As confidentially submitted to the Securities and Exchange Commission on October 6, 2020

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Bioventus Inc.
(Exact name of registrant as specified in its charter)

Delaware	3841	81-0980861
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

4721 Emperor Boulevard, Suite 400
Durham, North Carolina 27703
(919) 474-6700
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Kenneth M. Reali
Chief Executive Officer
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(919) 474-6700
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐
		Emerging growth company	☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price(1)(2)	Amount of registration fee(3)
Class A Common Stock, $0.001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Includes the offering price of shares of Class A common stock that may be sold if the over-allotment option to purchase additional shares of Class A common stock granted by the Registrant to the underwriters is exercised. See "Underwriting."
(3) To be paid in connection with the initial public filing of the registration statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.

Subject to completion, dated , 2020
Preliminary prospectus

Shares

bioventus

Class A common stock

This is the initial public offering of shares of Class A common stock of Bioventus Inc. We are offering shares of our Class A common stock.

Prior to this offering, there has been no public market for our Class A common stock. The estimated initial public offering price is between $ and $ per share. We expect to list our Class A common stock on The Nasdaq Global Market, or Nasdaq, under the symbol "BVS."

We will use the net proceeds that we receive from this offering to purchase from Bioventus LLC newly-issued common membership interests of Bioventus LLC, which we refer to as the LLC Interests. There is no public market for the LLC Interests. The purchase price for the newly-issued LLC Interests will be equal to the initial public offering price of our Class A common stock, less the underwriting discounts and commissions referred to below. We intend to cause Bioventus LLC to use the net proceeds it receives from us in connection with this offering as described in "Use of proceeds." Simultaneous with this offering, certain of the indirect owners of membership interests in Bioventus LLC, whom we refer to as Former LLC Owners, will exchange their indirect ownership interests for shares of Class A common stock and one other holder of membership interests in Bioventus LLC, whom we refer to as the Continuing LLC Owner, will retain its membership interests in Bioventus LLC.

We will have two classes of common stock outstanding after this offering: Class A common stock and Class B common stock. Each share of Class A common stock and Class B common stock entitles its holder to one vote on all matters presented to our stockholders generally. Immediately following this offering, all of our Class B common stock will be held by the Continuing LLC Owner, on a one-to-one basis with the number of LLC Interests it owns. Immediately following this offering, the holders of our Class A common stock issued in this offering collectively will hold % of the economic interests in us and % of the voting power in us, the Former LLC Owners, through their ownership of Class A common stock, collectively will hold % of the economic interests in us and % of the voting power in us, and the Continuing LLC Owner, through its ownership of all of the outstanding Class B common stock, collectively will hold no economic interest in us and the remaining % of the voting power in us. We will be a holding company, and upon consummation of this offering and the application of proceeds therefrom, our principal asset will be the LLC Interests we purchase from Bioventus LLC and acquire from the Former LLC Owners, representing an aggregate % economic interest in Bioventus LLC. The remaining % economic interest in Bioventus LLC will be owned by the Continuing LLC Owner through its ownership of LLC Interests.

We will be the sole managing member of Bioventus LLC. We will operate and control all of the business and affairs of Bioventus LLC and, through Bioventus LLC and its subsidiaries, conduct our business.

Following this offering, we will be a "controlled company" within the meaning of the corporate governance rules for Nasdaq-listed companies. See "Transactions" and "Management—Corporate governance."

We are an "emerging growth company" as defined under the federal securities laws and, as such, may elect to comply with certain reduced public company reporting requirements for future filings. See "Prospectus summary—Implications of being an emerging growth company."

	Per share	***Total***
Initial public offering price	*$*	*$*
Underwriting discounts and commissions(1)	*$*	*$*
Proceeds to us, before expenses	*$*	*$*

(1) See "Underwriting" for additional information regarding underwriting compensation.

We have granted the underwriters an over-allotment option for a period of 30 days to purchase up to additional shares of Class A common stock.

Investing in shares of our Class A common stock involves risks. See "Risk factors" beginning on page 22.

Neither the Securities and Exchange Commission, or the SEC, nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares against payment in New York, New York on , 2020.

Morgan Stanley *J.P. Morgan* *Goldman Sachs & Co. LLC*
Canaccord Genuity

The date of this prospectus is , 2020.

TABLE OF CONTENTS

We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any related free writing prospectuses. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares of Class A common stock offered by this prospectus, and only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date. Our business, results of operations, financial condition, and prospects may have changed since that date.

For investors outside the United States: We have not, and the underwriters have not, done anything that would permit this offering or the possession or distribution of this prospectus or any free writing prospectus in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of Class A common stock and the distribution of this prospectus outside the United States. See "Underwriting."

BASIS OF PRESENTATION

In connection with the closing of this offering, we will effect certain organizational transactions. Unless otherwise stated or the context otherwise requires, all information in this prospectus reflects the consummation of the organizational transactions and this offering, which we refer to collectively as the "Transactions." See "Transactions" for additional information regarding the Transactions.

As used in this prospectus, unless the context otherwise requires, references to:

- *"we," "us," "our," the "Company," "Bioventus," "Bioventus Inc."* and similar references refer: (i) following the consummation of the Transactions, including this offering, to Bioventus Inc., and, unless otherwise stated, all of its subsidiaries, including Bioventus LLC, which we refer to as "Bioventus LLC," and, unless otherwise stated, all of its subsidiaries, and (ii) on or prior to the completion of the Transactions, including this offering, to Bioventus LLC and, unless otherwise stated, all of its subsidiaries.

- *"Continuing LLC Owner"* refers to Smith & Nephew, Inc., or S+N, a U.S. based subsidiary of Smith & Nephew plc, which will continue to own LLC Interests (as defined below) after the Transactions and which may, following the consummation of this offering, exchange its LLC Interests for shares of our Class A common stock or a cash payment (if mutually agreed) as described in "Certain relationships and related party transactions—Bioventus LLC Agreement," in each case, together with a cancellation of the same number of its shares of Class B common stock.
- *"Essex Woodlands Health Ventures"* refers to Essex Woodlands Health Ventures Fund VIII, L.P., Essex Woodlands Health Ventures Fund VIII-A, L.P. and Essex Woodlands Health Ventures Fund VIII-B, L.P.
- *"Former LLC Owners"* refers to all of the Original LLC Owners (including Essex Woodlands Health Ventures, but excluding the Continuing LLC Owner) who will exchange their indirect ownership interests in Bioventus LLC for shares of our Class A common stock in connection with the consummation of this offering.
- *"LLC Interests"* refer to the single class of newly-issued common membership interests of Bioventus LLC.
- *"Original LLC Owners"* refer to the direct and certain indirect owners of Bioventus LLC, collectively, prior to the Transactions, including the members of the Voting Group (as defined below).
- *"Stock Plan Participants"* refer to certain individuals who hold existing awards under the Bioventus Stock Plan, which we refer to as the "Phantom Plan," and will, in connection with this offering, receive rights to receive shares of Class A common stock upon settlement of their awards as described in "Executive compensation—Narrative to summary compensation table—Equity-based compensation."
- *"Voting Group"* refers collectively to (i) Essex Woodlands Health Ventures, (ii) S+N and (iii) certain other Original LLC Owners, all of whom will be parties to the Stockholders Agreement as described in "Certain relationships and related party transactions—Stockholders Agreement." The Voting Group will hold Class A common stock and Class B common stock representing in the aggregate a majority of the combined voting power of our common stock.

Following completion of the Transactions, we will be a holding company and the sole managing member of Bioventus LLC and our principal asset will be LLC Interests of Bioventus LLC. Bioventus LLC is the predecessor of the issuer, Bioventus Inc., for financial reporting purposes. Accordingly, this prospectus contains the historical financial statements of Bioventus LLC. As we will have no other interest in any operations other than those of Bioventus LLC and its subsidiaries, the historical consolidated financial information included in this prospectus is that of Bioventus LLC and its subsidiaries. As Bioventus Inc. has no business transactions or activities to date and had no assets or liabilities during the periods presented, the historical financial statements of this entity are not included in this prospectus. Following completion of this offering, the reporting entity for purposes of periodic reporting will be Bioventus Inc.

The unaudited pro forma financial information of Bioventus Inc. presented in this prospectus has been derived by the application of pro forma adjustments to the historical consolidated financial statements of Bioventus LLC and its subsidiaries included elsewhere in this prospectus. These pro forma adjustments give effect to the Transactions as described in "Transactions," including the completion of this offering. The unaudited pro forma consolidated balance sheet as of June 27, 2020 gives effect to the Transactions as if they had occurred on that date. The unaudited pro forma consolidated statements of operations for the year ended December 31, 2019 and for the six months ended June 27, 2020 and June 29, 2019 have been prepared to illustrate the effects of the Transactions as if they occurred on January 1, 2019. See "Unaudited pro forma consolidated financial information" for a complete description of the adjustments and assumptions underlying the pro forma financial information included in this prospectus.

Numerical figures included in this prospectus have been subject to rounding adjustments. Accordingly, numerical figures shown as totals in various tables may not be arithmetic aggregations of the figures that precede them.

TRADEMARKS, TRADE NAMES AND SERVICE MARKS

This prospectus includes our trademarks and trade names that we own or license, such as Bioventus, Cellxtract, Durolane, Exogen, Exponent, GELSYN-3, MOTYS, OsteoAMP, OsteoPlus, Prohesion, PureBone, SAFHS, Signafuse, SUPARTZ FX and our logo. This prospectus also includes trademarks, trade names and service marks that are the property of other organizations. Solely for convenience, trademarks and trade names referred to in this prospectus appear without any "™" or "®" symbol, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks, trade names and service marks. We do not intend our use or display of other parties' trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

MARKET AND INDUSTRY DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the markets in which we operate is based on information from iData Research, Inc., or iData, and BioMedGPS, provider of SmartTRAK Business Intelligence Solutions. Other information concerning our industry and the markets in which we operate is based on independent industry and research organizations, other third-party sources (including industry publications, surveys and forecasts), and management estimates. Management estimates are derived from publicly available information released by independent industry analysts and third-party sources, as well as data from our internal research, and are based on assumptions made by us upon reviewing such data and our knowledge of such industry and markets which we believe to be reasonable. In addition, projections, assumptions and estimates of the future performance of the industry in which we operate and our future performance are necessarily subject to uncertainty and risk due to a variety of factors, including those described in "Risk factors" and "Special note regarding forward-looking statements." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus. This summary is not complete and may not contain all the information you should consider before investing in our Class A common stock. You should read this entire prospectus carefully, including the risks of investing in our Class A common stock discussed under the heading "Risk factors," and the financial statements and related notes included elsewhere in this prospectus before making an investment decision.

Bioventus

We are a global medical device company focused on developing and commercializing clinically differentiated, cost efficient and minimally invasive treatments that engage and enhance the body's natural healing process. We believe our non-invasive medical device and biologic products play a critical role in supporting the body's own healing mechanisms to heal or eliminate the pain caused by orthopedic conditions and problems, which we define as our active healing products. These products address an estimated $6.0 billion market opportunity across osteoarthritic, or OA, joint pain treatment and joint preservation, spinal fusion surgery and bone fractures, each of which is experiencing growth through multiple industry tailwinds, including an aging population, increased participation in sports and active lifestyles and a rise in obesity rates. Our devices are most often used to delay or replace the need for an elective surgical procedure and are focused on reaching patients early on in their treatment paradigm. In 2019, approximately 85% of our $340.1 million in revenues were derived from products associated with non-surgical procedures. Our products are widely reimbursed by both public and private health insurers and are sold in the physician's office or clinic, in ambulatory surgical centers, or ASCs, and in the hospital setting in the United States and across 37 countries. We have broad commercial reach across our established orthopedic customer base, which is a key strength of the company. We are focused on leveraging this significant customer base and the reach of our commercial organization to continue to grow the company by expanding our market share and product portfolio. This strategy has led to a 7.4% CAGR in revenue since 2016 and during this time period, our revenue has grown from $274.5 million to $340.1 million in 2019.

Our existing portfolio of products is grouped into three verticals based on our targeted customer focus:

- ***OA Joint Pain Treatment and Joint Preservation***. We are the largest pure play orthopedics-focused company in the OA joint pain treatment and joint preservation market. We have been the fastest growing hyaluronic acid, or HA, participant over the last three years, driving our share to number three by revenue in the U.S. market. We offer the only complete portfolio of HA viscosupplementation therapies, including single, three and five injection regimens, for patients experiencing pain related to OA in the knee. Our HA products are all approved by the U.S. Food and Drug Administration, or the FDA, through premarket approvals, or PMAs, and include:
  - (a) Durolane, a single injection therapy, was launched in the United States in 2018 and is also marketed outside the United States in more than 30 countries including Europe through a Conformité Européenne, or CE, mark;
  - (b) GELSYN-3, a three injection therapy, was launched in the United States in 2016; and
  - (c) SUPARTZ FX, a five injection therapy, was launched in the United States in 2001.
- ***Bone Graft Substitutes***. We are the fastest growing participant in the bone graft substitutes, or BGSs, market and offer a broad portfolio of products including human tissue allografts and synthetics. Our BGS products can be used in conjunction with any orthopedic fixation and spinal fusion implant. They are designed to improve bone fusion rates following spinal fusion and other orthopedic surgeries and reduce the need for using the patient's own bone, which is associated with additional cost and morbidity. Our products include an allograft-derived bone graft with growth factors (OsteoAMP), a demineralized bone matrix (Exponent), or DBM, a cancellous bone in different preparations

(PureBone), bioactive synthetics (Signafuse and Interface), a collagen ceramic matrix (OsteoMatrix), a biphasic calcium phosphate synthetic (OsteoPlus) and two bone marrow isolation systems (CellXtract and Extractor). Our products have received either Section 510(k) of the United States Federal Food, Drug, and Cosmetic Act, or 510(k), clearance from the FDA or are marketed pursuant to Section 361 of the Public Health Service Act, or PHSA, as Section 361 HCT/Ps. HCT/Ps regulated solely under Section 361 are human cells, tissues and cellular and tissue-based products that do not require marketing authorization to be marketed in the United States.

- ***Minimally Invasive Fracture Treatment.*** Our Exogen system is the number one prescribed device in the long bone stimulation market and has had marketing authorization via a PMA through the FDA for over 25 years. We are the only company to utilize advanced, pulsed ultrasound technology for bone growth in delayed and nonunion fractures in all fracture locations except spine, as well as in fresh fractures of the tibia and radius. Our Exogen system offers significant advantages over electrical based long bone stimulation systems, including a documented mechanism of action, shorter treatment times and superior nonunion heal rates. The system is also sold internationally under a CE mark for nonunions and fresh fractures and is the market-leading bone healing treatment for long bones in Japan.

Our expansive direct sales and distribution channel across our three verticals provides us with broad and differentiated customer reach, and allows us to serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery. Our OA joint pain treatment and joint preservation products and minimally invasive fracture treatment are sold by a direct sales team of approximately 270 in the United States and approximately 45 internationally. This direct sales team is complemented by approximately 20 account representatives who facilitate account access through integrated delivery networks, or IDNs, group purchasing organizations, or GPOs, and payer contracting. Our BGS products are sold by 170 independent distributors in the United States, each with their own independent sales force, supported by our 15 member regionalized sales support team. We market our BGSs primarily to orthopedic spine surgeons and neurosurgeons for use in the operating room in both the hospital and ASC setting. We believe that our broad customer reach has and will continue to enable strong and durable growth in each of our verticals and provides a significant foundation for future product launches.

In addition to our current portfolio, we have a deep pipeline of new products under development, and we are pursuing the development of line extensions and expanded indications for already marketed products that address a significant market opportunity within our current customer base. We have recently submitted an investigational new drug application, or IND, to begin a clinical trial for MOTYS, a placental tissue biologic for knee OA for which we ultimately plan to pursue a Biologics License Application, or BLA. We have recently entered into an option and equity purchase agreement with CartiHeal (2009) Ltd., or CartiHeal, which provides us with the option to acquire CartiHeal and its Agili-C technology, which we believe is the only off-the-shelf scaffold implant designed to address osteochondral defects in the knee. CartiHeal expects to submit a PMA seeking FDA approval of Agili-C in . We have also entered into an exclusive license and development collaboration agreement, or Collaboration Agreement with Harbor Medtech Inc., or Harbor, for purposes of commercializing PROcuff, a rotator cuff tissue repair product, and we anticipate filing a request for 510(k) clearance in . We intend to launch a new flowable version of our OsteoAmp product, or OsteoAmp Flowable, in 2021 that can be used in minimally invasive spine procedures. Additionally, we are currently conducting clinical studies of our Exogen system pursuant to an Investigational Device Exemption, or IDE, from the FDA, and we plan to use data from these studies to seek approval for expanded indications with respect to fresh fractures. We intend to leverage the clinical data from this program to support payer coverage in this area. We plan to file the PMA supplement for the first label expansion in .

We have grown our total net sales from $319.2 million for the year ended December 31, 2018 to $340.1 million for the year ended December 31, 2019. Our total net sales declined from $160.3 million for the

six months ended June 29, 2019, to $136.7 million for the six months ended June 27, 2020, related to the Coronavirus Disease 2019, or COVID-19, pandemic. For the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, we had net income (losses) from continuing operations of $8.1 million $4.4 million, $4.5 million and ($2.8) million, respectively. We have also grown our Adjusted EBITDA from $72.2 million for the year ended December 31, 2018 to $79.2 million for the year ended December 31, 2019. Our Adjusted EBITDA declined from $28.3 million for the six months ended June 29, 2019 to $21.2 million for the six months ended June 27, 2020, related to the COVID-19 pandemic. The COVID-19 pandemic and the measures imposed to contain the wide spread of the virus disrupted our business beginning in early March 2020 as healthcare systems across the U.S. were forced to limit patient visits and elective surgical procedures. The effects of the pandemic began to decrease in late April 2020 and we saw a very strong recovery for our products at the end of the second quarter as restrictions on orthopedic procedures were lifted across the United States and patients also returned to orthopedic offices. See the sections titled “Risk factors” and “Management’s discussion and analysis of financial condition and results of operations” for more information. For a reconciliation of net income (loss) from continuing operations to Adjusted EBITDA, see Note 2 to the information contained in “Prospectus summary—Summary historical and pro forma financial data.”

Our solutions

We offer a portfolio of active healing products to meet the needs of our orthopedist, musculoskeletal and sports medicine physician, podiatrist, neurosurgeon and orthopedic spine surgeon customers and their patients.

Our portfolio of products is grouped into three verticals based on clinical use: (i) OA joint pain treatment and joint preservation, (ii) BGSs and (iii) minimally invasive fracture treatment.

OA joint pain treatment and joint preservation

Our key OA joint pain treatment and joint preservation products are presented in the summary table below:

Product	Description	Regulatory pathway	Region where marketed(1)
DUROLANE hyaluronic acid, stabilized single injection	Single injection HA viscosupplementation therapy	• PMA • Device approval by Health Canada • CE mark and other registrations(2)	• United States • Canada • Europe
GELSYN-3 3 injection hyaluronic acid treatment	Three injection HA viscosupplementation therapy	• PMA	• United States
SUPARTZ FX sodium hyaluronate	Five injection HA viscosupplementation therapy	• PMA	• United States

(1) We maintain exclusive distribution agreements with respect to Durolane, GELSYN-3 and SUPARTZ FX in the United States. We maintain exclusive distribution agreements and own certain assets with respect to Durolane outside the United States.

(2) Durolane is also approved for marketing in Argentina, Australia, Brazil, Columbia, India, Indonesia, Jordan, Malaysia, Mexico, New Zealand, Russia, Saudi Arabia, Switzerland, Taiwan, Turkey and the United Arab Emirates, or the UAE.

Bone graft substitutes

Our key bone graft substitution products are presented in the summary table below:

Product	Indications	Regulatory pathway / year launched
Allograft		
osteoamp® Allogeneic Morphogenetic Proteins	Orthopedic, neurosurgical and reconstructive bone grafting procedures	• Section 361 HCT/P / 2009
exponent® Demineralized Bone Matrix	Posterolateral spine procedures	• 510(k) / 2012
purebone® Demineralized and Mineralized Allograft	Orthopedic, neurosurgical and reconstructive bone grafting procedures	• Section 361 HCT/P / 2012
Synthetic		
signafuse® Bioactive Bone Graft	Standalone posterolateral spine, extremities and pelvis, as well as a bone graft extender in the posterolateral spine	• 510(k) / 2014
interface Bioactive Bone Graft	Posterolateral spine when mixed with autograft, extremities and pelvis	• 510(k) / 2011
osteomatrix™ Biphasic Bone Graft	Posterolateral spine, extremities and pelvis	• 510(k) / 2010
osteoplus™ Biphasic Bone Graft	Posterolateral spine, extremities and pelvis	• 510(k) / 2006
signafuse® Bioactive Bone Graft	Posterolateral spine, extremities and pelvis	• 510(k) / 2020

Minimally invasive fracture treatment

We offer our Exogen system for the non-invasive treatment of established nonunion fractures and certain fresh fractures:

Product	Description	Regulatory pathway	Region where marketed(1)
exogen® ultrasound bone healing system	Ultrasound bone healing system for nonunion fractures and fresh fractures to the tibia and radius(1)	• PMA • Device approval by Health Canada • CE mark and other registrations(2)	• United States • Canada • Europe • Japan

(1) Our Exogen system is indicated in the United States for the non-invasive treatment of established nonunions, excluding skull and vertebra, and for accelerating the time to a healed fracture for fresh, closed, posteriorly displaced distal radius fractures and fresh, closed or Grade I open long bone fractures in skeletally mature individuals when these fractures are orthopedically managed by closed reduction and cast immobilization. We own our Exogen system and market it both in and outside the United States.

(2) Exogen is also approved for marketing in Australia, Japan, Jordan, New Zealand, Russia, Saudi Arabia, Turkey, South Africa and the UAE.

Our strengths

We believe that we have several key strengths that provide us with a competitive advantage:

- ***Broad customer reach and market access***. We believe we have one of the largest sales organizations in the verticals in which we operate, including a direct sales team and distributors, with a dedicated focus on OA joint pain treatment and joint preservation products, BGSs and minimally invasive fracture treatments. We believe that our broad customer reach and market access are key factors contributing to our ability to increase our market share and grow faster than our competitors. Our sales organization has a performance culture built on serving our core orthopedic patient customers and delivering our products to a variety of physicians and care settings. We serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric, trauma and spine. We believe we will continue to be well-positioned in the market given our strong foundation for reimbursement and customer access, coupled with a broad portfolio of clinically differentiated products.
- ***Differentiated, market leading products across three verticals.*** We believe our portfolio of complementary, market leading products provides patients and physicians with greater flexibility in tailoring a treatment regime that best fits the patient's needs and lifestyle. Our products are most often used to delay or replace the need for an elective surgical procedure and are focused on reaching patients early on in their treatment paradigm. In 2019, approximately 85% of our $340.1 million in revenues were associated with non-surgical procedures. We have the only complete one, three and five injection portfolio in the HA viscosupplementation market in the United States, which we believe gives patients the freedom of choice and appeals to the growing preference among providers to interact with a single vendor when accessing a complete portfolio of care. We also offer a comprehensive, clinically effective and cost efficient portfolio of BGSs to meet a broad range of patient needs and procedures. Our products are designed to improve bone fusion rates and avoid the cost and risks associated with autograft following spinal fusion and other orthopedic surgeries, and can be used in conjunction with any orthopedic fixation and spinal fusion implant. Additionally, our Exogen ultrasound bone healing system is the leader in the long bone stimulation market, offering shorter treatment times, superior non-union heal rates and a documented mechanism of action. Our Exogen system also has a broad label for patient use, including established nonunions and fresh fractures to the tibia and radius.
- ***Substantial body of peer reviewed clinical evidence.*** We believe that clinical evidence is critical to demonstrating efficacy, achieving reimbursement coverage and demonstrating the value of medical products. We have invested in building evidence and support for our key offerings and product portfolio. Clinical evidence is vital to physicians as they look to make decisions about which product would best serve their patients. The safety and efficacy of our key offerings within each of our three verticals has been demonstrated by numerous clinical studies, published peer review research and clinical publications. We believe that our significant body of clinical evidence creates a competitive barrier to entry given the time and investment required to amass the amount of published data we have and is an asset that would take years for a competitor to try to replicate.
- ***Robust free cash flow conversion.*** We believe that our robust free cash flow conversion and scale enables us to invest in our business in a meaningful way. Over the last four years, we have self-funded all internal research and development and business development efforts. We define free cash flow as net cash provided by operating activities from continuing operations as presented on our consolidated statement of cash flow plus interest expense as presented on our consolidated statement of operations less purchases of property and equipment and other on our consolidated statement of cash flow. Our

free cash flow conversion, defined as free cash flow divided by Adjusted EBITDA, was 78% for the year ended December 31, 2019 and 93% from 2018 through June 27, 2020. With $340.1 million in revenues for the year ended December 31, 2019, we also have scale to pursue opportunities to grow our business, including internationally to regions such as China. Our attractive cash generation has and will continue to allow us to expand our deep pipeline of products through further internal research and development investment and additional tuck-in acquisitions that leverage our established infrastructure.

- ***Experienced management team with a track record of value creation***. Our senior leadership team has been involved in growing large and mid-cap businesses, including through major acquisitions and integrations, public and private equity company sale transactions and strategic equity investments, as well as the development, approval and launch of new and transformative active healing products. Our team also has extensive operating experience with respect to active healing products, which includes designing clinical trials, working closely with regulatory agencies on identifying the appropriate path to market, successfully commercializing products, including securing managed care, payer or purchasing committee contracts and effectively managing our direct or distributor sales organizations.

Our growth strategy

We intend to pursue the following strategies to continue to grow our net sales and Adjusted EBITDA:

- continue to expand market share in HA viscosupplementation;
- introduce new OA joint pain treatment and joint preservation products;
- further develop and commercialize our BGS portfolio;
- expand indications for use for our Exogen system;
- invest in research and development;
- pursue business development opportunities; and
- opportunistically grow our international markets.

Summary of the transactions

Prior to the consummation of this offering and the organizational transactions described below, the Original LLC Owners were the only owners of Bioventus LLC. Bioventus Inc. was incorporated as a Delaware corporation on December 22, 2015 to serve as the issuer of the Class A common stock offered hereby.

In connection with the closing of this offering, we will consummate the following organizational transactions:

- we will amend and restate the amended and restated limited liability company agreement of Bioventus LLC, as amended, effective as of the completion of this offering, or the Bioventus LLC Agreement, to, among other things, (i) provide for LLC Interests that will be the single class of common membership interests in Bioventus LLC, (ii) exchange all of the existing membership interests (including profit interests awarded under the Bioventus LLC Management Incentive Plan, or MIP) in Bioventus LLC for LLC Interests and (iii) appoint Bioventus Inc. as the sole managing member of Bioventus LLC;
- we will amend and restate Bioventus Inc.'s certificate of incorporation to, among other things, (i) provide for Class A common stock and Class B common stock, each share of which entitles its holders to one vote per share on all matters presented to Bioventus Inc.'s stockholders and (ii) issue shares of Class B common stock to the Continuing LLC Owner, on a one-to-one basis with the number of LLC Interests it owns;

- the Former LLC Owners will exchange their indirect ownership interests in Bioventus LLC for shares of Class A common stock on a one-to-one basis, representing (i) approximately % of the combined voting power of all of Bioventus Inc.'s common stock (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and (ii) approximately % of the economic interest in the business of Bioventus LLC and its subsidiaries (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock), indirectly through Bioventus Inc.'s ownership of LLC Interests;
- Bioventus Inc. will issue shares of Class A common stock to the purchasers in this offering (or shares of our Class A common stock if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- Bioventus Inc. will use all of the net proceeds from this offering (including any net proceeds received upon exercise of the underwriters' option to purchase additional shares of Class A common stock) to acquire newly-issued LLC Interests from Bioventus LLC at a purchase price per interest equal to the initial public offering price per share of Class A common stock, less underwriting discounts and commissions, collectively representing % of Bioventus LLC's outstanding LLC Interests (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- Bioventus LLC will use the proceeds from the sale of LLC Interests to Bioventus Inc. as described in "Use of proceeds;"
- the Phantom Plan will be terminated and the Phantom Plan Participants will receive rights to receive up to shares of our Class A common stock upon settlement of their awards under the Phantom Plan, with such settlement expected to take place between twelve and 24 months following the date of termination of the Phantom Plan as described in "Executive compensation—Narrative to summary compensation table—Equity-based compensation" (which settlement may result in a change in the timing over which compensation expense is recognized as described in "Management's discussion and analysis of financial condition and results of operations—Components of our results of operations—Selling, general and administrative expense"), and Bioventus Inc. will receive a corresponding number of LLC Interests from Bioventus LLC upon settlement;
- the Continuing LLC Owner will continue to own the LLC Interests it received in exchange for its existing membership interests in Bioventus LLC, which LLC Interests, following this offering, will be redeemable, at its election, for newly-issued shares of Class A common stock on a one-for-one basis or, if Bioventus Inc. and the Continuing LLC Owner agree, a cash payment equal to a volume weighted average market price of one share of Class A common stock for each LLC Interest redeemed (subject to customary adjustments, including for stock splits, stock dividends and reclassifications) in accordance with the terms of the Bioventus LLC Agreement; provided that, at Bioventus Inc.'s election, Bioventus Inc. may effect a direct exchange of such Class A common stock or such cash (if mutually agreed) for such LLC Interests. Shares of Class B common stock will be cancelled on a one-for-one basis if we, at the election of the Continuing LLC Owner, redeem or exchange its LLC Interests pursuant to the terms of the Bioventus LLC Agreement; and
- Bioventus Inc. will enter into (i) a tax receivable agreement, or the Tax Receivable Agreement, with the Continuing LLC Owner, (ii) a stockholders agreement, or the Stockholders Agreement, with the Voting Group and (iii) a registration rights agreement, or the Registration Rights Agreement, with the Original LLC Owners.

Upon the consummation of this offering, the Continuing LLC Owner will own (x) shares of Bioventus' Class B common stock (which will not have any liquidation or distribution rights), representing approximately % of the combined voting power of all of Bioventus' common stock (or approximately

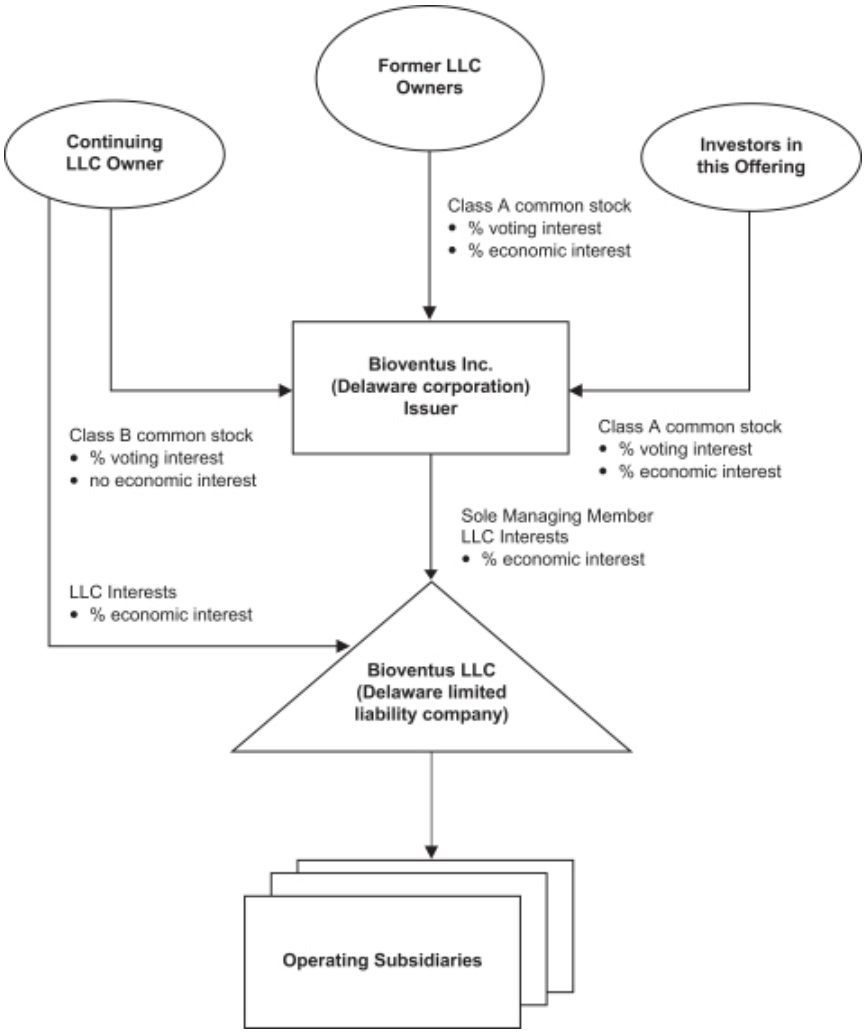
%, if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and (y) LLC Interests, representing approximately % of the economic interest in the business of Bioventus LLC and its subsidiaries (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).

We refer to the foregoing transactions collectively as the "Transactions." For more information regarding our structure after the completion of the Transactions, including this offering, see "Transactions."

Immediately following this offering, Bioventus Inc. will be a holding company and its principal asset will be the LLC Interests it purchases from Bioventus LLC and acquires from the Former LLC Owners. As the sole managing member of Bioventus LLC, Bioventus Inc. will operate and control all of the business and affairs of Bioventus LLC and, through Bioventus LLC and its subsidiaries, conduct our business. Accordingly, Bioventus Inc. will have the sole voting interest in, and control the management of, Bioventus LLC. As a result, we will consolidate Bioventus LLC in our consolidated financial statements and will report a non-controlling interest related to the LLC Interests held by the Continuing LLC Owner on our consolidated financial statements.

See "Description of capital stock" for more information about our certificate of incorporation and the terms of the Class A common stock and Class B common stock. See "Certain relationships and related party transactions" for more information about (i) the Bioventus LLC Agreement, including the terms of the LLC Interests and the redemption right of the Continuing LLC Owner; (ii) the Tax Receivable Agreement; (iii) the Registration Rights Agreement; and (iv) the Stockholders Agreement. Under the Stockholders Agreement, any increase or decrease in the size of our board of directors or any committee, and any amendment to our organizational documents, will in each case require the approval of Essex Woodlands Health Ventures and certain other members of the Voting Group, for so long as they collectively own at least 10% of the total shares of our Class A common stock owned by them as of the date this offering is consummated, and will also require the approval of S+N and its affiliates, for so long as S+N and its affiliates own at least 10% of the total shares of our Class B common stock owned by them as of the date this offering is consummated.

The diagram below depicts our organizational structure after giving effect to the Transactions, including this offering, assuming no exercise by the underwriters of their option to purchase additional shares of Class A common stock.



Summary of risks associated with our business

We are subject to several risks, including risks that may prevent us from achieving our business objectives or that may adversely affect our business, results of operations, financial condition, and cash flows. You should carefully consider the risks discussed in the section entitled “Risk factors,” including the following risks, before investing in our Class A common stock:

- our business may continue to experience adverse impacts as a result of the COVID-19 pandemic;
- we are highly dependent on a limited number of products;

- our long-term growth depends on our ability to develop, acquire and commercialize new products, line extensions or expanded indications;
- we may be unable to successfully commercialize newly developed or acquired products or therapies in the United States;
- demand for our existing portfolio of products and any new products, line extensions or expanded indications depends on the continued and future acceptance of our products by physicians, patients, third-party payers and others in the medical community;
- our commercial success depends on our ability to differentiate the HA viscosupplementation therapies that we own or distribute from alternative therapies for the treatment of OA;
- the proposed down classification of non-invasive bone growth stimulators, including our Exogen system, by the FDA could increase future competition for bone growth stimulators and otherwise adversely affect the Company's sales of Exogen;
- if we are unable to achieve and maintain adequate levels of coverage and/or reimbursement for our products, the procedures using our products, or any future products we may seek to commercialize, the commercial success of these products may be severely hindered;
- if we choose to acquire or invest in new businesses, products or technologies, we may be unable to complete these acquisitions or to successfully integrate them in a cost-effective and non-disruptive manner
- we compete and may compete in the future against other companies, some of which have longer operating histories, more established products or greater resources than we do, which may prevent us from achieving increased market penetration or improved operating results;
- the reclassification of our HA products from medical devices to drugs in the United States by the FDA could negatively impact our ability to market these products and may require that we conduct costly additional clinical studies to support current or future indications for use of those products;
- our ability to maintain our competitive position depends on our ability to attract, retain and motivate our senior management team and highly qualified personnel, and our failure to do so could adversely affect our business, results of operations and financial condition;
- if our facilities are damaged or become inoperable, we will be unable to continue to research, develop and manufacture our products and, as a result, our business, results of operations and financial condition may be adversely affected until we are able to secure a new facility;
- our products and operations are subject to extensive governmental regulation, and our failure to comply with applicable requirements could cause our business to suffer;
- we may be subject to enforcement action if we engage in improper claims submission practices and resulting audits or denials of our claims by government agencies could reduce our net sales or profits;
- the FDA regulatory process is expensive, time-consuming and uncertain, and the failure to obtain and maintain required regulatory clearances and approvals could prevent us from commercializing our products;our HCT/P products are subject to extensive government regulation and our failure to comply with these requirements could cause our business to suffer;
- if clinical studies of our future products do not produce results necessary to support regulatory clearance or approval in the United States or elsewhere, we will be unable to expand the indications for or commercialize these products; and
- we may be subject to enforcement action if we engage in improper marketing or promotion of our products, that could lead to costly investigations, fines or sanctions by regulatory bodies, any of which could be costly to our business.

Corporate information

Bioventus Inc., the issuer of the Class A common stock in this offering, was incorporated in Delaware on December 22, 2015. Bioventus LLC was organized in Delaware as a limited liability company in November 23, 2011. Our principal executive offices are located at 4721 Emperor Boulevard, Suite 400, Durham, NC 27703. Our telephone number is (919) 474-6700. Our corporate website is www.bioventus.com. The information contained on or that can be accessed through our website is not incorporated by reference into this prospectus, and you should not consider information on our website to be part of this prospectus or in deciding to purchase our Class A common stock.

Implications of being an emerging growth company

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to:

- reduced obligations with respect to financial data, including presenting only two years of audited financial statements and only two years of selected financial data in the registration statement on Form S-1 of which this prospectus is a part;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act; and
- exemptions from the requirements of holding a non-binding advisory vote on executive compensation and the requirement to obtain stockholder approval of any golden parachute payments not previously approved.

We may take advantage of these exemptions until the last day of our fiscal year following the fifth anniversary of the completion of this offering or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company upon the earliest to occur of (1) the last day of the fiscal year in which we have more than $1.07 billion in annual gross revenue; (2) the date we qualify as a "large accelerated filer" as defined in Rule 12b-2 under the Securities Exchange Act of 1934, or the Exchange Act; (3) the issuance, in any three-year period, by us of more than $1.0 billion in non-convertible debt securities held by non-affiliates; and (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering. We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of certain reduced reporting burdens in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, or the Securities Act, for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we are choosing to "opt out" of such extended transition period and, as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

THE OFFERING

Issuer	Bioventus Inc.
Class A common stock offered hereby	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Underwriters' option to purchase additional shares of Class A common stock	shares.
Class A common stock to be issued to Former LLC Owners	shares.
Class A common stock to be outstanding immediately after this offering	shares (or shares if the underwriters exercise in full their option to purchase additional shares).
Class B common stock to be outstanding immediately after this offering	shares, all of which will be owned by the Continuing LLC Owner.
Voting Rights	Holders of our Class A common stock and Class B common stock will vote together as a single class on all matters presented to stockholders for their vote or approval, except as otherwise required by law. Each share of Class A common stock and Class B common stock will entitle its holder to one vote per share on all such matters. See "Description of capital stock."
Voting power held by purchasers in this offering	% (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).
Voting power held by the Former LLC Owners	% (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).
Voting power held by all holders of Class A common stock after giving effect to this offering	% (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).
Voting power held by all holders of Class B common stock after giving effect to this offering	% (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).
Voting power held by the Original LLC Owners after giving effect to this offering	% (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock).
Ratio of shares of Class A common stock to LLC Interests	Our amended and restated certificate of incorporation and the Bioventus LLC Agreement will require that we at all times maintain a ratio of one LLC Interest owned by us for each outstanding share of Class A

	common stock (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities) and Bioventus LLC at all times maintain a one-to-one ratio between the number of shares of Class A common stock issued by us and the number of LLC Interests owned by us, as well as a one-to-one ratio between the number of shares of Class B common stock owned by the Continuing LLC Owner and the number of LLC Interests owned by the Continuing LLC Owner. This construct is intended to result in the Continuing LLC Owner having a voting interest in Bioventus Inc. that is substantially the same as the Continuing LLC Owner's percentage economic interest in Bioventus LLC. The Continuing LLC Owner will own all of our outstanding Class B common stock.
Use of proceeds	We estimate that the net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses, will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares of Class A common stock), assuming an initial public offering price of $ per share (the midpoint of the price range listed on the cover page of this prospectus). We intend to use the net proceeds that we receive from this offering (including any net proceeds from the underwriters' exercise of their option to purchase additional shares of Class A common stock) to purchase newly-issued LLC Interests from Bioventus LLC at a purchase price per interest equal to the initial public offering price per share of Class A common stock less underwriting discounts and commissions. We intend to cause Bioventus LLC to use such proceeds for general corporate purposes. We may also use a portion of the net proceeds to acquire or invest in businesses, products, services or technologies; however, we do not have agreements or commitments for any material acquisitions or investments at this time. See "Use of proceeds."
Redemption rights of holders of LLC Interests	The Continuing LLC Owner, from time to time following the offering, may require Bioventus LLC to redeem all or a portion of its LLC Interests for newly-issued shares of Class A common stock on a one-for-one basis or, if Bioventus Inc. and the Continuing LLC Owner agree, a cash payment equal to the volume weighted average market price of one

	share of our Class A common stock for each LLC Interest redeemed (subject to customary adjustments, including for stock splits, stock dividends and reclassifications) in accordance with the terms of the Bioventus LLC Agreement; provided that, at Bioventus Inc.'s election, it may effect a direct exchange of such Class A common stock or such cash (if mutually agreed) for such LLC Interests. See "Certain relationships and related party transactions—Bioventus LLC Agreement." Shares of our Class B common stock will be cancelled on a one-for-one basis if we, at the election of the Continuing LLC Owner, redeem or exchange its LLC Interests pursuant to the terms of the Bioventus LLC Agreement.
Registration Rights Agreement	Pursuant to the Registration Rights Agreement, we will, subject to the terms and conditions thereof, agree to register the resale of the shares of our Class A common stock that are issuable to the Continuing LLC Owner upon redemption or exchange of their LLC Interests and the shares of our Class A common stock that are issued to the Former LLC Owners in connection with the Transactions. See "Certain relationships and related party transactions—Registration Rights Agreement."
Controlled company	Following this offering we will be a "controlled company" within the meaning of the corporate governance rules of Nasdaq. See "Management—Corporate governance." By becoming a stockholder, you will be deemed to have notice of and consented to provisions of our amended and restated certificate of incorporation that allocate certain corporate opportunities between us and our Original LLC Owners. See "Description of capital stock—Corporate opportunities."
Dividend policy	We do not anticipate declaring or paying any cash dividends on our Class A common stock for the foreseeable future. See "Dividend policy."
Tax Receivable Agreement	We will enter into the Tax Receivable Agreement with Bioventus LLC and the Continuing LLC Owner that will provide for the payment by us to the Continuing LLC Owner of 85% of the amount of tax benefits, if any, that we actually realize (or in some circumstances are deemed to realize) as a result of (i) increases in the tax basis of assets of Bioventus LLC resulting from (a) any future redemptions or exchanges of LLC Interests described above under "—The offering—Redemption rights of holders of LLC interests" and (b) certain distributions (or

	deemed distributions) by Bioventus LLC and (ii) certain other tax benefits arising from payments under the Tax Receivable Agreement. See "Certain relationships and related party transactions—Tax Receivable Agreement."
Stockholders Agreement	Pursuant to the Stockholders Agreement, the Voting Group will hold Class A common stock and Class B common stock representing approximately % of the combined voting power of all of our common stock. Until such time as Essex Woodlands Health Ventures and certain other members of the Voting Group own less than % of the total shares of our Class A common stock owned by them as of the date this offering is consummated, and S+N owns less than % of the total shares of our Class B common stock owned by them as of the date this offering is consummated, or the Stockholders Agreement is otherwise terminated in accordance with its terms, the parties to the Stockholders Agreement will agree to vote their shares of Class A common stock and Class B common stock in favor of the election of the nominees of certain members of the Voting Group to our board of directors upon their nomination by the nominating and corporate governance committee of our board of directors. See "Certain relationships and related party transactions— Stockholders Agreement."
Risk Factors	Investing in shares of our Class A common stock involves a high degree of risk. See "Risk factors" for a discussion of factors you should carefully consider before investing in shares of our Class A common stock.
NASDAQ Global Market symbol	"BVS"

The number of shares of Class A common stock to be outstanding after this offering is based on the membership interests of Bioventus LLC outstanding as of , 2020, and excludes:

- shares of Class A common stock reserved for issuance under our 2020 Incentive Award Plan, or the Plan, as described in "Executive compensation—New incentive arrangements", consisting of (i) shares of Class A common stock issuable upon the exercise of options to purchase shares of Class A common stock granted on the date of this prospectus to our directors and certain employees, including the named executive officers, in connection with this offering as described in "Executive compensation—Director compensation" and "Executive compensation—New equity awards," and (ii) additional shares of Class A common stock reserved for future issuance (exclusive of the additional shares available for issuance under the Plan pursuant to the annual increase each calendar year beginning in and ending in , as described in "Executive compensation—New incentive arrangements";

- shares of Class A common stock reserved as of the closing date of this offering for future issuance to the Stock Plan Participants upon settlement of their awards as described in "Executive compensation—Narrative to summary compensation table—Equity-based compensation";
- shares of Class A common stock reserved for issuance under our Employee Stock Purchase Plan as described in "Executive compensation—New incentive arrangements"; and
- shares of Class A common stock reserved as of the closing date of this offering for future issuance upon redemption or exchange of LLC Interests by the Continuing LLC Owner.

Unless otherwise indicated, this prospectus assumes:

- the completion of the organizational transactions as described in "Transactions;"
- no exercise by the underwriters of their option to purchase additional shares of Class A common stock;
- the shares of Class A common stock are offered at $ per share (the midpoint of the price range listed on the cover page of this prospectus); and
- no exercise of outstanding options after , 2020.

SUMMARY HISTORICAL AND PRO FORMA FINANCIAL DATA

The following tables present the summary historical and pro forma financial data for Bioventus LLC and its subsidiaries for the periods and at the dates indicated. Bioventus LLC is the predecessor of the issuer, Bioventus Inc., for financial reporting purposes. The summary statements of operations and statement of cash flows data for the years ended December 31, 2019 and 2018 are derived from the Bioventus LLC audited financial statements included elsewhere in this prospectus. The summary statements of operations and statement of cash flows data for the six months ended June 27, 2020 and June 29, 2019, and the summary balance sheet data as of June 27, 2020 are derived from the Bioventus LLC unaudited interim condensed consolidated financial statements included elsewhere in this prospectus. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the information set forth herein. You should read this data together with our audited and unaudited financial statements and related notes appearing elsewhere in this prospectus and the information under the captions “Capitalization,” “Selected financial data” and “Management’s discussion and analysis of financial condition and results of operations.” Our historical results are not necessarily indicative of our future results and results of interim periods are not necessarily indicative of results for the entire year.

The summary unaudited pro forma consolidated financial data of Bioventus Inc. presented below have been derived from our unaudited pro forma consolidated financial statements included elsewhere in this prospectus. The summary unaudited pro forma balance sheet data as of June 27, 2020 give effect to the Transactions as described in “Transactions”, including the completion of this offering, as if all such transactions had occurred on that date and the summary unaudited pro forma statement of operations data for the year ended December 31, 2019 and the six months ended June 27, 2020 gives effect to the Transactions, as if all such transactions had occurred on January 1, 2019. The unaudited pro forma financial information includes various estimates which are subject to material change and may not be indicative of what our operations or financial position would have been had this offering and related transactions taken place on the dates indicated, or that may be expected to occur in the future. See “Unaudited pro forma consolidated financial information” for a complete description of the adjustments and assumptions underlying the summary unaudited pro forma consolidated financial data.

The summary historical data of Bioventus Inc. have not been presented as Bioventus Inc. has had no business transactions or activities to date and had no assets or liabilities during the periods presented in this section.

	Historical Bioventus LLC				Pro forma Bioventus Inc.(1)	
	Year ended		Six months ended		Year ended	Six months ended
(in thousands, except per share and share amounts)	December 31, 2019	December 31, 2018	June 27, 2020	June 29, 2019	December 31, 2019	June 27, 2020
Consolidated statements of operations data:						
Net sales	$ 340,141	$ 319,177	$ 136,662	$ 160,346	$	$
Cost of sales (including depreciation and amortization of $22,399, $20,614, $10,559 and $11,878, respectively)	90,935	84,168	39,077	45,126		
Gross profit	249,206	235,009	97,585	115,220		
Selling, general and administrative expense	198,475	191,672	80,809	98,903		
Research and development expense	11,055	8,095	4,742	5,062		
Change in fair value of contingent consideration	—	(739)	—	—		
Restructuring costs	575	1,373	—	529		
Depreciation and amortization	7,908	8,615	3,638	3,830		
Loss on impairment of intangible assets	—	489	—	—		
Operating income	31,193	25,504	8,396	6,896		
Interest expense	21,579	19,171	5,215	9,384		
Other (income) expense	(75)	226	(1,254)	6		
Other expense	21,504	19,397	3,961	9,390		
Income (loss) from continuing operations before income taxes	9,689	6,107	4,435	(2,494)		
Income tax expense (benefit)	1,576	1,664	(71)	315		
Net income (loss) from continuing operations	8,113	4,443	4,506	(2,809)		
Loss from discontinued operations, net of tax	1,815	16,650	—	1,616		
Net income (loss)	6,298	(12,207)	4,506	(4,425)		
Loss (income) attributable to noncontrolling interest	553	—	672	—		
Net income (loss) attributable to Bioventus	6,851	(12,207)	5,178	(4,425)	$	$
Accumulated and unpaid preferred distributions	(5,955)	(5,781)	(3,000)	(2,937)		
Net income allocated to participating shareholders	(1,555)	—	(1,249)	—		
Net (loss) income attributable to common unit holders	$ (659)	$ (17,988)	$ 929	$ (7,362)		
Net (loss) income per common unit, basic and diluted	$ (0.13)	$ (3.67)	$ 0.19	$ (1.50)		
Weighted average common units outstanding, basic and diluted	4,900	4,900	4,900	4,900		
Pro forma weighted average shares of Class A common stock outstanding:						
Basic						
Diluted						
Pro forma net (loss) income per share of Class A common stock outstanding:						
Basic					$	$
Diluted					$	$
Other Financial Data:						
Adjusted EBITDA(2)	$ 79,188	$ 72,171	$ 21,188	$ 28,342	$	$

(in thousands)	Years Ended December 31, 2019	Years Ended December 31, 2018	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019
Consolidated statements of cash flows data:				
Net cash provided by (used in):				
Operating activities from continuing operations	$ 42,545	$ 52,310	$ 25,511	$ 9,661
Investing activities from continuing operations	(7,912)	(6,061)	(1,202)	(7,297)
Financing activities	(10,951)	(13,256)	37,425	(11,109)
Discontinued operations	(1,832)	(7,163)	172	(1,702)
Effect of exchange rate changes on cash	(104)	(160)	(186)	265
Net change in cash and cash equivalents	$ 21,746	$ 25,670	$ 61,720	$ (10,182)

(in thousands)	As of June 27, 2020	Pro forma Bioventus Inc.(1) As of June 27, 2020
Balance sheet data:		
Cash and cash equivalents	$ 126,240	$
Total assets	$ 509,416	$
Total liabilities	$ 367,625	$
Accumulated deficit	$ (145,235)	$
Total members'/stockholders' equity	$ 141,791	$

(1) Gives pro forma effect to the Transactions, including the offering and sale of shares of Class A common stock in this offering at an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus. See "Unaudited pro forma consolidated financial information."

(2) We define Adjusted EBITDA as net income (loss) from continuing operations before interest expense, provision for income taxes and depreciation and amortization, adjusted for the impact of certain cash, non-cash and other items that we do not consider in our evaluation of ongoing operating performance. These items include loss on impairment of intangible assets, equity compensation, losses associated with debt refinancing, adjustments to the fair value of contingent consideration liabilities, restructuring costs, foreign currency impact and other non-recurring costs. We use Adjusted EBITDA, a non-GAAP financial measure, because we believe it is a useful indicator of our operating performance. Our management uses Adjusted EBITDA principally as a measure of our operating performance and believes that Adjusted EBITDA is useful to our investors because it is frequently used by securities analysts, investors and other interested parties in their evaluation of the operating performance of companies in industries similar to ours. Our management also uses Adjusted EBITDA for planning purposes, including the preparation of our annual operating budget and financial projections.

Adjusted EBITDA is not a measurement of financial performance under U.S. generally accepted accounting principles, or U.S. GAAP or GAAP. Adjusted EBITDA should not be considered in isolation or as a substitute for a measure of our liquidity or operating performance prepared in accordance with U.S. GAAP and is not indicative of net income (loss) from continuing operations as determined under U.S. GAAP. In addition, Adjusted EBITDA should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items. Adjusted EBITDA and other non-GAAP financial measures have limitations that should be considered before using these measures to evaluate our liquidity or financial performance. Some of these limitations are as follows:

Adjusted EBITDA excludes certain tax payments that may require a reduction in cash available to us; does not reflect our cash expenditures, or future requirements, for capital expenditures (including capitalized software developmental costs) or contractual commitments; does not reflect changes in, or cash requirements for, our working capital needs; does not reflect the cash requirements necessary to service interest or principal payments on our debt; and excludes certain purchase accounting adjustments related to acquisitions.

In addition, our definition and calculation of Adjusted EBITDA may differ from that of other companies. We compensate for these limitations by relying primarily on our U.S. GAAP results and by using non-GAAP financial measures as a supplement.

The following table presents a reconciliation of net income (loss) from continuing operations to Adjusted EBITDA for the periods presented:

	Year ended		Six Months Ended		Pro Forma Bioventus Inc.	
(in thousands)	December 31, 2019	December 31, 2018	June 27, 2020	June 29, 2019	Year ended December 31, 2019	Six Months Ended June 27, 2020
Net income (loss) from continuing operations	$ 8,113	$ 4,443	$ 4,506	$ (2,809)	$	$
Depreciation and amortization[a]	30,316	29,238	14,513	15,712		
Income tax expense (benefit)	1,576	1,664	(71)	315		
Interest expense	21,579	19,171	5,215	9,384		
Equity compensation[b]	10,844	14,325	(6,771)	2,121		
COVID-19 benefits, net[c]	—	—	(1,101)	—		
Succession and transition charges[d]	—	—	4,574	—		
Restructuring costs[e]	575	1,373	—	529		
Foreign currency impact[f]	8	234	40	48		
Loss on impairment of intangible assets[g]	—	489	—	—		
Losses associated with debt refinancing[h]	367	—	—	—		
Change in fair value of contingent consideration[i]	—	(739)	—	—		
Other non-recurring costs[j]	5,810	1,973	283	3,042		
Adjusted EBITDA	$ 79,188	$ 72,171	$ 21,188	$ 28,342	$	$

(a) Includes for the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, respectively, depreciation and amortization of $22.4 million, $20.6 million, $10.6 million and $11.9 million in cost of sales and $7.9 million, $8.6 million, $3.6 million and $3.8 million represented in the consolidated statements of operations and comprehensive income (loss) with the balance in research and development.

(b) Represents compensation as well as the change in fair market value resulting from two equity-based compensation plans, the MIP and the Phantom Plan.

(c) Represents income resulting from the Coronavirus Aid, Relief and Economic Security Act, or CARES Act, offset by additional cleaning and disinfecting expenses and contract termination fees for events we were unable to hold.

(d) Primarily represents costs related to the chief executive officer transition.
(e) Represents costs related to a shift from direct to an indirect distribution model in our International business to improve performance. In addition, various international subsidiaries were dissolved and or merged into other Bioventus LLC entities.
(f) Represents realized and unrealized gains and losses from fluctuations in foreign currency and is included in other (income) expense on the consolidated statements of operations and comprehensive income (loss).
(g) Represents the write-off of an intangible asset related to a BGS product we no longer sell.
(h) Represents charges with our 2019 debt refinancing that were included in selling, general and administrative expense on the consolidated statements of operations and comprehensive income (loss).
(i) Represents adjustments to the fair value of contingent consideration liabilities related to a supply agreement resulting from the OsteoAMP acquisition.
(j) Represents charges associated with Bioventus LLC potential strategic transactions such as potential acquisitions or preparing to become a public company, primarily accounting and legal fees.

RISK FACTORS

Investing in our Class A common stock involves a high degree of risk. These risks include, but are not limited to, those described below, each of which may be relevant to an investment decision. You should carefully consider the risks described below, together with all of the other information in this prospectus, including our financial statements and related notes, before investing in our Class A common stock. The realization of any of these risks could adversely affect our business, results of operations and financial condition. In that event, the trading price and value of our Class A common stock could decline, and you may lose part or all of your investment.

Risks related to our business

Our business may continue to experience adverse impacts as a result of the COVID-19 pandemic.

In March 2020, the World Health Organization declared the outbreak of COVID-19 to be a pandemic. The COVID-19 pandemic is having widespread, rapidly evolving and unpredictable impacts on global society, economies, financial markets and business practices. Federal and state governments have implemented measures in an effort to contain the virus, including social distancing, travel restrictions, border closures, limitations on public gatherings, work from home and supply chain logistical changes. We remain focused on protecting the health and well-being of our employees, partners and patients while assuring the continuity of our business operations. Furthermore, the long-term impact of COVID-19 on our business will depend on many factors, including, but not limited to, the duration and severity of the pandemic and the impact it has on our partners, patients and communities in which we operate, all of which continue to be uncertain. For example, there has been a decrease in patient visits to hospitals due to risk and fear of exposure to COVID-19, as well as decreases in, or temporary moratoriums on, elective procedures, which may be re-imposed in the future. Our business, results of operations and financial condition have been, and may continue to be, materially impacted due to the decrease in patient visits and elective procedures and any future temporary cessations of elective procedures and could be further impacted by delays in payments from customers, supply chain interruptions, extended “shelter in place” orders or advisories, facility closures or other reasons related to the pandemic.

To the extent the COVID-19 disruptions adversely impact our business, results of operations and financial condition, it may also have the effect of heightening many of the other risks described in “Risk Factors,” including risks relating to our ability to successfully commercialize new developed or acquired products or therapies, consolidation in the healthcare industry, disruptions in the supply or manufacturing of our products or their components, intensified pricing pressure as a result of changes in the purchasing behavior of hospitals and maintenance of our numerous contractual relationships.

We are highly dependent on a limited number of products.

Our OA joint pain treatment and joint preservation products accounted for 54%, 49%, 51% and 53% of our total revenue for the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, respectively. We expect that sales of such products will continue to account for a substantial portion of our revenue, and therefore, our ability to execute our growth strategy and maintain profitability will depend upon the continued demand for these products. In addition, our supply and distribution agreements for Durolane, GELSYN-3 and SUPARTZ FX are subject to renewal and their terms end in December 2115, February 2026 and May 2028, respectively. If the supply and distribution agreements for any of our HA viscosupplementation therapies were terminated, our revenue would be impaired. If our OA joint pain treatment and joint preservation products fail to maintain their market acceptance for any reason, our business, results of operations and financial condition may be adversely affected.

Our long-term growth depends on our ability to develop, acquire and commercialize new products, line extensions or expanded indications.

Our industry is highly competitive and subject to rapid change and technological advancements. Therefore, it is important to our business that we continue to introduce new products and/or enhance our existing product offerings through line extensions or expanded indications. Developing, acquiring and commercializing products is expensive, time-consuming and could divert management's attention away from our existing business. Even if we are successful in developing additional products, the success of any new product offering or enhancements to existing products will depend on several factors, including our ability to:

- properly identify and anticipate the needs of healthcare professionals and patients;
- develop and introduce new products, line extensions and expanded indications in a timely manner;
- distinguish our products from those of our competitors;
- avoid infringing upon the intellectual property rights of third-parties and maintain necessary intellectual property licenses from third-parties;
- demonstrate, if required, the safety and efficacy of new products with data from preclinical studies and clinical trials;
- obtain clearance or approval, if required, from the FDA and other regulatory agencies, for such new products, line extensions and expanded indications, and maintain full compliance with FDA and other regulatory requirements applicable to new devices or products or modifications of existing devices or products;
- provide adequate training to potential users of our products;
- receive adequate coverage and reimbursement for our products; and
- maintain an effective and dedicated sales and marketing team.

If we are unsuccessful in developing, acquiring and commercializing new products or enhancing our existing product offerings through line extensions and expanded indications, our ability to increase our net sales may be impaired.

Additionally, our research and development efforts may require a substantial investment of time and resources before we are adequately able to determine the commercial viability of a new product, technology, material or other innovation. Such efforts may not result in the development of a viable product. In addition, even if we are able to successfully develop new active healing products, line extensions and expanded indications, these products may not produce sales in excess of the costs of development and they may be rendered obsolete by changing customer preferences or the introduction by our competitors of products embodying new technologies or features.

We may be unable to successfully commercialize newly developed or acquired products or therapies in the United States.

The commercial success of newly acquired or developed products, such as MOTYS, in the United States will depend upon the awareness and acceptance of such products among the medical community, including physicians and patients. Market acceptance will depend on a number of factors, including, among others:

- the perceived advantages and disadvantages of such products over existing therapies and other competitive treatments;
- availability of alternative treatments;
- inability to secure and maintain adequate coverage, including obtaining a unique reimbursement code;

- the extent to which physicians prescribe the Company's products;
- the willingness of the target patient population to try new therapies;
- the strength of marketing and distribution support of the Company's new products and competitive products;
- publicity concerning the Company's new products, our existing products or competing products and treatments;
- pricing and cost effectiveness of such new therapies;
- the effectiveness of our sales and marketing strategies; and
- the willingness of patients to pay out-of-pocket in the absence of third-party reimbursement.

Our efforts to educate the medical community about the benefits of newly acquired or developed products may require significant resources and we may never be successful. If such newly acquired or developed products do not achieve an adequate level of acceptance by patients and physicians in the United States, our business, results of operations and financial condition may be adversely affected.

Demand for our existing portfolio of products and any new products, line extensions or expanded indications depends on the continued and future acceptance of our products by physicians, patients, third-party payers and others in the medical community.

We cannot be certain that our existing portfolio of products and any new products, line extensions or expanded indications that we develop will achieve or maintain market acceptance. With respect to our OA joint pain treatment and joint preservation products, third-party payers may be reluctant to continue to cover our HA viscosupplementation therapies at their current prices. Further, new injectable therapies or oral medications may become available that help manage OA joint pain in a more convenient and/or cost effective manner than our HA viscosupplementation therapies. With respect to our BGS products, new allograft, DBMs, synthetics, growth factors, or other enhancements to our existing implants may never achieve broad market acceptance, which can be affected by a lack of clinical acceptance of BGSs and technologies, introduction of competitive treatment options which render BGSs and technologies too expensive or obsolete and difficulty training surgeons in the use of BGSs and technologies. Media reports or other negative publicity concerning both methods of tissue recovery from donors and actual or potential disease transmission from donated tissue may limit widespread acceptance by the medical community of our allografts, growth factor and DBMs, whether directed at these products generally or our products specifically. Unfavorable reports of improper or illegal tissue recovery practices by any participant in the industry, both in the United States and internationally, as well as incidents of improperly processed tissue leading to transmission of disease, may broadly affect the rate of future tissue donation and market acceptance of allograft based technologies by the medical community.

In addition, we believe that even if the medical community generally accepts our existing portfolio of products and any new products, line extensions or expanded indications, acceptance and recommendations by influential members of the medical community will be important to their broad commercial success. If the medical community does not broadly accept our products, we may not remain competitive in the market, which could adversely affect our business, results of operations and financial condition.

Our commercial success depends on our ability to differentiate the HA viscosupplementation therapies that we own or distribute from alternative therapies for the treatment of OA.

Our ability to achieve commercial success will, at least in part, depend on our ability to differentiate the HA viscosupplementation therapies that we own or distribute in such a way that physicians and patients will select them. The HA viscosupplementation therapies that we own or distribute could face competition from steroid injections, other HA viscosupplementation therapies, combination HA viscosupplementation/steroid therapies and alternate therapies for the treatment of OA, including those currently in development.

We expect that the HA viscosupplementation therapies that we own or distribute will continue to be used primarily after oral analgesics and steroid injections no longer provide adequate pain relief. In addition, the five and three injection HA viscosupplementation therapies that we distribute face competition from single injection therapies. We expect the three injection market to decline by a projected 3.1% CAGR and the five injection market to decline by a projected 13.6% CAGR from 2019 to 2024. Due to the convenience associated with the single injection treatments, it is expected that these products will continue to capture increasing market share of the HA viscosupplementation therapies market, which may adversely affect our business, results of operations and financial condition to the extent physicians and patients do not select Durolane, our single injection HA viscosupplementation therapy. There are also a number of combination HA viscosupplementation/steroid therapies currently in development. The American Association of Orthopedic Surgeons, or AAOS, since the release of their May 2013 clinical practice guidelines, does not recommend the use of HA for patients with symptomatic knee OA. The evidence for the AAOS recommendation is based on two or more high quality studies with consistent findings for recommending for or against the intervention. The AAOS recommendation states that practitioners should follow a strong recommendation, such as this one, unless a clear and compelling rationale for an alternative approach is present. In May 2018, the Journal of the AAOS ranked the nonsteroidal anti-inflammatory drug naproxen the most effective in individual knee OA treatment for improving both pain and function. To the extent that any additional therapies receive approval or alternative therapies receive positive support from the AAOS or other physician associations, they could reduce the market share represented by HA viscosupplementation therapies for OA treatment and adversely affect our commercial success.

If we are unable to differentiate the HA viscosupplementation therapies we own or distribute from other therapies, physicians and patients may not be willing to use them or be willing to switch from existing therapies with which they are familiar. Once physicians incorporate a particular treatment into their practice, they may not alter their practice absent compelling clinical evidence of safety and/or effectiveness and/or significant pricing reimbursement advantages.

The proposed down-classification of non-invasive bone growth stimulators, including our Exogen system, by the FDA could increase future competition for bone growth stimulators and otherwise adversely affect the Company's sales of Exogen.

On August 17, 2020, FDA published a Federal Register notice announcing its proposal to reclassify non-invasive bone growth stimulators, such as Exogen, from Class III medical devices to Class II with special controls. Class III devices are subject to the most stringent regulatory pathway for approval for medical devices requiring, among other things, rigorous clinical studies and pre-approval manufacturing review. Class II devices may be cleared for marketing by the FDA under the 510(k) pathway if they are determined to be substantially equivalent to a legally marketed predicate device. The 510(k) clearance process does not always require clinical testing, and is generally less onerous than the premarket approval process applicable to Class III devices. On September 8-9, 2020, the Orthopaedic and Rehabilitation Devices Panel of the FDA Medical Devices Advisory Committee met and discussed FDA's proposal. The Panel, whose authority is non-binding but nonetheless considered by FDA, ultimately voted in favor of FDA's proposal to down-classify non-invasive bone growth stimulators.

The FDA is accepting comments on its proposed order to down-classify the devices through October 16, 2020, and the agency has proposed that any final order would become effective 30 days after publication. While FDA has not yet finalized its proposal to down-classify non-invasive bone growth stimulators, should such down-classification occur now or in the future, we may face additional competition from new market entrants who would be able to pursue marketing authorization through the 510(k) clearance pathway instead of the more onerous and burdensome PMA approval process. Class II devices that qualify as durable medical equipment under the Medicare program may also be eligible for inclusion in Medicare's competitive bidding program for durable medical equipment, prosthetics, orthotics and supplies. As a result of down-classification, Exogen could face additional competition or we could receive lower reimbursement amounts for Exogen, all of which could adversely affect our business, results of operations and financial condition.

If we are unable to achieve and maintain adequate levels of coverage and/or reimbursement for our products, the procedures using our products, or any future products we may seek to commercialize, the commercial success of these products may be severely hindered.

Our products are purchased by healthcare providers and customers who typically bill third-party payers, such as government programs, including Medicare and Medicaid, or private insurance plans and healthcare networks, to cover all or a portion of the costs and fees associated with our products. Patients may also be billed for deductibles or co-payments in accordance with third-party payer policies. These third-party payers and insurers may deny reimbursement if they determine that a device or product provided to a patient or used in a procedure does not meet applicable payment criteria or if the policyholder's healthcare insurance benefits are limited.

As required by law, the Centers for Medicare and Medicaid Services, or CMS, which administers the Medicare program, has continued efforts to implement a competitive bidding program for selected durable medical equipment, prosthetic and orthotic supplies items paid for by the Medicare program. In this program, Medicare rates are based on bid amounts for certain products in designated geographic areas, rather than the Medicare fee schedule amount. Bone growth stimulation products like our Exogen system are currently exempt from this competitive bidding process, but may be eligible for inclusion if the FDA's proposed down-classification order becomes effective. We cannot predict which products from any of our businesses may ultimately be affected or whether or when the competitive bidding process may be extended to our businesses.

Limits put on reimbursement by third-party payers, whether foreign or domestic, governmental or commercial, could make it more difficult to buy our products and substantially reduce, or possibly eliminate, patient access to our products. The healthcare industry in the United States has experienced a trend toward cost containment as government and private insurers seek to control rising healthcare costs by imposing lower payment rates and negotiating reduced contract rates with providers and suppliers.

There is no uniform policy of coverage and reimbursement for our products or procedures using our products among third-party payers in the United States, and coverage and reimbursement for our products and procedures using our products can differ significantly from payer to payer. Further, these payers regularly review new and existing technologies for possible coverage and can, without notice, deny or reverse coverage for new or existing products and treatments. Third-party payers may not consider our products to be medically necessary or cost-effective for certain indications or off-label uses or for all uses, and as a result, may not provide coverage for the products. For example, Blue Cross Blue Shield Association's Evidence Street platform issued a report in March 2018 questioning the efficacy of our Exogen system, which resulted in several non-coverage policies being issued by member organizations. Additionally, to the extent that third party payers decide that they are no longer willing to provide reimbursement for physician prescribed off-label uses of Exogen, sales may be negatively impacted. See "Risk factors—Risks related to government regulation—We may be subject to enforcement action if we engage in improper marketing or promotion of our products, and the misuse or off-label use of our products may harm our image in the marketplace, result in injuries that lead to product liability suits or result in costly investigations, fines or sanctions by regulatory bodies if we are deemed to have engaged in the promotion of these uses, any of which could be costly to our business."

We may also be required to conduct expensive clinical studies to justify coverage and reimbursement and/or the level of reimbursement relative to other therapies. In addition, should governmental authorities continue to enact legislation or adopt regulations that affect third-party coverage and reimbursement, access to our products and coverage by private or public insurers may be reduced. If third-party payers or insurers that currently cover or reimburse our products or the procedures in which they are used limit their coverage or reimbursement in the future, or if other third-party payers or insurers issue similar policies, this could impact our ability to sell our products, force us to lower the price we charge for our products, and adversely affect our business, results of operations and financial condition.

Our ability to market and sell our products could be harmed by future actions by CMS, other government agencies or private payers to diminish payments to healthcare providers and suppliers. For example, the CMS, in its ongoing implementation of the Medicare program, periodically reviews medical study literature to determine how the literature addresses certain procedures and therapies in the Medicare population. The impact that these assessments could have on Medicare or third-party payer coverage determinations for our products is currently unknown, but we cannot provide assurances that the resulting actions will not restrict Medicare or other insurance coverage for our products. In addition, there can be no assurance that we or our distributors will not experience significant coverage or reimbursement impediments in the future related to these or other programs and policies of CMS. Specifically, drug pricing reform legislation and executive orders, which could negatively affect the reimbursement rates paid for HA viscosupplements, have been issued by the White House and proposed by Congress, and may be enacted in the future.

Private payers may adopt coverage decisions and payment amounts determined by CMS as guidelines in setting their coverage and reimbursement policies. In addition, for some governmental programs, such as Medicaid, coverage and reimbursement differs from state to state. Medicaid payments to physicians, facilities and other providers are often lower than payments by other third-party payers and some state Medicaid programs may not pay an adequate amount for the procedures performed with our products, if any payment is made at all. If CMS, other government agencies or private payers lower their reimbursement rates, or if any of the proposed drug pricing executive orders or legislative reforms are enacted, the commercial success of our products may be adversely affected.

Our business may be adversely affected if consolidation in the healthcare industry leads to demand for price concessions or if a GPO, third-party payers or other similar entities exclude us from being a supplier.

Healthcare costs have risen significantly over the past decade, which has resulted in or led to numerous cost reform initiatives by legislators, regulators and third-party payers. Cost reform has triggered a consolidation trend in the healthcare industry to aggregate purchasing power, which may increase requests for pricing concessions or risk vendor exclusion. For example, non-clinical staff at hospitals are increasingly involved in the evaluation of products and product purchasing decisions. In order for us to sell our products, we must convince such staff as well as physicians and hospitals that our products are attractive alternatives to competing products for use in surgical procedures. Additionally, GPOs, independent delivery networks and large single accounts may continue to use their market power to consolidate purchasing decisions for physicians. Third-party payers may also continue to use their market power to reduce the reimbursement for our products by increasing the rebates we are required to pay them when our products are covered, which may negatively impact our results. We expect that market demand, government regulation, third-party coverage and reimbursement policies and societal pressures will continue to change the healthcare industry worldwide, resulting in further business consolidations and alliances among our customers, which may exert further downward pressure on the prices of our products.

If we choose to acquire or invest in new businesses, products or technologies, we may be unable to complete these acquisitions or to successfully integrate them in a cost-effective and non-disruptive manner.

Our success depends on our ability to enhance and broaden our product offerings in response to changing customer demands, competitive pressures and advances in technologies. We continue to search for viable acquisition candidates or strategic alliances that would expand our market sector and/or global presence, as well as additional products appropriate for current distribution channels. Accordingly, we may in the future pursue the acquisition of, or joint ventures relating to, new businesses, products or technologies instead of developing them internally. For example, we entered into an Option and Equity Purchase Agreement with CartiHeal providing for, among other things, an exclusive option to acquire the company under certain terms and conditions as described above. See “Business—Development and Clinical Pipeline—Treatment of Cartilage for Osteochondral defects—CartiHeal (developer of Agili-C) investment and option and equity purchase agreement.” Potential future and

completed acquisitions and strategic investments, such as the CartiHeal transaction, involve numerous risks, including:

- risks associated with conducting due diligence;
- problems integrating the purchased technologies, products or business operations;
- inability to achieve the anticipated synergies and overpaying for acquisitions or unanticipated costs associated with acquisitions;
- invalid net sales assumptions for potential acquisitions;
- issues maintaining uniform standards, procedures, controls and policies;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers, distributors and customers;
- risks associated with entering new markets in which we have limited or no experience;
- potential loss of key employees of acquired businesses; and
- increased legal, accounting and compliance costs.

We compete with other companies for these opportunities, and we may be unable to consummate such acquisitions or joint ventures on commercially reasonable terms, or at all. In addition, acquired businesses may have ongoing or potential liabilities, legal claims (including tort and/or personal injury claims) or adverse operating issues that we fail to discover through due diligence prior to the acquisition. Even if we are aware of such liabilities, claims or issues, we may not be able to accurately estimate the magnitude of the related liabilities and damages. In particular, to the extent that prior owners of any acquired businesses or properties failed to comply with or otherwise violated applicable laws or regulations, failed to fulfill their contractual obligations to their customers, or failed to satisfy legal obligations to employees or third parties, we, as the successor, may be financially responsible for these violations and failures and may suffer reputational harm or otherwise be adversely affected. Acquisitions also frequently result in the recording of goodwill and other intangible assets which are subject to potential impairment in the future that could harm our financial results. If we were to issue additional equity in connection with such acquisitions, this may dilute our stockholders.

Pricing pressure from our competitors or hospitals may affect our ability to sell our products at prices necessary to support our current business strategies.

Medical device companies, healthcare systems and GPOs have intensified competitive pricing pressure as a result of industry trends and new technologies. Purchasing decisions are gradually shifting to hospitals, IDNs and other hospital groups, with surgeons and other physicians increasingly acting only as "employees." Changes in the purchasing behavior of hospitals or the amount third-party payers are willing to reimburse our customers for procedures using our products, including those as a result of healthcare reform initiatives, could create additional pricing pressure on us. In addition to these competitive forces, we continue to see pricing pressure as hospitals introduce new pricing structures into their contracts and agreements, including fixed price formulas, capitated pricing and episodic or bundled payments intended to contain healthcare costs. If such trends continue to drive down the prices we are able to charge for our products, our profit margins will shrink, adversely affecting our business, results of operations and financial condition.

If we fail to successfully enter into purchasing contracts for our BGS products or engage in contract bidding processes internationally, we may not be able to receive access to certain hospital facilities and our sales may decrease.

In the United States, the hospital facilities where physicians treat patients with our BGS products typically require us to enter into purchasing contracts. The process of securing a satisfactory contract can be lengthy and

time-consuming and require extensive negotiations and management time. In certain international jurisdictions, from time to time, certain institutions require us to engage in a contract bidding process in the event that such institutions are considering making purchase commitments that exceed specified cost thresholds, which vary by jurisdiction. These processes are only open at certain periods of time, and we may not be successful in the bidding process. If we do not receive access to hospital facilities through these contracting processes or otherwise, or if we are unable to secure contracts or tender successful bids, our sales may stagnate or decrease and our operating results may be harmed. Furthermore, we may expend significant effort in these time-consuming processes and still may not obtain a purchase contract from such hospitals.

Governments outside the United States may not provide coverage or reimbursement of our products, which may adversely affect our business, results of operations and financial condition.

Acceptance of our products in international markets may depend, in part, upon the availability of coverage and reimbursement within prevailing healthcare payment systems. Reimbursement and healthcare payment systems in international markets vary significantly by country, and include both government-sponsored healthcare and private insurance. Our products may not obtain international coverage and reimbursement approvals in a timely manner, if at all, which may require consumers desiring our products to purchase them directly. Third-party coverage and reimbursement for our products or any of our products in development for which we may receive regulatory approval may not be available or adequate in international markets, which could adversely affect our business, results of operations and financial condition.

Our future growth depends on physician awareness of the distinctive characteristics, benefits, safety, clinical efficacy and cost-effectiveness of our products.

We focus our sales, marketing and training efforts on physicians, surgeons and other health care professionals. The acceptance of our products depends in part on our ability to educate physicians as to the distinctive characteristics, benefits, safety, clinical efficacy and cost-effectiveness of our products compared to alternative products, procedures and therapies. If physicians, surgeons or other healthcare professionals are not properly trained, they may misuse or ineffectively use our products, which may result in unsatisfactory patient outcomes, patient injury, negative publicity or lawsuits against us. In addition, a failure to educate physicians, surgeons or other healthcare professionals regarding our products may impair our ability to achieve market acceptance of our products.

We compete and may compete in the future against other companies, some of which have longer operating histories, more established products or greater resources than we do, which may prevent us from achieving increased market penetration or improved operating results.

The medical device industry is characterized by intense competition, subject to rapid change and significantly affected by market activities of industry participants, new product introductions and other technological advancements. We believe that our competitors have historically dedicated and will continue to dedicate significant resources to promote their products or to develop new products. We have competitors in the United States and internationally, including major medical device and pharmaceutical companies, biotechnology companies and universities and other research institutions.

These companies and other industry participants may develop alternative treatments, products or procedures that compete directly or indirectly with our products. If alternative treatments are, or are perceived to be, superior to our products, sales of our products could be adversely affected and our results of operations could suffer. Our competitors may also develop and patent processes or products earlier than we can or obtain regulatory clearance or approvals for competing products more rapidly than we can, which could impair our ability to develop and commercialize similar processes or products.

Many of our current and potential competitors are major medical device and pharmaceutical companies that have substantially greater financial, technical and marketing resources than we do, and they may succeed in

developing products that would render our products obsolete or noncompetitive. It is also possible that our competition will be able to leverage their large market share to set prices at a level below that which is profitable for us.

Some of our competitors enjoy several competitive advantages over us, including:

- greater financial, human and other resources for product research and development, sales and marketing and litigation;
- significantly greater name recognition;
- control of intellectual property and more expansive portfolios of intellectual property rights, which could impact future products under development;
- greater experience in obtaining and maintaining regulatory clearances or approvals for products and product enhancements;
- established relationships with hospitals and other healthcare providers, physicians, suppliers, customers and third-party payers;
- additional lines of products, and the ability to bundle products to offer greater incentives to gain a competitive advantage; and
- more established sales, marketing and worldwide distribution networks.

The potential introduction by competitors of products that compete with our existing or planned products may also make it difficult to market or sell our products. In addition, the entry of multiple new products and competitors may lead some of our competitors to employ pricing strategies that could adversely affect the pricing of our products and pricing in the market generally.

As a result, our ability to compete successfully will depend on our ability to develop proprietary products that reach the market in a timely manner, receive adequate coverage and reimbursement from third-party payers, and are safer, less invasive and more effective than alternatives available for similar purposes. If we are unable to do so, our sales or margins could decrease, which would adversely affect our business, results of operations and financial condition.

The reclassification of our HA products from medical devices to drugs in the United States by the FDA could negatively impact our ability to market these products and may require that we conduct costly additional clinical studies to support current or future indications for use of those products.

On December 18, 2018, the FDA published notice in the Federal Register announcing its intention to reconsider the appropriate classification of HA intra-articular products intended for the treatment of pain in OA of the knee. Although HA products intended for this use have previously been regulated as medical devices, in its notice the FDA stated that current published scientific literature supports that HA products achieve their primary intended purpose of treatment of pain in OA of the knee through biological action in the body which would require such products being classified as drugs. The FDA has encouraged organizations intending to submit applications for changes in indications for use, formulation, or route of administration of their HA products to obtain from the FDA an informal or formal classification and jurisdiction determination as a drug or device through a pre-request for designation or request for designation, respectively, prior to submission of such application. However, the FDA to date has taken no action to reclassify HA products from medical devices to drugs, or indicated what the potential ramifications would be for currently marketed HA products if a reclassification were to occur.

We currently market three HA products: Durolane, GELSYN-3 and SUPARTZ FX. If the reclassification of HA products were to occur, the FDA may not allow us to continue to market these products without submitting additional clinical trial data, obtaining approval of a New Drug Application, or NDA, for these products, or

without otherwise complying with new conditions or limitations on how those products are marketed. Clinical testing can take years to complete, can be expensive and carries uncertain outcomes, and there is no guarantee that would be able to successfully obtain and maintain any required regulatory approvals. These new regulatory obligations could result in increased regulation of Durolane, GELSYN-3 and SUPARTZ FX and would subject these products to a new set of regulatory requirements to which they have not been previously subject. These changes could ultimately increase our costs and adversely impact our business, results of operations and financial condition if they were to be implemented. See "Risk factors—Risks related to our business—If we are unable to achieve and maintain adequate levels of coverage and/or reimbursement for our products, the procedures using our products, or any future products we may seek to commercialize, the commercial success of these products may be severely hindered."

Our ability to maintain our competitive position depends on our ability to attract, retain and motivate our senior management team and highly qualified personnel, and our failure to do so could adversely affect our business, results of operations and financial condition.

We believe that our continued success depends to a significant extent upon the skill, experience and performance of members of our senior management team, who have been critical to the management of our operations and implementation of our strategy, as well as our ability to continue to attract, retain and motivate additional executive officers, and other key employees and consultants, such as those individuals who are engaged in our research and development efforts. The replacement of any of our key personnel likely would involve significant time and costs and may significantly delay or prevent the achievement of our business objectives and could therefore adversely affect our business, results of operations and financial condition. In addition, we do not carry any "key person" insurance policies that could offset potential loss of service under applicable circumstances.

Competition for experienced employees in the medical device industry can be intense. To attract, retain and motivate qualified employees, we may utilize equity-based incentive awards such as employee stock options. If the value of such equity incentive awards does not appreciate as measured by the performance of the price of our Class A common stock and ceases to be viewed as a valuable benefit, our ability to attract, retain and motivate our employees could be adversely impacted, which could adversely affect our business, results of operations and financial condition and/or require us to increase the amount we expend on cash and other forms of compensation.

Our history of operations includes periods of net losses, and we may not be able to sustain profitability.

For the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, we had net income (loss) from continuing operations of $8.1 million, $4.4 million, $4.5 million and ($2.8) million, respectively. We had an accumulated deficit of $145.2 million and $141.7 million as of June 27, 2020 and December 31, 2019, respectively. Our ability to generate sufficient net sales from our existing products or from any of our products in development or products that we acquire, in order to sustain profitability, is uncertain. We expect that our operating expenses will continue to increase as we continue to develop, enhance and commercialize new products and incur additional operational costs associated with being a public company. Furthermore, we may not be able to sustain or increase profitability on an ongoing basis. If we do not achieve sustained profitability, it will be more difficult for us to finance our business and accomplish our strategic objectives.

If we fail to properly manage our anticipated growth, our business could suffer.

We have been growing steadily in recent periods. We intend to continue to grow and may experience periods of rapid growth and expansion, which could place a significant additional strain on our limited personnel, information technology systems and other resources. In particular, our sales force and distributor network requires significant management, training, financial and other supporting resources. Any failure by us to manage our growth effectively could have an adverse effect on our ability to achieve our development and commercialization goals.

To achieve our revenue goals, we must also successfully increase supply of our products to meet expected customer demand. In the future, we may experience difficulties with yields, quality control, component supply and shortages of qualified personnel, among other problems. These problems could result in delays in product availability and increases in expenses. Any such delay or increased expense could adversely affect our ability to generate revenue.

Future growth will also impose significant added responsibilities on management, including the need to identify, recruit, train and integrate additional employees. In addition, rapid and significant growth will place a strain on our administrative and operational infrastructure.

In order to manage our operations and growth we will need to continue to improve our operational and management controls, reporting and information technology systems and financial internal control procedures. If we are unable to manage our growth effectively, it may be difficult for us to execute our business strategy and our operating results and business could suffer.

We may not be able to strengthen our brand and the brands associated with our products.

We believe that strengthening the Bioventus brand and the brands associated with our products is critical to achieving widespread acceptance of our products, particularly because of the rapidly developing nature of the market for active healing products. Promoting and positioning our brand will depend largely on the success of our marketing efforts and the reliability of our products. Historically, our efforts to build our brand have involved marketing expenses, and it is likely that our future marketing efforts will require us to incur additional expenses. These brand promotion activities may not yield increased sales and, even if they do, any sales increases may not offset the expenses we incur to promote our brand and our products. If we fail to successfully promote and maintain our brand, or if we incur substantial expenses in an unsuccessful attempt to promote and maintain our brand and the brands of our products, our products may not be accepted by healthcare providers, which would cause our sales to decrease and would adversely affect our business, results of operations and financial condition.

We face the risk of product liability claims that could be expensive, divert management's attention and harm our reputation and business. We may not be able to maintain adequate product liability insurance.

Our business exposes us to the risk of product liability claims that are inherent in the testing, manufacturing and marketing of our products. This risk exists even if a product is cleared or approved for commercial sale by the FDA and manufactured in facilities regulated by the FDA or an applicable foreign regulatory authority. Our products are designed to affect, and any future products will be designed to affect, important bodily functions and processes. Any side effects, manufacturing defects, misuse or abuse associated with our products or our products in development could result in patient injury or death. The medical device industry has historically been subject to extensive litigation over product liability claims, and we cannot assure you that we will not face product liability claims. We may be subject to product liability claims if our products or products in development cause, or merely appear to have caused, patient injury or death, even if such injury or death was as a result of supplies or components that are produced by third-party suppliers. Product liability claims may be brought against us by consumers, healthcare providers or others selling or otherwise coming into contact with our products, among others. If we cannot successfully defend ourselves against product liability claims, we will incur substantial liabilities and reputational harm. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- costs of litigation;
- distraction of management's attention from our primary business;
- the inability to commercialize existing or new products;
- decreased demand for our products or, if cleared or approved, products in development;
- damage to our business reputation;

- product recalls or withdrawals from the market;
- withdrawal of clinical trial participants;
- substantial monetary awards to patients or other claimants; and
- loss of net sales.

While we may attempt to manage our product liability exposure by proactively recalling or withdrawing from the market any defective products, any recall or market withdrawal of our products may delay the supply of those products to our customers and may impact our reputation. We cannot assure you that we will be successful in initiating appropriate market recall or market withdrawal efforts that may be required in the future or that these efforts will have the intended effect of preventing product malfunctions and the accompanying product liability that may result. Such recalls and withdrawals may also be used by our competitors to harm our reputation for product safety or be perceived by patients as a safety risk when considering the use of our products, either of which could adversely affect our business, results of operations and financial condition.

In addition, although we have product liability and clinical study liability insurance that we believe is appropriate, this insurance is subject to deductibles and coverage limitations. Our current product liability insurance may not continue to be available to us on acceptable terms, if at all, and, if available, coverage may not be adequate to protect us against any future product liability claims. If we are unable to obtain insurance at an acceptable cost or on acceptable terms or otherwise protect against potential product liability claims, we could be exposed to significant liabilities. A product liability claim, recall or other claim with respect to uninsured liabilities or for amounts in excess of insured liabilities could adversely affect our business, results of operations and financial condition.

Fluctuations in the demand for our products or our inability to forecast demand accurately may influence the ability of our suppliers to meet our delivery needs or result in excess product inventory.

We are required by some of our contracts with suppliers of our products to forecast future product demand or meet minimum purchase requirements. Our supply agreement for Durolane is subject to a minimum order volume for each order and purchase amounts are based in part on forecasts. We are also subject to certain annual minimum purchase requirements for GELSYN-3 and SUPARTZ FX and purchase amounts are based on rolling annual forecasts. Our forecasts are based on multiple assumptions of product and market demand, which may cause our estimates to be inaccurate. If we underestimate demand, we may not have adequate supplies and could have reduced control over pricing, availability and delivery schedules with our suppliers, which could prevent us from meeting increased customer or consumer demand and harm our business. However, if we overestimate our demand, we may have underutilized assets and may experience reduced margins. If we do not accurately align our supplies with demand and/or fail to meet contractual minimum purchase requirements, our business, results of operations and financial condition may be adversely affected. For example, our anticipated 2020 volumes for SUPARTZ FX will not satisfy our minimum purchase obligations to our supplier. Failure to satisfy these minimums could result in the loss of our exclusive distribution rights for SUPARTZ FX in the U.S. unless we pay $1 million to maintain exclusivity.

We may face issues with respect to the supply of our products or their components, including increased costs, disruptions of supply, shortages, contaminations or mislabeling.

We are dependent on a limited number of suppliers for our products and components used in the manufacturing process of our products. Our top three suppliers provide us with products and components that constituted 54%, 49%, 51% and 53% of total net sales for the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, respectively. Durolane, GELSYN-3 and SUPARTZ FX are supplied by single-source third-party manufacturers. Our Exogen system undergoes final assembly with components procured from various suppliers, including a transducer, which is a key component that is supplied by a single source supplier. We may not be able to renew or enter into new contracts with our existing suppliers following the expiration of such contracts on commercially reasonable terms, or at all.

In particular, the success of our bone graft substitutions product portfolio, depends on our suppliers continuing to have access to donated human cadaveric tissue, as well as the maintenance of high standards in their processing methodology. The supply of such donors can fluctuate over time. We cannot be certain that our current suppliers who rely on allograft bone tissue, plus any additional sources that our suppliers identify in the future, will be sufficient to meet our product needs. Our dependence on a limited number of third-party suppliers and the challenges that they may face in obtaining adequate supplies of allograft bone tissue involve several risks, including limited control over pricing, availability, quality and delivery schedules. We may be unable to find an alternative supplier in a reasonable time period or on commercially reasonable terms, if at all, which would adversely affect our business, results of operations and financial condition.

If any of our products or the components used in our products are alleged or proven to include quality or product defects, including as a result of improper methods of tissue recovery from donors and disease transmission from donated tissue or illegal harvesting, we may need to find alternate supplies, delay production of our products, discard or otherwise dispose of our products, or engage in a product recall, all of which may adversely affect our business, results of operations and financial condition. If our products or the components in our products are affected by adverse prices or quality or other concerns, we may not be able to identify alternate sources of components or other supplies that meet our quality controls and standards to sustain our sales volumes or on commercially reasonable terms, or at all.

We rely on a limited number of third-party manufacturers to manufacture certain of our products.

Third-party manufacturers generally manufacture Durolane, GELSYN-3, SUPARTZ FX, Exogen components and our bone graft substitutions product portfolio. We have developed in-house assembly capabilities for our Exogen system. We and our third-party manufacturers are required to comply with the Quality System Regulation, or QSR, which is a set of FDA regulations that establishes current Good Manufacturing Practices, or cGMP, requirements for medical devices and covers the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of such devices. Moreover, certain of our products may be re-classified as drugs, and we are planning to seek approval of a product pursuant to the BLA pathway. In each case, such products would be required to comply with the cGMP requirements that apply to drugs and biologics, respectively.

There are a limited number of suppliers and third-party manufacturers that operate under FDA's QSR requirements and that have the necessary expertise and capacity to manufacture our products or components for our products. As a result, it may be difficult for us to locate manufacturers for our anticipated future needs, and our anticipated growth could strain the ability of our current suppliers and third-party manufacturers to deliver products, materials and components to us. Upon expiration of our existing agreements with these third-party manufacturers, we may not be able to renegotiate the terms of our agreements with these third-party manufacturers on a commercially reasonable basis, or at all.

If we or our third-party manufacturers fail to maintain facilities in accordance with the FDA's QSR, the noncomplying party could lose the ability to manufacture our products on a commercial scale. Loss of this manufacturing capability would limit our ability to sell our products, including Durolane, GELSYN-3, SUPARTZ FX and our bone graft substitutions product portfolio, which are manufactured by single-source third-party manufacturers. See "Business—Manufacturing and supply."

The manufacture of our products may not be easily transferable to other sites in the event that any of our third-party manufacturers experience breakdown, failure or substandard performance of equipment, disruption of supply or shortages of, or quality issues with, components of our products and other supplies, labor problems, power outages, adverse weather conditions and natural disasters or the need to comply with environmental and other directives of governmental agencies. From time to time, a third-party manufacturer may experience financial difficulties, bankruptcy or other business disruptions, which could disrupt our supply of finished goods or require that we incur additional expense by providing financial accommodations to the third-party

manufacturer or taking other steps to seek to minimize or avoid supply disruption, such as establishing a new third-party manufacturing arrangement with another provider. The loss of any of these third-party manufacturers or the failure for any reason of any of these third-party manufacturers to fulfill their obligations under their agreements with us, including a failure to meet our quality controls and standards, may result in disruptions to our supply of finished goods. We may be unable to locate an additional or alternate third-party manufacturing arrangement that meets our quality controls and standards in a timely manner or on commercially reasonable terms, if at all. If this occurs, our business, results of operations and financial condition will be adversely affected.

If our facilities are damaged or become inoperable, we will be unable to continue to research, develop and manufacture our products and, as a result, our business, results of operations and financial condition may be adversely affected until we are able to secure a new facility.

We do not have redundant facilities for the final assembly of our Exogen system. Our other facilities and equipment would be costly to replace and could require substantial lead-time to repair or replace. Our facilities may be harmed or rendered inoperable by natural or man-made disasters, including, but not limited to, tornadoes, flooding, fire and power outages. Such disasters may render it difficult or impossible to manufacture and commercialize our products and conduct our research and development activities for new products, line extensions and expanded indications. The inability to perform those activities, combined with our limited inventory of supplies, components and finished product, may result in the inability to continue manufacturing or supplying our products during such periods and the loss of customers or harm to our reputation. Although we possess insurance for damage to our facilities and the disruption of our business, this insurance may not be sufficient to cover all of our potential losses and this insurance may not continue to be available to us on acceptable terms, or at all.

If we fail to maintain our numerous contractual relationships, our business, results of operations and financial condition could be adversely affected.

We are party to numerous contracts in the normal course of our business, including our supply and distribution agreements for Durolane, which has a current term expiring in December 2115, GELSYN-3, which has a current term expiring in February 2026, and SUPARTZ FX, which has a current term expiring in May 2028. We have contractual relationships with suppliers, distributors and agents, as well as service providers. In the aggregate, these contractual relationships are necessary for us to operate our business. From time to time, we amend, terminate or negotiate our contracts. We may also periodically be subject to, or make claims of breach of contract, or threaten legal action relating to our contracts. These actions may result in litigation. At any one time, we have a number of negotiations under way for new or amended commercial agreements. We devote substantial time, effort and expense to the administration and negotiation of contracts involved in our business. However, these contracts may not continue in effect past their current term or we may not be able to negotiate satisfactory contracts in the future with current or new business partners, which may adversely affect our business, results of operations and financial condition.

If we are unable to manage, train, maintain and grow our direct sales team and network of independent distributors, we may not be able to generate anticipated sales or we may be subject to regulatory or enforcement action.

Our operating results are directly dependent upon the sales and marketing efforts of not only our direct sales team, but also our independent distributors. If our direct sales team or independent distributors fail to adequately promote, market and sell our products, our sales could significantly decrease.

We face significant challenges and risks in managing our geographically dispersed distribution network and retaining the individuals who make up that network. If any members of our direct sales team were to leave us, or if any of our independent distributors were to cease to do business with us, our sales could be adversely affected.

In such a situation, we may need to seek alternative independent distributors or increase our reliance on our direct sales team, which may not prevent our sales from being adversely affected. If a member of our direct sales team or independent distributor were to depart and be retained by one of our competitors, we may be unable to prevent them from helping competitors solicit business from our existing customers, which could further adversely affect our sales. Because of the competition for their services, we may be unable to recruit or retain additional qualified independent distributors or to hire additional direct sales team members to work with us on favorable or commercially reasonable terms, if at all. Failure to hire or retain qualified members of our direct sales team or independent distributors would prevent us from maintaining or expanding our business and generating sales.

If we launch new products or increase our marketing efforts with respect to existing products, we will need to expand the reach of our marketing and sales networks. Our future success will depend largely on our ability to continue to hire, train, retain and motivate skilled members of our direct sales team and independent distributors with significant technical knowledge in active healing products. New hires require training and take time to achieve full productivity. If we fail to train new hires adequately, or if we experience high turnover in our sales force in the future, we cannot be certain that new hires will become as productive as may be necessary to maintain or increase our sales. Further, if we are unable to adequately train new hires and/or members of our direct sales team, if new hires and/or members of our direct sales team engage in practices such as the promotion of unapproved or off-label uses of our devices or if new hires and/or members of our direct sales team assist with the reimbursement process in a manner that results in false or fraudulent claims for reimbursement being submitted to government or private payers, we may be subject to investigations or regulatory or enforcement actions by governmental authorities or third party payers for reasons such as the promotion of unapproved or off-label uses of our devices, inappropriate actions and involvement in the reimbursement process, or inappropriate completion of reimbursement forms. See "—Risks related to government regulation—We may be subject to enforcement action if we engage in improper claims submission practices and resulting audits or denials of our claims by government agencies could reduce our net sales or profits."

If we are unable to expand our sales and marketing capabilities domestically and internationally, we may not be able to effectively commercialize our products, which would adversely affect our business, results of operations and financial condition.

Actual or attempted breaches of security, unauthorized disclosure of information, denial of service attacks or the perception that personal and/or other sensitive or confidential information in our possession or control is not secure, could result in a material loss of business, substantial legal liability or significant harm to our reputation.

We receive, collect, process, use and store a large amount of information, including personally identifiable, protected health and other sensitive and confidential information. This data is often accessed by us through transmissions over public and private networks, including the Internet. The secure transmission of such information over the Internet and other mechanisms is essential to maintain confidence in our IT systems. Despite the privacy and security measures we have in place to ensure compliance with applicable laws, regulations and contractual requirements, our facilities and systems, and those of our third-party vendors and service providers, are vulnerable to privacy and security incidents including, but not limited to, computer hacking, breaches, acts of vandalism or theft, computer viruses and other malware, including ransomware or other forms of cyber-attack, misplaced or lost data, programming and/or human errors or other similar events. A party, whether internal or external, that is able to circumvent our security systems could, among other things, misappropriate or misuse sensitive or confidential information, user information or other proprietary information, or cause significant interruptions in our operations. Internal or external parties have and will continue to attempt to circumvent our security systems, and we expect that we may in the future experience external attacks on our network, such as, reconnaissance probes, denial of service attempts, malicious software attacks and phishing attacks.

Because the techniques used to circumvent security systems can be highly sophisticated and change frequently, often are not recognized until launched against a target and may originate from less regulated and remote areas around the world, we may be unable to proactively address all possible techniques or implement adequate preventive measures for all situations. Recent, well-publicized attacks on prominent companies have resulted in the theft of significant amounts of sensitive and personal information and demonstrate the sophistication of the perpetrators and magnitude of the threat posed to companies across the nation, including the health care industry.

If someone is able to circumvent or breach our security systems, they could steal any information located therein or cause interruptions to our operations. Security breaches or attempts thereof could also damage our reputation and expose us to a risk of monetary loss and/or litigation, fines and sanctions. We also face risks associated with security breaches affecting third parties that conduct business with us or our customers and others who interact with our data. While we maintain insurance that covers certain security and privacy breaches, we may not carry appropriate insurance or maintain sufficient coverage to compensate for all potential liability. Additionally, the costs incurred to remediate any data security or privacy incident could be substantial.

We cannot assure you that our third-party service providers with access to our or our customers', suppliers', trial patients', and employees' personally identifiable and other sensitive or confidential information in relation to which we are responsible will not breach contractual obligations imposed by us, or that they will not experience data security breaches or attempts thereof, which could have a corresponding effect on our business including putting us in breach of our obligations under privacy laws and regulations and/or which could in turn adversely affect our business, results of operations and financial condition. While we attempt to address the associated risks by performing security assessments and detailed due diligence, we cannot assure you that these contractual measures and our own privacy and security-related safeguards will protect us from the risks associated with the third-party processing, storage and transmission of such information.

Failure of a key information technology and communication system, process or site could adversely affect our business, results of operations and financial condition.

We rely extensively on information technology and communication systems and software and hardware products, including those of external providers, to conduct business. These systems and software and hardware impact, among other things, ordering and managing components of our products from suppliers, shipping products to customers on a timely basis, processing transactions, coordinating our sales activities across all of our products, summarizing and reporting results of operations, complying with regulatory, legal or tax requirements, data security and other processes necessary to manage our business.

Despite any precautions we may take, our systems and software and hardware could be exposed to damage or interruption from circumstances beyond our control, such as fire, natural disasters, systems failures, power outages, cyber-attacks, terrorism, energy loss, telecommunications failure, security breaches and attempts thereof, computer viruses and similar disruptions affecting the global Internet. Although we have taken steps to prevent system failures and have back-up systems and procedures to prevent or reduce disruptions, such steps may not prevent an interruption of services and our disaster recovery planning may not be adequate or account for all contingencies. Additionally, our insurance may not adequately compensate us for all losses or failures that may occur. If our systems or software and hardware are damaged or cease to function properly and our business continuity plans do not effectively compensate on a timely basis, we may suffer interruptions in our operations, which could adversely affect our business, results of operations and financial condition.

We will need to improve and upgrade our systems and infrastructure as our operations grow in scale in order to maintain the reliability and integrity of our systems and infrastructure. The expansion of our systems and infrastructure will require us to commit substantial financial, operational and technical resources before the volume of our business increases, with no assurance that the volume of business will increase. Any service outages or delays due to the installation of any new or upgraded technology (and customer issues therewith), or

the impact on the reliability of our data from any new or upgraded technology could adversely affect our business, results of operations and financial condition.

Our business subjects us to economic, political, regulatory and other risks associated with international sales and operations that could adversely affect our business, results of operations and financial condition.

Since we sell our products in many different jurisdictions outside the United States, our business is subject to risks associated with conducting business internationally. We anticipate that net sales from international operations will continue to represent a portion of our total net sales. In addition, a number of our third-party manufacturing facilities and suppliers of our products are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including:

- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- customers in some foreign countries potentially having longer payment cycles;
- disadvantages of competing against companies from countries that are not subject to U.S. laws and regulations, including the U.S. Foreign Corrupt Practices Act, or FCPA, regulations of the U.S. Office of Foreign Assets Controls, and U.S. anti-money laundering regulations, as well as exposure of our foreign operations to liability under these regulatory regimes;
- training of third-parties on our products and the procedures in which they are used;
- reduced protection for and greater difficulty enforcing our intellectual property rights;
- unexpected changes in tariffs, trade barriers and regulatory requirements, export licensing requirements or other restrictive actions by foreign governments;
- difficulty in staffing and managing widespread operations, including compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- international regulators and third-party payers requiring additional clinical studies prior to approving or allowing reimbursement for our products;
- complexities associated with managing multiple payer reimbursement regimes, government payers or patient self-pay systems;
- production shortages resulting from any events affecting material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, global pandemics or natural disasters including earthquakes, typhoons, floods and fires.

In addition, further expansion into new international markets may require significant resources and the efforts and attention of our management and other personnel, which may divert resources from our existing business operations. As we expand our business internationally, our success will depend, in large part, on our ability to anticipate and effectively manage these and other risks associated with our operations outside of the United States.

We are exposed to foreign currency risks, which may adversely affect our business, results of operations and financial condition.

External events such as the withdrawal by the United Kingdom from the EU, global pandemics, the ongoing uncertainty regarding actual and potential shifts in U.S. and foreign trade, economic and other policies and the passage of U.S. taxation reform legislation each have caused, and may continue to cause, significant volatility in currency exchange rates. Because some of our revenue, expenses, assets and liabilities are denominated in foreign currencies, we are subject to exchange rate and currency risks. In preparing our financial statements, which are presented in U.S. dollars, we must convert all non-U.S. dollar financial results to U.S. dollars at varying exchange rates. This may ultimately result in currency gain or loss, the outcome of which we cannot predict. Furthermore, to the extent that we incur expenses or earn revenue in currencies other than in U.S. dollars, any change in the values of those foreign currencies relative to the U.S. dollar could cause our profits to decrease or our products to be less competitive against those of our competitors. To the extent that our current assets denominated in foreign currency are greater or less than our current liabilities denominated in foreign currencies, we face potential foreign exchange exposure.

To minimize such exposures, we have entered, and may in the future enter, into derivative instruments related to forecasted foreign currency transactions or currency hedges from time to time. Losses from changes in the value of the Euro or other foreign currencies relative to the U.S. dollar could adversely affect our business, results of operations and financial condition.

We are subject to differing tax rates in several jurisdictions in which we operate, which may adversely affect our business, results of operations and financial condition.

We will be subject to taxes in the United States and certain foreign jurisdictions. Due to economic and political conditions, tax rates in various jurisdictions, including the United States, may be subject to change. Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities and changes in tax laws or their interpretation. In addition, we may be subject to income tax audits by various tax jurisdictions. Although we believe our income tax liabilities are reasonably estimated and accounted for in accordance with applicable laws and principles, an adverse resolution by one or more taxing authorities could have a material impact on the results of our operations

International tariffs applied to goods traded between the United States and China may adversely affect our business, results of operations and financial condition.

International tariffs, including tariffs applied to goods traded between the United States and China, may adversely affect our business, results of operations and financial condition. Since the beginning of 2018, there has been increasing rhetoric, in some cases coupled with legislative or executive action, from several U.S. and foreign leaders regarding the possibility of instituting tariffs against foreign imports of certain materials. More specifically, in March and April of 2018, the U.S. and China have applied tariffs to certain of each other’s exports. The institution of trade tariffs both globally and between the U.S. and China specifically carries the risk of adversely affecting overall economic condition, which could have a negative impact on us as imposition of tariffs could cause an increase in the cost of our products and the components for our products, specifically with respect to our Exogen system, which may adversely affect our business, results of operations and financial condition.

The 2019 Credit Agreement contains financial and operating restrictions that may limit our access to credit. If we fail to comply with financial or other covenants in the 2019 Credit Agreement, we may be required to repay indebtedness to our existing lenders, which may harm our liquidity.

On December 6, 2019, we entered into a $250.0 million credit and guaranty agreement, or the 2019 Credit Agreement, with Wells Fargo Bank National Association, as administrative agent and collateral agent, and a

syndicate of other entities as lenders. As of June 27, 2020, we had outstanding indebtedness of $195.7 million under our term loan and $49.0 million outstanding balance on our revolving credit facility (leaving availability of $0.9 million after giving effect to $0.1 million in an outstanding letter of credit). On September 24, 2020, we repaid all borrowings outstanding under our revolving credit facility. We are subject to certain covenants under the 2019 Credit Agreement, including, but not limited to:

- a minimum interest coverage ratio and a maximum debt leverage ratio requirement as defined in our credit agreement;
- restrictions on the declaration or payment of certain distributions on or in respect of our equity interests;
- restrictions on acquisitions, investments and certain other payments;
- limitations on the incurrence of new indebtedness;
- limitations on the incurrence of new liens on property or assets;
- limitations on transfers, sales and other dispositions;
- limitations on entering into transactions with affiliates; and
- limitations on making any material change in any of our business objectives that could reasonably be expected to have a material adverse effect on the repayment of our credit agreement.

Such indebtedness could have significant consequences, including:

- requiring a substantial portion of our cash flows to be dedicated to debt service payments instead of funding growth, working capital, capital expenditures, investments or other cash requirements;
- reducing our flexibility to adjust to changing business conditions or obtain additional financing;
- exposing us to the risk of increased interest rates as certain of our borrowings, including borrowings under our term loan, are at variable rates, making it more difficult for us to make payments on our indebtedness;
- restricting us from making strategic acquisitions or causing us to make non-strategic divestitures;
- subjecting us to restrictive covenants that may limit our flexibility in operating our business; and
- limiting our ability to obtain additional financing for working capital, capital expenditures, debt service requirements and general corporate or other purposes.

In addition, we may not be able to comply with these financial covenants described above in the future. In the absence of a waiver from our lenders, any failure by us to comply with these covenants in the future may result in the declaration of an event of default, which could adversely affect our business, results of operations and financial position. See “Management’s discussion and analysis of financial condition and results of operations—Indebtedness.”

Due to the high degree of uncertainty regarding the implementation and impact of the CARES Act and other legislation related to COVID-19, there can be no assurance as to the total amount of financial assistance we will receive or that we will be able to comply with the applicable terms and conditions for retaining such assistance.

On March 27, 2020, the CARES Act was signed into law, which is aimed at providing emergency assistance and health care for individuals, families, and businesses affected by the COVID-19 pandemic and generally supporting the U.S. economy. The CARES Act, among other things, includes provisions relating to refundable payroll tax credits, deferment of employer social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, and modifications to the net interest deduction limitations. The CARES

Act and similar legislation intended to provide assistance related to the COVID-19 pandemic also authorized $175.0 billion in funding to be distributed by the U.S. Department of Health and Human Services, or the HHS, to eligible health care providers. This funding, known as the Provider Relief Fund, is designated to fund eligible healthcare providers' healthcare-related expenses or lost revenues attributable to COVID-19. Payments from the Provider Relief Fund are subject to certain eligibility criteria, as well as reporting and auditing requirements, but do not need to be repaid to the U.S. government if recipients comply with the applicable terms and conditions.

In reliance on the CARES Act, we deferred our employer social security payroll tax payments from May 2020 until the remainder of the 2020 calendar year of which, 50% is deferred until December 31, 2021, with the remaining 50% deferred until December 31, 2022. The Company has deferred $0.5 million as of June 27, 2020, all of which has been recorded in other long-term liabilities on the condensed consolidated balance sheet. We are in the process of analyzing other provision of the CARES Act to determine the financial impact on our condensed consolidated financial statements.

In April 2020, we received, without request, a $1.2 million payment from the Provider Relief Fund from HHS. We determined that we complied with the conditions to be able to keep and use the funds as reimbursement for health care related expenses and lost revenue attributable to the public health emergency resulting from COVID-19 and submitted to HHS the required attestation to agree to the applicable terms and conditions of the Provider Relief Fund Phase I General Distribution. The payment was recorded as other income on the condensed consolidated statement of operations and comprehensive (loss) income for the three and six months ended June 27, 2020. In July, we applied for and received a second Provider Relief Fund payment totaling $2.9 million, which is subject to the same conditions as the initial payment.

Due to the high degree of uncertainty regarding the implementation of the CARES Act and other stimulus legislation, there can be no assurance that the terms and conditions of the Provider Relief Fund or other relief programs will not change or be interpreted in ways that affect our ability to comply with such terms and conditions in the future, which could affect our ability to retain such assistance. We will continue to monitor our compliance with the terms and conditions of the Provider Relief Fund, including demonstrating that the distributions received have been used for healthcare-related expenses or lost revenue attributable to COVID-19. If we are unable to comply with current or future terms and conditions, our ability to retain some or all of the distributions received may be impacted, and we may be subject to actions including payment recoupment, audits and inquiries by governmental authorities, and criminal, civil or administrative penalties.

Our future capital needs are uncertain and we may need to raise additional funds in the future, and such funds may not be available on acceptable terms or at all.

We believe that our current cash and cash equivalents, in combination with the borrowing availability under our credit facility and our expected cash from operations, will be sufficient to meet our projected operating requirements for the foreseeable future. However, we may seek additional funds from public and private stock offerings, borrowings under our existing or new credit facilities or other sources in order to fund future initiatives related to the expansion of our business, which financing may not be available on acceptable or commercially reasonable terms, if at all. For example, pursuant to the Option and Equity Purchase Agreement with CartiHeal and its shareholders, CartiHeal has a put option that would require us to purchase 100% of CartiHeal's shares for $350 million under certain conditions, or the Put Option. The Put Option is only exercisable by CartiHeal upon pivotal clinical trial success of the Agili-C device and we may terminate the Put Option at any time ending 30 days after receipt by CartiHeal of the statistical report regarding the final results of the pivotal clinical upon payment of $30.0 million to CartiHeal. See "Management's discussion and analysis of financial condition and results of operations—Strategic transactions—CartiHeal (developer of Agili-C) investment and option and equity purchase agreement."

Furthermore, if we issue equity or debt securities to raise additional capital, our existing stockholders may experience dilution, and the new equity or debt securities may have rights, preferences and privileges senior to those of our existing stockholders. In addition, if we raise additional capital through collaboration, licensing or

other similar arrangements, it may be necessary to relinquish valuable rights to our products, potential products or proprietary technologies, or grant licenses on terms that are not favorable to us. If we cannot raise capital on acceptable terms, we may not be able to develop or enhance our products, execute our business plan, take advantage of future opportunities, or respond to competitive pressures, changes in our supplier relationships, or unanticipated customer requirements. Any of these events could adversely affect our business, results of operations and financial condition.

Risks related to government regulation

The risk factors listed below describe the risks we face related to government regulation. The companies who manufacture or produce certain of the products we distribute face similar risks with respect to government regulation relating to such products. If such suppliers are unable to comply with government regulations, they may not be able to continue to supply us with products, which could adversely affect our business, results of operations and financial condition.

Our products and operations are subject to extensive governmental regulation, and our failure to comply with applicable requirements could cause our business to suffer.

The healthcare industry, and in particular the medical device industry, are regulated extensively by governmental authorities, principally the FDA and corresponding state and foreign regulatory agencies and authorities. The FDA and other U.S. and foreign governmental agencies and authorities regulate and oversee, among other things:

- design, development and manufacturing;
- testing, labeling, content and language of instructions for use and storage;
- clinical trials;
- product safety;
- marketing, sales and distribution;
- premarket clearance and approval;
- conformity assessment procedures;
- record-keeping procedures;
- advertising and promotion;
- recalls and other field safety corrective actions;
- postmarket surveillance, including reporting of deaths or serious injuries and malfunctions that, if they were to recur, could lead to death or serious injury;
- postmarket studies; and
- product import and export.

The regulations to which we are subject are complex and have tended to become more stringent over time. Regulatory changes could result in restrictions on our ability to carry on or expand our operations, higher than anticipated costs or lower than anticipated sales.

The failure to comply with applicable regulations could jeopardize our ability to sell our products and result in enforcement actions such as:

- administrative or judicially imposed sanctions;
- unanticipated expenditures to address or defend such actions;

- injunctions, consent decrees or the imposition of civil penalties or fines;
- recall or seizure of our products;
- total or partial suspension of production or distribution;
- refusal to grant pending or future clearances or approvals for our products;
- withdrawal or suspension of regulatory clearances or approvals;
- clinical holds;
- untitled letters or warning letters;
- refusal to permit the import or export of our products; and
- criminal prosecution of us or our employees.

Any of these sanctions could result in higher than anticipated costs or lower than anticipated sales and harm our reputation, business, results of operations and financial condition.

Moreover, governmental authorities outside the United States have become increasingly stringent in their regulation of medical devices, and our products may become subject to more rigorous regulation by non U.S. governmental authorities in the future. U.S. or non-U.S. government regulations may be imposed in the future that adversely affect our business, results of operations and financial condition. The European Commission has harmonized national regulations for the control of medical devices through European Medical Device Directives with which manufacturers must comply. Under these new regulations, manufacturing plants must have received a full Quality Assurance Certification from a "Notified Body" in order to be able to sell products within the member states of the EU. This certification allows manufacturers to stamp the products of certified plants with a "CE" mark. Products covered by European Commission regulations that do not bear the CE mark cannot be sold or distributed within the EU. We have received certification for all of our manufacturing facilities.

We may be subject to enforcement action if we engage in improper claims submission practices and resulting audits or denials of our claims by government agencies could reduce our net sales or profits.

In connection with our Exogen system, we submit claims directly to, and receive payments directly from, the Medicare and Medicaid programs and private payers. Therefore, we are subject to extensive government regulation, including detailed requirements for submitting claims under appropriate codes and maintaining certain documentation, including evidence that all medical necessity requirements are met to support our claims. Billing for our Exogen system is complex, time-consuming and expensive, particularly for items and services provided to government healthcare program beneficiaries, such as Medicare and Medicaid. Reimbursement claims may be adversely affected by improper completion of the Certificate for Medical Necessity form, or CMN, required in connection with Medicare claims for the Exogen system and we may be subject to investigations by governmental authorities or third party payers and required to prove the validity of the claims or the authenticity of the signatures on the CMNs under investigation. Reimbursement claims may also be adversely affected by the promotion of our devices for unapproved or off-label uses or assistance with the reimbursement process that could result in false or fraudulent claims for reimbursement being submitted to government or private payers. Depending on the billing arrangement and applicable law, we bill various payers, all of which may have different prior authorization, patient qualification and medical necessity requirements, as well as patients for any applicable co-payments or co-insurance amounts. In addition, we may also face increased risk in our collection efforts, including potential write-offs of doubtful accounts and long collection cycles, any of which could adversely affect our business, results of operations and financial condition.

We are also required to implement compliance procedures and oversight, train and monitor our employees, appeal coverage and payment denials, and perform internal audits periodically to assess compliance with applicable laws and regulations as well as internal compliance policies and procedures. We are required to report

and return any overpayments received from government payers within 60 days of identification and exercise of reasonable diligence to investigate credible information regarding potential overpayments. Failure to identify and return such overpayments exposes the provider or supplier to liability under federal false claims laws. See “Risk Factors—Risks related to government regulation—We are subject to federal, state and foreign laws and regulations relating to our healthcare business, and could face substantial penalties if we are determined not to have fully complied with such laws, which would adversely affect our business, results of operations and financial condition.” Moreover, Medicare contractors and Medicaid agencies periodically conduct pre- and post-payment reviews and other audits of claims and are under increasing pressure to more closely scrutinize healthcare claims and supporting documentation. We may be subject to pre-payment and post-payment reviews, as well as audits of claims in the future. Private payers may from time to time conduct similar reviews and audits. Any third-party payer reviews and audits of our claims could result in material delays in payment, material recoupments, overpayments, claim denials, fines, revocations of billing privileges, bars on re-enrollment in federal or state healthcare programs, cancellation of our agreements or damage to our reputation, any of which would reduce our net sales and profitability.

For example, in July of 2018 we became aware of allegations that certain of our sales personnel may have been completing Section B of the CMN required in connection with Medicare claims for the Exogen system, which, under federal law, must be completed by the physician and/or physician staff. Together with our outside counsel, Ropes & Gray, we initiated an investigation into these allegations and as a result of our findings made a self-disclosure on November 30, 2018 to the Office of Inspector General of the U.S. Department of Health and Human Services, or the OIG, under the Provider Self-Disclosure Protocol. Our self-disclosure disclosed the extent of our findings relative to the inappropriate completion of CMN forms by our sales personnel and offered to make repayment for certain claims we submitted to the Medicare program between October 1, 2012 and September 30, 2018, the statutory period applicable to such conduct. In October 2019, Ropes & Gray, as our legal counsel, received a letter from the Office of the United States Attorney in the Middle District of North Carolina, or the USAO, stating that the USAO would be working with the OIG to resolve our self-disclosure. Subsequently, Ropes & Gray has received requests for further information regarding the self-disclosure from the USAO in January 2020 and June 2020, which was furnished to the USAO and OIG by Ropes & Gray on our behalf. At this time, the matter remains pending and there has been no indication from the USAO or OIG on the potential outcome of the matter or if claims will be asserted for any additional amounts. We have estimated the number of impacted claims with improperly completed CMN forms and believe the potential fine for all impacted claims may amount to $10.8 million in aggregate. Also, the OIG may require repayment of the total value of the impacted claims, or $30.1 million, as well as assess an additional fine which we believe will be equivalent to half the dollar amount of impacted claims, or $15.0 million, for an aggregate potential impact of $55.9 million. Further, we may be subject to non-monetary penalties, such as monitoring agreements, as well as requirements to conduct audits and submit reports to HHS. The ultimate outcome of these matters is uncertain and we cannot assure that the estimated fines will not be more than $55.9 million in aggregate. In the event of an unfavorable outcome, these contingencies and/or penalties may have a material adverse effect on our business, results of operations and financial condition, and we do not have an established reserve for this matter.

In 2019, separate from the self-disclosure described above, as a result of our internal auditing of Exogen Medicare claims, we made repayments to our Medicare Administrative Contractors, or MACs, for overpayments identified during such auditing totaling $7.5 million for the period October 1, 2012 through December 31, 2018. This amount reflected certain Medicare claims for Exogen for which we lacked adequate documentation of medical necessity consistent with Medicare coverage requirements. Similarly, in July of 2020, we made repayments to the MACs of $1.5 million after completing our internal auditing of Exogen Medicare claims for the period beginning January 1, 2019 through December 31, 2019. We maintain a reserve for reimbursement claims related to our Exogen system that may have been processed for payment without adequate medical records support. Our reserve is estimated using an extrapolation of an error rate from a statistical sample, which represents our best estimate as of the date of the financial statements, but because of the uncertainty inherent in such estimates, the ultimate resolution may be materially different.

The FDA regulatory process is expensive, time-consuming and uncertain, and the failure to obtain and maintain required regulatory clearances and approvals could prevent us from commercializing our products.

Before we can market or sell a new medical device or other product or a new use of or a claim for or significant modification to an existing medical device in the United States, we must obtain either clearance from the FDA under 510(k) pathway or approval of a PMA, unless an exemption applies. In the United States, we have obtained 510(k) premarket clearance from the FDA to market products such as Signafuse Bioactive Bone Graft Putty, Interface Bioactive Bone Graft and Signafuse Mineralized Collagen Scaffold. Our OA joint pain treatment and joint preservation products, including Durolane, GELSYN-3 and SUPARTZ FX, and our Exogen system, have obtained PMA approval. In the 510(k) clearance process, before a device may be marketed, the FDA must determine that a proposed device is "substantially equivalent" to a legally-marketed "predicate" device, which includes a device that has been previously cleared through the 510(k) process, a device that was legally marketed prior to May 28, 1976 (preamendments device), a device that was originally on the U.S. market pursuant to an approved PMA application and later downclassified, or a 510(k)-exempt device. To be "substantially equivalent," the proposed device must have the same intended use as the predicate device, and either have the same technological characteristics as the predicate device or have different technological characteristics and not raise different questions of safety or effectiveness than the predicate device. Clinical data are sometimes required to support substantial equivalence. In the PMA process, the FDA must determine that a proposed product is safe and effective for our intended use based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing and labeling data. The PMA process is typically required for products that are deemed to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices.

Modifications to products that are approved through a PMA application generally require FDA approval. Similarly, certain modifications made to products cleared through a 510(k) may require a new 510(k) clearance. Both the PMA approval and the 510(k) clearance process can be expensive, lengthy and uncertain. The FDA's 510(k) clearance process usually takes from three to twelve months, but can last longer. The process of obtaining a PMA is much more costly and uncertain than the 510(k) clearance process and generally takes from six to 18 months, or even longer, from the time the application is filed with the FDA. In addition, a PMA generally requires the performance of one or more clinical trials. Despite the time, effort and cost, we cannot assure you that any particular device will be approved or cleared by the FDA. Any delay or failure to obtain necessary regulatory approvals could harm our business.

Any modification to one of our 510(k) cleared products that would constitute a major change in its intended use, or any change that could significantly affect the safety or effectiveness of the device would require us to obtain a new 510(k) marketing clearance and may even, in some circumstances, require the submission of a PMA application, if the change raises complex or novel scientific issues or the product has a new intended use. The FDA requires every manufacturer to make the determination regarding the need for a new 510(k) submission in the first instance, but the FDA may review any manufacturer's decision. We may make changes to our 510(k)-cleared products in the future that we may determine do not require a new 510(k) clearance or PMA approval. If the FDA disagrees with our decision not to seek a new 510(k) or PMA approval for changes or modifications to existing devices and requires new clearances or approvals, we may be required to recall and stop marketing our products as modified, which could require us to redesign our products, conduct clinical trials to support any modifications, and pay significant regulatory fines or penalties. If there is any delay or failure in obtaining required clearances or approvals or if the FDA requires us to go through a lengthier, more rigorous examination for future products or modifications to existing products than we had expected, our ability to introduce new or enhanced products in a timely manner would be adversely affected, which in turn would result in delayed or no realization of revenue from such product enhancements or new products and could also result in substantial additional costs which could decrease our profitability.

The FDA can delay, limit or deny clearance or approval of a device for many reasons, including:

- we may not be able to demonstrate to the FDA's satisfaction that the product or modification is substantially equivalent to the proposed predicate device or safe and effective for its intended use;

- the data from our preclinical studies and clinical trials may be insufficient to support clearance or approval, where required; and
- the manufacturing process or facilities we use may not meet applicable requirements.

In addition, the FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, or take other actions, which may prevent or delay approval or clearance of our future products under development or impact our ability to modify our currently cleared or approved products on a timely basis. Even after clearance or approval for our products is obtained, we and the products are subject to extensive postmarket regulation by the FDA, including with respect to advertising, marketing, labeling, manufacturing, distribution, import, export, and clinical evaluation. For example, as a condition of approving a PMA application, the FDA may require some form of post-approval study or post-market surveillance, whereby the applicant conducts a follow-up study or follows certain patient groups for a number of years and makes periodic reports to the FDA on the clinical status of those patients when necessary to protect the public health or to provide additional safety and effectiveness data for the device. The product labeling must be updated and submitted in a PMA supplement once results, including any adverse event data from the post-approval study, become available. Failure to conduct post-approval studies in compliance with applicable regulations or to timely complete required post-approval studies or comply with other post-approval requirements could result in withdrawal of approval of the PMA, which would harm our business.

We are also required to timely file various reports with regulatory agencies. If these reports are not timely filed, regulators may impose sanctions and sales of our products may suffer, and we may be subject to product liability or regulatory enforcement actions, all of which could harm our business. In addition, if we initiate a correction or removal for one of our devices, issue a safety alert, or undertake a field action or recall to reduce a risk to health posed by the device, we may be required to submit a report to the FDA, and in many cases, to other regulatory agencies. Such reports could lead to increased scrutiny by the FDA, other international regulatory agencies and our customers regarding the quality and safety of our devices and to negative publicity, including FDA alerts, press releases, or administrative or judicial actions. Furthermore, the submission of these reports has been and could be used by competitors against us in competitive situations and cause customers to delay purchase decisions or cancel orders, which would harm our reputation and business.

The FDA and state authorities have broad enforcement powers. Our failure to comply with applicable regulatory requirements could result in enforcement action by the FDA or state agencies, which may include any of the following sanctions:

- adverse publicity, warning letters, untitled letters, fines, injunctions, consent decrees and civil penalties;
- repair, replacement, refunds, recalls, termination of distribution, administrative detention or seizures of our products;
- operating restrictions, partial suspension or total shutdown of production;
- customer notifications or repair, replacement or refunds;
- refusing our requests for 510(k) clearance or PMA approvals or foreign regulatory approvals of new products, new intended uses or modifications to existing products;
- withdrawals of current 510(k) clearances or PMAs or foreign regulatory approvals, resulting in prohibitions on sales of our products;
- FDA refusal to issue certificates to foreign governments needed to export products for sale in other countries; and
- criminal prosecution.

Any of these sanctions could also result in higher than anticipated costs or lower than anticipated sales and adversely affect our business, results of operations and financial condition.

In addition, the FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance as a result of a changing regulatory landscape, we may lose any marketing approvals or clearances that we have already obtained or fail to obtain new marketing approvals or clearances, and we may not be able to achieve or sustain profitability, which would adversely affect our business, prospects, financial condition and results of operations.

We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. For example, certain policies of the current administration under President Trump may impact our business and industry. Namely, the current administration has taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or otherwise materially delay, FDA's ability to engage in routine regulatory and oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these executive actions, including the Executive Orders, will be implemented, and the extent to which they will affect the FDA's ability to exercise its regulatory authority. If these executive actions impose constraints on the FDA's ability to engage in oversight and implementation activities in the normal course, our business, results of operations and financial condition may be adversely affected.

Once obtained, we cannot guarantee that FDA or international product approvals will not be withdrawn or rescinded or that relevant regulatory authorities will not require other corrective action, and any withdrawal, rescission or corrective action could materially affect our business and financial results.

Once obtained, marketing approval can be withdrawn by the FDA or comparable foreign regulatory authorities for a number of reasons, including the failure to comply with ongoing regulatory requirements or the occurrence of unforeseen problems following initial approval. Regulatory authorities could also limit or prevent the manufacture or distribution of our products. Any regulatory limitations on the use of our products or any withdrawal, suspension or rescission of approval by the FDA or a comparable foreign regulatory authority could have a material adverse effect on our business, financial condition, and results of operations.

Legislative or regulatory reforms, including those currently under consideration by FDA, could make it more difficult or costly for us to obtain regulatory clearance or approval of any future products and to manufacture, market and distribute our products after clearance or approval is obtained, which could adversely affect our competitive position and materially affect our business and financial results.

From time to time, legislation is drafted and introduced in Congress that could significantly change the statutory provisions governing the regulatory clearance or approval, manufacture and marketing of regulated products or the reimbursement thereof. In addition, FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, propose new reclassification orders, or take other actions, which may prevent or delay approval or clearance of our future products under development or impact our ability to market or modify our currently cleared products on a timely basis. FDA and foreign regulations depend heavily on administrative interpretation, and we cannot assure you that future interpretations made by the FDA or other regulatory bodies, with possible retroactive effect, will not adversely affect us. Additionally, any changes, whether in interpretation or substance, in existing regulations or policies, or any future adoption of new regulations or policies by relevant regulatory bodies, could prevent or delay approval of our products. In the event our future, or current, products, including HA generally, are classified, or re-classified, as human drugs, combination products, or biologics by the FDA or an applicable international regulatory body, the applicable review process related to such products is typically substantially longer and substantially more expensive than the review process to which they are currently subject as medical devices. In 2018, FDA publicly indicated its intent to consider HA products for certain indications as drugs and has indicated that sponsors of HA products who submit PMAs or PMA supplements for changes in indications for use, formulation or route of

administration should obtain an informal or formal classification and jurisdictional determination through a pre-request for determination or request for determination prior to submission. There exists uncertainty with respect to the final interpretation, implementation, and consequences of this development, and this or any other potential regulatory changes in approach or interpretation similar in substance to those mentioned in this paragraph and affecting our products could materially impact our competitive position, business, and financial results.

Moreover, over the last several years, the FDA has proposed reforms to its 510(k) clearance process, and such proposals could include increased requirements for clinical data and a longer review period, or could make it more difficult for manufacturers to utilize the 510(k) clearance process for their products. For example, in November 2018, FDA officials announced forthcoming steps that the FDA intends to take to modernize the premarket notification pathway under Section 510(k) of the FDCA. Among other things, the FDA announced that it planned to develop proposals to drive manufacturers utilizing the 510(k) pathway toward the use of newer predicates. These proposals included plans to potentially sunset certain older devices that were used as predicates under the 510(k) clearance pathway, and to potentially publish a list of devices that have been cleared on the basis of demonstrated substantial equivalence to predicate devices that are more than 10 years old. The FDA also announced that it intended to finalize guidance to establish a premarket review pathway for "manufacturers of certain well-understood device types" as an alternative to the 510(k) clearance pathway and that such premarket review pathway would allow manufacturers to rely on objective safety and performance criteria recognized by the FDA to demonstrate substantial equivalence, obviating the need for manufacturers to compare the safety and performance of their medical devices to specific predicate devices in the clearance process.

In May 2019, the FDA solicited public feedback on its plans to develop proposals to drive manufacturers utilizing the 510(k) pathway toward the use of newer predicates, including whether the FDA should publish a list of devices that have been cleared on the basis of demonstrated substantial equivalence to predicate devices that are more than 10 years old. The FDA requested public feedback on whether it should consider certain actions that might require new authority, such as whether to sunset certain older devices that were used as predicates under the 510(k) clearance pathway. These proposals have not yet been finalized or adopted, and the FDA may work with Congress to implement such proposals through legislation. Accordingly, it is unclear the extent to which any proposals, if adopted, could impose additional regulatory requirements on us that could delay our ability to obtain new 510(k) clearances, increase the costs of compliance, or restrict our ability to maintain our current clearances, or otherwise create competition that may negatively affect our business.

More recently, in September 2019, the FDA finalized the aforementioned guidance to describe an optional "safety and performance based" premarket review pathway for manufacturers of "certain, well-understood device types" to demonstrate substantial equivalence under the 510(k) clearance pathway, by demonstrating that such device meets objective safety and performance criteria established by the FDA, obviating the need for manufacturers to compare the safety and performance of their medical devices to specific predicate devices in the clearance process. The FDA intends to maintain a list device types appropriate for the "safety and performance based pathway" and develop product-specific guidance documents that identify the performance criteria for each such device type, as well as the testing methods recommended in the guidances, where feasible. The FDA may establish performance criteria for classes of devices for which we or our competitors seek or currently have received clearance, and it is unclear the extent to which such performance standards, if established, could impact our ability to obtain new 510(k) clearances or otherwise create competition that may negatively affect our business.

In addition, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. Any new statutes, regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of any future products or make it more difficult to obtain clearance or approval for, manufacture, market or distribute our products. We cannot determine what effect changes in regulations, statutes, legal interpretation or policies, when and if promulgated, enacted or adopted may have on our business in the future. Such changes could, among other things, require:

additional testing prior to obtaining clearance or approval; changes to manufacturing methods; recall, replacement or discontinuance of our products; or additional record keeping. Additionally, the implementation of the new European Medical Device Regulation, or EU MDR, set to take full effect on May 26, 2021 after a one-year postponement due to the COVID-19 pandemic, is expected to change several aspects of the existing regulatory framework in Europe. Specifically, the EU MDR will require changes in the clinical evidence required for medical devices, post-market clinical follow-up evidence, annual reporting of safety information for Class III products, and bi-annual reporting for Class II products, Unique Device Identification, or UDI, for all products, submission of core data elements to a European UDI database prior to placement of a device on the market, reclassification of medical devices, and multiple other labeling changes. While we will be able to continue marketing our currently CE-marked products in the EEA after the EU MDR enters into full effect and until the associated CE mark certificates expire, acquiring approvals for new products or renewing our existing CE mark certificates once these expire could be more challenging and costly.

Our HCT/P products are subject to extensive government regulation and our failure to comply with these requirements could cause our business to suffer.

In the United States, we sell human tissue-derived BGSs, such as PureBone and OsteoAMP, which are referred to by the FDA as human cells, tissues and cellular or tissue-based products, or HCT/Ps. In the U.S., we are marketing our HCT/Ps pursuant to Section 361 of the PHSA and 21 CFR Part 1271 of FDA's regulations. We do not manufacture these HCT/P products, but serve as a distributor for them. So-called Section 361 HCT/Ps are not currently subject to the FDA requirements to obtain marketing authorizations as long as they meet certain criteria provided in FDA's regulations. HCT/Ps regulated as "361 HCT/Ps" are currently subject to requirements relating to registering facilities and listing products with the FDA, screening and testing for tissue donor eligibility, current Good Tissue Practices, or cGTP, when processing, storing, labeling and distributing HCT/Ps, including required labeling information, stringent record keeping and adverse event reporting. If we or our suppliers fail to comply with these requirements, we could be subject to FDA enforcement action, including, for example, warning letters, fines, injunctions, product recalls or seizures, and, in the most serious cases, criminal penalties. To be regulated as Section 361 HCT/Ps, these products must meet FDA's criteria to be considered "minimally manipulated" and intended for "homologous use," among other requirements. HCT/Ps that do not meet the criteria to be considered Section 361 HCT/Ps are subject to the FDA's regulatory requirements applicable to medical devices, biologics or drugs. Device, biologic or drug HCT/Ps must comply both with the requirements exclusively applicable to Section 361 HCT/Ps and, in addition, with other requirements, including requirements for marketing authorization. For example, Section 361 HCT/Ps do not require 510(k) clearance, PMA approval, approval of a BLA, or other premarket authorization from FDA before marketing. Except as described below with regard to MOTYS, we believe our HCT/Ps are regulated solely under Section 361 of the PHSA, and therefore, we have not sought or obtained 510(k) clearance, PMA approval, or licensure through a BLA for such HCT/Ps.

The FDA could disagree with our determination that these human tissue products are Section 361 HCT/Ps and could determine that these products are biologics requiring a BLA or medical devices requiring 510(k) clearance or PMA approval, and could require that we cease marketing such products and/or recall them pending appropriate clearance, approval or licensure from the FDA. For example, the FDA's Center for Devices and Radiological Health, or CDRH, issued us a letter in March 2016 in which it asserted that OsteoAMP meets the definition of a medical device, and requested that we provide CDRH with information in support of our position that OsteoAMP does not require 510(k) clearance or PMA approval. We provided CDRH with the requested information in support of this position in May 2016 and we have received no further inquiries to date. We believe that CDRH's assertion is unfounded and inconsistent with a 2011 letter from the FDA concluding that OsteoAMP meets the criteria for regulation solely as a Section 361 HCT/P. However, if the FDA were to disagree, and if we are otherwise unsuccessful in asserting our position, the FDA may then require that we obtain 510(k) clearance or PMA approval and that we cease marketing OsteoAMP and/or recall OsteoAMP unless and until we receive clearance or approval. If we have to cease marketing and/or have to recall any of our BGSs

products, including OsteoAmp, our net sales would decrease, which would adversely affect our business, results of operations and financial condition.

HCT/Ps that do not meet the criteria of Section 361 are regulated under Section 351 of the PHSA. Unlike Section 361 HCT/Ps, HCT/Ps regulated as "351" HCT/Ps are subject to premarket review and approval by the FDA. In November 2017, the FDA released a guidance document entitled "Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue—Based Products: Minimal Manipulation and Homologous Use—Guidance for Industry and Food and Drug Administration Staff." The guidance outlined the FDA's position that all lyophilized amniotic products are more than minimally manipulated and would therefore require a BLA to be lawfully marketed in the United States. The guidance also indicated that the FDA would exercise enforcement discretion, using a risk-based approach, with respect to the IND application and pre-market approval requirements for certain HCT/Ps for a period of 36 months from the issuance date of the guidance to allow manufacturers to pursue its IND application. Under this approach, FDA indicated that high-risk products and uses could be subject to immediate enforcement action; FDA has not clearly stated what must happen by the end of its enforcement discretion period in order to avoid enforcement (i.e., whether a BLA must be approved by that time, or merely submitted). In July 2020, the FDA extended its period of enforcement discretion to May 31, 2021.

We plan to market MOTYS under the FDA's policy of enforcement discretion as we pursue marketing authorization under a BLA for the product. We may be required to cease selling MOTYS if the FDA changes the scope of its enforcement discretion or changes the criteria used to assess which products qualify. In addition, following the period of enforcement discretion articulated in FDA's guidance, we may be required to cease selling MOTYS until such time as we obtain BLA approval or be subject to another enforcement action or penalties. We may also be subject to enforcement on the grounds that we are marketing a product at the same time we are investigating that product pursuant to an IND, in violation of FDA's prohibition on the preapproval promotion of an investigational product. The loss of our ability to market and sell this product could have an adverse impact on our business, results of operations and financial condition. In addition, we expect the cost to manufacture our products will be higher than our other HCT/Ps because of the costs to comply with the more stringent requirements that apply to products regulated as biologics for which a BLA is required (and not just as Section 361 HCT/Ps). These requirements include satisfying cGMP manufacturing standards and performing ongoing product testing. If we do receive BLA approval for this product, changes such as adding new indications, manufacturing changes and additional labeling claims, will be subject to further testing requirements and FDA review and approval.

In addition, the FDA may in the future modify the scope of its enforcement discretion with respect to Section 361 HCT/Ps or change its position on which current or future products qualify as Section 361 HCT/Ps, or determine that some or all of our HCT/P products may not be lawfully marketed under the FDA's policy of enforcement discretion. Any regulatory changes could have adverse consequences for us and make it more difficult or expensive for us to conduct our business by requiring pre-market clearance or approval and compliance with additional post-market regulatory requirements with respect to those products.

If clinical studies of our future products do not produce results necessary to support regulatory clearance or approval in the United States or elsewhere, we will be unable to expand the indications for or commercialize these products.

We will likely need to conduct additional clinical studies in the future to support new indications for our products or for clearances or approvals of new product lines, or for the approval of the use of our products in some foreign countries. Clinical testing can take many years, can be expensive and carries uncertain outcomes. The initiation and completion of any of these studies may be prevented, delayed, or halted for numerous reasons. Conducting successful clinical studies requires the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit. Patient enrollment in clinical trials and completion of patient participation and follow-up depends on many factors, including the size of the patient population, the nature of the trial

protocol, the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects, the availability of appropriate clinical trial investigators and support staff, proximity of patients to clinical sites, patient ability to meet the eligibility and exclusion criteria for participation in the clinical trial and patient compliance. For example, patients may be discouraged from enrolling in our clinical trials if the trial protocol requires them to undergo extensive post-treatment procedures or follow-up to assess the safety and effectiveness of our products or if they determine that the treatments received under the trial protocols are not attractive or involve unacceptable risks or discomforts. Patients may also not participate in our clinical trials if they choose to participate in contemporaneous clinical trials of competitive products. In addition, patients participating in clinical trials may die before completion of the trial or suffer adverse medical events unrelated to investigational products.

For example, in late 2017 we began enrollment for the B.O.N.E.S. clinical study, a uniquely designed trial to further broaden the label of our Exogen system to include a fuller range of bones that may be treated as fresh fractures in predisposed patients at risk of nonunion. The B.O.N.E.S clinical study design includes prospective inclusion of 3,000 Exogen-treated patients presenting certain risk factors observed over the course of 12 months. See “Business—Development and Clinical Pipeline—Exogen clinical data—Ongoing Bioventus-sponsored clinical studies (B.O.N.E.S.).” If we are unable to successfully complete enrollment and conclude the B.O.N.E.S. study, or the data generated from the study does not support these new indications, future demand for our Exogen system may be affected. In September 2020, we submitted an IND to the FDA to allow us to conduct clinical trial to support a BLA submission for MOTYS, as well as an additional clinical trial based on a registry of patients who receive MOTYS after our initial commercial launch in the cash pay market. If we are unable to complete enrollment of these trials or if these trials do not support our desired clinical indications for use or show clinical efficacy of the MOTYS product, we may not obtain approval of the BLA and may not be able to continue to sell MOTYS or obtain coverage or reimbursement for the product.

Clinical failure can occur at any stage of testing. Our clinical studies may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical and non-clinical studies in addition to those we have planned. In addition, failure to adequately demonstrate the safety and efficacy of any of our devices would prevent receipt of regulatory clearance or approval and, ultimately, the commercialization of that device or indication for use. Even if our future products are cleared in the United States, commercialization of our products in foreign countries would require approval by regulatory authorities in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials. Any of these occurrences could adversely affect our business, results of operations and financial condition.

Interim, “top-line” and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim, “top-line” or preliminary data from our clinical trials. Interim, top-line, or preliminary data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary, “top-line,” or interim data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim, “top-line,” and preliminary data should be viewed with caution until the final data are available. Differences between preliminary, interim, or “top-line” data and final data could significantly harm our business prospects and may cause the trading price of our common stock to fluctuate significantly.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our business in general. In addition, the information we choose to publicly disclose

regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is the material or otherwise appropriate information to include in our disclosure, and any information we determine not to disclose may ultimately be deemed significant with respect to future decisions, conclusions, views, activities or otherwise regarding a particular product candidate or our business. If the interim, "top-line," or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for and commercialize our product candidates, our business, operating results, prospects or financial condition may be harmed.

We may be subject to enforcement action if we engage in improper marketing or promotion of our products, and the misuse or off-label use of our products may harm our image in the marketplace, result in injuries that lead to product liability suits or result in costly investigations, fines or sanctions by regulatory bodies if we are deemed to have engaged in the promotion of these uses, any of which could be costly to our business.

The medical devices that we currently market have been cleared or approved by the FDA and other foreign regulatory bodies for specific treatments. However, we cannot prevent a physician from using our products outside of such cleared or approved indications for use, known as off-label uses, when in the physician's independent professional medical judgment, he or she deems it appropriate, and we do not analyze the ordering practices of physicians with respect to off-label uses. In cases where prescriptions of our Exogen system are written for off-label uses, we could be subject to regulatory or enforcement actions if we were determined to have engaged in promotion of our products for off-label uses, or otherwise determined to have made false or misleading statements about our products. There may be increased risk of injury to patients if physicians attempt to use our products off-label. Furthermore, the use of our products for indications other than those cleared or approved by the FDA or any foreign regulatory body may not effectively treat such conditions, which could harm our reputation in the marketplace among physicians and patients.

In addition, physicians may misuse our products or use improper techniques if they are not adequately trained, potentially leading to injury and an increased risk of product liability. If our products are misused or used with improper technique, we may become subject to costly litigation by our customers or their patients. Product liability claims could divert management's attention from our core business, be expensive to defend and result in sizeable damage awards against us that may not be covered by insurance.

Further, our promotional materials and training methods must comply with FDA and other applicable laws and regulations, including the prohibition of the promotion of off-label use. If the FDA or any foreign regulatory body determines that our promotional materials or training constitute promotion of an off-label use, the FDA could request that we modify our training, promotional materials or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fine or criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our business activities to constitute promotion of an off-label use, which could result in significant penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement. Such enforcement actions may include, but are not limited to, criminal, civil and administrative penalties, treble damages, fines, disgorgement, exclusion from participation in government healthcare programs, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws and the curtailment or restructuring of our operations.

Our products may cause or contribute to adverse medical events that we are required to report to the FDA, and if we fail to do so, we would be subject to sanctions that could materially harm our business.

Some of our marketed products are subject to Medical Device Reporting, or MDR, obligations, which require that we report to the FDA any incident in which our products may have caused or contributed to a death

or serious injury, or in which our products malfunctioned and, if the malfunction were to recur, it could likely cause or contribute to a death or serious injury. The timing of our obligation to report under the MDR regulations is triggered by the date we become aware of the adverse event as well as the nature of the event. We may fail to report adverse events of which we become aware within the prescribed timeframe. We may also fail to recognize that we have become aware of a reportable adverse event, especially if it is not reported to us as an adverse event or if it is an adverse event that is unexpected or removed in time from the use of our products. If we fail to comply with our reporting obligations, the FDA could take action including warning letters, untitled letters, administrative actions, criminal prosecution, imposition of civil monetary penalties, revocation of our device clearances, seizure of our products, or delay in clearance of future products.

We and our third-party manufacturers and suppliers are subject to various governmental regulations related to the manufacturing of our products.

Our products and the manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for such products, will be subject to continued regulatory review, oversight and periodic inspection by the FDA and other domestic and foreign regulatory bodies. In particular, the methods used in, and the facilities used for, the manufacture of the products that we own and distribute that are regulated as medical devices must comply with the FDA's QSR, which covers the procedures and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage and shipping of medical devices. The FDA enforces the QSR through periodic announced or unannounced inspections of manufacturing facilities, and both we and our third-party manufacturers and suppliers are subject to such inspections. Similarly, the devices we distribute on behalf of third-party manufacturers that are regulated as Section 361 HCT/Ps must be manufactured in compliance with cGTP requirements and other related requirements. Moreover, should any of our HA products be re-classified as drugs, such products would be required to comply with a different set of manufacturing requirements under FDA's current Good Manufacturing Practice, or cGMP, requirements for drugs. Similarly, if we are successful in obtaining BLA approval for MOTYS, that product will need to comply with the cGMP requirements for biologics, instead of the cGTP requirements that will apply to the product upon our planned launch of the product as a Section 361 HCT/P. The need to comply with different manufacturing requirements may require us to seek new suppliers.

Failure to comply with applicable FDA requirements, or later discovery of previously unknown problems with our products or the manufacturing processes of our third-party manufacturers and suppliers, including any failure to take satisfactory corrective action in response to an adverse regulatory inspection, can result in, among other things:

- administrative or judicially imposed sanctions;
- injunctions or the imposition of civil penalties or fines;
- recall or seizure of our products;
- total or partial suspension of production or distribution;
- refusal to grant pending or future clearances or approvals for our products;
- withdrawal or suspension of regulatory clearances or approvals;
- clinical holds;
- untitled letters or warning letters;
- refusal to permit the import or export of our products; and
- criminal prosecution of us or our employees.

Any of these actions could prevent or delay us from marketing, distributing or selling our products and would likely harm our business. Furthermore, our suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements, which could result in our failure to produce our products on a timely basis and in the required quantities, if at all.

Our products may be subject to product recalls. A recall of our products, either voluntarily or at the direction of the FDA or another governmental authority, or the discovery of serious safety issues with our products, could adversely affect us.

The FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products in the event of material deficiencies or defects in their design or manufacture. The FDA's authority to require a recall for medical devices must be based on a finding that there is reasonable probability that the device would cause serious injury or death. We may also decide to voluntarily recall our products if certain deficiencies are found, and have in the past instituted a voluntary recall for certain of our products. A government-mandated or voluntary recall could occur as a result of an unacceptable risk to health, component failures, malfunctions, manufacturing errors, design or labeling defects or other deficiencies and issues. Recalls of any of our products would divert managerial and financial resources and could adversely affect our reputation and business, which could impair our ability to produce our products in a cost-effective and timely manner in order to meet our customers' demands. We may also be subject to liability claims, be required to bear other costs, or take other actions that could adversely affect our business, results of operations and financial condition.

Companies are required to maintain certain records of recalls and corrections, even if they are not reportable to the FDA. We may initiate voluntary recalls or corrections for our products in the future that we determine do not require notification of the FDA. If the FDA disagrees with our determinations, they could require us to report those actions as recalls and we may be subject to enforcement action.

As we conduct clinical studies designed to generate long-term data on some of our existing products, the data we generate may not be consistent with our existing data and may demonstrate less favorable safety or efficacy. Data we generate may ultimately not be favorable, or could even hurt the commercial prospects for our products.

We are currently collecting and plan to continue collecting long-term clinical data regarding the quality, safety and effectiveness of some of our existing products. The clinical data collected and generated as part of these studies will further strengthen our clinical evaluation concerning safety and performance of these products. We believe that this additional data will help with the marketing of our products by providing surgeons and physicians with additional confidence in their long-term safety and efficacy. If the results of these clinical studies are negative, these results could reduce demand for our products and significantly reduce our ability to achieve expected net sales. We do not expect to undertake such studies for all of our products and will only do so in the future where we anticipate the benefits will outweigh the costs and risks. For these reasons, surgeons and physicians could be less likely to purchase our products than competing products for which longer-term clinical data are available. Also, we may not choose or be able to generate the comparative data that some of our competitors have or are generating and we may be subject to greater regulatory and product liability risks. If we are unable to or unwilling to collect sufficient long-term clinical data supporting the quality, safety and effectiveness of our existing products, our business, results of operations and financial condition could be adversely affected.

We may rely on third parties to conduct our clinical studies and to assist us with preclinical development and if they fail to perform as contractually required or expected, we may not be able to obtain regulatory clearance or approval to commercialize our products.

We have relied upon and may continue to rely upon third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories to assist in conducting our clinical studies, which must be conducted in accordance with applicable regulations, including those known as good clinical practice, or GCP, and our preclinical development activities. We rely on these parties for execution of our studies, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our clinical studies is conducted in accordance with the applicable protocol, legal, regulatory, and

scientific standards, and our reliance on these third parties does not relieve us of our regulatory responsibilities. GCPs are regulations and guidelines enforced by the FDA and other regulatory authorities for products in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators, trial sites, and CROs. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under applicable manufacturing requirements.

If these third parties fail to successfully carry out their contractual duties, comply with applicable regulatory obligations, including GCP requirements, or meet expected deadlines, or if these third parties must be replaced, or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to clinical protocols or applicable regulatory requirements or for other reasons, our pre-clinical development activities or clinical studies may be extended, delayed, suspended or terminated. Under these circumstances we may not be able to obtain regulatory clearance or approval for, or successfully commercialize, our products on a timely basis, if at all, and our business, results of operations and financial condition may be adversely affected.

If any of our relationships with these third parties terminate, we may not be able to enter into arrangements with alternative third parties or to do so on commercially reasonable terms. In addition, our third parties are not our employees, and except for remedies available to us under our agreements with them, we cannot control whether or not they devote sufficient time and resources to our on-going clinical, nonclinical and preclinical programs. Switching or adding additional third parties involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO or other third party vendor commences work. As a result, delays occur, which can materially impact our ability to meet our desired development timelines. Though we carefully manage our relationships with our third party vendors including CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

Healthcare regulatory reform may affect our ability to sell our products profitably and could adversely affect our business, results of operations and financial condition.

In the United States and in certain foreign jurisdictions, there have been a number of legislative and regulatory proposals to change the regulatory and healthcare systems in ways that could prevent or delay marketing approval of our products in development, restrict or regulate post-approval activities of our products and impact our ability to sell our products profitably. In the United States in recent years, new legislation has been proposed and adopted at the federal and state level that is effecting major changes in the healthcare system. In addition, new regulations and interpretations of existing healthcare statutes and regulations are frequently adopted.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively, the Affordable Care Act, was signed into law. While the goal of healthcare reform is to expand coverage to more individuals, it also involves increased government price controls, additional regulatory mandates and other measures designed to constrain medical costs. The Affordable Care Act substantially changes the way healthcare is financed by both governmental and private insurers, encourages improvements in the quality of healthcare items and services and significantly impacts the medical device industry. Among other things, the Affordable Care Act:

- increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;
- created a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;
- extended manufacturers' Medicaid rebate liability to individuals enrolled in Medicaid managed care organizations;

- expanded eligibility criteria for Medicaid programs;
- established a new Patient-Centered Outcomes Research Institute to oversee and identify priorities in comparative clinical effectiveness research in an effort to coordinate and develop such research; and
- implemented payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models.

Since its enactment, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, as well as recent efforts by the Trump administration to repeal or replace certain aspects of the ACA, and we expect such challenges and amendments to continue. For example, the Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate." On December 14, 2018, a U.S. District Court Judge in the Northern District of Texas, ruled that the individual mandate is a critical and inseverable feature of the Affordable Care Act, and therefore, because it was repealed as part of the U.S. Tax Act, the remaining provisions of the Affordable Care Act are invalid as well. On December 18, 2019, the U.S. Court of Appeals for the 5th Circuit upheld the District Court ruling that the individual mandate was unconstitutional and remanded the case back to the District Court to determine whether the remaining provisions of the Affordable Care Act are invalid as well. On March 2, 2020, the United States Supreme Court granted the petitions for writs of certiorari to review this case, and oral argument is scheduled for November 10, 2020. It remains unclear when or how the Supreme Court will rule and whether eight or, if the President's nominee is confirmed, nine Supreme Court justices will hear the case. It is also unclear how other efforts to challenge, repeal or replace the Affordable Care Act will impact the Affordable Care Act or our business. We expect there will be additional challenges and amendments to the Affordable Care Act in the future.

The results of the 2020 U.S. presidential and congressional elections have created regulatory uncertainty, including with respect to the U.S. government's role, in the U.S. healthcare industry. As a result of such elections, there are renewed and reinvigorated calls for health insurance reform, which could cause significant uncertainty in the U.S. healthcare market, could increase our costs, decrease our revenues or inhibit our ability to sell our products. We cannot predict with certainty what impact any U.S. federal and state health reforms will have on us, but such changes could impose new and/or more stringent regulatory requirements on our activities or result in reduced reimbursement for our products, any of which could adversely affect our business, results of operations and financial condition.

In addition, third-party payers regularly update payments to physicians and hospitals where our products are used. For example, the Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the Sustainable Growth Rate Formula, and provided for a 0.5% annual increase in payment rates under the Medicare Physician Fee Schedule through 2019, but no annual update from 2020 through 2025. MACRA also introduced a merit based incentive bonus program for Medicare physicians beginning in 2019. At this time, it is unclear how the introduction of the merit based incentive program will impact overall physician reimbursement under the Medicare program. In addition, the Budget Control Act of 2011 imposed reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013, and, due to subsequent legislative amendments, will stay in effect through 2030 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several types of providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These and other payment updates could directly impact the demand for our products or any products we may develop in the future, if cleared or approved.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in additional reductions in Medicare and other healthcare funding, more rigorous coverage criteria, new payment methodologies and in additional downward pressure on the price that we receive for any

cleared or approved products. Furthermore, we believe that many individuals who have obtained insurance coverage through the health insurance exchanges which arose as a result of the Affordable Care Act have done so with policies that have significantly higher deductibles than policies they may have obtained prior to its enactment. Because the out-of-pocket costs of undergoing certain procedures for patients who have not met their deductible for a given year would be significantly higher than they historically would have been, these patients may be discouraged from undergoing certain procedures due to the cost. Any reluctance on the part of patients to undergo procedures utilizing our products due to cost could impact our ability to expand sales of our products and could adversely impact our business, results of operations and financial condition.

We are subject to federal, state and foreign laws and regulations relating to our healthcare business, and could face substantial penalties if we are determined not to have fully complied with such laws, which would adversely affect our business, results of operations and financial condition.

Both in our capacity as a pharmaceutical and medical device manufacturer and/or as a supplier of covered items and services to federal health care program beneficiaries, with respect to which items and services we submit claims for reimbursement from such programs, we are subject to healthcare fraud and abuse regulation and enforcement by federal, state and foreign governments, which could adversely impact our business, results of operations and financial condition. Healthcare fraud and abuse and health information privacy and security laws potentially applicable to our operations include:

- the federal Anti-Kickback Statute, which applies to our marketing practices, educational programs, pricing and discounting policies and relationships with healthcare providers, by prohibiting, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or providing remuneration intended to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare or Medicaid programs. A person or entity does not need to have actual knowledge of this statute or specific intent to violate it to have committed a violation. Violations are also subject to civil monetary penalties up to $100,000 for each violation, plus up to three times the remuneration involved. Civil penalties for such conduct can further be assessed under the federal False Claims Act. Violations of the federal Anti-Kickback Statute may also result civil and criminal penalties, including criminal fines of up to $100,000 and imprisonment of up to ten years, or exclusion from Medicare, Medicaid or other governmental programs;
- the “Stark Law,” which prohibits a physician from referring Medicare or Medicaid patients to an entity providing “designated health services,” which includes durable medical equipment, if the physician or immediate family member of the physician, has an ownership or investment interest in or compensation arrangement with such entity that does not comply with the requirements of a Stark exception;
- the federal civil and criminal false claims laws, including the False Claims Act, which impose civil and criminal penalties through governmental, civil whistleblower or qui tam actions, against individuals or entities for, among other things, knowingly presenting, or causing to be presented, claims for payment or approval to the federal government that are false or fraudulent, knowingly making a false statement material to an obligation to pay or transmit money or property to the federal government or knowingly concealing or knowingly and improperly avoiding or decreasing an obligation to pay or transmit money or property to the federal government. Suits filed under the False Claims Act, can be brought by any individual on behalf of the government, known as ‘‘qui tam’’ actions, and such individuals, commonly known as ‘‘whistleblowers,’’ may share in any amounts paid by the entity to the government in fines or settlement. The frequency of filing qui tam actions has increased significantly in recent years, causing greater numbers of pharmaceutical, medical device and other healthcare companies to have to defend a False Claims Act action. When an entity is determined to have violated the False Claims Act, the government may impose civil fines and penalties ranging from $11,665 to $23,331 for each false claim, plus treble damages, and exclude the entity from participation in Medicare, Medicaid and other federal healthcare programs. The government may assert that a claim including items or services resulting

from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the false claims statutes;

- the federal civil monetary penalties laws, which impose civil fines for, among other things, the offering or transfer of remuneration to a Medicare or state healthcare program beneficiary if the person knows or should know it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state healthcare program, unless an exception applies;
- HIPAA and its implementing regulations, which created federal criminal laws that prohibit, among other things, executing or attempting to execute a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, which also imposes certain regulatory and contractual requirements regarding the privacy, security and transmission of protected health information, or PHI;
- the federal Physician Payments Sunshine Act, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the government information related to certain payments or other "transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and, beginning in 2022, physician assistants, nurse practitioners, and other practitioners, and requires applicable manufacturers to report annually to the government ownership and investment interests held by the providers described above and their immediate family members and payments or other "transfers of value" to such provider owners. Failure to submit required information may result in civil monetary penalties of $11,766 per failure up to an aggregate of $176,495 per year (or up to an aggregate of $1.177 million per year for "knowing failures"), for all payments, transfers of value or ownership or investment interests that are not timely, accurately, and completely reported in an annual submission, and may result in liability under other federal laws or regulations;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;
- federal government price reporting laws, which require us to calculate and report complex pricing metrics in an accurate and timely manner to government programs, and where the failure to report such prices may expose us to potential liability; and
- state and foreign law equivalents of each of the above federal laws and regulations, such as anti-kickback, self-referral, fee-splitting and false claims laws that may apply to items or services reimbursed by any third-party payer, including commercial insurers; state laws that require pharmaceutical and device companies to comply with the industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise that restrict payments that may be made to healthcare providers; state laws that require drug and device manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures and pricing information; and state and foreign laws governing the privacy and security of certain health information, such as GDPR, which imposes obligations and restrictions on the collection and use of personal data relating to individuals located in the EU (including health data), many of which differ from each other in significant ways and some of which may be more stringent than HIPAA or HITECH.

The risk of us being found in violation of these laws and regulations is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a

variety of interpretations. We are unable to predict what additional federal, state or foreign legislation or regulatory initiatives may be enacted in the future regarding our business or the healthcare industry in general, or what effect such legislation or regulations may have on us. Federal, state or foreign governments may impose additional restrictions or adopt interpretations of existing laws that could adversely affect us.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available under such laws, it is possible that some of our business activities, including certain sales and marketing practices and financial arrangements with physicians and other healthcare providers, some of whom recommend, use, prescribe or purchase our products, and other customers, could be subject to challenge under one or more of such laws. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from governmental healthcare programs, disgorgement, contractual damages, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely impact our business, results of operations and financial condition.

We are subject to governmental regulation and other legal obligations, particularly related to privacy, data protection and information security, and we are subject to consumer protection laws that regulate our marketing practices and prohibit unfair or deceptive acts or practices. Our actual or perceived failure to comply with such obligations could harm our business.

We are subject to diverse laws and regulations relating to data privacy and security, including, in the United States, the federal Health Insurance Portability and Accountability Act of 1996, as amended by HITECH, and the regulations that implement both laws, collectively known as HIPAA, and, in the European Union, or EU, and the European Economic Area, or EEA, Regulation 2016/679, known as the General Data Protection Regulation, or GDPR. New privacy rules are being enacted in the United States and globally, and existing ones are being updated and strengthened. Complying with these numerous, complex and often changing regulations is expensive and difficult, and failure to comply with any privacy laws or data security laws or any security incident or breach involving the misappropriation, loss or other unauthorized use or disclosure of sensitive or confidential patient or consumer information, whether by us, one of our business associates or another third-party, could adversely affect our business, results of operations and financial condition, including but not limited to: investigation costs, material fines and penalties; compensatory, special, punitive, and statutory damages; litigation; reputational damage; consent orders regarding our privacy and security practices; requirements that we provide notices, credit monitoring services and/or credit restoration services or other relevant services to impacted individuals; adverse actions against our licenses to do business; and injunctive relief. Furthermore, these rules are constantly changing. For example, the California Consumer Privacy Act, or CCPA, took effect on January 1, 2020. The CCPA establishes a new privacy framework for covered businesses and provides new and enhanced data privacy rights to California residents, such as affording consumers the right to access and delete their information and to opt out of certain sharing and sales of personal information. The CCPA imposes severe statutory damages as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action is expected to increase the likelihood of, and risks associated with, data breach litigation. It remains unclear how various provisions of the CCPA will be interpreted and enforced. The CCPA contains an exemption for medical information governed by the California Confidentiality of Medical Information Act, or CMIA, and for PHI collected by a covered entity or business associate governed by the privacy, security and breach notification rules established pursuant to HIPAA, but the precise application and scope of this exemption is not yet clear, and the law may still apply to certain aspects of our business. The CCPA may lead other states to pass comparable legislation, with potentially greater penalties, and more rigorous compliance requirements relevant to our business, and that may not include exemptions for businesses subject to HIPAA. The effects of the CCPA, and other similar state or federal laws, are potentially significant and may require us to modify our data processing practices and policies and to incur substantial costs and potential liability in an effort to comply with such legislation.

The privacy laws in the EU have been significantly reformed. On May 25, 2018, the GDPR entered into force and became directly applicable in all EU member states. The GDPR implements more stringent operational requirements than its predecessor legislation. For example, the GDPR requires us to make more detailed disclosures to data subjects, requires disclosure of the legal basis on which we can process personal data, makes it harder for us to obtain valid consent for processing, requires the appointment of data protection officers when sensitive personal data, such as health data, is processed on a large scale, provides more robust rights for data subjects, introduces mandatory data breach notification through the EU, imposes additional obligations on us when contracting with service providers and requires us to adopt appropriate privacy governance including policies, procedures, training and data audit. If we do not comply with our obligations under the GDPR, we could be exposed to fines of up to the greater of €20 million or up to 4% of our total global annual revenue in the event of a significant breach. In addition, we may be the subject of litigation and/or adverse publicity, which could adversely affect our business, results of operations and financial condition.

Prior to the effectiveness of the GDPR, the US-EU Safe Harbor framework provided a method which permitted the transfer of personal data to the United States under European privacy law; in 2015 it was declared invalid and replaced with the US-EU Privacy Shield framework, or Privacy Shield. On July 16, 2020, the Court of Justice of the European Union, or CJEU, invalidated Privacy Shield. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created increasing uncertainty. This recent development will require us to review and amend the legal mechanisms by which we make and/or receive personal data transfers to/in the U.S. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Additionally starting on January 1, 2021 (when the transitional period following the United Kingdom's departure from the EU is currently scheduled to expire, unless that transition period is extended by mutual agreement), we will have to comply with the GDPR and the UK GDPR (i.e. the GDPR as implemented into UK law) if we offer services to UK users, monitor their behavior or are established in the United Kingdom. Failure to comply with the UK GDPR can result in fines up to the greater of £17 million (approximately $20 million), or 4% of global revenue. However, the relationship between the United Kingdom and the European Union in relation to certain aspects of data protection law remains unclear. For example, it is unclear what the role of the Information Commissioner's Office will be following the end of the transitional period. In addition, it is likely that documentation will need to be put in place between UK entities and entities in European member states to ensure adequate safeguards are in place for data transfers, which may result in increased costs with respect to transfers of personal data between the European Union and the UK, which would increase our expenses. We may find it necessary or advantageous to join industry bodies or self-regulatory organizations that impose stricter compliance requirements than those set out in applicable laws, including the GDPR. We may also be bound by contractual restrictions that prevent us from participating in data processing activities that would otherwise be permissible under applicable laws, including the GDPR. Such strategic choices may impact our ability to use and exploit data, and may have an adverse impact on our business.

Failure to comply with the FCPA and laws associated with our activities outside the United States could adversely affect our business, results of operations and financial condition.

We are subject to the FCPA and other anti-bribery legislation around the world. The FCPA generally prohibits covered entities and their intermediaries from engaging in bribery or making other prohibited payments, offers or promises to foreign officials for the purpose of obtaining or retaining business or other advantages. In addition, the FCPA imposes recordkeeping and internal controls requirements on publicly traded corporations

and their foreign affiliates, which are intended to, among other things, prevent the diversion of corporate funds to the payment of bribes and other improper payments, and to prevent the establishment of "off books" slush funds from which such improper payments can be made. As we conduct our business in jurisdictions outside of the United States, we face significant risks if we fail to comply with the FCPA and other laws that prohibit improper payments, offers or promises of payment to foreign governments and their officials and political parties by us and other business entities for the purpose of obtaining or retaining business or other advantages. In many foreign countries, particularly in countries with developing economies, it may be a local custom that businesses operating in such countries engage in business practices that are prohibited by the FCPA or other laws and regulations. Although we have implemented a company policy requiring our employees and consultants to comply with the FCPA and similar laws, such policy may not be effective at preventing all potential FCPA or other violations. Although our agreements with our international distributors clearly state our expectations for our distributors' compliance with U.S. laws, including the FCPA, and provide us with various remedies upon any non-compliance, including the ability to terminate the agreement, we also cannot guarantee our distributors' compliance with U.S. laws, including the FCPA. Therefore, there can be no assurance that our employees and agents, or those companies to which we outsource certain of our business operations, have not and will not take actions that violate our policies or applicable laws, for which we may be ultimately held responsible. Any violation of the FCPA and related policies could result in severe criminal or civil sanctions, which could adversely affect our business, results of operations and financial condition.

Furthermore, we are subject to the export controls and economic embargo rules and regulations of the United States, including, but not limited to, the Export Administration Regulations and trade sanctions against embargoed countries, which are administered by the Office of Foreign Assets Control within the Department of the Treasury, as well as the laws and regulations administered by the Department of Commerce. These regulations limit our ability to market, sell, distribute or otherwise transfer our products or technology to prohibited countries or persons. A determination that we have failed to comply, whether knowingly or inadvertently, may result in substantial penalties, including fines, enforcement actions, civil and/or criminal sanctions, the disgorgement of profits, the imposition of a court-appointed monitor, as well as the denial of export privileges, and may adversely affect our business, results of operations and financial condition.

If we fail to meet Medicare accreditation and surety bond requirements or DMEPOS supplier standards, it could adversely affect our business, results of operations and financial condition.

Our Exogen system is classified by CMS and third-party payers as durable medical equipment. Suppliers of Medicare durable medical equipment, prosthetics, orthotics and supplies, or DMEPOS, must be accredited by an approved accreditation organization as meeting DMEPOS quality standards adopted by CMS and are required to meet surety bond requirements. In addition, Medicare DMEPOS suppliers must comply with Medicare supplier standards in order to obtain and retain billing privileges, including meeting all applicable federal and state licensure and regulatory requirements. CMS periodically expands or otherwise clarifies the Medicare DMEPOS supplier standards, and states periodically change licensure requirements, including licensure rules imposing more stringent requirements on out-of-state DMEPOS suppliers. We believe we are currently in compliance with these requirements. If we fail to maintain our Medicare accreditation status and/or do not comply with Medicare surety bond or supplier standard requirements or state licensure requirements in the future, or if these requirements are changed or expanded, it could adversely affect our business, results of operations and financial condition.

Our operations involve the use of hazardous and toxic materials, and we must comply with environmental, health and safety laws and regulations, which can be expensive, and could adversely affect our business, results of operations and financial condition.

We are subject to a variety of federal, state, local and foreign laws and regulations relating to the protection of the environment or of human health and safety, including laws pertaining to the use, handling, storage, disposal and human exposure to hazardous and toxic materials. Liability under environmental laws can be

imposed on a joint and several basis (which could result in an entity paying more than its fair share) and without regard to comparative fault, and environmental laws are likely to become more stringent over time, imposing greater compliance costs and increasing risks and penalties associated with violations, which could adversely affect our business, results of operations and financial condition.

Our employees, independent distributors, independent contractors, suppliers and other third parties may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements, which could expose us to liability and hurt our reputation.

We are exposed to the risk that our employees, independent distributors, independent contractors, suppliers and others may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: (1) FDA laws and regulations, including those laws that require the reporting of true, complete and accurate information to the FDA, (2) manufacturing standards, (3) healthcare fraud and abuse laws, or (4) laws that require the true, complete and accurate reporting of financial information or data. Activities subject to these laws also involve the improper use or misrepresentation of information obtained in the course of clinical trials, creating fraudulent data in our preclinical studies or clinical trials or illegal misappropriation of product, which could result in regulatory sanctions and cause serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Additionally, we are subject to the risk that a person or government could allege such fraud or other misconduct, even if none occurred.

If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and financial results, including, without limitation, the imposition of significant civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our business, results of operations and financial condition.

Risks related to intellectual property matters

The risk factors listed below describe the risks we face related to intellectual property matters. The companies who own certain of the products we distribute face similar risks with respect to intellectual property relating to such products. If such suppliers are unable to protect their intellectual property rights, they may not be able to continue to supply us with products, which could adversely affect our business, results of operations and financial condition.

Protection of our intellectual property rights may be difficult and costly, and our inability to protect our intellectual property could adversely affect our competitive position.

Our success depends on our ability to protect our proprietary rights to the technologies and inventions used in, or embodied by, our products. To protect our proprietary technology, we rely on patent protection, as well as a combination of copyright, trade secret and trademark laws, as well as nondisclosure, confidentiality and other contractual restrictions in our consulting and employment agreements. These legal means afford only limited protection, however, and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Our existing confidentiality and/or invention assignment agreements with employees, contractors, and others who participate in IP development activities could be breached, or we may not enter into sufficient and adequate agreements with those individuals in the first instance, and we may not have adequate remedies for such breaches. Furthermore, we may be subject to, and forced to defend against, third-party claims of ownership to our intellectual property. If we fail in defending any such claims, in addition to paying monetary damages, we may

lose valuable intellectual property rights, such as exclusive ownership of, or rights to use, valuable intellectual property. Such an outcome could adversely affect our business, results of operations and financial condition. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Patents

The process of applying for patent protection is time-consuming and expensive and we cannot assure you that all of our patent applications will issue as patents or that, if issued, they will issue in a form that will be advantageous to us. The rights granted to us under our patents, including prospective rights sought in our pending patent applications, may not be meaningful or provide us with any commercial advantage, and they could be opposed, contested, narrowed, or circumvented by our competitors or declared invalid or unenforceable in judicial or administrative proceedings. We may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. As a result, some of our products are not, and in the future may not be, protected by patents. We generally apply for patents in those countries where we intend to make, have made, use, offer for sale, or sell products and where we assess the risk of infringement to justify the cost of seeking patent protection. However, we do not seek protection in all countries where we sell products and we may not accurately predict all the countries where patent protection would ultimately be desirable. If we fail to timely file a patent application in any such country or major market, we may be precluded from doing so at a later date. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories in which we have patent protection but where such protection may not be sufficient to terminate infringing activities. Furthermore, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed to us by third-parties. Therefore, these patents and applications may not be prosecuted or enforced in a manner consistent with the best interests of our business. If such licensors fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated, which could also adversely affect our business, results of operations and financial condition.

We own numerous issued patents and pending patent applications relating to our technology and products. The rights granted to us under these patents, including prospective rights sought in our pending patent applications, could be opposed, contested or circumvented by our competitors or declared invalid or unenforceable in judicial or administrative proceedings. If any of our patents are challenged, invalidated or legally circumvented by third-parties, and if we do not own other enforceable patents protecting our products, competitors could market products and use processes that are substantially similar to, or superior to, those of ours, and our business will suffer. In addition, the patents we own may not be of sufficient scope or strength to provide us with any meaningful protection or commercial advantage, and competitors may be able to design around our patents or develop products that provide outcomes comparable to those of ours without infringing on our intellectual property rights.

Even if our patents are determined by the U.S. Patent and Trademark Office, or USPTO, foreign patent office, or a court to be valid and enforceable, they may not be drafted or interpreted sufficiently broadly to prevent others from marketing products and services similar to ours or designing around our patents. For example, third parties may be able to develop products that are similar to ours but that are not covered by the claims of our patents. Third parties may assert that we or our licensors were not the first to make the inventions covered by our issued patents or pending patent applications. The claims of our issued patents or patent applications when issued may not cover our commercial technology or the future products and services that we develop. We may not have freedom to operate unimpeded by the patent rights of others. Third parties may have dominating, blocking or other patents relevant to our technology of which we are not aware. In addition, because patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after the filing of certain priority documents (or, in some cases, are not published until they issue as

patents) and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for our technology or our contemplated technology. Any such patent applications may have priority over our patent applications or issued patents, which could require us to obtain rights from third parties to issued patents or pending patent applications covering such technologies to allow us to commercialize our technology. If another party has filed a U.S. patent application on inventions similar to ours, depending on when the timing of the filing date falls under certain patent laws, we may have to participate in a priority contest (such as an interference proceeding) declared by the USPTO to determine priority of invention in the United States. There may be prior public disclosures of which we are not aware that could invalidate our patents or a portion of the claims of our patents. Further, we may not develop additional proprietary technologies and, even if we do, they may not be patentable.

In addition, patent reform legislation may pass in the future that could lead to additional uncertainties and increased costs surrounding the prosecution, enforcement, and defense of our patents and applications. We may be subject to a third-party preissuance submission of prior art to the USPTO, or become involved in opposition, derivation, reexamination, inter partes review, post-grant review or other patent office proceedings or litigation, in the United States or elsewhere, challenging our patent rights. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third-parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights.

Moreover, the USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In addition, periodic maintenance fees on issued patents often must be paid to the USPTO and foreign patent agencies over the lifetime of the patent. While an unintentional lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we fail to maintain the patents and patent applications covering our products or procedures, we may not be able to stop a competitor from marketing products that are the same as or similar to our products, which would adversely affect our business, results of operations and financial condition.

Filing, prosecuting and defending patents on our products in all countries throughout the world would be prohibitively expensive. The requirements for patentability may differ in certain countries, particularly developing countries, and the breadth of patent claims allowed can be inconsistent. In addition, the laws of some foreign countries may not protect our intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories in which we have patent protection that may not be sufficient to terminate infringing activities.

Due to differences between foreign and U.S. patent laws, our patented intellectual property rights may not receive the same degree of protection in every jurisdiction in which we obtain patents. Furthermore, we do not have patent rights in certain foreign countries in which a market may exist in the future. We may need to expend additional resources to protect or defend our intellectual property rights in these countries, and the inability to protect or defend the same could impair our brand or adversely affect the growth of our business internationally. For example, we may not be able to stop a competitor from marketing and selling in foreign countries products that are the same as or similar to our products.

Patents have a limited lifespan, and the protection patents affords is limited. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest U.S.

non-provisional filing date. Even if patents covering our products are obtained, once the patent life has expired for patents covering a product, we may be open to competition from competitive products and services. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing product candidates similar or identical to ours.

Trademarks

We rely on our trademarks as one means to distinguish our products from the products of our competitors, and have registered or applied to register many of these trademarks. However, we may not be able to successfully secure trademark registrations for all such applications. Third-parties may oppose our trademark applications, or otherwise challenge our use of both registered and unregistered trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks. Over the long term, if we are unable to establish name recognition based on our trademarks, then we may not be able to compete effectively and our business, results of operations and financial condition may be adversely affected.

Trade secrets and know-how

We may not be able to prevent the unauthorized disclosure or use of our technical knowledge or other trade secrets by consultants, vendors, former employees or current employees, despite the existence generally of confidentiality agreements and other contractual restrictions. Monitoring unauthorized uses and disclosures of our intellectual property is difficult, and we do not know whether the steps we have taken to protect our intellectual property will be effective.

Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. For example, the FDA, as part of its Transparency Initiative, is currently considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA's disclosure policies may change in the future, if at all. Our competitors could use any of the information we may be required to disclose by the FDA to develop independently technology similar to those of ours. Competitors could purchase our products and attempt to replicate some or all of the competitive advantages we derive from our development efforts, willfully infringe our intellectual property rights, design around our protected technology or develop their own competitive technologies that fall outside of our intellectual property rights. If our intellectual property is not adequately protected so as to protect our market against competitors' products and methods, our competitive position could be adversely affected, as could our business, results of operations and financial condition.

If we were to enforce a claim that a third-party had illegally obtained, misappropriated or was using our trade secrets, it would be expensive and time consuming, and the outcome would be unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. If any of the technology or information that we protect as trade secrets were to be independently developed by a competitor, we would have no right to prevent them from using that technology or information to compete with us. Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may adversely affect our business, results of operations and financial condition. Additionally, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret.

We depend on certain technologies that are licensed to us. We do not control the intellectual property rights covering these technologies and any loss of our rights to these technologies or the rights licensed to us could prevent us from selling our products, which could adversely impact our business, results of operations and financial condition.

We are a party to license agreements under which we are granted rights to intellectual property that is important to our business, and we may need to enter into additional license agreements in the future. We rely on

these licenses in order to be able to use and sell various proprietary technologies that are material to our business, as well as technologies which we intend to use in our future commercial activities. Our rights to use these technologies and the inventions claimed in the licensed patents are subject to the continuation of and our compliance with the terms of those licenses. Our existing license agreements impose, and we expect that future license agreements will impose on us, various diligence obligations, payment of milestones or royalties and other obligations. If we fail to comply with our obligations under these agreements, or we are subject to a bankruptcy, the licensor may have the right to terminate the license, in which case we would not be able to market products covered by the license, which would adversely affect our business, results of operations and financial condition.

As we have done previously, we may need to obtain licenses from third parties to advance our research or allow commercialization of our products and technologies. We may fail to obtain any of these licenses on commercially reasonable terms, if at all. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In the event that we are not able to acquire a license, we may be required to expend significant time and resources to develop or license replacement technology. If we are unable to do so, we may be unable to develop or commercialize the affected products and technologies, which could materially harm our business. In addition, the third parties owning such intellectual property rights could seek either an injunction prohibiting our sales, or, with respect to our sales, an obligation on our part to pay royalties or other forms of compensation and damages.

In some cases, we may not have the right to control the prosecution, maintenance, or filing of the patents that are licensed to us, or the enforcement of these patents against infringement by third parties. Some of our patents and patent applications were not filed by us, but were either acquired by us or are licensed from third parties. Thus, these patents and patent applications were not drafted by us or our attorneys, and we did not control or have any input into the prosecution of these patents and patent applications prior to our acquisition of, or our entry into a license with respect to, such patents and patent applications. We cannot be certain that the drafting or prosecution of the patents and patent applications licensed to us will result or has resulted in valid and enforceable patents. Further, we do not always retain complete control over our ability to enforce our licensed patent rights against third-party infringement. In those cases, we cannot be certain that our licensor will elect to enforce these patents to the extent that we would choose to do so, or in a way that will ensure that we retain the rights we currently have under our license. If our licensor fails to properly enforce the patents subject to our license in the event of third-party infringement, our ability to retain our competitive advantage with respect to our products may be materially and adversely affected.

Licensing of intellectual property is an important part of our business and involves complex legal, business and scientific issues. Disputes may arise between us and our licensors regarding intellectual property that is subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the license agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our products and technologies, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

In addition, we may become the owner of intellectual property that was obtained through assignments which may be subject to re-assignment back to the original assignor upon our failure to prosecute or maintain such intellectual property, upon our breach of the agreement pursuant to which such intellectual property was assigned, or upon our bankruptcy.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, or if intellectual property is re-assigned back to the original assignor, we may be unable to successfully develop and commercialize the affected products and technologies.

Our intellectual property agreements with third parties may be subject to disagreements over contract interpretation, which could narrow the scope of our rights to the relevant intellectual property or technology.

Certain provisions in our intellectual property agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could affect the scope of our rights to the relevant intellectual property or technology, or affect financial or other obligations under the relevant agreement, either of which could adversely affect our business, results of operations and financial condition.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact conceives or develops intellectual property that we regard as our own. Our assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

We may in the future be a party to patent and other intellectual property litigation and administrative proceedings that could be costly and could interfere with our ability to successfully market our products.

The medical device industry has been characterized by frequent and extensive intellectual property litigation and is highly competitive. Our competitors or other patent holders may assert that our products and/or the methods employed in our products are covered by their patents or that we are infringing, misappropriating, or misusing their trademark, copyright, trade secret, and/or other proprietary rights.

If our products or methods are found to infringe, we could be prevented from manufacturing or marketing our products. In the event that we become involved in such a dispute, we may incur significant costs and expenses and may need to devote resources to resolving any claims, which would reduce the cash we have available for operations and may be distracting to management and other employees, including those involved in the development of intellectual property. We do not know whether our competitors or potential competitors have applied for, will apply for, or will obtain patents that will prevent, limit or interfere with our ability to make, use, sell, import or export our products. Because patent applications can take many years to issue, third parties may have currently pending patent applications which may later result in issued patents that our products and technologies may infringe, or which such third parties claim are infringed by the use of our products or technologies. There is no guarantee that patents will not issue in the future from currently pending applications that may be infringed by our technology or products. In addition, identification of third-party patent rights that may be relevant to our technology is difficult because patent searching is imperfect due to differences in terminology among patents, incomplete databases, and difficulty in assessing the meaning of patent claims. Moreover, as the medical device industry expands and more patents are issued in this area, the risk increases that we may be subject to claims of infringement of the patent rights of third parties. We cannot assure you that we will prevail in such actions, or that other actions alleging misappropriation or misuse by us of third-party trade secrets or infringement by us of third-party patents, copyrights, trademarks or other rights or challenging the validity of our patents, copyrights, trademarks or other rights will not be asserted against us. Competing products may also be sold in other countries in which our patent coverage might not exist or be as strong. If we lose a foreign patent lawsuit alleging our infringement of a competitor’s patents, we could be prevented from marketing our products in one or more foreign countries.

We may also initiate litigation against third-parties to enforce our patent and proprietary rights or to determine the scope, enforceability or validity of the proprietary rights of others. Our intellectual property has not

been tested in litigation. If we initiate litigation to protect our rights, we run the risk of having our patents and other proprietary rights invalidated, canceled or narrowed, which could undermine our competitive position. Further, if the scope of protection provided by our patents or patent applications or other proprietary rights is threatened or reduced as a result of litigation, it could discourage third parties from entering into collaborations with us that are important to the commercialization of our products.

We may be subject to ownership disputes relating to intellectual property, including disputes arising from conflicting obligations of consultants or others who are involved in developing our product. Furthermore, if a license to necessary technology is terminated, the licensor may initiate litigation claiming that our processes or products infringe or misappropriate its patent or other intellectual property rights and/or that we breached our obligations under the license agreement, and we and our collaborators would need to defend against such proceedings.

These lawsuits and proceedings, regardless of merit, are time-consuming and expensive to initiate, maintain, defend or settle, and could divert the time and attention of managerial and technical personnel, which could materially adversely affect our business, results of operations and financial condition. Any such claim could also force use to do one or more of the following:

- incur substantial monetary liability for infringement or other violations of intellectual property rights, which we may have to pay if a court decides that the product, service, or technology at issue infringes or violates the third-party's rights, and if the court finds that the infringement was willful, we could be ordered to pay treble damages and the third-party's attorneys' fees;
- pay substantial damages to our customers or end users to discontinue use or replace infringing technology with non-infringing technology;
- stop manufacturing, offering for sale, selling, using, importing, exporting or licensing the product or technology incorporating the allegedly infringing technology or stop incorporating the allegedly infringing technology into such product, service, or technology;
- obtain from the owner of the infringed intellectual property right a license, which may require us to pay substantial upfront fees or royalties to sell or use the relevant technology and which may not be available on commercially reasonable terms, or at all;
- redesign our products, services, and technology so they do not infringe or violate the third-party's intellectual property rights, which may not be possible or may require substantial monetary expenditures and time;
- enter into cross-licenses with our competitors, which could weaken our overall intellectual property position;
- lose the opportunity to license our technology to others or to collect royalty payments based upon successful protection and assertion of our intellectual property against others;
- find alternative suppliers for non-infringing products and technologies, which could be costly and create significant delay; or
- relinquish rights associated with one or more of our patent claims, if our claims are held invalid or otherwise unenforceable.

Some of our competitors may be able to sustain the costs of complex intellectual property litigation more effectively than we can because they have substantially greater resources. In addition, intellectual property litigation, regardless of its outcome, may cause negative publicity, adversely impact prospective customers, cause product shipment delays, divert the time, attention and resources of management, or prohibit us from manufacturing, marketing or otherwise commercializing our products, services and technology. Any uncertainties resulting from the initiation and continuation of any litigation could adversely affect our ability to raise additional funds or otherwise adversely affect our business, results of operations and financial condition.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If these results are perceived to be negative, the price of our Class A common stock could be adversely affected.

In addition, certain of our agreements with suppliers, distributors, customers and other entities with whom we do business may require us to defend or indemnify these parties to the extent they become involved in infringement claims relating to our technologies or products, or rights licensed to them by us. We could also voluntarily agree to defend or indemnify third parties in instances where we are not obligated to do so if we determine it would be important to our business relationships. If we are required or agree to defend or indemnify any of these third parties in connection with any infringement claims, we could incur significant costs and expenses that could adversely affect our business, results of operation and financial condition.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed alleged trade secrets of our competitors or former employers or are in breach of non-competition or non-solicitation agreements with our competitors or former employers.

We could in the future be subject to claims that we or our employees have inadvertently or otherwise used or disclosed alleged trade secrets or other proprietary information of former employers or competitors. In addition, we may in the future be subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and could be a distraction to management. If our defense to those claims fails, in addition to paying monetary damages, a court could prohibit us from using technologies or features that are essential to our products, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the competitors or former employers. An inability to incorporate technologies or features that are important or essential to our products could adversely affect our business, results of operations and financial condition, and may prevent us from selling our products. In addition, we may lose valuable intellectual property rights or personnel. Any litigation or the threat thereof may adversely affect our ability to hire employees or contract with independent sales representatives. A loss of key personnel or their work product could hamper or prevent our ability to commercialize our products, which could adversely affect our business, results of operations and financial condition.

Any product candidates that we develop as biologics subject to the BLA pathway may be subject to competition sooner than anticipated.

We expect to submit a BLA to allow for the marketing of MOTYS following the expiration of FDA's enforcement discretion period for certain HCT/Ps. See "—Risks related to government regulation—Our HCT/P products are subject to extensive government regulation and our failure to comply with these requirements could cause our business to suffer. These products could be subject to significant additional regulatory requirements." The Biologics Price Competition and Innovation Act of 2009, or BPCIA, was enacted as part of the Affordable Care Act to establish an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an approved biologic. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the reference product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when processes intended to implement BPCIA may be fully adopted by the FDA, any of these processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of the product candidates we develop that is approved in the United States as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider the subject product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of the reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

In addition, the approval of a biologic product biosimilar to one of our products could have a material adverse impact on our business as it may be significantly less costly to bring to market and may be priced significantly lower than our products.

Intellectual property rights do not necessarily address all potential threats to our business.

Once granted, patents may remain open to invalidity challenges including opposition, interference, re-examination, post-grant review, inter partes review, nullification or derivation action in court or before patent offices or similar proceedings for a given period after allowance or grant, during which time third parties can raise objections against such grant. In the course of such proceedings, which may continue for a protracted period of time, the patent owner may be compelled to limit the scope of the allowed or granted claims thus attacked, or may lose the allowed or granted claims altogether.

In addition, the degree of future protection afforded by our intellectual property rights is uncertain because even granted intellectual property rights have limitations, and may not adequately protect our business, provide a barrier to entry against our competitors or potential competitors or permit us to maintain our competitive advantage. Moreover, if a third-party has intellectual property rights that cover the practice of our technology, we may not be able to fully exercise or extract value from our intellectual property rights. The following examples are illustrative:

- others may be able to develop and/or practice technology that is similar to our technology or aspects of our technology, but that are not covered by the claims of the patents that we own or control, assuming such patents have issued or do issue;
- we or our licensors or any future strategic partners might not have been the first to conceive or reduce to practice the inventions covered by the issued patent or pending patent application that we own or have exclusively licensed;
- we or our licensors or any future strategic partners might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- our pending patent applications may not lead to issued patents;
- issued patents that we own or exclusively license may not provide us with any competitive advantage, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- third parties performing manufacturing or testing for us using our products or technologies could use the intellectual property of others without obtaining a proper license;
- parties may assert an ownership interest in our intellectual property and, if successful, such disputes may preclude us from exercising exclusive rights over that intellectual property;

- we may not develop or in-license additional proprietary technologies that are patentable;
- we may not be able to obtain and maintain necessary licenses on commercially reasonable terms, or at all; and
- the patents of others may adversely affect our business.

Should any of these events occur, they could adversely affect our business, results of operations and financial condition.

Risks related to our organizational structure and the Tax Receivable Agreement

Our principal asset after the completion of this offering will be our interest in Bioventus LLC, and, accordingly, we will depend on distributions from Bioventus LLC to pay our taxes and expenses, including payments under the Tax Receivable Agreement. Bioventus LLC's ability to make such distributions may be subject to various limitations and restrictions.

Upon the consummation of this offering, we will be a holding company and will have no material assets other than our ownership of LLC Interests of Bioventus LLC. As such, we will have no independent means of generating net sales or cash flow, and our ability to pay our taxes and operating expenses or declare and pay dividends in the future, if any, will be dependent upon the financial results and cash flows of Bioventus LLC and its subsidiaries and distributions we receive from Bioventus LLC. There can be no assurance that Bioventus LLC and its subsidiaries will generate sufficient cash flow to distribute funds to us or that applicable state law and contractual restrictions, including negative covenants in our debt instruments, will permit such distributions.

Bioventus LLC will continue to be treated as a partnership for U.S. federal income tax purposes and, as such, generally will not be subject to any entity-level U.S. federal income tax. Instead, taxable income will be allocated to holders of LLC Interests, including us. Accordingly, we will incur income taxes on our allocable share of any net taxable income of Bioventus LLC. Under the terms of the Bioventus LLC Agreement, Bioventus LLC will be obligated to make tax distributions to holders of LLC Interests, including us, subject to any limitations or restrictions in our debt arrangements. In addition to tax expenses, we will also incur expenses related to our operations, including payments under the Tax Receivable Agreement, which we expect could be significant. See "Certain relationships and related party transactions— Tax Receivable Agreement." We intend, as its managing member, to cause Bioventus LLC to make cash distributions to the owners of LLC Interests, including us, in an amount sufficient to (i) fund their or our tax obligations in respect of allocations of taxable income from Bioventus LLC and (ii) cover our operating expenses, including payments under the Tax Receivable Agreement. However, Bioventus LLC's ability to make such distributions may be subject to various limitations and restrictions, such as restrictions on distributions that would either violate any contract or agreement to which Bioventus LLC is then a party, including debt agreements, or any applicable law, or that would have the effect of rendering Bioventus LLC insolvent. If we do not have sufficient funds to pay taxes or other liabilities or to fund our operations, we may have to borrow funds, which could materially adversely affect our liquidity and financial condition and subject us to various restrictions imposed by any such lenders. To the extent that we are unable to make payments under the Tax Receivable Agreement for any reason, such payments generally will be deferred and will accrue interest until paid; provided, however, that nonpayment for a specified period may constitute a material breach of a material obligation under the Tax Receivable Agreement and therefore accelerate payments due under the Tax Receivable Agreement. See "Certain relationships and related party transactions—Tax Receivable Agreement." In addition, if Bioventus LLC does not have sufficient funds to make distributions, our ability to declare and pay cash dividends will also be restricted or impaired. See "Risk Factors—Risks related to this offering and ownership of our Class A common stock" and "Dividend policy."

The Tax Receivable Agreement with the Continuing LLC Owner requires us to make cash payments to it in respect of certain tax benefits to which we may become entitled, and we expect that the payments we will be required to make could be significant.

Upon the closing of this offering, we will be a party to the Tax Receivable Agreement with the Continuing LLC Owner. Under the Tax Receivable Agreement, we will be required to make cash payments to the Continuing LLC Owner equal to 85% of the tax benefits, if any, that we actually realize, or in certain circumstances are deemed to realize, as a result of (1) increases in the tax basis of assets of Bioventus LLC resulting from (a) any future redemptions or exchanges of LLC Interests described under "Certain relationships and related party transactions—Bioventus LLC Agreement—LLC Interest Redemption Right," and (b) certain distributions (or deemed distributions) by Bioventus LLC and (2) certain other tax benefits arising from payments under the Tax Receivable Agreement. We expect the amount of the cash payments that we will be required to make under the Tax Receivable Agreement will be significant. The actual amount and timing of any payments under the Tax Receivable Agreement will vary depending upon a number of factors, including the timing of redemptions or exchanges by the Continuing LLC Owner, the amount of gain recognized by the Continuing LLC Owner, the amount and timing of the taxable income we generate in the future, and the federal tax rates then applicable. Any payments made by us to the Continuing LLC Owner under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us. To the extent that we are unable to make timely payments under the Tax Receivable Agreement for any reason, the unpaid amounts will be deferred and will accrue interest until paid by us. Furthermore, our future obligation to make payments under the Tax Receivable Agreement could make us a less attractive target for an acquisition, particularly in the case of an acquirer that cannot use some or all of the tax benefits that are the subject of the Tax Receivable Agreement. Payments under the Tax Receivable Agreement are not conditioned on the Continuing LLC Owner's continued ownership of LLC Interests or our Class A common stock after this offering. For more information, see "Certain relationships and related party transactions—Tax Receivable Agreement."

Our organizational structure, including the Tax Receivable Agreement, confers certain tax benefits upon the Continuing LLC Owner that may not benefit Class A common stockholders to the same extent as they will benefit the Continuing LLC Owner.

Our organizational structure, including the Tax Receivable Agreement, confers certain tax benefits upon the Continuing LLC Owner that may not benefit the holders of our Class A common stock to the same extent as they will benefit the Continuing LLC Owner. We will enter into the Tax Receivable Agreement with Bioventus LLC and the Continuing LLC Owner that will provide for our payment to the Continuing LLC Owner of 85% of the amount of tax benefits, if any, that we actually realize (or in some circumstances are deemed to realize) as a result of (i) increases in the tax basis of assets of Bioventus LLC resulting from (a) any future redemptions or exchanges of LLC Interests described under "Certain relationships and related party transactions—Bioventus LLC Agreement—LLC Interest Redemption Right," and (b) certain distributions (or deemed distributions) by Bioventus LLC and (ii) certain other tax benefits arising from payments under the Tax Receivable Agreement. Although Bioventus will retain 15% of such tax benefits, this and other aspects of our organizational structure may adversely impact the future trading market for the Class A common stock.

In certain cases, payments under the Tax Receivable Agreement to the Continuing LLC Owner may be accelerated or significantly exceed the actual benefits we realize in respect of the tax attributes subject to the Tax Receivable Agreement.

The Tax Receivable Agreement will provide that if (i) we materially breach any of our material obligations under the Tax Receivable Agreement, (ii) certain mergers, asset sales, other forms of business combinations or other changes of control were to occur on or before December 31, 2021 or (iii) we elect an early termination of the Tax Receivable Agreement, then our obligations or our successor's obligations under the Tax Receivable Agreement to make payments thereunder would be based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax

Receivable Agreement (or, in the case of certain mergers, asset sales, other forms of business combinations or other changes of control occurring after December 31, 2021, that we would have taxable income at least equal to four times the highest taxable income in any of the four fiscal quarters ending prior to the closing date of such transaction (increased by 10% for each taxable year beginning with the second taxable year following such closing date)).

As a result of the foregoing, (i) we could be required to make payments under the Tax Receivable Agreement that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement and (ii) if we materially breach any of our material obligations under the Tax Receivable Agreement or if we elect to terminate the Tax Receivable Agreement early, we would be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a substantial negative impact on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combinations or other changes of control. There can be no assurance that we will be able to fund or finance our obligations under the Tax Receivable Agreement. See “Certain relationships and related party transactions—Tax Receivables Agreement.”

We may make payments to the Continuing LLC Owner under the Tax Receivable Agreement that exceed the tax benefits actually realized by us in the event that any tax benefits are disallowed by a taxing authority.

Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine, and the Internal Revenue Service, or the IRS, or another tax authority may challenge all or part of the tax basis increases, as well as other related tax positions we take, and a court could sustain such challenge. Pursuant to the Tax Receivable Agreement, the Continuing LLC Owner is required to reimburse us for any cash payments previously made to it under the Tax Receivable Agreement in the event that any tax benefits actually realized by us and for which payment has been made under the Tax Receivable Agreement are subsequently challenged by a taxing authority and are ultimately disallowed. In addition, but without duplication of any amounts previously reimbursed by the Continuing LLC Owner, any excess cash payments made by us to the Continuing LLC Owner will be netted against any future cash payments that we might otherwise be required to make to the Continuing LLC Owner under the terms of the Tax Receivable Agreement. However, we might not determine that we have effectively made an excess cash payment to the Continuing LLC Owner for a number of years following the initial time of such payment. Moreover, there can be no assurance that any excess cash payments for which the Continuing LLC Owner has a reimbursement obligation under the Tax Receivable Agreement will be repaid to us. As a result, payments could be made under the Tax Receivable Agreement in excess of the tax savings that we realize in respect of the tax attributes with respect to the Continuing LLC Owner that are the subject of the Tax Receivable Agreement. See “Certain relationships and related party transactions—Tax Receivable Agreement.”

Unanticipated changes in effective tax rates or adverse outcomes resulting from examination of our income or other tax returns could adversely affect our results of operations and financial condition.

We are subject to taxes by the U.S. federal, state, local and foreign tax authorities, and our tax liabilities will be affected by the allocation of expenses to differing jurisdictions. Our future effective tax rates could be subject to volatility or adversely affected by a number of factors, including:

- changes in the valuation of our deferred tax assets and liabilities;
- expected timing and amount of the release of any tax valuation allowances;
- tax effects of equity-based compensation;

- changes in tax laws, regulations or interpretations thereof; or
- future earnings being lower than anticipated in countries where we have lower statutory tax rates and higher than anticipated earnings in countries where we have higher statutory tax rates.

In addition, we may be subject to audits of our income, sales and other transaction taxes by U.S. federal, state, local and foreign taxing authorities. Outcomes from these audits could adversely affect our business, results of operations and financial condition.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended, or the 1940 Act, as a result of our ownership of Bioventus LLC, applicable restrictions could make it impractical for us to continue our business as contemplated and could adversely affect our business, results of operations and financial condition.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an "investment company" for purposes of the 1940 Act if (i) it is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (ii) it engages, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash items) on an unconsolidated basis. We do not believe that we are an "investment company," as such term is defined in either of those sections of the 1940 Act.

As the sole managing member of Bioventus LLC, we will control and operate Bioventus LLC. On that basis, we believe that our interest in Bioventus LLC is not an "investment security" as that term is used in the 1940 Act. However, if we were to cease participation in the management of Bioventus LLC, our interest in Bioventus LLC could be deemed an "investment security" for purposes of the 1940 Act.

We and Bioventus LLC intend to conduct our operations so that we will not be deemed an investment company. However, if we were to be deemed an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could adversely affect our business, results of operations and financial condition.

Bioventus is controlled by the Original LLC Owners, whose interests may differ from those of our public stockholders.

Immediately following this offering and the application of net proceeds from this offering, the Original LLC Owners will control approximately % of the combined voting power of our common stock through their ownership of both Class A common stock and Class B common stock. The Original LLC Owners will, for the foreseeable future, have the ability to substantially influence us through their ownership position over corporate management and affairs, and will be able to control virtually all matters requiring stockholder approval. The Original LLC Owners are able to, subject to applicable law, and the voting arrangements described in "Certain relationships and related party transactions," elect a majority of the members of our board of directors and control actions to be taken by us and our board of directors, including amendments to our certificate of incorporation and bylaws and approval of significant corporate transactions, including mergers and sales of substantially all of our assets. The directors so elected will have the authority, subject to the terms of our indebtedness and applicable rules and regulations, to issue additional stock, implement stock repurchase programs, declare dividends and make other decisions. It is possible that the interests of the Original LLC Owners may in some circumstances conflict with our interests and the interests of our other stockholders, including you. For example, the Continuing LLC Owner may have different tax positions from us, especially in light of the Tax Receivable Agreement that could influence our decisions regarding whether and when to dispose of assets, whether and when to incur new or refinance existing indebtedness, and whether and when Bioventus

should terminate the Tax Receivable Agreement and accelerate its obligations thereunder. In addition, the determination of future tax reporting positions and the structuring of future transactions may take into consideration the Continuing LLC Owner's tax or other considerations, which may differ from the considerations of us or our other stockholders. See "Certain relationships and related party transactions—Tax Receivable Agreement."

Risks related to this offering and ownership of our Class A common stock

We have identified an ongoing material weakness in our internal control over financial reporting. If we are unable to remediate this material weakness, or if we experience additional material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely requirements applicable to public companies, which may adversely affect investor confidence in us, and, as a result, the market price of our Class A common stock.

Ensuring that we have adequate internal financial and accounting controls and procedures in place so that we can produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP.

Prior to the completion of this offering, we have been a private company with limited accounting personnel and other resources to address our internal control over financial reporting. In connection with the audit of our consolidated financial statements as of and for the year ended December 31, 2018, we identified two material weaknesses in our internal control over financial reporting, one of which had not been remediated by December 31, 2019. A material weakness is a deficiency, or combination of deficiencies in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis.

In connection with the audit of our consolidated financial statements as of and for the year ended December 31, 2019, we determined that we continued to have a material weakness associated with the proper processing of Exogen reimbursement claims in accordance with regulations and contractual terms related to items we self-reported to the OIG.

We have implemented measures designed to improve our internal control over financial reporting to address the underlying causes of this material weakness. These efforts include:

- the augmentation, reorganization and training of our prescription to cash staff, which includes our direct sales team, order management personnel, patient financial services personnel and reimbursement services and accounts receivable personnel, regarding key aspects of regulations and requirements and how to deal with inconsistencies within patient medical records,
- realigning executive responsibility for this function to enhance the segregation of duties;
- implementation of monthly sales order testing on sampling basis by the Compliance department including a review of medical necessity;
- implementation of a third party medical billing review including a review of key regulatory elements;
- implementation of an electronic Certificate of Medical Necessity Form to ensure authorized individuals complete the appropriate sections in accordance with Medicare guidelines
- established a cross functional governance committee, reporting to an executive steering committee to review and approve the Company's Exogen Medicare policy and oversee future Exogen policy and process interpretations and changes; and
- implementing a checklist to be completed for each Medicare order to ensure compliance with the Company's policy for Medicare claims and then further automating this checklist.

In addition, we also determined that we had a material weakness associated with the establishment and review of a reimbursement claim reserve for errors related to the determination of medical necessity for Exogen reimbursement claims, which we believe has been remediated.

We cannot assure you that the measures we have taken to date, and actions we may take in the future, will be sufficient to remediate the control deficiencies that led to our material weaknesses in our internal control over financial reporting or that they will prevent or avoid potential future material weaknesses. If we are unable to successfully remediate our existing or any future material weaknesses in our internal control over financial reporting, or identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports in addition to applicable stock exchange listing requirements, investors may lose confidence in our financial reporting, and the market price of our Class A common stock may decline as a result. We could also become subject to investigations by the SEC or other regulatory authorities, which could require additional financial and management resources.

Failure to establish and maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act could adversely affect our business and stock price.

We are not currently required to comply with the rules of the SEC implementing Section 404 of the Sarbanes-Oxley Act and are therefore not required to make a formal assessment of the effectiveness of our internal control over financial reporting for that purpose. Upon becoming a public company, we will be required to comply with the SEC's rules implementing Sections 302 and 404 of the Sarbanes-Oxley Act, which will require management to certify financial and other information in our quarterly and annual reports and provide an annual management report on the effectiveness of internal controls over financial reporting. Though we will be required to disclose changes made in our internal controls and procedures on a quarterly basis, we will not be required to make our first annual assessment of our internal control over financial reporting pursuant to Section 404 until the year following our first annual report required to be filed with the SEC. However, as an emerging growth company, our independent registered public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 until the later of the year following our first annual report required to be filed with the SEC or the date we are no longer an emerging growth company. At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating.

To comply with the requirements of being a public company, we have undertaken various actions, and may need to take additional actions, such as implementing new internal controls and procedures and hiring additional accounting or internal audit staff. Testing and maintaining internal controls can divert our management's attention from other matters that are important to the operation of our business. Additionally, when evaluating our internal controls over financial reporting, we may identify material weaknesses that we may not be able to remediate in time to meet the applicable deadline imposed upon us for compliance with the requirements of Section 404. If we identify any material weaknesses in our internal controls over financial reporting or are unable to comply with the requirements of Section 404 in a timely manner or assert that our internal controls over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal controls over financial reporting once we are no longer an emerging growth company, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our Class A common stock could be adversely affected, and we could become subject to investigations by the stock exchange on which our securities are listed, the SEC or other regulatory authorities, which could require additional financial and management resources.

We will incur increased costs as a result of becoming a public company and in the administration of our organizational structure.

As a public company, we will incur significant legal, accounting, insurance and other expenses that we have not incurred as a private company, including costs associated with public company reporting requirements. We also have incurred and will incur costs associated with the Sarbanes-Oxley Act and related rules implemented by the SEC. Following the completion of this offering, we will incur ongoing periodic expenses in connection with the administration of our organizational structure. The expenses incurred by public companies generally for reporting and corporate governance purposes have been increasing. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly, although we are currently unable to estimate these costs with any degree of certainty. In estimating these costs, we took into account expenses related to insurance, legal, accounting, and compliance activities, as well as other expenses not currently incurred. These laws and regulations could also make it more difficult or costly for us to obtain certain types of insurance, including director and officer liability insurance, and we may be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. These laws and regulations could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as our executive officers. Furthermore, if we are unable to satisfy our obligations as a public company, we could be subject to delisting of our common stock, fines, sanctions and other regulatory action and potentially civil litigation.

The dual class structure of our common stock may adversely affect the trading price or liquidity of our Class A common stock.

The existence of dual classes of our common stock could result in less liquidity for any such class than if there were only one class of our capital stock. In addition, S&P Dow Jones and FTSE Russell have announced changes to their eligibility criteria for inclusion of shares of public companies on certain indices that will exclude companies with multiple classes of shares of common stock from being added to such indices. Several shareholder advisory firms also have announced their opposition to the use of multiple class structures. As a result, the dual class structure of our common stock may prevent the inclusion of our Class A common stock in such indices and may cause shareholder advisory firms to publish negative commentary about our corporate governance practices or otherwise seek to cause us to change our capital structure. Any such exclusion from indices could result in a less active trading market for our Class A common stock. Any actions or publications by shareholder advisory firms critical of our corporate governance practices or capital structure could also adversely affect the value of our Class A common stock.

Immediately following the consummation of this offering, the Continuing LLC Owner will have the right to have its LLC Interests redeemed pursuant to the terms of the Bioventus LLC Agreement, which may dilute the owners of the Class A common stock.

After this offering, we will have an aggregate of shares of Class A common stock authorized but unissued, including approximately shares of Class A common stock issuable upon redemption of LLC Interests that will be held by the Continuing LLC Owner. Bioventus LLC will enter into the Bioventus LLC Agreement and, subject to certain restrictions set forth therein and as described elsewhere in this prospectus, the Continuing LLC Owner will be entitled to have its LLC Interests redeemed for shares of our Class A common stock. We also intend to enter into the Registration Rights Agreement pursuant to which the shares of Class A common stock issued to the Continuing LLC Owner upon redemption of its LLC Interests and the shares of Class A common stock issued to the Former LLC Owners in connection with the Transactions will be eligible for resale, subject to certain limitations set forth therein. See “Certain relationships and related party transactions—Registration Rights Agreement.”

We cannot predict the size of future issuances of our Class A common stock or the effect, if any, that future issuances and sales of shares of our Class A common stock may have on the market price of our Class A

common stock. Sales or distributions of substantial amounts of our Class A common stock, including shares issued in connection with an acquisition, or the perception that such sales or distributions could occur, may cause the market price of our Class A common stock to decline.

We are a "controlled company" within the meaning of Nasdaq listing standards and, as a result, will qualify for, and intend to rely on, exemptions from certain corporate governance requirements. You will not have the same protections afforded to stockholders of companies that are subject to such requirements.

Substantially concurrent with the closing of this offering, the Voting Group, which will hold Class A common stock and Class B common stock representing approximately % of the combined voting power of our common stock, intends to enter into the Stockholders Agreement. Pursuant to the terms of the Stockholders Agreement, until such time as Essex Woodlands Health Ventures and certain other members of the Voting Group own less than 10% of the total shares of our Class A common stock owned by them as of the date this offering is consummated, and S+N owns less than 10% of the total shares of our Class B common stock owned by them as of the date this offering is consummated, or the Stockholders Agreement is otherwise terminated in accordance with its terms, the parties to the Stockholders Agreement will agree to vote their shares of Class A common stock and Class B common stock in favor of the election of the nominees of certain members of the Voting Group to our board of directors upon their nomination by the nominating and corporate governance committee of our board of directors. See "Certain relationships and related party transactions—Stockholders Agreement."

Because of the Stockholders Agreement and the aggregate voting power over our Class A common stock and Class B common stock held by the parties to the Stockholders Agreement, we are considered a "controlled company" for the purposes of Nasdaq. As such, we are exempt from certain corporate governance requirements of Nasdaq, including (1) the requirement that a majority of the board of directors consist of independent directors, (2) the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors and (3) the requirement that we have a compensation committee that is composed entirely of independent directors. Following this offering, we intend to rely on some or all of these exemptions. As a result, we will not have a majority of independent directors and our compensation and nominating and corporate governance committees will not consist entirely of independent directors. Accordingly, you will not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of Nasdaq.

If you purchase shares of Class A common stock in this offering, you will incur immediate and substantial dilution.

Dilution is the difference between the offering price per share and the pro forma net tangible book value per share of our Class A common stock immediately after the offering. The price you pay for shares of our Class A common stock sold in this offering is substantially higher than our pro forma net tangible book value per share immediately after this offering. If you purchase shares of Class A common stock in this offering, you will incur immediate and substantial dilution in the amount of $ per share based upon an assumed initial public offering price of $ per share (the midpoint of the price range listed on the cover page of this prospectus). In addition, you may also experience additional dilution, or potential dilution, upon future equity issuances to investors or to our employees and directors under our stock option plan and any other equity incentive plans we may adopt. As a result of this dilution, investors purchasing shares of Class A common stock in this offering may receive significantly less than the full purchase price that they paid for the stock purchased in this offering in the event of liquidation. See "Dilution."

We do not know whether a market will develop for our Class A common stock or what the market price of our Class A common stock will be and as a result it may be difficult for you to sell your shares of our Class A common stock.

Before this offering, there was no public trading market for our Class A common stock. If a market for our Class A common stock does not develop or is not sustained, it may be difficult for you to sell your shares of Class A common stock at an attractive price or at all. We cannot predict the prices at which our Class A common stock will trade. It is possible that in one or more future periods our results of operations may be below the expectations of public market analysts and investors and, as a result of these and other factors, the price of our Class A common stock may fall.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our Class A common stock, the price of our Class A common stock could decline.

The trading market for our Class A common stock will rely in part on the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by industry or securities analysts. If no or few analysts commence coverage of us, the trading price of our stock would likely decrease. Even if we do obtain analyst coverage, if one or more of the analysts covering our business downgrade their evaluations of our stock, the price of our Class A common stock could decline. If one or more of these analysts cease to cover our Class A common stock, we could lose visibility in the market for our stock, which in turn could cause our Class A common stock price to decline.

We expect that the price of our Class A common stock will fluctuate substantially and you may not be able to sell the shares you purchase in this offering at or above the offering price.

The initial public offering price for the shares of our Class A common stock sold in this offering is determined by negotiation between the representatives of the underwriters and us. This price may not reflect the market price of our Class A common stock following this offering. In addition, the market price of our Class A common stock is likely to be highly volatile and may fluctuate substantially due to many factors, including:

- the volume and timing of sales of our products;
- the introduction of new products or product enhancements by us or our competitors;
- disputes or other developments with respect to our or others' intellectual property rights;
- our ability to develop, obtain regulatory clearance or approval for, and market new and enhanced products on a timely basis;
- product liability claims or other litigation;
- quarterly variations in our results of operations or those of our competitors;
- media exposure of our products or our competitors;
- announcement or expectation of additional equity or debt financing efforts;
- additions or departures of key personnel;
- issuance of new or updated research or reports by securities analysts;
- failure to meet or exceed financial estimates and projections of the investment community or that we provide to the public;
- changes in governmental regulations or in reimbursement;
- changes in earnings estimates or recommendations by securities analysts; and
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

In recent years, the stock markets generally have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may significantly affect the market price of our Class A common stock, regardless of our actual operating performance. These fluctuations may be even more pronounced in the trading market for our Class A common stock shortly following this offering. If the market price of shares of our Class A common stock after this offering does not ever exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment.

In addition, in the past, class action litigation has often been instituted against companies whose securities have experienced periods of volatility in market price. Securities litigation brought against us following volatility in our stock price, regardless of the merit or ultimate results of such litigation, could result in substantial costs, which would hurt our financial condition and operating results and divert management's attention and resources from our business.

Substantial future sales of our Class A common stock, or the perception in the public markets that these sales may occur, may depress our stock price.

Sales of substantial amounts of our Class A common stock in the public market after this offering, or the perception that these sales could occur, could adversely affect the price of our Class A common stock and could impair our ability to raise capital through the sale of additional shares. Upon the closing of this offering, we will have shares of Class A common stock outstanding (or if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and shares of Class A common stock that would be issuable upon redemption or exchange of LLC Interests authorized but unissued. The shares of Class A common stock offered in this offering will be freely tradable without restriction under the Securities Act, except for any shares of our common stock that may be held or acquired by our directors, executive officers and other affiliates, as that term is defined in the Securities Act, which will be restricted securities under the Securities Act. Restricted securities may not be sold in the public market unless the sale is registered under the Securities Act or an exemption from registration is available.

The remaining outstanding shares of Class A common stock held by the Former LLC Owners will be subject to certain restrictions on sale. We and each of our executive officers and directors and the Original LLC Owners, which collectively will hold % of our outstanding capital stock (including shares of Class A common stock issuable upon redemption or exchange of LLC Interests) upon the closing of this offering, have agreed with the underwriters, subject to certain exceptions, not to dispose of or hedge any shares of common stock or securities convertible into or exchangeable for (including the LLC Interests), or that represent the right to receive, shares of common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of the representatives on behalf of the underwriters. See "Underwriting." All of our shares of common stock outstanding as of the date of this prospectus (and shares of Class A common stock issuable upon redemption or exchange of LLC Interests) may be sold in the public market by existing stockholders following the expiration of the applicable lock-up period, subject to applicable limitations imposed under federal securities laws.

We also intend to enter into the Registration Rights Agreement pursuant to which the shares of Class A common stock issued upon redemption or exchange of LLC Interests held by the Continuing LLC Owner and the shares of Class A common stock issued to the Former LLC Owners in connection with the Transactions will be eligible for resale, subject to certain limitations set forth therein. See "Certain relationships and related party transactions—Registration Rights Agreement."

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of Class A common stock subject to outstanding options and Class A common stock (a) issued or issuable under our stock plans and (b) issuable to the Phantom Plan Participants under the Phantom Plan. Any such Form S-8 registration statements will automatically become effective upon filing. Accordingly, shares registered

under such registration statements will be available for sale in the open market following the expiration of the applicable lock-up period.

See “Shares eligible for future sale” for a more detailed description of the restrictions on selling shares of our common stock after this offering.

In the future, we may also issue additional securities if we need to raise capital, which could constitute a material portion of our then-outstanding shares of common stock.

We have broad discretion over the use of the net proceeds from this offering and it is possible that we will not use them effectively.

We cannot specify with any certainty the particular uses of the net proceeds that we will receive from this offering. Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled ‘‘Use of Proceeds,’’ and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these proceeds effectively could adversely affect our business, results of operations and financial condition. Pending their use, we may invest our proceeds in a manner that does not produce income or that loses value. Our investments may not yield a favorable return to our investors and may negatively impact the price of our Class A common stock.

Taking advantage of the reduced disclosure requirements applicable to “emerging growth companies” may make our Class A common stock less attractive to investors.

The JOBS Act provides that, so long as a company qualifies as an “emerging growth company,” it will, among other things:

- be exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that its independent registered public accounting firm provide an attestation report on the effectiveness of its internal control over financial reporting;
- be exempt from the “say on pay” and “say on golden parachute” advisory vote requirements of the Dodd-Frank Wall Street Reform and Customer Protection Act, or the Dodd-Frank Act;
- be exempt from certain disclosure requirements of the Dodd-Frank Act relating to compensation of its executive officers and be permitted to omit the detailed compensation discussion and analysis from proxy statements and reports filed under the Exchange Act; and
- be permitted to provide a reduced level of disclosure concerning executive compensation and be exempt from any rules that have been adopted by the Public Company Accounting Oversight Board requiring a supplement to the auditor’s report on the financial statements or that may be adopted requiring mandatory audit firm rotations.

We are an “emerging growth company,” as defined in the JOBS Act, and we could be an emerging growth company for up to five years following the completion of this offering. For as long as we continue to be an emerging growth company, we may choose to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies. We currently intend to take advantage of the reduced disclosure requirements regarding executive compensation. We have irrevocably elected not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 107(b) of the JOBS Act. We could be an emerging growth company for up to five years after this offering and will continue to be an emerging growth company unless our total annual gross revenues are $1.07 billion or more, we have issued more than $1 billion in non-convertible debt in the past three years or we become a “large accelerated filer” as

defined in the Exchange Act. If we remain an "emerging growth company" after this offering, we may take advantage of other exemptions, including the exemptions from the advisory vote requirements and executive compensation disclosures under the Dodd-Frank Act and the exemption from the provisions of Section 404(b) of the Sarbanes-Oxley Act. We cannot predict if investors will find our Class A common stock less attractive if we elect to rely on these exemptions, or if taking advantage of these exemptions would result in less active trading or more volatility in the price of our Class A common stock. Also, as a result of our intention to take advantage of some or all of the reduced regulatory and reporting requirements that will be available to us as long as we qualify as an "emerging growth company," our financial statements may not be comparable to those of companies that fully comply with regulatory and reporting requirements upon the public company effective dates.

We do not currently expect to pay any cash dividends.

We do not anticipate declaring or paying any cash dividends to holders of our Class A common stock in the foreseeable future. We currently intend to retain future earnings, if any, to finance our growth. Any determination to pay cash dividends in the future will be at the sole discretion of our board of directors, subject to limitations under applicable law and may be discontinued at any time. In addition, our ability to pay cash dividends is currently restricted by the terms of our 2019 Credit Agreement. Therefore, you are not likely to receive any dividends on your Class A common stock for the foreseeable future, and the success of an investment in our Class A common stock will depend upon any future appreciation in its value. Consequently, investors may need to sell all or part of their holdings of our Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investment. There is no guarantee that our Class A common stock will appreciate in value or even maintain the price at which our stockholders have purchased our Class A common stock. Investors seeking cash dividends should not purchase our Class A common stock.

In addition, our operations are currently conducted entirely through Bioventus LLC and its subsidiaries and our ability to generate cash to meet our debt service obligations or to make future dividend payments, if any, is highly dependent on the earnings and the receipt of funds from Bioventus LLC and its subsidiaries via dividends or intercompany loans.

Our amended and restated certificate of incorporation will, to the extent permitted by applicable law, contain provisions renouncing our interest and expectation to participate in certain corporate opportunities identified or presented to certain of our Original LLC Owners.

Certain of the Original LLC Owners are in the business of making or advising on investments in companies and these Original LLC owners may hold, and may, from time to time in the future, acquire interests in or provide advice to businesses that directly or indirectly compete with certain portions of our business or the business of our suppliers. Our amended and restated certificate of incorporation will provide that, to the fullest extent permitted by law, none of the Original LLC Owners or any director who is not employed by us or his or her affiliates will have any duty to refrain from engaging in a corporate opportunity in the same or similar lines of business as us. The Original LLC Owners may also pursue acquisitions that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us. As a result, these arrangements could adversely affect our business, results of operations, financial condition or prospects if attractive business opportunities are allocated to any of the Original LLC Owners instead of to us. See "Description of capital stock—Corporate opportunities."

We may issue shares of preferred stock in the future, which could make it difficult for another company to acquire us or could otherwise adversely affect holders of our Class A common stock, which could depress the price of our Class A common stock.

Our amended and restated certificate of incorporation will authorize us to issue one or more series of preferred stock. Our board of directors will have the authority to determine the preferences, limitations and relative rights of the shares of preferred stock and to fix the number of shares constituting any series and the

designation of such series, without any further vote or action by our stockholders. Our preferred stock could be issued with voting, liquidation, dividend and other rights superior to the rights of our Class A common stock. The potential issuance of preferred stock may delay or prevent a change in control of us, discourage bids for our Class A common stock at a premium to the market price, and materially and adversely affect the market price and the voting and other rights of the holders of our Class A common stock.

Anti-takeover provisions in our governing documents and under Delaware law could make an acquisition of our company more difficult, limit attempts by our stockholders to replace or remove our current management, and depress the market price of our common stock.

Our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law contain or will contain provisions that could have the effect of rendering more difficult, delaying or preventing an acquisition deemed undesirable by our board of directors. Among others, our amended and restated certificate of incorporation and amended and restated bylaws will include the following provisions:

- authorizing the issuance of "blank check" preferred stock that could be issued by our board of directors to increase the number of outstanding shares and thwart a takeover attempt;
- establishing a classified board of directors so that not all members of our board of directors are elected at one time;
- the removal of directors only for cause;
- prohibiting the use of cumulative voting for the election of directors;
- limiting the ability of stockholders to call special meetings or amend our bylaws;
- requiring all stockholder actions to be taken at a meeting of our stockholders; and
- establishing advance notice and duration of ownership requirements for nominations for election to the board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management. As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation Law, or the DGCL, which prevents interested stockholders, such as certain stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations unless (i) prior to the time such stockholder became an interested stockholder, the board approved the transaction that resulted in such stockholder becoming an interested stockholder, (ii) upon consummation of the transaction that resulted in such stockholder becoming an interested stockholder, the interested stockholder owned 85% of the common stock or (iii) following board approval, the business combination receives the approval of the holders of at least two-thirds of our outstanding common stock not held by such interested stockholder. Because we have "opted out" of Section 203 of the DGCL in our amended and restated certificate of incorporation, the statute will not apply to business combinations involving us.

Any provision of our amended and restated certificate of incorporation, amended and restated bylaws or Delaware law that has the effect of delaying, preventing or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock and could also affect the price that some investors are willing to pay for our common stock.

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation will provide that, unless we consent to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for: (a) any

derivative action or proceeding brought on our behalf; (b) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or to our stockholders; (c) any action asserting a claim arising pursuant to the DGCL, our amended and restated certificate of incorporation or amended bylaws, or as to which the DGCL confers exclusive jurisdiction on the Court of Chancery of the State of Delaware; or (d) any action asserting a claim governed by the internal affairs doctrine; provided that the exclusive forum provisions will not apply to suits brought to enforce any liability or duty created by Exchange Act or to any claim for which the federal courts have exclusive jurisdiction. Unless we consent in writing to the selections of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision. The choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations and financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements concerning our business, operations and financial performance and condition, as well as our plans, objectives and expectations for our business operations and financial performance and condition. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “potential,” “positioned,” “seek,” “should,” “target,” “will,” “would” and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. These forward-looking statements include, but are not limited to, statements about:

- the adverse impacts on our business as a result of the COVID-19 pandemic;
- our dependence on a limited number of products;
- our ability to develop, acquire and commercialize new products, line extensions or expanded indications;
- the continued and future acceptance of our existing portfolio of products and any new products, line extensions or expanded indications by physicians, patients, third-party payers and others in the medical community;
- our ability to differentiate the HA viscosupplementation therapies we own or distribute from alternative therapies for the treatment of OA;
- the proposed down-classification of non-invasive bone growth stimulators, including our Exogen system, by the FDA;
- our ability to achieve and maintain adequate levels of coverage and/or reimbursement for our products, the procedures using our products, or any future products we may seek to commercialize;
- our ability to complete acquisitions or successfully integrate new businesses, products or technologies in a cost-effective and non-disruptive manner;
- competition against other companies;
- the negative impact on our ability to market our HA products due to the reclassification of HA products from medical devices to drugs in the United States by the FDA;
- our ability to attract, retain and motivate our senior management and qualified personnel;
- our ability to continue to research, develop and manufacture our products if our facilities are damaged or become inoperable;
- failure to comply with the extensive government regulations related to our products and operations;
- enforcement actions if we engage in improper claims submission practices or in improper marketing or promotion of our products;
- the FDA regulatory process and our ability to obtain and maintain required regulatory clearances and approvals;
- failure to comply with the government regulations that apply to our HCT/P products;
- the clinical studies of any of our future products that do not product results necessary to support regulatory clearance or approval in the United States or elsewhere; and
- the other risks identified in this prospectus including, without limitation, those under the sections titled “Risk factors,” “Management’s discussion and analysis of financial condition and results of operations” and “Business.”

Forward-looking statements are based on management's current expectations, estimates, forecasts and projections about our business and the industry in which we operate, and management's beliefs and assumptions are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements in this prospectus may turn out to be inaccurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. Factors that may cause actual results to differ materially from current expectations include, among other things, those described in the section entitled "Risk factors" and elsewhere in this prospectus. Potential investors are urged to consider these factors carefully in evaluating these forward-looking statements. These forward-looking statements speak only as of the date of this prospectus. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks and other information we describe in the reports we will file from time to time with the SEC after the date of this prospectus.

USE OF PROCEEDS

We estimate the net proceeds from this initial public offering of shares of Class A common stock will be approximately $ million, or $ million if the underwriters exercise their option to purchase additional shares in full, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) the net proceeds to us by approximately $ million, assuming that the assumed initial public offering price remains the same, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds to us from this offering to purchase newly-issued LLC Interests from Bioventus LLC at a purchase price per LLC Interest equal to the initial public offering price per share of Class A common stock less the underwriting discounts and commissions.

We intend to cause Bioventus LLC to use such proceeds, after deducting estimated offering expenses, for general corporate purposes. We may also use a portion of the net proceeds to acquire or invest in businesses, products, services or technologies; however, we do not have agreements or commitments for any material acquisitions or investments at this time.

We will use the net proceeds we receive pursuant to any exercise of the underwriters' option to purchase additional shares of Class A common stock to purchase additional LLC Interests from Bioventus LLC to maintain the one-to-one ratio between the number of shares of Class A common stock issued by us and the number of LLC Interests owned by us. We intend to cause Bioventus LLC to use any such proceeds it receives for general corporate purposes.

As of the date of this prospectus, since we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, our management will have broad discretion over the use of any net proceeds from this offering that are to be applied for general corporate purposes. Pending the use of the proceeds from this offering, we intend to invest the net proceeds in short-term, interest-bearing, investment grade securities, certificates of deposit or governmental securities.

DIVIDEND POLICY

We do not anticipate declaring or paying any cash dividends to holders of our Class A common stock in the foreseeable future. We currently intend to retain future earnings, if any, to finance the growth of our business. If we decide to pay cash dividends in the future, the declaration and payment of such dividends will be at the sole discretion of our board of directors and may be discontinued at any time. Holders of our Class B common stock are not entitled to participate in any dividends declared by our board of directors. In determining the amount of any future dividends, our board of directors will take into account any legal or contractual limitations, our actual and anticipated future earnings, cash flow, debt service and capital requirements and other factors that our board of directors may deem relevant. In addition, our ability to pay cash dividends is currently restricted by the terms of our 2019 Credit Agreement. We are a holding company, and substantially all of our operations are carried out by Bioventus LLC and its subsidiaries, and therefore we will only be able to pay dividends from funds we receive from Bioventus LLC. Our ability to pay dividends may also be restricted by the terms of any future credit agreement or any future debt or preferred equity securities of us or our subsidiaries.

TRANSACTIONS

Existing organization

Prior to the consummation of this offering and the organizational transactions described below, the Original LLC Owners are the only owners of Bioventus LLC. Bioventus LLC is treated as a partnership for U.S. federal income tax purposes and, as such, generally is not subject to any U.S. federal entity-level income taxes (with the exception of certain subsidiaries that are subject to entity-level income taxes). Rather, taxable income or loss is included in the U.S. federal income tax returns of Bioventus LLC's members.

Bioventus Inc. was incorporated as a Delaware corporation on December 22, 2015 to serve as the issuer of the Class A common stock offered hereby.

Transactions

In connection with the closing of this offering, we will consummate the following organizational transactions, which we refer to as the "Transactions":

- we will amend and restate the Bioventus LLC Agreement, to, among other things, (i) provide for LLC Interests that will be the single class of common membership interests in Bioventus LLC, (ii) exchange all of the existing membership interests (including profit interests awarded under our MIP) in Bioventus LLC for LLC Interests and (iii) appoint Bioventus Inc. as the sole managing member of Bioventus LLC;
- we will amend and restate Bioventus Inc.'s certificate of incorporation to, among other things, (i) provide for Class A common stock and Class B common stock, each share of which entitles its holders to one vote per share on all matters presented to Bioventus Inc.'s stockholders and (ii) issue shares of Class B common stock to the Continuing LLC Owner, on a one-to-one basis with the number of LLC Interests it owns;
- the Former LLC Owners will exchange their indirect ownership interests in Bioventus LLC for shares of Class A common stock on a one-to-one basis;
- Bioventus Inc. will issue shares of our Class A common stock to the purchasers in this offering (or shares of Class A common stock if the underwriters exercise in full their option to purchase additional shares of Class A common stock) in exchange for net proceeds of approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares of Class A common stock), assuming the shares are offered at $ per share (the midpoint of the price range listed on the cover page of this prospectus), after deducting underwriting discounts and commissions but before offering expenses;
- Bioventus Inc. will use all of the net proceeds from this offering (including any net proceeds received upon exercise of the underwriters' option to purchase additional shares of Class A common stock) to acquire newly-issued LLC Interests from Bioventus LLC at a purchase price per interest equal to the initial public offering price per share of Class A common stock, less underwriting discounts and commissions, collectively representing % of Bioventus LLC's outstanding LLC Interests (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- Bioventus LLC will use the proceeds from the sale of LLC Interests to Bioventus Inc. as described in "Use of proceeds;"
- the Phantom Plan will be terminated and the Phantom Plan Participants will receive rights to receive up to shares of Class A common stock upon settlement of their awards under the Phantom Plan, with such settlement expected to take place between twelve and 24 months following the date of termination of the Phantom Plan as described in "Executive compensation—Narrative to summary

compensation table—Equity-based compensation" (which settlement may result in a change in the timing over which compensation expense is recognized as described in "Management's discussion and analysis of financial condition and results of operations—Components of our results of operations—Selling, general and administrative expense"), and Bioventus Inc. will receive a corresponding number of LLC Interests from Bioventus LLC upon settlement;

- the Continuing LLC Owner will continue to own the LLC Interests it received in exchange for its existing membership interests in Bioventus LLC; and
- Bioventus Inc. will enter into (i) the Tax Receivable Agreement with the Continuing LLC Owner, (ii) the Stockholders Agreement with the Voting Group and (iii) the Registration Rights Agreement with the Original LLC Owners who, upon the consummation of this offering, will own shares of Bioventus' Class A and Class B common stock (which will not have any liquidation or distribution rights).

Organizational structure following this offering

Immediately following the completion of the Transactions, including this offering:

- Bioventus Inc. will be a holding company and the principal asset of Bioventus Inc. will be LLC Interests of Bioventus LLC;
- Bioventus Inc. will be the sole managing member of Bioventus LLC and will control the business and affairs of Bioventus LLC and its subsidiaries;
- Bioventus Inc.'s amended and restated certificate of incorporation and the Bioventus LLC Agreement will require that we and Bioventus LLC at all times maintain a one-to-one ratio between the number of shares of Class A common stock issued by us and the number of LLC Interests owned by us, as well as a one-to-one ratio between the number of shares of Class B common stock owned by the Continuing LLC Owner and the number of LLC Interests owned by the Continuing LLC Owner;
- Bioventus Inc. will own LLC Interests representing % of the economic interest in Bioventus LLC (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- the purchasers in this offering (i) will own shares of Class A common stock, representing approximately % of the combined voting power of all of Bioventus Inc.'s common stock (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock), (ii) will own % of the economic interest in Bioventus Inc. (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and (iii) through Bioventus Inc.'s ownership of LLC Interests, indirectly will hold (applying the percentages in the preceding clause (ii) to Bioventus Inc.'s percentage economic interest in Bioventus LLC) approximately % of the economic interest in Bioventus LLC (or % if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- the Former LLC Owners (i) will own shares of Class A common stock, representing approximately % of the combined voting power of all of Bioventus Inc.'s common stock (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock), (ii) will own % of the economic interest in Bioventus Inc. (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and (iii) through Bioventus Inc.'s ownership of LLC Interests, indirectly will hold (applying the percentages in the preceding clause (ii) to Bioventus Inc.'s percentage economic interest in Bioventus LLC) approximately % of the economic interest in Bioventus LLC (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock);
- the Continuing LLC Owner will own (i) through its ownership of Class B common stock, approximately % of the voting power in Bioventus Inc. (or approximately %, if the

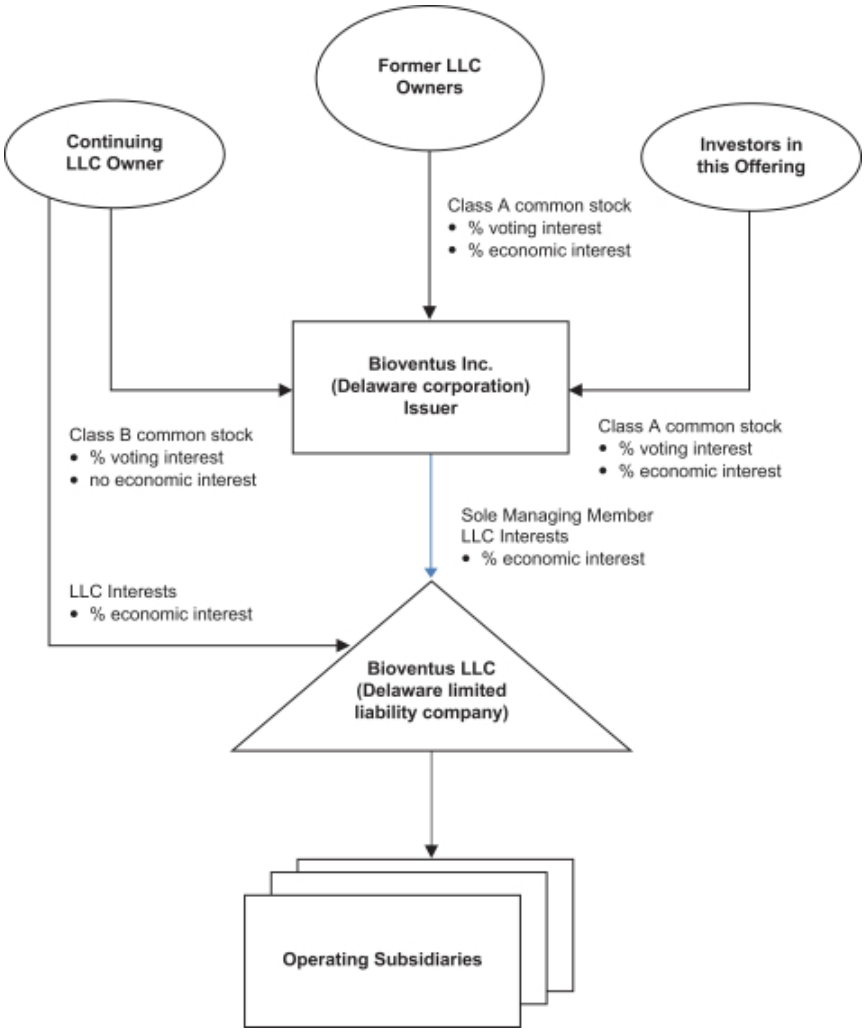
underwriters exercise in full their option to purchase additional shares of Class A common stock) and (ii) LLC Interests, representing % of the economic interest in Bioventus LLC (or %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock). Following the offering, each LLC Interest held by the Continuing LLC Owner will be redeemable, at its election, for newly-issued shares of Class A common stock on a one-for-one basis or, if Bioventus Inc. and the Continuing LLC Owner agree, a cash payment (if mutually agreed) equal to a volume weighted average market price of one share of Class A common stock for each LLC Interest redeemed (subject to customary adjustments, including for stock splits, stock dividends and reclassifications) in accordance with the terms of the Bioventus LLC Agreement; provided that, at Bioventus Inc.'s election, Bioventus Inc. may effect a direct exchange of such Class A common stock or such cash (if mutually agreed) for such LLC Interests. Shares of Class B common stock will be cancelled on a one-for-one basis if we, at the election of the Continuing LLC Owner, redeem or exchange its LLC Interests pursuant to the terms of the Bioventus LLC Agreement. See "Certain relationships and related party transactions—Bioventus LLC Agreement;" and

- Bioventus Inc. will enter into (i) the Tax Receivable Agreement with the Continuing LLC Owner, (ii) the Stockholders Agreement with the Voting Group and (iii) the Registration Rights Agreement with the Original LLC Owners. Upon the consummation of this offering, the Continuing LLC Owner will own (x) shares of Bioventus' Class B common stock (which will not have any liquidation or distribution rights), representing approximately % of the combined voting power of all of Bioventus Inc.'s common stock (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock) and (y) LLC Interests, representing approximately % of the economic interest in the business of Bioventus LLC and its subsidiaries (or approximately %, if the underwriters exercise in full their option to purchase additional shares of Class A common stock), representing both a direct interest through the Continuing LLC Owner's ownership of LLC Interests and an indirect interest through the Former LLC Owners' ownership of Class A common stock.

Immediately following this offering, Bioventus Inc. will be a holding company and our principal asset will be the LLC Interests we purchase from Bioventus LLC and acquire from the Former LLC Owners. As the sole managing member of Bioventus LLC, Bioventus Inc. will operate and control all of the business and affairs of Bioventus LLC and, through Bioventus LLC and its subsidiaries, conduct our business. Accordingly, we will have the sole voting interest in, and control the management of, Bioventus LLC. As a result, Bioventus Inc. will consolidate Bioventus LLC in our consolidated financial statements and will report a non-controlling interest related to the LLC Interests held by the Continuing LLC Owner on our consolidated financial statements. Bioventus Inc. will have a board of directors and executive officers, but will have no employees. The functions of all of our employees are expected to reside at or under Bioventus LLC.

See "Description of capital stock" for more information about our certificate of incorporation and the terms of the Class A common stock and Class B common stock. See "Certain relationships and related party transactions" for more information about (i) the Bioventus LLC Agreement, including the terms of the LLC Interests and the redemption right of the Continuing LLC Owner; (ii) the Tax Receivable Agreement; (iii) the Registration Rights Agreement; and (iv) the Stockholders Agreement. Under the Stockholders Agreement, any increase or decrease in the size of our board of directors or any committee, and any amendment to our organizational documents, will in each case require the approval of Essex Woodlands Health Ventures and certain other members of the Voting Group, for so long as they collectively own at least 10% of the total shares of our Class A common stock owned by them as of the date this offering is consummated, and will also require the approval of S+N and its affiliates, for so long as S+N and its affiliates own at least 10% of the total shares of our Class B common stock owned by them as of the date this offering is consummated.

The diagram below depicts our organizational structure after giving effect to the Transactions, including this offering, assuming no exercise by the underwriters of their option to purchase additional shares of Class A common stock:



CAPITALIZATION

The following table sets forth the cash and cash equivalents and capitalization as of June 27, 2020:

- of Bioventus LLC and its subsidiaries on an actual basis; and
- of Bioventus Inc. and its subsidiaries on a pro forma basis to give effect to the Transactions, including our issuance and sale of shares of Class A common stock in this offering at an assumed initial public offering price of $ per share, the midpoint of the price range listed on the cover page of this prospectus, after (i) deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us and (ii) the application of the proceeds from the offering, each as described under "Use of proceeds."

You should read this information together with the financial statements and related notes appearing elsewhere in this prospectus and the information set forth under the headings "Prospectus summary—Summary historical and pro forma financial data," "Transactions," "Use of proceeds," "Selected financial data," and "Management's discussion and analysis of financial condition and results of operations".

	As of June 27, 2020	
(in thousands, except share and per share data)	**Bioventus LLC actual**	**Bioventus Inc. pro forma(1)**
Cash and cash equivalents	$ 126,240	
Long-term indebtedness:		
Revolving credit facility(2)	49,000	—
Term loan(2)	195,672	
Stockholders' equity (deficit):		
Class A common stock, par value $ per share; no shares authorized, issued and outstanding, actual; shares authorized, shares issued and outstanding, Bioventus Inc. pro forma	—	
Class B common stock, par value $ per share; no shares authorized, issued and outstanding, actual; shares authorized, shares issued and outstanding, Bioventus Inc. pro forma	—	
Members' equity	285,135	—
Accumulated other comprehensive (loss) income	(721)	
Additional paid-in capital	—	
Accumulated deficit	(145,235)	
Non-controlling interest in subsidiary	2,612	
Total members' equity, actual; stockholders' equity pro forma	141,791	
Total capitalization	$ 386,463	

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range listed on the cover page of this prospectus, would increase (decrease) the pro forma amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by approximately $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

(2) On September 24, 2020, we repaid all borrowings outstanding under our revolving credit facility. For more information regarding our term loan and revolving credit facility, see "Management's discussion and analysis of financial condition and results of operations—Indebtedness."

DILUTION

The Continuing LLC Owner will maintain its LLC Interests in Bioventus LLC after the Transactions. Because the Continuing LLC Owner does not own any Class A common stock or have any right to receive distributions from Bioventus, we have presented dilution in pro forma net tangible book value per share after this offering assuming the Continuing LLC Owner had its LLC Interests redeemed or exchanged for newly-issued shares of Class A common stock on a one-for-one basis (rather than for cash), and the cancellation for no consideration of all of its shares of Class B common stock (which are not entitled to distributions from Bioventus Inc.), in order to more meaningfully present the dilutive impact on the investors in this offering. We refer to the assumed redemption or exchange of all LLC Interests owned by the Continuing LLC Owner for shares of Class A common stock as described in the previous sentence as the "Assumed Redemption." We also note that the effect of the Assumed Redemption is to increase the assumed number of shares of Class A common stock outstanding before the offering, thereby decreasing the pro forma net tangible book value per share before the offering and correspondingly increasing the dilution per share to new Class A common stock investors.

Dilution is the amount by which the offering price paid by the purchasers of the Class A common stock in this offering exceeds the pro forma net tangible book value per share of Class A common stock after the offering. Bioventus LLC's net tangible book value as of June 27, 2020 was $ million. Net tangible book value per share is determined at any date by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of Class A common stock deemed to be outstanding at that date.

If you invest in our Class A common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the initial public offering price per share and the pro forma net tangible book value per share of our Class A common stock after this offering.

Pro forma net tangible book value per share is determined at any date by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of Class A common stock, after giving effect to the Transactions, including this offering, and the Assumed Redemption. Our pro forma net tangible book value as of June 27, 2020 would have been approximately $ million, or $ per share of Class A common stock. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $ per share to new investors purchasing shares of Class A common stock in this offering. We determine dilution by subtracting the pro forma net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of Class A common stock. The following table illustrates this dilution:

Assumed initial public offering price per Class A share	$
Pro forma net tangible book value per share as of June 27, 2020 before this offering(1)	
Increase in pro forma net tangible book value per share attributable to investors in this offering	
Pro forma net tangible book value per share after this offering	
Dilution per share to new Class A common stock investors	$

(1) The computation of pro forma net tangible book value per share as of June 27, 2020 before this offering is set forth below:

Numerator:	
Book value of tangible assets	$
Less: total liabilities	
Pro forma net tangible book value[(a)]	$
Denominator:	
Shares of Class A common stock outstanding immediately prior to this offering and after Assumed Redemption	
Pro forma net tangible book value per share	$

(a) Gives pro forma effect to the Transactions (other than this offering) and the Assumed Redemption.

If the underwriters exercise their option to purchase additional shares of our Class A common stock in full in this offering, the pro forma net tangible book value after the offering would be $ per share, the increase in pro forma net tangible book value per share to existing stockholders would be $ and the dilution per share to new investors would be $ per share, in each case assuming an initial public offering price of $ per share, which is the midpoint of the price range listed on the cover page of this prospectus.

The following table summarizes, as of June 27, 2020 after giving effect to this offering, the Transactions and the differences between the Original LLC Owners and new investors in this offering with regard to:

- the number of shares of Class A common stock purchased from us by investors in this offering and the number of shares issued to the Original LLC Owners after giving effect to the Assumed Redemption,
- the total consideration paid to us in cash by investors purchasing shares of Class A common stock in this offering and by the Original LLC Owners, and
- the average price per share of Class A common stock that such Original LLC Owners and new investors paid.
- The calculation below is based on an assumed initial public offering price of $ per share, which is the midpoint of the price range listed on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares purchased		Total consideration		Average price per share
	Number	Percent	Amount	Percent	
Original LLC Owners		%	$	%	$
New investors					
Total		100%	$	100%	$

Except as otherwise indicated, the discussion and the tables above assume no exercise of the underwriters' option to purchase additional shares of Class A common stock. The number of shares of our Class A common stock outstanding after this offering as shown in the tables above is based on the membership interests of Bioventus LLC outstanding as of , 2020, and excludes:

- shares of Class A common stock reserved for future issuance under the Plan, as described in "Executive compensation—New incentive arrangements," consisting of (i) shares of Class A common stock issuable upon the exercise of options to purchase shares of Class A common stock granted on the date of this prospectus to our directors and certain employees, including the named executive officers, in connection with this offering, as described in "Executive compensation—Director compensation" and Executive compensation—New equity awards," and (ii) additional shares of Class A common stock reserved for future issuance (exclusive of the additional shares available for issuance under the Plan pursuant to the annual increase each calendar year beginning in and ending in , as described in "Executive compensation—New incentive arrangements");

- shares of Class A common stock reserved as of the closing date of this offering for future issuance to the Stock Plan Participants upon settlement of their awards, as described in “Executive compensation—Narrative to summary compensation table—Equity-based compensation;”
- shares of Class A common stock reserved for issuance under our Employee Stock Purchase Plan, as described in “Executive compensation—New incentive arrangements;” and
- shares Class A common stock reserved as of the closing date of this offering for future issuance upon redemption or exchange of LLC Interests by the Continuing LLC Owner.

Unless otherwise indicated, this prospectus assumes:

- the completion of the organizational transactions as described under “Transactions;”
- no exercise by the underwriters of their option to purchase additional shares of Class A common stock;
- the shares of Class A common stock are offered at $ per share (the midpoint of the price range listed on the cover page of this prospectus); and
- no exercise of outstanding options after , 2020.

UNAUDITED PRO FORMA CONSOLIDATED FINANCIAL INFORMATION

The following statements set forth unaudited pro forma consolidated financial data for Bioventus Inc. as of June 27, 2020, for the six months ended June 27, 2020 and June 29, 2019 and for the year ended December 31, 2019. The unaudited pro forma consolidated balance sheet as of June 27, 2020 gives effect to the Transactions as if they had occurred on that date. The unaudited pro forma consolidated statements of operations for the year ended December 31, 2019 and for the six months ended June 27, 2020 and June 29, 2019 have been prepared to illustrate the effects of the Transactions as if they occurred on January 1, 2019. The unaudited pro forma consolidated financial statements have been developed by applying pro forma adjustments to the historical audited consolidated financial statements of Bioventus LLC included elsewhere in this prospectus. Assumptions underlying the pro forma adjustments are described in the accompanying notes, which should be read in conjunction with these unaudited pro forma consolidated financial statements.

Bioventus Inc. was incorporated on December 22, 2015 and has no business transactions, activities, assets or liabilities to date, and therefore its historical financial information is not shown in a separate column in the unaudited pro forma consolidated balance sheet and unaudited pro forma consolidated statement of operations.

The pro forma adjustments related to the Transactions other than this offering, which we refer to as Reorganization Adjustments, are described in the notes to the unaudited pro forma consolidated financial information, and principally include those transactions as listed within the “Transactions” section of this prospectus.

The pro forma adjustments related to this offering, which we refer to as the Offering Adjustments, are described in the notes to the unaudited pro forma consolidated financial information, and principally include those items listed within “The offering” and “Use of proceeds” sections of this prospectus.

Except as otherwise indicated, the unaudited pro forma consolidated financial information presented assumes no exercise by the underwriters of their option to purchase additional shares of Class A common stock from us.

Bioventus LLC has been, and following the Transactions will continue to be, treated as a partnership for U.S. federal income tax purposes and, as such, is generally not, apart from certain subsidiaries, subject to any U.S. federal entity-level income taxes. Rather, taxable income or loss is included in the U.S. federal income tax returns of Bioventus LLC’s members, including following this offering, Bioventus Inc. Bioventus Inc. will be subject to U.S. federal, state and local income tax with respect to its allocable share of any taxable income of Bioventus LLC. For the purposes of the unaudited pro forma financial statements, Bioventus Inc. has not recorded pro forma adjustments to income tax expense or deferred income tax as it is not more likely than not that Bioventus Inc. will be able to realize the benefit from the reorganization.

As described in greater detail under ‘‘Certain relationships and related party transactions—Tax Receivable Agreement,’’ in connection with the closing of this offering, we will enter into the Tax Receivable Agreement with the Continuing LLC Owner that will provide for the payment to it by Bioventus Inc. of 85% of the amount of tax benefits, if any, that Bioventus Inc. actually realizes (or in some circumstances is deemed to realize) as a result of (i) increases in the tax basis of assets of Bioventus LLC resulting from (a) any future redemptions or exchanges of LLC Interests described under “Certain relationships and related party transactions—Bioventus LLC Agreement—LLC Interest Redemption Right,” and (b) certain distributions (or deemed distributions) by Bioventus LLC and (ii) certain other tax benefits arising from payments under the Tax Receivable Agreement. Due to the uncertainty in the amount and timing of future redemptions or exchanges of LLC Interests by the Continuing LLC Owner, the unaudited pro forma consolidated financial information assumes that no redemptions or exchanges of LLC Interests have occurred and therefore no increases in tax basis in Bioventus LLC’s assets or other tax benefits that may be realized thereunder have been assumed in the unaudited pro forma consolidated financial information. However, if the Continuing LLC Owner were to exchange or redeem all of its

LLC Interests, we would recognize a deferred tax asset of approximately $ million and a related liability for payments under the Tax Receivable Agreement of approximately $ million, assuming, among other factors, (i) all exchanges occurred on the same day; (ii) a price of $ per share of Class A common stock (which is the midpoint of the price range set forth on the cover of this prospectus), (iii) a constant corporate tax rate of %; (iv) we will have sufficient taxable income to fully utilize the tax benefits; (v) Bioventus LLC is able to fully depreciate or amortize its assets; and (vi) no material changes in tax law. For each 5% increase (decrease) in the price per share of Class A common stock (and therefore the value of the LLC Interests exchanged by the Continuing LLC Owner), our deferred tax asset would increase (decrease) by approximately $ million and the related liability for payments under the Tax Receivable Agreement would increase (decrease) by approximately $ million, assuming that the corporate tax rate remains the same. These amounts are estimates and have been prepared for informational purposes only. The actual amount of deferred tax assets and related liabilities that we will recognize will differ based on, among other things, the timing of the redemptions or exchanges, the price of our shares of Class A common stock at the time of the redemptions or exchanges and the tax rates then in effect.

Under the Tax Receivable Agreement, we may elect to terminate the Tax Receivable Agreement early by making an immediate cash payment equal to the present value of all of the tax benefit payments that would be required to be paid by us to the Continuing LLC Owner under the Tax Receivable Agreement. The calculation of such cash payment would be based on certain assumptions, including, among others (i) that the Continuing LLC Owner's LLC Interests that have not been exchanged are deemed exchanged, in general, for the market value of our Class A common stock that would be received by the Continuing LLC Owner if such LLC Interests had been exchanged at the time of termination, (ii) we will have sufficient taxable income in each future taxable year to fully realize all potential tax savings, (iii) the tax rates for future years will be those specified in the law as in effect at the time of termination and (iv) certain non-amortizable assets are deemed disposed of within specified time periods. In addition, the present value of such tax benefit payments is discounted at a rate equal to the lessor of (i) 6.50% per annum, compounded annually and (ii) LIBOR plus 100 basis points. Assuming that the market value of our Class A common stock were to be equal to $, the midpoint of the price range set forth on the cover of this prospectus and that LIBOR were to be %, we estimate that the aggregate amount of these termination payments would be approximately $ million if we were to exercise our termination right immediately following this offering.

The pro forma adjustments are based upon available information and methodologies that are factually supportable and directly related to the Transactions and are presented for illustrative purposes only. The unaudited pro forma consolidated financial information includes various estimates which are subject to material change and may not be indicative of what our operations or financial position would have been had the Transactions, including this offering, taken place on the dates indicated, or that may be expected to occur in the future.

The pro forma financial information should be read in conjunction with, "Risk factors," "Summary historical and unaudited pro forma consolidated financial and other data," "Management's discussion and analysis of financial condition and results of operations" and the historical consolidated financial statements and related notes included elsewhere in this prospectus.

Bioventus Inc.
Unaudited pro forma consolidated balance sheet
As of June 27, 2020
(Dollar amounts in thousands)

	Bioventus LLC historical	Reorganization adjustments (note 1)	Offering adjustments (note 2)	Bioventus Inc. pro forma
Assets				
Current assets:				
Cash and cash equivalents	$ 126,240	$ —	$ 2	$ —
Accounts receivable, net	67,226	—	—	—
Inventory	33,756	—	—	—
Prepaid and other current assets	7,188	—	2	—
Total current assets	234,410	—		—
Property and equipment, net	4,513	—	—	—
Goodwill	49,800	—	—	—
Intangibles assets, net	202,938	—	—	—
Operating lease assets	14,343	—	2	—
Investment and other assets	3,412	—	—	—
Total assets	$ 509,416	$ —	$	$ —
Liabilities and members'/stockholders' equity				
Current liabilities:				
Accounts payable	$ 13,550	$ —	$ —	$ —
Accrued liabilities	56,999	—	—	—
Accrued equity-based compensation	7,837	—	—	—
Long-term debt	15,000	—	2	—
Other current liabilities	3,827	—	—	—
Total current liabilities	97,213	—		—
Long-term debt, less current portion	229,672	—	2	—
Accrued equity-based compensation, less current portion	17,760	—	—	—
Deferred income taxes	3,615	—	—	—
Other long-term liabilities	19,365	1	—	
Total liabilities	367,625			
Class A Common Stock	—	1	2	
Class B Common Stock	—	1	—	
Members equity	285,135	1	2	
Additional paid in capital	—	1	—	
Accumulated other comprehensive loss	(721)	1	—	
Accumulated deficit	(145,235)	1	—	
Non-controlling interest in subsidiary	2,612	1	—	
Total members'/stockholders' equity	141,791			
Total liabilities and members'/stockholders' equity	$ 509,416	$	$	$

See Notes to the Unaudited Pro Forma Consolidated Financial Information.

Bioventus Inc.
Unaudited pro forma consolidated statement of operations
For the year ended December 31, 2019
(Dollar amounts in thousands, except per share amounts)

	Bioventus LLC historical	Reorganization adjustments (note 1)	Offering adjustments (note 2)	Bioventus Inc. pro forma
Net sales	$ 340,141	$ —	$ —	$
Cost of sales (including depreciation and amortization)	90,935	—	—	
Gross profit	249,206	—	—	
Selling, general and administrative expense	198,475	—	2	
Research and development expense	11,055	—	2	
Restructuring costs	575	—	—	
Depreciation and amortization	7,908	—	—	
Operating income	31,193	—		
Interest expense	21,579	—	2	
Other income	(75)	—	—	
Other expense	21,504	—		
Income from continuing operations before income taxes	9,689	—		
Income tax expense	1,576	1	—	
Net income from continuing operations	8,113			
Less: Net (loss) income from continuing operations attributable to non-controlling interests	(553)	1	2	
Net income from continuing operations attributable to Bioventus	$ 8,666	$	$	$
Net income from continuing operations attributable to unit holders	$ 8,666			
Accumulated and unpaid preferred distribution	(5,955)			
Net income allocated to participating shareholders	(1,555)			
Net income from continuing operations attributable to common unit holders	$ 1,156			
Pro forma net income from continuing operations per share attributable to Bioventus:				
Basic				$ 2
Diluted				$ 2
Pro forma weighted average common shares outstanding:				
Basic				2
Diluted				2

See Notes to the Unaudited Pro Forma Consolidated Financial Information.

Bioventus Inc.
Unaudited pro forma consolidated statement of operations
For the six months ended June 27, 2020
(Dollar amounts in thousands, except per share amounts)

	Bioventus LLC historical	Reorganization adjustments (note 1)	Offering adjustments (note 2)	Bioventus Inc. pro forma
Net sales	$ 136,662	$ —	$ —	$
Cost of sales (including depreciation and amortization)	39,077	—	—	
Gross profit	97,585	—	—	
Selling, general and administrative expense	80,809	—	2	
Research and development expense	4,742	—	2	
Depreciation and amortization	3,638	—	—	
Operating income	8,396	—		
Interest expense	5,215	—	2	
Other income	(1,254)	—	—	
Other expense	3,961	—		
Income from continuing operations before income taxes	4,435	—		
Income tax benefit	(71)	1	—	
Net income from continuing operations	4,506			
Less: Net (loss) income from continuing operations attributable to non-controlling interests	(672)	1	2	
Net income from continuing operations attributable to Bioventus	$ 5,178	$	$	$
Net income from continuing operations attributable to unit holders	$ 5,178			
Accumulated and unpaid preferred distribution	(3,000)			
Net income allocated to participating shareholders	(1,249)			
Net income from continuing operations attributable to common unit holders	$ 929			
Pro forma net income from continuing operations per share attributable to Bioventus:				
Basic				$ 2
Diluted				$ 2
Pro forma weighted average common shares outstanding:				
Basic				2
Diluted				2

See Notes to the Unaudited Pro Forma Consolidated Financial Information.

Bioventus Inc.
Unaudited pro forma consolidated statement of operations
For the six months ended June 29, 2019
(Dollar amounts in thousands, except per share amounts)

	Bioventus LLC historical	Reorganization adjustments (note 1)	Offering adjustments (note 2)	Bioventus Inc. pro forma
Net sales	$ 160,346	$ —	$ —	$
Cost of sales (including depreciation and amortization)	45,126	—	—	
Gross profit	115,220	—	—	
Selling, general and administrative expense	98,903	—	2	
Research and development expense	5,062	—	2	
Restructuring costs	529	—	—	
Depreciation and amortization	3,830	—	—	
Operating income	6,896	—		
Interest expense	9,384	—	2	
Other expense	6	—	—	
Other expense	9,390	—	—	
Loss from continuing operations before income taxes	(2,494)	—		
Income tax expense	315	1		
Net Loss from continuing operations	(2,809)			
Less: Net (loss) income from continuing operations attributable to non-controlling interests	—	1	2	
Net loss from continuing operations attributable to Bioventus	$ (2,809)	$	$	$
Net loss from continuing operations attributable to unit holders	$ (2,809)			
Accumulated and unpaid preferred distribution	(2,937)			
Net loss from continuing operations attributable to common unit holders	$ (5,746)			
Pro forma net loss from continuing operations per share attributable to Bioventus:				
Basic				$ 2
Diluted				$ 2
Pro forma weighted average common shares outstanding:				
Basic				2
Diluted				2

See Notes to the Unaudited Pro Forma Consolidated Financial Information.

Notes to unaudited pro forma consolidated financial information
(Dollar amounts in thousands, except for per share amounts)

1. Reorganization adjustments

The following adjustments are related to the reorganization of the Company as described in the section entitled "Transactions".

(a) As a C-corporation, we will no longer record a members' equity in the consolidated balance sheet. The preferred units of Bioventus LLC, along with their related preferred return (collectively the liquidation preference) and the profit interest award under the MIP will convert to common units in Bioventus LLC immediately prior to the Transactions. To reflect the C-corporation structure of our equity, we will separately present the value of our Class A common stock, Class B common stock, non-controlling interest in subsidiary, additional paid-in capital and accumulated deficit. This adjustment represents the issuance of shares of Class A common stock with a par value of $ per share and the issuance of shares of Class B common stock with a par value of $ per share. Additionally, this adjustment includes the elimination of previously recorded accumulated other comprehensive income and accumulated deficit of Bioventus LLC.

(b) As described in "Transactions", Bioventus Inc. will become the sole managing member of, own the sole voting interest in, and control the management of Bioventus LLC. As a result, we will consolidate the financial results of Bioventus LLC and will report a non-controlling interest related to the LLC Interests held by the Continuing LLC Owner on our consolidated balance sheet.

The computation of the non-controlling interest following the consummation of this offering is as follows:

	Units	Percentage
LLC Interests in Bioventus LLC held by Bioventus Inc.		%
Non-controlling interest in Bioventus LLC held by the Continuing LLC Owner		%
		100.0%

If the underwriters were to exercise their option to purchase additional shares of our Class A common stock, Bioventus Inc. would own % of the economic interest of Bioventus LLC and the Continuing LLC Owner would own the remaining % of the economic interest of Bioventus LLC.

The balance of the non-controlling interest and total member's equity as of June 27, 2020 on a pro forma basis were calculated as follows:

Historical Bioventus LLC equity	$ 141,791
Net adjustments from the reorganization and this offering	—
Total members' equity of Bioventus LLC after the Transactions	141,791
Total Continuing LLC Owner's ownership percentage in Bioventus LLC after the Transactions	—
Non-controlling interest as of June 27, 2020 on a pro forma basis	—
Stockholders' equity attributable to common stock on a pro forma basis	141,791
Total stockholders' equity at June 27, 2020 on a pro forma basis	$ 141,791

The Continuing LLC Owner, from time to time following the offering, may require Bioventus LLC to redeem or exchange all or a portion of its LLC Interests for newly-issued shares of Class A common stock on a one-for-one basis or, if Bioventus Inc. and the Continuing LLC Owner agree, a cash payment equal to the volume weighted average market price of one share of our Class A common stock for each LLC Interest redeemed in accordance with the terms of the Bioventus LLC Agreement; provided that, at Bioventus' election, Bioventus may effect a direct exchange of such Class A common stock or such cash (if mutually agreed) for such LLC Interests. See "Certain relationships and related party transactions—Bioventus LLC Agreement."

2. Offering adjustments

(a) We have been deferring certain costs in our historical financial statements directly associated with this offering, including certain legal, accounting and other related expenses, which have been recorded in other assets on our consolidated balance sheet. Upon completion of this offering, approximately $ million of deferred costs will be reversed out of other assets and charged against the proceeds from this offering as a reduction to additional paid-in capital. The total amount of estimated offering expenses is $ million.

(b) We estimate that the net proceeds from this offering, after deducting underwriting discounts and commissions but before estimated offering expenses, will be approximately $ million, based on an assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus. If the underwriters exercise their option to purchase additional shares in full, we estimate that the net proceeds will be approximately $ million after deducting underwriting discounts and commissions but before estimated offering expenses.

Assumed initial public offering price per share	$
Shares of Class A common stock issued in this offering	
Gross proceeds	$
Less: underwriting discounts and commissions	
Less: offering expenses (including amounts previously deferred)	
Net cash proceeds	$

(c) We intend to use the proceeds from this offering to purchase newly-issued LLC Interests from Bioventus LLC at a purchase price per interest equal to the initial public offering price per share of Class A common stock less underwriting discounts and commissions.

(d) Pro forma basic net income (loss) from continuing operations per share is calculated by dividing net income (loss) attributable to common stockholders by the number of weighted average Class A common stock outstanding.

	Year Ended	Six months ended	
	December 31, 2019	June 27, 2020	June 29, 2019
Net income (loss) from continuing operations per share, basic and diluted:			
Numerator			
Net income (loss) from continuing operations			
Less: Net income (loss) from continuing operations attributable to non-controlling interests			
Net income (loss) from continuing operations attributable to Class A common stockholders			
Denominator			
Shares of Class A common stock issued in this offering			
Shares of Class A common stock held by the Former LLC Owners			
Weighted-average shares of Class A common stock			
Net income (loss) from continuing operations per share, basic and diluted			

In computing the dilutive effect, if any, that the aforementioned exchange would have on earnings per share, we considered that the net income available to holders of Class A common stock would increase due to elimination of the non-controlling interest in consolidated entities associated with the Class B common stock held (including any tax impact).

(e) In connection with the Transactions, we intend to grant new equity-based compensation awards to certain of our employees and directors. Accordingly this adjustment reflects estimated compensation expense of $, $, and $, for the year ended December 31, 2019 and the six months ended June 27, 2020 and June 29, 2019, respectively, which has been recorded in selling, general and administrative expense and research and development expense. The settlement of the awards under the Phantom Plan is expected to take place between the twelve and 24-month anniversary following the date of termination of the Phantom Plan. Our unaudited pro forma consolidated statements of operations do not include compensation expense related to the settlement of the Phantom Plan awards.

The pro forma net income (loss) from continuing operations attributable to non-controlling interest is computed as follows by adjustment:

	Year ended December 31, 2019		Six months ended June 27, 2020		Six months ended June 29, 2019	
	Reorganization	Offering	Reorganization	Offering	Reorganization	Offering
Net income (loss) from continuing operations	$ —	$ —	$ —	$ —	$ —	$ —
Non-controlling interests ownership percentage	—	—	—	—	—	—
Net income (loss) from continuing operations attributable to non-controlling interests	$ —	$ —	$ —	$ —	$ —	$ —

SELECTED FINANCIAL DATA

The following table presents the selected financial data for Bioventus LLC and its subsidiaries for the periods and at the dates indicated. Bioventus LLC is the predecessor of the issuer, Bioventus Inc., for financial reporting purposes. The selected statements of operations and statement of cash flows data for the years ended December 31, 2019 and 2018 and the selected balance sheet data as of December 31, 2019 and 2018 are derived from the Bioventus LLC audited financial statements appearing elsewhere in this prospectus. The selected statements of operations and statement of cash flows data for the years ended December 31, 2017 and 2016 are derived from Bioventus LLC financial statements not appearing in this prospectus. The selected statements of operations and statement of cash flows data for the six months ended June 27, 2020 and June 29, 2019 and the selected balance sheet data as of June 27, 2020 are derived from the Bioventus LLC unaudited interim condensed consolidated financial statements included elsewhere in this prospectus. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the information set forth herein. You should read this data together with our audited and unaudited financial statements and related notes appearing elsewhere in this prospectus and the information under the captions “Capitalization” and “Management’s discussion and analysis of financial condition and results of operations.” Our historical results are not necessarily indicative of our future results or any other period and results of interim periods are not necessarily indicative of results for the entire year. The selected financial data included in this section are not intended to replace the financial statements and the related notes included elsewhere in this prospectus.

	Years Ended December 31,				Six Months Ended	
(in thousands, except per share and share amounts)	2019	2018	2017	2016	June 27, 2020	June 29, 2019
Net sales	$340,141	$319,177	$292,059	$274,500	$136,662	$160,346
Cost of sales (including depreciation and amortization of $22,399, $20,614, $22,296, $22,760, $10,599 and $11,878, respectively)	90,935	84,168	82,101	80,388	39,077	45,126
Gross profit	249,206	235,009	209,958	194,112	97,585	115,220
Selling, general and administrative expense	198,475	191,672	164,842	160,321	80,809	98,903
Research and development expense	11,055	8,095	8,096	7,900	4,742	5,062
Change in fair value of contingent consideration	—	(739)	(10,492)	(4,796)	—	—
Restructuring costs	575	1,373	2,313	—	—	529
Depreciation and amortization	7,908	8,615	9,996	11,001	3,638	3,830
Loss on impairment of intangible assets	—	489	7,200	8,750	—	—
Operating income	31,193	25,504	28,003	10,936	8,396	6,896
Interest expense	21,579	19,171	18,897	15,938	5,215	9,384
Other (income) expense	(75)	226	448	652	(1,254)	6
Other expense	21,504	19,397	19,345	16,590	3,961	9,390
Income (loss) from continuing operations before income taxes	9,869	6,107	8,658	(5,654)	4,435	(2,494)
Income tax expense (benefit)	1,576	1,664	(785)	1,091	(71)	315
Net income (loss) from continuing operations	8,113	4,443	9,443	(6,745)	4,506	(2,809)
Loss attributable to noncontrolling interest	553	—	—	—	672	—
Loss from discontinued operations, net of tax	(1,815)	(16,650)	(8,885)	(11,208)	—	(1,616)
Net income (loss) attributable to unit holders	$ 6,851	$ (12,207)	$ 558	$ (17,953)	$ 5,178	$ (4,425)

(in thousands, except per share and share amounts)	Years Ended December 31, 2019	2018	2017	2016	Six Months Ended June 27, 2020	June 29, 2019
Net income (loss) from continuing operations attributable to unit holders	$ 8,666	$ 4,443	$ 9,443	$ (6,745)	$ 5,178	$ (2,809)
Accumulated and unpaid preferred distributions	(5,955)	(5,781)	(5,613)	(5,449)	(3,000)	(2,937)
Net income allocated to participating shareholders	(1,555)	—	(2,197)	—	(1,249)	—
Net income (loss) from continuing operations attributable to common unit holders	1,156	(1,338)	1,633	(12,194)	929	(5,746)
Loss from discontinued operations, net of tax	1,815	16,650	8,885	11,208	—	1,616
Net (loss) income attributable to common unit holders	$ (659)	$ (17,988)	$ (7,252)	$ (23,402)	$ 929	$ (7,362)
Net (loss) income per unit attributable to common unit holders—basic and diluted:						
Net income (loss) from continuing operations	$ 0.24	$ (0.27)	$ 0.33	$ (2.49)	$ 0.19	$ (1.17)
Loss from discontinued operations, net of tax	0.37	3.40	1.81	2.29	—	0.33
Net (loss) income attributable to common unit holders	$ (0.13)	$ (3.67)	$ (1.48)	$ (4.78)	$ 0.19	$ (1.50)
Weighted average common units outstanding, basic and diluted	4,900	4,900	4,900	4,900	4,900	4,900

(in thousands)	Years Ended December 31, 2019	2018	2017	2016	Six Months Ended June 27, 2020	June 29, 2019
Consolidated statement of cash flow data:						
Net cash provided by (used in):						
Operating activities from continuing operations	$ 42,545	$ 52,310	$ 28,976	$ 37,145	$ 25,511	$ 9,661
Investing activities from continuing operations	(7,912)	(6,061)	(6,675)	(7,949)	(1,202)	(7,297)
Financing activities	(10,951)	(13,256)	(10,241)	(8,961)	37,425	(11,109)
Discontinued operations	(1,832)	(7,163)	(9,451)	(11,716)	172	(1,702)
Effect of exchange rate changes	(104)	(160)	1,176	(493)	(186)	265
Net change in cash and cash equivalents	$ 21,746	$ 25,670	$ 3,785	$ 8,026	$ 61,720	$ (10,182)

(in thousands)	As of December 31, 2019	2018	As of June 27, 2020
Balance sheet data:			
Cash and cash equivalents	$ 64,520	$ 42,774	$ 126,240
Total assets	$ 472,407	$ 442,723	$ 509,416
Total liabilities	$ 326,790	$ 297,456	$ 367,625
Accumulated deficit	$ (141,700)	$ (139,821)	$ (145,235)
Total members' equity	$ 145,617	$ 145,267	$ 141,791

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Risk factors," "Selected financial data" and our consolidated financial statements and the related notes to those statements included elsewhere in this prospectus. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Some of the numbers included herein have been rounded for the convenience of presentation. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many factors, including those discussed under "Risk factors" and elsewhere in this prospectus. The following discussion does not give effect to the Transactions. See "Transactions" and "Unaudited pro forma consolidated financial information" included elsewhere in this prospectus for a description of the Transactions and their effect on our historical results of operations.

Executive Summary

We are a global medical device company focused on developing and commercializing clinically differentiated, cost efficient and minimally invasive treatments that engage and enhance the body's natural healing process. We operate our business through two reportable segments, U.S. and International, and our portfolio of products is grouped into following three verticals:

- OA joint pain treatment and joint preservation products, which are HA viscosupplementation therapies approved by the FDA through a PMA;
- BGSs, which are human tissue allograft and synthetic products used primarily in spine surgery which have either (i) received 510(k) clearance, which is a premarket submission made to the FDA to demonstrate that the device to be marketed is at least as safe and effective, that is, substantially equivalent, to a legally marketed device, or (ii) are regulated solely as Section 361 HCT/Ps, which means they are human cells, tissues and cellular and tissue-based products that do not require a PMA in the United States; and
- minimally invasive fracture treatment, which is a FDA-approved Exogen system prescribed for long bone stimulation for fracture healing.

Our U.S. segment offers our full existing portfolio of products. This includes our OA joint pain treatment and joint preservation products, which address the entire market for HA viscosupplementation with offerings for single, three and five injection therapies: (i) Durolane, a single injection therapy, which we launched in the United States in the first half of 2018 and also market outside the United States in more than 30 countries; (ii) GELSYN-3, a three injection therapy, which we have marketed in the United States since the second half of 2016; and (iii) SUPARTZ FX, a five injection therapy, which we have marketed in the United States since May 2012. Our U.S. segment also offers our BGS products, which are targeted at improving bone fusion rates following spinal fusion and other orthopedic surgeries. These products include allograft-derived bone graft with growth factors (OsteoAMP), a DBM (Exponent), cancellous bone in different preparations (PureBone), bioactive synthetics (Signafuse and Interface), a collagen ceramic matrix (OsteoMatrix), a biphasic calcium phosphate synthetic (OsteoPlus) and two bone marrow isolation systems (CellXtract and Extractor). Further, our U.S. segment offers our Exogen system, which we believe offers significant advantages over electrical based long bone stimulation systems, including documented mechanism of action, shorter treatment times and superior nonunion heal rates.

Our International segment offers Durolane, or single injection therapy, OsteoAMP our allograft-derived bone graft with growth factors, and our Exogen system.

The following table sets forth total net sales, net income (losses) from continuing operations and Adjusted EBITDA:

(in thousands)	Years Ended December 31, 2019	Years Ended December 31, 2018	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019
Net sales	$ 340,141	$ 319,177	$ 136,662	$ 160,346
Net income (loss) from continuing operations	$ 8,113	$ 4,443	$ 4,506	$ (2,809)
Adjusted EBITDA(1)	$ 79,188	$ 72,171	$ 21,188	$ 28,342

(1) For a reconciliation of net income (loss) from continuing operations to Adjusted EBITDA, see Note 2 to the information contained in "Prospectus summary—Summary historical and pro forma financial information."

Strategic transactions

We have pursued and continue to pursue business development opportunities that leverage our significant customer presence across orthopedics, broaden our portfolio and increase our global footprint. Below is a summary of some of our recent transactions:

Collaboration and development agreement for MOTYS

On May 29, 2019, we entered into a collaboration and development agreement, or Development Agreement, with Musculoskeletal Transplant Foundation, Inc., or MTF, to develop an injectable placental tissue product, MOTYS, for use in the OA joint pain treatment. The development and commercialization of the product is anticipated to take place in two stages. In consideration for achieving its development milestones, we paid MTF $1.5 million and are obligated to pay additional payments totaling $0.8 million if certain further milestones are achieved. We plan to begin selling MOTYS in the fourth quarter of 2020, subject to the terms of an exclusive commercial supply agreement entered into with MTF on June 18, 2020.

Development collaboration agreement for PROcuff

On August 23, 2019, we entered into an exclusive Collaboration Agreement with Harbor, to develop and license the rights to commercialize a woven-suture-collagen composite implant product. Concurrently with the execution of the agreement, we purchased $1.0 million of shares of Harbor. As a result of Harbor's achievement of certain milestones, on October 5, 2020, we purchased $1.0 million of additional shares of Harbor. The sole use of proceeds from these investments is for the development of the implant product that is the subject of our agreement. We intend to negotiate and enter into a definitive supply agreement with Harbor if and when the product is cleared for marketing by the FDA at a price per unit not to exceed an agreed upon maximum.

CartiHeal (developer of Agili-C) investment and option and equity purchase agreement

On July 15, 2020, we made a $15.0 million equity investment in CartiHeal, a privately-held company headquartered in Israel and developer of the proprietary Agili-C implant for the treatment of joint surface lesions in traumatic and osteoarthritic joints. This investment follows the recently completed enrollment and outcome of interim analysis in CartilHeal's IDE multinational pivotal study for Agili-C. This new round of funding is expected to enable CartiHeal to complete all patient follow-up in the Agili-C study and submit an application for PMA to the FDA. Under the agreement, CartiHeal can secure an additional $5.0 million equity investment from us, if needed, for IDE study completion. We previously made an initial $2.5 million investment in CartiHeal in January 2018 and a subsequent investment of $0.2 million in January 2020.

At the time of closing of the initial equity investment, we also entered into an Option and Equity Purchase Agreement with CartiHeal and its shareholders, which provides us with an exclusive option to acquire 100% of

CartiHeal's shares under certain conditions, or the Call Option, and provides CartiHeal with a put option that would require us to purchase 100% of CartiHeal's shares under certain conditions, or the Put Option. The Call Option is exercisable by us upon closing of the investment. The Put Option is only exercisable by CartiHeal upon pivotal clinical trial success, including achievement of certain secondary endpoints and FDA approval of the Agili-C device with a label consistent in all respects with pivotal clinical trial success. The pivotal clinical trial's objective is to demonstrate the superiority of the Agili-C implant over the surgical standard of care, including microfracture and debridement, for the treatment of cartilage or osteochondral defects, in both osteoarthritic knees and knees without degenerative changes. If not previously exercised, the Call Option and the Put Option terminate 45 days following the FDA approval of Agili-C or in the event of failure of the pivotal clinical trial. We also have the right to terminate the Call Option and Put Option at any time ending 30 days after receipt from CartiHeal of the statistical report regarding the final results of the pivotal clinical trial upon payment of a break fee of $30.0 million. Consideration for the acquisition of all of the shares of CartiHeal pursuant to the Call Option or Put Option would be $350.0 million, all of which would be payable at closing, with an additional $150.0 million payable upon achievement of certain sales milestones related to Agili-C. Such closing would be subject to customary closing conditions.

Certain of the foregoing transactions have had a significant impact on our financial results of operations for the periods in which they occurred, and they have affected the comparability of these statements for the corresponding comparative periods.

Outlook

We plan to continue to expand our business and to increase our net sales and profitability by executing on the following strategies:

- continue to expand market share in HA viscosupplementation;
- introduce new OA joint pain treatment and joint preservation products;
- further develop and commercialize our BGS portfolio;
- expand indications for use for our Exogen system;
- invest in research and development;
- pursue business development opportunities; and
- opportunistically grow our international markets.

We expect to face challenges as we execute on our business strategy. Our industry is highly competitive, subject to rapid change and significantly affected by market activities of industry participants, new product introductions and other technological advancements. We believe our experienced management team positions us for success in facing these and other challenges. However, there are several factors affecting our business that are beyond our control, such as our ability to successfully introduce new products and line extensions, expand labels, continue to obtain reimbursement for our products at acceptable rates and receive necessary governmental approvals. In addition, we expect that market demand, government regulation, third-party coverage and reimbursement policies and societal pressures will continue to change the healthcare industry worldwide, resulting in further business consolidations and alliances among our customers, which may exert further downward pressure on the prices of our products. For information about additional factors that may affect our outlook, see the "Risk factors" and "Special note regarding forward-looking statements" sections of this prospectus.

COVID-19 Update and Outlook

In March 2020, the World Health Organization declared a global pandemic related to the rapidly growing outbreak of a novel strain of coronavirus known as COVID-19. In the following weeks, many states and counties

across the United States responded by implementing a number of measures designed to prevent its spread, including stay-at-home or shelter-in-place orders, quarantines and closure of all non-essential businesses.

The COVID-19 pandemic has rapidly escalated in the United States, creating significant uncertainty and economic disruption, and leading to record levels of unemployment nationally. Due to the evolving nature of the COVID-19 crisis, we continue to monitor the situation closely and assess the impact on our business. In response to various governmental orders and public health advisories, we have implemented a number of measures to protect the health and safety of our workforce, conserve liquidity and position us to emerge from the current crisis in a healthy financial position. These measures include closing our offices and instituting work-from-home policies with the exception of essential personnel in March 2020. In addition, we temporarily imposed employee salary reductions for our U.S. employees for the month of June 2020 and suspended, until December 31, 2020, a portion of the employer contribution we make under our 401(k) plan. All temporary salary reductions have now been reversed and all salaries have been reinstated to pre-COVID-19 levels. To the extent permitted and in accordance with guidance from public health officials and government agencies, we have begun to reopen our locations and resume normal operations where appropriate. We expect our operations will continue to be impacted throughout 2020, however, the magnitude and duration of the impact is impossible to predict due to:

- uncertainties regarding the duration of the COVID-19 pandemic and the length of time over which the disruptions caused by COVID-19 will continue;
- the impact of governmental orders and regulations that have been, and may in the future be, imposed in response to the pandemic;
- the impact of COVID-19 on our suppliers, manufacturers and other third parties on which we rely;
- the deterioration of economic conditions in the United States, as well as record high unemployment levels, which could have an adverse impact on discretionary consumer spending; and
- uncertainly regarding the potential for a “second wave” of the COVID-19 crisis to occur later in the year.

The COVID-19 pandemic began to have a material impact on our business during the second quarter of 2020. Since March 2020, various governmental orders and public health advisories, including “shelter-in-place” orders and quarantines, have reduced or prevented patient access to hospitals and physicians. As a result, the number of both elective and non-elective procedures have been reduced and our sales have decreased. As a precautionary measure in March 2020, in response to changing market dynamics and in order to increase our cash position and preserve financial flexibility in view of the uncertainty resulting from the COVID-19 pandemic, we drew down $49.0 million on our revolving credit facility. On September 24, 2020, we repaid all borrowings outstanding under our revolving credit facility.

In addition, we could be further impacted if we begin to see delays in payments from customers, return to more stringent “shelter in place” orders or advisories, facility closures or other reasons related to the pandemic. Despite the COVID-19 pandemic, we had positive cash flows for the six months ended June 27, 2020, due to draws on our revolving credit facility, a lack of significant delays in payments from customers, decreases in expenses correlating to a decrease in sales, reduction in travel expenses and the institution of various cost cutting measures provided us with positive cash flow during the six months ended June 27, 2020. However, the extent to which COVID-19 could materially impact our future liquidity is uncertain.

In April 2020, we received $1.2 million in funds from the HHS as part of the CARES Act Provider Relief Fund. We determined we have complied with the CARES Act Provider Relief Fund conditions so that we may use the funds to reimburse for health care related expenses and lost revenues attributable to the public health emergency resulting from COVID-19. We have recognized this payment as other income within our condensed consolidated statement of operations and comprehensive (loss) income for the six months ended June 27, 2020. An additional $2.9 million was received from the CARES Act Provider Relief Fund in July 2020.

Under the CARES Act, we have also taken advantage of the deferral of employer social security payroll tax payments. In April 2020, we began deferring all employer social security payroll tax payments for the remainder of the 2020 calendar year, with 50% of the taxes is deferred until December 31, 2021 and the remaining 50% deferred until December 31, 2022.

We are continuing to evaluate other aspects of the CARES Act, including the use of the employee retention tax credit. The employee retention tax credit provides an additional tax credit to employers that (i) have either fully or partially suspended operations because of government orders associated with COVID-19 or (ii) experience a substantial decline in income but continue to pay employees their wages.

Components of our results of operations

Net sales

We generate net sales from a portfolio of active healing products that serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery. We report sales net of contractual allowances, rebates and returns.

We sell our OA joint pain treatment and joint preservation products and minimally invasive fracture treatment through our direct sales team, who manage and maintain the sales relationship with healthcare providers, distribution centers or specialty pharmacies. In certain international markets, we also sell to independent distributors on pre-arranged business terms, who manage or maintain the sales relationship with their physician customers. See Note 2 to our consolidated financial statements for the years ended December 31, 2019 and 2018. We recognize revenue at the point in time when control is transferred to the customer, typically, in the case of our OA joint pain treatment and joint preservation products, when these products are shipped to the customer and, in the case of our Exogen system, when the patient has accepted the product.

Our BGSs are primarily sold in the U.S. market through independent distributors. We generally consign our BGS products to hospitals so our neurosurgeon and orthopedic spine surgeon customers can use them in procedures. We recognize revenue based upon consumption in a surgical procedure.

Cost of sales

Our cost of sales primarily consist of costs of products purchased from our third-party suppliers, direct labor and allocated overhead associated with the assembly of our Exogen system, excess and obsolete inventory charges, shipping, inspection and related costs incurred in making our products available for sale or use. In addition, cost of sales includes depreciation related to production as well as amortization of product-related intellectual property and distribution rights associated with commercialized products. Our OA joint pain treatment and joint preservation products and BGS products are manufactured by or obtained from third-party suppliers primarily located in Japan, Switzerland, Sweden and the United States. We receive the components for our Exogen system from suppliers and assemble each system in-house at our Cordova, Tennessee facility. In the future, we expect our cost of sales to increase due to increased sales volume.

Gross profit and gross margin

Gross profit consists of net sales less cost of sales. We calculate gross margin as gross profit divided by net sales. Our gross margin has been and will continue to be affected by a variety of factors, including costs of products purchased from our third-party suppliers, manufacturing costs, product mix and implementation over time of cost-reduction strategies. We expect net sales and product mix to vary quarter by quarter and therefore our gross profit will likely fluctuate from quarter to quarter.

Selling, general and administrative expense

Selling, general and administrative expense primarily consists of salaries, benefits and other related costs, including equity-based compensation, for personnel employed in sales, marketing, finance, legal, compliance, administrative, information technology, medical education and training, quality and human resource departments. Selling, general and administrative expense also includes third-party marketing, supply chain and distribution, information technology, legal, human resources, insurance and facilities expenses, selling, general and administrative expenses also include commissions, generally based on a percentage of sales, to our direct sales team and independent distributors. We expect our selling, general and administrative expenses will increase with the continued expansion of our sales organization and commercialization of our current and pipeline products. We plan to hire more personnel to support the growth of our business. In addition, as a public company, we will be implementing additional procedures and processes to address the standards and requirements applicable to public companies. We expect to incur additional annual selling, general and administrative expenses related to these additional procedures and processes including, among other things, equity-based compensation, increased liability insurance for our directors and officers, director fees, reporting requirements of the SEC, transfer agent fees, hiring additional accounting, legal and administrative personnel, increased auditing and legal fees and similar expenses. We also expect a change in the timing over which compensation expense is recognized as a result of the termination of the Phantom Plan and the receipt by participants of shares of Class A common stock upon settlement of their awards, which settlement is expected to take place between the twelve and 24 month anniversary of the date of such termination. However, over time, as we grow our net sales, we expect selling, general and administrative expenses to decline as a percentage of net sales.

Research and development expense

Research and development expense primarily consists of employee compensation, equity compensation and related expenses, as well as contract research organization service expenses related to clinical trials. We expense internal research and development costs as incurred and research and development costs incurred by third parties as they perform contracted work. Our research and development expenses may vary substantially from period to period based on the timing of research and development activities. We are focused on internal research and development to broaden our product portfolio across all verticals, expand our Exogen system product label and undertake clinical research to support commercialization of all of our products. As a result, we expect our research and development expenses to increase to the mid-single digits as a percentage of net sales as we introduce new products, extend existing product lines and expand indications. We see significant opportunity to develop innovative and clinically differentiated products in-house with our experienced research and development team. We are currently funding our B.O.N.E.S. clinical study, which began enrollment in 2018 and is aimed at broadening the label of our Exogen system to include a broader range of bones that may be treated as fresh fractures in predisposed patients at risk of nonunion. In addition, we are planning preclinical and animal model studies for MOTYS and PROcuff. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations.

Change in fair value of contingent consideration

Our change in fair value of contingent consideration primarily consists of changes in estimated contingent consideration payable to counterparties in connection with certain acquisition and investment transactions. During the periods presented, change in fair value of contingent consideration primarily consisted of income related to adjustments to the fair value of contingent consideration liabilities in connection with a supply agreement resulting from the OsteoAMP acquisition. We initially value contingent consideration using a weighted probability calculation of potential payment scenarios discounted at rates reflective of the risks associated with the expected future cash flows. Key assumptions used to estimate the fair value of contingent consideration include revenue, new business and operating forecasts and the probability of achieving the specific targets. After the initial valuation, we assign 100% probability to our best estimate in each reporting period and recognize a gain or loss in the income statement for fair value adjustments.

Restructuring costs

Restructuring costs primarily consist of employee severance, legal, consulting and temporary labor expenses. During the periods presented, restructuring costs were associated with headcount reductions in our international business to improve operating efficiency. Key assumptions in determining the restructuring costs include headcount reductions, as well as terms and negotiated payments to terminate certain contractual obligations.

Depreciation and amortization

Depreciation expense primarily consists of depreciation of computer equipment and software as well as leasehold improvements, furniture, fixtures, machinery and equipment. Amortization expense primarily consists of amortization expense related to customer relationships and other intangible assets.

Loss on impairment of intangible assets

During the periods presented, loss on impairment of intangible assets primarily consists of the write-off of an intangible asset related to a BGS product we no longer sell. We review intangible assets for recoverability if the facts and circumstances suggest that a potential impairment may have occurred. If this review indicates that carrying values may not be recoverable, we will perform an assessment to determine if an impairment charge is required to reduce carrying values to estimated fair value. We estimate fair value using a discounted value of estimated future cash flows.

Interest expense

Interest expense primarily consists of interest on our indebtedness, which currently consists of our term loan and revolving credit facility, which was incurred pursuant to the 2019 Credit Agreement. We have entered into interest rate swaps to limit our exposure to changes in the variable interest rate on our term loan. Interest expense includes any fair value gain or losses on these swaps. Interest expense also includes the revaluation for the liability related to our Equity Participation Right, or EPR, Unit. The EPR Unit's entitlement is 0.55% of available distributions arising from a distribution event as defined in the Bioventus LLC Agreement. We expect to use net proceeds from this offering to settle the EPR liability.

Other (income) expense

Other (income) expense primarily consists of foreign currency transaction and remeasurement gains and losses on transactions denominated in currencies other than our functional currency. Our foreign currency transaction and remeasurement gains and losses are primarily related to foreign currency denominated cash, liabilities and intercompany receivables and payables. Other (income) expense may also include certain nonrecurring items.

Income tax expense

Bioventus LLC is a partnership for U.S. federal tax purposes. Accordingly, the members include the profits and losses of Bioventus LLC in their income tax returns. Certain wholly-owned subsidiaries of Bioventus LLC are taxable entities for U.S. or foreign tax purposes and file tax returns in their local jurisdictions. Income tax expense includes U.S. federal and state and international income taxes, including certain taxes applicable to Bioventus LLC and U.S. federal income taxes for one of our subsidiaries that is treated as a corporation for U.S. federal tax purposes. Certain income and expense items in income tax returns are not reported in the same year as financial statements. We report the income tax effects of these differences as deferred income taxes. Valuation allowances recognized reduce the related deferred tax assets to an amount which will, more likely than not, be realized. We recognize interest and penalties related to unrecognized tax benefits as a component of income tax expense.

After the consummation of this offering, Bioventus Inc. will become subject to U.S. federal, state and local income taxes at the prevailing corporate tax rates with respect to our taxable income. In addition to tax expenses, we will be obligated to make payments under the Tax Receivable Agreement, which could be significant. The Tax Receivable Agreement, will obligate us to pay to the Continuing LLC Owner 85% of the amount of any realized tax benefits, (or in some circumstances are deemed to realize) resulting from (i) increases in the tax basis of assets of Bioventus LLC as a result of (a) any future redemptions or exchanges of LLC Interests described under "Certain relationships and related party transactions—Bioventus LLC Agreement—LLC Interest Redemption Right," and (b) certain distributions (or deemed distributions) by Bioventus LLC and (ii) certain other tax benefits arising from our making payments under the Tax Receivable Agreement. For more information, see "Certain relationships and related party transactions—Tax Receivable Agreement."

Adjusted EBITDA

We present Adjusted EBITDA, a non-GAAP financial measure because we believe it is a useful indicator of our operating performance. Our management uses Adjusted EBITDA principally as a measure of our operating performance and believes that Adjusted EBITDA is useful to our investors because it is frequently used by securities analysts, investors and other interested parties frequently use it in their evaluation of the operating performance of companies in industries similar to ours. Our management also uses Adjusted EBITDA for planning purposes, including the preparation of our annual operating budget and financial projections. We define Adjusted EBITDA as net income (loss) from continuing operations before depreciation and amortization, provision of income taxes and interest expense, adjusted for the impact of certain cash, non-cash and other items that we do not consider in our evaluation of ongoing operating performance. These items include equity compensation, change in fair value of contingent consideration, COVID-19 benefits, succession and transition charges, loss on impairment of intangible assets, losses associated with debt refinancing, restructuring costs, foreign currency impact and other non-recurring costs. Adjusted EBITDA by segment is comprised of net sales and costs directly attributable to a segment, as well as an allocation of corporate overhead costs. The allocation of corporate overhead costs is determined based on various methods but is primarily based on a ratio of net sales by segment to total consolidated net sales. For more information regarding our calculation of Adjusted EBITDA, including information about its limitations as a tool for analysis, please see Note 2 to the table under "Prospectus summary—Summary historical and pro forma financial data."

Results from continuing operations

Six months ended June 27, 2020 compared to the six months ended June 29, 2019

The following table sets forth components of our condensed consolidated statements of operations from continuing operations as a percentage of net sales for the periods presented:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Net sales	100.0%	100.0%
Cost of sales (including depreciation and amortization)	28.6%	28.1%
Gross profit	71.4%	71.9%
Selling, general and administrative expense	59.1%	61.7%
Research and development expense	3.5%	3.2%
Restructuring costs	—	0.3%
Depreciation and amortization	2.7%	2.4%
Operating income	6.1%	4.3%

The following table presents a reconciliation of net income (loss) from continuing operations to Adjusted EBITDA for the periods presented:

(in thousands)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019
Net income (loss) from continuing operations	$ 4,506	$ (2,809)
Depreciation and amortization[a]	14,513	15,712
Income tax (benefit) expense	(71)	315
Interest expense	5,215	9,384
Equity compensation[b]	(6,771)	2,121
COVID-19 benefits, net[c]	(1,101)	—
Succession and transition charges[d]	4,574	—
Restructuring costs[e]	—	529
Foreign currency impact[f]	40	48
Other non-recurring costs[g]	283	3,042
Adjusted EBITDA	$ 21,188	$ 28,342

(a) Includes for the six months ended June 27, 2020 and June 29, 2019, respectively, depreciation and amortization of $10.6, $11.9 million in cost of sales and $3.6, $3.8 million presented in the consolidated statements of operations and comprehensive income (loss) with the balance in research and development.

(b) Represents compensation as well as the change in fair market value resulting from two equity-based compensation plans, the MIP and the Phantom Plan.

(c) Represents income resulting from the CARES Act offset by additional cleaning and disinfecting expenses and contract termination fees for events we were unable to hold.

(d) Primarily represents costs related to the CEO transition.

(e) Represents costs related to a shift from direct to an indirect distribution model in our International business to improve performance. In addition, various international subsidiaries were dissolved and or merged into other Bioventus LLC entities.

(f) Foreign currency impact represents realized and unrealized gains and losses from fluctuations in foreign currency and is included in other (income) expense on the consolidated statements of operations and comprehensive income (loss).

(g) Represents charges associated with potential strategic transactions, such as potential acquisitions, and preparing to become a public company, primarily accounting and legal fees.

Net sales

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
U.S.	$125,136	$143,962	$(18,826)	(13.1)%
International	11,526	16,384	(4,858)	(29.7)%
Net Sales	$136,662	$160,346	$(23,684)	(14.8)%

U.S.

Net sales decreased $18.8 million, or 13.1%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to a decline of $17.4 million in sales of our OA joint pain treatment and joint preservation products resulting from a decrease in net prices as more treatments were sold under new contracts with major insurers at lower prices. This price decrease was partially offset by $2.0 million impact of price increase in our minimally invasive fracture treatment.

Net sales also decreased by $2.2 million for the six months ended June 27, 2020 due to lower sales volume of our minimally invasive fracture treatment as a result of the disruption caused by the COVID-19 pandemic. This decrease was partially offset by the sales volume growth in our OA joint pain treatment and joint preservation products and BGS products. The changes in net sales by vertical were as follows:

- OA joint pain treatment and joint preservation — $5.6 million
- BGSs — $0.6 million
- Minimally invasive fracture treatment — ($8.4) million

International

Net sales decreased $4.9 million, or 29.7%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to a decline in order volumes due to the disruption caused by the COVID-19 pandemic.

Gross profit and gross margin

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Gross profit				
U.S.	$ 90,014	$104,081	$ (14,067)	(13.5)%
International	7,571	11,139	(3,568)	(32.0)%
Total	$ 97,585	$115,220	$ (17,635)	

	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change
Gross margin			
U.S.	71.9%	72.3%	(0.4)%
International	65.7%	68.0%	(2.3)%
Total	71.4%	71.9%	(0.5)%

U.S.

Gross profit decreased $14.1 million, or 13.5%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to the decline in net sales described above.

International

Gross profit decreased $3.6 million, or 32.0%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to the decrease in sales from the disruption caused by COVID-19 pandemic. The decline in International gross margin of 2.3 percentage points is primarily due to the increased proportional mix of sales made through distributors compared to our direct sales team.

Selling, general and administrative expense

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Selling, general and administrative expense	$ 80,809	$ 98,903	$(18,094)	(18.3)%

Selling, general and administrative expense declined $18.1 million, or 18.3%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to:

- COVID-19 related decreases, including lower commissions, reduction in bonuses and other salary and benefits expenses and cost-reduction initiatives $10.0 million
- Lower equity compensation $8.9 million
- Lower legal and accounting expenses $3.8 million

These decreases were partially offset by $4.6 million in succession and transition charges primarily associated with the transition to our new Chief Executive Officer in April 2020.

Research and development expense

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Research and development expense	$ 4,742	$ 5,062	$ (320)	(6.3)%

Research and development expense decreased $0.3 million, or 6.3%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, due to cost reduction initiatives undertaken as a result of the COVID-19 pandemic.

Restructuring costs

There were no restructuring charges during the six months ended June 27, 2020. Restructuring charges of $0.5 million for the six months ended June 29, 2019 resulted from a reduction in headcount and the closing of offices in certain countries as we shifted to an indirect distribution model in these countries to improve the performance of our International operations.

Depreciation and amortization

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Depreciation and amortization	$ 3,638	$ 3,830	$ (192)	(5.0)%

Depreciation and amortization during the six months ended June 27, 2020 remained consistent with the six months ended June 29, 2019, as it slightly decreased $0.2 million, or 5.0%.

Other Expense

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Interest expense	$ 5,215	$ 9,384	$(4,169)	(44.4)%
Other (income) expense	$(1,254)	$ 6	$(1,260)	NM

Interest expense decreased $4.2 million, or 44.4%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to decreased debt interest of $5.4 million resulting from refinancing our debt in December 2019. This decrease was partially offset with an increase of $1.2 million primarily resulting from the decline in value of our interest rate swap.

Income tax (benefit) expense

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
Income tax (benefit) expense	$ (71)	$ 315	$ (386)	(122.5)%
Effective tax rate	1.6%	12.6%		(11.0)%

Income tax benefit increased $0.4 million, or 122.5%, for the six months ended June 27, 2020, compared to the six months ended June 29, 2019, primarily due to the change in (loss) income from continuing operations before income taxes. Our change in effective tax rate is the result of Bioventus LLC's pass-through structure for U.S. income tax purposes, while being treated as taxable in certain states and various foreign jurisdictions as well as for certain subsidiaries.

Segment Adjusted EBITDA

Adjusted EBITDA for each of our reportable segments is as follows:

(in thousands, except for percentage)	Six Months Ended June 27, 2020	Six Months Ended June 29, 2019	Change $	Change %
U.S.	$21,151	$25,925	$(4,774)	(18.4)%
International	$ 37	$ 2,417	$(2,380)	(98.5)%

U.S.

Adjusted EBITDA decreased $4.8 million, or 18.4%, during the comparable time periods. The decline was the result of decreased gross profit, excluding depreciation and amortization in cost of sales, resulting from the decrease in sales primarily resulting from the economic impact of COVID-19, which also led to lower expenses resulting from lower commissions, reduction in bonuses, other salary and benefits expenses, and cost-reduction initiatives.

International

Adjusted EBITDA decreased $2.4 million, or 98.5%, during the comparable time periods. The decline was the result of decreased gross profit, excluding depreciation and amortization in cost of sales, resulting from the decrease in sales primarily due to the economic impact of COVID-19, which was partially offset by lower expenses resulting from doing business virtually, reduced commissions and various other cost reduction initiatives.

Year ended December 31, 2019 compared to the Year ended December 31, 2018

The following table sets forth components of our consolidated statements of operations from continuing operations as a percentage of net sales for the periods presented:

	Years Ended December 31, 2019	Years Ended December 31, 2018
Net sales	100.0%	100.0%
Cost of sales (including depreciation and amortization)	26.7%	26.4%
Gross profit	73.3%	73.6%
Selling, general and administrative expense	58.3%	60.0%
Research and development expense	3.3%	2.5%
Change in fair value of contingent consideration	—	(0.2)%
Restructuring costs	0.2%	0.4%
Depreciation and amortization	2.3%	2.7%
Loss on impairment of intangible assets	—	0.2%
Operating income	9.2%	8.0%

The following table presents a reconciliation of net income from continuing operations to Adjusted EBITDA for the periods presented:

(in thousands)	Years Ended December 31, 2019	2018
Net income from continuing operations	$ 8,113	$ 4,443
Depreciation and amortization[a]	30,316	29,238
Income tax expense (benefit)	1,576	1,664
Interest expense	21,579	19,171
Equity compensation[b]	10,844	14,325
Contingent consideration[c]	—	(739)
Loss on impairment of intangible assets[d]	—	489
Losses associated with debt refinancing[e]	367	—
Restructuring costs[f]	575	1,373
Foreign currency impact[g]	8	234
Other non-recurring costs[h]	5,810	1,973
Adjusted EBITDA	$ 79,188	$ 72,171

(a) Includes for the years ended December 31, 2019 and 2018, respectively, depreciation and amortization of $22.4 million and $20.6 million in cost of sales and $7.9 million, $8.6 million shown on the consolidated statements of operations and comprehensive income (loss) with the balance in research and development expense.

(b) Represents compensation as well as the change in fair market value resulting from two equity-based compensation plans, the MIP and the Phantom Plan.

(c) Represents adjustments to the fair value of contingent consideration liabilities related to a supply agreement resulting from the OsteoAMP acquisition.

(d) Represents the write-off of an intangible asset related to a BGS product we no longer sell.

(e) Represents charges with our 2019 debt refinancing that were included in selling, general and administrative expense on the consolidated statements of operations and comprehensive income (loss).

(f) Represents costs related to a shift from direct to an indirect distribution model in our International business to improve performance. In addition, various international subsidiaries were dissolved and or merged into other Bioventus LLC entities.

(g) Foreign currency impact represents realized and unrealized gains and losses from fluctuations in foreign currency and is included in other (income) expense on the consolidated statements of operations and comprehensive income (loss).

(h) Represents charges associated with Bioventus LLC potential strategic transactions such as potential acquisitions or preparing to become a public company, primarily accounting and legal fees.

Net sales

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
U.S.	$305,072	$282,895	$ 22,177	7.8%
International	35,069	36,282	(1,213)	(3.3)%
Net Sales	$340,141	$319,177	$ 20,964	6.6%

U.S.

Net sales increased $22.2 million, or 7.8%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, primarily due to an increase of $26.7 million in sales of our treatments for OA joint pain and joint preservation due to multiple large contract wins executed in 2019, partially offset by net price decreases resulting from more products being sold under new contracts with major insurers at lower prices. Net sales also increased by $11.6 million due to higher sales volume of BGS as we added new distributors. These increases were partially offset by a decrease of $16.1 million in lower sales of our minimally invasive fracture treatment.

International

Net sales decreased $1.2, or 3.3%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, primarily due to conversion from direct to indirect sales channels in several markets.

Gross profit and gross margin

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Gross profit				
U.S.	$224,957	$209,415	$ 15,542	7.4%
International	24,249	25,594	(1,345)	(5.3)%
Total	$249,206	$235,009	$ 14,197	

	Years Ended December 31, 2019	2018	Change
Gross margin			
U.S.	73.7%	74.0%	(0.3)%
International	69.1%	70.5%	(1.4)%
Total	73.3%	73.6%	(0.3)%

U.S.

Gross profit increased $15.5 million, or 7.4%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, primarily due to the increase in sales volume. The decline in U.S. gross margin of 0.3 percentage points primarily resulted from the change in mix in products sold as well as higher amortization expense attributed to our products.

International

Gross profit decreased $1.3 million, or 5.3%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, primarily due to the decrease in sales. The decline in International gross margin of 1.4 percentage points is primarily due to the increased proportional mix of sales made through distributors compared to our direct sales team.

Selling, general and administrative expense

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Selling, general and administrative expense	$198,475	$191,672	$ 6,803	3.5%

Selling, general and administrative expense increased $6.8 million, or 3.5%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, due to:

- Increase in strategic transactions and consulting expenses $4.9 million
- Increase in compensation related expenses $1.2 million

Research and development expense

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Research and development expense	$11,055	$ 8,095	$ 2,960	36.6%

Research and development expense increased $3.0 million or 36.6% primarily due to the Development Agreement for MOTYS and our B.O.N.E.S. clinical study.

Change in fair value of contingent consideration

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Change in fair value of contingent consideration	$ —	$ (739)	$ 739	100.0%

There was no change in the fair value of contingent consideration in 2019. The change in fair value of contingent consideration for the year ended December 31, 2018 was primarily driven by lower forecasted sales in subsequent years for certain BGS products as well as the actual 2018 sales being lower than those estimated at December 31, 2017. These were partially offset by interest on discounted cash flows.

Restructuring costs

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Restructuring costs	$ 575	$ 1,373	$ (798)	(58.1)%

Restructuring costs decreased $0.8 million, or 58.1%, for the year ended December 31, 2019, compared to the year ended December 31, 2018. The charges in 2019 and 2018 resulted from a reduction in headcount and the closing of offices in certain countries as we shifted to an indirect distribution model with more of the expense incurred in 2018.

Depreciation and amortization

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Depreciation and amortization	$ 7,908	$ 8,615	$ (707)	(8.2)%

Depreciation and amortization during 2019 remained consistent with 2018 as it slightly decreased $0.7 million, or 8.2%, during the comparable time periods.

Loss on impairment of intangible assets

During 2018, we decided to stop selling a specific BGS product and fully wrote off the related intangible asset, resulting in an impairment charge of $0.5 million.

Other expense

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Interest expense	$21,579	$19,171	$ 2,408	12.6%
Other (income) expense	$ (75)	$ 226	$ (301)	NM

Interest expense increased $2.4 million, or 12.6%, for the year ended December 31, 2019, compared to the year ended December 31, 2018, primarily due to the December 2019 refinancing resulting in a write-off of various deferred loan costs and discount related to the 2016 Credit Agreement.

Income tax expense

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
Income tax expense	$ 1,576	$ 1,664	$ (88)	(5.3)%
Effective tax rate	16.3%	27.2%		(10.9)%

Income tax expense remained consistent year over year. Our change in effective tax rate is the result of Bioventus LLC's pass-through structure for U.S. income tax purposes, while being treated as taxable in certain states and various foreign jurisdictions as well as for certain subsidiaries.

Segment Adjusted EBITDA

Adjusted EBITDA for each of our reportable segments is as follows:

(in thousands, except for percentage)	Years Ended December 31, 2019	2018	Change $	%
U.S.	$71,673	$67,480	$ 4,193	6.2%
International	$ 7,515	$ 4,691	$ 2,824	60.2%

U.S.

Adjusted EBITDA increased $4.2, or 6.2%, during the comparable time periods. The increase was primarily the result of the increase in gross profit, excluding depreciation and amortization in cost of sales, resulting from the increase in sales. This increase was partially offset by the related increase in commissions, higher compensation expenses, increased consulting and legal expenses related to improving certain business processes.

International

Adjusted EBITDA increased $2.8, or 60.2%, during the comparable time periods. The increase was primarily the result of the restructuring that began in late 2018 resulting in lower personnel expenses and a decline in various other costs due to the closure of offices. These increases in Adjusted EBITDA were partially offset by the decrease in gross profit, excluding depreciation and amortization in cost of sales, resulting from the decrease in and mix of sales due to conversion from direct to indirect sales channels in several markets.

Liquidity and Capital Resources

Overview

Our principal liquidity needs have historically been for acquisitions, working capital, research and development, clinical trials, and capital expenditures. We expect these needs to continue as we develop and

commercialize new products and further our expansion into international markets. We believe that our existing cash and cash equivalents, borrowing capacity under our revolving credit facility, cash flow from operations and net proceeds from this offering will be enough to meet our anticipated cash requirements for at least the next twelve months. We may require additional liquidity as we continue to execute our business strategy. Negative impacts to our liquidity would include a decline in sales of our products, including declines due to changes in our customers' ability to obtain third-party coverage and reimbursement for procedures that utilize our products, increased pricing pressures resulting from intensifying competition and cost increases, as well as general economic and industry factors. We anticipate that to the extent that we require additional liquidity, we will obtain funding through the incurrence of other indebtedness, additional equity financings or a combination of these potential sources of liquidity. In addition, we may raise additional funds to finance future cash needs through receivables or royalty financings or corporate collaboration and licensing arrangements. If we raise additional funds by issuing equity securities or convertible debt, our stockholders will experience dilution. Debt financing, if available, would result in increased fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish valuable rights to our products, future revenue streams or product candidates, or to grant licenses on terms that may not be favorable to us. The covenants under our credit agreement limit our ability to obtain additional debt financing. We cannot be certain that additional funding will be available on acceptable terms, or at all. Any failure to raise capital in the future could have a negative impact on our financial condition and our ability to pursue our business strategies.

Six Months Ended June 27, 2020 compared to the Six Months ended June 29, 2019

Cash and cash equivalents, as of June 27, 2020, totaled $126.2 million compared to $64.5 million at December 31, 2019, primarily due to the $49.0 million draw on our revolving credit facility and cash provided by operating activities from continuing operations.

	Six Months Ended		Change	
(in thousands)	June 27, 2020	June 29, 2019	$	%
Consolidated statement of cash flow data:				
Net cash provided by (used in):				
Net cash provided by operating activities from continuing operations	$ 25,511	$ 9,661	$ 15,850	164.1%
Net cash used in investing activities from continuing operations	(1,202)	(7,297)	6,095	(83.5)%
Net cash provided by (used in) financing activities	37,425	(11,109)	48,534	NM
Net cash provided by (used in) discontinued operations	172	(1,702)	1,874	(110.1)%
Effect of exchange rate changes on cash and cash equivalents	(186)	265	(451)	(170.2)%
Net change in cash and cash equivalents	$ 61,720	$(10,182)	$ 71,902	NM

Operating Activities

Cash flows from operating activities from continuing operations increased $15.9 million during the six months ended June 27, 2020 compared to the six months ended June 29, 2019 due to collections on accounts receivables staying strong while selling, general and administrative expenses declined. We experienced a reduction in commission payments due to the decline in sales, lower travel expense payments resulting from the near halting of all travel and increased cash savings from cost cutting measures. We also received stimulus payments from government entities while our cost of sales declined as we purchased less inventory due to the decline in sales. In addition, our interest expense was significantly lower during the six months ended June 27, 2020 due to the December 2019 refinancing.

Investing Activities

Cash flows used in investing activities decreased $6.1 million during the six months ended June 27, 2020 compared to the six months ended June 29, 2019 primarily due to the $6.0 million purchase of distribution rights during the six months ended June 29, 2019.

Financing Activities

Cash flows from financing activities increased $48.5 million during the six months ended June 27, 2020 compared to the six months ended June 29, 2019 primarily due to the $49.0 million draw on our revolving credit facility during the six months ended June 27, 2020.

Credit Facilities

As of June 27, 2020, there had been no material changes to our credit facilities as disclosed in our audited consolidated financial statements for the year ended December 31, 2019. In March 2020, as a precautionary measure and in order to increase our cash position and preserve financial flexibility in view of the uncertainty resulting from the COVID-19 pandemic, we drew down $49.0 million on our revolving credit facility.

Other

For information regarding Commitments and Contingencies, see Note 8 to the June 27, 2020 Notes to the Unaudited Condensed Consolidated Financial Statements contained herein.

Year ended December 31, 2019 compared to the Year ended December 31, 2018

	Years Ended December 31,		Change	
	2019	2018	$	%
Consolidated statement of cash flow data:				
Net cash provided by (used in):				
Net cash provided by operating activities from continuing operations	$ 42,545	$ 52,310	$ (9,765)	(18.7)%
Net cash used in investing activities from continuing operations	(7,912)	(6,061)	(1,851)	(30.5)%
Net cash used in financing activities	(10,951)	(13,256)	2,305	17.4%
Net cash used in discontinued operations	(1,832)	(7,163)	5,331	74.4%
Effect of exchange rate changes on cash and cash equivalents	(104)	(160)	56	35.0%
Net change in cash and cash equivalents	$ 21,746	$ 25,670	$ (3,924)	(15.3)%

Operating activities

Net cash provided by operating activities from continuing operations decreased $9.8 million during the year ended December 31, 2019 compared to the year ended December 31, 2018. The decrease was due to the timing of cash receipts and payments, including $7.5 million paid to CMS Medicare as reimbursement for overpayments received on claims between October 1, 2012 and December 31, 2018.

Investing activities

Net cash used in investing activities increased $1.9 million during the year ended December 31, 2019 compared to the year ended December 31, 2018 primarily due to a $2.5 million increase in the acquisition of distribution rights.

Financing activities

Net cash used in financing activities decreased $2.3 million during the year ended December 31, 2019 compared to the year ended December 31, 2018 primarily due to the receipt of $3.9 million in net cash proceeds from the December 2019 refinancing, which was partially offset by $1.3 million in additional distributions to members.

Indebtedness

On December 6, 2019, we entered into the 2019 Credit Agreement. The 2019 Credit Agreement is comprised of our $200.0 million term loan and our $50.0 million revolving credit facility. All obligations under the 2019 Credit Agreement are guaranteed by certain of our wholly owned domestic subsidiaries and secured by substantially all our and the guarantors' assets. The term loan and revolving credit facility mature on December 6, 2024. The 2019 Credit Agreement contains various restrictive covenants, including a quarterly covenant not to exceed a consolidated leverage ratio of 3.50 to 1.00 and an interest coverage ratio of 3.00:1.00 for the prior four consecutive quarters. The leverage and interest coverage ratios are based on Consolidated EBITDA as defined in the 2019 Credit Agreement, which includes several differences from Adjusted EBITDA as calculated in this prospectus. Consolidated EBITDA as defined in the 2019 Credit Agreement permits, among other things, the exclusion of (1) certain extraordinary, unusual and/or non-recurring expenses, some of which are subject to an aggregate cap, including but not limited to severance, acquisitions, dispositions, debt refinancing/amendment and initial public offering-related, (2) foreign currency gains/losses recognized in the statement of operations and (3) franchise, excise and property taxes recognized in the statement of operations. The restrictive covenants include limitations on (1) the declaration or payment of certain distributions on or in respect of our equity interests, (2) restrictions on acquisitions, investments and certain other payments, (3) limitations on the incurrence of new indebtedness, (4) limitations on transfers, sales and other dispositions and (5) limitations on making changes to our business and organizational documents. As of June 27, 2020, we complied with all covenants under the 2019 Credit Agreement and there were $195.7 million outstanding borrowings under the term loan and $49.0 million outstanding balance on our revolving credit facility. We have one nominal outstanding letter of credit. On September 24, 2020, we repaid all borrowings outstanding under our revolving credit facility. We intend to use the net proceeds for general corporate purposes. See "Use of proceeds."

Off-balance sheet arrangements

We do not have any off-balance sheet arrangements.

Contractual obligations

Our contractual obligations as of December 31, 2019 are as follows:

	Payments Due by Period				
(in thousands)	Less than 1 year	1-3 Years	3-5 Years	More than 5 years	Total
Long-term debt obligations	$ 10,000	$ 30,000	$ 160,000	$ —	$ 200,000
Interest on long-term debt obligations	8,477	14,270	11,212	—	33,959
Operating lease obligations	1,814	3,602	3,575	7,336	16,327
Purchase obligations	16,889	—	—	—	16,889
	$ 37,180	$ 47,872	$ 174,787	$ 7,336	$ 267,175

The table above does not include certain obligations as follows:

- commitments under our multi-year exclusive supply agreements for our OA products except for those amounts that are contractually committed as of December 31, 2019. Our purchase obligations under

these supply agreements are generally based upon our forecasted requirements, subject in some cases to a contractual minimum per annum;

- commitments under the Development Agreement with MTF, the Option and Equity Purchase Agreement with CartiHeal and its shareholders and the Collaboration Agreement with Harbor, for which the relevant contingent events requiring a payment under the respective agreements have not yet occurred; and
- future milestone payments pursuant to the Development Agreement with MTF, the Option and Equity Purchase Agreement with CartiHeal and its shareholders, the Collaboration Agreement with Harbor and the amended and restated license agreement, or the Q-Med License Agreement, with Q-Med and NSH, as the payment obligations under these agreements are contingent upon future events and we are unable to estimate the timing or likelihood of achieving these milestones or generating future product sales.

Quantitative and qualitative disclosures about market risk

We are exposed to various market risks, which may result in potential losses arising from adverse changes in market rates, such as interest rates and foreign exchange rates. We do not enter into derivatives or other financial instruments for trading or speculative purposes. We use derivative instruments to manage exposures to interest rates and foreign currencies. Derivatives are recorded on the balance sheet at fair value at each balance sheet date. We have elected the fair value method of accounting and do not designate whether the derivative instrument is an effective hedge of an asset, liability or firm commitment. Changes in the fair values of derivative instruments are recognized in the consolidated statements of operations and comprehensive income (loss) in the period incurred.

Interest rate risk

Our cash and cash equivalents balance as of June 27, 2020 consisted of demand deposits and institutional money market funds held in U.S. and foreign banks. Cash equivalents consist of highly liquid investment securities with original maturities on the date of purchase of three months or less and can be exchanged for a known amount of cash. We are exposed to the market risk related to fluctuations in interest rates and market prices for our cash equivalents. We are also exposed to interest rate risk in connection with borrowings under our credit agreement, which bear interest at a floating rate based on one-month LIBOR plus an applicable borrowing margin. As of June 27, 2020, a 1.0% increase in interest rate would result in $10.9 million increase in total interest payable over the remaining life of the credit agreement in the event we were to draw down the entire capacity of our revolving credit facility. For variable rate debt, interest rate changes generally do not affect the fair value of the debt instrument, but impact future earnings and cash flows, assuming other factors are constant. In the ordinary course of business, we may enter into contractual arrangements to reduce our exposure to interest rate risks.

In March 2020, we entered into an interest rate swap agreement, effective March 26, 2020 and expiring December 6, 2024 to limit our exposure to changes in the variable interest rate on our term loan. The derivative instrument was not designated as a hedge.

Foreign exchange risk management

We operate in countries other than the U.S. and are exposed to foreign currency risks. We bill most direct sales outside of the U.S. in local currencies. We expect that the percentage of our sales denominated in foreign currencies will increase in the foreseeable future as we continue to expand into international markets. When sales or expenses are not denominated in U.S. dollars, a fluctuation in exchange rates could affect our net income. We believe that the risk of a significant impact on our operating income from foreign currency fluctuations is minimal. Although we do not currently have any foreign currency hedges, we have used foreign exchange

forward contracts in the past to protect against the impact of foreign currency fluctuations and may use forward contracts, derivatives or other hedges for foreign exchange risk management purposes in the future.

Effects of inflation

We do not believe that inflation has had a material effect on our results of operations during the periods presented herein.

Related parties

For a description of our related party transactions, see "Certain relationships and related party transactions."

Recently issued accounting standards

The Company has elected to comply with non-accelerated public company filer effective dates of adoption. Therefore, the required effective dates for adopting new or revised accounting standards as described below are specific to non-accelerated public company filers, which are generally earlier than when emerging growth companies are required to adopt.

Accounting Pronouncements Recently Adopted

The Financial Accounting Standards Board, or FASB, issued Accounting Standards Update 2016-13, *Financial Instruments-Credit Losses*, or ASU 2016-13, in June 2016 that significantly changes accounting for credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. ASU 2016-13 requires that an entity measure and recognize expected credit losses for financial assets held at amortized cost and replaces the incurred loss impairment methodology in prior GAAP with a methodology that considers a broad range of information for the estimation of credit losses. The Company adopted ASU 2016-13 on January 1, 2020 prospectively and the adoption did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software*, or ASU 2018-15, addressing a customer's accounting for implementation costs incurred in a cloud computing arrangement, or CCA, that is considered a service contract. Under ASU 2018-15, implementation costs for a CCA should be evaluated for capitalization using the same approach as implementation costs associated with internal-use software. The capitalized implementation costs should be expensed over the term of the hosting arrangement, which includes any reasonably certain renewal periods. Capitalized implementation costs should be assessed for impairment like long-lived assets. The Company adopted ASU 2018-15 on January 1, 2020 prospectively and it had no material impact on the consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-13, *Fair Value Measurement*, or ASU 2018-13, modifying the disclosure requirements on fair value measurements and eliminates the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels and the valuation processes for Level 3 fair value measurements. ASU 208-13 modifies certain disclosures related to investments measured at net asset value and clarifies that companies are to disclose uncertainties in measurements as of the reporting date. ASU 2018-13 requires additional disclosure related to changes in unrealized gains and losses included in other comprehensive income for recurring Level 3 fair value measurements as well as the range and weighted average, or other quantitative information that would be a more reasonable and rational method, of significant unobservable inputs used to develop Level 3 fair value measurements. The additional disclosures and description of any measurement uncertainty amendments should be applied prospectively for the most recent interim or annual period in the initial year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. The Company adopted ASU 2018-13 on January 1, 2020 and it did not have a material impact on its consolidated financial statements.

New Accounting Pronouncements Not Yet Adopted

In December 2019, the FASB issued Accounting Standards Update 2019-12, *Income Taxes*, or ASU 2019-12, which amended the accounting for income taxes. ASU 2019-12 eliminates certain exceptions to the guidance for income taxes related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences as well as simplifying aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. ASU 2019-12 is effective for annual and interim periods beginning after December 15, 2020. Early adoption is permitted in interim or annual periods for which financial statements have not been made available for issuance. Entities that elect to early adopt the amendments in an interim period should reflect any adjustments as of the beginning of the annual period that includes that interim period. Certain amendments are to be applied prospectively while others are retrospective. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

Internal control over financial reporting

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. Prior to this offering, we were a private company and we are currently in the process of reviewing, documenting and testing our internal control over financial reporting.

Presently, we are not an accelerated filer, as such term is defined by Rule 12b-2 of the Exchange Act, and therefore, our management is not presently required to perform an annual assessment of the effectiveness of our internal control over financial reporting. This requirement will first apply to our second Annual Report on Form 10-K. Our independent public registered accounting firm will first be required to attest to the effectiveness of our internal control over financial reporting for our Annual Report on Form 10-K for the first year we are no longer an “emerging growth company”.

Critical accounting policies and estimates

The preparation of the consolidated financial statements requires us to make assumptions, estimates and judgments that affect the reported amounts of assets and liabilities, the disclosures of contingent assets and liabilities as of the date of the consolidated financial statements, and the reported amounts of sales and expenses during the reporting periods. Certain of our more critical accounting policies require the application of significant judgment by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. On an ongoing basis, we evaluate our judgments, including those related to inventories, recoverability of long-lived assets and the fair value of our common stock. We use historical experience and other assumptions as the basis for our judgments in making these estimates. Because future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Any changes in these estimates will be reflected in our consolidated financial statements as they occur. While our significant accounting policies are more fully described in Note 1 to our consolidated financial statements included elsewhere in this prospectus, we believe that the following accounting policies and estimates are most critical to a full understanding and evaluation of our reported financial results. The critical accounting policies addressed below reflect our most significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue recognition

Sale of products

We derive revenue primarily from the sale of our OA joint pain treatment and joint preservation products, BGSs and minimally invasive fracture treatment. We sell these products directly to healthcare institutions,

patients, distributors and dealers. We also enter into arrangements with pharmacy and health benefit managers that provide for privately negotiated rebates, chargebacks and discounts with respect to the purchase of our products. We recognize revenue at a point in time upon transfer of control of the promised product to customers in an amount that reflects the consideration we expect to receive in exchange for those products. We exclude from revenues taxes collected from customers and remitted to governmental authorities.

Revenues are recorded at the transaction price, which is determined as the contracted price net of estimates of variable consideration resulting from discounts, rebates, returns, chargebacks, contractual allowances, estimated third-party payer settlements and certain distribution and administration fees offered in our customer contracts and other indirect customer contracts relating to the sale of our products. We establish reserves for the estimated variable consideration based on the amounts earned or eligible for claim on the related sales. Where appropriate, these estimates take into consideration a range of possible outcomes, which are probability-weighted for relevant factors such as our historical experience, current contractual requirements, specific known market events and trends, industry data and forecasted customer buying and payment patterns. The amount of variable consideration is included in the transaction price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period. We regularly review all reserves and update them at the end of each reporting period as needed. Adjustments arising from the change in estimates of variable consideration were not significant for the years ended December 31, 2019 and 2018.

OA joint pain treatment and joint preservation

Revenue from customers such as healthcare providers, distribution centers or specialty pharmacies is recognized at the point in time when control is transferred to the customer, typically upon shipment.

Distributor chargebacks

We have preexisting contracts with established rates with many of the distributors' customers that require the distributors to sell our product at their established rate. We offer chargebacks to distributors who supply these customers with our products. We reduce revenue at the time of sale for the estimated future chargebacks. We record chargeback reserves as a reduction of accounts receivable and base the reserves on the expected value by using probability-weighted estimates of volume of purchases, inventory holdings and historical chargebacks requested for each distributor.

Discounts and rebates

We offer retrospective discounts and rebates linked to the volume of purchases which may increase at negotiated thresholds within a contract-buying period. We reduce revenue and record the reserve as a reduction to accounts receivable for the estimated discount and rebate at the most likely amount the customer will earn, based on historical buying trends and forecasted purchases.

Bone graft substitutes

The majority of our BGS product sales are through consignment inventory with hospitals, where ownership remains with us until the hospital performs a surgery and consumes the consigned inventory. We recognize the revenue when the surgery has been performed. The customer does not have control of the product until the customer consumes it, as we are able to require the return or transfer of the product to a third-party. An unconditional obligation to pay for the product does not exist until the customer consumes it.

Minimally invasive fracture treatment

We recognize revenue from third-party payers, such as governmental agencies, insurance companies or managed care providers, when we transfer control of the Exogen system to the patient, typically when the patient

has accepted the product or upon delivery. We record this revenue at the contracted rate, net of contractual allowances at the time of sale, or an estimated price based on historical data and other available information for non-contracted payers. We record contractual allowances based on probability weighting historical data and collections. We recognize revenue from patients (self-pay and insured patients with coinsurance and deductible responsibilities) based on billed amounts giving effect to any discounts and implicit price concessions. Implicit price concessions represent differences between amounts billed and the amounts we expect to collect from patients, which considers historical collection experience and current market conditions.

Settlements with third-party payers for retroactive revenue adjustments due to audits, reviews or investigations are considered variable consideration and are included in the determination of the estimated transaction price using the most likely outcome method. These settlements are estimated based on the terms of the payment agreement with the payer, correspondence from the payer and historical settlement activity, including an assessment to ensure that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the retroactive adjustment is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available), or as years are settled or are no longer subject to such audits, reviews and investigations. We are not aware of any claims, disputes or unsettled matters with any payer that would materially affect revenues for which we have not adequately provided for.

Product returns

We estimate the amount of returns and reduce revenue in the period the related product revenue is recognized. We record a liability for expected returns based on probability weighted historical data.

Accounts receivable, net

Accounts receivable, net are amounts billed and currently due from customers. We record the amounts due net of allowance for doubtful accounts. We maintain allowances for credit losses to provide for receivables we do not expect to collect. We base the allowance on an assessment of customer creditworthiness, historical payment experience, the age of outstanding receivables and other information as applicable. Collection of the consideration that we expect to receive typically occurs within 30 to 90 days of billing. We apply the practical expedient for contracts with payment terms of one year or less which does not consider the effects of the time value of money. Occasionally, we enter into payment agreements with patients that allow payment terms beyond one year. In those cases, the financing component is not deemed significant to the contract.

Contract assets

Contract assets consist of unbilled amounts resulting from estimated future royalties from an international distributor that exceeds the amount billed. Contract assets are included in prepaid and other current assets on the consolidated balance sheets.

Contract liabilities

Contract liabilities consist of customer advance payments or deposits and deferred revenue. Occasionally for certain international customers, we require payments in advance of shipping product and recognizing revenue resulting in contract liabilities. Contract liabilities are included in accrued liabilities on the consolidated balance sheets.

Shipping and handling

We classify amounts billed for shipping and handling as a component of net sales. The related shipping and handling fees and costs as well as other distribution costs are included in cost of sales. We have elected to recognize shipping and handling activities that occur after control of the related product transfers to the customer as fulfillment costs and are included in cost of sales.

Contract costs

We apply the practical expedient of recognizing the incremental costs of obtaining contracts as an expense when incurred as the amortization period of the assets that we otherwise would have recognized is one year or less. These incremental costs include our sales incentive programs for the internal sales force and third-party sales agents as the compensation is commensurate with annual sales activities. These costs are included in selling, general and administrative expense on the consolidated statements of operations and comprehensive income.

Use of estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities, at the date of the financial statements, as well as the reported amounts of revenues and expenses during the period. On an ongoing basis, management evaluates these estimates, including those related to contractual allowances and sales incentives, allowances for doubtful accounts, inventory reserves, goodwill and intangible assets impairment, useful lives of long lived assets, noncontrolling interest, fair value measurements, litigation and contingent liabilities, income taxes, and equity-based compensation. Management bases its estimates on historical experience, future expectations and other relevant assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

Fair value

We record certain assets and liabilities at fair value. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A three-level fair value hierarchy that prioritizes the inputs used to measure fair value is described below. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. Assets and liabilities are categorized based on the lowest level that is significant to the valuation.

The three levels of inputs used to measure fair value are as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities;

Level 2—Observable inputs other than quoted prices included within Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and

Level 3—Unobservable inputs that are supported by little or no market data. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

Business combinations

We record identifiable assets acquired, liabilities assumed and any noncontrolling interest in an acquiree resulting from a business combination at their estimated fair values on the date of the acquisition. We generally have third-party valuations completed for intangible assets in a business combination using a discounted cash flow analysis, incorporating various assumptions. Goodwill represents the excess of the purchase price over the estimated fair value of the net assets acquired, including the amount assigned to identifiable intangible assets. The most significant estimates and assumptions inherent in a discounted cash flow analysis include the amount and timing of projected future cash flows, discount rate used to measure the risks inherent in the future cash

flows, assessment of the asset's life cycle, and competitive and other trends impacting the asset, including consideration of technical, legal, regulatory, economic and other factors. Each of these factors and assumptions can significantly affect the value of the intangible asset.

Acquired in-process research and development, or IPR&D, is the fair value of projects for which the related products have not received regulatory approval and have no alternative future use and is capitalized as an indefinite-lived intangible asset. Due to inherent uncertainty related to research and development, actual results could differ materially from the assumptions used in the discounted cash flow model. Additionally, there are risks including, but not limited to, delay or failure to receive regulatory requirements to conduct clinical trials, required market clearances, or patent issuance, and that the research and development project does not result in a successful commercial product. Development costs incurred after the acquisition are expensed as incurred. Upon receipt of regulatory approval of the related technology or product, the indefinite-lived intangible asset is accounted for as a finite-lived intangible asset and amortized on a straight-line basis over its estimated useful life. If the research and development project is abandoned, the indefinite-lived asset is charged to expense.

We recognize contingent consideration liabilities resulting from business combinations at estimated fair value on the acquisition date. Contingent consideration liabilities are revalued subsequent to the acquisition date with changes in fair value recognized in earnings. Contingent payments related to acquisitions consist of development, regulatory and commercial milestone payments, and are valued using discounted cash flow techniques. Significant estimates and assumptions required for these valuations include the probability of achieving regulatory approval under specified time frames, product sales projections under various scenarios and discount rates used to calculate the present value of the estimated payments. Changes in the fair value of contingent consideration liabilities result from changes in these estimates and assumptions. Significant judgment is employed in determining the appropriateness of the estimates and assumptions as of the acquisition date and in post-acquisition periods.

Impairment

We evaluate goodwill and other indefinite-lived intangible assets for impairment annually during the fourth quarter, or more frequently if events or changes in circumstances indicate that the asset might be impaired. Our reporting units are U.S. and International and we analyze each reporting unit separately in our goodwill impairment evaluation. We used independent third-party valuation specialists in 2019 and 2018 to assist management in performing the annual review of goodwill for impairment as well as in April 2020 due to the COVID-19 triggering event. The specialists assist management in the determination of fair value of reporting units based upon inputs and assumptions provided by management, which management uses for its impairment assessment. We analyze all other indefinite-lived intangible assets qualitatively to determine if it is more likely than not for an impairment to exist. If we meet the criteria, we perform a quantitative analysis to determine if an impairment exists.

Goodwill

Our goodwill impairment process includes applying a quantitative impairment analysis where the fair value of the reporting unit and compare it to its carrying value (including goodwill). We determine the fair value of U.S. and International reporting units based primarily on an income approach, which incorporates the use of a discounted free cash flow analysis. The discounted free cash flow analyses is based on significant judgments, including the current operating budgets, estimated long-term growth projections and future forecasts for each reporting unit. We discount future cash flows based on a market comparable weighted average cost of capital rate for each reporting unit. The discount rates used in the discounted free cash flow analyses reflect the risks inherent in the expected future cash flows generated by the respective intangible assets. Market risk, industry risk and a small company premium has an impact on the discount rate. The value of each reporting unit is determined on a stand-alone basis from the perspective of a market participant and represents the price we estimate we would receive in a sale of the reporting unit in an orderly transaction between market participants at the measurement

date. Significant judgments inherent in this analysis include estimating the amount and timing of future cash flows and the selection of appropriate discount rates, royalty rate and long-term growth rate assumptions. Changes in these estimates and assumptions could materially affect the determination of fair value for each reporting unit and for some of the reporting units and could result in an impairment charge, which could be material to our financial position and results of operations. There has been no impairment of our goodwill related to our U.S. and International reporting units since our formation.

Equity compensation

We operate two equity-based compensation plans, the MIP and Phantom Plan. We issue MIP and Phantom Plan, which allows our employees to share our future profit without granting any additional voting rights. Awards granted under the MIP and certain Phantom Plan awards granted in 2015 and thereafter, or the 2015 Phantom Plan Units, are liability-classified. Those Phantom Plan awards granted from inception in 2012 and until the grant of the 2015 Phantom Plan Units, or the 2012 Phantom Plan Units, are equity-classified, as they do not contain a put option or other features requiring them to be liability-classified. Equity compensation includes compensation expense for all equity awards made to employees that are part of continuing operations and are based on estimated fair values as of the grant date for the 2012 Phantom Plan Units and period end fair value for the MIP units and 2015 Phantom Plan Units. We recognize expense for performance-based awards when we expect them to be earned. We recognize timed-based awards over the requisite service period, which is generally the vesting period of the award. We recognize forfeitures as they occur.

We used independent third-party valuation specialists in 2019 and 2018 to assist management in performing the annual valuation of MIP and 2015 Phantom Plan Units, as well as in April 2020 due to the COVID-19 triggering event. The specialists assist management in the determination of fair value of awards granted using the Monte Carlo option pricing model. The subjective assumptions and the application of judgment in determining the fair value of the awards represent management's best estimates. If factors change and different assumptions are used, our equity compensation expense could be materially different in the future. The most significant assumptions and judgments are as follows:

- Expected volatility—We determine the expected price volatility based on the historical volatilities of our peer group, as we do not have a sufficient trading history for our units. Industry peers consist of several public companies in the medical device industry similar to us in size, stage of life cycle and financial leverage. We intend to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own stock price becomes available, or unless circumstances change such that the identified companies are no longer similar to us, in which case, more suitable companies whose share prices are publicly available would be utilized in the calculation.
- Time to liquidity event—The amount of time that the awards are expected to be outstanding.
- Risk-free interest rate—We based the risk-free rate on U.S. Government Constant Maturity Treasury rates for a term corresponding to the Time to Liquidity Event.
- Expected dividend yield—We used a dividend rate of zero as we have not previously issued dividends and do not anticipate paying dividends in the foreseeable future.

The assumptions utilized to determine the fair value of the awards are indicated in the following table:

	Year ended December 31,		
	2019	2018	April 30, 2020
Expected dividend yield	0.0%	0.0%	0.0%
Expected volatility	35.0%	30.0%	55.0%
Risk-free interest rate	1.5%	2.7%	0.2%
Time to exit event (in years)	1.5	1.0	1.0

The calculation of the fair value of awards also requires an estimate of our equity value, based on inputs from management and reporting unit valuation reports prepared by the specialists during the annual goodwill impairment process.

We determined the value of our equity utilizing methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants Practice Aid, "Valuation of Privately-Held-Company Equity Securities Issued as Compensation". Prior to the consummation of this offering, in the absence of a public trading market, our Board of Managers determines a reasonable estimate of the grant date fair value of our equity awards based on input from management and the annual valuation reports prepared by the specialists. In addition, we exercised judgment in evaluating and assessing the foregoing based on several factors including:

- the nature and history of our business;
- our historical operating and financial results;
- the market value of companies that are engaged in a similar business to ours;
- the lack of marketability of our common stock;
- the overall inherent risks associated with our business at the time awards were approved; and
- the overall equity market conditions and general economic trends.

After the closing of this offering, our board of directors will determine the grant date fair value of our equity awards based on the closing price of our common shares as reported by Nasdaq on the date of the grant.

As of June 27, 2020, we had $7.0 million of unrecognized compensation expense to be recognized over a weighted-average period of 1.3 years based on time to vest.

Income taxes

Bioventus LLC is currently a partnership for U.S. federal income tax purposes. As a partnership, taxable income or loss is generally included in the income tax returns of its members. We also have a subsidiary that operates as a C-corporation that is subject to income tax requirements and international operations that are subject to foreign income tax requirements. Additionally, Bioventus LLC is liable for various other state and local taxes. As a corporation, Bioventus Inc. will be subject to U.S. federal, state and local income taxes. We recognize the effect of income tax positions only if these positions are more likely than not to be sustained. We reflect changes in recognition or measurement in the period in which the change in judgment occurs. Upon the redemption or exchange of Bioventus LLC Units for shares of Class A common stock or cash, we will determine if we are likely to realize the resulting tax benefits. If we are, we will record (i) a deferred tax asset based on the step-up in basis resulting from the exchange and the then effective income tax rate, (ii) a payable to related party in respect of the corresponding 85% payment under the Tax Receivable Agreement and (iii) a tax benefit based on the net difference between (i) and (ii). As we realize cash tax savings, we will reduce the deferred tax asset and the payments made under the Tax Receivable Agreement will reduce the payable to related party. Further, we will evaluate the likelihood that we will realize the benefit represented by the deferred tax asset and, to the extent that we estimate it is more likely than not that we will not realize the benefit, we will reduce the carrying amount of the deferred tax asset with a valuation allowance.

Long-lived assets

Property and equipment are stated at cost and are depreciated using the straight-line method over the shorter of the asset's estimated useful life, or the lease term if related to leased property, as follows in years:

Computer software and hardware	3-5
Leasehold improvements	7
Machinery and equipment	7
Furniture and fixtures	7

We amortize finite-lived identifiable intangible assets using the straight-line method over their estimated remaining weighted average useful lives as follows in years:

	Weighted Average Useful Life
Intellectual property	17.1
Distribution rights	12.1
Customer relationships	10.0
Developed technology	5.0

We capitalize costs incurred from third-party vendors for software design, configuration, coding and testing and amortizes these costs on a straight-line basis over the estimated useful life of the product, not to exceed three years. We do not capitalize costs that are precluded from capitalization in authoritative guidance, such as preliminary project phase costs, planning, oversight, process re-engineering costs, training costs or data conversion costs.

The carrying values of property, equipment and finite lived intangible assets are reviewed for recoverability if the facts and circumstances suggest that a potential impairment may have occurred. If this review indicates that carrying values may not be recoverable, we will perform an assessment to determine if an impairment charge is required to reduce carrying values to estimated fair value. There were no events, facts or circumstances for the years ended December 31, 2019 and 2018 that resulted in any impairment charges to our property, equipment or finite lived intangible assets.

JOBS Act

We qualify as an “emerging growth company” pursuant to the provisions of the JOBS Act. For as long as we are an “emerging growth company,” we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies,” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, reduced disclosure obligations relating to the presentation of financial statements in the “Management’s discussion and analysis of financial condition and results of operations” section and exemptions from the requirements of holding advisory “say-on-pay” votes on executive compensation and shareholder advisory votes on golden parachute compensation. We have availed ourselves of the reduced reporting obligations and executive compensation disclosure in this prospectus and expect to continue to avail ourselves of the reduced reporting obligations available to emerging growth companies in future filings.

In addition, an emerging growth company can delay its adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we are choosing to “opt out” of such extended transition period, and as a result, we plan to comply with any new or revised accounting standards on the relevant dates on which non- emerging growth companies must adopt such standards. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

We will continue to qualify as an emerging growth company until the earliest of:

- The last day of our fiscal year following the fifth anniversary of the date of our initial public offering;
- The last day of our fiscal year in which have annual gross revenues of $1.07 billion or more;
- The date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt;
- The date on which we are deemed to be a “large accelerated filer”, which will occur at such time as we (1) have an aggregate worldwide market value of common equity securities held by non-affiliates of $700 million or more as of the last business day of our most recently completed second quarter, (2) have been required to file annual and quarterly reports under the Exchange Act for a period of at least 12 months and (3) have filed at least one annual report pursuant to the Exchange Act.

BUSINESS

Overview

We are a global medical device company focused on developing and commercializing clinically differentiated, cost efficient and minimally invasive treatments that engage and enhance the body's natural healing process. We believe our non-invasive medical device and biologic products play a critical role in supporting the body's own healing mechanisms to heal or eliminate the pain caused by orthopedic conditions and problems, which we define as our active healing products. These products address an estimated $6.0 billion market opportunity across OA joint pain treatment and joint preservation, spinal fusion surgery and bone fractures, each of which is experiencing growth through multiple industry tailwinds, including an aging population, increased participation in sports and active lifestyles and a rise in obesity rates. Our devices are most often used to delay or replace the need for an elective surgical procedure and are focused on reaching patients early on in their treatment paradigm. In 2019, approximately 85% of our $340.1 million in revenues were derived from products associated with non-surgical procedures. Our products are widely reimbursed by both public and private health insurers and are sold in the physician's office or clinic, in ASCs, and in the hospital setting in the United States and across 37 countries. We have broad commercial reach across our established orthopedic customer base, which is a key strength of the company. We are focused on leveraging this significant customer base and the reach of our commercial organization to continue to grow the company by expanding our market share and product portfolio. This strategy has led to a 7.4% CAGR in revenue since 2016 and during this time period, our revenue has grown from $274.5 million to $340.1 million in 2019.

Our existing portfolio of products is grouped into three verticals based on our targeted customer focus:

- ***OA Joint Pain Treatment and Joint Preservation***. We are the largest pure play orthopedics-focused company in the OA joint pain treatment and joint preservation market. We have been the fastest growing HA participant over the last three years, driving our share to number three by revenue in the U.S. market. We offer the only complete portfolio of HA viscosupplementation therapies, including single, three and five injection regimens, for patients experiencing pain related to OA in the knee. Our HA products are all approved by the FDA through PMAs, and include:

  (a) Durolane, a single injection therapy, was launched in the United States in 2018 and is also marketed outside the United States in more than 30 countries including Europe through a CE mark;

  (b) GELSYN-3, a three injection therapy, was launched in the United States in 2016; and

  (c) SUPARTZ FX, a five injection therapy, was launched in the United States in 2001.

- ***Bone Graft Substitutes.*** We are the fastest growing participant in the BGSs market and offer a broad portfolio of products including human tissue allografts and synthetics. Our BGS products can be used in conjunction with any orthopedic fixation and spinal fusion implant. They are designed to improve bone fusion rates following spinal fusion and other orthopedic surgeries and reduce the need for using the patient's own bone, which is associated with additional cost and morbidity. Our products include an allograft-derived bone graft with growth factors (OsteoAMP), a DBM, a cancellous bone in different preparations (PureBone), bioactive synthetics (Signafuse and Interface), a collagen ceramic matrix (OsteoMatrix), a biphasic calcium phosphate synthetic (OsteoPlus) and two bone marrow isolation systems (CellXtract and Extractor). Our products have received either 510(k) clearance from the FDA or are marketed as Section 361 HCT/Ps. HCT/Ps regulated solely under Section 361 are human cells, tissues and cellular and tissue-based products that do not require marketing authorization to be marketed in the United States.

- ***Minimally Invasive Fracture Treatment.*** Our Exogen system is the number one prescribed device in the long bone stimulation market. It has had marketing authorization via a PMA through the FDA for over 25 years. We are the only company to utilize advanced, pulsed ultrasound technology for bone

growth in delayed and nonunion fractures in all fracture locations except spine, as well as in fresh fractures of the tibia and radius. Our Exogen system offers significant advantages over electrical based long bone stimulation systems, including a documented mechanism of action, shorter treatment times and superior nonunion heal rates. The system is also sold internationally under a CE mark for nonunions and fresh fractures and is the market-leading bone healing treatment for long bones in Japan.

Our expansive direct sales and distribution channel across our three verticals provides us with broad and differentiated customer reach, and allows us to serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery. Our OA joint pain treatment and joint preservation products and minimally invasive fracture treatment are sold by a direct sales team of approximately 270 in the United States and approximately 45 internationally. This direct sales team is complemented by approximately 20 account representatives who facilitate account access through IDNs, GPOs and payer contracting. Our BGS products are sold by 170 independent distributors in the United States, each with their own independent sales force, supported by our 15 member regionalized sales support team. We market our BGSs primarily to orthopedic spine surgeons and neurosurgeons for use in the operating room in both the hospital and ASC setting. We believe that our broad customer reach has and will continue to enable strong and durable growth in each of our verticals and provides a significant foundation for future product launches.

In addition to our current portfolio, we have a deep pipeline of new products under development, and we are pursuing the development of line extensions and expanded indications for already marketed products that address a significant market opportunity within our current customer base. We have recently submitted an IND to begin a clinical trial for MOTYS, a placental tissue biologic for knee OA for which we ultimately plan to pursue a BLA. We have recently entered into an option and equity purchase agreement with CartiHeal, which provides us with the option to acquire CartiHeal and its Agili-C technology, which we believe is the only off-the-shelf scaffold implant designed to address osteochondral defects in the knee. CartiHeal expects to submit a PMA seeking FDA approval of Agili-C in . We have also entered into an exclusive Collaboration Agreement with Harbor for purposes of commercializing PROcuff, a rotator cuff tissue repair product, and we anticipate filing a request for 510(k) clearance in . We intend to launch OsteoAmp Flowable in 2021 for use in minimally invasive spine procedures. Additionally, we are currently conducting clinical studies of our Exogen system pursuant to an IDE from the FDA, and we plan to use data from these studies to seek approval for expanded indications with respect to fresh fractures. We intend to leverage the clinical data to support payer coverage in this area. We plan to file the PMA supplement for the first label expansion in .

We have grown our total net sales from $319.2 million for the year ended December 31, 2018 to $340.1 million for the year ended December 31, 2019. Our total net sales declined from $160.3 million for the six months ended June 29, 2019, to $136.7 million for the six months ended June 27, 2020, related to the COVID-19 pandemic. For the years ended December 31, 2019 and 2018 and the six months ended June 27, 2020 and June 29, 2019, we had net income (losses) from continuing operations of $8.1 million $4.4 million, $4.5 million and ($2.8) million, respectively. We have also grown our Adjusted EBITDA from $72.2 million for the year ended December 31, 2018 to $79.2 million for the year ended December 31, 2019. Our Adjusted EBITDA declined from $28.3 million for the six months ended June 29, 2019 to $21.2 million for the six months ended June 27, 2020, related to the COVID-19 pandemic. The COVID-19 pandemic and the measures imposed to contain the wide spread of the virus disrupted our business beginning in early March 2020 as healthcare systems across the U.S. were forced to limit patient visits and elective surgical procedures. The effects of the pandemic began to decrease in late April 2020 and we saw a very strong recovery for our products at the end of the second quarter as restrictions on orthopedic procedures were lifted across the United States and patients also returned to orthopedic offices. See the sections titled “Risk factors” and “Management’s discussion and analysis of financial condition and results of operations” for more information. For a reconciliation of net income (loss) from continuing operations to Adjusted EBITDA, see Note 2 to the information contained in “Prospectus summary—Summary historical and pro forma financial data.”

Our strengths

We believe that we have several key strengths that provide us with a competitive advantage:

- ***Broad customer reach and market access***. We believe we have one of the largest sales organizations in the verticals in which we operate, including a direct sales team and distributors, with a dedicated focus on OA joint pain treatment and joint preservation products, BGSs and minimally invasive fracture treatments. We believe that our broad customer reach and market access are key factors contributing to our ability to increase our market share and grow faster than our competitors. Our sales organization has a performance culture built on serving our core orthopedic patient customers and delivering our products to a variety of physicians and care settings. We serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric, trauma and spine. We believe we will continue to be well-positioned in the market given our strong foundation for reimbursement and customer access, coupled with a broad portfolio of clinically differentiated products.
- ***Differentiated, market leading products across three verticals.*** We believe our portfolio of complementary, market leading products provides patients and physicians with greater flexibility in tailoring a treatment regime that best fits the patient's needs and lifestyle. Our products are most often used to delay or replace the need for an elective surgical procedure and are focused on reaching patients early on in their treatment paradigm. In 2019, approximately 85% of our $340.1 million in revenues were associated with non-surgical procedures. We have the only complete one, three and five injection portfolio in the HA viscosupplementation market in the United States, which we believe gives patients the freedom of choice and appeals to the growing preference among providers to interact with a single vendor when accessing a complete portfolio of care. We also offer a comprehensive, clinically effective and cost efficient portfolio of BGSs to meet a broad range of patient needs and procedures. Our products are designed to improve bone fusion rates and avoid the cost and risks associated with autograft following spinal fusion and other orthopedic surgeries, and can be used in conjunction with any orthopedic fixation and spinal fusion implant. Additionally, our Exogen ultrasound bone healing system is the leader in the long bone stimulation market, offering shorter treatment times, superior non-union heal rates and a documented mechanism of action. Our Exogen system also has a broad label for patient use, including established nonunions and fresh fractures to the tibia and radius.
- ***Substantial body of peer reviewed clinical evidence.*** We believe that clinical evidence is critical to demonstrating efficacy, achieving reimbursement coverage and demonstrating the value of medical products. We have invested in building evidence and support for our key offerings and product portfolio. Clinical evidence is vital to physicians as they look to make decisions about which product would best serve their patients. The safety and efficacy of our key offerings within each of our three verticals has been demonstrated by numerous clinical studies, published peer review research and clinical publications. We believe that our significant body of clinical evidence creates a competitive barrier to entry given the time and investment required to amass the amount of published data we have and is an asset that would take years for a competitor to try to replicate.
- ***Robust free cash flow conversion.*** We believe that our robust free cash flow conversion and scale enables us to invest in our business in a meaningful way. Over the last four years, we have self-funded all internal research and development and business development efforts. We define free cash flow as net cash provided by operating activities from continuing operations as presented on our consolidated statement of cash flow plus interest expense as presented on our consolidated statement of operations less purchases of property and equipment and other on our consolidated statement of cash flow. Our free cash flow conversion, defined as free cash flow divided by Adjusted EBITDA, was 78% for the year ended December 31, 2019 and 93% from 2018 through June 27, 2020. With $340.1 million in revenues for the year ended December 31, 2019, we also have scale to pursue opportunities to grow our business, including internationally to regions such as China. Our attractive cash generation has and will continue to allow us to expand our deep pipeline of products through further internal research and development investment and additional tuck-in acquisitions that leverage our established infrastructure.

- ***Experienced management team with a track record of value creation.*** Our senior leadership team has been involved in growing large and mid-cap businesses, including through major acquisitions and integrations, public and private equity company sale transactions and strategic equity investments, as well as the development, approval and launch of new and transformative active healing products. Our team also has extensive operating experience with respect to active healing products, which includes designing clinical trials, working closely with regulatory agencies on identifying the appropriate path to market, successfully commercializing products, including securing managed care, payer or purchasing committee contracts and effectively managing our direct or distributor sales organizations.

Our growth strategy

We intend to pursue the following strategies to build a market-leading and customer-focused company centered on the OA joint pain treatment and joint preservation, BGSs and minimally invasive fracture treatments, and to continue to grow our net sales and Adjusted EBITDA:

- ***Continue to expand market share in HA viscosupplementation***. We intend to increase sales of our HA viscosupplementation therapies and extend our market leadership in this category by building on our unique positioning as the only company to offer a one, three and five injection treatment regimen and by expanding payer coverage, which we have done successfully, increasing the number of lives under contract from 6 million to 48 million between April 2017 and April 2020. This increase in lives, along with our differentiated portfolio and dedicated direct sales team, has allowed us to achieve significant market share gains over the last several years and positioned us as the largest pure play orthopedic-focused company in the U.S. HA viscosupplementation market with a market share of approximately 17%.
- ***Introduce new OA joint pain treatment and joint preservation products.*** To expand our offering beyond HA viscosupplementation therapies and build a comprehensive portfolio for the OA joint pain treatment and joint preservation, we are planning to commercially launch a range of new therapies over the next several years, including:

  (a) ***MOTYS.*** A placental tissue injectable biologic for knee OA, which we expect to begin selling in the cash pay market in the fourth quarter of 2020 as a Section 361 HCT/P pursuant to a temporary FDA policy of enforcement discretion. In parallel, we plan to pursue a required BLA premarket approval for this product, which we expect would expand insurance payment alternatives over time.

  (b) ***PROcuff.*** A bio-inductive collagen implant for regeneration of tendon tissue in the rotator cuff. We expect to file a request for 510(k) clearance in .

  (c) ***Agili-C.*** An off-the-shelf aragonite implant designed for implantation into osteochondral defects in the knee. We have an option to acquire this technology from CartiHeal upon FDA approval. CartiHeal expects to submit a PMA seeking FDA approval in .
- ***Further develop and commercialize our BGS portfolio.*** We intend to grow our presence in the BGS market and expand our reach into the operating room in both ASCs and hospitals. In the near-term, we plan to maintain and selectively expand our profitable product lines by adding to our U.S. distributor base in an effort to reach significantly underpenetrated markets. Over time, we intend to launch product line enhancements and invest in the development of next generation BGS therapies to continue to grow our market share. Consistent with this strategy, we recently launched the Signafuse Bioactive Strip and anticipate launching the OsteoAmp Flowable in 2021.
- ***Expand indications for use for our Exogen system***. We are focused on generating incremental clinical data and peer-reviewed publications to expand our indications and continue to grow our market leading share. We are currently underway with the B.O.N.E.S. clinical studies, which are aimed at generating data to support label expansion in additional bone types and expanded reimbursement for the treatment

of fresh fractures in patients at risk of nonunion due to certain comorbidities, such as diabetes or obesity. We commenced patient enrollment to study three specific bones in 2017 and expect a rolling release of data starting in late 2020. If successful, we plan to submit three PMA supplements to the FDA in , and to seek approval for a broad fresh fracture indication, which we believe in aggregate could expand our addressable market by $1.7 billion.

- ***Invest in research and development.*** We are focused on internal research and development to broaden our portfolio of therapies to manage OA joint pain and joint preservation, expand our Exogen system product label and undertake clinical research to support commercialization of our next generation of BGS products. We see significant opportunity to develop innovative and clinically differentiated products internally with our qualified research and development team. We rely on a team of 40 highly trained individuals to develop new products, conduct clinical investigations and help educate health care providers using our products. Our research and development team is comprised of 15 members holding PhDs and 22 members with more than 15 years of experience in the medical device industry. We collaborate with academic centers of excellence, leading contract research organizations and other industrial groups to complement and expedite execution of our research and development programs and minimize fixed costs.
- ***Pursue business development opportunities.*** Consistent with our track record of partnerships and acquisitions of MOTYS, PROcuff and CartiHeal, we intend to continue to pursue business development opportunities that leverage our significant customer presence across orthopedics, broaden our portfolio and increase our global footprint. We will continue to search for clinically differentiated and cost-effective products and technologies that also balance our portfolio in terms of risk and time to market.
- ***Opportunistically grow our international markets.*** We intend to focus our international business on markets where our existing portfolio can maintain profitable growth over time, either through direct or distributor based channels. For example, we launched OsteoAMP in Canada in 2020, where Durolane and Exogen already had a market leading presence. We plan to selectively expand to new markets with Durolane, Exogen and our BGSs and intend to pursue further opportunities in the Asia Pacific markets. In particular, China represents an attractive and exciting market given its large and aging population as well as its rising middle class. We are adding a management team in China and will be creating a legal entity as we seek approval from the China Food and Drug Administration for Durolane, which we believe will be facilitated by the successful completion of our Chinese randomized controlled trial, or RCT.

Our products

We offer a diverse portfolio of active healing products to serve physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery, in the physician’s office or clinic, ASCs or in the hospital setting.

Our portfolio of products is grouped into three verticals based on clinical use: (i) OA joint pain treatment and joint preservation, (ii) BGSs and (iii) minimally invasive fracture treatment.

OA joint pain treatment and joint preservation

Knee OA is a degenerative condition that is chronic in nature and is characterized by gradual breakdown and destruction of the cartilage in the knee. This condition develops over years and is often found in patients who exhibit joint malalignment, have had a joint injury, or are overweight. The disease can involve joint inflammation and results in symptoms that include redness, warmth, swelling, stiffness, tenderness, limited range of motion and pain. As the condition advances, the knee joint gradually loses cartilage tissue and the cartilage layer attached to the bone deteriorates to the point where eventually the bone becomes exposed.

Knee OA is one of the five leading causes of disability among U.S. adults with an estimated 14 million individuals in the United States suffering from symptomatic knee OA. The prevalence of knee OA has increased over the past several decades in the United States, in line with the aging population and the growing obesity epidemic. Currently, the U.S. Census Bureau projects that nearly one in five U.S. residents will be aged 65 and older by 2030. As the chances of developing knee OA increase with each decade of life, we expect the number of individuals with knee OA to increase as the U.S. population as a whole becomes older. In addition, the Centers for Disease Control and Prevention, or CDC, estimates that one-third of the U.S. population is considered obese, and studies have shown that nearly two out of every three people who are obese will likely develop symptomatic knee OA in their lifetime. Furthermore, a study in the *American Journal of Epidemiology* has also shown that obese patients have approximately a four- to five-times greater chance of developing knee OA than non-obese patients. Accordingly, we believe that the number of individuals suffering from symptomatic knee OA in the United States will continue to grow.

Furthermore, costs due to hospitalizations for total knee replacements in patients with severe knee OA in the United States are estimated to be approximately $40 billion annually, underscoring the need for non-surgical treatments for this prevalent chronic condition.

Although there is no cure for knee OA, several non-surgical options for treatment exist, such as weight reduction, physiotherapy, physical exercise and braces for functional assistance. Pharmacological therapy is often prescribed for symptoms of pain. Among these therapies are off-the-shelf oral analgesics, such as acetaminophen and nonsteroidal anti-inflammatory drugs, topical nonsteroidal anti-inflammatory drugs and intra-articular corticosteroid injections. Oral nonsteroidal anti-inflammatory drugs have well-known toxicities, with the potential for adverse gastrointestinal effects. Intra-articular corticosteroid injections have been shown to cause toxic effects in the joint, and a clinical study conducted by McAlindon et al. in 2017 observed that repeated injection of corticosteroids into patients' knees caused a measurable and significant loss in cartilage tissue. Furthermore, the pain relief provided by intra-articular corticosteroid injections is often short-lived (approximately three months), as observed by Bannuru et al. in a 2009 meta-analysis.

HA is a major component of the extracellular matrix in almost all living tissue that is produced naturally by the human body and is concentrated in the joints, cartilage and skin. HA is a natural lubricant and a major component of synovial fluid and articular cartilage and has an important anti-inflammatory role, causing inhibition of tissue destruction and facilitating tissue healing. Viscosupplementation is a procedure in which HA is injected into the joint. Within the United States, the FDA has approved the use of HA injections for treatment of pain caused by knee OA. Outside of the United States, HA viscosupplementation is used for treatment of OA in other joints in addition to the knee, such as the hip, ankle, shoulder elbow and small joints.

The treatment regimen for HA viscosupplementation therapies involves injections in the knee, with the number of injections depending on the type of formulation, the technology used to chemically modify HA to increase its longevity, as well as the preference of the patient and physician. Pain relief is usually experienced within four to twelve weeks and the effect has been shown to last up to six months. The safety of viscosupplementation has been established- infrequent potential side effects of knee OA injections include joint swelling and pain. Injection schedules vary from one to five injections and patients are generally advised to repeat the injection schedule if they are satisfied with the previous injection course. In a 2016 study, Bannuru et al. observed multiple cycles of HA viscosupplementation treatment to be safe and effective. A 2015 study conducted on claims data and published in *PLoS ONE* showed that HA injections are associated with significant delay in total knee replacement. In the cohort evaluated in this study, patients who received no HA viscosupplementation therapy had a median time-to-total knee replacement of approximately four months. With one course of HA viscosupplementation therapy, the median time to total knee replacement increased to more than 12 months and with more than five courses this number increased to 38 months, suggestive of a significant clinical benefit from HA injections.

In 2019, there were an estimated 2.4 million HA viscosupplementation procedures performed in the United States, representing approximately a $1 billion market size across single, three and five injection treatments. The $476.0 million single injection market has a projected 6.5% CAGR from 2019 to 2024 driven by economic advantages and greater patient convenience and compliance. The market opportunity for the $405.0 million three injection market has a projected CAGR decline of (3.1)% and the $113.0 million five injection market has a projected CAGR decline of (13.6)% from 2019 to 2024. However, we believe the multi-injection treatment market continues to be viable as there is a pool of patients that will continue to prefer these treatment protocols.

We have the only complete one, three and five injection portfolio in the HA viscosupplementation market in the United States with Durolane, GELSYN-3 and SUPARTZ FX.

Product	Description	Regulatory pathway	Region where marketed(1)
DUROLANE hyaluronic acid, stabilized single injection	Single injection HA viscosupplementation therapy	• PMA • Device approval by Health Canada • CE mark and other registrations(2)	• United States • Canada • Europe
GELSYN-3	Three injection HA viscosupplementation therapy	• PMA	• United States
SUPARTZ FX sodium hyaluronate	Five injection HA viscosupplementation therapy	• PMA	• United States

(1) We maintain exclusive distribution agreements with respect to Durolane, GELSYN-3 and SUPARTZ FX in the United States. We maintain exclusive distribution agreements and own certain assets with respect to Durolane outside the United States.

(2) Durolane is also approved for marketing in Argentina, Australia, Brazil, Columbia, India, Indonesia, Jordan, Malaysia, Mexico, New Zealand, Russia, Saudi Arabia, Switzerland, Taiwan, Turkey and the UAE.

Single Injection Therapy

Durolane is a sterile, transparent and viscoelastic gel that is a single injection therapy that is indicated for the symptomatic treatment of OA in the knee in the United States. Durolane is also indicated for the hip, ankle and shoulder, as well as for treatment of other small orthopedic joints outside the United States. Durolane contains high levels of HA and is injected directly into the joints affected by OA to relieve pain and restore lubrication and cushioning. This may improve joint function and help to potentially avoid or delay knee replacement surgery.

Physicians administer Durolane to the affected knee joint in a single injection and it has been observed to provide a benefit for pain reduction in patients with OA in the knee for up to 26 weeks. Durolane's injection schedule results in economic advantages and greater patient convenience and compliance compared to other HA viscosupplementation therapies which require weekly injections over a period of three to five weeks. For example, we believe that changes in physician visiting patterns, as a result of the COVID-19 pandemic, have led to increased preference for single injection therapies.

Durolane is highly purified and based upon a natural and patented non-animal stabilized HA, or NASHA, expanding use to patients who are allergic to animal derived solutions.

Comparison of major FDA-approved single injection HA viscosupplementation therapies

Product *Manufacturer or distributor*	**Indication**	**Source and process**	**Active ingredient / treatment dosage**	**Duration**
DUROLANE® hyaluronic acid, stabilized single injection *Bioventus*	OA of the knee	Non-animalstabilized HA	NASHA / (60 mg)	Six months
Synvisc-One *Sanofi S.A.*	OA of the knee	Animal sourced Hylan A and Hylan B polymers	Hylan G-F 20 / (48 mg)	Six months
Monovisc *DePuy Orthopaedics, Inc.*	OA of the knee	Non-animal cross-linked sourced HA	2.2% sodium hyaluronate / (88 mg)	Six months
Gel-One *Zimmer Biomet Holdings, Inc.*	OA of the knee	Animal sourced HA	1.0% sodium hyaluronate /(30 mg)	Three months

Durolane clinical data

Durolane's proprietary stabilizing technology substantially extends the amount of time it remains in the joint. Multiple studies have been conducted to determine Durolane's half-life, which is the amount of time needed for 50% of the injected material to be broken down and excreted from the body.

In one study, Durolane's half-life in the joint was studied in a rabbit model. Results showed the Durolane remained in the joint with an observable half-life of 32 days, substantially longer than the half-lives of Synvisc and unmodified HA, as determined in comparable studies, which were 40 hours and less than 24 hours, respectively.

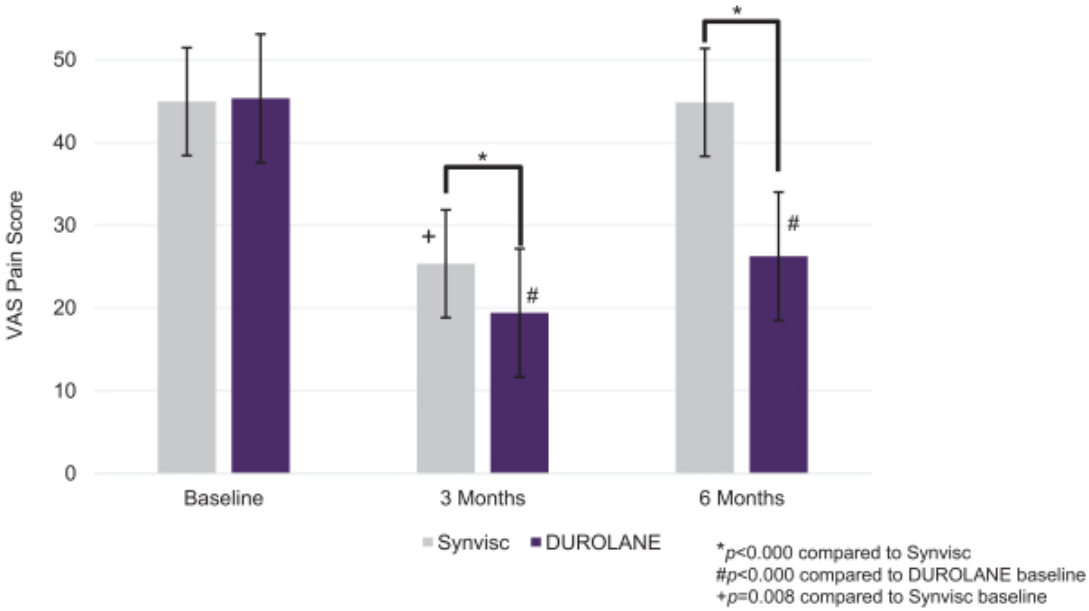
The long half-life of Durolane was also observed in the 2002 Lindqvist et al. human study where six healthy volunteers were given a single injection of Durolane that contained a radioactive isotope that could be traced, allowing scientists to measure Durolane's elimination from the body over time. The results showed a 30-day half-life, indicative of the expected long residence time in the joint due to Durolane's proprietary stabilizing technology and pre-clinical studies.

In terms of efficacy, Durolane has been directly compared against the main intra-articular therapeutic options available for managing osteoarthritic pain: SUPARTZ FX, a five injection product, Synvisc One, a single injection product and methylprednisolone acetate, an intra-articular corticosteroid.

In a multi-center randomized, blinded, controlled trial of 349 patients with mild-to-moderate knee OA, Durolane was compared with SUPARTZ FX. This 2015 Zhang et al. study concluded that one injection of Durolane was non-inferior to five weekly injections of SUPARTZ FX in terms of pain, stiffness, physical function and global self-assessment.

In an independent, investigator-initiated randomized, controlled study involving 213 patients with mild-to-moderate knee OA, Durolane was further compared to Synvisc-One. After following up with the patients over a span of 12 months following the treatment, the results from this 2013 McGrath et al. study showed that Durolane produced significantly more durable pain relief effects than Synvisc-One, while also providing longer-lasting improvements in range of motion and a reduction in the use of pain medication for study participants.

Greater Reduction in Knee Pain versus Synvisc-One



(n=168)
Mean values +/- standard deviation

In a separate prospective, multi-center, randomized, active-controlled, double-blind, non-inferiority clinical trial with 442 enrolled patients with knee OA, it was observed that single injection Durolane was well tolerated and non-inferior compared to the corticosteroid methylprednisolone acetate at twelve weeks. Methylprednisolone acetate is a steroid injectable formulation used to treat pain and swelling that occurs with OA and other joint disorders. The effect size for pain, physical function and stiffness scores favored Durolane over methylprednisolone acetate from twelve to 26 weeks. The benefit of Durolane was maintained through 26 weeks, while that of methylprednisolone acetate declined during the same period. An additional injection of Durolane at 26 weeks conferred improvements through 52 weeks without increased sensitivity or risk of complications compared to the initial injection. One subset of 31 patients treated with Durlane remained pain free after six months from the first injection and did not elect to receive a second injection.

As of June 27, 2020, over 2 million injections of the Durolane formulation have been safely administered globally since its international launch in 2006. We launched Durolane in the United States in March 2018 and have owned certain Durolane assets outside of the United States relating to trademark, product registrations and clinical data since November 2015.

Three Injection Therapy

GELSYN-3 is an FDA-approved sterile, buffered solution of highly purified sodium hyaluronate that is administered as a three injection HA viscosupplementation therapy. It is indicated for the treatment of pain due to knee OA in patients who have failed to respond adequately to conservative non-pharmacologic therapy and simple analgesics. The solution treats knee OA by providing temporary replacement for the diseased synovial fluid and restoring lubricity of bearing joint surfaces. Physicians administer GELSYN-3 to the affected knee joint once a week for three consecutive weeks. GELSYN-3 provides relief of knee pain and may help delay the need for total knee replacement surgery. GELSYN-3 is derived from bacterial fermentation, is highly purified and does not involve the use of animal products, thereby reducing the potential risk of an immune response following

injection. We currently market GELSYN-3 in the United States. As of June 27, 2020, approximately 750,000 injections of the GELSYN-3 HA formulation have been safely administered in the United States since its launch in 2016.

GELSYN-3 clinical data

The safety and efficacy of GELSYN-3 was assessed in a prospective, multicenter, randomized, controlled, double-blind, non-inferiority pivotal study that enrolled 381 adult patients with knee OA. Patients were randomized to receive three weekly injections of GELSYN-3 or three weekly injections of Synvisc 3, a three injection regimen commercialized in the United States by Sanofi S.A., with follow-up visits scheduled up to 26 weeks. GELSYN-3 was observed to be non-inferior to Synvisc 3 at the 26-week time point.

Five Injection Therapy

SUPARTZ FX is an FDA-approved sterile and viscoelastic solution of HA that is administered as a five injection HA viscosupplementation therapy. It is indicated for the treatment of pain in patients with knee OA who failed to adequately respond to conservative nonpharmacological therapy and simple analgesics. The solution treats knee OA by providing temporary replacement for the diseased synovial fluid and restoring the lubricity of the bearing joint surfaces. Physicians administer SUPARTZ FX to the affected knee joint once a week for five consecutive weeks. SUPARTZ FX may also delay the need for total knee replacement. SUPARTZ FX is derived from HA extracted from certified and veterinary inspected chicken combs. Risks can include general knee pain, warmth and redness or pain at the injection site. We currently market SUPARTZ FX in the United States. As of March 31, 2020, over over 410 million injections of the SUPARTZ FX HA formulation have been safely administered globally since its launch in 1987.

SUPARTZ FX clinical data

In a double blind, randomized, multicenter, parallel group study conducted by Day et al. in 2004 of the effectiveness and tolerance of intra-articular SUPARTZ FX compared to control (saline) treatment for knee OA, it was observed that SUPARTZ FX reduced knee pain in patients during the post-injection period by about 50% from the baseline. Of 240 patients randomized for inclusion in the study, 223 patients were evaluable for the modified intention to treat analysis and the statistically significant difference from the control was apparent after the series of injections was complete. Intra-articular SUPARTZ FX therapy was shown to be more effective than saline in mild to moderate knee OA for the 13-week post injection period of the study.

The safety and efficacy of SUPARTZ FX was observed by Strand et al. in an integrated analysis. This integrated analysis included five separate double-blind, randomized, saline-controlled trials, and included a total of 1,155 patients comparing five weekly injections of SUPARTZ FX versus a saline placebo. The pooled results from this study showed that SUPARTZ FX produced statistically significantly greater reduction from baseline in total Lequesne scores, a measure of overall function including pain. The incidence of adverse events were observed to be minimal and similar in both treatment arms. Furthermore, none of the reported adverse events were observed to be deemed treatment-related suggesting that SUPARTZ FX was safe and well-tolerated.

Comparison of FDA-approved multi-injection HA viscosupplementation therapies

Product *Manufacturer or distributor*	**Indication**	**Source and process**	**Active ingredient / total treatment dosage**	**Number of injections per course**	**Duration**
GELSYN-3 ***Bioventus***	OA of the knee	Fermented, bacterial derived HA	0.84% sodium hyaluronate (50.4 mg)	Three	Six months
SUPARTZ FX ***Bioventus***	OA of the knee	Naturally derived, purified HA	1.0% sodium hyaluronate (75/125 mg)	Three to Five	Six months
Synvisc *Sanofi S.A.*	OA of the knee	Hylan polymers, purified HA	0.8% Hylan G-F 20 (48 mg)	Three	Six months
Euflexxa *Ferring Pharmaceuticals Inc.*	OA of the knee	Fermented, bacterial derived HA	1.0% sodium hyaluronate (60 mg)	Three	Six months
Hyalgan *Fidia Farmaceutici S.p.A.*	OA of the knee	Naturally derived, purified HA	1.0% sodium hyaluronate (60 mg/100 mg)	Three to Five	Six months
Genvisc-850 *OrthogenRx, Inc.*	OA of the knee	Fermented, bacterial derived HA	1.0% sodium hyaluronate (75/125 mg)	Three to Five	Six months

Development and Clinical Pipeline

Amniotic tissue products for the treatment of OA

Collaboration and development agreement for MOTYS

On May 29, 2019, we entered into a Development Agreement with MTF to develop an injectable placental tissue product, MOTYS, for use in the OA joint pain treatment and joint preservation.

The development and commercialization of the product is anticipated to take place in two stages, and we plan to begin limited commercialization of MOTYS to a cash pay only market in the fourth quarter of 2020 as a Section 361 HCT/P pursuant to the FDA's policy of enforcement discretion allowing for marketing without the required BLA approval until May 2021, while in parallel we pursue a BLA pre-market approval for the product. Once approved as a biologic, MOTYS will be eligible for health insurance reimbursement and hence gain access a broader patient population.

Given these products are currently sold in the cash pay market, there is limited industry data available on the current market for amniotic injectables. The approximately $110.7 million U.S. amniotic tissue market for orthopedic, sports and spine applications is estimated to reach approximately $271.3 million in 2023, a projected 25.1% CAGR from 2019 to 2023. We expect that demographic trends coupled with industry focus, expected positive clinical trial outcomes and potential for future coverage and reimbursement will drive further interest in amniotic tissue products.

We are planning to conduct randomized clinical trials to ultimately support the submission to the FDA of a BLA for the use of MOTYS in the OA joint pain treatment.

Based on our preclinical evidence, we believe the MOTYS formulation holds potential for mitigating OA joint pain while protecting damaged cartilage and promoting anti-catabolic and pro-anabolic events that could ultimately result in delayed disease progression in OA. We have completed extensive in vitro and in vivo studies comparing the effect of MOTYS to the clinical standard of care (steroid injections). MOTYS provided non-inferior pain relief effects to a steroid, but was superior in its effect on cartilage protection and in promotion of new tissue formation.

We have submitted our IND for MOTYS in September 2020 and plan to initiate clinical studies by year end. Amniotic products have been extensively and safely used in clinical practice, and FDA has granted Regenerative Medicine Advanced Therapy, or RMAT, designation to other amniotic tissue products being investigated for use in OA, which enables an expedited development pathway as well as eligibility for increased and earlier interactions with FDA. We intend to submit a request for RMAT designation for MOTYS in .

Implantable for the treatment of rotator cuff injuries

Development collaboration agreement for PROcuff

On August 23, 2019, we entered into an exclusive Collaboration Agreement with Harbor to develop and license the rights to commercialize a woven-suture-collagen composite implant product, PROcuff, for the regeneration of tendon tissue.

Concurrently with the execution of the agreement, we purchased $1.0 million of shares of Harbor. As a result of Harbor's achievement of certain milestones, on October 5, 2020, we purchased $1.0 million of additional shares of Harbor.

The sole use of proceeds from these investments is for the development of the woven-suture-collagen composite implant product and we have the right to purchase the product from Harbor once it is cleared for marketing by the FDA.

According to SmartTRAK Business Intelligence, there will be an estimated 534,000 rotator cuff injuries surgically repaired in the United States in 2020, and at least one quarter of those injuries are in scope for PROcuff technology. The composite implant could also be used in additional tendon/ligament disorders in other extremities. The number of rotator cuff injuries surgically repaired in the United States is expected to grow to 802,000 procedures by 2024.

We have currently completed a pilot sheep implantation study through a collaboration with a prominent academic investigator. Results indicate that the material is well tolerated, rapidly integrated and promotes the formation of new tendon tissue at the bone tendon interface.

We expect to file a request for 510(k) clearance in . We plan to conduct post-clearance human clinical studies with the composite implant to further demonstrate the safety and efficacy of the product, and facilitate reimbursement.

Treatment of Cartilage for Osteochondral defects

CartiHeal (developer of Agili-C) investment and option and equity purchase agreement

On July 15, 2020, we made a $15.0 million equity investment in CartiHeal, a privately-held company headquartered in Israel and developer of the proprietary Agili-C implant for the treatment of joint surface lesions in traumatic and osteoarthritic joints.

We believe Agili-C is the only product in clinical development in the United States as an off-the-shelf scaffold implant that is designed to regenerate hyaline cartilage and subchondral bone simultaneously. The associated surgical procedure is similar to osteochondral allograft implantation, but is a single-step process and is

easier, faster and more cost-effective. We believe this is the first cartilage repair technology to be tested in trials designed for regulatory approval in the United States in non-OA and OA patients, potentially unlocking applications for millions of patients with knee OA and cartilage defects. We also believe Agili-C will enable the treatment of cartilage lesions in a significant population of OA patients, including those younger, active patients for whom available treatment options are limited. The approximately $110.0 million U.S. knee cartilage repair market for 2020 is estimated to reach approximately $197.0 million in 2026, a projected 10% CAGR from 2019 to 2026. We believe Agili-C also has the potential for broader indications for use in other joints, providing entrance into an approximately $1.3 billion global market for cartilage repair products designed to delay or eliminate the need for knee replacements.

In preclinical studies, based on implantation in over 200 animals, Agili-C was associated with osteochondral regeneration, good lateral integration and hyaline cartilage formation in critical size defects at 20 months when implanted in a goat, with the implant being fully resorbed between six to 20 months.

The Agili-C implant has been implanted in more than 190 patients outside the United States with follow up of more than four years and is CE marked. The implant is currently being evaluated in a pivotal study pursuant to an IDE filed with the FDA. The trial's objective is to demonstrate the superiority of the Agili-C implant over the surgical standard of care (microfracture and debridement) for the treatment of cartilage or osteochondral defects, in both osteoarthritic knees and knees without degenerative changes. The study's protocol design, which is based on feedback from multiple pre-IDE interactions with the FDA, involves broad inclusionary criteria, such as defect size, age, and etiology, multiple controls, including microfracture and debridement, and multiple pre-planned secondary endpoints. The study has an adaptive design, which allows for a maximum of 500 planned patients, includes multiple interim analyses to estimate sample size needs and includes EU, Israeli and U.S. sites.

Our CartiHeal investment follows the recently completed enrollment and reporting of interim results in CartilHeal's IDE multinational pivotal study for Agili-C.

This investment is expected to enable CartiHeal to complete the study, including all patient follow-up, and submit a PMA to the FDA. Under the equity purchase agreement, CartiHeal can secure an additional $5.0 million from us, if needed, for IDE study completion. We previously made an initial $2.5 million investment in CartiHeal in January 2018 and a subsequent investment of $0.2 million in January 2020 as part of prior CartiHeal financing rounds. Any additional investment we make will be subject to customary closing conditions.

We concurrently entered into an Option and Equity Purchase Agreement with CartiHeal and its shareholders, which provides us with an exclusive option to acquire 100% of CartiHeal's shares, or the Call Option, and provides CartiHeal with a put option that would require us to purchase 100% of CartiHeal's shares under certain conditions, or the Put Option. The Call Option is exercisable by us upon closing of the investment. The Put Option is only exercisable by CartiHeal upon pivotal clinical trial success, including achievement of certain secondary endpoints and FDA approval of the Agili-C device with a label consistent in all respects with pivotal clinical trial success.

If not previously exercised, the Call Option and the Put Option terminate 45 days following the FDA approval of Agili-C or in the event of failure of the pivotal clinical trial. We also have the right to terminate the Call Option and Put Option at any time ending 30 days after receipt from CartiHeal of the statistical report regarding the final results of the pivotal clinical trial upon payment of a breakup fee of $30.0 million. Consideration for the acquisition of all of the shares of CartiHeal pursuant to the Call Option or Put Option would be $350.0 million, all of which would be payable at closing, with an additional $150.0 million payable upon achievement of certain sales milestones related to Agili-C.

Bone Graft Substitutes

BGSs in spinal fusion and other procedures

Bone grafting is a surgical procedure used to fuse spinal vertebrae, replace missing bones, fix bones that are damaged from trauma or problem joints, or to facilitate growing bones around an implanted device, such as a total knee replacement. The bones used in a bone graft can come from a particular patient's own body, referred to as an autograft, or from a donor, referred to as an allograft, or can be entirely man-made, referred to as a synthetic. Most bone grafts are expected to be reabsorbed and replaced as the natural bone heals over a few months.

In some spinal fusion procedures, parts of the vertebrae are removed to facilitate the procedure. The removed bone can be saved and used as the graft, known as a local autograft. Given that it is the patient's own bone, the advantage is that it will not be rejected and eliminates the need to harvest bone from elsewhere in the body. The disadvantage is that there is a limited amount of bone that can be harvested from the small spinal bones, especially as the patient gets older and their bones tend to thin and weaken.

An autograft can also be harvested from other parts of the patient's body such as the hip, rib or other areas of the spine. Iliac crest bone taken from a patient's hip has been considered the preferred bone graft material to promote successful fusion because it is easy to access, provides good quantities of cortical and cancellous bone, has natural curvatures that aid in the creation of grafts and does not carry the risk of rejection or disease transmission. The major drawback to the use of an autograft is graft-site morbidity and associated major complications such as deep infection, iliac fracture, chronic pain and arterial injury, among others. There is also extra cost associated with autograft bone grafting procedures, which face difficulties and complications such as increased operative time, blood loss, limited supply of bone graft, increased risk of subsequent pelvic fracture, peripheral nerve dysfunction causing numbness or weakness, postoperative pain and infection. Despite these potential adverse events, autograft bone grafting procedures are still performed regularly with approximately 175,000 performed in the United States in 2019.

To avoid the morbidity and cost of harvesting autograft, a number of BGSs have been developed and commercialized for orthopedic applications. There are several types of BGSs that have been developed and commercialized, including growth factors, stem cells, synthetics, DBMs and allografts.

Different BGSs are often combined in a procedure to achieve the key elements of successful bone regeneration, which include osteoinduction, osteoconduction and osteogenesis. Osteoinduction refers to the ability of an implant to stimulate bone formation based primarily on soluble growth factor signals. Osteoconduction refers to the ability of an implant to facilitate bone formation based primarily on a physical matrix or scaffold, when placed adjacent to viable bone tissue. Osteogenesis refers to the ability to facilitate new bone formation based primarily on the viable stem cells contained within the bone graft. BGSs, depending on their design, can be used entirely in place of an autograft or by extending the volume of an autograft by combining it with the BGS.

Surgeons utilize BGSs in spinal fusion, orthopedic trauma, foot and ankle, hand and wrist, hip and knee and craniomaxillofacial surgeries. Below is a brief description of these applications:

- ***Spinal fusion***. Spinal fusion surgery is indicated for several conditions, including spine trauma, tumors and degenerative disease in the cervical, thoracic and lumbar sections of the spine. The objective of spinal fusion is to create an environment that will allow bone to form a solid bony bridge across the involved spinal segments. In 2019, spinal fusion represented the largest potential indication for bone replacement materials, accounting for 31.2%, or over 705,000 of all potential orthopedic spine bone grafting procedures. This number is expected to grow at a 3.6% CAGR from 2019 to 2024.
- ***Orthopedic trauma***. Most uses of BGSs in trauma are for fresh fracture cases, rather than nonunion, due to the nature of these injuries. The number of trauma BGS procedures performed in 2019 was

estimated to be approximately 553,000 and represents 24.4% of the total orthopedic spine bone grafting procedures for that year. Trauma BGS procedures are expected to grow at a 4.0% CAGR from 2019 to 2024.

- ***Other***. BGSs are used in foot and ankle surgeries, as well as hand and wrist procedures to fill defects, span bone voids and correct alignment; in hip and knee procedures when there is bone lost to disease, infection or injury, or if the bone needs assistance integrating with surgically implanted devices; and in craniomaxillofacial surgeries to reduce fusion times and in conjunction with the use of metal plates. Excluding craniomaxillofacial surgeries, there were approximately 1,000,000 procedures performed in 2019 and this number of procedures is expected to grow at a 5.6% CAGR from 2019 to 2024.

Bone graft substitutes	U.S. 2019 market size (*in millions*)	Market CAGR (2019-2023)	Primary applications	Bioventus product offerings(1)
Allografts, DBMs and Growth factors	1,077	3.2%	Spinal fusion, trauma and other bone repair applications	Purebone, Exponent and OsteoAMP
Synthetics	534	1.5%	Spinal fusion, trauma and other bone repair applications	Signafuse, Interface, OsteoPlus and OsteoMatrix
Stem cells	395	16.1%	Spinal fusion, trauma and other bone repair applications	Distributor for other brands

Source: iData US Market report on Orthopedic Biomaterials

Procedure	Description	Procedures in 2019 (‘000)
Allograft Bone Graft Substitutes	- Harvested from cadaveric femoral or iliac crests - Depending on preparation process may exhibit osteoconductive and/or osteoinductive properties - Comes in a variety of forms including freeze-dried, fresh-frozen, morselized and cancellous chips	249
DBMs	- Allograft material obtained from cadaveric bone that is frozen, freeze-dried and devoid of mineral content - Structural matrix consisting of type-1 collagen provides osteoconductive activity and differences in demineralization process provides varying degrees of osteoinductive properties - Effective BGS for spinal fusion and other orthopedic procedures - Comes in a variety of forms including putty, gel, powder, fiber, flexible sheets or mixed with cortical chips	401
Growth Factors	- When produced through recombinant manufacturing process, allows for easy reproducibility and consistent purity of large amounts of BMP-2 and PDGF, bone-growth regulatory factors - May include allogeneic morphogenic proteins that undergo a novel tissue processing technique that utilizes angiogenic, mitogenic and osteoinductive growth factors - Provides access to growth factors that are naturally found within bone marrow cells	118

Procedure	Description	Procedures in 2019 ('000)
Synthetics	- Produced from ceramics such as hydroxyapatite, beta-tricalcium phosphate and bioactive glass - Osteoconductive, biodegradable, non-immunogenic and no risk of disease transmission - Readily available in large quantities and inexpensive to manufacture - Neither osteogenic nor osteoinductive - Designed to have porosity and pore size optimized for bony ingrowth - Can be fashioned in many different sizes and shapes - Possess limited compressive strength	432
Stem Cells	- Obtained from cadaveric cancellous bone - Contains viable multipotent stem cells (mesenchymal stem cells) - Exhibits osteoinductive activity through mesenchymal stem cells -	109

Source: iData US Market report on Orthopedic Biomaterials

Our BGS product portfolio is comprised of clinically efficacious and cost effective bone graft solutions to meet a broad range of patient needs and procedures. Our products are designed to improve bone fusion rates following spinal and other orthopedic surgeries, including trauma and reconstructive foot and ankle procedures. These products include an allograft-derived bone graft with growth factors (OsteoAMP), a DBM (Exponent), cancellous bone in different preparations (PureBone), bioactive synthetics (Signafuse and Interface), a collagen ceramic matrix (OsteoMatrix), a biphasic calcium phosphate synthetic (OsteoPlus) and two bone marrow isolation systems (CellXtract and Extractor).

As we build the body of clinical evidence supporting our products, we continue to look for and execute on opportunities to innovate in our BGS portfolio. To meet growing market demand and evolving surgical techniques, we continue to develop product extensions and adjust formulations. For example, we launched OsteoAMP Select in 2019 and we expect to launch OsteoAMP Flowable in 2021. We designed OsteoAMP Flowable to be moldable and easy to use, with a convenient, ready to use syringe.

Product	Indications	Description	Regulatory pathway / year launched
Allograft			
osteoamp® Allogeneic Morphogenetic Proteins	Orthopedic, neurosurgical and reconstructive bone grafting procedures	An allogeneic bone graft that is available in multiple formats (fibers, putty, sponge and granules) that is processed with bone marrow cells to maintain the wide array of growth factors present in native bone	• Section 361 HCT/P / 2009
exponent® Demineralized Bone Matrix	Posterolateral spine procedures	Derived from human allograft bone tissue and is combined with a migration-resistant resorbable carrier and formulated into a putty	• 510(k) / 2012
purebone® Demineralized and Mineralized Allograft	Orthopedic, neurosurgical and reconstructive bone grafting procedures	100% cancellous bone with compressible, elastic and sponge-like attributes, offered in filler, block and strip options, as well as mineralized chips	• Section 361 HCT/P / 2012
Synthetic			
signafuse® Bioactive Bone Graft	Standalone posterolateral spine, extremities and pelvis, as well as a bone graft extender in the posterolateral spine	Bioactive synthetic bone graft substitute comprised of a mixture of calcium phosphate granules and bioglass granules suspended in a resorbable polymer carrier that facilitates handling and delivery of the granule components to fill spaces of missing bone	• 510(k) / 2014
interface Bioactive Bone Graft	Posterolateral spine when mixed with autograft, extremities and pelvis	Bioactive synthetic bone graft in the form of irregular granules of bioglass to repair bone defects	• 510(k) / 2011
osteomatrix™ Biphasic Bone Graft	Posterolateral spine, extremities and pelvis	Next-generation mineralized two-phase calcium phosphate bone void filler comprised of a collagen scaffold designed for optimized intra-operative handling and biologic responsiveness at the defect site	• 510(k) / 2010
osteoplus™ Biphasic Bone Graft	Posterolateral spine, extremities and pelvis	Biphasic calcium phosphate synthetic bone graft substitute that mimics the structure of natural cancellous and cortical bone for providing an osteoconductive scaffold with well-defined interconnected porosity	• 510(k) / 2006
signafuse® Bioactive Bone Graft	Posterolateral spine, extremities and pelvis	Next-generation mineralized bone void filler comprised of bioglass and biphasic mineral granules embedded in a collagen scaffold designed for optimized intra-operative handling and biologic responsiveness at the defect site.	• 510(k) / 2020

Minimally Invasive Fracture Treatment

Bone fractures

Fractures, also known as broken bones, occur when there is a high force or impact put on a bone, most commonly from trauma resulting from sports injuries, car accidents, falls or from osteoporosis, which is bone weakening due to aging. Immediately following a fracture, patients are treated to realign the fractured bone ends. If possible or required, the affected limb is immobilized using plaster or a splint. In some cases, fractures require surgical fixation with devices such as screws, plates, rods and frames. X-rays, CT and MRI imaging are utilized to verify alignment of the bone and to assess progress towards healing.

A fracture is considered a fresh fracture during the first 14 days after the fracture occurs. After a fracture is treated, new bone tissue begins to form and bridge the gap. With modern treatment methods, most fractures heal spontaneously over the course of several months following injury. However, some fractures fail to heal even when they receive the best surgical or non-surgical treatments. This condition may be diagnosed as a nonunion fracture. Nonunions may occur due to mechanical instability of the fracture site, due to inadequate immobilization, poor blood supply, gaps in bone to bone contact, or a number of comorbidities experienced by the patient. In clinical literature, it is estimated that five to ten percent of all fractures fail to heal, often in high impact fractures or in patients that have compromised health from old age, obesity, cardiovascular disorders, arthritis, diabetes or smoking. A nonunion is considered to be established when the fracture site shows no visibly progressive signs of healing. Nonunions have a negative impact on quality of life with symptoms, such as reduced mobility, swelling, pain, tenderness, deformity and difficulty bearing weight.

Long bone stimulation systems

Patients with nonunions may undergo surgery when certain conditions occur, such as an unstable or misaligned fracture, or a larger inter-fragment gap. Some nonunions can be treated non-surgically using bone stimulation devices. We estimate the total long bone stimulation market was approximately $250.0 million in 2019 and that it will continue to grow at a 1.9% CAGR from 2019 to 2024 with the number of fractures treated with long bone stimulation devices to steadily grow from approximately 100,000 fractures treated in 2019 to 113,000 in 2024.

We offer our Exogen ultrasound bone healing system for the non-invasive treatment of established nonunion fractures and certain fresh fractures. Our Exogen system is the number one prescribed device in the long bone stimulation market. It has been sold commercially for over 25 years and is the only FDA-approved device on the market for the accelerated healing of fresh, closed posteriorly displaced distal fractures of the radius and fresh, closed or grade I open long bone fractures.

Product	Description	Regulatory pathway	Region where marketed(1)
exogen ultrasound bone healing system	Ultrasound bone healing system for nonunion fractures and fresh fractures to the tibia and radius(2)	• PMA • Device approval by Health Canada • CE mark and other registrations(2)	• United States • Canada • Europe • Japan

(1) Our Exogen system is indicated in the United States for the non-invasive treatment of established nonunions, excluding skull and vertebra, and for accelerating the time to a healed fracture for fresh, closed, posteriorly displaced distal radius fractures and fresh, closed or Grade I open long bone fractures in skeletally mature individuals when these fractures are orthopedically managed by closed reduction and cast immobilization. We own our Exogen system and market it both in and outside the United States.

(2) Exogen is also approved for marketing in Australia, Japan, Jordan, New Zealand, Russia, Saudi Arabia, Turkey, South Africa and the UAE.

Our Exogen system is used to administer treatment in a location of convenience, including at home or work, once daily, for 20 minutes, or as prescribed by the patient's physician, for accelerating bone healing. This therapy provides a cost-effective treatment alternative to surgical intervention for nonunions.

Our Exogen system consists of the portable device, a charger, a gel bottle and strap. The device features a transducer at the end of a coiled cord, a color screen, a power button and a mini-USB charging port to allow for recharging the battery. The transducer sends specifically-programmed low-intensity pulsed ultrasound to the fracture site through the skin and soft tissue, with little or no sensation felt by the patient during the treatment. The gel facilitates ultrasound signal transmission through the patient's skin. Our Exogen system provides an easy to use interface that tracks treatment use and promotes compliance. In a clinical study of our Exogen system, we observed a 91% patient compliance with the treatment regimen, based on median total time of device usage. An additional support tool for the patient is Exogen Connects, a free smartphone app that provides daily automated treatment reminders and helpful healing information.

Our Exogen system utilizes low-intensity pulsed ultrasound technology to stimulate the body's natural bone healing process. The ultrasound output intensity of the device is comparable to diagnostic ultrasound intensity levels used in obstetrical sonogram procedures for fetal monitoring and is typically only one to five percent of the output intensity of conventional therapeutic ultrasound devices used for physical therapy. Some patients report experiencing a tingling sensation at the treatment site. The depth and breadth of the Exogen ultrasound signal enables it to treat superficial and deep indicated fractures. Exogen ultrasound is osteoinductive, which means it stimulates cells to differentiate into osteoblasts, or cells that make new bone. The growth of this new bone helps bridge the gap at the fracture site.

Comparison of U.S. long bone stimulation devices

Product *Manufacturer*	**Daily treatment times**	**Technology**	**Indications**
exogen® ultrasound bone healing system ***Bioventus***	20 minutes	Low-intensity pulsed ultrasound	Nonunions and select fresh fractures(2)
CMF OL1000 *DJO Global, Inc.*	30 minutes	Combined magnetic field	Nonunions
Physio-Stim *Orthofix International B.V.*	3 hours	Pulsed electromagnetic field	Nonunions
EBI Bone Healing System *Zimmer Biomet Holdings, Inc.*	10 hours	Pulsed electromagnetic field	Nonunions
OsteoGen *Zimmer Biomet Holdings, Inc.*	24 hours	Direct electrical current (implanted)	Nonunions
Orthopak 2 Bone Growth Stimulator *Zimmer Biomet Holdings, Inc.*	24 hours	Capacitive coupling	Nonunions

(1) Heal rates for fresh fracture as compared to placebo.

(2) Our Exogen system is indicated in the United States for the non-invasive treatment of established nonunions excluding skull and vertebra and for accelerating the time to a healed fracture for fresh, closed, posteriorly displaced distal radius fractures and fresh, closed or Grade I open long bone fractures in skeletally mature individuals when these fractures are orthopedically managed by closed reduction and cast immobilization.

Exogen clinical data

In a meta-analysis published by Leighton et al. in 2017 studied heal rates of many different fracture nonunions treated with our Exogen system. A total of 13 eligible studies were identified which reported success of treatment with our Exogen system in 1,441 nonunions. Overall, that analysis estimated that 82% of nonunions of at least three months in age treated with our Exogen system successfully healed. Because healing of established nonunion is not expected without treatment, these findings are compelling. Our Exogen system may be most useful in patients for whom surgery is high risk. With an observed overall average nonunion heal rate of at least 80% after treatment with our Exogen system, the study authors concluded that treatment with our Exogen system was comparable to surgical treatment for nonunion.

Additional published evidence supports the efficacy of our Exogen system in treating fracture nonunions. Established fracture nonunions rarely heal without corrective surgery, though nonunion revision surgery is expensive, invasive and the expected heal rate averages approximately 86%. In a study that looked at patient data collected over a four-year period, Zura et al. found that was that the Exogen system enhanced the heal rate among chronic nonunions and even healed fractures that had been nonunion for more than 10 years, without further surgical intervention. Heal rate was 86.2% among patients with fractures that had not healed for at least one year, 82.7% among 98 patients with chronic nonunion of greater than five years duration, and furthermore 12 patients healed after chronic nonunion of greater than 10 years. Therefore, our Exogen system offers a heal rate comparable to surgery, with fewer associated risks and morbidities.

Developmental and clinical pipeline

Ongoing Bioventus-sponsored clinical studies (B.O.N.E.S.)

While currently indicated for the treatment of both established nonunions, excluding skull and vertebrae, and certain types of conservatively managed acute fractures of the tibia and radius, our Exogen system's use in fracture care management has grown over its 20 year clinical history in both the United States and internationally. The use of our Exogen system for the management of fresh fractures has been the subject of numerous published peer reviewed research articles encompassing over 4,500 subjects. The current prescription data indicate that the product's use in routine practice of fresh fracture management is based on clinician's determination of medical necessity, in an effort to mitigate risk of progression to fracture nonunion in at-risk patients.

In order to quantify the effectiveness of our Exogen system in mitigating the risk of progression to fracture nonunion, and in an effort to obtain regulatory approval for expanded indications, we are seeking to supplement the body of clinical knowledge in an innovative population-based clinical development program, B.O.N.E.S., which stands for Bioventus Observational Non-interventional Exogen Studies. With enrollment started in late 2017, the B.O.N.E.S. clinical study design includes the parallel conduct of three independent study protocols which, taken together, are designed to prospectively include more than 3,000 Exogen-treated patients presenting with certain risk factors to be observed over the course of 9 to 12 months. Our Exogen system treated patients will be propensity matched to one or more untreated controls extracted from a real-world health claims database provided by Truven Healthcare Analytics, generating a total sample size of at least 6,000 patients. The program involves the concurrent execution of three studies on pre-specified anatomical locations, such as the tibia, scaphoid and fifth metatarsal, with the objective of determining if the use of our Exogen system mitigates risk of fracture nonunion in predisposed patients. If successful, we plan to submit three PMA supplements to the FDA in , and to seek approval for expanded labels, which we believe in aggregate could expand our addressable market by $1.7 billion.

Sales and marketing

Our expansive direct sales and distribution channel across our product portfolio provides us with broad and differentiated customer reach, and allows us to serve physicians spanning the orthopedic continuum, including

sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery. Our products are widely reimbursed by both public and private health insurers and are sold in the physician's office or clinic, ASCs, and in the hospital setting in the United States and across 37 countries. Our sales team and distributors work directly with our physician customers on a frequent basis, providing us with a significant opportunity to introduce new products and upsell from our current portfolio. We believe our sales organization will provide us with an opportunity to efficiently roll out our deep pipeline and participate in business development opportunities going forward.

Our OA joint pain treatment and joint preservation products and our minimally invasive fracture treatment products are sold by a direct sales team of approximately 270 in the United States and approximately 45 internationally. This direct team is complimented by approximately 20 account representatives who work with our sales team to provide account access through IDNs, GPOs and payer contracting. Our direct sales organization, totaling approximately 335 globally, is comprised of approximately 35 sales managers and approximately 300 members of the sales team in the field. Our sales leaders have considerable experience, with an average of five years of experience. Our BGS products are sold by 170 independent distributors in the United States, each with their own independent sales force, supported by our 15 member regionalized sales support team. We market our BGSs primarily to orthopedic spine surgeons and neurosurgeons for use in the operating room in both the hospital and ASC setting. We believe that our broad customer reach has and will continue to enable strong and durable growth in each of our verticals and provides a significant foundation for future product launches. We support our sales organization with extensive training to help them excel, and we have a performance culture built on serving our core orthopedic patient customers and delivering our products to a variety of physicians and care settings.

Research and clinical operations

We see significant opportunity to develop innovative and clinically differentiated products internally with our experienced research and development team. We are focused on internal research and development to broaden our portfolio of therapies to manage OA joint pain and joint preservation, expand our Exogen system product label and undertake clinical research to support commercialization of our next generation of BGS products.

As a result, we expect our research and development expense to increase to the mid-single digits as a percentage of net sales as we introduce new products, extend existing product lines and expand indications. As of June 27, 2020, our research and development and clinical operations staff included approximately 40 engineers, scientists and project managers. Our research and development activities are focused on product development in BGSs, treatments for OA and soft tissue surgery. Our clinical research is focused on running the B.O.N.E.S. and MOTYS clinical programs, as well as continuing to build our body of clinical evidence to demonstrate the efficacy and value of our products through collaborations with prominent academic investigators. Our research and development team is comprised of 15 individuals holding PhDs and 22 individuals with more than 15 years of experience in the medical device industry. We collaborate with academic centers of excellence, leading contract research organizations and other industrial groups to complement and expedite execution of our research and development programs and minimize fixed costs. Research and development expense, including spending on our clinical evidence development efforts, totaled $11.1 million, $8.1 million and $8.1 million for the years ended years ended December 31, 2019, 2018 and 2017, respectively, and $4.7 million and $5.1 million for the six months ended June 27, 2020 and June 29, 2019, respectively.

Competition

The medical device industry is highly competitive, subject to change and significantly affected by activities of industry participants.

The multi-injection HA viscosupplementation therapies that we own or distribute compete against Ferring Pharmaceutical Inc.'s Euflexxa, Fidia Farmaceutici S.p.A.'s Hyalgan, DePuy Orthopaedics, Inc. (Johnson &

Johnson's) Orthovisc, Sanofi S.A.'s Synvisc and OrthogenRx Inc.'s GenVisc 850. These products have faced significant competition from single injection therapies, such as Sanofi S.A.'s Synvisc-One, Zimmer Biomet Holdings, Inc.'s Gel-One and DePuy Orthopaedics, Inc. (Johnson & Johnson's) Monovisc.

Our BGS product portfolio competes with products from Medtronic, DePuy Orthopaedics, Inc. (Johnson & Johnson), Stryker Corporation, NuVasive, Inc., SeaSpine, Inc., Orthofix Medical Inc., Zimmer Biomet Holdings, Inc. and Globus Medical Inc.

Our Exogen system competes with products marketed by Orthofix Medical Inc., Zimmer Biomet Holdings, Inc. and DJO Global Inc.

At any time, these or other market participants may develop alternative treatments, products or procedures that compete directly or indirectly with our products. They may also develop and patent processes or products earlier than we can or obtain regulatory clearance or approvals for competing products more rapidly than we can.

See "Risk factors—Risks related to our business—Our commercial success depends on our ability to differentiate the HA viscosupplementation therapies that we own or distribute from alternative therapies for the treatment of OA" and "Risk factors—Risks related to our business—We compete and may compete in the future against other companies, some of which have longer operating histories, more established products or greater resources than we do, which may prevent us from achieving increased market penetration or improved operating results."

Intellectual property

We strive to protect and enhance the proprietary technologies, inventions and improvements that we believe are important to our business, including seeking, maintaining and defending patent rights, whether developed internally or licensed from third parties. Our policy is to seek to protect our proprietary position by, among other methods, pursuing and obtaining patent protection in the United States and in jurisdictions outside of the United States related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trademarks, trade secrets and careful monitoring of and contractual obligations with respect to our proprietary information to protect aspects of our business that are not amenable to, or that we do not consider appropriate for, patent protection.

Our success will depend on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, defend and enforce our patents, maintain our licenses to use intellectual property owned by third parties and operate without infringing the valid and enforceable patents and other proprietary rights of third parties. For important factors related to our proprietary technology, inventions and improvements, please see the section entitled "Risk factors—Risks related to intellectual property."

Patents

We own numerous patents and/or patent applications which relate to our products, including patents for our Exogen system. Corresponding patents and patent applications which relate to our products have also been granted or are otherwise pending in Europe, Asia, Canada, Mexico and Australia. As of June 27, 2020, we owned approximately 19 issued U.S. patents and owned or co-owned pending applications for approximately 11 U.S. patents.

Trademarks

We own registered trademarks for Bioventus, Cellxtract, Durolane, Exogen, Exponent, Gelsyn-3, OsteoAMP, Osteofuse, OsteoPlus, Prohesion, PureBone, SAFHS, and Signafuse in the United States.

Trade secrets

We may rely on trade secret law to protect some of our technology, including the processing of tissue for OsteoAMP. Trade secrets, however, can be difficult to protect.

We seek to protect our proprietary technology and manufacturing process, in part, by confidentiality and invention assignment agreements with employees, under which they are bound to assign to us inventions that are made during the term of their employment and relate to our business, unless there is an exception. These agreements further prohibit our employees from using, disclosing, or bringing onto the premises any proprietary information belonging to any third-party. In addition, our consultants, scientific advisors and contractors are required to sign agreements under which they must assign to us any inventions that relate to our business. These agreements also prohibit these third-parties from incorporating into any inventions the proprietary rights of third-parties without informing us. It is our policy to require all employees to document potential inventions and other intellectual property in laboratory notebooks and to disclose inventions to patent counsel.

We also seek to preserve the integrity and confidentiality of our data and trade secrets by taking commercially reasonable efforts to maintain the physical security of our premises and physical and electronic security of our information technology systems.

While we have confidence in these individuals, organizations and systems, our security measures may be breached, or may otherwise prove inadequate to protect the integrity and confidentiality of our data and trade secrets. Further, our agreements may be breached (or not obtained in the first place) and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Amended and Restated License Agreement for Durolane

In December 2016, we entered into the Q-Med License Agreement with Q-Med and NSH. Pursuant to the Q-Med License Agreement, Q-Med granted us an exclusive license under certain intellectual property rights controlled by Q-Med to commercialize, but not to develop or manufacture, Durolane products for use in the prevention or treatment of pain due to OA in the United States. For the first ten years of the Q-Med License Agreement, we may not commercialize any single-injection-regimen or dual-injection-regimen products other than Durolane in the United States for use in the prevention or treatment of pain due to osteoarthritis. In connection with the Q-Med License Agreement, we paid Q-Med an upfront fee of $2 million, and agreed to pay up to an aggregate of an additional $8 million upon the achievement of certain regulatory and commercial milestones. We also agreed to pay Q-Med tiered royalties based on our annual net sales of Durolane, at rates calculated such that the sum of the royalty payable and the supply price we pay for Durolane purchased from Q-Med in the applicable year equals low-to mid- twenty percentages of net sales of Durolane, subject to a specified floor on such payment. In the event that we do not meet a specified minimum sales requirement we must pay Q-Med a fee equal to the shortfall.

The Q-Med License Agreement will remain in effect until the ninety-ninth anniversary of the effective date of the agreement unless earlier terminated. If the Q-Med Supply Agreement is terminated, the terminating party may simultaneously terminate the Q-Med License Agreement. The Q-Med License Agreement may be terminated earlier by either party in the event of material breach by the other party that remains uncured for 60 days, or by Q-Med if we were to challenge the validity or enforceability of the licensed patents, directly or indirectly through a third party.

Exclusive distribution agreement for GELSYN-3

In March 2016, we entered into an agreement with IBSA under which we obtained the exclusive distribution rights for GELSYN-3 in the United States, as well as an assignment of the related GELSYN-3 trademark. Under the agreement, IBSA will supply GELSYN-3 on a purchase order basis, based on the amounts of GELSYN-3 that we require as set forth in rolling forecasts. We are also subject to certain annual minimum purchase requirements. We are obligated to diligently market GELSYN-3 in the United States.

The term of the IBSA agreement continues in effect for ten years, or until March 2026. Thereafter, the agreement will be automatically renewed for consecutive five year terms, unless either we or IBSA gives notice of termination at least six months prior to the expiration of the initial term or any renewal term. If we fail to meet the minimum purchase requirement in a given year and do not purchase enough products to satisfy the shortfall for such year within a specified time after receiving notice from IBSA, IBSA may terminate the agreement.

Either party may terminate the agreement on written notice for the other party's material breach that remains uncured for 30 days after receipt of prior written notice. Either party may terminate the agreement upon written notice for the other party's bankruptcy or insolvency-related events.

Exclusive distribution agreement for SUPARTZ FX

Effective May 2018, we entered into an Amended and Restated Exclusive Distribution Agreement with Seikagaku Corporation, or SKK, whereby we maintained our exclusive promotion and distribution rights, with the right to engage sub-distributors if approved by SKK, for SUPARTZ FX in the United States. We also received an exclusive license to the trademarks SUPARTZ and SUPARTZ FX in the United States. SKK supplies to us SUPARTZ FX on a purchase order basis, based on the amounts of SUPARTZ FX we require as set forth in rolling forecasts and in exchange we pay to SKK an amount in the low thirty percentages of the average selling price per unit of SUPARTZ FX, subject to certain adjustments. We are subject to certain annual minimum purchase requirements based on a percentage of our SUPARTZ FX annual forecast and are obligated to use our best efforts to commercialize SUPARTZ FX in the United States.

The term of the SKK agreement continues in effect until May 2028. If we fail to order a minimum quantity of SUPARTZ FX from SKK in any year during the term of the agreement, SKK has the right to make our promotion and distribution right non-exclusive, unless we pay SKK a specified fee.

Either party may terminate the agreement on written notice for the other party's material breach that cannot be cured, or that otherwise remains uncured for 60 days after receipt of prior written notice thereof, or for the other party's bankruptcy or insolvency-related events. SKK may terminate the agreement immediately if we fail to pay undisputed amounts due under the agreement within a certain time of receiving written notice of our nonpayment. We may terminate the agreement upon 15 days written notice if we are enjoined from selling SUPARTZ FX in any part of the United States a specified time period due to patent infringement.

Manufacturing and supply

Our HA viscosupplementation therapies and certain of our surgical products are manufactured exclusively by single-source third-party manufacturers, pursuant to multi-year supply agreements. We work closely with each of our manufacturing partners and provide them with a forecast, which enables them to better capacity plan and sequence their production efficiently. For Durolane, we are subject to minimum order volumes for each order and purchase amounts are also based in part on forecasts. For GELSYN-3, we will be subject to certain annual minimum purchase requirements and purchase amounts based on rolling forecasts. For SUPARTZ FX, we are subject to certain annual minimum purchase requirements based on a percentage of our SUPARTZ FX annual forecast.

For Durolane, in December 2016, we entered into an amended and restated supply agreement, or the Q-Med Supply Agreement, with Q-Med AB, or Q-Med. Under the Q-Med Supply Agreement, Q-Med supplies Durolane

products exclusively to us for sale in the United States for use in the in the prevention or treatment of pain due to OA on a purchase order basis, based on the amounts of Durolane we require as set forth in rolling forecasts and we are subject to certain semi-annual minimum purchase requirements based on a percentage of our Durolane forecast.

The term of the Q-Med Supply Agreement continues in effect until the termination of the Q-Med License Agreement. We may terminate the Q-Med Supply Agreement immediately if Q-Med fails to supply a specified percentage of the aggregate quantities of licensed product required for a specified number of months and does not cure such shortfall within a defined time period and, upon such termination, Q-Med is obligated to grant us, or to a third party reasonably acceptable to us, the right to manufacture Durolane products.

Either party may terminate the Q-Med Supply Agreement upon written notice for the other party's material breach that remains uncured for 60 days (or 30 days for any payment default) after receipt of prior written notice.

We assemble, inspect, test and package our Exogen system at our facility in Cordova, Tennessee with components supplied by third-party suppliers. Our Exogen system includes a transducer which is a key component that is supplied by a single-source supplier. We perform inspections of these components before use in our manufacturing operations.

We intend to maintain sufficient supplies of the products and components from these single-source suppliers in the event that one or more of these suppliers were to encounter certain interruptions in supply. See "Risk factors—Risks related to our business—We rely on a limited number of third-party manufacturers to manufacture certain of our products."

We believe our manufacturing operations are in compliance with regulations mandated by the FDA. We are an FDA-registered medical device manufacturer. Our manufacturing facilities and processes are subject to periodic inspections and audits by various federal, state and foreign regulatory agencies.

With respect to MOTYS, on June 18, 2020, we entered into a commercial supply agreement with MTF. Under the agreement, MTF will exclusively manufacture and supply MOTYS under cGTPs to us to allow for our limited commercialization beginning in the fourth quarter of 2020 under the tissue regulations while we pursue a BLA for the product. MTF is responsible for obtaining and storing all materials, including all tissue materials, required for the manufacture, testing, handling, packaging, labeling, release and delivery of the product to us.

We anticipate entering into an additional supply agreement with MTF if we are able to obtain FDA approval for our BLA and at the appropriate stage of development of the program, when adherence to cGMP manufacturing standards is required for continued regulatory compliance.

Government regulation

Government regulation of medical devices

Our medical devices are subject to regulation by numerous government agencies, including the FDA and comparable foreign agencies. The FDA and other U.S. and foreign governmental agencies regulate, among other things, with respect to medical devices:

- design, development and manufacturing;
- testing, labeling, content and language of instructions for use and storage;
- clinical trials;
- product safety;
- marketing, sales and distribution;

- premarket clearance and approval;
- record keeping procedures;
- advertising and promotion;
- recalls and field safety corrective actions;
- postmarket surveillance, including reporting of deaths or serious injuries and malfunctions that, if they were to recur, could lead to death or serious injury;
- postmarket approval studies; and
- product import and export.

The regulations to which we are subject are complex and have tended to become more stringent over time. Regulatory changes could result in restrictions on our ability to carry on or expand our operations, higher than anticipated costs or lower than anticipated sales.

FDA premarket clearance and approval requirements

Each medical device we seek to commercially distribute in the United States must first receive 510(k) clearance or approval of a PMA application from the FDA, unless specifically exempt. The FDA classifies all medical devices into one of three classes. Devices deemed to pose lower risk are categorized as either Class I or Class II. Class II devices require the manufacturer to submit to the FDA a 510(k) pre-market notification requesting clearance of the device for commercial distribution in the United States. Class I devices are exempted from this requirement. Devices deemed by the FDA to pose the greatest risk, such as life sustaining, life-supporting, selected implantable devices, or devices deemed not substantially equivalent to a previously 510(k) cleared device, are categorized as Class III, generally requiring submission and approval of a PMA.

510(k) clearance process

To obtain 510(k) clearance, we must submit a premarket notification to the FDA demonstrating the proposed device to be substantially equivalent to a predicate device. A predicate is a previously cleared 510(k) device, a device that was in commercial distribution before May 28, 1976 for which the FDA has not yet called for the submission of PMA applications, or is a device that has been reclassified from Class III to either Class II or I. The standard review process for 510(k)s is between 30 days to 3 months, dependent upon the type of 510(k) filing submitted. Although many 510(k) premarket notifications are cleared without clinical data, in some cases, the FDA may require clinical data to support substantial equivalence. In reviewing a premarket notification, the FDA may request additional information, including clinical data, which may significantly prolong the review process and clearance is never assured.

After a device receives 510(k) clearance, any subsequent modification of the device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, requires a new 510(k) clearance or could require submission and approval of a PMA application in cases where new indications are sought for which there is no predicate. Non-significant changes are handled via internal documentation by the Company. Each manufacturer must judge the significance of modifications based on algorithms within FDA 510(k) guidance documents. FDA may review any such decision and may disagree with a manufacturer’s determination. If the FDA disagrees with a manufacturer’s determination, the FDA may require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or PMA approval is obtained. We have modified aspects of some of our devices since receiving initial regulatory clearance. We concluded that some of those modifications did not significantly affect the safety or efficacy of the device and therefore, that new 510(k) clearances were not required. We have also obtained new 510(k) clearances from the FDA for other modifications to our devices. In the future, we may make additional modifications to our products after they have received FDA clearance or approval and in appropriate circumstances, determine that new clearance or approval

is unnecessary. However, the FDA may disagree with our determination and if the FDA requires us to seek 510(k) clearance or submit new PMA applications for any modifications to a previously cleared product, we may be required to cease marketing or recall the modified device until we obtain the required clearance or approval. Under these circumstances, we may also be subject to significant regulatory fines or other penalties.

We have obtained 510(k) premarket clearance from the FDA for Signafuse Bioactive Bone Graft Putty, Interface Bioactive Bone Graft, Osteomatrix +, and Signafuse Mineralized Collagen Scaffold.

Premarket approval process

A PMA application must be submitted if the medical device is in Class III (although the FDA has the discretion to continue to allow certain pre-amendment Class III devices to use the 510(k) process) or cannot be cleared through the 510(k) process. A PMA application must be supported by, among other things, extensive technical, preclinical, clinical trials, manufacturing and labeling data to demonstrate to the FDA's satisfaction the safety and effectiveness of the device.

After a PMA application is submitted and filed, the FDA begins an in-depth review of the submitted information. The standard review of such application is six months. During this review period, the FDA may request additional information or clarification of information already provided. This can extend the overall review process and typically PMAs take between one to three years in total for approval. Also during the review period, an advisory panel of experts from outside the FDA will usually be convened for a new type of device to review and evaluate the application and provide recommendations to the FDA as to the approvability of the device. In addition, the FDA will conduct a pre-approval inspection of the manufacturing facility to ensure compliance with QSR, which impose elaborate design development, testing, control, documentation and other quality assurance procedures in the design and manufacturing process. The FDA may approve a PMA application with post-approval conditions intended to ensure the safety and effectiveness of the device including, among other things, restrictions on labeling, promotion, sale and distribution and collection of long-term follow-up data from patients in the clinical study that supported approval. Failure to comply with the conditions of approval can result in materially adverse enforcement action, including the loss or withdrawal of the approval. PMA supplements are required for significant modifications to the manufacturing process, labeling of the product and design of a device that is approved through the PMA process. PMA supplements requires submission of information needed to support any changes from the device covered by the original PMA and typically do not require clinical data or the convening of an advisory panel. Non-significant changes must be reported to the FDA through an annual report filing with the FDA. In review of this report, FDA may disagree with a manufacturer's determination of the level of significance of the change. If the FDA disagrees with a manufacturer's determination, the FDA may require the manufacturer to cease marketing and/or recall the modified device until PMA supplement approval is obtained.

Durolane, GELSYN-3, SUPARTZ FX and our Exogen bone healing system have each been approved through the PMA process.

Clinical trials

A clinical trial is typically required to support a PMA and is sometimes required for a 510(k) premarket notification. In the United States, authorization to conduct a clinical trial generally requires submission of an application for an IDE to the FDA. The IDE application must be supported by appropriate data, such as animal and laboratory testing results, showing that it is safe to test the device in humans and that the investigational protocol is scientifically sound. The IDE application must be approved in advance by the FDA for a specified number of patients, unless the product is deemed a non-significant risk device and eligible for abbreviated IDE requirements. Clinical trials for a significant risk device may begin once the IDE application is approved by the FDA as well as the appropriate institutional review boards, or IRBs, at the clinical trial sites and the informed consent of the patients participating in the clinical trial is obtained. After a trial begins, the FDA may place it on

hold or terminate it if, among other reasons, it concludes that the clinical subjects are exposed to an unacceptable health risk. Any trials we conduct must be conducted in accordance with FDA regulations as well as other federal regulations and state laws concerning human subject protection and privacy. Moreover, the results of a clinical trial may not be sufficient to obtain clearance or approval of the product.

Pervasive and continuing FDA regulation

After a medical device is placed on the market, numerous FDA regulatory requirements apply, including, but not limited to the following:

- QSRs, which requires manufacturers to follow design, testing, control, documentation and other quality assurance procedures during the manufacturing process;
- Establishment Registration, which requires establishments involved in the production and distribution of medical devices, intended for commercial distribution in the United States, to register with the FDA;
- Medical Device Listing, which requires manufacturers to list the devices they have in commercial distribution with the FDA;
- Labeling regulations, which prohibit "misbranded" devices from entering the market, as well as prohibit the promotion of products for unapproved or off-label uses and impose other restrictions on labeling;
- Postmarket surveillance, including MDR requirements which requires manufacturers to report to the FDA if their device may have caused or contributed to a death or serious injury, or malfunctioned in a way that would likely cause or contribute to a death or serious injury if it were to recur; and
- Corrections and Removal Reporting regulations, which require that manufacturers report to the FDA field corrections and product recalls or removals if undertaken to reduce a risk to health posed by the device or to remedy a violation of the United States Federal Food, Drug, and Cosmetic Act that may present a risk to health.

The FDA enforces these requirements by inspection and market surveillance. Failure to comply with applicable regulatory requirements may result in enforcement action by the FDA, which may include one or more of the following sanctions:

- untitled letters or warning letters;
- fines, injunctions and civil penalties;
- mandatory recall or seizure of our products;
- administrative detention or banning of our products;
- operating restrictions, partial suspension or total shutdown of production;
- refusing our request for 510(k) clearances or PMA approvals for new product versions;
- revocation of 510(k) clearances or PMA approvals previously granted; and
- criminal prosecution and penalties.

U.S. regulation of HCT/Ps

Our products, including OsteoAMP and PureBone, are regulated as human cells, tissues and cellular and tissue-based products, or HCT/Ps. Section 361 of the PHSA authorizes the FDA to issue regulations to prevent the introduction, transmission or spread of communicable disease. HCT/Ps regulated as "Section 361" HCT/Ps are subject to requirements relating to registering facilities and listing products with the FDA, screening and testing for tissue donor eligibility, cGTP, when processing, storing, labeling and distributing HCT/Ps, including

required labeling information, stringent record keeping and adverse event reporting, among other applicable requirements and laws. Specifically, cGTPs are requirements that govern the methods used in, and the facilities and controls used for, the manufacture of HCT/Ps in a way that prevents the introduction, transmission, or spread of communicable diseases. Section 361 HCT/Ps do not require 510(k) clearance, PMA approval, BLAs, or other premarket authorization from the FDA before marketing. However, to be regulated as a Section 361 HCT/P, the product must, among other things, be "minimally manipulated," which for structural tissue products means that the manufacturing processes do not alter the original relevant characteristics of the tissue relating to the tissue's utility for reconstruction, repair, or replacement and for cells or nonstructural tissue products, means that the manufacturing processes do not alter the relevant biological characteristics of cells or tissues. A Section 361 HCT/P must also be intended for "homologous use," which refers to use in the repair, reconstruction, replacement, or supplementation of a recipient's cells or tissues with an HCT/P that performs the same basic function or functions in the recipient as in the donor.

We believe our OsteoAMP product is properly regulated as a Section 361 HCT/P and therefore have not sought or obtained 510(k) clearance, PMA approval, or licensure through a BLA. However, the FDA's CDRH issued us a letter in March 2016 in which it asserted that OsteoAMP meets the definition of a medical device and requested that we provide CDRH with information in support of our position that OsteoAMP does not require 510(k) clearance or PMA approval. We provided CDRH with the requested information in support of this position in May 2016 and we have received no further inquiries to date. We believe that CDRH's assertion is unfounded and inconsistent with a 2011 letter from the FDA concluding that OsteoAMP meets the criteria for regulation solely as a Section 361 HCT/P. However, if the FDA were to disagree and if we are otherwise unsuccessful in asserting our position, the FDA may then require that we obtain 510(k) clearance or PMA approval and that we cease marketing OsteoAMP and/or recall OsteoAMP unless and until we receive clearance or approval. We estimate that if we were to cease marketing OsteoAmp and/or recall OsteoAmp that our net sales would decrease, which would adversely affect our results of operations. See "Risk factors—Risks related to government regulation—Our HCT/P products are subject to extensive government regulation and our failure to comply with these requirements could cause our business to suffer."

HCT/Ps that do not meet the criteria of Section 361 are regulated under Section 351 of the PHSA. Unlike 361 HCT/Ps, HCT/Ps regulated as "351" HCT/Ps are subject to premarket review and/or approval by the FDA, as required.

In November 2017, the FDA released a guidance document entitled "Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue—Based Products: Minimal Manipulation and Homologous Use—Guidance for Industry and Food and Drug Administration Staff." The guidance outlined the FDA's position that all lyophilized amniotic products are more than minimally manipulated and would therefore require a BLA to be lawfully marketed in the United States. The guidance also indicated that the FDA would exercise enforcement discretion, using a risk-based approach, with respect to the IND application and pre-market approval requirements for certain HCT/Ps for a period of 36 months from the issuance date of the guidance to allow manufacturers to pursue its IND application. Under this approach, FDA indicated that high-risk products and uses could be subject to immediate enforcement action. In July 2020, the FDA extended its period of enforcement discretion to May 31, 2021.

We plan to market MOTYS under the FDA's policy of enforcement discretion as we pursue approval under a BLA for the product. We may be required to cease selling MOTYS if the FDA changes the scope of its enforcement discretion policy or changes the criteria used to assess which products qualify. In addition, following the period of enforcement discretion under the guidance, we may be required to cease selling MOTYS until such time as we obtain BLA approval.

Failure to comply with statutory and regulatory requirements subjects a manufacturer to possible legal or regulatory action, including the seizure or recall of products, injunctions, consent decrees placing significant restrictions on or suspending manufacturing operations and civil and criminal penalties.

U.S. regulation of drugs and biologics

We expect that MOTYS will be regulated by the FDA as a biological product, or biologic, and we plan to submit a BLA to the FDA to allow for the marketing of MOTYS following the expiration of the FDA's enforcement discretion period for certain HCT/Ps. Biologics are regulated under both the FDCA and the PHSA and other federal, state, local and foreign statutes and regulations. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval or licensure of our product candidates.

The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and animal studies performed in accordance with applicable regulations, including the FDA's Good Laboratory Practice, or GLP, regulations;
- submission to the FDA of an IND which must become effective before clinical trials may begin;
- approval by an independent institutional review board, or IRB, or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials to establish the safety and effectiveness of the proposed drug candidate and the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of an NDA or BLA after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a NDA or BLA to file the application for review;
- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMP requirements, and to assure that the facilities, methods and controls are adequate to preserve the product's safety and effectiveness, and of selected clinical investigation sites to assess compliance with GCPs; and
- FDA review and approval of a NDA or BLA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning the first clinical trial with a product candidate, we must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol or protocols clinical trials. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product, chemistry, manufacturing and controls, or CMC, information, and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research

subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed. Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing preclinical studies and clinical trials and clinical study results to public registries.

For purposes of regulatory approval, human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1*. The investigational product is initially introduced into patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- *Phase 2*. The investigational product is administered to a limited patient population to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks.
- *Phase 3*. The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the NDA or BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate, and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical study investigators. The FDA or the sponsor or its data safety monitoring board may suspend a clinical study at any time on various grounds, including a finding that the research participant or participants are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical study at its institution if the clinical study is not being conducted in accordance with the IRB's requirements or if the product candidate has been associated with unexpected serious harm to patients. There are also requirements governing the reporting of ongoing clinical trials and completed clinical trial results to public registries. Sponsors of clinical trials of FDA-regulated products may be required to register and disclose certain clinical trial information, which is publicly available at www.clinicaltrials.gov.

NDA or BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a NDA or BLA requesting approval to market the product for one or more indications. The NDA or BLA must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's CMCs and proposed labeling, among other things. The submission of a NDA or BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies. The FDA has 60 days from the applicant's submission of a NDA or BLA to either issue a refusal to file letter or accept the NDA or BLA for filing, indicating that it is sufficiently complete to permit substantive review.

Once a NDA or BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after it accepts the application for filing, or, if the application qualifies for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process is often significantly extended by FDA requests for additional information or clarification. The FDA reviews a NDA or BLA to determine, among other things, whether a product is safe and effective, or safe, pure, and potent, for its intended use, and whether the facility in which it is manufactured, processed, packed or held meets standards designed to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may convene an advisory committee to provide clinical insight on application review questions. Before approving a NDA or BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a NDA or BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a NDA or BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be manufactured, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the NDA or BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the NDA or BLA in condition for approval, including requests for additional information or clarification, including the potential requirement for additional clinical studies. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA or BLA with a Risk Evaluation and Mitigation Strategy, or REMS, to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-

marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which the FDA assesses an annual program fee for each product identified in an approved NDA or BLA. Manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMPs and impose reporting requirements upon us and any third-party manufacturers that we may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMPs and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning or untitled letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of drugs and biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. The FDA and

other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA, but physicians may not submit claims for reimbursement that are false or fraudulent. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

International regulation of medical devices

Sales of medical devices outside the United States are subject to foreign government regulations, which vary substantially from country to country. In order to market our products in other countries, we must obtain regulatory approvals and comply with extensive safety and quality regulations in other countries. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA approval and the requirements may differ significantly.

EU regulation of medical devices

The EU has adopted legislation, in the form of directives to be implemented in each Member State, concerning the regulation of medical devices within the EU. The directives include, among others, the Medical Device Directive (Council Directive 93/42/EEC) that establishes certain requirements, such as the essential requirements, with which medical devices must comply before they can be commercialized in the EEA (which is comprised of the Member States of the EU plus Norway, Liechtenstein and Iceland). Under the EU Medical Device Directive, medical devices are classified into four Classes, I, IIa, IIb and III, with Class I being the lowest risk and Class III being the highest risk. Under the Medical Device Directive, a competent authority is nominated by the government of each Member State to monitor and ensure compliance with the Directive. To demonstrate compliance of their medical devices with the essential requirements, manufacturers must undergo a conformity assessment evaluation, which varies according to the type of medical device and its classification. Except for certain types of low risk medical devices (Class I non-sterile, non-measuring devices), where the manufacturer can issue an EC Declaration of Conformity based on a self-assessment of the conformity of its products with the essential requirements of the Medical Devices Directive, a conformity assessment evaluation requires the intervention of an organization accredited by a Member State of the EEA to conduct conformity assessments, a so-called Notified Body. The Notified Body would typically audit and examine the quality system for the manufacture, design and final inspection of the medical devices, along with conducting a technical review of data supporting the device's safety and efficacy, before issuing a certification demonstrating compliance with the essential requirements. Both the quality system and the product are reviewed and certified. The Company is subject to annual surveillance audits by the Notified Body and must undergo re-certification every 5 years. During these audits, (minor or major) non-conformities to the essential requirement may be issued to the Company. The Company could potentially lose marketing authorization if these non-conformaties are not remediated with the Notified Body. Significant modifications to the quality system or product changes for Class III devices must be submitted to the Notified Body for review prior to implementation. Non-significant changes are subject to review during the annual surveillance audits. Medical devices that comply with the essential requirements are entitled to bear the CE mark, which is an abbreviation for Conformité Européenne or European Conformity. Medical devices properly bearing the CE mark may be commercially distributed throughout the EEA. We have received CE certification from the British Standards Institute, a United Kingdom Notified Body, for conformity with the EU Medical Device Directive allowing us to place the CE mark on Durolane (Class III) and our Exogen bone healing system (Class IIa). Additional PMAs in individual EEA countries are sometimes required prior to marketing of a product. Failure to maintain the CE mark would preclude us from selling our products in the EEA, as could failure to comply with the specific requirements of the Member States.

On April 5, 2017, the European Parliament passed the Medical Devices Regulation, which repeals and replaces the EU Medical Devices Directive. Unlike directives, which must be implemented into the national laws of the EEA Member States, the regulations would be directly applicable without the need for adoption of EEA Member State laws implementing them in all EEA Member States and are intended to eliminate current differences in the regulation of medical devices among EEA Member States. The Medical Devices Regulation, among other things, is intended to establish a uniform, transparent, predictable and sustainable regulatory framework across the EEA for medical devices and *in vitro* diagnostic devices and ensure a high level of safety and health while supporting innovation.

The Medical Devices Regulation was meant to become applicable three years after publication (in May 2020). However, on April 23, 2020, to take the pressure off EEA national authorities, notified bodies, manufacturers and other actors so they can focus fully on urgent priorities related to the COVID-19 pandemic, the European Council and Parliament adopted Regulation 2020/561, postponing the date of application of the Medical Devices Regulation by one year (to May 2021). Once applicable, the new regulations will among other things:

- strengthen the rules on placing devices on the market and reinforce surveillance once they are available;
- establish explicit provisions on manufacturers' responsibilities for the follow-up on the quality, performance and safety of devices placed on the market;
- improve the traceability of medical devices throughout the supply chain to the end-user or patient through a unique identification number;
- set up a central database to provide patients, healthcare professionals and the public with comprehensive information on products available in the EU; and
- strengthen rules for the assessment of certain high-risk devices, such as implants, which may have to undergo an additional check by experts before they are placed on the market.

These new rules and procedures may result in increased regulatory oversight of our devices and this may, in turn, increase the costs, time and requirements that we need to meet in order to maintain or place such devices on the EEA market.

Further, the advertising and promotion of our products in the EEA is subject to the laws of individual EEA Member States implementing the EU Medical Devices Directive, Directive 2006/114/EC concerning misleading and comparative advertising and Directive 2005/29/EC on unfair commercial practices, as well as other EEA Member State laws governing the advertising and promotion of medical devices. These laws may limit or restrict the advertising and promotion of our products to the general public and may impose limitations on our promotional activities with healthcare professionals.

Other countries' regulation of medical devices

Many other countries have specific requirements for classification, registration and postmarketing surveillance that are independent of the countries already listed. We obtain what we believe are the appropriate clearances for Durolane and our Exogen bone healing system and conduct our business in accordance with the applicable laws of each country. This landscape is constantly changing and we could be found in violation if we interpret the laws incorrectly or fail to keep pace with changes. In the event of either of these occurrences, we could be instructed to recall products, cease distribution and/or be subject to civil or criminal penalties.

Anti-kickback, false claims and other healthcare laws

In addition to FDA restrictions on the marketing of pharmaceutical, biological and medical device products, we are also subject to healthcare regulation and enforcement by the federal government and the states and foreign

governments and authorities in the locations in which we conduct our business. These other agencies include, without limitation, CMS, other divisions of the HHS, the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice, as well as state and local governments. Such agencies enforce a variety of laws which include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, data privacy and security and physician payment transparency laws and regulations.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity from knowingly and willfully offering, paying, soliciting or receiving any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any good, facility, item or service reimbursable, in whole or in part, by Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value, including cash, improper discounts and free or reduced price items and services. Among other things, the Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical, biotechnology and medical device manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not meet the requirements of a statutory or regulatory exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the Anti-Kickback Statute has been violated. In addition, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Violations are subject to civil monetary penalties up to $100,000 for each violation, plus up to three times the remuneration involved, and may result in criminal fines of up to $100,000 and imprisonment of up to ten years, or exclusion from Medicare, Medicaid or other governmental programs. Further, a claim including items or services resulting from a violation of the federal Anti-Kickback Statute also constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

Federal law also includes a provision commonly known as the "Stark Law," which prohibits a physician from referring Medicare or Medicaid patients to an entity providing "designated health services," which includes durable medical equipment, if the physician or immediate family member of the physician, has an ownership or investment interest or compensation arrangement with such entity that does not comply with the requirements of a Stark exception. Violation of the Stark Law could result in denial of payment, disgorgement of reimbursements received under a non-compliant arrangement, civil penalties, and exclusion from Medicare, Medicaid or other governmental programs.

The federal false claims and civil monetary penalties laws, including the civil False Claims Act, prohibit, among other things, any person or entity from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment to or approval by the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Actions under the False Claims Act may be brought by the Attorney General or as a qui tam action by a private individual in the name of the U.S. government. Violations of the False Claims Act can result in very significant monetary penalties and treble damages. The federal government is using the False Claims Act and the accompanying threat of significant liability, in its investigation and prosecution of pharmaceutical, biotechnology and medical device companies throughout the country. Manufacturers can be held liable under these laws if they are deemed to "cause" the submission of false or fraudulent claims by for example, in connection with the promotion of products for unapproved or off-label uses and other sales and marketing practices. The government has obtained multi-million and multi-billion dollar settlements under the False Claims Act in addition to individual criminal

convictions under applicable criminal statutes. When an entity is determined to have violated the federal civil False Claims Act, the government may impose civil fines and penalties ranging from $11,181 to $22,363 for each false claim, plus treble damages, and exclude the entity from participation in Medicare, Medicaid and other federal healthcare programs. In addition, companies found liable under the False Claims Act have been forced to implement extensive corrective action plans, and have often become subject to consent decrees or corporate integrity agreements, severely restricting the manner in which they conduct their business and imposing ongoing reporting and disclosure obligations.

The federal civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Given the significant size of actual and potential settlements, it is expected that governmental authorities will continue to devote substantial resources to investigating healthcare providers' and manufacturers' compliance with applicable fraud and abuse laws. For drugs that are covered under Medicare Part B, the manufacturer must report average sales price, or ASP, to CMS on a quarterly basis. Failure to report this information in a timely and accurate manner can lead to substantial civil and criminal penalties and to liability under the False Claims Act.

In July of 2018 we became aware of allegations that certain of our sales personnel may have been completing Section B of the CMN required in connection with Medicare claims for the Exogen system, which, under federal law, must be completed by the physician and/or physician staff.

Together with our outside counsel, Ropes & Gray, we initiated an investigation into these allegations and as a result of our findings made a self-disclosure on November 30, 2018 to the OIG, under the Provider Self-Disclosure Protocol. Our self-disclosure disclosed the extent of our findings relative to the inappropriate completion of CMN forms by our sales personnel and offered to make repayment of $2.3 million for certain claims we submitted to the Medicare program between October 1, 2012 and September 30, 2018, the statutory period applicable to such conduct. In October 2019, Ropes & Gray, as our legal counsel, received a letter from the Office of the United States Attorney in the Middle District of North Carolina, or USAO, stating that the USAO would be working with the OIG to resolve our self-disclosure.

Subsequently, Ropes & Gray has received requests for further information regarding the self-disclosure from the USAO in January 2020 and June 2020, which Ropes & Gray information was furnished to the USAO and OIG on our behalf. At this time, the matter remains pending and there has been no indication from the USAO or OIG on the potential outcome of the matter or if claims will be asserted for any additional amounts.

See "Risk factors—Risks related to government regulation—We may be subject to enforcement action if we engage in improper claims submission practices and resulting audits or denials of our claims by government agencies could reduce our net sales or profits."

HIPAA created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of these statutes or specific intent to violate them in order to have committed a violation.

Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payer, in addition to items and services reimbursed under Medicaid and other state programs.

In addition, a person who offers or transfers to a Medicare or Medicaid beneficiary any remuneration, including waivers of co-payments and deductible amounts (or any part thereof), that the person knows or should

know is likely to influence the beneficiary's selection of a particular provider, practitioner or supplier of Medicare or Medicaid payable items or services may be liable for civil monetary penalties of up to $20,866 for each wrongful act. Moreover, in certain cases, providers who routinely waive co-payments and deductibles for Medicare and Medicaid beneficiaries can also be held liable under the Anti-Kickback Statute and civil False Claims Act, which can impose additional penalties associated with the wrongful act. One of the statutory exceptions to the prohibition is non-routine, unadvertised waivers of co-payments or deductible amounts based on individualized determinations of financial need or exhaustion of reasonable collection efforts. The OIG emphasizes, however, that this exception should only be used occasionally to address special financial needs of a particular patient. Although this prohibition applies only to federal healthcare program beneficiaries, the routine waivers of co-payments and deductibles offered to patients covered by commercial payers may implicate applicable state laws related to, among other things, unlawful schemes to defraud, excessive fees for services, tortious interference with patient contracts and statutory or common law fraud. To the extent our patient assistance programs are found to be inconsistent with applicable laws, we may be required to restructure or discontinue such programs, or be subject to other significant penalties.

Additionally, there has been a recent trend of increased federal and state regulation of payments made to physicians and certain other healthcare providers. The Patient Protection and Affordable Care Act, as amended by the Health Care and Education and Reconciliation Act, or collectively, the Affordable Care Act, imposed, among other things, new annual reporting requirements through the Physician Payments Sunshine Act for covered manufacturers for certain payments and "transfers of value" provided to physicians and teaching hospitals, and, beginning in 2022, physician assistants, nurse practitioners and other practitioners, as well as ownership and investment interests held by such providers and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties of up to an aggregate of $176,495 per year and up to an aggregate of $1.177 million per year for "knowing failures." Covered manufacturers must submit reports by the 90th day of each calendar year. In addition, certain states require implementation of compliance programs and compliance with the industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, impose restrictions on marketing practices, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities and/or require tracking and reporting of gifts, compensation and other remuneration or items of value provided to physicians and other healthcare professionals and entities.

These laws impact the kinds of financial arrangements we may have with hospitals, physicians or other potential purchasers of our products. They particularly impact how we structure our sales offerings, including discount practices, customer support, education and training programs, physician consulting, research grants and other arrangements. If our operations are found to be in violation of any of the health regulatory laws described above or any other laws or regulations that apply to us, we may be subject to penalties, including, without limitation, potentially significant criminal, civil and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government healthcare programs, imprisonment, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings and the curtailment or restructuring of our operations.

As a result of our sale or distribution of products in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post marketing requirements, including safety surveillance, anti-fraud and abuse laws and implementation of corporate compliance programs and reporting of payments or other transfers of value to healthcare professionals.

We participate in state government-managed Medicaid programs as well as certain other qualifying federal and state government programs where discounts and mandatory rebates are provided to participating state and local government entities. In connection with several of these government programs, we are required to report prices to various government agencies. Pricing calculations vary among programs. The calculations are complex and are often subject to interpretation by the reporting entities, government agencies and the courts. Our

methodologies for calculating these prices could be challenged under false claims laws or other laws. We could make a mistake in calculating reported prices and required discounts, which could result in retroactive liability to government agencies. Government agencies may also make changes in program interpretations, requirements or conditions of participation, some of which may have implications for amounts previously estimated or paid. If we make these mistakes or if governmental agencies make these changes, we could face, in addition to prosecution under federal and state false claims laws, substantial liability and civil monetary penalties, exclusion of our products from reimbursement under government programs, criminal fines or imprisonment, or prosecutors may impose a Corporate Integrity Agreement, Deferred Prosecution Agreement, or similar arrangement.

The Medicare Prescription Drug, Improvement and Modernization Act of 2003, or the MMA, requires that manufacturers report data to CMS on pricing of covered drugs reimbursed under Medicare Part B. These are generally drugs and biologicals, such as injectable products, that are administered "incident to" a physician service and in general are not self-administered. Effective January 1, 2005, ASP became the basis for reimbursement to physicians and suppliers for drugs and biologicals covered under Medicare Part B, replacing the average wholesale price, or AWP, provided and published by pricing services. In general, we must comply with all reporting requirements for any drug that is separately reimbursable under Medicare. The SUPARTZ FX product is reimbursed under Medicare Part B and, as a result, we provide ASP data on this product to CMS on a quarterly basis.

Privacy and data protection laws in the United States

HIPAA and its implementing regulations, as amended by the regulations promulgated pursuant to the HITECH Act, which we collectively refer to as HIPAA, contain substantial restrictions and requirements with respect to the use and disclosure of certain PHI). These restrictions and requirements are set forth in the HIPAA Privacy, Security and Breach Notification Rules.

In some of our operations, such those involving the acceptance of payments, we are a "covered entity" under HIPAA and therefore required to comply with the Privacy, Security and Breach Notification Rules and is subject to significant civil and criminal penalties for failure to do so. We also provide services to customers that are covered entities themselves and we are required to provide satisfactory written assurances to these customers through written "business associate" agreements that we will provide our services in accordance with HIPAA.

The Final Rule published by the U.S. Department of Health and Human Services Office for Civil Rights, or OCR, of the Department of Health and Human Services in January 2013 and effective March 23, 2013, modified the HIPAA Privacy, Security, Breach Notification and Enforcement Rules, including revisions/additions made by the HITECH Act. The rule expanded the privacy and security requirements for business associates that create, receive, maintain or transmit PHI for or on behalf of covered entities, increased penalties for noncompliance and strengthened requirements for reporting of breaches of unsecured PHI, among other changes. The rule also made business associates and their subcontractors directly liable for civil monetary penalties for impermissible uses and disclosures of PHI.

If we were to be found to have breached our obligations under HIPAA, we could be subject to enforcement actions by the OCR and state health regulators and lawsuits, including class action law suits, by private plaintiffs. In addition, OCR performs compliance audits in order to proactively enforce the HIPAA privacy and security standards. OCR has become an increasingly active regulator and has signaled its intention to continue this trend. OCR has the discretion to impose penalties without being required to attempt to resolve violations through informal means; further OCR may require companies to enter into resolution agreements and corrective action plans which impose ongoing compliance requirements. OCR enforcement activity can result in financial liability and reputational harm, and responses to such enforcement activity can consume significant internal resources. In addition to enforcement by OCR, state attorneys general are authorized to bring civil actions under either HIPAA or relevant state laws seeking either injunctions or damages in response to violations that threaten the privacy of state residents. Although we have implemented and maintained policies, processes and a compliance program

infrastructure to assist us in complying with these laws and regulations and our contractual obligations, we cannot provide assurance regarding how these laws and regulations will be interpreted, enforced or applied to our operations.

In addition to HIPAA, we must adhere to state patient confidentiality laws that are not pre-empted by HIPAA, including those that are more stringent than HIPAA requirements. Numerous other state, federal and foreign laws, including consumer protection laws and regulations, govern the collection, dissemination, use, access to, confidentiality and security of patient health information. In addition, Congress and some states are considering new laws and regulations that further protect the privacy and security of medical records or medical information. With the recent increase in publicity regarding data breaches resulting in improper dissemination of consumer information, all states have passed laws regulating the actions that a business must take if it experiences a data breach, such as prompt disclosure to affected customers. Generally, these laws are limited to electronic data and make some exemptions for smaller breaches. Congress has also been considering similar federal legislation relating to data breaches. The FTC and states' Attorneys General have also brought enforcement actions and prosecuted some data breach cases as unfair and/or deceptive acts or practices under the FTC Act. In addition to data breach notification laws, some states have enacted statutes and rules requiring businesses to reasonably protect certain types of personal information they hold or to otherwise comply with certain specified data security requirements for personal information. For example, the CCPA took effect on January 1, 2020. The CCPA establishes a new privacy framework for covered businesses and provides new and enhanced data privacy rights to California residents, such as affording consumers the right to access and delete their information and to opt out of certain sharing and sales of personal information. The CCPA imposes severe statutory damages as well as a private right of action for certain data breaches that result in the loss of personal information. This private right of action is expected to increase the likelihood of, and risks associated with, data breach litigation. It remains unclear how various provisions of the CCPA will be interpreted and enforced. The CCPA contains an exemption for medical information governed by the CMIA and for PHI collected by a covered entity or business associate governed by the privacy, security and breach notification rules established pursuant to HIPAA and HITECH, but the precise application and scope of this exemption is not yet clear, and the law may still apply to certain aspects of our business. The CCPA may lead other states to pass comparable legislation, with potentially greater penalties, and more rigorous compliance requirements relevant to our business, and that may not include exemptions for businesses subject to HIPAA. The effects of the CCPA, and other similar state or federal laws, are potentially significant and may require us to modify our data processing practices and policies and to incur substantial costs and potential liability in an effort to comply with such legislation. As with HIPAA, any laws regulating the collection, dissemination, use, access to, confidentiality and security of personal information may apply directly to our business or indirectly by contract when we provide services to other companies. We intend to continue to comprehensively protect all consumer data and to comply with all applicable laws regarding the protection of this data.

Privacy and data protection laws in Europe

We are subject to European laws relating to our and our suppliers', partners' and subcontractors' collection, control, processing and other use of personal data, such as data relating to an identifiable living individual, whether that individual can be identified directly or indirectly. We and our suppliers, partners and subcontractors process personal data including in relation to our employees, employees of customers, trial patients, health care professions and employees of suppliers including health and medical information. The data privacy regime in the EU includes the GDPR, the E-Privacy Directive (2002/58/EC) and national laws implementing or supplementing each of them.

The GDPR requires that personal data is only collected for specified, explicit and legal purposes as set out in the GDPR or local laws and the data may then only be processed in a manner consistent with those purposes. The personal data collected and processed must be adequate, relevant and not excessive in relation to the purposes for which it is collected and processed, it must be held securely, not transferred outside of the EEA unless certain steps are taken to ensure an adequate level of protection and must not be retained for longer than necessary for

the purposes for which it was collected. In addition, the GDPR requires companies processing personal data to take certain organizational steps to ensure that they have adequate records, policies, security, training and governance frameworks in place to ensure the protection of data subject rights, including as required to respond to complaints and requests from data subjects. In addition, to the extent a company processes, controls or otherwise uses 'special category' personal data (including patients' health or medical information, genetic information and biometric information), more stringent rules apply, further limiting the circumstances and the manner in which a company is legally permitted to process that data. Finally, GDPR provides a broad right for EU Member States to create supplemental national laws. Such laws, for example may relate to the processing of health, genetic and biometric data, which could further limit our ability to use and share such data or could cause our costs to increase and harm our business and financial condition.

The draft ePrivacy Regulation imposes strict opt-in marketing rules with limited exceptions for business-to-business communications, alters rules on third-party cookies, web beacons and similar technology and significantly increases penalties for breach of the rules. These laws are expected, when implemented, to alter rules on third-party cookies, web beacons and similar technology for online behavioral advertising and to impose stricter requirements on companies using these tools. Regulation of cookies and web beacons may lead to broader restrictions on online research activities, including efforts to understand users' internet usage.

We are also subject to evolving European laws on data export and electronic marketing. The rules on data export will apply when we transfer personal data to group companies or third parties outside of the EEA. For example, in 2015, the CJEU ruled that the U.S.-EU Safe Harbor framework, one compliance method by which companies could transfer personal data regarding citizens of the EU to the United States, was invalid and could no longer be relied upon. European and U.S. negotiators agreed in February 2016 to a new framework, the EU-US Privacy Shield framework, which replaced the Safe Harbor framework, however, on July 16, 2020 the CJEU also invalidated the Privacy Shield framework as a method to transfer personal data from the EEA to US. While the CJEU upheld the adequacy of the standard contractual clauses (a standard form of contract approved by the European Commission as an adequate personal data transfer mechanism, and potential alternative to the Privacy Shield), it made clear that reliance on them alone may not necessarily be sufficient in all circumstances; this has created uncertainty. These changes will require us to review and amend the legal mechanisms by which we make and/ or receive personal data transfers to/ in the U.S. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

The EU is in the process of replacing the e-Privacy Directive with a new set of rules taking the form of a regulation, which will be directly implemented in the laws of each European Member State, without the need for further enactment. The current draft of the e-Privacy Regulation imposes strict opt-in electronic marketing rules to business to business communications with limited exceptions and significantly increases fining powers to the same levels as GDPR, which is the greater of €20.0 million or 4% of total global annual revenue. While the e-Privacy Regulation was originally intended to be adopted on May 25, 2018 (alongside the GDPR), it is still going through the European legislative process and commentators now expect it to be adopted during the middle or second half of 2020.

We are subject to the supervision of local data protection authorities in those jurisdictions where we are established or collecting data from EU residents. We depend on a number of third parties in relation to our provision of our services, a number of which process personal data on our behalf. With each such provider we enter into contractual arrangements to ensure that they only process personal data according to our instructions, and that they have sufficient technical and organizational security measures in place. Where we transfer personal data outside the EEA, we do so in compliance with the relevant data export requirements. We take our data protection obligations seriously, as any improper, unlawful or accidental disclosure, loss, alternation or access to,

personal data, particularly sensitive personal data, such as special category, could adversely affect our business and/or our reputation.

We may find it necessary or desirable to join self-regulatory bodies or other privacy-related organizations, particularly relating to biopharmacy and/or scientific research that require compliance with certain rules pertaining to privacy and data security.

There are costs and administrative burdens associated with compliance with GDPR and the resultant changes in the EU and EEA Member States' national laws and the introduction of the e-Privacy Regulation once it takes effect. Any failure or perceived failure to comply with global privacy laws carries with it the risk of significant penalties and sanctions. These laws or new interpretations, enactments or supplementary forms of these laws, could create liability for us, could impose additional operational requirements on our business, and could affect the manner in which we use and transmit patient information and could increase our cost of doing business. Claims of violations of privacy rights or contractual breaches, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm our business.

Coverage and reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical, biological or medical device product. In the United States and markets in other countries, patients who are prescribed treatments or undergo procedures for their conditions and the providers performing the services generally rely on third-party payers to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products or related procedures. Sales of any products will therefore depend, in part, on the availability of coverage and adequate reimbursement from third-party payers. Third-party payers include government authorities, managed care organizations, private health insurers and other organizations.

The process for determining whether a third-party payer will provide coverage for a product typically is separate from the process for setting the price of such product or for establishing the reimbursement rate that the payer will pay for the product once coverage is approved. Third-party payers may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication, or place products at certain formulary levels that result in lower reimbursement levels and higher cost-sharing obligation imposed on patients. A decision by a third-party payer not to cover any of our products or product candidates could reduce physician utilization of such products and adversely affect our business, results of operations and financial condition. Moreover, a third-party payer's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development. Additionally, coverage and reimbursement for products can differ significantly from payer to payer. One third-party payer's decision to cover a particular medical product or service does not ensure that other payers will also provide coverage for the medical product or service, or will provide coverage at an adequate reimbursement rate. As a result, the coverage determination process will often require us to provide scientific and clinical support for the use of our products to each payer separately and can be a time-consuming process.

Third-party payers are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. Third-party payers may not consider our products to be medically necessary or cost-effective for certain indications or for all uses, and as a result, may not provide coverage for our products. In order to obtain and maintain coverage and reimbursement for our products and product candidates, we may need to conduct expensive clinical trials in order to demonstrate the medical necessity and cost-effectiveness of such products, in addition to the costs required to obtain regulatory approvals. If third-party payers do not consider a product to be cost-effective compared to other available therapies, they may not cover the product as a benefit under their plans or, if they do, the level of

payment may not be sufficient to allow a company to sell our products at a profit. Any changes in coverage and reimbursement that further restrict coverage of our products or lower reimbursement for procedures using our devices could materially affect our business. See “Risk factors—Risks related to our business—If we are unable to achieve and maintain adequate levels of coverage and/or reimbursement for our products, the procedures using our products, or any future products we may seek to commercialize, the commercial success of these products may be severely hindered.”

Outside of the United States, the pricing of medical devices and prescription pharmaceuticals is subject to governmental control in many countries. For example, in the EU, pricing and reimbursement schemes vary widely from country to country. Some countries provide that products may be marketed only after a reimbursement price has been agreed. Some countries may require the completion of additional studies that compare the cost-effectiveness of a particular therapy to currently available therapies or so called health technology assessments, in order to obtain reimbursement or pricing approval. Other countries may allow companies to fix their own prices for products, but monitor and control prescription volumes and issue guidance to physicians to limit prescriptions. Efforts to control prices and utilization of medical devices and pharmaceutical products could continue as countries attempt to manage healthcare expenditures, especially in light of the severe fiscal and debt crises experienced by many countries in the EU. There can be no assurance that any country that has price controls or reimbursement limitations for medical devices or pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products, if approved in those countries. See “Risk factors—Risks related to our business—Governments outside the United States may not provide coverage or reimbursement of our products, which may adversely affect our business, results of operations and financial condition.”

Exogen reimbursement and order fulfillment

Our Exogen system is classified as durable medical equipment, meaning the product is used by the patient in the home and that the patient and/or insurance company, rather than the physician, is billed for the product. We bill third-party payers, such as private insurance or Medicare, on behalf of our patients and bill the patient for their co-payment obligations and deductibles. An internal team and external consultants assist with billing and processing orders for our Exogen system and has been trained in verifying case-by-case benefits, obtaining prior authorization and billing and collecting payments from payers. We also have a separate dedicated team of employees that provides customer support services for our Exogen system.

We have strong and established payer relationships, including the largest private payers in the United States. Based on our estimates, we are contracted as a provider with payers covering over 200 million lives. These contracts allow patients to access our Exogen system at a competitive rate and copay comparable to other suppliers and easing our administrative burden in processing at both authorization and when billing. Our Exogen system is reimbursed under HCPCS code E0760.

Healthcare reform

Current and future legislative proposals to further reform healthcare or reduce healthcare costs may limit coverage for the procedures associated with the use of our products, or result in lower reimbursement for those procedures. The cost containment measures that payers and providers are instituting and the effect of any healthcare reform initiative implemented in the future could significantly reduce our revenues from the sale of our products. By way of example, the Affordable Care Act substantially changed healthcare financing and delivery by both governmental and private insurers and significantly impacted the pharmaceutical and medical device industries. The Affordable Care Act imposed, among other things, a new federal excise tax on the sale of certain medical devices, provided incentives to programs that increase the federal government’s comparative effectiveness research and implemented payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models. Since its enactment, there have been

judicial and Congressional challenges to certain aspects of the Affordable Care Act, including the permanent repeal of the federal excise tax on the sale of certain medical devices effective January 1, 2020. We expect there will be additional challenges and amendments to the Affordable Care Act in the future.

In addition, other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. On August 2, 2011, the Budget Control Act of 2011 was signed into law, which, among other things, included reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013, and, due to subsequent legislative amendments, will stay in effect through 2030 unless additional congressional action is taken. On January 2, 2013, the American Taxpayer Relief Act of 2012, was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals.

Moreover, payment methodologies may be subject to changes due to healthcare legislation and regulatory initiatives. For example, CMS may develop new payment and delivery models, such as bundled payment models. In addition, recently there has been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several U.S. Congressional inquiries and proposed and enacted federal legislation designed to, among other things, bring more transparency to drug pricing, reduce the cost of prescription drugs under Medicare and review the relationship between pricing and manufacturer patient programs. The Trump administration's budget proposal for fiscal year 2020 contained further drug price control measures that could be enacted in future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs.

Individual states in the United States have also increasingly passed legislation and implemented regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures and, in some cases, designed to encourage importation from other countries and bulk purchasing. In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs.

In the EU, similar political, economic and regulatory developments have occurred or are being contemplated. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or Member State level may result in significant additional requirements or obstacles that may increase operating costs. The delivery of healthcare in the EU, including the establishment and operation of health services and the pricing and reimbursement of medicines, is almost exclusively a matter for national, rather than EU, law and policy. National governments and health service providers have different priorities and approaches to the delivery of health care and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most EU Member States have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers.

We expect that additional foreign, state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our products or additional pricing pressure.

Employees

As of June 27, 2020, we had approximately 680 employees, none of whom were covered by collective bargaining agreements. Most of these employees are located in the United States with approximately 95 located outside the United States. We believe that our relations with our employees are generally good.

Facilities

Our principal executive offices are located on leased property in Durham, North Carolina. We also occupy leased office and manufacturing space in Cordova, Tennessee. In addition, our international operations occupy leased office spaces in Hoofddorp, Netherlands and Mississauga, Canada. We believe that our facilities are sufficient to meet our current needs and that suitable additional space will be available as and when needed on acceptable terms.

Legal proceedings

We are not currently a party to any material legal proceedings. We may at times be involved in litigation and other legal claims in the ordinary course of business. When appropriate in our estimation, we may record reserves in our financial statements for pending litigation and other claims.

MANAGEMENT

Executive officers, key employees and directors

The following table sets forth information regarding the individuals who have agreed to become our executive officers, key employees and directors upon the completion of this offering, as of the date of this prospectus:

Name	Age	Position(s)
Executive Officers		
Kenneth M. Reali	54	Chief Executive Officer and Director
Gregory O. Anglum	50	Senior Vice President and Chief Financial Officer
John E. Nosenzo	61	Chief Commercial Officer
Anthony D'Adamio	59	Senior Vice President and General Counsel
Katrina Church	59	Senior Vice President and Chief Compliance Officer
Alessandra Pavesio	53	Senior Vice President and Chief Science Officer
Non-Employee Directors		
William A. Hawkins	66	Director, Chairperson
Bradley J. Cannon	52	Director
Philip G. Cowdy	53	Director
Guido J. Neels	71	Director
Guy P. Nohra	60	Director
David J. Parker	59	Director
Martin P. Sutter	65	Director
Susan M. Stalnecker	67	Director

The following are biographical summaries and a description of the business experience of those individuals who serve as officers of Bioventus LLC. Upon the consummation of this offering, such individuals will serve in the same capacities at Bioventus Inc. The following also contains biographical summaries and a description of the business experience of those individuals who will serve as directors of Bioventus Inc.

Executive officers and directors

Kenneth M. Reali has served as our Chief Executive Officer since April 2020 and as a member of our board of directors since September 2020. Mr. Reali previously served as President and Chief Executive Officer of Clinical Innovations, LLC, a medical device company focused on advancing woman's healthcare, from June 2015 until its successful sale on February 12, 2020. In this role, Mr. Reali led the company through two successful acquisitions by a private equity firm in October 2017 and later to a leading diagnostic and therapeutic medical technology company in February 2020. Prior to joining Clinical Innovations, LLC, Mr. Reali also served as the President and CEO of Baxano Surgical, Inc., a medical device company, from January 2010 until February 2015, leading its turn-around out of bankruptcy. Mr. Reali also held positions of increasing responsibility at several medical device companies, including Biomet, Inc. (now known as Zimmer Biomet) and Stryker Corporation. Mr. Reali also served as Senior Vice President and General Manager within the Biologics and Clinical Therapies business of S+N from May 2005 to January 2010, a division which was later spun out to become Bioventus LLC. Mr. Reali has served as a member of the board of managers of Bioventus LLC since April 2020. Mr. Reali also currently serves as a member of the board of directors of Ossio, Ltd., an orthopedic medical device company, and the Advanced Medical Technology Association, or AdvaMed, an American medical device trade association. Mr. Reali also serves on the compensation committee of Ossio, Ltd. and the ethics and health care compliance committee of AdvaMed. Mr. Reali holds a Bachelor of Science in Business Administration from Valparaiso University.

We believe Mr. Reali is qualified to serve on our board of directors because of his vast skills and experience in the medical device industry, his role as our Chief Executive Officer and his extensive knowledge of the Company.

Gregory O. Anglum has served as our Senior Vice President and Chief Financial Officer since May 2017. Previously, Mr. Anglum served as our Chief Accounting Officer from April 2016 to May 2017. Prior to joining us, Mr. Anglum served as Chief Financial Officer of Overture Networks, Inc. (now known as ADVA Optical Networking SE), a leading global provider of networking and telecommunications equipment from September 2015 to April 2016. From December 2014 to September 2015, Mr. Anglum was Chief Financial Officer at StrikeIron, Inc., a Data-as-a-Service software company. From August 2004 to July 2014, Mr. Anglum was an audit partner at Grant Thornton LLP, or GT, where he also served as leader of the Raleigh office from August 2009 through July 2014 and was a member of the firm-wide leadership team for the technology industry group. Mr. Anglum holds a Master of Business Administration with a concentration in Accounting from Vanderbilt University's Owen Graduate School of Management and a Bachelors of Arts in Economics from Vanderbilt University and is a Certified Public Accountant.

John E. Nosenzo has served as our Chief Commercial Officer since February 2017. Prior to joining us, Mr. Nosenzo served as Senior Vice President, Global Customer Operations at Beckman Coulter Diagnostics, a global leader in clinical diagnostics, from September 2011 to February 2017. From May 2010 to September 2011, Mr. Nosenzo was Senior Vice President, Customer Relations Management for Siemens Healthcare (now known as Siemens Healthineers AG), a clinical diagnostic services and therapeutic systems company, where he developed and implemented sales plans for their multi-billion dollar healthcare imaging and healthcare IT commercial organizations. Mr. Nosenzo's earlier career also includes senior positions at Quest Diagnostics and Bayer Healthcare LLC's Diagnostics Division (now known as Siemens Healthcare Diagnostics). Mr. Nosenzo currently serves as a member of the board of directors of Spectral Medical Inc. Mr. Nosenzo holds a Master of Business Administration in marketing and management from Adelphi University and received his Bachelor of Science in pharmacy from St. John's University.

Anthony D'Adamio has served as our Senior Vice President and General Counsel since August 2017. Previously, Mr. D'Adamio was General Counsel and Secretary at Siemens Healthcare (now known as Siemens Healthineers AG) from January 2010 to August 2017 and served as Deputy General Counsel and Secretary of Siemens Healthcare Diagnostics from January 2007 to January 2010. Prior to that, Mr. D'Adamio was Senior Counsel within the Diagnostics Division of Bayer Healthcare LLC (now known as Siemens Healthcare Diagnostics) from January 2001 to December 2006. Mr. D'Adamio began his legal career at the law firm of Bond, Schoeneck & King before taking corporate legal positions with companies within the health insurance, pharmaceutical and biotechnology industries, including Group Health Incorporated, Quest Diagnostics and Covance Inc. Mr. D'Adamio holds a Juris Doctor, cum laude, from Howard University School of Law and a Bachelor of Arts from the State University of New York at Binghamton.

Katrina Church has served as our Chief Compliance Officer since August 2020. Prior to joining us, Ms. Church served in corporate counsel and compliance roles within the Merz Group of companies, most recently as Global Compliance Officer for Merz Pharma GmbH & Co KGaA, a privately-held pharmaceutical company, from March 2015 to August 2020. From June 1998 to December 2008, Ms. Church was Executive Vice President and General Counsel of Connetics Corporation, a specialty pharmaceutical company that was acquired by Stiefel Laboratories, Inc. in 2008. Ms. Church began her career as an attorney at Hopkins & Carley, a San Jose-based law firm. In 2020, Ms. Church was nominated for several industry awards for compliance training and received the 2020 Women in Compliance Award for "Most Impactful Compliance Training Programme of the Year" and the Brandon Hall 2020 Gold Medal for Excellence in Training. Ms. Church holds a Juris Doctor from New York University School of Law and a Bachelor of Arts in Comparative Literature, magna cum laude, from Duke University.

Alessandra Pavesio has served as our Senior Vice President and Chief Science Officer since August 2013. Previously, Ms. Pavesio managed the Boston University Coulter Translational Partnership, a foundation-

sponsored research program designed to enhance clinical impact and wealth creation through the development and transfer of innovative intellectual properties from university laboratories to commercial practice, from January 2012 to July 2013. From January 2010 to December 2011, Ms. Pavesio was Vice President of Research & Development at Anika Therapeutics, Inc., an integrated orthopedic medicines company. Prior to that, Ms. Pavesio served as Director of Research and Development at Fidia Advanced Biopolymers, s.r.l. (now known as Anika Therapeutics, Inc.), from May 1991 to December 2009. Ms. Pavesio is the co-author of numerous peer reviewed publications and more than 15 patented inventions on hyaluronan based and biologics technologies. In the European Union, she has also served as chairperson of international regenerative medicine technology platforms and government advisory councils on innovation. Ms. Pavesio holds a Master's degree in Medicinal Chemistry, magna cum laude, from the University of Turin in Italy.

Non-employee directors

William A. Hawkins has served as a member of our board of directors since September 2020 and was appointed Chairperson of our board of directors in September 2020. Mr. Hawkins is a Senior Advisor to EW Healthcare Partners, a leading private equity firm investing in life sciences. From October 2011 to July 2015, Mr. Hawkins served as President and Chief Executive Officer of Immucor, Inc., a leading provider of transfusion and transplantation diagnostic products worldwide. Prior to that, Mr. Hawkins served in positions of increasing responsibility at Medtronic, Inc., a prominent medical technology company, from January 2002 to June 2011, most recently serving as its Chief Executive Officer from November 2007 to June 2011. Mr. Hawkins served as President and Chief Executive Officer of Novoste Corporation, a global leader in the field of vascular brachytherapy, from 1988 to 2002 and has also held several senior leadership positions at American Home Products (now known as Wyeth, LLC), Johnson & Johnson, Guidant Corp. and Eli Lilly and Co. Mr. Hawkins has served as a member of the board of managers of Bioventus LLC since January 2016. Mr. Hawkins also currently serves on the board of directors of Avanos Medical, Inc., a public medical technology company; Biogen Inc. and MiMedx Group Inc., each a public biopharmaceutical company; and Asklepios BioPharmaceutical, Inc., Baebies, Inc., Cirtec Medical Corp., Immucor, Inc. and Virtue Labs, LLC, each a privately-held life science company. Mr. Hawkins was elected to the Duke University Board of Trustees in 2011 and currently serves as its Vice Chairman. Mr. Hawkins is also Chair of the Duke University Health System board of director and a member of the board of directors of the North Carolina Biotechnology Center and the Focused Ultrasound Foundation Society. Mr. Hawkins holds a Master of Business Administration from the University of Virginia Darden School of Business and received a Bachelor of Science in electrical and biomedical engineering from Duke University.

We believe Mr. Hawkins is qualified to serve on our board of directors because of his experience in and knowledge of the life science industry.

Bradley J. Cannon has served as a member of our board of directors since September 2020. Mr. Cannon is the President of Global Sports Medicine & Ear, Nose and Throat for S+N, a global medical technology business. Since joining S+N in December 2012, he has also served as Chief Marketing Officer, President of Europe and Canada and President of Global Orthopaedic Franchises. Prior to joining S+N, Mr. Cannon worked in Medtronic, Inc.'s Spine and Biologics division, most recently serving as Vice President of Global Commercial Operations from May 2011 to December 2012. Mr. Cannon has served as a member of the board of managers of Bioventus LLC since July 2018. Mr. Cannon holds a Master of Business Administration with a concentration in Marketing and Operations from The Wharton School of the University of Pennsylvania and received his Bachelor of Science in Biology from Washington and Lee University.

We believe Mr. Cannon is qualified to serve on our board of directors because of his experience in and knowledge of the orthopedic industry.

Philip G. Cowdy has served as a member of our board of directors since September 2020. Mr. Cowdy is the Chief Business Development and Corporate Affairs Officer for S+N. Since joining S+N in June 2008, he has also

served as Executive Vice President of Business Development and Corporate Affairs, Head of Corporate Affairs and Strategic Planning, Group Director of Corporate Affairs and Director of Investor Relations. Prior to joining S+N, Mr. Cowdy served as a Senior Director at Deutsche Bank for 13 years, providing corporate finance and equity capital markets advice to a variety of UK-based companies. Mr. Cowdy is currently a member of the board of managers of Bioventus LLC, which he has served on from January 2012 to October 2017 and again from July 2018, and he has served as a member of the Audit, Compliance and Quality Committee. Mr. Cowdy received his Bachelor of Science in Natural Sciences from Durham University (UK) and is a qualified chartered accountant.

We believe Mr. Cowdy is qualified to serve on our board of directors because of his experience in the industry, his finance experience, and his knowledge of the Company.

Guido J. Neels has served as a member of our board of directors since September 2020. Mr. Neels has been with Essex Woodlands since August 2006, where he is now an Operating Partner. Prior to joining Essex Woodlands, Mr. Neels served in a variety of management positions at Guidant Corporation, a developer of cardiovascular medical products. From July 2004 until retiring in November 2005, Mr. Neels served as Guidant's Chief Operating Officer, where he was responsible for the global operations of Guidant's four operating units: Cardiac Rhythm Management, Vascular Intervention, Cardiac Surgery and Endovascular Solutions. From December 2002 to July 2004, Mr. Neels served as Guidant's Group Chairman, Office of the President, responsible for worldwide sales operations, corporate communications, corporate marketing, investor relations and government relations. In January 2000, Mr. Neels was named Guidant's President, Europe, Middle East, Africa and Canada. In addition, Mr. Neels served as Guidant's Vice President, Global Marketing, Vascular Intervention, from 1996 to 2000 and as Guidant's General Manager, Germany and Central Europe, from 1994 to 1996. Mr. Neels has served as a member of the board of managers of Bioventus LLC since May 2012. Mr. Neels also currently serves on the board of directors of Axogen, Inc. and also is a member of its compensation committee. Mr. Neels previously served on the board of directors of Endologix, Inc. from December 2010 to June 2019 and on the board of directors of Entellus Medical from November 2009 to February 2018, each of which is a public company. Mr. Neels holds a Master in Business Administration from the Stanford University Graduate School of Business and received his Business Engineering degree from the University of Leuven in Belgium.

We believe that Mr. Neels is qualified to serve on our board of directors because of his experience in the industry, familiarity with serving on the boards of public companies and his knowledge of our business.

Guy P. Nohra has served as a member of our board of directors since September 2020. In March 1996, Mr. Nohra co-founded Alta Partners, a life sciences venture capital firm, and he has since been involved in the funding and development of numerous medical technology and life sciences companies. Mr. Nohra is currently a member of the board of managers of Bioventus LLC, which he has served on since May 2012, and serves as the Chair of the Compensation Committee. Mr. Nohra currently serves as a member of the boards of directors of several private life sciences companies, including Bionure, Inc., Sanifit Therapeutics S.A. and Spiral Therapeutics, Inc. He also previously served on the board of directors of various public companies, including ATS Medical, Inc., Cutera, Inc., AcelRx Pharmaceuticals, Inc., and ZS Pharma, as well as several private companies, including Carbylan Biosurgery, Inc., Cerenis Therapeutics, Coapt Systems, Paracor Medical, Inc. and PneumRx. Mr. Nohra holds a Master in Business Administration from the University of Chicago and received his Bachelor of Arts in History from Stanford University.

We believe Mr. Nohra is qualified to serve on our board because of his extensive experience in the life sciences industry, his investment and development experience, and his service as a director of other life sciences companies.

David J. Parker has served as a member of our board of directors since September 2020. Mr. Parker has been a General Partner at Ampersand Capital Partners since November 2010, a private equity firm with

$800.0 million of capital under management, which he joined in September 1994. Prior to joining Ampersand Capital Partners, Mr. Parker served as a management consultant at Bain & Company and Mercer Management Consulting, where he provided strategy and operations consulting services to clients in the healthcare, transportation, consumer products and telecommunications sectors. Mr. Parker is currently a member of the board of managers of Bioventus LLC, which he has served on since May 2012, and serves on the Audit, Compliance and Quality Committee. Mr. Parker also currently serves as a director of Genome Diagnostics B.V., or GenDx, MedPharm Ltd. And Tjoapack Holdings B.V. Mr. Parker also serves on the remuneration committees of both GenDx and MedPharm and the audit committee of GenDx. Mr. Parker holds a Master of Business Administration in Finance from The Wharton School of the University of Pennsylvania and received his Bachelor of Arts in Government and Economics from Dartmouth College.

We believe Mr. Parker is qualified to serve on our board because of his extensive experience in the life sciences industry, his finance and investment experience, and his service as a director of other life sciences companies.

Martin P. Sutter has served as a member of our board of directors since September 2020. Mr. Sutter is one of the two founding Managing Directors of EW Healthcare Partners (previously known as Essex Woodlands), one of the oldest and largest life sciences and healthcare focused venture capital firms, which he formed in 1994. Mr. Sutter has more than 30 years of management experience in operations, marketing, finance and venture capital. Mr. Sutter has served as a member of the board of managers of Bioventus LLC since May 2012. Mr. Sutter also currently serves on the board of directors of Abiomed, Inc., a publicly traded biopharmaceutical company, MiMedx Group, Inc., a publicly traded medical devices company, and Prolacta Biosciences, Inc., a privately held life sciences company. Mr. Sutter has also previously served on the board of directors of Tissue Tech, Inc., Suneva Medical, Inc. and QSpex Technologies, Inc. Mr. Sutter currently serves on the compensation and nominating and governance committees of both Abiomed, Inc. and MiMedx Group, Inc. Mr. Sutter holds a Master of Business Administration from the University of Houston and received his Bachelor of Science from Louisiana State University.

We believe Mr. Sutter is qualified to serve on our board because of his extensive experience in the life sciences industry, his investment experience, and his service as a director of other life sciences companies.

Susan M. Stalnecker has served as a member of our board of directors since September 2020. Ms. Stalnecker has been a Senior Advisor at Boston Consulting Group, a global management consulting firm, since March 2016. Ms. Stalnecker served as Vice President of E.I. duPont de Nemours and Co. (now known as DuPont de Nemours, Inc., or DuPont), a public company engaged primarily in biotechnology and the manufacture of chemicals and pharmaceuticals, from December 1976 until she retired in 2016. During her nearly 40-year career at DuPont, Ms. Stalnecker served in several senior leadership roles including Vice President, Treasurer & M&A; Vice President, Risk Management; Vice President, Government and Consumer Markets; and Vice President, Productivity & Shared Services. Ms. Stalnecker has served as a member of the board of managers of Bioventus LLC since November 2018. Ms. Stalnecker also currently serves on the board of directors of Leidos Holding, Inc. and Optimum Funds McQuairie, and serves on the Board of Trustees of the Duke Health System. She also serves on the audit & finance committee of Leidos Inc., the audit committee of Optimum Funds McQuairie and the compliance, audit & finance committee of the Duke Health System. Ms. Stalnecker holds a Master of Business Administration from The Wharton School of the University of Pennsylvania and received her Bachelor of Arts from Duke University.

We believe Ms. Stalnecker is qualified to serve on our board because of her extensive experience as a financial expert, her investment experience, and her service as a director of other public companies.

Corporate governance

Composition of our board of directors

Our business and affairs are managed under the direction of our board of directors. We currently have nine directors. Our amended and restated certificate of incorporation and bylaws will provide for the division of our board of directors into three classes, as nearly equal in number as possible, with the directors in each class serving for a three-year term, and one class being elected each year by our stockholders. Prior to the offering each of , , , , , , and , will join our board of directors.

When considering whether directors and nominees have the experience, qualifications, attributes or skills, taken as a whole, to enable our board of directors to satisfy its oversight responsibilities effectively in light of our business and structure, the board of directors focuses primarily on each person's background and experience as reflected in the information discussed in each of the directors' individual biographies set forth above. We believe that our directors provide an appropriate mix of experience and skills relevant to the size and nature of our business.

In accordance with our amended and restated certificate of incorporation and the Stockholders Agreement, each of which will be in effect upon the closing of this offering, our board of directors will be divided into three classes with staggered three year terms. At each annual meeting of stockholders after the initial classification, the successors to the directors whose terms will then expire will be elected to serve from the time of election and qualification until the third annual meeting following their election. Our directors will be divided among the three classes as follows:

- the Class I directors will be Messrs. , and , and their terms will expire at the annual meeting of stockholders to be held in ;
- the Class II directors will be Messrs. , and , and their terms will expire at the annual meeting of stockholders to be held in ; and
- the Class III directors will be Messrs. , and , and their terms will expire at the annual meeting of stockholders to be held in .

Any increase or decrease in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. This classification of our board of directors may have the effect of delaying or preventing changes in control of our Company.

Director independence

Prior to the consummation of this offering, our board of directors undertook a review of the independence of our directors and considered whether any director has a material relationship with us that could compromise that director's ability to exercise independent judgment in carrying out that director's responsibilities. Our board of directors has determined that, except as described below with respect to Kenneth M. Reali, all of the members of each of the board's three standing committees are independent as defined under the rules of Nasdaq, including, in the case of all members of the audit committee, except , the independence requirements contemplated by Rule 10A-3 under the Exchange Act.

Board committees

Our board has established four standing committees—audit, compliance and ethics, compensation, and nominating and corporate governance—each of which operates under a charter that has been approved by our board of directors. Current copies of each committee's charter are posted on our website, *www.bioventus.com*. The information on any of our websites is deemed not to be incorporated in this prospectus or to be part of this prospectus.

Following this offering, the Voting Group, which will hold Class A common stock and Class B common stock collectively representing a majority of the combined voting power of our total common stock outstanding, intends to enter into the Stockholders Agreement to elect the nominees of certain members of the Voting Group to our board of directors. See "Description of capital stock—Stockholders Agreement." As a result, we will be a "controlled company" under Nasdaq governance standards. As a controlled company, exemptions under the standards will mean that we are not required to comply with certain corporate governance requirements, including the following requirements:

- that a majority of our board of directors consists of "independent directors," as defined under the Nasdaq rules;
- that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- for an annual performance evaluation of the nominating and governance committee and compensation committee.

These exemptions do not modify the independence requirements for our audit committee, and we intend to comply with the applicable requirements of the Sarbanes-Oxley Act and rules with respect to our audit committee within the applicable time frame.

Audit committee

The audit committee will be responsible for, among other matters:

- appointing, compensating, retaining, evaluating, terminating and overseeing our independent registered public accounting firm;
- discussing with our independent registered public accounting firm their independence from management;
- reviewing with our independent registered public accounting firm the scope and results of their audit;
- approving all audit and permissible non-audit services to be performed by our independent registered public accounting firm;
- overseeing the financial reporting process and discussing with management and our independent registered public accounting firm the interim and annual financial statements that we file with the SEC;
- reviewing and monitoring our accounting principles, accounting policies, financial and accounting controls and compliance with legal and regulatory requirements;
- overseeing the Company's cybersecurity policies, processes and controls; and
- establishing procedures for the confidential anonymous submission of concerns regarding questionable accounting, internal controls or auditing matters.

Upon the closing of this offering, our audit committee will consist of , and , with serving as chair. Rule 10A-3 of the Exchange Act and the Nasdaq rules require us to have one independent audit committee member upon the listing of our common stock, a majority of independent directors on our audit committee within 90 days of the date of this prospectus and an audit committee composed entirely of independent directors within one year of the date of this prospectus. Our board of directors has affirmatively determined that and meet the definition of "independent director" for purposes of serving on an audit committee under Rule 10A-3 and the Nasdaq rules, and we intend to comply with the other independence requirements within the time periods specified. In addition, our board of directors has determined that will qualify as an "audit committee financial expert," as such term is defined in Item 407(d)(5) of Regulation S-K.

Compensation committee

The compensation committee's responsibilities include:

- reviewing and approving the compensation of our directors, Chief Executive Officer and other executive officers; and
- appointing and overseeing any compensation consultants.
- Upon the closing of this offering, our compensation committee will consist of , and , with serving as chair. As a controlled company, we will rely upon the exemption from the requirement that we have a compensation committee composed entirely of independent directors.

Compliance, ethics and culture committee

The compliance committee's responsibilities include:

- overseeing and monitoring the implementation of a Global Compliance Program, including our Code of Compliance and Ethics, and related compliance policies and procedures; and
- overseeing the activities of the Company's Chief Compliance Officer.
- Upon the closing of this offering, our compliance committee will consist of , and , with serving as chair.

Nominating and corporate governance committee

The nominating and corporate governance committee's responsibilities include:

- identifying individuals qualified to become members of our board of directors, consistent with criteria approved by our board of directors; and
- developing and recommending to our board of directors a set of corporate governance guidelines and principles.

The members of our nominating and corporate governance committee are , and , with serving as chair. As a controlled company, we will rely upon the exemption from the requirement that we have a nominating and corporate governance committee composed entirely of independent directors.

Risk oversight

Our board of directors is responsible for overseeing our risk management process. Our board of directors focuses on our general risk management strategy, the most significant risks facing us, and oversees the implementation of risk mitigation strategies by management. Our board of directors is also apprised of particular risk management matters in connection with its general oversight and approval of corporate matters and significant transactions.

Risk considerations in our compensation program

We conducted an assessment of our compensation policies and practices for our employees and concluded that these policies and practices are not reasonably likely to have a material adverse effect on us.

Compensation committee interlocks and insider participation

During fiscal 2019, the members of Bioventus LLC's compensation committee were Bradley J. Cannon, Guido J. Neels and Guy P. Nohra. No member of our compensation committee is or has been a current or former

officer or employee of Bioventus or had any related person transaction involving Bioventus. None of our executive officers served as a director or a member of a compensation committee (or other committee serving an equivalent function) of any other entity, one of whose executive officers served as a director or member of Bioventus LLC's compensation committee during fiscal 2019.

Code of compliance and ethics

Prior to the completion of this offering, we will adopt a written code of compliance and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We will post a current copy of the code on our website, *www.bioventus.com*. In addition, we intend to post on our website all disclosures that are required by law or Nasdaq listing standards concerning any amendments to, or waivers from, any provision of the code. The information on any of our websites is deemed not to be incorporated in this prospectus or to be part of this prospectus.

EXECUTIVE COMPENSATION

This section discusses the material components of the executive compensation program for our executive officers who are named in the "2019 Summary compensation table" below. In 2019, our "named executive officers" and their positions were as follows:

- Anthony P. Bihl III, Chief Executive Officer;
- Gregory O. Anglum, Senior Vice President & Chief Financial Officer;
- John E. Nosenzo, Senior Vice President & Chief Commercial Officer;
- Anthony D'Adamio, Senior Vice President & General Counsel; and
- Alessandra Pavesio, Senior Vice President & Chief Science Officer.

Mr. Kenneth Reali became Chief Executive Officer and a member of the Bioventus LLC board of managers, effective as of April 13, 2020, in connection with Mr. Bihl's retirement on April 19, 2020.

2019 Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the year ended December 31, 2019.

Name and Principal Position	Year	Salary ($)(1)	Non-Equity Incentive Plan Compensation ($)(2)	All Other Compensation ($)(3)	Total ($)
Anthony P. Bihl III	2019	684,979	552,910	23,561	1,261,450
Chief Executive Officer					
Gregory O. Anglum	2019	374,019	143,479	22,386	539,884
Senior Vice President & Chief Financial Officer					
John E. Nosenzo	2019	490,219	295,322	22,584	808,125
Senior Vice President & Chief Commercial Officer					
Anthony D'Adamio	2019	391,106	150,016	22,584	563,706
Senior Vice President & General Counsel					
Alessandra Pavesio	2019	398,165	160,693	21,000	579,858
Senior Vice President & Chief Science Officer					

(1) Amounts reflect annual base salary earned with respect to 2019.

(2) Amounts reflect the annual performance-based cash incentives earned by our named executive officers in 2020 based on achievement of corporate and personal performance objectives as set forth in the 2019 Executive Annual Incentive Plan – Non Commercial or the 2019 Executive Annual Incentive Plan – Chief Commercial Officer, as applicable,. For a discussion of the determination of these amounts, please review the section entitled "—Narrative disclosure to summary compensation table—2019 Incentive Bonuses" below.

(3) Amounts reflect (a) $2,561 benefit stipend to Mr. Bihl (b) $8,400, $8,400, $8,400, $8,400 and $8,400 in matching 401(k) contributions made by us to the 401(k) accounts of Messrs. Bihl, Anglum, Nosenzo, D'Adamio and Ms. Pavesio, respectively, (c) additional fixed non-elective contributions of $12,600, $12,600, $12,600, $12,600 and $12,600 made by us to the 401(k) accounts of Messrs. Bihl, Anglum, Nosenzo, D'Adamio and Ms. Pavesio, respectively, and (d) reimbursement of cellular telephone expenses to Messrs. Anglum, Nosenzo, and D'Adamio equal to $1,386, $1,584 and $1,584, respectively.

Narrative to Summary Compensation Table

Employment Letters

The terms of Mr. Bihl's prior employment are documented in his offer letter dated November 4, 2013. The current terms of employment for Messrs. Anglum, Nosenzo, D'Adamio and Ms. Pavesio are documented in their employment letters dated August 2, 2017, November 18, 2016, July 11, 2017 and June 13, 2013 respectively. Pursuant to their respective employment letters, Mr. Bihl was hired to serve as the Chief Executive Officer, Mr. Anglum was promoted on August 7, 2017 to serve as the Chief Financial Officer (after serving as the interim Chief Financial Officer effective May 1, 2017), Mr. Nosenzo was hired to serve as Chief Commercial Officer, Mr. D'Adamio was hired to serve as Senior Vice President and General Counsel and Ms. Pavesio was hired to serve as Chief Science Officer. Mr. Bihl also served as a member of the Bioventus LLC board of managers until his retirement on April 19, 2020. In connection with this offering, we intend to enter into new employment agreements with our current Chief Executive Officer, Mr. Kenneth Reali, as well as Messrs. Anglum, Nosenzo, D'Adamio, and Ms. Pavesio.

2019 Salaries

The named executive officers were entitled to receive a base salary in 2019 to compensate them for services rendered to us (which, in the case of Mr. Bihl, was characterized for tax purposes as a guaranteed payment to a partner). The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the named executive officer's skill set, experience, role and responsibilities. The annual base salaries payable to Messrs. Bihl, Anglum, Nosenzo, D'Adamio and Ms. Pavesio as of December 31, 2019, were $691,629, $378,525, $496,125, $393,975 and $401,560 respectively, all of which reflect merit increases in April 2019. Effective as of the commencement of his employment with us on April 13, 2020, the annual base salary payable to Mr. Reali was $615,000.

2019 Incentive Bonuses

With respect to their services in 2019, Messrs. Bihl, Anglum, D'Adamio and Ms. Pavesio were eligible to earn an annual performance-based cash bonus pursuant to the 2019 Executive Annual Incentive Plan – Non Commercial, or the Non Commercial AIP, and Mr. Nosenzo was eligible to earn an annual performance-based cash bonus pursuant to the 2019 Executive Annual Incentive Plan – Chief Commercial Officer, or the Commercial AIP. Bonuses earned by our named executive officers under both the Non Commercial AIP and Commercial AIP were based upon weighted threshold, target and maximum achievement of both business and personal performance measures. The Non Commercial AIP objective business measures in 2019 were (1) Global Revenue, (2) Adjusted Global EBITDA and (3) OA treatment achievements, including completion of a signed development agreement for amniotic tissue product for treatment of OA, product and process design freeze completion, development of a GTP compliant product ready for commercial launch by Q4, approval of a commercial launch plan in Q4 and submission of an IND to the FDA, while the Commercial AIP objective business measures were (1) Global Revenue and (2) Adjusted Global EBITDA . The personal performance standards were based on the named executive officers' performance ratings.

Mr. Bihl's target incentive for 2019 was 100% of his annual base salary; Mr. Nosenzo's was 75% of his annual base salary; and Messrs. Anglum, D'Adamio and Ms. Pavesio's was 50% of their respective annual base salaries.

Payouts for the objective business measures under the Non Commercial AIP and the Commercial AIP ranged from 50% to 200% of the applicable objective business measure target for achievement of minimum or maximum performance results, respectively. The personal performance component of the award amount ranged from a 0% to a 200% payout. We expect the targets for future incentives for each of our named executives officers to generally remain the same pursuant to their expected new employment agreements.

Of the targeted objective business measures for the Non Commercial AIP, we achieved 73% of Global Revenue, 66% of Adjusted Global EBITDA and 75% of OA treatment goals. Mr. Bihl and Ms. Pavesio achieved 120% of their targeted individual performance. Messrs. Anglum and D'Adamio achieved 100% of their targeted individual performance. Of the targeted objective business measures for the Commercial AIP, we achieved 73% of Global Revenue and 66% of Adjusted Global EBITDA. Mr. Nosenzo achieved 120% of his targeted individual performance. The actual amount of the performance-based cash incentives earned by each named executive officer, paid in 2020, with respect to 2019 performance is set forth above in the Summary Compensation Table in the columns entitled "Non-equity incentive plan compensation".

Equity-Based Compensation

We currently maintain the Bioventus LLC profits interest plan, which we call the Management Incentive Plan or the MIP, pursuant to which we granted 333,330 profits interest units of Bioventus LLC, or Profits Interest Units, to Mr. Bihl on December 2, 2013. In connection with Mr. Bihl's retirement, we redeemed or plan to redeem all of his Profits Interest Units as described below under "—Severance." On and following the date of this offering, no further awards will be made under the MIP.

We also currently maintain the Bioventus Phantom Profits Interest Plan, which was renamed the Bioventus Stock Plan on June 1, 2020, and which we call the Phantom Plan, pursuant to which we granted phantom plan units, or Phantom Units, which entitle the holder to a cash payment, in an amount determined by reference to the value of our Profits Interest Units, with respect to any vested Phantom Units upon the earlier of a termination from service or a change in control. In the event of a change in control prior to a termination, all Phantom Units fully vest. In connection with this offering, we intend to terminate the Phantom Plan and settle all awards thereunder 12 months following such termination. We expect that, in connection with the Phantom Plan termination, Bioventus Inc. will assume obligations of Bioventus LLC and that Phantom Plan awards will be paid in the form of shares of Class A common stock. The number of shares of Class A common stock received by each participant, including our named executive officers, will be determined by dividing the participant's account balance as of the date of plan termination by the initial public offering price of Class A common stock. To the extent that a Phantom Plan award is not otherwise vested as of the date the Phantom Plan is terminated, payment will be subject to the holder's continued employment with us through the applicable vesting date or the twelve month anniversary of plan termination, if earlier. On and following the date of this offering, no further awards will be made under the Phantom Plan.

Each of our named executive officers holds Phantom Plan awards in Bioventus LLC as set forth below.

On April 21, 2016, Mr. Bihl was granted an award of 38,618 Phantom Units, with respect to which he received payment in full, in accordance with the Phantom Plan, upon his retirement as described below under "—Severance."

On July 22, 2013, Ms. Pavesio was granted 83,333 Phantom Units, and on June 1, 2015, Ms. Pavesio was granted an additional 15,000 Phantom Units, all of which are fully vested. Ms. Pavesio also was granted 11,392 Phantom Units on April 21, 2016, of which 20% vested on December 31, 2016, and an additional 5% was eligible to vest each quarter thereafter.

On April 4, 2016, Mr. Anglum was granted 20,000 Phantom Units, and on May 1, 2017, in connection with his transition to the role of Chief Financial Officer, he received an additional grant of 95,000 Phantom Units.

On February 6, 2017, Mr. Nosenzo was granted 125,000 Phantom Units.

On August 14, 2017, Mr. D'Adamio was granted 40,000 Phantom Units.

The Phantom Plan awards granted to each of Messrs. Anglum, Nosenzo and D'Adamio in 2016 and 2017 vested with respect to 20% of the Phantom Units on the first anniversary of the date of grant, and were eligible to vest with respect to an additional 5% of the Phantom Units each quarter thereafter.

In addition, on September 17, 2018, Messrs. Bihl, Anglum, Nosenzo, D'Adamio and Ms. Pavesio were granted, respectively, an additional 25,000, 20,000, 25,000, 15,000 and 20,000 Phantom Units, which are eligible to vest on June 1, 2021 at 100% if 2020 revenue is greater than or equal to $391.8 million and at 75% if 2020 revenue is greater than or equal to $336.0 million, subject to adjustment and/or discretionary vesting for achievement of lesser or greater revenue, as determined appropriate by our board of managers. Any such Phantom Units that do not vest based on 2020 revenue will expire. Mr. Bihl's 25,000 Phantom Units were unvested, and were forfeited, in connection with his retirement in April 2020.

On June 25, 2020, in connection with the commencement of his employment with us, Mr. Reali was granted 417,804 Phantom Units, 20% of which are eligible to vest on April 13, 2021, and 5% of which are eligible to vest each quarter thereafter.

In addition, on July 30, 2020, Mr. Reali was granted a fully-vested option to purchase up to 5,935 common units or profits interests of Bioventus LLC or an equivalent number of any newly-issued equity interests of any successor entity having the same rights, preferences and limitations as such units, at a per-unit price of $42.12 at any time prior to July 30, 2021 (or the termination of his service, if earlier).

New Equity-Based Compensation

In connection with the offering, we intend to terminate the Phantom Plan and to adopt a new incentive award plan in order to facilitate the grant of cash and equity incentives to our non-employee directors, employees (including our named executive officers) and consultants and employees and consultants of our subsidiaries and to enable our Company and our subsidiaries to obtain and retain the services of these individuals, which is essential to our long-term success. We expect that the plan will be effective prior to this offering, subject to approval of such plan by our stockholders. In connection with this offering, we intend to grant awards with respect to shares of Class A common stock under such plan to certain of our employees, including our named executive officers. For additional information about the new incentive award plan and the intended grants to be made under such plan in connection with this offering, please see the section titled "New incentive arrangements—2020 Incentive award plan" below.

Severance

The employment letters in effect as of December 31, 2019 for each of our named executive officers provide for severance payments upon termination of employment by us at any time without cause (other than as a result of death or disability) or a termination by the named executive officer for good reason (as defined below) during the two year period following the date of a change in control (as defined in the respective employment letter). In the event of a termination by us without cause, each of our named executive officers would be entitled to receive (1) twelve months' base salary, payable in a lump sum within 60 days following termination of employment, (2) 100% of their respective target annual cash incentive, payable within 60 days following termination of employment, and (3) payment of COBRA premiums for the first twelve months of coverage following termination of employment. In the event of a termination by Messrs. Anglum, Nosenzo, D'Adamio and Ms. Pavesio for good reason during the two-year period following a change in control, Messrs. Anglum, Nosenzo, D'Adamio and Ms. Pavesio would be entitled to receive the same severance payments and benefits as in the case of termination by us without cause. In the event of a termination by Mr. Bihl for good reason during the two-year period following a change in control, under his employment letter Mr. Bihl would have been entitled to receive enhanced severance equal to 24 months of each of his base salary and his target annual cash incentive, each payable in a lump sum on or about 60 days following termination of employment, as well as payment of COBRA premiums for the first 12 months of coverage following termination of employment. The severance payments are conditioned upon execution and delivery of a release and compliance with confidentiality and restrictive covenant obligations as set forth in a separate proprietary information agreement.

Subsequent to his retirement, we entered into an agreement with Mr. Bihl on June 12, 2020, pursuant to which he received a payment on June 16, 2020 of $9.25 million, which represented payment in full for amounts

due to Mr. Bihl under the Phantom Plan and payment for the redemption of 150,252 of his Profits Interest Units under the MIP, and pursuant to which he is entitled to receive a payment with respect to the remainder of his MIP award on or before June 16, 2021 in an amount equal to the greater of (a) $7.71 million and (b) the fair market value of such remaining MIP award as of the date of payment, as well as an additional cash payment of $1.54 million. We retained the right to accelerate the June 16, 2021 payments by paying Mr. Bihl the amounts due on an earlier date, and we anticipate accelerating such payments in connection with this offering. Mr. Bihl did not receive severance or other benefits upon his voluntary resignation from the company.

The employment letter entered into with Mr. Reali, dated March 12, 2020, in connection with the commencement of his employment with us on April 13, 2020 provides for the same terms as the named executive officers in connection with a termination by us without cause and provides that, in the event of a termination by Mr. Reali for good reason during the two-year period following a change in control, Mr. Reali would be entitled to enhanced severance equal to 18 months of each of his base salary and his target annual cash incentive, each payable in a lump sum within 60 days following termination of employment, as well as payment of COBRA premiums for the first 18 months of coverage following termination of employment. The severance payments are conditioned upon execution and delivery of a release and compliance with confidentiality and restrictive covenant obligations as set forth in a separate proprietary information agreement.

In connection with this offering, we expect to enter into new employment agreements with each of Messrs. Anglum, Nosenzo, D'Adamio, Reali and Ms. Pavesio that will supersede their existing severance arrangements. For purposes of the existing employment letters, "cause" is defined generally as the occurrence of any one of the following events by a named executive officer, and, with respect to Mr. Bihl, without full cure of such event within 30 days of written notice provided by the board of managers of Bioventus LLC: (a) conviction (including a guilty plea or plea of nolo contendere) of any felony or any other crime involving fraud, violence or dishonesty, (b) commission of or participation in a fraud or act of dishonesty or misrepresentation against Bioventus LLC, (c) violation of any written and fully executed contract or agreement between the named executive officer and Bioventus LLC, including without limitation, breach of the restrictive covenants agreement, (d) gross negligence or willful misconduct, (e) continued and substantial failure to perform applicable duties or (f) violation of any material policies, practices or procedures of Bioventus LLC; and "good reason" is defined generally as the occurrence of any one of the following events without either express prior written consent or full cure within 30 days of written notice provided to Bioventus LLC and, within the two-year period following the date of a change in control: (i) a material diminution of duties or responsibilities, (ii) a material reduction in salary, other than for across-the-board reductions similarly affecting all senior executive officers, (iii) the relocation of the named executive officer's principal office, or principal place of employment, to a location more than 50 miles from the location of the principal office or place of business as of the effective date of the employment letter, or (iv) a failure to pay earned compensation to the named executive officer.

Restrictive Covenants

Our named executive officers and Mr. Reali are subject to certain post-employment restrictive covenants, including twelve-month non-competition and non-solicitation obligations, as set forth in proprietary information agreements entered into with each named executive officer. Further, the employment letters for each of our named executive officers and Mr. Reali provide for mutual non-disparagement obligations.

Retirement Plans

Bioventus LLC currently maintains a 401(k) retirement savings plan, or the 401(k) plan, in which all Bioventus LLC employees, including our named executive officers, who satisfy certain eligibility requirements may participate. The Internal Revenue Code allows eligible employees to defer a portion of their compensation, within prescribed limits, on a pre-tax basis through contributions to the 401(k) plan. Under the terms of the 401(k) plan, we currently make (a) non-discretionary matching contributions equal to 50% of the employee's contributions, up to a maximum of 6% of the employee's eligible compensation and (b) a non-elective

contribution equal to 4.5% of the employee's compensation for the plan year. Due to the COVID-19 crisis, we have suspended the 4.5% non-elective contribution effective May 3, 2020 with plans to reinstate the benefit effective December 26, 2020. Further, our board of managers has discretion under the 401(k) plan to provide for (i) annual discretionary matching contributions based on eligible compensation contributed by each employee and (ii) discretionary non-elective contributions in an amount determined by the board at year end, subject to continued employment through year end. We believe that providing a vehicle for tax-deferred retirement savings though the 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies. Following the consummation of this offering, we anticipate that our employees will continue to be eligible to participate in a 401(k) plan maintained by us.

Employee Benefits

All of our full-time employees and working partners, including our named executive officers, are eligible to participate in health and welfare plans maintained by Bioventus LLC, including:

- medical, dental and vision benefits;
- medical flexible spending accounts and health savings account;
- short-term and long-term disability insurance;
- basic life and accidental death & dismemberment insurance; and
- group accident, critical illness and hospital indemnity plans.

Our named executive officers participate in these plans on the same basis as other eligible employees. We do not maintain any supplemental health and welfare plans for our named executive officers. We reimburse our named executive officers for the full cost of their personal cellular phones. We believe the benefits described above are necessary and appropriate to provide a competitive compensation package to our named executive officers.

Section 280G

The employment letters for Messrs. Reali, Anglum and D'Adamio provide that in the case of their receipt of any payments in connection with a change in control (as defined in the employment letter), or that would otherwise be considered an "excess parachute payment" within the meaning of Section 280G of the Code, such payments will be reduced to the maximum amount that does not trigger the excise tax imposed by Section 4999 of the Code if Messrs. Reali, Anglum and D'Adamio would be better off on a net after-tax basis with such reduction.

Retention Plan

On April 13, 2020, we initiated a retention plan with Mr. Nosenzo for $520,000 less applicable taxes. A payment of $260,000 will be paid on each of May 4, 2021 and May 4, 2022, subject to Mr. Nosenzo's continued service through each such date; provided that if Mr. Nosenzo's employment is terminated for a reason that would qualify Mr. Nosenzo for severance benefits under his offer letter (x) before the May 4, 2021 payment date he will receive $260,000 in a single lump sum within 60 days following termination of employment and (y) after the May 4, 2021 payment date but before the May 4, 2022 payment date he will receive $260,000 in a lump sum within 60 days following the termination date. Any such payments are in addition to any severance benefits under Mr. Nosenzo's offer letter.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the number of profits interest units underlying Phantom Units for our named executive officers as of December 31, 2019. For additional information about the outstanding equity awards granted to our named executive officers, please see the section titled "Equity-based compensation" above.

		Number of profits interest units underlying Phantom Units (#)		
Name	Grant Date	Vested(1)	Unvested(1) (7)	Market Value(8) of Unvested Units
Anthony P. Bihl III	4/21/2016	30,894(2)	7,724(2)	268,241
	9/17/2018	—(2)	25,000(2)	558,250
Gregory O. Anglum	4/04/2016	14,000(3)	6,000(3)	208,380
	5/01/2017	47,500(3)	47,500(3)	1,543,275
	9/17/2018	—(3)	20,000(3)	446,600
John E. Nosenzo	2/06/2017	68,750(4)	56,250(4)	1,827,563
	9/17/2018	—(4)	25,000(4)	558,250
Anthony D'Adamio	8/14/2017	18,000(5)	22,000(5)	714,780
	9/17/2018	—	15,000(5)	334,950
Alessandra Pavesio	7/22/2013	83,333(6)	—(6)	—
	6/1/2015	15,000(6)	—(6)	—
	4/21/2016	9,114(6)	2,278(6)	79,129
	9/17/2018	—(6)	20,000(6)	446,600

(1) These columns show the number of Phantom Units granted to our named executive officers. Phantom Units generally represent the right to receive cash amounts from us based on the distributions that would be made to an equivalent number of profits interests with an equivalent benchmark amount. The benchmark amounts represent the cumulative distributions that must be made by us pursuant to the Bioventus LLC Agreement before a grantee is entitled to receive any distributions or payments in respect of such grantee's units. The benchmark amount for Ms. Pavesio's 2013 Phantom Units is $231,372,549, for Ms. Pavesio's 2015 Phantom Units is $344,898,596, for Messrs. Bihl's and Anglum's and Ms. Pavesio's 2016 grant of Phantom Units is $472,003,000, for Messrs. Nosenzo, Anglum, and D'Adamio's 2017 grant is $510,000,000 and for Messrs. Bihl, Anglum, Nosenzo and D'Adamio's and Ms. Pavesio's 2018 grant of Phantom Units is $703,691,178.

(2) Mr. Bihl was granted 38,618 Phantom Units on April 21, 2016; 20% of such Phantom Units vested on December 31, 2016 and 5% vests each quarter thereafter. Mr. Bihl was also granted 25,000 Phantom Units on September 17, 2018; these units would have been eligible to vest on June 1, 2021 based on our achievement of revenue targets for 2020. Mr. Bihl's 2018 Phantom Units were forfeited in connection with his retirement in April 2020.

(3) Mr. Anglum was granted 20,000 Phantom Units on April 4, 2016 and 95,000 Phantom Units on May 1, 2017; 20% of each grant vested on the first anniversary of the grant date and 5% vests each quarter thereafter. Mr. Anglum was also granted 20,000 Phantom Units on September 17, 2018; these units will vest on June 1, 2021 at 100% if 2020 revenue is greater than or equal to $391.8 million and at 75% if 2020 revenue is greater than or equal to $336.0 million.

(4) Mr. Nosenzo was granted 125,000 Phantom Units on February 6, 2017; 20% of these Phantom Units vested on February 6, 2018 and 5% vests each quarter thereafter. Mr. Nosenzo was also granted 25,000 Phantom Units on September 17, 2018; these units will vest on June 1, 2021 at 100% if 2020 revenue is greater than or equal to $391.8 million and at 75% if 2020 revenue is greater than or equal to $336.0 million.

(5) Mr. D'Adamio was granted 40,000 Phantom Units on August 14, 2017; 20% of such grant vested on the first anniversary of the grant date and 5% vests each quarter thereafter. Mr. D'Adamio was also granted 15,000 Phantom Units on September 17, 2018; these units will vest on June 1, 2021 at 100% if 2020 revenue is greater than or equal to $391.8 million and at 75% if 2020 revenue is greater than or equal to $336.0 million.

(6) Ms. Pavesio was granted 83,333 Phantom Units on July 22, 2013; 20% of such grant vested on the first anniversary of the grant date and 5% vested each quarter thereafter. Ms. Pavesio was also granted 15,000 Phantom Units on June 1, 2015 which vested on June 1, 2018 at 100% if the 2017 409A enterprise valuation (as reflected in the report issued in Q1 2018) was equal to or greater than $740 million, at 50% if the 2017 409A enterprise valuation was equal to or greater than $690 million but less than $740 million and at 0% if the 2017 409A enterprise valuation was less than $690 million. Ms. Pavesio's Phantom Units vested at 100% based on the 2017 409A enterprise valuation achieved. Ms. Pavesio was also granted 11,392 Phantom Units on April 21, 2016; 20% of such Phantom Units vested on December 31, 2016 and 5% vest each quarter thereafter. Ms. Pavesio was also granted 20,000 Phantom Units on September 17, 2018; these units will vest on June 1, 2021 at 100% if 2020 revenue is greater than or equal to $391.8 million and at 75% if 2020 revenue is greater than or equal to $336.0 million.

(7) The Phantom Units do not have an expiration date; provided that any Phantom Units granted on September 17, 2018 that do not vest as a result of achieving 2020 revenue targets on June 1, 2021 will expire.

(8) Market value is determined based on an independent valuation report on the fair market value of the Company.

Director Compensation

The following table sets forth information concerning the compensation of Mr. William A. Hawkins, and Ms. Susan M. Stalnecker, the current members of the Bioventus LLC board of managers, for the year ended December 31, 2019.

Name	Year	Fees Earned or Paid in Cash ($)(1)	Total ($)(2)
William A. Hawkins(3)	2019	90,000	90,000
Susan M. Stalnecker(3)	2019	60,000	69,167
Guy P. Nohra	2019	—	—
Martin P. Sutter	2019	—	—
Bradley J. Cannon	2019	—	—
David J. Parker	2019	—	—
Philip G. Cowdy	2019	—	—
Guido J. Neels	2019	—	—

(1) Mr. Hawkins received an annual retainer of $40,000 for his service as a member of the board and an additional annual retainer fee of $50,000 for his service as chairman of the board. Ms. Stalnecker received an annual retainer fee of $50,000 for her service as a member of the board and an additional annual retainer fee of $10,000 for her service on the audit committee of the board. No other members of our board received any cash compensation in 2019.

(2) No members of our board received equity compensation awards in 2019.

(3) As of December 31, 2019, Mr. Hawkins held 50,000 Phantom Units, 75% of which were vested and 25% of which were unvested, and Ms. Stalnecker held 50,000 Phantom Units, 20% of which were vested and 80% of which were unvested, respectively. The benchmark amount for Mr. Hawkins's grant of Phantom Units is $472,003,000 and the benchmark amount for Ms. Stalnecker's grant of Phantom Units is $703,691,178.

In connection with our December 11, 2015 offer to Mr. Hawkins to join the Bioventus LLC board of managers as its chairman, we agreed, pursuant to an offer letter, effective January 1, 2016, to (1) pay Mr. Hawkins an annual retainer fee of $40,000 for his service as a member of the board and $50,000 for his service as chairman of the board, each payable in quarterly instalments in arrears and pro-rated for any partial period of service and (2) award Mr. Hawkins a one-time grant of 50,000 Phantom Units under the Phantom Plan.

Effective November 28, 2018, pursuant to an offer letter with Ms. Stalnecker providing for her appointment as a member of our board and chair of the audit committee, we agreed to (1) pay Ms. Stalnecker an annual

retainer fee of $50,000 for her service as a member of the board and $10,000 for her participation in the audit committee, each payable in quarterly installments in arrears and pro-rated for any partial period of service and (2) award Ms. Stalnecker 50,000 Phantom Units under the Phantom Plan. Ms. Stalnecker received a prorated payment of $9,167 for her time on the board and as chair of the audit committee in 2018.

In connection with this offering, we intend to adopt a compensation policy that, effective upon the closing of this offering, will be applicable to all of our non-employee directors. The material terms of the non-employee director compensation policy will be summarized in a subsequent filing.

New Incentive Arrangements

2020 Incentive Award Plan

In connection with the offering, we intend to adopt the Plan subject to approval by our stockholders, under which we may grant cash and equity incentive awards to eligible service providers in order to attract, motivate and retain the talent for which we compete. The material terms of the Plan will be summarized in a subsequent filing.

New Equity Awards

In connection with this offering, we intend to grant stock options with respect to shares of Class A common stock under the Plan to certain of our employees, including our named executive officers, or the Offering Grants. The Offering Grants are expected to vest over time, subject to continued employment. No determination has been made as to the types or amounts of awards that will be granted to specific individuals pursuant to the Plan.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2017 to which we have been a party in which the amount involved exceeds $120,000 and in which any of our directors, executive officers or beneficial holders of more than 5% of our Class A common stock, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest.

Each agreement described below is filed as an exhibit to the registration statement of which this prospectus forms a part, and the following descriptions are qualified by reference to such agreements.

Compensation arrangements for our directors and named executive officers are described in this prospectus under the section entitled “Executive compensation.”

Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation and our amended and restated bylaws, each of which will be effective upon the closing of this offering, will provide that we will indemnify our directors and officers to the fullest extent permitted under Delaware law, which prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of the director’s duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Our amended and restated certificate of incorporation and our amended and restated bylaws will also provide that if Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will also provide that we shall have the power to indemnify our employees and agents to the fullest extent permitted by law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether we would have the power to indemnify such person against such expense, liability or loss under the General Corporation Law of the State of Delaware. We have obtained directors’ and officers’ liability insurance.

In connection with this offering, we intend to enter into separate indemnification agreements with our directors and executive officers, in addition to indemnification provided for in our amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by this person in any action or proceeding arising out of this person’s services as a director or executive officer or at our request. We believe that these provisions in our amended and restated certificate of incorporation and amended and restated bylaws and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers.

The above description of the indemnification provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is not complete and is qualified in its entirety by reference to these documents, each of which is filed as an exhibit to this registration statement to which this prospectus forms a part.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

Tax Receivable Agreement

We expect to obtain an increase in our share of the tax basis of the assets of Bioventus LLC when (as described below under "—Bioventus LLC Agreement—LLC Interest Redemption Right") the Continuing LLC Owner receives shares of our Class A common stock or, if we and the Continuing LLC Owner agree, cash in connection with an exercise of the Continuing LLC Owner's right to have its LLC Interests redeemed by Bioventus LLC or, at the election of Bioventus Inc., directly exchanged (such basis increases, together with the basis increases resulting from certain distributions (or deemed distributions) from Bioventus LLC, or the Basis Adjustments. We intend to treat such redemptions or exchanges of LLC Interests as the direct purchase of LLC Interests by Bioventus Inc. from the Continuing LLC Owner for U.S. federal income and other applicable tax purposes, regardless of whether such LLC Interests are surrendered by the Continuing LLC Owner to Bioventus LLC for redemption or sold to Bioventus Inc. upon the exercise of our election to acquire such LLC Interests directly. A Basis Adjustment may have the effect of reducing the amounts that we would otherwise pay in the future to various tax authorities. The Basis Adjustments may also decrease gains (or increase losses) on future dispositions of certain capital assets to the extent tax basis is allocated to those capital assets.

In connection with the transactions described above, we will enter into the Tax Receivable Agreement with the Continuing LLC Owner. The Tax Receivable Agreement will provide for our payment to the Continuing LLC Owner of 85% of the amount of tax benefits, if any, that we actually realize, or in some circumstances are deemed to realize, as a result of any Basis Adjustments and certain other tax benefits arising from payments under the Tax Receivable Agreement. Bioventus LLC will have in effect an election under Section 754 of the Code effective for each taxable year in which a redemption or exchange (including deemed exchange) of LLC Interests for shares of our Class A common stock or cash occurs. These Tax Receivable Agreement payments are not conditioned upon any continued ownership interest in either Bioventus LLC or us by the Continuing LLC Owner. The rights of the Continuing LLC Owner under the Tax Receivable Agreement are assignable to transferees of its LLC Interests (other than Bioventus Inc. as transferee pursuant to subsequent redemptions (or exchanges) of the transferred LLC Interests). We expect to benefit from the remaining 15% of tax benefits, if any, that we may actually realize.

The actual Basis Adjustments, as well as any amounts paid to the Continuing LLC Owner under the Tax Receivable Agreement, will vary depending on a number of factors, including:

- *the timing of any subsequent redemptions or exchanges*—for instance, the increase in any tax deductions will vary depending on the fair value, which may fluctuate over time, of the depreciable or amortizable assets of Bioventus LLC at the time of each redemption or exchange;
- *the price of shares of our Class A common stock at the time of redemptions or exchanges*—the Basis Adjustments, as well as any related increase in any tax deductions, is directly related to the price of shares of our Class A common stock at the time of each redemption or exchange;
- *the extent to which such redemptions or exchanges are taxable*—if a redemption or exchange is not taxable for any reason, increased tax deductions will not be available; and

- *the amount and timing of our income*—the Tax Receivable Agreement generally will require Bioventus Inc. to pay 85% of the tax benefits as and when those benefits are treated as realized under the terms of the Tax Receivable Agreement. Except as discussed below in cases of (i) a material breach of a material obligation under the Tax Receivable Agreement, (ii) a change of control or (iii) an early termination of the Tax Receivable Agreement, if Bioventus Inc. does not have taxable income, it will generally not be required to make payments under the Tax Receivable Agreement for that taxable year because no tax benefits will have been realized. However, any tax benefits that do not result in realized tax benefits in a given taxable year may generate tax attributes that may be utilized to generate tax benefits in future taxable years. The utilization of any such tax attributes will result in payments under the Tax Receivable Agreement.

For purposes of the Tax Receivable Agreement, cash savings in income tax will be computed by comparing Bioventus Inc.'s actual income tax liability to the amount of such taxes that it would have been required to pay had there been no Basis Adjustments and had the Tax Receivable Agreement not been entered into. The Tax Receivable Agreement will generally apply to each of our taxable years, beginning with the first taxable year ending after the consummation of the offering. There is no maximum term for the Tax Receivable Agreement; however, the Tax Receivable Agreement may be terminated by us pursuant to an early termination procedure that requires us to pay the Continuing LLC Owner an agreed upon amount equal to the estimated present value of the remaining payments to be made under the agreement (calculated based on certain assumptions, including regarding tax rates and utilization of the Basis Adjustments).

The payment obligations under the Tax Receivable Agreement are obligations of Bioventus Inc. and not of Bioventus LLC. Although the actual timing and amount of any payments that may be made under the Tax Receivable Agreement will vary, we expect that the payments that we may be required to make to the Continuing LLC Owner could be significant. Any payments made by us to the Continuing LLC Owner under the Tax Receivable Agreement will generally reduce the amount of overall cash flow that might have otherwise been available to us or to Bioventus LLC and, to the extent that we are unable to make payments under the Tax Receivable Agreement for any reason, the unpaid amounts generally will be deferred and will accrue interest until paid by us. Decisions made by us in the course of running our business, such as with respect to mergers, asset sales, other forms of business combinations or other changes in control, may influence the timing and amount of payments that are received by the Continuing LLC Owner under the Tax Receivable Agreement. For example, the earlier disposition of assets following a transaction that results in a Basis Adjustment will generally accelerate payments under the Tax Receivable Agreement and increase the present value of such payments. We anticipate funding ordinary course payments under the Tax Receivable Agreement from distributions from Bioventus LLC out of distributable cash, to the extent permitted by our agreements governing our indebtedness. See "Certain relationships and related party transactions—Bioventus LLC Agreement."

The Tax Receivable Agreement provides that if (i) we materially breach any of our material obligations under the Tax Receivable Agreement, (ii) certain mergers, asset sales, other forms of business combination, or other changes of control were to occur, on or before December 31, 2021 or (iii) we elect an early termination of the Tax Receivable Agreement, then our obligations, or our successor's obligations, under the Tax Receivable Agreement would be based on certain assumptions, including an assumption that we would have sufficient taxable income to fully utilize all potential future tax benefits that are subject to the Tax Receivable Agreement. The Tax Receivable Agreement also provides that in the case of certain mergers, asset sales, other forms of business combination or other changes of control occurring on or after December 31, 2021, payments under the Tax Receivable Agreement would be based on certain assumptions, including an assumption that in each taxable year ending on or after the change of control, we would have taxable income equal to the greater of (A) actual taxable income for such taxable year and (B) the product of (x) four and (y) the highest taxable income in any of the four fiscal quarters ended prior to the change in control (increased by 10% for each taxable year beginning with the second taxable year following the change in control), in each case, as adjusted to take into account our actual percentage ownership in Bioventus LLC for the taxable year for which the tax benefit payment is being determined.

As a result of the foregoing, (i) we could be required to make cash payments to the Continuing LLC Owner that are greater than the specified percentage of the actual benefits we ultimately realize in respect of the tax benefits that are subject to the Tax Receivable Agreement, and (ii) if we materially breach any of our material obligations under the Tax Receivable Agreement or if we elect to terminate the Tax Receivable Agreement early, we would be required to make an immediate cash payment equal to the present value of the anticipated future tax benefits that are the subject of the Tax Receivable Agreement, which payment may be made significantly in advance of the actual realization, if any, of such future tax benefits. In these situations, our obligations under the Tax Receivable Agreement could have a material adverse effect on our liquidity and could have the effect of delaying, deferring or preventing certain mergers, asset sales, other forms of business combination, or other changes of control. There can be no assurance that we will be able to finance our obligations under the Tax Receivable Agreement. We may elect to completely terminate the Tax Receivable Agreement early only with the written approval of a majority of our directors other than any directors that have been appointed or designated by the Continuing LLC Owner or any of such person's affiliates.

Payments under the Tax Receivable Agreement will be based on the tax reporting positions that we determine. Pursuant to the Tax Receivable Agreement, the Continuing LLC Member is required to reimburse us for cash payments previously made to it pursuant to the Tax Receivable Agreement if any tax benefits actually realized by us are subsequently challenged by a taxing authority and ultimately disallowed. In addition, but without duplication of any amounts previously reimbursed by the Continuing LLC Owner, any excess cash payments made by us to the Continuing LLC Owner will be netted against any future cash payments that we might otherwise be required to make under the terms of the Tax Receivable Agreement. However, a challenge to any tax benefits actually realized by us may not arise for a number of years following the initial time of such payment and we might not determine that we have effectively made an excess cash payment to the Continuing LLC Owner for a number of years following the initial time of such payment. Moreover, there can be no assurance that any excess cash payments for which the Continuing LLC Owner has a reimbursement obligation under the Tax Receivable Agreement will be repaid to us. As a result, it is possible that we could make cash payments under the Tax Receivable Agreement that are substantially greater than our actual cash tax savings. The applicable U.S. federal income tax rules are complex and factual in nature, and we cannot assure you that the IRS or a court will not disagree with our tax reporting positions. We will have full responsibility for, and sole discretion over, all Bioventus' and Bioventus LLC's tax matters, including the filing and amendment of all tax returns and claims for refund and defense of all tax contests, subject to certain participation and approval rights held by the Continuing LLC Owner.

Payments are generally due under the Tax Receivable Agreement within a specified period of time following the filing of our tax return for the taxable year with respect to which the payment obligation arises, although interest on such payments will begin to accrue at a rate of LIBOR plus 100 basis points from the due date (without extensions) of such tax return and ending on the date that such payments are required to be made under the terms of the Tax Receivable Agreement. Any late payments that may be made under the Tax Receivable Agreement will continue to accrue interest at LIBOR plus 500 basis points from the due date of such payments under the Tax Receivable Agreement until such payments are made, including any late payments that we may subsequently make because we did not have enough available cash to satisfy our payment obligations at the time at which they originally arose, including as a result of restrictions on payments to our equity owners in the agreements governing our indebtedness.

Bioventus LLC Agreement

We will operate our business through Bioventus LLC and its subsidiaries. In connection with the completion of this offering, we and the Continuing LLC Owner will enter into Bioventus LLC's second amended and restated limited liability company agreement, which we refer to as the "Bioventus LLC Agreement." The operations of Bioventus LLC, and the rights and obligations of the holders of LLC Interests, will be set forth in the Bioventus LLC Agreement.

Appointment as Manager

Under the Bioventus LLC Agreement, we will become a member and the sole manager of Bioventus LLC. As the sole manager, we will be able to control all of the day-to-day business affairs and decision-making of Bioventus LLC. As such, we, through our officers and directors, will be responsible for all operational and administrative decisions of Bioventus LLC and the day-to-day management of Bioventus LLC's business. Pursuant to the terms of the Bioventus LLC Agreement, we cannot, under any circumstances, be removed as the sole manager of Bioventus LLC except by our election.

Compensation

We will not be entitled to compensation for our services as manager. We will be entitled to reimbursement or capital contribution credit by Bioventus LLC for fees and expenses incurred on behalf of Bioventus LLC, including all expenses associated with this offering and maintaining our corporate existence.

Distributions

The Bioventus LLC Agreement will require "tax distributions" to be made by Bioventus LLC to its members, as that term is defined in the agreement. Tax distributions will be made to members on a pro rata basis, including us, in an amount sufficient to allow us to pay our taxes and our obligations under the Tax Receivable Agreement (as described above under "—Tax Receivable Agreement"). The Bioventus LLC Agreement will also allow for distributions to be made by Bioventus LLC to its members on a pro rata basis out of "distributable cash," as that term is defined in the agreement. We expect Bioventus LLC may make distributions out of distributable cash periodically to the extent permitted by our agreements governing our indebtedness and necessary to enable us to cover our operating expenses and other obligations, including our tax liability and obligations under the Tax Receivable Agreement, as well as to make dividend payments, if any, to the holders of our Class A common stock.

LLC Interest Redemption Right

The Bioventus LLC Agreement will provide a redemption right to the Continuing LLC Owner which will entitle it to have its LLC Interests redeemed, at its election, for newly-issued shares of our Class A common stock on a one-for-one basis or a cash payment equal to a volume weighted average market price of one share of Class A common stock for each LLC Interest redeemed (subject to customary adjustments, including for stock splits, stock dividends and reclassifications). If the Continuing LLC Owner elects to receive a cash payment, we may elect to settle such redemption with Class A common stock in lieu of a cash payment, provided that if we elect to do so, the Continuing LLC Owner has the option to rescind its redemption request within a specified time period. Upon the exercise of the redemption right, the redeeming member will surrender its LLC Interests to Bioventus LLC for cancellation. The Bioventus LLC Agreement will require that we contribute cash or shares of our Class A common stock to Bioventus LLC in exchange for an amount of newly-issued LLC Interests in Bioventus LLC that will be issued to us equal to the number of LLC Interests redeemed from the Continuing LLC Owner. Bioventus LLC will then distribute the cash or shares of our Class A common stock to the Continuing LLC Owner to complete the redemption. In the event of such a redemption election by the Continuing LLC Owner, Bioventus Inc. may effect a direct exchange of cash or Class A common stock for such LLC Interests in lieu of such a redemption. Whether by redemption or exchange, we will be obligated to ensure that at all times the number of LLC Interests that we own equals the number of shares of Class A common stock issued by us (subject to certain exceptions for treasury shares and shares underlying certain convertible or exchangeable securities).

Indemnification

The Bioventus LLC Agreement will provide for indemnification of the manager, members and officers of Bioventus LLC and their respective subsidiaries or affiliates.

Stockholders Agreement

Substantially concurrent with the closing of this offering, the Voting Group, which will hold Class A common stock or Class B common stock representing approximately % of the combined voting power of our Class A and Class B common stock, intends to enter into the Stockholders Agreement.

Voting Agreement

Pursuant to the terms of the Stockholders Agreement, Essex Woodlands Health Ventures, Spindletop Healthcare Capital, Pantheon Global, Ampersand Capital and Alta Partners, as members of the Voting Group, whom we refer to as the Essex Members, collectively will have the right to designate up to three individuals to be included in the slate of nominees recommended by our board of directors. S+N, as the other member of the Voting Group, will have the right to designate up to two individuals to be included in the slate of nominees recommended by our board of directors. The number of individuals that the Essex Members and S+N may designate will decrease if they dispose of certain percentages of the shares of our Class A common stock or Class B common stock, as applicable, that they own on the date this offering is consummated. At such time as the Essex Members or S+N own less than % of the shares of Class A common stock or Class B common stock that they owned on the date this offering is consummated, the Essex Members or S+N, as the case may be, will no longer have designation rights under the Stockholders Agreement. Until such time, or if the Stockholders Agreement is otherwise terminated in accordance with its terms, the parties to the Stockholders Agreement will agree to vote their shares of Class A common stock and Class B common stock in favor of the election of the nominees of the Essex Members and S+N to our board of directors upon their nomination by the nominating and corporate governance committee of our board of directors.

Voting Group Approvals

Under the Stockholders Agreement, any increase or decrease in the size of our board of directors or any committee, and any amendment to our organizational documents, will in each case require the approval of the Essex Members, for so long as the Essex Members collectively owns at least % of the total shares of our Class A common stock owned by them as of the date this offering is consummated, and will also require the approval of S+N and its affiliates, for so long as S+N and its affiliates own at least % of the total shares of our Class B common stock owned by them as of the date this offering is consummated.

Registration Rights Agreement

We intend to enter into the Registration Rights Agreement with the Original LLC Owners in connection with this offering. The Registration Rights Agreement will provide the Original LLC Owners certain registration rights whereby, at any time following our initial public offering and the expiration of any related lock-up period, the Continuing LLC Owner can require us to register under the Securities Act shares of Class A common stock issuable to it upon, at our election, redemption or exchange of its LLC Interests, and the Former LLC Owners can require us to register under the Securities Act the shares of Class A common stock issued to them in connection with the Transactions. The Registration Rights Agreement will also provide for piggyback registration rights for the Original LLC Owners.

Kenneth M. Reali Option Agreement

In July 2020, we entered into an agreement with our CEO, Ken Reali, providing him an option to acquire 5,935 units in Bioventus LLC at a price of $42.12 per unit. Upon joining and accepting the role of CEO, Mr. Reali expressed his desire to make a personal investment in our company. The terms of Mr. Reali’s agreement provide for an option period of 12 months and is priced at the Bioventus LLC’s 409A valuation from April 2020. This agreement was reviewed and approved by the Compensation Committee and ratified by our entire board of managers.

Policies and Procedures for Related Party Transactions

Our board of directors will adopt a written related person transaction policy, to be effective upon the closing of this offering, setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy will cover, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant, where the amount involved exceeds $120,000 in any fiscal year and a related person had, has or will have a direct or indirect material interest, including without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person.

In reviewing and approving any such transactions, our audit committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction and the extent of the related person's interest in the transaction. All of the transactions described in this section occurred prior to the adoption of this policy. In connection with the review and approval or ratification of a related person transaction, management must disclose to the audit committee or disinterested directors, as applicable, the name of the related person and the basis on which the person is a related person, the material terms of the related person transaction, including the approximate dollar value of the amount involved in the transaction, and all the material facts as to the related person's direct or indirect interest in, or relationship to, the related person transaction. Management must advise the audit committee or disinterested directors, as applicable, as to whether the related person transaction complies with the terms of our agreements governing our material outstanding indebtedness that limit or restrict our ability to enter into a related person transaction, and whether the related person transaction will be required to be disclosed in our applicable filings under the Securities Act or the Exchange Act, and related rules, and, to the extent required to be disclosed, management must ensure that the related person transaction is disclosed in accordance with such Acts and related rules. Management must advise the committee or disinterested directors, as applicable, as to whether the related person transaction constitutes a "personal loan" for purposes of Section 402 of the Sarbanes-Oxley Act.

PRINCIPAL STOCKHOLDERS

The following table presents information as to the beneficial ownership of our Class A common stock and Class B common stock, after the consummation of the Transactions, including this offering, for:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our Class A common stock or our Class B common stock;
- each named executive officer;
- each of our directors; and
- all executive officers and directors as a group.

As described in "Transactions" and "Certain relationships and related party transactions," the Continuing LLC Owner will be entitled to have its LLC Interests redeemed for Class A common stock on a one-for-one basis, or, if Bioventus Inc. and the Continuing LLC Owner agree, cash equal to the market value of the applicable number of our shares of Class A common stock. In addition, at Bioventus' election, Bioventus may effect a direct exchange of such Class A common stock or such cash (if mutually agreed) for such LLC Interests in lieu of such a redemption. In connection with this offering, we will issue to the Continuing LLC Owner one share of Class B common stock for each LLC Interest it owns. As a result, the number of shares of Class B common stock listed in the table below correlates to the number of LLC Interests the Continuing LLC Owner will own immediately prior to and after this offering (but after giving effect to the Transactions other than this offering). See "Transactions."

The number of shares beneficially owned by each stockholder as described in this prospectus is determined under rules issued by the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options, or other rights, including the redemption right described above, held by such person that are currently exercisable or will become exercisable within 60 days of , are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless otherwise indicated, the address of each of the individuals and entities named below is c/o Bioventus Inc., 4721 Emperor Boulevard, Suite 400, Durham, NC 27703. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name of Beneficial Owner	Shares of Class A Common Stock Beneficially Owned		Shares of Class B Common Stock Beneficially Owned		Total Common Stock Beneficially Owned
	Number	Percentage	Number	Percentage	Percentage
5% Stockholders					
Essex Woodlands Health Ventures(1)		%	—	*	%
S+N(2)		%		%	%
Spindletop Healthcare Capital L.P.(3)		%	—	*	%
Pantheon Global Co-Investment Opportunities Fund L.P.(4)		%	—	*	%
Ampersand Capital(5)		%	—	*	%
Alta Partners VIII, L.P.(6)		%	—	*	%
Named Executive Officers and Directors					
Kenneth M. Reali	—	*	—	*	*
Gregory O. Anglum	—	*	—	*	*
John E. Nosenzo	—	*	—	*	*

Name of Beneficial Owner	Shares of Class A Common Stock Beneficially Owned		Shares of Class B Common Stock Beneficially Owned		Total Common Stock Beneficially Owned
	Number	Percentage	Number	Percentage	Percentage
William A. Hawkins	—	*	—	*	*
Bradley J. Cannon	—	*	—	*	*
Philip G. Cowdy	—	*	—	*	*
Guido J. Neels	—	*	—	*	*
Guy P. Nohra	—	*	—	*	*
David J. Parker	—	*	—	*	*
Martin P. Sutter	—	*	—	*	*
Susan M. Stalnecker					
All directors and executive officers as a group (11 persons)	—	*	—	*	*%

* Represents beneficial ownership of less than 1%.

(1) Represents shares held by Essex Woodlands Health Ventures Fund VIII, L.P., Essex Woodlands Health Ventures Fund VIII-A, L.P. and Essex Woodlands Health Ventures Fund VIII-B, L.P., which we collectively refer to as the "Essex Stockholders." Essex Woodlands Health Ventures VIII, L.P., a Delaware limited partnership, is the general partner of each of the Essex Stockholders and is referred to as the "Partnership," and Essex Woodlands Health Ventures VIII, LLC, a Delaware limited liability company, is the general partner of the Partnership and is referred to as the "General Partner." James L. Currie, Martin P. Sutter, Immanuel Thangaraj, Petri Vainio, Jeff Himawan, Ron Eastman, Guido Neels and Steve Wiggins are the managers of the General Partner, and each is referred to as a "Manager" and collectively as the "Managers." The Partnership is deemed to have sole voting and dispositive power with respect to the shares held by each of the Essex Stockholders. The Managers are deemed to have shared voting and dispositive power with respect to the shares held by each of the Essex Stockholders by unanimous consent and through the Partnership. Each Manager disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. The address of the Essex Stockholders is 21 Water Way Avenue, Suite 225, The Woodlands, Texas 77380.

(2) Represents shares held by Smith & Nephew, Inc. and Smith & Nephew OUS, Inc., which we collectively refer to as the "S+N Stockholders." The address of the S+N Stockholders is 7135 Goodlett Farms, Cordova, Tennessee 38106. The S+N Stockholders are U.S. based subsidiaries of Smith & Nephew plc, which is a United Kingdom based public company listed on the London Stock Exchange with American Depositary Receipts traded on the New York Stock Exchange.

(3) Represents shares held by Spindletop Healthcare Capital L.P. Evan Melrose is the Manager of the General Partner of the General Partner of Spindletop Healthcare Capital L.P. and may be deemed to have shared voting and dispositive power with respect to the shares held by Spindletop Healthcare Capital L.P. The address of Spindletop Healthcare Capital L.P. is 3571 Far West Blvd., PMB #108, Austin, Texas 78731.

(4) Represents shares held by Pantheon Global Co-Investment Opportunities Fund L.P. David Braman, Susan Long McAndrews and Lily Wong are directors of Pantheon Global Co-Investment Opportunities GP Limited, the general partner of Pantheon Global Co-Investment Opportunities Fund, L.P. and make the investment and voting decisions with respect to shares held by of Pantheon Global Co-Investment Opportunities Fund, L.P. The address of Pantheon Global Co-Investment Opportunities Fund L.P. is 600 Montgomery Street, 23rd Floor, San Francisco, CA 94111.

(5) Represents shares held by Ampersand 2006 Limited Partnership 1 and Ampersand 2011 Limited Partnership which we collectively refer to as the "Ampersand Capital Stockholders." Richard A. Charpie and Herbert H. Hooper, the Managing Members of the General Partner of the General Partner of each of the Ampersand Capital Stockholders, may be deemed to have shared voting and dispositive power with respect to shares held by Ampersand 2006 Limited Partnership. The address of the Ampersand Capital Stockholders is in care of Ampersand Capital Partners, 55 William Street, Suite 240, Wellesley, Massachusetts 02481,

(6) Represents shares held by Alta Partners VIII, L.P. Alta Partners Management VIII, LLC is the general partner of Alta Partners VIII, L.P. Guy Nohra, Daniel Janney and Farah Champsi are managing directors of Alta Partners Management VIII, LLC and exercise shared voting and investment powers with respect to the shares owned by Alta Partners VIII, L.P. Each of the reporting persons disclaims beneficial ownership of such shares, except to the extent of their proportionate pecuniary interest therein, if any. The principal business address of Alta Partners VIII, L.P. is One Embarcadero Center, 37th Floor San Francisco, CA 94111.

DESCRIPTION OF CAPITAL STOCK

The following descriptions of our capital stock and provisions of our amended and restated certificate of incorporation, and our bylaws, each of which will be in effect prior to the completion of this offering, are summaries and are qualified by reference to the amended and restated certificate of incorporation and the bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part.

Our current authorized capital stock consists of shares of Common Stock, par value $ per share. As of the consummation of this offering, our authorized capital stock will consist of shares of Class A common stock, par value $, shares of Class B common stock, par value $ per share, and shares of preferred stock.

Common Stock

As of the consummation of this offering, there will be shares of our Class A common stock issued and outstanding, and shares of our Class B common stock issued and outstanding.

Class A Common Stock

Voting Rights

Holders of our Class A common stock will be entitled to cast one vote per share. Holders of our Class A common stock will not be entitled to cumulate their votes in the election of directors. Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all holders of Class A common stock and Class B common stock present in person or represented by proxy, voting together as a single class. Except as otherwise provided by law, amendments to the amended and restated certificate of incorporation must be approved by a majority or, in some cases, a super-majority of the combined voting power of all shares of Class A common stock and Class B common stock, voting together as a single class.

Dividend Rights

Holders of Class A common stock will share ratably (based on the number of shares of Class A common stock held) if and when any dividend is declared by the board of directors out of funds legally available therefor, subject to any statutory or contractual restrictions on the payment of dividends and to any restrictions on the payment of dividends imposed by the terms of any outstanding preferred stock.

Liquidation Rights

On our liquidation, dissolution or winding up, each holder of Class A common stock will be entitled to a pro rata distribution of any assets available for distribution to common stockholders.

Other Matters

No shares of Class A common stock will be subject to redemption or have preemptive rights to purchase additional shares of Class A common stock. Holders of shares of our Class A common stock do not have subscription, redemption or conversion rights. There will be no redemption or sinking fund provisions applicable to the Class A common stock. Upon consummation of this offering, all the outstanding shares of Class A common stock will be validly issued, fully paid and non-assessable.

Class B Common Stock

Issuance of Class B Common Stock with LLC Interests

Shares of Class B common stock will only be issued in the future to the extent necessary to maintain a one-to-one ratio between the number of LLC Interests held by the Continuing LLC Owner and the number of shares of Class B common stock issued to the Continuing LLC Owner. Shares of Class B common stock are transferable only together with an equal number of LLC Interests. Shares of Class B common stock will be cancelled on a one-for-one basis if we, at the election of the Continuing LLC Owner, redeem or exchange its LLC Interests pursuant to the terms of the Bioventus LLC Agreement.

Voting Rights

Holders of Class B common stock will be entitled to cast one vote per share, with the number of shares of Class B common stock held by the Continuing LLC Owner being equivalent to the number of LLC Interests held by such Continuing LLC Owner. Holders of our Class B common stock will not be entitled to cumulate their votes in the election of directors.

Generally, all matters to be voted on by stockholders must be approved by a majority (or, in the case of election of directors, by a plurality) of the votes entitled to be cast by all Class A and Class B stockholders present in person or represented by proxy, voting together as a single class. Except as otherwise provided by law, amendments to the amended and restated certificate of incorporation must be approved by a majority or, in some cases, a super-majority of the combined voting power of all shares of Class A common stock and Class B common stock, voting together as a single class.

Dividend Rights

Holders of our Class B common stock will not participate in any dividend declared by the board of directors.

Liquidation Rights

On our liquidation, dissolution or winding up, holders of Class B common stock will not be entitled to receive any distribution of our assets.

Transfers

Pursuant to the Bioventus LLC Agreement, each holder of Class B common stock agrees that:

- the holder will not transfer any shares of Class B common stock to any person unless the holder transfers an equal number of LLC Interests to the same person; and
- in the event the holder transfers any LLC Interests to any person, the holder will transfer an equal number of shares of Class B common stock to the same person.

Other Matters

No shares of Class B common stock will have preemptive rights to purchase additional shares of Class B common stock. Holders of shares of our Class B common stock do not have subscription, redemption or conversion rights. There will be no redemption or sinking fund provisions applicable to the Class B common stock. Upon consummation of this offering, all outstanding shares of Class B common stock will be validly issued, fully paid and nonassessable.

Preferred Stock

Our amended and restated certificate of incorporation will provide that our board of directors has the authority, without action by the stockholders, to designate and issue up to shares of preferred stock in one or more classes or series and to fix the powers, rights, preferences, privileges and restrictions of each class or series of preferred stock, including dividend rights, conversion rights, voting rights, redemption privileges, liquidation preferences and the number of shares constituting any class or series, which may be greater than the rights of the holders of the common stock. There will be no shares of preferred stock outstanding immediately after this offering.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from seeking to acquire, a majority of our outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of our Class A common stock by restricting dividends on the Class A common stock, diluting the voting power of the Class A common stock or subordinating the liquidation rights of the Class A common stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of our Class A common stock.

Exclusive Venue

Our amended and restated certificate of incorporation, as it will be in effect upon the closing of this offering, will provide that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware, to the fullest extent permitted by applicable law, be the sole and exclusive forum for: (1) any derivative action or proceeding brought on our behalf; (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees or stockholders to us or our stockholders; (3) any action asserting a claim against us arising pursuant to any provision of the DGCL, our amended and restated certificate of incorporation or our amended and restated bylaws, or as to which the DGCL confers exclusive jurisdiction on the Court of Chancery; or (4) any action asserting a claim against us, any director or our officers or employees that is governed by the internal affairs doctrine; officers; provided that the exclusive forum provisions will not apply to suits brought to enforce any liability or duty created by the Exchange Act, or to any claim for which the federal courts have exclusive jurisdiction. Unless we consent in writing to the selections of an alternative forum, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act, subject to and contingent upon a final adjudication in the State of Delaware of the enforceability of such exclusive forum provision.

Anti-Takeover Effects of Provisions of our Amended and Restated Certificate of Incorporation, our Bylaws and Delaware Law

Our amended and restated certificate of incorporation and amended and restated bylaws, as they will be in effect upon completion of this offering, also contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which we believe may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor.

Classified Board of Directors

Our amended and restated certificate of incorporation will provide that our board of directors will be divided into three classes, with the classes as nearly equal in number as possible and each class serving three-year

staggered terms. In addition, our amended and restated certificate of incorporation will provide that directors may only be removed from our board of directors with cause. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control of us or our management.

Authorized but Unissued Shares

The authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of Nasdaq. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved common stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Requirements for Advance Notification of Stockholder Meetings, Nominations and Proposals

Our amended and restated certificate of incorporation will provide that stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. Our amended and restated certificate of incorporation will provide that, subject to applicable law, special meetings of the stockholders may be called only by a resolution adopted by the affirmative vote of the majority of the directors then in office. Our bylaws will prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. In addition, any stockholder who wishes to bring business before an annual meeting or nominate directors must comply with the advance notice and duration of ownership requirements set forth in our bylaws and provide us with certain information. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers or changes in control of us or our management.

Stockholder Action by Written Consent

Pursuant to Section 228 of the DGCL, any action required to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote if a consent or consents in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares of our stock entitled to vote thereon were present and voted, unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation will provide that stockholder action by written consent will be permitted only if the action to be effected by such written consent and the taking of such action by such written consent have been previously approved by the board of directors.

Amendment of Amended and Restated Certificate of Incorporation or Bylaws

The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless a corporation's certificate of incorporation or bylaws, as the case may be, requires a greater percentage. Upon completion of this offering, our bylaws may be amended or repealed by a majority vote of our board of directors or by the affirmative vote of the holders of at least 66- $^{2}/_{3}$% of the votes which all our stockholders would be entitled to cast in any annual election of directors. In addition, the affirmative vote of the holders of at least 66- $^{2}/_{3}$% of the votes which all our stockholders would be entitled to cast in any election of directors will be required to amend or repeal or to adopt any provisions inconsistent with any of the provisions of our certificate described above.

The foregoing provisions of our amended and restated certificate of incorporation and bylaws could discourage potential acquisition proposals and could delay or prevent a change in control. These provisions are

intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by our board of directors and to discourage certain types of transactions that may involve an actual or threatened change of control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our shares of Class A common stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management or delaying or preventing a transaction that might benefit you or other minority stockholders.

In addition, we are subject to Section 203 of the DGCL. Subject to certain exceptions, Section 203 prevents a publicly held Delaware corporation from engaging in a "business combination" with any "interested stockholder" for three years following the date that the person became an interested stockholder, unless the interested stockholder attained such status with the approval of our board of directors or unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger or consolidation involving us and the "interested stockholder" and the sale of more than 10% of our assets. In general, an "interested stockholder" is any entity or person beneficially owning 15% or more of our outstanding voting stock and any entity or person affiliated with or controlling or controlled by such entity or person.

Because we have "opted out" of Section 203 of the DGCL in our amended and restated certificate of incorporation, the statute will not apply to business combinations involving us.

Limitations on Liability and Indemnification of Officers and Directors

Our amended and restated certificate of incorporation and bylaws provide indemnification for our directors and officers to the fullest extent permitted by the DGCL. Prior to the completion of this offering, we intend to enter into indemnification agreements with each of our directors that may, in some cases, be broader than the specific indemnification provisions contained under Delaware law. In addition, as permitted by Delaware law, our amended and restated certificate of incorporation includes provisions that eliminate the personal liability of our directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of this provision is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director, except that a director will be personally liable for:

- any breach of his duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- any transaction from which the director derived an improper personal benefit; or
- improper distributions to stockholders.

These provisions may be held not to be enforceable for violations of the federal securities laws of the United States.

Corporate Opportunities

In recognition that partners, principals, directors, officers, members, managers and/or employees of the Original LLC Owners and their affiliates and investment funds, which we refer to as the Corporate Opportunity Entities, may serve as our directors and/or officers, and that the Corporate Opportunity Entities may engage in activities or lines of business similar to those in which we engage, our amended and restated certificate of incorporation provides for the allocation of certain corporate opportunities between us and the Corporate

Opportunity Entities. Specifically, none of the Corporate Opportunity Entities has any duty to refrain from engaging, directly or indirectly, in the same or similar business activities or lines of business that we do. In the event that any Corporate Opportunity Entity, through its partner, principal, director, officer, member, manager or employee or otherwise, acquires knowledge of a potential transaction or matter which may be a corporate opportunity for itself and us, we will not have any expectancy in such corporate opportunity, and the Corporate Opportunity Entity will not have any duty to communicate or offer such corporate opportunity to us and may pursue or acquire such corporate opportunity for itself or direct such opportunity to another person. In addition, if a director of our Company who is also a partner, principal, director, officer, member, manager or employee of any Corporate Opportunity Entity acquires knowledge of a potential transaction or matter which may be a corporate opportunity for us and a Corporate Opportunity Entity, we will not have any expectancy in such corporate opportunity. Messrs. Philip G. Cowdy, Guido J. Neels, Guy P. Nohra, David J. Parker, Bradley J. Cannon and Martin P. Sutter, who will serve as directors on our Board of Directors, are or are affiliated with Original LLC Owners. In the event that any other director of ours acquires knowledge of a potential transaction or matter which may be a corporate opportunity for us we will not have any expectancy in such corporate opportunity unless such potential transaction or matter was presented to such director expressly in his or her capacity as such.

By becoming a stockholder in our Company, you will be deemed to have notice of and consented to these provisions of our amended and restated certificate of incorporation. Any amendment to the foregoing provisions of our amended and restated certificate of incorporation requires the affirmative vote of at least two-thirds of the voting power of all shares of our common stock then outstanding.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders will have appraisal rights in connection with a merger or consolidation. Pursuant to Section 262 of the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation will have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of our shares at the time of the transaction to which the action relates or such stockholder's stock thereafter devolved by operation of law and such suit is brought in the Court of Chancery in the State of Delaware.

Listing

Our Class A common stock will be listed on Nasdaq under the trading symbol "BVS".

Transfer Agent and Registrar

Upon the closing of this offering, the transfer agent and registrar for our Class A common stock will be American Stock Transfer & Trust Company, LLC.

Stockholders Agreement

In connection with this offering, we will enter into the Stockholders Agreement with the Voting Group pursuant to which the Voting Group will have specified board representation rights, governance rights and other rights. See "Certain relationships and related party transactions—Stockholders Agreement."

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there was no public market for our Class A common stock. Future sales of substantial amounts of Class A common stock in the public market (including shares of Class A common stock issuable upon redemption or exchange of LLC Interests), or the perception that such sales may occur, could adversely affect the market price of our Class A common stock. Although we have applied to have our Class A common stock listed on Nasdaq, we cannot assure you that there will be an active public market for our Class A common stock.

Upon the closing of this offering, we will have outstanding an aggregate of shares of Class A common stock, assuming the issuance of shares of Class A common stock offered by us in this offering and the issuance of shares of Class A common stock to the Former LLC Owners. In addition, upon the closing of this offering, the Phantom Plan will be terminated and Phantom Plan Participants will hold rights to receive shares of Class A common stock upon settlement of their awards between twelve and 24 months following the termination of the Phantom Plan (as more fully described above under "Executive compensation—Narrative to summary compensation table—Equity-based compensation"). In connection with the offering, each profits interest unit awarded under the MIP will be exchanged for LLC Interests which may then be exchanged for shares of Class A common stock (upon redemption or cancellation of the same number of their shares of our Class B common stock) or a cash payment (subject to certain conditions). Of these shares, all shares sold in this offering will be freely tradable without restriction or further registration under the Securities Act, except for any shares purchased by our "affiliates," as that term is defined in Rule 144 under the Securities Act, whose sales would be subject to the Rule 144 resale restrictions described below, other than the holding period requirement. The remaining outstanding shares of our common stock will be "restricted securities" as that term is defined under Rule 144 of the Securities Act.

Subject to the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, these restricted securities (including shares of Class A common stock issuable upon redemption or exchange of LLC Interests) will be available for sale in the public market as follows:

- no shares will be available for sale until 180 days after the date of this prospectus, subject to certain limited exceptions provided for in the lock-up agreements; and

- shares, plus any shares purchased by our affiliates in this offering, will be eligible for sale beginning more than 180 days after the date of this prospectus, subject, in the case of shares held by our affiliates, to the volume limitations under Rule 144.

Lock-up Agreements

In connection with this offering, our officers and directors, and certain of our stockholders, have each entered into a lock-up agreement with the underwriters of this offering that restricts the sale of shares of our common stock by those parties for a period of 180 days after the date of this prospectus without the prior written consent of the representatives. However, the representatives, on behalf of the underwriters, may, in their discretion, choose to release any or all of the shares of our common stock subject to these lock-up agreements at any time prior to the expiration of the lock-up period without notice. For more information, see "Underwriting." Upon the expiration of the lock-up period, substantially all of the shares subject to such lock-up restrictions will become eligible for sale, subject to the limitations discussed above.

Rule 144

Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours, or who was an affiliate at any time during the 90 days before a sale, who has beneficially owned shares of our Class A common stock for at least 180 days would be entitled to sell in

"broker's transactions" or certain "riskless principal transactions" or to market makers, a number of shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our Class A common stock then outstanding; and
- the average weekly trading volume in our Class A common stock on Nasdaq during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Affiliate resales under Rule 144 are also subject to the availability of current public information about us. In addition, if the number of shares being sold under Rule 144 by an affiliate during any three-month period exceeds 5,000 shares or has an aggregate sale price in excess of $50,000, the seller must file a notice on Form 144 with the SEC and Nasdaq concurrently with either the placing of a sale order with the broker or the execution directly with a market maker.

Non-Affiliate Resales of Restricted Securities

In general, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is not an affiliate of ours at the time of sale, and has not been an affiliate at any time during the 90 days preceding a sale, and who has beneficially owned shares of our Class A common stock for at least six months but less than a year, is entitled to sell such shares subject only to the availability of current public information about us. If such person has held our shares for at least one year, such person can resell under Rule 144(b)(1) without regard to any Rule 144 restrictions, including the 90-day public company requirement and the current public information requirement.

Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Rule 701

In general, under Rule 701, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

The SEC has indicated that Rule 701 will apply to typical stock options granted by an issuer before it becomes subject to the reporting requirements of the Exchange Act, along with the shares acquired upon exercise of such options, including exercises after an issuer becomes subject to the reporting requirements of the Exchange Act.

Equity Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register the offer and sale of all shares of Class A common stock (i) issuable under our stock plans and (ii) issuable to the Stock Plan Participants under the Phantom Plan. We expect to file the registration statement covering shares offered pursuant to our stock plans shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market subject to compliance with the resale provisions of Rule 144.

Registration Rights

Upon the closing of this offering, the holders of shares of Class A common stock (including the holders of LLC Interests redeemable or exchangeable for shares of Class A common stock) or their transferees

will be entitled to various rights with respect to the registration of these shares under the Securities Act. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. See “Certain relationships and related party transactions—Registration Rights Agreement” for additional information. Shares covered by a registration statement will be eligible for sale in the public market upon the expiration or release from the terms of the lock-up agreement described in “—Lock-up agreements.”

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our Class A common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our Class A common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our Class A common stock.

This discussion is limited to Non-U.S. Holders that hold our Class A common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons subject to the alternative minimum tax;
- persons holding our Class A common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- "controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;
- partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell our Class A common stock under the constructive sale provisions of the Code;
- persons who hold or receive our Class A common stock pursuant to the exercise of any employee stock option or otherwise as compensation;
- tax-qualified retirement plans;
- "qualified foreign pension funds" as defined in Section 897(I)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds; and
- persons subject to special tax accounting rules as a result of any item of gross income with respect to the stock being taken into account in an applicable financial statement.

If an entity treated as a partnership for U.S. federal income tax purposes holds our Class A common stock, the tax treatment of an owner in such an entity will depend on the status of the partner, the activities of such entity and certain determinations made at the owner level. Accordingly, entities treated as partnerships holding our Class A common stock and the owners in such entities should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR CLASS A COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "Non-U.S. Holder" is any beneficial owner of our Class A common stock that is neither a "U.S. person" nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

- an individual who is a citizen or resident of the United States;
- a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in the section entitled "Dividend policy," we do not anticipate declaring or paying dividends to holders of our Class A common stock in the foreseeable future. However, if we do make distributions of cash or property on our Class A common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its Class A common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under "—Sale or other taxable disposition."

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our Class A common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or Other Taxable Disposition

Subject to the discussion below under ‘‘Information reporting and backup withholding’’ and ‘‘Additional withholding tax on payments made to foreign accounts,’’ a Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our Class A common stock unless:

- the gain is effectively connected with the Non-U.S. Holder’s conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);
- the Non-U.S. Holder is a non-resident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our Class A common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our Class A common stock will not be subject to U.S. federal income tax if our Class A common stock is “regularly traded,” as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually or constructively, 5% or less of our Class A common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder’s holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Payments of dividends on our Class A common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any distributions on our Class A common stock paid to the Non-U.S. Holder, regardless of whether such distributions constitute dividends or whether any tax was actually withheld. In

addition, proceeds of the sale or other taxable disposition of our Class A common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our Class A common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, our Class A common stock, in each case, paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations (including providing sufficient documentation evidencing its compliance (or deemed compliance) with FATCA), (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our Class A common stock. While withholding under FATCA would have applied to payments of gross proceeds from the sale or other disposition of such stock on or after January 1, 2019, proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our Class A common stock.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC, J.P. Morgan Securities LLC and Goldman Sachs & Co. LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares of Class A common stock indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
J.P. Morgan Securities LLC	
Goldman Sachs & Co. LLC	
Canaccord Genuity LLC	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of Class A common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of Class A common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of Class A common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option described below.

The underwriters initially propose to offer part of the shares of Class A common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial offering of the shares of Class A common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of Class A common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of Class A common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of Class A common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of Class A common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of Class A common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us	$	$	$
Proceeds, before expenses to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $. We have agreed to reimburse the underwriters for certain expenses relating to this offering up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of Class A common stock offered by them.

We have applied to list our Class A common stock for quotation on Nasdaq under the trading symbol "BVS."

We and all directors and officers and the holders of substantially all of our LLC Interests prior to the Transactions (each, a "lock-up party" and collectively, the "lock-up parties") have agreed that, without the prior written consent of the representatives, on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus (the "restricted period"):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock (including without limitation, options or warrants to purchase common stock and LLC Interests or such other securities which may be deemed to be beneficially owned by the lock-up party in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant (any such securities, the "Restricted Securities"));
- enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the Restricted Securities;
- make any demand for or exercise any right with respect to the registration of any Restricted Securities; or
- publicly disclose the intention to do any of the foregoing,

whether any such transaction described above is to be settled by delivery of Restricted Securities, in cash or otherwise. The lock-up parties have also acknowledged and agreed that the foregoing precludes them from engaging in any hedging or other transactions designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition of any Restricted Securities, or securities convertible into or exercisable or exchangeable for Restricted Securities, even if any such sale or disposition transaction or transactions would be made or executed by or on behalf of someone other than the lock-up party.

The representatives, in their sole discretion, may release Restricted Securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the Class A common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the Class A common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the Class A common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an

additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of Class A common stock in the open market to stabilize the price of the Class A common stock. These activities may raise or maintain the market price of the Class A common stock above independent market levels or prevent or retard a decline in the market price of the Class A common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters participating in this offering. The representatives may agree to allocate a number of shares of Class A common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our Class A common stock. The initial public offering price was determined by negotiations between us and the representatives. Among the factors considered in determining the initial public offering price were our future prospects and those of our industry in general, our sales, earnings and certain other financial and operating information in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a "Relevant State"), no securities have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of securities may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

(a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, and the expression "Prospectus Regulation" means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 ("FSMA") received by it in connection with the issue or sale of the shares of our Class A common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our Class A common stock in, from or otherwise involving the United Kingdom.

LEGAL MATTERS

The validity of the issuance of our Class A common stock offered in this prospectus will be passed upon for us by Latham & Watkins LLP. The validity of the issuance of our Class A common stock offered in this prospectus will be passed upon for the underwriters in connection with this offering by Simpson Thacher & Bartlett LLP, New York, New York.

EXPERTS

The audited financial statements as of and for the year ended December 31, 2019 included in this prospectus and elsewhere in the registration statement have been so included in reliance on the report of Grant Thornton LLP, or GT, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The financial statements for the year end December 31, 2018 included in this prospectus have been so included in reliance on the report (which contains an emphasis of matter paragraph relating to the Company's identification of noncompliance with certain U.S. Federal statutes and regulations to which the Company is subject and the Company's voluntary self-disclosure to the U.S. Department of Health and Human Services Office of Inspector General. As a result of the noncompliance, the Company may be subject to civil monetary penalties, as well as repayment obligations related to previously reimbursed claims and fines as described in Notes 2 and 13 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

CHANGE IN REGISTERED PUBLIC ACCOUNTANT

We dismissed PwC as our independent auditor on November 1, 2019. Our Audit, Compliance and Quality Committee participated in and approved our change in independent registered public accounting firm. On November 20, 2019, we engaged GT as our independent registered public accounting firm for the year ended December 31, 2019. Concurrent with GTs appointment, we engaged GT to audit our consolidated financial statements as of and for the year ended December 31, 2019.

The report of PwC on the financial statements of Bioventus LLC as of and for the year ended December 31, 2018 did not contain any adverse opinions or disclaimer of opinion and was not qualified as to uncertainty, audit scope or accounting principles; however, it does include an emphasis of matter paragraph relating to the Company's identification of noncompliance with certain U.S. Federal statutes and regulations to which the Company is subject and the Company's voluntary self-disclosure to the OIG. As a result of the noncompliance, the Company may be subject to civil monetary penalties, as well as repayment obligations related to previously reimbursed claims and fines as described in Notes 2 and 13 to the financial statements.

During the audit of the year ended December 31, 2018 and subsequent interim period through November 1, 2019, there were no disagreements with PwC on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure that, if not resolved to PwC's satisfaction, would have caused PwC to make reference to the subject matter of the disagreement in connection with its report and (ii) no "reportable events" (as defined in Item 304(a)(1)(v) of Regulation S-K), except for the material weaknesses in our internal control over financial reporting related to (a) an ineffective design of internal controls to review reimbursement claims in order to identify non-compliance with regulations and contract terms and (b) an effective design of internal controls to establish and review a reimbursement claim reserve for errors related to the determination of medical necessity from such non-compliance.

We requested that PwC provide us with a letter addressed to the SEC stating whether or not it agrees with the above disclosure. A copy of PwC's letter, dated , is attached as Exhibit 16.1 to the registration statement of which this prospectus is a part.

During the year ended December 31, 2018 and the subsequent interim period through November 20, 2019, neither we, nor any person on our behalf, consulted GT with respect to either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that may be rendered on our financial statements, and no written report or oral advice was provided to us by GT that GT concluded was an important factor considered by us in reaching a decision as to the accounting, auditing or financial reporting issue or (ii) any matter that was either the subject of a disagreement, as that term is described in Item 304(a)(1)(iv) of Regulation S-K and the related instructions to Item 304 of Regulation S-K, or a reportable event, as that term is described in Item 304(a)(1)(v) of Regulation S-K.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Class A common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith, certain portions of which are omitted as permitted by the rules and regulations of the SEC. For further information with respect to Bioventus Inc. and the shares of Class A common stock offered hereby, reference is made to the registration statement and the exhibits and schedules filed therewith. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding registrants, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

As a result of this offering, we will be required to file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference room and the website of the SEC referred to above. We also maintain a website at www.bioventus.com, through which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on our website is not a part of this prospectus and the inclusion of our website address in this prospectus is an inactive textual reference only.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

BIOVENTUS LLC

Years ended December 31, 2019 and 2018

Six months ended June 27, 2020 and June 29, 2019 (unaudited)

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Managers
Bioventus LLC

Opinion on the financial statements

We have audited the accompanying consolidated balance sheet of Bioventus LLC (a Delaware Limited Liability Company) and subsidiaries (the "Company") as of December 31, 2019, the related consolidated statements of operations and comprehensive income (loss), changes in members' equity, and cash flows for the year ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019, and the results of its operations and its cash flows for the year ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

Change in accounting principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for leases in 2019 due to the adoption of FASB Accounting Standards Codification (Topic 842), Leases.

Basis for opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2019.

Raleigh, North Carolina
October 6, 2020

Report of Independent Registered Public Accounting Firm

To the Board of Managers and Members of Bioventus LLC

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of Bioventus LLC and its subsidiaries (the "Company") as of December 31, 2018, and the related consolidated statements of operations and comprehensive income (loss), of changes in members' equity and of cash flows for the year then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of these consolidated financial statements in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audit provides a reasonable basis for our opinion.

Emphasis of Matter

As discussed in Notes 2 and 13 to the consolidated financial statements, the Company has identified noncompliance with certain U.S. Federal statutes and regulations to which the Company is subject and made a voluntary self-disclosure to the U.S. Department of Health and Human Services Office of Inspector General. As a result of the noncompliance, the Company may be subject to civil monetary penalties, as well as repayment obligations related to previously reimbursed claims and fines. Management's evaluation of the impact of these material contingencies is also discussed in Note 13.

/s/ PricewaterhouseCoopers LLP

Raleigh, North Carolina
August 15, 2019, except for the effects of disclosing net loss per unit information discussed in Note 14 and the effects of discontinued operations discussed in Note 17 to the consolidated financial statements, as to which the date is October 6, 2020

We served as the Company's auditor from 2012 to 2019.

BIOVENTUS LLC

Consolidated statements of operations and comprehensive income (loss)
Years ended December 31, 2019 and 2018
(Dollars in thousands, except per unit and per share data)

	2019	2018
Net sales	$ 340,141	$ 319,177
Cost of sales (including depreciation and amortization of $22,399 and $20,614, respectively)	90,935	84,168
Gross profit	249,206	235,009
Selling, general and administrative expense	198,475	191,672
Research and development expense	11,055	8,095
Change in fair value of contingent consideration	—	(739)
Restructuring costs	575	1,373
Depreciation and amortization	7,908	8,615
Loss on impairment of intangible assets	—	489
Operating income	31,193	25,504
Interest expense	21,579	19,171
Other (income) expense	(75)	226
Other expense	21,504	19,397
Income from continuing operations before income taxes	9,689	6,107
Income tax expense	1,576	1,664
Net income from continuing operations	8,113	4,443
Loss from discontinued operations, net of tax	1,815	16,650
Net income (loss)	6,298	(12,207)
Loss attributable to noncontrolling interest	553	—
Net income (loss) attributable to unit holders	6,851	(12,207)
Other comprehensive income (loss), net of tax		
Change in prior service cost and unrecognized (loss) gain for defined benefit plan adjustment	(78)	131
Change in foreign currency translation adjustments	(322)	(334)
Other comprehensive loss	(400)	(203)
Comprehensive income (loss)	$ 6,451	$ (12,410)
Net income from continuing operations attributable to unit holders	$ 8,666	$ 4,443
Accumulated and unpaid preferred distributions	(5,955)	(5,781)
Net income allocated to participating shareholders	(1,555)	—
Net income (loss) from continuing operations attributable to common unit holders	1,156	(1,338)
Loss from discontinued operations, net of tax	1,815	16,650
Net loss attributable to common unit holders	$ (659)	$ (17,988)
Net loss per unit attributable to common unit holders—basic and diluted (Note 14)		
Net income (loss) from continuing operations	$ 0.24	$ (0.27)
Loss from discontinued operations, net of tax	0.37	3.40
Net loss attributable to common unit holders	$ (0.13)	$ (3.67)
Weighted average common units outstanding, basic and diluted	4,900	4,900
Unaudited pro forma net income per share—basic (Note 19):		
Unaudited pro forma net income from continuing operations		
Unaudited pro forma net loss from discontinued operations, net of tax		
Unaudited pro forma net income attributable to unit holders		
Unaudited pro forma net income per share—diluted (Note 19):		
Unaudited pro forma net income from continuing operations		
Unaudited pro forma net loss from discontinued operations, net of tax		
Unaudited pro forma net income attributable to unit holders		

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Consolidated balance sheets
December 31, 2019 and 2018
(Dollars in thousands)

	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	$ 64,520	$ 42,774
Accounts receivable, net	85,128	72,569
Inventory	27,326	27,396
Prepaid and other current assets	6,059	5,615
Total current assets	183,033	148,354
Property and equipment, net	4,489	4,759
Goodwill	49,800	49,800
Intangible assets, net	216,510	237,029
Operating lease assets	15,267	—
Investments and other assets	3,308	2,781
Total assets	$ 472,407	$ 442,723
Liabilities and Members' Equity		
Current liabilities:		
Accounts payable	$ 6,440	$ 8,207
Accrued liabilities	52,827	50,984
Accrued equity-based compensation	15,547	—
Long-term debt	10,000	5,250
Other current liabilities	4,201	987
Total current liabilities	89,015	65,428
Long-term debt, less current portion	187,965	189,578
Accrued equity-based compensation, less current portion	25,255	33,063
Deferred tax liability	3,874	3,955
Other long-term liabilities	20,681	5,432
Total liabilities	326,790	297,456
Commitments and contingencies (Note 13)		
Members' equity (preferred unit liquidation preference of $204,443 and $198,488 at December 31, 2019 and 2018, respectively)	285,147	285,153
Accumulated other comprehensive loss	(465)	(65)
Accumulated deficit	(141,700)	(139,821)
Equity attributable to unit holders	142,982	145,267
Noncontrolling interest	2,635	—
Total members' equity	145,617	145,267
Total liabilities and members' equity	$ 472,407	$ 442,723

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Consolidated statements of changes in members' equity
Years ended December 31, 2019 and 2018
(Dollars in thousands)

	Members' Equity	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Noncontrolling Interest	Total Members' Equity
Balance at December 31, 2017	$ 285,114	$ 138	$ (119,795)	$ —	$ 165,457
Profits interest compensation	39	—	—	—	39
Distribution to members	—	—	(7,819)	—	(7,819)
Net loss attributable to unit holders	—	—	(12,207)	—	(12,207)
Defined benefit plan adjustment	—	131	—	—	131
Translation adjustment	—	(334)	—	—	(334)
Balance at December 31, 2018	285,153	(65)	(139,821)	—	145,267
Profits interest forfeitures	(6)	—	—	—	(6)
Distribution to members	—	—	(8,730)	—	(8,730)
Acquisition of noncontrolling interest	—	—	—	3,188	3,188
Net income (loss) attributable to unit holders	—	—	6,851	(553)	6,298
Defined benefit plan adjustment	—	(78)	—	—	(78)
Translation adjustment	—	(322)	—	—	(322)
Balance at December 31, 2019	$ 285,147	$ (465)	$ (141,700)	$ 2,635	$ 145,617

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Consolidated statements of cash flows
Years ended December 31, 2019 and 2018
(Dollars in thousands)

	2019	2018
Operating activities:		
Net income (loss):	$ 6,298	$ (12,207)
Less: Net loss from discontinued operations	1,815	16,650
Net income from continuing operations	8,113	4,443
Adjustments to reconcile net income to net cash provided by operating activities from continuing operations:		
Depreciation and amortization	30,316	29,238
Loss on impairment of intangible assets	—	489
Change in fair value of contingent consideration	—	(739)
Payment of contingent consideration in excess of amount established in purchase accounting	(945)	(3,558)
Provision for doubtful accounts	2,242	2,538
Profit interest, management incentive plan and liability-classified awards compensation	10,844	14,325
Change in fair value of Equity Participation Rights unit	565	1,009
Deferred income taxes	(348)	(79)
Unrealized foreign currency transaction losses and other	395	106
Amortization of debt discount and capitalized loan fees, net	1,583	1,686
Loss on debt retirement and modification	3,352	—
Changes in operating assets and liabilities, net of acquisitions:		
Accounts receivable	(14,909)	(12,130)
Inventories	(1,427)	3,256
Accounts payable and accrued expenses	6,646	12,148
Other current assets and liabilities	(3,882)	(422)
Net cash provided by operating activities from continuing operations	42,545	52,310
Net cash used in operating activities of discontinued operations	(1,832)	(7,123)
Net cash provided by operating activities	40,713	45,187
Investing activities:		
Investment and acquisition of distribution rights	(6,000)	(3,500)
Acquisition of VIE	430	—
Purchase of property and equipment and other	(2,342)	(2,561)
Net cash used in investing activities from continuing operations	(7,912)	(6,061)
Net cash used in investing activities of discontinued operations	—	(40)
Net cash used in investing activities	(7,912)	(6,101)
Financing activities:		
Proceeds from the issuance of long-term debt, net of issuance costs	198,134	—
Payments on long-term debt	(199,500)	(5,250)
Long-term refinancing costs	(367)	—
Principal payments toward finance lease obligations and notes payable	(81)	(160)
Distribution to members	(9,137)	(7,846)
Net cash used in financing activities	(10,951)	(13,256)
Effect of exchange rate changes on cash	(104)	(160)
Net change in cash and cash equivalents	21,746	25,670
Cash and cash equivalents at the beginning of the period	42,774	17,104
Cash and cash equivalents at the end of the period	$ 64,520	$ 42,774
Supplemental disclosure of cash flow information		
Cash paid for income taxes	$ 1,577	$ 1,944
Cash paid for interest	$ 15,450	$ 17,273
Supplemental disclosure of noncash investing and financing activities		
Accrued acquisition of distribution rights	$ —	$ 6,000
Accounts payable for purchase of property and equipment	$ 34	$ 184
Accrued member distribution	$ 499	$ 906

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Notes to consolidated financial statements
(Dollars in thousands, except per unit and per share data)

1. Organization and basis of presentation of financial information

The Company

Bioventus LLC, Bioventus or the Company, is a limited liability company formed under the laws of the state of Delaware on November 23, 2011 and operates as a partnership. Bioventus is a global medical device company, conducting business in various countries, primarily in North America and Europe, with approximately 690 employees. The Company is focused on developing and commercializing clinically differentiated, cost efficient and minimally invasive treatments that engage and enhance the body's natural healing processes.

On November 23, 2011, Smith & Nephew plc, or S+N, filed a certificate of formation for the Company. On January 3, 2012, a series of agreements were executed with investment vehicles sponsored and managed by Essex Woodlands, or Essex, a healthcare growth equity firm, in order to effect a spin-off of S+N's biologic and clinical therapies segment (the Business) into Bioventus.

On May 4, 2012 the Spin-off occurred and S+N sold certain assets related to the Business' worldwide operations to Essex and the assets were subsequently contributed by Essex to Bioventus in addition to $20,000 cash in exchange for 5,100 preferred units, representing a 51% ownership interest. As part of the Spin-off, S+N then contributed certain other assets, primarily related to the Business' remaining worldwide operations, to Bioventus for 4,900 common units, representing a 49% ownership interest. As a result, the Company commenced operations in Durham, North Carolina, USA, which is its headquarters.

Principles of consolidation

The consolidated financial statements have been prepared in conformity with U.S. generally accepted accounting principles, or U.S. GAAP. The consolidated financial statements include the Company, its subsidiaries and investments in which the Company has control. Amounts pertaining to the non-controlling ownership interests held by third parties in the operating results and financial position of the Company's controlled subsidiaries are reported as non-controlling interests. All intercompany balances and transactions have been eliminated in consolidation.

Unaudited pro forma net income per common unit

Unaudited pro forma basic and diluted net loss per unit reflects the conversion of all outstanding units of members' capital as if the conversion had occurred at the beginning of the period or the date of issuance, if later. The unaudited pro forma basic and diluted net income per unit amounts do not give effect to the issuance of shares from the planned initial public offering, nor do they give effect to potential dilutive securities where the impact would be anti-dilutive.

Reclassifications

Certain prior period amounts have been reclassified to conform to the current period presentation. These changes had no effect on previously reported total revenues, net income (loss), comprehensive income (loss), members' equity or cash flows. Unless otherwise noted, all financial information in the consolidated financial statement footnotes reflect the Company's results from continuing operations. Discontinued operation is discussed further in Note 17.

Segment reporting

The Company identifies a business as an operating segment if: (i) it engages in business activities from which it may earn revenues and incur expenses; (ii) its operating results are regularly reviewed by the Chief Operating Decision Maker, or CODM, to make decisions about resources to be allocated to the segment and assess its performance; and (iii) it has available discrete financial information. The Company's CODM is its Chief Executive Officer. The CODM reviews financial information at the operating segment level to allocate resources and to assess the operating results and financial performance for each operating segment.

The Company's two reportable segments are U.S. and International (discussed further in Note 15 and 16). U.S. and International products are primarily sold to physicians spanning the orthopedic continuum, including sports medicine, total joint reconstruction, hand and upper extremities, foot and ankle, podiatric surgery, trauma, spine and neurosurgery, as well as directly to their patients.

Use of estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities, at the date of the financial statements, as well as the reported amounts of revenues and expenses during the period. On an ongoing basis, management evaluates these estimates, including those related to contractual allowances and sales incentives, allowances for doubtful accounts, inventory reserves, goodwill and intangible assets impairment, useful lives of long lived assets, noncontrolling interest, fair value measurements, litigation and contingent liabilities, income taxes, and equity-based compensation. Management bases its estimates on historical experience, future expectations and other relevant assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

2. Summary of significant accounting policies

Recent accounting pronouncements

Leases

In February 2016, the Financial Accounting Standards Board, or FASB, issued guidance that requires lessees to recognize the rights and obligations resulting from leases as assets and liabilities. It also modifies the classification criteria and the accounting for sales-type and direct financing leases for the lessor.

The Company adopted this guidance January 1, 2019, using the cumulative-effect adjustment transition method, which applies the new guidance at the effective date with no restatement of prior periods. In addition, the Company elected the transition package of practical expedients permitted within the new lease guidance, which among other things allowed the Company to carry forward the historical lease classification of existing leases at the time of adoption. The Company also elected not to separate lease components from non-lease components and to exclude short-term leases from its consolidated balance sheet. The adoption of the new guidance resulted in recognizing net lease assets of $12,003 and lease liabilities of $12,827 to the consolidated balance sheet as of January 1, 2019 and reclassifying deferred rent and lease incentive liabilities required under the previous lease guidance to lease assets. There was no impact to the consolidated statement of operations or statements of cash flows. There was also no impact to liquidity or debt covenant compliance under the Company's agreements.

The Company determines if an arrangement is a lease at inception. Operating leases are separately stated on the consolidated balance sheets as operating lease assets, and current and noncurrent operating lease obligations. Finance leases are included in property and equipment, and separately stated as current and noncurrent finance

lease obligations on the consolidated balance sheets. Operating lease costs are recognized on a straight-line basis over the lease term and are included in selling, general and administrative expense. Finance lease amortization and interest are included in depreciation and amortization expense and interest expense, respectively.

Operating lease assets represent the Company's right to use an underlying asset for the lease term and lease liability obligations represent the Company's obligation to make lease payments arising from the lease. Operating lease assets and liabilities are recognized at commencement date based on the present value of fixed lease payments over the lease term. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. The Company estimates its incremental borrowing rate based on the information available at commencement date in determining the present value of its lease payments, as the implicit rate in its leases is not readily determinable. In addition, the Company uses a portfolio approach to determine its incremental borrowing rate. The operating lease asset also includes any advance lease payments made and excludes any lease incentives and lease direct costs (discussed further in Note 13).

Other

In June 2016, the FASB issued new accounting guidance that significantly changes how entities will measure credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. The guidance is effective for annual and interim periods beginning after December 15, 2019. The Company has adopted the guidance on January 1, 2020. Based on the Company's preliminary evaluation, this guidance is expected to primarily impact its trade accounts receivables; however, it does not expect a material impact to its consolidated financial statements.

In August 2017, the FASB issued new guidance amending the hedge accounting model to enable entities to better portray risk management activities in the financial statements. The guidance eliminates the requirement to separately measure and report hedge ineffectiveness and generally requires the entire change in the fair value of a hedging instrument to be presented in the same statement of operations line as the hedged item. The Company adopted this guidance January 1, 2019 and there was no material impact on its consolidated financial statements.

In August 2018, the FASB issued new guidance addressing a customer's accounting for implementation costs incurred in a cloud computing arrangement, or CCA, that is considered a service contract. Under the new guidance, implementation costs for a CCA should be evaluated for capitalization using the same approach as implementation costs associated with internal-use software. The capitalized implementation costs should be expensed over the term of the hosting arrangement, which includes any reasonably certain renewal periods. Capitalized implementation costs should be assessed for impairment like long-lived assets. The Company will adopt this guidance on January 1, 2020. The Company does not believe the new guidance will have a material impact on its consolidated financial statements.

In August 2018, the FASB issued new guidance modifying the disclosure requirements on fair value measurements. The guidance eliminates the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels and the valuation processes for Level 3 fair value measurements. The guidance modifies certain disclosures related to investments measured at net asset value and clarifies that companies are to disclose uncertainties in measurements as of the reporting date. The guidance requires additional disclosure related to changes in unrealized gains and losses included in other comprehensive income for recurring Level 3 fair value measurements as well as the range and weighted average, or other quantitative information would be a more reasonable and rational method, of significant unobservable inputs used to develop Level 3 fair value measurements. The guidance is effective for annual reporting periods beginning after December 31, 2019. Early adoption is permitted upon issuance. The additional disclosures and description of any measurement uncertainty amendments should be applied prospectively for the most recent interim or annual period in the initial year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective

date. The Company will adopt this guidance on January 1, 2020. The Company does not believe the new guidance will have a material impact on its consolidated financial statements.

In December 2019, the FASB issued new guidance amending the accounting for income taxes. The guidance eliminates certain exceptions to the guidance in ASC 740 related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences as well as simplifying aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. The guidance also clarifies that single-member limited liability companies and similar disregarded entities that are not subject to income tax are not required to recognize an allocation of consolidated income tax expense in their separate financial statements, but they could elect to do so. The guidance is effective for annual and interim periods beginning after December 15, 2020. Early adoption is permitted in interim or annual periods for which financial statements have not been made available for issuance. Entities that elect to early adopt the amendments in an interim period should reflect any adjustments as of the beginning of the annual period that includes that interim period. Certain amendments are to be applied prospectively while others are retrospective. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

Variable Interest Entity

The Company reviews each investment and collaboration agreement to determine if it has a variable interest in the entity. In assessing whether the Company has a variable interest in the entity as a whole, the Company considers and makes judgments regarding the purpose and design of entity, the value of the licensed assets to the entity, the value of the entity's total assets and the significant activities of the entity. If the Company has a variable interest in the entity as a whole, the Company assesses whether or not the Company is a primary beneficiary of that variable interest entity, or VIE, based on a number of factors, including: (i) which party has the power to direct the activities that most significantly affect the VIE's economic performance, (ii) the parties' contractual rights and responsibilities pursuant to the collaboration agreement, and (iii) which party has the obligation to absorb losses of or the right to receive benefits from the VIE that could be significant to the VIE. If the Company determines that it is the primary beneficiary of a VIE at the onset of the collaboration, the collaboration is treated as a business combination and the Company consolidates the financial statement of the VIE into the Company's consolidated financial statements. On a quarterly basis, the Company evaluates whether it continues to be the primary beneficiary of the consolidated VIE. If the Company determines that it is no longer the primary beneficiary of a consolidated VIE, it deconsolidates the VIE in the period the determination is made.

Assets and liabilities recorded as a result of consolidating VIEs' financial results into the Company's consolidated balance sheet do not represent additional assets that could be used to satisfy claims against the Company's general assets or liabilities for which creditors have recourse to the Company's general assets.

Noncontrolling Interest

The Company records noncontrolling interest related to the consolidated VIEs on its consolidated balance sheet. The Company records loss attributable to noncontrolling interest on its consolidated statements of operations, which reflects the VIE's net loss for the reporting period, adjusted for changes in the noncontrolling interest holders claim to net assets, including contingent milestone and royalty payments, which are evaluated each reporting period.

Deconsolidation and discontinued operations

Upon the occurrence of certain events and on a regular basis, the Company evaluates whether it no longer has a controlling interest in its subsidiaries, including consolidated VIEs. If the Company determines it no longer has a controlling interest, the subsidiary is deconsolidated. The Company records a gain or loss on

deconsolidation based on the difference on the deconsolidation date between (i) the aggregate of (a) the fair value of any consideration received, (b) the fair value of any retained noncontrolling investment in the former subsidiary and (c) the carrying amount of any noncontrolling interest in the subsidiary being deconsolidated, less (ii) the carrying amount of the former subsidiary's assets and liabilities.

The Company assesses whether a deconsolidation is required to be presented as discontinued operations in its consolidated financial statements on the deconsolidation date. This assessment is based on if the deconsolidation represents a strategic shift that has or will have a major effect on the Company's operations or financial results. If the Company determines that a deconsolidation requires presentation as a discontinued operation on the deconsolidation date, or at any point during the one-year period following such date, it will present the former subsidiary as a discontinued operation in current and comparative period financial statements.

Effect of foreign currency

The assets and liabilities of foreign subsidiaries whose functional currency is the local currency are translated into U.S. dollars at rates of exchange in effect at the close of their month end. Equity accounts are translated at their historical rates. Revenues and expenses are translated at the exchange rate on the transaction date. Translation gains and losses are accumulated within accumulated other comprehensive loss as a separate component of members' equity.

Foreign currency transaction gains and losses are included in other expense on the consolidated statements of operations and comprehensive income (loss). There were nominal losses for the year ended December 31, 2019 and losses of $234 for the year ended December 31, 2018.

Other comprehensive income (loss)

Comprehensive income (loss) consists of two components: net income (loss) and other comprehensive income (loss). Other comprehensive income (loss) refers to gains and losses that under U.S. GAAP are recorded as an element of members' equity and are excluded from net income (loss). The Company's other comprehensive income (loss) consists of a defined benefit plan adjustment and foreign currency translation adjustments from those subsidiaries not using the U.S. dollar as their functional currency.

Cash and cash equivalents

Cash equivalents consist of highly liquid investments with an original maturity of three months or less at date of purchase. The Company's cash is primarily held in financial institutions in the United States and the Netherlands. The Company maintains cash balances in the United States in excess of the federally insured limits. The Company did not have restricted cash as of December 31, 2019 and 2018.

Derivatives

The Company uses derivative instruments to manage exposures to interest rates. Derivatives are recorded on the balance sheet at fair value at each balance sheet date and the Company does not designate whether the derivative instrument is an effective hedge. Changes in the fair values of derivative instruments are recognized in the consolidated statements of operations and comprehensive income (loss). The Company has entered, and may in the future enter, into derivative contracts related to its debt.

Fair value

The Company records certain assets and liabilities at fair value (discussed further in Note 8). Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the

measurement date. A three-level fair value hierarchy that prioritizes the inputs used to measure fair value is described below. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. Assets and liabilities are categorized based on the lowest level that is significant to the valuation.

The three levels of inputs used to measure fair value are as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities;
- Level 2—Observable inputs other than quoted prices included within Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data; and
- Level 3—Unobservable inputs that are supported by little or no market data. This includes certain pricing models, discounted cash flow methodologies and similar techniques that use significant unobservable inputs.

Revenue recognition

Sale of Products

The Company derives revenue primarily from the sale of its osteoarthritic, or OA, joint pain treatment and joint preservation products, which are hyaluronic acid, or HA, viscosupplementation therapies, BGS products and a Minimally Invasive Fracture Treatment product. The Company sells product directly to healthcare institutions, patients, distributors and dealers. The Company also enters arrangements with pharmacy and health benefit managers that provide for negotiated rebates, chargebacks and discounts with respect to the purchase of the Company's products.

The Company recognizes revenue at a point in time upon transfer of control of the promised product to customers in an amount that reflects the consideration it expects to receive in exchange for those products. The Company excludes from revenues taxes collected from customers and remitted to governmental authorities.

Revenues are recorded at the transaction price, which is determined as the contracted price net of estimates of variable consideration resulting from discounts, rebates, returns, chargebacks, contractual allowances, estimated third-party payer settlements, and certain distribution and administration fees offered in our customer contracts and other indirect customer contracts relating to the sale of our products. The Company establishes reserves for the estimated variable consideration based on the amounts earned or eligible to be claimed on the related sales. Where appropriate, these estimates take into consideration a range of possible outcomes, which are probability-weighted for relevant factors such as the Company's historical experience, current contractual requirements, specific known market events and trends, industry data and forecasted customer buying and payment patterns. The amount of variable consideration is included in the transaction price only to the extent that it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur in a future period. The Company regularly reviews all reserves and update them at the end of each reporting period as needed. There were no adjustments arising from the change in estimates of variable consideration that were significant for the years ended December 31, 2019 and 2018.

OA Joint Pain Treatment and Joint Preservation

Revenue from customers, such as healthcare providers, distribution centers or specialty pharmacies is recognized at the point in time when control is transferred to the customer, typically upon shipment.

Distributor chargebacks

The Company has preexisting contracts with established rates with many of the distributors' customers who require the distributors to sell our product at their established rate. The Company offers chargebacks to distributors who supply these customers with our products. The Company reduces revenue at the time of sale for the estimated future chargebacks. The Company records chargeback reserves as a reduction of accounts receivable and base the reserves on the expected value by using probability-weighted estimates of volume of purchases, inventory holdings and historical chargebacks requested for each distributor.

Discounts and gross-to-net deductions

The Company offers retrospective discounts and gross-to-net deductions linked to the volume of purchases which may increase at negotiated thresholds within a contract-buying period. The Company reduces revenue and records the reserve as a reduction to accounts receivable for the estimated discount and rebate at the most likely amount the customer will earn, based on historical buying trends and forecasted purchases.

Minimally Invasive Fracture Treatment

The Company recognizes revenue from third-party payers, such as governmental agencies, insurance companies or managed care providers, when the Company transfers control to the patient, typically when the patient has accepted the product or upon delivery. The Company records this revenue at the contracted rate, net of contractual allowances and estimated third-party payer settlements at the time of sale, or an estimated price based on historical data and other available information for non-contracted payers. The Company estimates the contractual allowances using the portfolio approach and based on probability weighting historical data and collections history within those portfolios. The portfolios determined using the portfolio approach consist of the following customer groups: government payers, commercial payers, and patients. The Company recognizes revenue from patients (self-pay and insured patients with coinsurance and deductible responsibilities) based on billed amounts giving effect to any discounts and implicit price concessions. Implicit price concessions represent differences between amounts billed and the amounts the Company expects to collect from patients, which considers historical collection experience and current market conditions.

Settlements with third-party payers for retroactive revenue adjustments due to audits, reviews or investigations are considered variable consideration and are included in the determination of the estimated transaction price using the most likely outcome method. These settlements are estimated based on the terms of the payment agreement with the payer, correspondence from the payer and historical settlement activity, including an assessment to ensure that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the retroactive adjustment is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known (that is, new information becomes available), or as years are settled or are no longer subject to such audits, reviews and investigations. The Company is not aware of any claims, disputes or unsettled matters with any payer that would materially affect revenues for which the Company has not adequately provided for or disclosed in the accompanying consolidated financial statements (discussed further in Note 13).

Product returns

The Company estimates the amount of returns and reduces revenue in the period the related product revenue is recognized. The Company records a liability for expected returns based on probability-weighted historical data.

Bone Graft Substitute

Most of the Company's BGS product sales are through consignment inventory with hospitals, where ownership remains with the Company until the hospital or ambulatory surgical center, or ASC, performs a

surgery and consumes the consigned inventory. The Company recognizes revenue when the surgery has been performed. The customer does not have control of the product until the customer consumes it, as the Company is able to require the return or transfer of the product to a third-party. An unconditional obligation to pay for the product does not exist until the customer consumes it.

Accounts receivable, net

Accounts receivable, net are amounts billed and currently due from customers. The Company records the amounts due net of allowance for doubtful accounts. The Company maintains an estimated allowance for doubtful accounts to provide for receivables the Company does not expect to collect. The Company bases the allowance on an assessment of customer creditworthiness, historical payment experience, the age of outstanding receivables and other information as applicable. Collection of the consideration that the Company expects to receive typically occurs within 30 to 90 days of billing. The Company applies the practical expedient for contracts with payment terms of one year or less which does not consider the effects of the time value of money. Occasionally, the Company enters into payment agreements with patients that allow payment terms beyond one year. In those cases, the financing component is not deemed significant to the contract.

Contract assets

Contract assets consist of unbilled amounts resulting from estimated future royalties from an international distributor that exceeds the amount billed. Contract assets totaling $261 and $472 as of December 31, 2019 and 2018, are included in prepaid and other current assets on the consolidated balance sheets, respectively.

Contract liabilities

Contract liabilities consist of customer advance payments and deferred revenue. Occasionally for certain international customers, the Company requires payments in advance of shipping product and recognizing revenue resulting in contract liabilities. Contract liabilities were nominal as of December 31, 2019 and 2018 and are included in accrued liabilities on the consolidated balance sheets.

Shipping and handling

The Company classifies amounts billed for shipping and handling as a component of net sales. The related shipping and handling fees and costs as well as other distribution costs are included in cost of sales. The Company has elected to recognize shipping and handling activities that occur after control of the related product transfers to the customer as fulfillment costs and are included in cost of sales.

Contract costs

The Company applies the practical expedient of recognizing the incremental costs of obtaining contracts as an expense when incurred as the amortization period of the assets that the Company otherwise would have recognized is one year or less. These incremental costs include the Company’s sales incentive programs for the internal sales force and third-party sales agents as the compensation is commensurate with annual sales activities. These costs are included in selling, general and administrative expense on the consolidated statements of operations and comprehensive income.

Inventory

The Company values its inventory at the lower of cost or net realizable value and adjusts for the value of inventory that is estimated to be excess, obsolete or otherwise unmarketable. Cost is determined using the first-in, first-out (FIFO) method. Elements of cost in inventory include raw materials, direct labor, manufacturing

overhead and inbound freight. The Company records allowances for excess and obsolete inventory based on historical and estimated future demand and market conditions.

Business combinations

Accounting for acquisitions requires the Company to recognize separately from goodwill assets acquired and the liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While best estimates and assumptions are used to accurately value assets acquired and liabilities assumed at the acquisition date, as well as contingent consideration where applicable, estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the assets acquired and liabilities assumed with a corresponding offset to goodwill. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations and comprehensive income (loss). Subsequent changes in the estimated fair value of contingent consideration are recognized in earnings in the period of change.

Long-lived assets

Property and equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization expense are recognized using the straight-line method over the estimated useful life of each asset, or the shorter of the lease term or useful life if related to leasehold improvements. The useful lives are as follows (in years):

Computer software and hardware	3-5
Leasehold improvements	7
Machinery and equipment	7
Furniture and fixtures	7

Goodwill and intangible assets

Finite-lived intangible assets were initially recorded at fair value upon acquisition and are amortized using the straight-line method over their estimated useful lives as follows (in years):

	Weighted Average Useful Life
Intellectual property	17.1
Distribution rights	12.1
Customer relationships	10.0
Developed technology	5.0

Goodwill is not amortized but is evaluated for impairment annually or more frequently if events or changes in circumstances indicate that goodwill might be impaired. The Company reviews goodwill for impairment by applying a quantitative impairment analysis where the fair value of the reporting unit is compared with the carrying value (including goodwill). The Company determines the fair value of each reporting unit based on an income approach. The value of each reporting unit is determined on a stand-alone basis from the perspective of a market participant and represents the price estimated to be received in a sale of the reporting unit in an orderly transaction between market participants at the measurement date. The Company performs its annual goodwill impairment test on October 31st. If the fair value of the reporting unit is less than its carrying value, the Company will recognize the difference as an impairment loss, which is limited to the amount of goodwill allocated to the reporting units. There were no impairment charges for the years ended December 31, 2019 and 2018.

Software development costs

The Company capitalizes internal and external costs incurred to develop internal-use software during the application development stage for software design, configuration, coding and testing upon placing the asset in service and then amortizes these costs on a straight-line basis over the estimated useful life of the product, not to exceed three years. The Company does not capitalize costs that are precluded from capitalization in authoritative guidance, such as preliminary project phase costs, training costs or data conversion costs. Capitalized software costs totaled $14,119 and $13,027 as of December 31, 2019 and 2018 and the related accumulated amortization totaled $12,184 and $11,301 as of December 31, 2019 and 2018, respectively. Depreciation expense was $1,138 and $1,204 for the years ended December 31, 2019 and 2018, respectively.

The carrying values of property, equipment, intangible assets as well as other long-lived and indefinite lived assets are reviewed for recoverability if the facts and circumstances suggest that a potential impairment may have occurred. If this review indicates that carrying values may not be recoverable the Company will perform an assessment to determine if an impairment charge is required to reduce carrying values to estimated fair value. If quoted market prices are not available, the Company estimates fair value using an undiscounted value of estimated future cash flows. During 2018, the Company determined that it would no longer sell a specific BGS product and as a result, an intangible asset related to this product was fully written off and the Company recognized impairment charges of $489 for the year ended December 31, 2018, which is included on the consolidated statements of operations and comprehensive income (loss). Upon retirement or sale of property and equipment, the cost of assets disposed of and the related accumulated depreciation and amortization are removed from the accounts, and any resulting gain or loss is included in income from operations.

Other than in-process research and development, or IPR&D, described below, there were no events, facts or circumstances for the December 31, 2019 that resulted in any other impairment charges to the Company’s property, equipment, intangible or other long-lived assets.

Acquired in-process research and development

The fair value of IPR&D assets acquired in a business combination are capitalized and accounted for as indefinite-lived intangible assets and are not amortized until development is completed and the product is available for sale. Once the product is available for sale, the asset is transferred to developed technology and amortized over its estimated useful life. Impairment tests for IPR&D assets occur at least annually in December, or more frequently if events or changes in circumstances indicate that the asset might be impaired. If the fair value of the intangible assets is less than the carrying amount, an impairment loss is recognized for the difference. There were no events, facts or circumstances for the years ended December 31, 2019 and 2018 that resulted in any impairment charges to the Company’s IPR&D.

Deferred Offering Costs

Deferred offering costs, consisting of legal, accounting, filing and other fees related to the initial public offering, are capitalized. The deferred offering costs will be offset against proceeds from the initial public offering upon the effectiveness of the initial public offering. In the event the initial public offering is terminated, all capitalized deferred offering costs would be expensed. As of December 31, 2019 and 2018, there were no deferred offering costs capitalized.

Concentration of risk

The Company provides credit, in the normal course of business, to its customers. The Company does not require collateral or other securities to support customer receivables. Credit losses are provided for through allowances and have historically been materially within management’s estimates.

Certain suppliers provide the Company with product that results in a significant percentage of total sales for the years ended December 31 as follows:

	2019	2018
Supplier A	20%	12%
Supplier B	19%	17%
Supplier C	15%	20%

Accounts payable to these significant suppliers at December 31 were as follows:

	2019	2018
Supplier A	$3,586	$ 426
Supplier B	$ 697	$ 457
Supplier C	$ 360	$1,605

Certain products provide the Company with a significant percentage of total sales for the years ended December 31 as follows:

	2019	2018
Product A	30%	38%
Product B	20%	12%
Product C	19%	17%
Product D	15%	20%

Restructuring costs

The Company has restructured portions of its operations and future restructuring activities are possible. Identifying and calculating the cost to exit these operations requires certain assumptions to be made, the most significant of which are anticipated future liabilities. Although estimates have been reasonably accurate in the past, significant judgment is required, and these estimates and assumptions may change as additional information becomes available and facts or circumstances change. Restructuring costs are recorded at estimated fair value. Key assumptions in determining the restructuring costs include negotiated terms and payments to terminate contractual obligations.

Profits interest compensation

The Company measures profits interest compensation cost at the grant date based on the fair value of the award and recognizes this cost as compensation expense over the required or estimated service period for awards expected to vest. Certain awards are liability-classified, which require they be remeasured at each reporting date. Compensation expense is included in Selling, general and administrative expense and Research and development expense on the consolidated statement of operations and comprehensive income (loss) based upon the classification of the employees who were granted the awards.

The Company uses the Monte Carlo option model to determine the fair value to the granted profits interest awards and other equity instruments. Expected stock price volatility is based on an average of several peer public companies due to the Company’s limited operating history. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the award. The dividend yield percentage is zero because the Company neither currently pays dividends nor intends to do so during the expected term. The expected term of awards represents the time the awards are expected to be outstanding. The expected term is based on the estimated time until a liquidity or Distribution Event as defined in the amended and restated limited liability company agreement of Bioventus LLC, or LLC Agreement, discussed further in Note 10.

Advertising costs

Advertising costs include costs incurred to promote the Company's business and are expensed as incurred. Advertising costs were $2,351 and $2,916 for the years ended December 31, 2019 and 2018, respectively.

Research and development expense

Research and development expense consist primarily of employee compensation and related expenses as well as contract research organization services. Internal research and development costs are expensed as incurred. Research and development costs incurred by third parties are expensed as the contracted work is performed.

Net income (loss) per unit

Basic income (loss) per common unit is determined by dividing the net income (loss) allocable to common unit holders by the weighted average number of common units outstanding during the periods presented. Diluted loss per common unit is computed by dividing the net income (loss) allocable to common unit holders on an "if converted" basis by the weighted average number of actual common units outstanding and, when dilutive, the unit equivalents that would arise from the assumed conversion of convertible instruments.

Contingencies

The Company records a liability in the consolidated financial statements on an undiscounted basis for loss contingencies when a loss is known or considered probable and the amount may be reasonably estimated. If the reasonable estimate of known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a loss is reasonably possible but not known or probable, and may be reasonably estimated, the estimated loss or range of loss is disclosed. Legal fees expected to be incurred in connection with a loss contingency are not included in the estimated loss contingency. The Company accrues for any legal costs as they are incurred.

Income taxes

Bioventus is treated as a partnership for U.S. tax purposes. Accordingly, the profits and losses are passed through to the members and included in their income tax returns. The Company is required to make tax distributions to its members in an amount equal to 40% of the members' taxable income attributable to their ownership. The tax rate applied for purposes of this distribution may be changed only by approval of the Company's Board of Managers.

Certain wholly owned subsidiaries of Bioventus are taxable entities for U.S. or foreign tax purposes and file tax returns in their local jurisdictions. Income tax expense includes U.S. federal, state and international income taxes. Certain items of income and expense are not reported in income tax returns and financial statements in the same year. The income tax effects of these differences are reported as deferred income taxes. Valuation allowances are provided to reduce the related deferred tax assets to an amount which will, more likely than not, be realized.

The Company recognizes a tax benefit from any uncertain tax positions only if they are more likely than not to be sustained upon examination based on the technical merits of the position. The amount of the accrual for which an exposure exists is measured as the largest amount of benefit determined on a cumulative probability basis that the Company believes is more likely than not to be realized upon ultimate settlement of the position. Components of the reserve, if relevant, are classified as a current or noncurrent liability in the consolidated balance sheet based on when the Company expects each of the items to be settled. Interest and penalties related to unrecognized tax benefits are recognized as a component of income tax expense.

Subsequent Events

The Company has considered the effects of subsequent events through October 6, 2020, the date the Company's consolidated financial statements were issued.

3. Balance sheet information

Accounts receivable, net

Accounts receivable, net of allowances, consisted of the following as of December 31:

	2019	2018
Accounts receivable	$ 89,274	$ 77,066
Less:		
Allowances for doubtful accounts	(4,146)	(4,497)
	$ 85,128	$ 72,569

Changes in the allowances for doubtful accounts were as follows for the years ended December 31:

	2019	2018
Balance, beginning of period	$ (4,497)	$ (3,795)
Provision for losses	(2,242)	(2,538)
Write-offs, net of recoveries	2,593	1,836
	$ (4,146)	$ (4,497)

Inventory

Inventory consisted of the following as of December 31:

	2019	2018
Raw materials and supplies	$ 3,349	$ 3,998
Finished goods	24,509	23,968
Gross	27,858	27,966
Excess and obsolete reserves	(532)	(570)
	$ 27,326	$ 27,396

Changes in excess and obsolete reserves for inventory were as follows for the years ended December 31:

	2019	2018
Balance, beginning of period	$ (570)	$ (485)
Provision for losses	(870)	(1,059)
Write-offs	908	974
	$ (532)	$ (570)

Property and equipment, net

Property and equipment consisted of the following as of December 31:

	2019	2018
Computer equipment and software	$ 16,854	$ 18,371
Leasehold improvements	2,918	2,461
Furniture and fixtures	1,451	1,431
Machinery and equipment	1,138	1,052
Assets not yet placed in service	370	200
	22,731	23,515
Less accumulated depreciation	(18,242)	(18,756)
	$ 4,489	$ 4,759

Depreciation expense was $2,579 and $3,439 for the years ended December 31, 2019 and 2018, respectively.

Goodwill and intangible assets, net

There were no changes to goodwill during the years ended December 31, 2019 and 2018. Following is a summary of goodwill by reportable segment:

	U.S.	International	Consolidated
Balance at December 31, 2018 and 2019	$ 41,040	$ 8,760	$ 49,800

Intangible assets consisted of the following as of December 31:

	2019	2018
Intellectual property	$ 263,422	$ 258,588
Distribution rights	59,700	59,700
Customer relationships	57,700	57,700
IPR&D	11,095	9,650
Developed technology and other	4,649	4,648
Total carrying amount	396,566	390,286
Less accumulated amortization:		
Intellectual property	(100,982)	(84,900)
Distribution rights	(28,716)	(23,670)
Customer relationships	(46,407)	(41,567)
Developed technology and other	(3,404)	(3,120)
Total accumulated amortization	(179,509)	(153,257)
Intangible assets, net before currency translation	217,057	237,029
Currency translation	(547)	—
	$ 216,510	$ 237,029

In August 2019, the Company invested in Harbor Medtech Inc., or Harbor, and consolidated its financial statements with the Company's (discussed further in Note 4). As a result of this consolidation, $4,834 of intellectual property and $1,445 of IPR&D was added to intangible assets. The remaining $9,650 of IPR&D consists of research and development progress toward the next generation of a BGS product for which the Company filed a 510(k) in 2019 and intends to begin commercialization in 2020.

Amortization expense related to intangible assets was $26,252 and $26,622 for the years ended December 31, 2019 and 2018 of which $6,416 and $7,766 are included in ending inventory at December 31, 2019 and 2018, respectively. Estimated amortization expense for the years ended December 31, 2020 through 2024 is expected to be $27,106, $27,106, $22,754, $21,141 and $20,103, respectively.

Investments

VIE

On August 23, 2019, the Company purchased 285,714 shares of Harbor's Series C Preferred Stock or 3.1% of fully diluted shares for $1,000 in cash. In addition, the Company and Harbor entered into an exclusive license and development collaboration agreement, or Collaboration Agreement, for purposes of developing a product for orthopedic uses to be commercialized by the Company and supplied by Harbor (discussed further in Note 13). As a result of these transactions, the Company determined that it had a variable interest in Harbor. The Company

also concluded that it was the primary beneficiary since it controls the significant activities of Harbor through the Collaboration Agreement. Accordingly, the Company accounted for the $1,000 investment in Harbor as a business combination and consolidated Harbor in its consolidated financial statements with a noncontrolling interest for the remaining 96.9% (discussed further in Note 4).

Harbor assets that can only be used to settle Harbor obligations and Harbor liabilities for which creditors do not have recourse to the general credit of the Company are as follows as of December 31, 2019:

Cash and cash equivalents	$ 1,127
Property and equipment, net	60
Intangible assets, net	6,122
Operating lease assets	231
Other assets	59
	$ 7,599
Accounts payable and accrued liabilities	$ 458
Other current liabilities	2,395
Deferred income tax	215
Other long-term liabilities	872
	$ 3,940

Other

On January 30, 2018, the Company purchased 337,397 shares of CartiHeal (2009) Ltd., or CartiHeal, a privately held entity, Series F Convertible Preferred Stock or 2.8% of fully diluted shares for $2,500 in cash. The investment does not have a readily determinable fair value. Under the measurement alternative, the investment is recorded at cost, less any impairment, plus or minus any changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. There have not been any impairments or adjustments to the investment. This investment is included in investment and other assets on the consolidated balance sheet.

Accrued liabilities

Accrued liabilities consisted of the following at December 31:

	2019	2018
Gross-to-net deductions	$ 14,622	$ 4,238
Bonus and commission	14,200	12,255
Reserve for estimated overpayments from third-party payers	6,801	12,468
Compensation and benefits	3,231	3,139
Income and other taxes	2,555	2,032
Distribution rights	—	6,000
Other liabilities	11,418	10,852
	$ 52,827	$ 50,984

4. Business combination

As discussed in Note 3, on August 23, 2019, the Company invested $1,000 in Harbor. Harbor is a corporation formed under the laws of the state of Delaware on October 12, 2010. The Company accounted for the Harbor investment as a business combination using the acquisition method of accounting whereby the total

purchase price was preliminarily allocated to tangible and intangible assets acquired and liabilities assumed based on respective fair values. The total cash purchase price was $1,000.

The fair value of the Harbor intellectual property and IPR&D was determined using the income approach through an excess earnings analysis, with projected earnings discounted at a rate of 16.5%. The $1,445 of IPR&D consists of research and development progress toward developing a product for orthopedic uses. The fair value of the noncontrolling interest was calculated as estimated fair value of net assets acquired less the Bioventus' purchase price.

The following table summarizes the preliminary fair values of the assets acquired and liabilities assumed at the acquisition date:

Cash and cash equivalents	$ 1,430
Intellectual property (10-year useful life)	4,834
IPR&D	1,445
Other assets	70
Accounts payable and accrued liabilities	(932)
Other current liabilities	(1,696)
Other long-term liabilities	(697)
Deferred income tax	(266)
Estimated fair value of net assets acquired	4,188
Bioventus purchase price	1,000
Fair value of Harbor's noncontrolling interest	3,188
	$ —

The results of Harbor operations have been included in the accompanying consolidated financial statements subsequent to acquisition date. The Company has not disclosed post-acquisition or pro-forma losses attributable to Harbor as they did not have a material effect on the Company's consolidated statements of operations and comprehensive income (loss).

Nearly all the liabilities assumed are payable to Harbor shareholders. The notes payable primarily consists of $1,196 in promissory notes to various Harbor shareholders that mature August 31, 2020 and have an interest rate of 8%. Payments are due monthly. The remaining $500 of notes payable are two convertible promissory notes, or Convertible Notes, to Harbor shareholders that was entered on August 22, 2019 and were scheduled to mature on November 18, 2019. On March 27, 2020, the Convertible Notes were converted to 142,858 of Harbor Series C Preferred Stock and warrants for 428,572 shares of the Harbor common stock exercisable at a price of $1.167 per share with a 5-year exercise period expiring March 27, 2025.

5. Debt

2016 credit agreement

On November 15, 2016, the Company entered into a $250,000 credit agreement, or 2016 Credit Agreement, with JPMorgan Chase Bank, N.A., as well as a syndicate of other entities. The 2016 Credit Agreement was comprised of a $210,000 term loan, or 2016 Term Loan, with an original issue discount, or OID, of $4,200, and a $40,000 revolving facility, or 2016 Revolver. All obligations under the 2016 Credit Agreement were guaranteed by the Company and certain of the Company's wholly owned subsidiaries. The obligations under the 2016 Credit Agreement were collateralized by substantially all the assets of the Company. The 2016 Term Loan and 2016 Revolver were to mature on November 15, 2021. As of December 31, 2018, $194,828 was outstanding on the 2016 Term Loan, net of the OID of $2,705 and deferred financing costs of $1,967. As of December 31, 2018, there was no outstanding balance on the 2016 Revolver and one nominal letter of credit, or LOC, outstanding,

leaving approximately $39,917 available. On December 6, 2019, all outstanding balances under the 2016 Credit Agreement were paid in full. As a result, $1,728 of OID and $1,257 of deferred financing costs were written off and recorded in interest expense.

As of December 31, 2018, the 2016 Term Loan interest rate including a margin of 6.25% was 8.77%. The 2016 Revolver included a commitment fee at 0.40% of the average daily amount of the available revolving commitment, assuming any swingline loans outstanding were $0. There were no swingline loans outstanding as of December 31, 2018. The fee was payable quarterly in arrears on the last day of the calendar quarters.

During November 2016, the Company entered into an interest rate swap agreement totaling $52,500 with a term of three years as required by the 2016 Credit Agreement (discussed further in Note 6). As of December 31, 2018, the effective interest rate, including the applicable lending margin, on 26.3% or $52,500, of the outstanding principal of the Company's 2016 Term Loan was fixed at 7.90% using the interest rate swap. The Company's effective weighted average interest rate on all outstanding debt, including the commitment fee and interest rate swap, was 8.74% as of December 31, 2018.

2019 Credit Agreement

On December 6, 2019, the Company entered into a $250,000 credit and guaranty agreement, or 2019 Credit Agreement, with Wells Fargo Bank National Association, or Wells, as well as a syndicate of other banks, or Lenders. The 2019 Credit Agreement is comprised of a $200,000 term loan, or Term Loan, with an OID of $666, and a $50,000 revolving facility, or Revolver. All obligations under the 2019 Credit Agreement are guaranteed by the Company and certain of the Company's wholly owned subsidiaries. Substantially all the assets of the Company collateralize the obligations under the 2019 Credit Agreement. The Term Loan and Revolver mature on December 6, 2024, or Maturity.

Term Loan

As of December 31, 2019, $197,965 was outstanding on the Term Loan, net of original issue discount of $657 and deferred financing costs of $1,378. As of December 31, 2019, the Term Loan interest rate including a margin of 2.25% was 3.96%. Scheduled quarterly principal payments are as follows with the final payment of $125,000 at Maturity:

	Quarterly payment
2020	$ 2,500
2021 and 2022	$ 3,750
2023 and 2024	$ 5,000

The Company may voluntarily prepay the Term Loan without premium or penalty upon prior notice. The Company may be required to make additional principal payments on the Term Loan dependent upon the generation of certain cash flow events as defined in the 2019 Credit Agreement. These additional prepayments will be applied to the scheduled installments of principal in direct order of maturity of the Base Rate, or BR portions of the Term Loan first and then the Eurodollar portions of the Term Loan.

Revolver

The Revolver is a five-year revolving credit facility of $50,000 which includes revolving and swingline loans as well as LOCs and, inclusive of all, cannot exceed $50,000 at any one time. LOCs are available in an amount not to exceed $7,500. Revolving loans are due at the earlier of termination or Maturity. Swingline loans are available as BR interest rate option loans only and must be outstanding for at least five days. Swingline loans are due the fifteenth or last day of a calendar month or Maturity whichever is earlier. As of December 31, 2019, there was no outstanding balance on the Revolver and one nominal LOC outstanding, leaving approximately $49,917 available.

Interest

The Term Loan and Revolver permits at the Company's election either Eurodollar or BR interest rate options for the entire amount or certain portions of the loans and have interest rates equal to a formula driven base interest rate plus a margin, tied to a leverage ratio. The leverage ratio is the ratio of debt to consolidated EBITDA as defined in the 2019 Credit Agreement, or Bank EBITDA, for four consecutive quarters at the end of each period.

BR portions of the Term Loan have interest due the last day of each calendar quarter-end. Eurodollar portions of the Term Loan have one, two, three or six-month interest reset periods and interest is due on the last day of each three-month period or the last day of the loan term if less than three months. In advance of the last day of the current Eurodollar Loan, the Company may select a new loan type so long as it does not extend beyond Maturity. The outstanding Term Loan has been a Eurodollar Loan since inception and is an auto-renewing one-month loan for setting an interest rate. In addition, the Term Loan has an interest due date concurrent with any scheduled principal repayment or prepayment.

Interest is calculated based on a 360-day year except for BR loans where the base interest is the Wells Prime Rate, in which case it is calculated based on a calendar-day year. The base interest rate for all BR loans is equal to the highest of (a) the Wells Prime Rate, (b) the greater of the Federal Funds Effective Rate or Overnight Bank Funding Rate plus 1/2% and (c) the Eurodollar Rate for a USD deposit with a maturity of one month plus 1.0%. The base interest rate for all Eurodollar Loans is equal to the rate determined for such day in accordance with the following formula with the Term Loan having a floor of 0%:

$$\frac{\text{LIBOR}}{1\text{—Eurocurrency Reserve Requirements}}$$

Pricing grids are used to determine the loan margins based on the type of loan and the leverage ratio. The initial Eurodollar and BR loans have a margin of 2.25% and 1.25%, respectively. Loan margin is adjusted after the quarterly financial statements are delivered to the lenders in accordance with the pricing grid below:

Leverage ratio	Eurodollar	BR
> 2.50 to 1.00	2.50%	1.50%
>1.50 to 1.00 and < 2.50 to 1.00	2.25%	1.25%
> 1.25 to 1.00 and <1.50 to 1.00	1.75%	0.75%
> 0.75 to 1.00 and <1.25 to 1.00	1.50%	0.50%
< 0.75 to 1.00	1.25%	0.25%

The Revolver includes a commitment fee at 0.25% of the average daily amount of the available revolving commitment, assuming any swingline loans outstanding are $0. There were no swingline loans outstanding as of December 31, 2019. The fee is payable quarterly in arrears on the last day of the calendar quarters and at Maturity. The commitment fee rate is adjusted after the quarterly financial statements are delivered to lenders based on the pricing grid below:

Leverage ratio	Commitment fee rate
> 2.50 to 1.00	0.30%
>1.50 to 1.00 and < 2.50 to 1.00	0.25%
> 1.25 to 1.00 and <1.50 to 1.00	0.20%
> 0.75 to 1.00 and <1.25 to 1.00	0.15%
< 0.75 to 1.00	0.10%

Fees are charged on all outstanding LOCs at an annual rate equal to the margin in effect on Eurodollar revolving loans. A fronting fee of 0.125% per year on the undrawn and unexpired amount of each LOC is payable as well. The fees are payable quarterly in arrears on the last day of the calendar quarters.

As of December 31, 2019, the Company's effective weighted average interest rate on all outstanding debt, including the commitment fee and interest rate swap, was 3.27%.

Other

The 2019 Credit Agreement contains customary affirmative and negative covenants, including those related to financial reporting and notification, restrictions on the declaration or payment of certain distributions on or in respect of the Company's equity interests, restrictions on acquisitions, investments and certain other payments, limitations on the incurrence of new indebtedness, limitations on transfers, sales and other dispositions of Company assets, as well as limitations on making changes to the Company's business and organizational documents. Financial covenant requirements include a maximum debt leverage ratio as well as an interest coverage ratio not less than 3.00 to 1.00 as defined in the 2019 Credit Agreement. As of December 31, 2019, the Company complied with the financial covenants in the 2019 Credit Agreement.

Each Lender may provide an additional Term or Revolving Loan by executing and delivering notice specifying the terms, if doing so would not cause certain undesired events to occur as defined in the 2019 Credit Agreement or extend repayment beyond Maturity. The aggregate amount of all additional borrowings may not exceed the greater of $100,000 and the trailing four quarters Bank EBITDA without the consent of the Lenders holding more than 50% of the total outstanding debt under the 2019 Credit Agreement.

Financing costs

During December 2019, the Company paid financing costs totaling $2,117 in order to refinance the 2016 Credit Agreement. The Company recorded $269 directly to selling, general and administrative expense and the remaining $1,848 was capitalized to the consolidated balance sheet. One lender participating in the 2016 Credit Agreement became a lender in the 2019 Credit Agreement and, as a result, $2,985 related to 2016 Term Loan was written off and recorded as interest expense. The $269 recorded in selling, general and administrative expense and the $2,985 recorded in interest expense total the $3,252 of loss on debt retirement and modification.

Total capitalized deferred fees for the Term Loan of $1,398 and Revolver of $653 are being amortized to interest expense on a straight-line basis over each of the respective lives, which approximates the effective interest method. The Company recorded $711 and $745 in interest expense associated with these deferred costs for the years ended December 31, 2019 and 2018, respectively.

Contractual maturities of long-term debt as of December 31, 2019, were as follows:

2020	$ 10,000
2021	15,000
2022	15,000
2023	20,000
2024	140,000
Deferred finance costs	(1,378)
Original issue discount	(657)
Total long-term debt	197,965
Less current portion	(10,000)
Total	$187,965

6. Derivatives

The Company does not use derivative financial instruments for speculative or trading purposes. In November 2016, the Company entered an interest rate swap effective November 30, 2016 to limit its exposure to

changes in the variable interest rate on its 2016 Term Loan (as discussed in Note 5). The interest rate swap was not designated as a hedge. Effective November 30, 2019 the interest rate swap expired leaving no balance as of December 31, 2019. The fair value of the Company's derivative was recorded in the Company's consolidated balance sheets as other current asset totaling $430 as of December 31, 2018. The effect of the Company's derivatives on interest expense (income) in the consolidated statements of operations and comprehensive income (loss) totaled $96 and ($334) for the years ended December 31, 2019 and 2018, respectively.

7. Members' equity

Members' equity consisted of the following at December 31:

	2019	2018
Preferred	$ 168,000	$ 168,000
Common	113,373	113,373
Profits interest (discussed further in Note 10)	3,774	3,780
	$ 285,147	$ 285,153

The authorized number of common and preferred units is unlimited. On May 4, 2012, 4,900 common units and 5,100 preferred units, or 2012 Preferred Units, were issued. During November 2015, the Company obtained a $50,000 capital contribution from its existing members and 1,490 in preferred units were issued, or 2015 Preferred Units. The common and preferred members have stated rights and privileges, which include, but are not limited to: (1) voting and Company governance, (2) the transfer of membership interests and (3) dissolutions and liquidation of the Company.

Each preferred unit carries a priority payout (the Liquidation Preference as defined in the LLC agreement) upon certain events, including but not limited to a qualified initial public offering, sale of the Company or a liquidation or dissolution of the Company. The initial Liquidation Preference for the 2012 and 2015 Preferred Units are $23.14 and $33.57, respectively. Until preferred units are converted to common units, the preferred units will also accrue a distribution right, or Preferred Distribution, at a rate of 3% per annum and if it is unpaid, such Preferred Distribution shall be added annually to the Liquidation Preference.

In addition to other units, one member owns the only Equity Participation Right Unit, or EPR Unit. The EPR Unit is junior to the common units and its only entitlement is 0.55% of available distributions arising from a Distribution Event (discussed further in note 8). Upon the conclusion of a Distribution Event, the EPR Unit will cease to exist and all entitlements will end.

8. Fair value measurements

Recurring fair value measurements

As of December 31, 2019, there were no assets or liabilities measured at fair value using Level 1 or Level 2 inputs. The following table provides information, by level, for liabilities that were measured at fair value on a recurring basis using Level 3 inputs:

Liability	Balance Sheet Caption	Level 3
Management incentive plan awards	Accrued equity-based compensation	$ 15,547
Liability-classified awards	Accrued equity-based compensation, less current portion	25,255
EPR	Other long-term liabilities	5,457
		$ 46,259

As of December 31, 2018, there were no assets or liabilities measured at fair value using Level 1 inputs. The following table provides information for assets and liabilities that are measured at fair value on a recurring basis using Level 2 and Level 3 inputs:

	Total	Level 2	Level 3
Assets:			
Interest rate swaps	$ 430	$ 430	$ —
Liabilities:			
Contingent consideration	$ 945	$ —	$ 945
Management incentive plan and liability-classified awards	33,063	—	33,063
EPR liability	4,892	—	4,892
Total liabilities	$ 38,900	$ —	$ 38,900

Below is a summary of the valuation techniques used in determining fair value:

Contingent consideration—The Company initially valued contingent consideration related to business combinations using a probability-weighted calculation of potential payment scenarios discounted at rates reflective of the risks associated with the expected future cash flows. Key assumptions used to estimate the fair value of contingent consideration include revenue, net new business and operating forecasts and the probability of achieving the specific targets. After the initial valuation, the Company's best estimate is assigned 100% probability.

Interest rate swaps—The Company values interest rate swaps by discounting cash flows of the swap. Forward curves and volatility levels are used to estimate future cash flows that are not certain. These are determined using observable market inputs when available and based on estimates when not available.

MIP and liability-classified awards—The Company values these awards using the Monte Carlo option model to allocate fair value. Key assumptions used to estimate the fair value include expected stock price volatility, risk-free interest rate, dividend yield and the average time the award is expected to be outstanding.

EPR—The Company values the EPR Unit using a probability-weighted calculation of potential payment scenarios discounted at rates reflective of the risks associated with the expected future cash flows. Key assumptions used to estimate the fair value of the EPR Unit include the timing and amount available from a Distribution Event. In October 2014, the percentage that will be applied to distributions resulting from a Distribution Event became fixed at 0.55%. The revaluation for the EPR liability is recognized in interest expense on the consolidated statements of operations and comprehensive income (loss).

The following table summarize the changes in the Level 3 liabilities measured on a recurring basis for the years ended December 31:

	Contingent consideration		MIP and liability-classified awards		EPR liability	
	2019	2018	2019	2018	2019	2018
Beginning balance	$ 945	$ 5,242	$33,063	$18,382	$ 4,892	$ 3,883
Initial estimate	—	—	5,464	4,253	—	—
Forfeitures	—	—	(1,013)	(391)	—	—
Change in fair value	—	(739)	6,290	10,914	565	1,009
Payment	(945)	(3,558)	(3,002)	(95)	—	—
Ending balance	$ —	$ 945	$40,802	$33,063	$ 5,457	$ 4,892

The contingent consideration change in fair value of ($739) for the year ended December 31, 2018 was primarily driven by lower forecasted sales in subsequent years as well as 2018 sales being lower than those estimated at December 31, 2017 partially offset by interest on discounted cash flows.

Non-recurring fair value measurements and fair value disclosures

The carrying value of the 2016 and 2019 Credit Agreement and other indebtedness was not materially different from fair value at December 31, 2019 and 2018, respectively. The fair value of these obligations was determined based on discounted cash flows using estimated incremental borrowing rates for obligations with similar characteristics.

9. Restructuring costs

Restructuring costs are not allocated to the Company's reportable segments as they are not part of the segment performance measures regularly reviewed by management. These charges are included in restructuring expenses in the consolidated statement of operations and comprehensive income (loss).

In the fourth quarter of 2018, the Company adopted a restructuring plan to improve the performance of International operations, principally through headcount reduction and closing offices in certain countries as the Company shifts to an indirect distribution model in these countries. The plan was completed in 2019 and for the years ended December 31, 2019 and 2018, the Company recorded total pre-tax charges of $575 and $1,373, respectively, primarily related to severance. The Company's costs totaled $1,948, consulting and compensation for departing employees that remained through the transition totaled $1,569 and other associated costs totaled $379.

During the years ended December 31, 2019 and 2018 the Company made payments and provision adjustments for the plan as presented below:

	Employee severance and temporary labor costs	Other charges	Total
Balance at December 31, 2017	$ 723	$ —	$ 723
Expenses incurred	1,078	295	1,373
Payments made	(804)	(89)	(893)
Balance at December 31, 2018	997	206	1,203
Expenses incurred	491	84	575
Payments made	(1,488)	(290)	(1,778)
Balance at December 31, 2019	$ —	$ —	$ —

10. Benefit plans

Equity-based compensation plans

The Company operates two equity-based compensation plans, or the Plans, the MIP and the Phantom Plan. The awards granted under both plans represent a non-managing, non-voting interest in the Company designed for grantees to share in the future appreciation of the value of the Company. Awards granted under the MIP Plan and the 2015 Phantom Units are liability-classified and the 2012 Phantom Units are equity-classified. At December 31, 2019, 2,437,192 units are authorized to be awarded and 307,092 units were available for award. Profits interest compensation of $10,844 and $14,325 was recognized for the years ended December 31, 2019 and 2018, respectively. The expense is included in selling, general and administrative expense and research and development expense on the consolidated statement of operations and comprehensive income (loss) based upon

the classification of the employee. Profits interest (forfeiture) compensation of ($111) and $490 were recognized in loss from discontinued operations for the years ended December 31, 2019 and 2018, respectively. As of December 31, 2019, there was approximately $7,162 of unrecognized compensation expense to be recognized over a weighted-average period of 1.1 years.

MIP liability-classified

The awards granted under MIP vested 25% upon the first anniversary of the grant date, 6.25% per quarter thereafter and were fully vested at December 2, 2017. Receipt of value will be realized upon sale of the Company or a liquidation or dissolution of the Company as defined in the LLC Agreement, or MIP Distribution Event, and will be based on the grantees vested ownership of their award in proportion to the Company's equity, including vested interests under both the MIP and Phantom Plan, after all debt and equity holders have been repaid. There are cumulative distributions that must be made to the members before distributions are made, or Benchmark Amount. The Benchmark Amount is $281,372 for MIP awards. The MIP award allows the grantee to force a cash settlement after December 2, 2018 if the grantee retires. The grantee announced his intention to retire in 2020. The proceeds received by the MIP grantee upon a forced cash settlement will be calculated on the same basis as if a MIP Distribution Event occurred. The value to be allocated to the MIP grantee will be calculated as the greater of fair value in an arms-length transaction or the earnings before interest, tax, depreciation and amortization, or EBITDA, multiple of the Spin-out times the annualized most recent 6-month EBITDA. The MIP awards are re-measured to fair value at each reporting date and are included in other long-term liabilities on the consolidated balance sheet (as discussed in Note 8). As of December 31, 2019, $15,547 was recorded as current accrued equity-based compensation on the consolidated balance sheet.

2012 Phantom Units equity-classified

Awards granted under the Phantom Plan in 2012 generally vested over a five-year period. Receipt of value will be realized upon the closing of a sale of units representing a percentage interest of more than 66.66%, or the sale of all or substantially all of the assets of the Company, provided such event constitutes a change of control, or Phantom Plan Distribution Event, and will be based on the grantees vested ownership of their award in proportion to the Company's equity, including vested interests under both the MIP and Phantom Plan, after all debt and equity holders have been repaid. Payment amount for vested awards shall be equal to an amount that would be payable with respect to the equivalent number of Phantom Units with an equivalent Benchmark Amount that was pursuant to the LLC Agreement, which was $281,372, subject to change as defined in the Phantom Plan.

2015 "value creation" Phantom Units liability-classified

"Value Creation" Phantom Plan awards were granted in 2015 with a three-year cliff vesting related to the 2017 enterprise value, which, exceeded the required value of $740,000. As a result, 100.0% vesting was achieved in 2018 on the third anniversary of the award. Receipt of value will be realized upon a Phantom Plan Distribution Event or termination that was not for cause, whichever comes first. The payment amount for vested awards shall be an amount that would be allocated to an equivalent number of Phantom Units with an equivalent Benchmark Amount, or $394,899, upon a Phantom Plan Distribution Event or upon termination as if the Company were liquidated on the termination date at fair market value. Payment will be based on the grantees vested ownership of their award in proportion to the Company's equity, including vested interests under both the MIP and Phantom Plan, after all debt and equity holders have been repaid. The 2015 Phantom Plan awards are re-measured to fair value at each reporting date and are included in accrued equity-based compensation, less current portion on the consolidated balance sheet (as discussed in Note 8).

2015 Phantom Units liability-classified

Phantom Plan Awards granted in 2015 generally vest over a five-year period. Most of the awards vest 20% on each of the first five anniversaries from the grant date. Certain awards vest 20% upon the first anniversary of

the grant date and 5% per quarter thereafter. Receipt of value will be realized upon a Phantom Plan Distribution Event or termination, that was not for cause, whichever comes first. The payment amount for vested awards shall be an amount that would be allocated to an equivalent number of Phantom Units with an equivalent Benchmark Amount, upon a Phantom Plan Distribution Event or upon termination as if the Company were liquidated on the termination date at fair market value. Payment will be based on the grantees vested ownership of their award in proportion to the Company's equity, including vested interests under both the MIP and Phantom Plan, after all debt and equity holders have been repaid. The 2015 Phantom Plan awards are re-measured to fair value at each reporting date and are included in accrued equity-based compensation, less current portion on the consolidated balance sheet (as discussed in Note 8).

2018 "value creation" Phantom Units liability-classified

"Value Creation" Phantom Plan awards were granted in 2018 with a three-year cliff vesting related to the annual 2020 net sales.

2020 net sales	<$350,600	>$350,600 but <$370,800	>$370,800 but <$391,800	>$391,800
Percent vested	0.0%	50.0%	75.0%	100.0%

Receipt of value will be realized upon a Phantom Plan Distribution Event or termination that was not for cause, whichever comes first. The payment amount for vested awards shall be an amount that would be allocated to an equivalent number of Phantom Units with an equivalent Benchmark Amount, or $703,691, upon a Phantom Plan Distribution Event or upon termination as if the Company were liquidated on the termination date at fair market value. Payment will be based on the grantees vested ownership of their award in proportion to the Company's equity, including vested interests under both the MIP and Phantom Plan, after all debt and equity holders have been repaid. The 2018 "Value Creation" Phantom Plan awards are re-measured to fair value at each reporting date and are included in accrued equity-based compensation, less current portion on the consolidated balance sheet (as discussed in Note 8).

The assumptions utilized to determine the fair value of the awards for the years ended December 31 are indicated in the following table:

	2019	2018
Expected dividend yield	0.0%	0.0%
Expected volatility	35.0%	30.0%
Risk-free interest rate	1.5%	2.7%
Time to exit event (in years)	1.5	1.0

A summary of the award activity of the Plans is as follows (number of awards in thousands):

	MIP and 2012 Phantom Units		Other Phantom Units	
	Number of awards	Weighted average grant-date fair value	Number of awards	Weighted average grant-date fair value
Outstanding at December 31, 2018	993	$ 5.46	1,150	$ 9.12
Granted	—	$ —	160	$ 15.31
Converted to cash	—	$ —	(93)	$ 4.84
Forfeited	(2)	$ 9.70	(78)	$ 10.61
Outstanding at December 31, 2019	991	$ 5.44	1,139	$ 10.24
Awards vested at December 31, 2019	989	$ 5.43	471	$ 6.76

There were no 2012 Phantom Unit awards granted in 2018. The weighted average grant date fair value per Other Phantom Unit awards granted in the year ended December 31, 2018 was $14.93.

	MIP and 2012 Phantom Units		Other Phantom Units	
	Number of awards	Weighted average grant-date fair value	Number of awards	Weighted average grant-date fair value
Nonvested at December 31, 2018	12	$ 9.65	719	$ 11.09
Vested during 2019	8	$ 9.56	134	$ 8.33
Nonvested at December 31, 2019	2	$ 10.01	667	$ 12.71

The total fair value of MIP and 2012 Phantom Units vested in the years ended December 31, 2019 and 2018 was $80 and $184, respectively. The total fair value of 2015 Phantom Units vested in the years ended December 31, 2019 and 2018 was $3,696 and $6,130, respectively.

Defined contribution plans

The Company has various defined contribution plans or plans that share profit which are offered in Canada, Germany, the Netherlands and the United Kingdom. In some cases, these plans are required by local laws or regulations. Contributions are primarily discretionary, except in some countries where contributions are contractually required. These plans cover substantially all eligible employees in the countries where the plans are offered either voluntarily or statutorily.

In the U.S., the Company provides a 401(k) defined contribution plan (U.S. Plan) that covers substantially all U.S. employees that meet minimum age requirements. The Company matches 50% of the employees' contribution up to 6% of the employees' wages. In addition, the Company contributes 4.5% of the employees' wages to the U.S. Plan.

For the years ended December 31, 2019 and 2018 Company contributions totaled $5,401 and $5,462, respectively, for all global plans. The expense is included in cost of sales, selling, general and administrative expense and research and development expense on the consolidated statement of operations and comprehensive income (loss) based upon the classification of the employee.

11. Income taxes

On December 22, 2017, the Tax Cuts and Jobs Act, or Tax Act, was enacted. The Tax Act significantly revised U.S. corporate income tax law by reducing the U.S. statutory federal corporate income tax rate to 21% effective January 1, 2018. The Company completed its accounting for the tax effects of the Tax Act as of December 31, 2018 recognizing a nominal adjustment to the provisional amounts recorded at December 31, 2017.

The Tax Act also subjects companies to tax on Global intangible low-taxed income (GILTI) earned by certain foreign subsidiaries. FASB guidance states that the Company can make an accounting policy election to either recognize deferred taxes for temporary basis differences expected to reverse as GILTI in future years or provide for the tax expense related to GILTI in the year the tax is incurred as a period expense only. Due to Bioventus LLC's pass-through structure for U.S. income tax purposes, related deferred taxes are not recognized on the consolidated balance sheet. The Company has included an estimate for GILTI related to operations in the effective income tax rate. The impact of GILTI was nominal for the years ended December 31, 2019 and 2018.

The components of income (loss) from continuing operations before income taxes for the years ended December 31 are as follows:

	2019	2018
Taxable subsidiaries:		
Domestic	$ 2,679	$ 2,925
Foreign	2,967	(1,393)
	5,646	1,532
Other domestic subsidiaries	4,043	4,575
Income from continuing operations before income taxes	$ 9,689	$ 6,107

	2019	2018
Federal income taxes:		
Current	$ 932	$ 891
Deferred	(345)	(294)
Foreign income taxes:		
Current	815	472
Deferred	—	180
State income taxes:		
Current	177	380
Deferred	(3)	(1)
Change in tax rates—deferred	—	36
Income tax expense	$ 1,576	$ 1,664

The differences between the effective income tax rate and the federal statutory income tax rates for the years ended December 31 by taxable and other subsidiaries are as follows:

	2019	2018
U.S. statutory federal corporate income tax rate	21.0%	21.0%
LLC flow-through structure	(8.8)	(15.7)
State and local income taxes, net of federal benefit	2.4	7.3
Foreign rate differential	1.7	11.5
Provision to return adjustment	—	3.1
Effective income tax rate	16.3%	27.2%

The Company’s effective tax rate differs from statutory rates primarily due to Bioventus LLC’s pass-through structure for U.S. income tax purposes while being treated as taxable in certain states and various foreign jurisdictions as well as for certain subsidiaries. In addition, certain states assess income taxes on pass-through structures.

Deferred tax assets and liabilities are determined based on the difference between financial statement and tax bases using enacted tax rates in effect for the year in which the differences are expected to reverse. The components of the deferred taxes were as follows:

	2019	2018
Deferred tax assets:		
Net operating losses	$ 3,530	$ —
Tax credit carryforwards and other	390	—
Gross deferred tax assets	3,920	—
Valuation allowance	(2,423)	—
Total deferred tax assets	1,497	—
Deferred tax liability:		
Acquired intangible	(5,371)	(3,955)
Net deferred tax liability	$(3,874)	$(3,955)

At December 31, 2019, the Company had federal and state net operating loss carryforwards related to Harbor of $24,349 expiring at various dates from 2020 through 2037 and approximately $900 with no expiration date.

Under current tax law, the utilization of tax attributes will be restricted if an ownership change, as defined, were to occur. Section 382 of the U.S. Internal Revenue Code of 1986, as amended, or the Internal Revenue Code, provides, in general, that if an “ownership change” occurs with respect to a corporation with net operating and other loss carryforwards, such carryforwards will be available to offset taxable income in each taxable year after the ownership change only up to the “Section 382 Limitation” for each year. The Company’s ability to use its loss carryforwards will be limited in the event of an ownership change.

During the year ended December 31, 2018, Dutch income taxes were imposed on a negotiated percentage of sales. The Company has an agreement with the Dutch taxing authorities where the Company’s Netherland subsidiary will incur but not have to pay income taxes in years when the subsidiary is operating at a loss.

Minimal interest and penalties were incurred for the years ended December 31, 2019 and 2018. The Company is subject to audit by various taxing jurisdictions for the years 2015 through 2019.

12. Related-party transactions

The Company made cash tax distributions of $9,137 and $7,846 to its members in an amount equal to approximately 40% of the members’ estimated taxable income for the years ended December 31, 2019 and 2018, respectively. At December 31, 2019 and 2018, there were tax distributions payable to tax authorities on the members behalf totaling $473 and $572 as well as tax distributions payable to the members totaling $26 and $334, respectively.

13. Commitments and contingencies

Leases

The Company leases its office facilities as well as other property, vehicles and equipment under operating leases. The Company also leases certain office equipment under finance leases. The remaining lease terms range from 1 month to 9 years.

The components of lease cost were as follows:

	2019
Operating lease cost	$ 2,529
Short-term lease cost*	358
Financing lease cost:	
Amortization of finance lease assets	48
Interest on lease liabilities	3
Total lease cost	$ 2,938

* Includes variable lease cost and sublease income, which are immaterial.

Supplemental cash flow information and non-cash activity related to leases were as follow:

	2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$2,343
Operating cash flows from finance leases	$ 3
Finance cash flows from finance leases	$ 43
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	$5,016
Finance leases	$ —

Current and noncurrent operating and finance lease liabilities are included in other current liabilities and other long-term liabilities, respectively, on the consolidated balance sheet. Other balance sheet information related to leases are as follows:

	2019
Operating leases	
Operating lease assets	$ 15,267
Operating lease liabilities—current	$ 1,814
Operating lease liabilities—noncurrent	14,513
Total operating lease liabilities	$ 16,327
Finance leases	
Finance lease assets	$ 20
Finance lease liabilities—current	$ 41
Finance lease liabilities—noncurrent	13
Total finance lease liabilities	$ 54

	2019
Weighted average remaining lease term (years):	
Operating leases	8.0
Finance leases	1.8
Weighted average discount rate:	
Operating leases	5.0%
Finance leases	4.1%

Maturities of lease liabilities as of December 31, 2019 were as follows:

	Operating leases	Finance leases
2020	$ 2,572	$ 42
2021	2,452	7
2022	2,397	7
2023	2,230	—
2024	2,246	—
Thereafter	7,991	—
Total future lease payments	19,888	56
Less amounts representing interest	(3,561)	(2)
Present value of future lease payments	$ 16,327	$ 54

As disclosed under the previous lease accounting standard, future minimum lease payments for finance leases and non-cancelable operating leases as of December 31, 2018 were as follows:

	Operating leases	Capital leases
2019	$ 2,672	$ 45
2020	2,093	40
2021	1,569	7
2022	1,516	7
2023	1,388	—
2024 and thereafter	7,015	—
Total minimum payments	$ 16,253	99
Less amounts representing interest		(2)
Present value of capital lease obligations		97
Less current maturities		(42)
Capital lease obligations, less current maturities		$ 55

The gross value of assets under capital leases as of December 31, 2018 was approximately $2,806 with accumulated depreciation of $2,738. These assets mainly consist of computer and office equipment, which are included in property and equipment. Depreciation of capital lease assets is included in depreciation and amortization expense as well as cost of sales in the consolidated statements of operations and comprehensive income (loss). Rent expense was $2,858 for the year ended December 31, 2018. Certain facility leases provide for reduced rent periods. As of December 31, 2018, these rent concessions totaling $696 have been reflected in accrued liabilities and other long-term liabilities in the consolidated balance sheets.

OIG's Provider Self-Disclosure

The Company identified non-compliance with certain U.S. federal statutes and requirements governing the Medicare program in 2018 related to improper completion of Certificate for Medical Necessity, or CMN, forms and in November 2018 made a voluntary self-disclosure to the Office of Inspector General of the U.S. Department of Health and Human Services, or the OIG, pursuant to the OIG's Provider Self-Disclosure Protocol related to this matter. This non-compliance is subject to statutory Civil Monetary Penalties, or CMP, on a per claim basis that ranges from nothing to $1 per instance of non-compliance. The Company has estimated the number of impacted claims with improperly completed CMN forms based on the extrapolation of an occurrence rate found in a statistical sample of CMN forms and calculated the potential fine for all impacted claims based on the range above as nothing to $10,800 in aggregate. Although the statutory CMP are reasonably possible, the Company does not believe it is probable that they will be incurred. Additionally, the OIG could require

repayment of the total dollar amount of the impacted claims or $30,060 as well as assessing an additional fine equivalent to half the dollar amount of impacted claims or $15,030 for an aggregate potential impact of $55,890. The Company does not believe the requirement to repay the claims and associated fines is probable. Accordingly, no accrual has been recorded for these potential repayment obligations related to improper completion of CMN forms and potential fines at this time. While these matters are not considered probable, the ultimate outcome of these matters is uncertain. In the event of an unfavorable outcome to the Company, these contingencies could have a material adverse effect on the Company's financial position, results of operations, liquidity and cash flows.

Reserve for estimated overpayments from all third-party payers

The Company maintains a reserve for reimbursement claims related to its Bone Growth Stimulator Products that may have been processed for payment by the Company without adequate medical records support. The Company held a reserve of $6,801 and $12,468 at December 31, 2019 and 2018, respectively for these amounts. The Company refunded Medicare $7,458 related to known and estimated overpayments for medical necessity included in this reserve for periods through December 31, 2018. Certain of these overpayments were identified as potential overpayments in the Company's OIG self-disclosure in November 2018. The OIG is currently reviewing the Company's self-disclosure. The Company's reserve was estimated using extrapolation of an error rate from a statistical sample, which represents the Company's best estimate as of the date of the financial statements, but because of the uncertainty inherent in such estimates, the ultimate resolution may be materially different.

Other matters

As discussed in Note 3, on August 23, 2019, the Company and Harbor entered into an exclusive Collaboration Agreement for purposes of developing a product for orthopedic uses to be commercialized by the Company and supplied by Harbor. Upon execution of the Collaboration Agreement, the Company paid a nominal license fee for certain technology and intellectual property licenses owned by Harbor and for the assignment of a third-party license used in the product development. The third-party license assigned to the Company is subject to 3% royalty on commercial sales of product developed with the licensed patent(s), or a minimum of $25 per quarter beginning 2023, regardless of commercial sales and will remain in effect until earlier of expiration of the licensed patent, or terminated by the Company and ceased selling of the licensed product. The Company will also make two one-time payments totaling $6,000 contingent upon the successful completion of the following milestones: $1,000 upon receiving regulatory approval, or Regulatory Milestone, and $5,000 upon achieving a pre-established net sales target, or Net Sales Milestone. Unless earlier terminated, the Collaboration Agreement will remain in effect until the earlier of 8 years or payment of the Net Sales Milestone. In addition, contingent on Harbor obtaining certain debt or equity financing and the achievement of certain milestones, the Company has agreed to purchase additional shares of Harbor's Series C Preferred Stock for $1,000.

On May 29, 2019, the Company and Musculoskeletal Transplant Foundation, Inc. d/b/a MTF Biologics, or MTF, entered into a collaboration and development agreement, or Development Agreement, whereby both parties will undertake a collaborative program to develop one or more products for orthopedic application to be commercialized by the Company and supplied by MTF. The development will be performed over several phases. The Company is obligated to pay $4,250 for the third phase as well as $444 upon the receipt of samples, and another $444 upon initiation of the first clinical trial conducted under an Investigational New Drug Application. The Company paid cash of $1,250 in June 2019, of which $1,146 is included in research and development expense on the consolidated statement of operations and comprehensive income (loss) and the remaining $104 is included in prepaid and other current assets on the consolidated balance sheet. Additional fees for the subsequent phases will be determined as the development work progresses. The Development Agreement continues until the date when the parties execute a supply agreement for the commercial products.

On December 9, 2016, the Company entered into an amended and restated license agreement for the exclusive U.S. distribution and commercialization rights of a single injection, OA product with the supplier of the Company's single injection OA product for the non-U.S. market. In November 2018, the Company was notified and a unique reimbursement code became effective for the product on January 1, 2019 resulting in the Company making an additional $4,000 cash payment in January 2019 which was recognized as a liability as of December 31, 2018 and included in accrued liabilities on the consolidated balance sheet as well as an intangible asset. The Company began selling the product in the U.S. in 2018 and as of January 1, 2019 became subject to minimum purchase requirements. The agreement requires the Company to pay royalties on net sales. Royalties related to this agreement totaled $7,622 and $3,082 for the years ended December 31, 2019 and 2018, respectively, and are included in cost of sales on the consolidated statement of operations and comprehensive income (loss).

On June 30, 2016, the Company entered into an amended and restated distribution agreement with the sole supplier of the Company's five injection OA product. This agreement provided non-exclusive U.S. market distribution rights until May 4, 2019. No additional payments were required to amend and restate the distribution agreement. In February 2018, the Company entered into an amended and restated distribution agreement effective May 2018, which provides exclusive U.S. market distribution rights until May 2028. The Company paid $2,000 and $1,000 in cash to the supplier in May 2019 and 2018, respectively, which was capitalized as an intangible asset. The additional $2,000 paid in May 2019, was recorded as liability as of December 31, 2018 and included in accrued liabilities on the consolidated balance sheet.

As part of a supply agreement entered on February 9, 2016 for the Company's three injection OA product, the Company is subject to annual minimum purchase requirements for ten years. After the initial ten years, the agreement will automatically renew for an additional five years unless terminated by the Company or the seller in accordance with the agreement.

The Company has an exclusive license and supply agreement for the use of bioactive glass in certain of its BGS products. The Company has a world-wide, royalty bearing license, as well as the right to sublicense, for the use of certain developed technologies related to spine repair. The Company was required to pay a royalty on all commercial sales revenue from the licensed products. The agreement expired in April 2019. The Company has an exclusive license agreement for bioactive bone graft putty. The Company is required to pay a royalty on all commercial sales revenue from the license products with a minimum annual royalty payment through 2023, the date the agreement will expire, upon the expiration of the patent held by the licensor. These royalties are included in cost of sales on the consolidated statement of operations and comprehensive income (loss).

On October 3, 2014, the Company purchased certain BGS assets and the resulting BGS business from a biologics company. The purchase price included contingent consideration which consists of up to $12,000 for various cash earn-out payments upon the achievement of certain net sales targets through December 31, 2019, a royalty on future net sales of certain BGS products beginning January 1, 2019 through December 31, 2023 and a supply agreement with the previous owner ending in October 2018. Under the terms of the supply agreement, the Company purchased the BGS products at prices above the market rate. In May 2017, the Company entered into an agreement with the previous owners to end exclusivity for certain BGS products and to extend the supply agreement for the other BGS products for an additional six months to April 2019. In addition, the duration for achieving sales targets to trigger certain earn-out payments was extended through June 30, 2020. There are no estimated contingent consideration payments remaining as of December 31, 2019.

From time to time, the Company causes LOCs to be issued to provide credit support for guarantees, contractual commitments and insurance policies. The fair values of the LOCs reflect the amount of the underlying obligation and are subject to fees payable to the issuers, competitively determined in the marketplace. As of December 31, 2019 and 2018, the Company had a LOCs for $83 and $84, respectively, outstanding with one of the Company's banking institutions.

The Company currently maintains insurance for risks associated with the operation of its business, provision of professional services and ownership of property. These policies provide coverage for a variety of potential losses, including loss or damage to property, bodily injury, general commercial liability, professional errors and omissions and medical malpractice. The Company is self-insured for health insurance covering most of its employees located in the United States. The Company maintains stop-loss insurance on a “claims made” basis for expenses in excess of $150 per member per year.

In the normal course of business, the Company periodically becomes involved in various claims and lawsuits, and governmental proceedings and investigations that are incidental to the business. With respect to governmental proceedings and investigations, like other companies in our industry, the Company is subject to extensive regulation by national, state and local governmental agencies in the U.S. and in other jurisdictions in which the Company and its affiliates operate. As a result, interaction with governmental agencies is ongoing. The Company’s standard practice is to cooperate with regulators and investigators in responding to inquiries. The outcomes of legal actions are not within the Company’s complete control and may not be known for extended periods of time. Other than the matters discussed above, management of the Company, after consultation with legal counsel, does not believe there are any unrecorded matters that will have a material adverse effect upon the Company’s financial statements.

14. Net loss per unit

The following table presents the computation of basic and diluted net loss per unit for the years ended December 31 as follows:

	2019	2018
Net income from continuing operations attributable to unit holders	$ 8,666	$ 4,443
Accumulated and unpaid preferred distributions	(5,955)	(5,781)
Net income allocated to participating shareholders	(1,555)	—
Net income (loss) from continuing operations attributable to common unit holders	1,156	(1,338)
Loss from discontinued operations, net of tax	1,815	16,650
Net loss attributable to common unit holders	$ (659)	$(17,988)
Net loss per unit attributable to common unit holders—basic and diluted		
Net income (loss) from continuing operations	$ 0.24	$ (0.27)
Loss from discontinued operations, net of tax	0.37	3.40
Net loss attributable to common unit holders	$ (0.13)	$ (3.67)
Weighted average units used in computing basic and diluted net loss per common unit	4,900	4,900

The computation of diluted earnings per unit for the year ended December 31, 2019 and 2018 excludes the effect of potential common units that would be issued upon the conversion of preferred units. The effect of these 6,590 units would be antidilutive due to the Company being in a net loss position and these units only convert upon completion of a Distribution Event.

15. Net Sales

The Company attributes net sales to external customers to the U.S. and to all foreign countries based on the location from which the sale originated. The following table presents our net sales by segment disaggregated by geographic markets and major products for the years ended December 31 as follows:

	2019	2018
Primary geographic markets:		
U.S.	$ 305,072	$ 282,895
International	35,069	36,282
Total net sales	$ 340,141	$ 319,177
Major product lines:		
OA joint pain treatment and joint preservation	$ 182,082	$ 155,576
Minimally invasive fracture treatment	103,504	121,032
Bone graft substitutes	54,555	42,569
Total net sales	$ 340,141	$ 319,177

16. Segments

Segment information by asset is not disclosed as it is not reviewed by the CODM or used to allocate resources or to assess the operating results and financial performance. We believe EBITDA, adjusted for additional non-operational factors disclosed in the table below, or Adjusted EBITDA, is a key measure for internal reporting. Adjusted EBITDA should not be considered in isolation or as a substitute for consolidated net income (loss) attributable to the Company, the most closely analogous U.S. GAAP measure. Adjusted EBITDA is not defined in the same manner by all companies and may not be comparable to other similarly titled measures of other companies unless the definition is the same. The following table presents segment adjusted EBITDA reconciled to income from continuing operations before income taxes for the years ended December 31 as follows:

	2019	2018
Segment adjusted EBITDA		
U.S.	$ 71,673	$ 67,480
International	7,515	4,691
Depreciation and amortization	(30,316)	(29,238)
Interest expense	(21,579)	(19,171)
Loss on impairment of intangible assets	—	(489)
Equity compensation	(10,844)	(14,325)
Loss on debt retirement and modification	(367)	—
Change in fair value of contingent consideration	—	739
Restructuring costs	(575)	(1,373)
Realized and unrealized foreign currency loss	(8)	(234)
Other non-recurring costs	(5,810)	(1,973)
Income from continuing operations before income taxes	$ 9,689	$ 6,107

17. Discontinued operations

In December 2018, the Company, under the direction and authority of the Company's Board of Managers, committed to shut down the bone morphogenetic protein, or BMP, research and development program which had been reported as its own segment in previous years. Substantially all operations, including project close documentation, contract termination, vacating the facility and ultimately the termination of the employees,

ceased by March 2019 and as a result the BMP research and development program met the criteria for discontinued operations. Included in prepaid and other current assets on the consolidated balance sheet is net property and equipment classified as current assets held for sale totaling $172 and $224 as of December 31, 2019 and 2018, respectively. The following table summarizes the statement of operations information from discontinued operations for the years ended December 31:

	2019	2018
Research and development expense	$ 1,773	$ 7,127
Loss on disposal	52	9,638
Income tax benefit	(10)	(115)
Loss from discontinued operations, net of tax	$ 1,815	$16,650

18. Subsequent events

COVID-19 pandemic impact

In December 2019, an outbreak of the Coronavirus Disease 2019, or COVID-19, originated in China and has since spread to other countries, including the U.S. On March 11, 2020, the World Health Organization characterized COVID-19 as a pandemic. In addition, multiple jurisdictions in the U.S. have declared a state of emergency. It is anticipated that these impacts will continue for some time. There have been moderate disruptions and restrictions on our employees' ability to work. Future potential impacts may include significant disruptions or restrictions on our employees' ability to work, loss of revenue and diminished future cash flows among others. An estimate of the financial statement effect cannot be made at this time other than those described below. Continued volatility could impact the carrying value of goodwill, intangible assets, long-lived assets, right of use assets, and investment securities as well as the valuation of equity-based compensation plans.

On March 24, 2020, the Company increased its cash position by borrowing $49,000 on its Revolver as a precautionary measure to preserve financial flexibility in view of the uncertainty resulting from the COVID-19 pandemic. The $49,000 was repaid on September 24, 2020.

On March 27, 2020, the U.S. enacted the Coronavirus Aid, Relief and Economic Security Act, or CARES Act. The CARES Act is an emergency economic stimulus package that includes spending and tax breaks to strengthen the U.S. economy and fund a nationwide effort to curtail the effect of COVID-19. While the CARES Act provides sweeping tax changes in response to the COVID-19 pandemic, some of the more significant provisions which are expected to impact the Company's financial statements include removal of certain limitations on utilization of net operating losses and increasing the ability to deduct interest expense, as well as amending certain provisions of the previously enacted Tax Act. The Company continues to quantify the impact, if any, that the CARES Act will have on its financial position, results of operations or cash flows.

As a result of the CARES Act, On May 15, 2020, the Company began deferring employer social security payroll tax payments through the remainder of the 2020 calendar year of which, 50% is deferred until December 31, 2021, with the remaining 50% deferred until December 31, 2022, all of which will be initially recorded in other long-term liabilities on the condensed consolidated balance sheet.

As a result of the CARES Act and at the direction of the U.S. Department of Health and Human Services ("HHS"), the Company received a $1,247 Provider Relief Fund Payment in April 2020. The Company determined it complied with the conditions to be able to keep and use the funds to reimburse for health care related expenses and lost revenue attributable to the public health emergency resulting from COVID-19. The payment will be recorded as other income on the condensed consolidated statement of operations and comprehensive income (loss) for the six months ended June 27, 2020. A second Provider Relief Fund Payment totaling $2,854 was received in July 2020.

As of March 28 2020, due to the COVID-19 triggering event, the Company performed a fair value assessment of its liability-classified MIP and 2015 Phantom Plan awards and determined that the fair value decreased by $7,849 primarily attributable to a change in management's forecast of future net sales because of uncertainty in the market and the economy from the impact of COVID-19.

Other

On January 22, 2020, the Company invested in CartiHeal through a Simple Agreement for Future Equity, or SAFE, by paying cash of $152. On July 15, 2020, the Company entered into an Option and Equity Purchase Agreement with CartiHeal. Under the terms of the agreement, the Company purchased 1,014,267 shares of CartiHeal Series G Preferred Shares for $15,000 and the SAFE converted to 12,825 in Series G-1 Preferred Shares. As a result, the Company's equity ownership in CartiHeal increased to 10.03% of fully diluted shares. The Company will, if needed, purchase an additional 338,089 of CartiHeal Series G Preferred Shares for $5,000, for the completion of a certain study. The Company has an exclusive option to acquire the remaining equity in CartiHeal which may be exercised at any time up to and within 45 days following notice of FDA approval for a CartiHeal product currently in development. In addition, upon the same FDA approval, CartiHeal may exercise an option within 45 days that requires the Company to complete the acquisition of the remaining equity in CartiHeal.

On March 26, 2020, the Company entered into an interest rate swap agreement to limit its exposure to changes in the variable interest rate on its Term Loan (as discussed in Note 5). The interest rate swap was not designated as a hedge and expires December 6, 2024. The interest rate swap totaled $100,000, or 50% of the Term Loan outstanding principal at December 31, 2019, and as of March 26, 2020, the Term Loan effective interest rate, including the applicable lending margin of 2.25%, is fixed at 2.88%.

The Company refunded Medicare $1,500 of the reserve for estimated overpayments from third-party payors during June 2020 related to known and estimated overpayments for medical necessity for periods through December 31, 2019.

In June 2020, the sole MIP awardee exercised the right to force a cash settlement for 150,252 of the 333,330 vested units resulting in a payment of $6,329. The Company agreed to cash settle for the remaining 183,078 units in June 2021.

On October 5, 2020, the Company purchased 285,714 additional shares of Harbor's Series C Preferred Stock for $1,000 (as discussed in Note 13).

19. Unaudited pro forma net income per share

Pro forma basic net income per share is calculated by dividing net loss attributable to Class A common stockholders by the number of weighted average shares of Class A common stock after giving effect to the corporate conversion. Pro forma diluted net income per share reflects the exchange of shares of Class B common stock and an adjustment to the net loss attributable to non-controlling interests.

	Year ended December 31, 2019
Net income per share, basic and diluted:	
Numerator	
Net income from continuing operations	
Less: Net income attributable to non-controlling interests	
Net income from continuing operations attributable to Class A common stockholders	—
Net income per share from continuing operations, basic	
Net income per share from continuing operations, diluted	
Numerator	
Net income attributable to unit holders	
Less: Net income attributable to non-controlling interests	
Net income attributable to Class A common stockholders	—
Net income per share, basic	
Net income per share, diluted	
Denominator	
Shares of Class A common stock held by the Former LLC Owners	
Weighted-average shares of common stock, basic	
Shares of Class A common stock held by the Former LLC Owners	
Shares of Class B common stock held by the Former LLC Owners	
Weighted-average shares of common stock, diluted	

BIOVENTUS LLC

Condensed consolidated statements of operations and comprehensive income (loss)
Six months ended June 27, 2020 and June 29, 2019
(Dollars in thousands, except per unit and per share data)
(Unaudited)

	Six Months Ended	
	June 27, 2020	June 29, 2019
Net sales	$ 136,662	$ 160,346
Cost of sales (including depreciation and amortization of $10,599 and $11,878, respectively)	39,077	45,126
Gross profit	97,585	115,220
Selling, general and administrative expense	80,809	98,903
Research and development expense	4,742	5,062
Restructuring costs	—	529
Depreciation and amortization	3,638	3,830
Operating income	8,396	6,896
Interest expense	5,215	9,384
Other (income) expense	(1,254)	6
Other expense	3,961	9,390
Income (loss) from continuing operations before income taxes	4,435	(2,494)
Income tax (benefit) expense	(71)	315
Net income (loss) from continuing operations	4,506	(2,809)
Loss from discontinued operations, net of tax	—	1,616
Net income (loss)	4,506	(4,425)
Loss attributable to noncontrolling interest	672	—
Net income (loss) attributable to unit holders	5,178	(4,425)
Other comprehensive income (loss), net of tax		
Change in foreign currency translation adjustments	(256)	180
Comprehensive income (loss)	$ 4,922	$ (4,245)
Net income (loss) from continuing operations attributable to unit holders	$ 5,178	$ (2,809)
Accumulated and unpaid preferred distributions	(3,000)	(2,937)
Net income allocated to participating shareholders	(1,249)	—
Net income (loss) from continuing operations attributable to common unit holders	929	(5,746)
Loss from discontinued operations, net of tax	—	1,616
Net income (loss) attributable to common unit holders	$ 929	$ (7,362)
Net income (loss) per unit attributable to common unit holders—basic and diluted (Note 12)		
Net income (loss) from continuing operations	$ 0.19	$ (1.17)
Loss from discontinued operations, net of tax	—	0.33
Net income (loss) attributable to common unit holders	$ 0.19	$ (1.50)
Weighted average common units outstanding, basic and diluted	4,900	4,900
Unaudited pro forma net income per share—basic (Note 13):		
Unaudited pro forma net income from continuing operations		
Unaudited pro forma net loss from discontinued operations, net of tax		
Unaudited pro forma net income attributable to unit holders		
Unaudited pro forma net income per share—diluted (Note 13):		
Unaudited pro forma net income from continuing operations		
Unaudited pro forma net loss from discontinued operations, net of tax		
Unaudited pro forma net income attributable to unit holders		

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Condensed consolidated balance sheets as of June 27, 2020 (Unaudited) and December 31, 2019
(Dollars in thousands)

	June 27, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 126,240	$ 64,520
Accounts receivable	67,226	85,128
Inventory	33,756	27,326
Prepaid and other current assets	7,188	6,059
Total current assets	234,410	183,033
Property and equipment, net	4,513	4,489
Goodwill	49,800	49,800
Intangible assets, net	202,938	216,510
Operating lease assets	14,343	15,267
Investment and other assets	3,412	3,308
Total assets	$ 509,416	$ 472,407
Liabilities and Members' Equity		
Current liabilities:		
Accounts payable	$ 13,550	$ 6,440
Accrued liabilities	56,999	52,827
Accrued equity-based compensation	7,837	15,547
Long-term debt	15,000	10,000
Other current liabilities	3,827	4,201
Total current liabilities	97,213	89,015
Long-term debt, less current portion	229,672	187,965
Accrued equity-based compensation, less current portion	17,760	25,255
Deferred income taxes	3,615	3,874
Other long-term liabilities	19,365	20,681
Total liabilities	367,625	326,790
Commitments and contingencies (Note 8)		
Members' equity (preferred unit liquidation preference of $207,443 and $204,443 at June 27, 2020 and December 31, 2019, respectively)	285,135	285,147
Accumulated other comprehensive loss	(721)	(465)
Accumulated deficit	(145,235)	(141,700)
Equity attributable to Bioventus LLC members	139,179	142,982
Noncontrolling interest	2,612	2,635
Total members' equity	141,791	145,617
Total liabilities and members' equity	$ 509,416	$ 472,407

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Condensed consolidated statements of changes in members' equity
Six months ended June 27, 2020 and June 29, 2019
(Dollars in thousands)
(Unaudited)

	Members' equity	Accumulated other comprehensive loss	Accumulated deficit	Noncontrolling interest	Total members' equity
Balance at December 31, 2019	$ 285,147	$ (465)	$ (141,700)	$ 2,635	$ 145,617
Profits interest forfeitures	(12)	—	—	—	(12)
Distribution to members	—	—	(8,713)	—	(8,713)
Debt conversion	—	—	—	649	649
Net income (loss)	—	—	5,178	(672)	4,506
Translation adjustment	—	(256)	—	—	(256)
Balance at June 27, 2020	$ 285,135	$ (721)	$ (145,235)	$ 2,612	$ 141,791

	Members' equity	Accumulated other comprehensive loss	Accumulated deficit	Noncontrolling interest	Total members' equity
Balance at December 31, 2018	$ 285,153	$ (65)	$ (139,821)	$ —	$ 145,267
Profits interest forfeitures	(10)	—	—	—	(10)
Distribution to members	—	—	(7,695)	—	(7,695)
Net loss	—	—	(4,425)	—	(4,425)
Translation adjustment	—	180	—	—	180
Balance at June 29, 2019	$ 285,143	$ 115	$ (151,941)	$ —	$ 133,317

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Condensed consolidated statements of cash flows
Six months ended June 27, 2020 and June 29, 2019
(Dollars in thousands)
(Unaudited)

	Six Months Ended	
	June 27, 2020	June 29, 2019
Operating activities:		
Net income (loss)	$ 4,506	$ (4,425)
Net loss from discontinued operations	—	1,616
Net income (loss) from continuing operations	4,506	(2,809)
Adjustments to reconcile net income (loss) to net cash provided by operating activities from continuing operations:		
Depreciation and amortization	14,513	15,712
Payment of contingent consideration in excess of amount established in purchase accounting	—	(947)
Provision for expected credit losses	1,162	1,760
Profits interest plan and liability-classified awards compensation	(6,771)	2,121
Change in fair value of Equity Participation Rights unit	(788)	14
Change in fair value of interest rate swap	2,001	105
Deferred income taxes	(258)	(148)
Amortization of debt discount and capitalized loan fees, net	272	843
Other, net	(148)	181
Changes in operating assets and liabilities:		
Accounts receivable	16,631	(3,264)
Inventories	(6,329)	(3,006)
Accounts payable and accrued expenses	1,587	3,438
Other current assets and liabilities	(867)	(4,339)
Net cash provided by operating activities from continuing operations	25,511	9,661
Net cash used in operating activities of discontinued operations	—	(1,702)
Net cash provided by operating activities	25,511	7,959
Investing activities:		
Purchase of property and equipment	(1,050)	(1,297)
Acquisition of distribution rights	—	(6,000)
Investments	(152)	—
Net cash used in investing activities from continuing operations	(1,202)	(7,297)
Net cash provided by investing activities from discontinued operations	172	—
Net cash used in investing activities	(1,030)	(7,297)
Financing activities:		
Borrowings on revolver	49,000	—
Payments on long-term debt	(2,500)	(2,625)
Distribution to members	(9,075)	(8,484)
Net cash provided by (used in) financing activities	37,425	(11,109)
Effect of exchange rate changes on cash	(186)	265
Net change in cash and cash equivalents	61,720	(10,182)
Cash and cash equivalents at the beginning of the period	64,520	42,774
Cash and cash equivalents at the end of the period	$ 126,240	$ 32,592
Supplemental disclosure of noncash investing and financing activities		
Accrued member distributions	$ 787	$ 117

The accompanying notes are an integral part of these consolidated financial statements.

BIOVENTUS LLC

Notes to condensed consolidated financial statements
(Dollars in thousands, except for per unit and per share data)
(Unaudited)

1. Summary of significant accounting policies

Unaudited interim financial information

The accompanying unaudited consolidated financial statements of the Company have been prepared in accordance with U.S. GAAP for interim financial information under Rule 10-01 of Regulation S-X. Pursuant to these rules and regulations they do not include all information and notes required by U.S. GAAP for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair statement of the Company's financial condition and results of operations have been included. Operating results for the periods presented are not necessarily indicative of the results that may be expected for the full year. As such, the information included in this report should be read in conjunction with the Company's audited consolidated financial statements for the year ended December 31, 2019. The balance sheet at December 31, 2019 has been derived from the audited consolidated financial statements of the Company but does not include all the disclosures required by U.S. GAAP.

Operating results attributable to the BMP research and development business are presented as discontinued operations on the consolidated statements of operations and comprehensive income (loss) (Refer to Note 11. Discontinued Operations).

We reclassified certain prior period amounts to conform to the current period presentation.

COVID-19 pandemic impact

In December 2019, an outbreak of COVID-19 originated in China and spread to other countries, including the U.S. On March 11, 2020, the World Health Organization characterized COVID-19 as a pandemic and was subsequently declared a national emergency. The Company remains focused on protecting the health and wellbeing of its employees, partners, patients, and the communities in which it operates while assuring the continuity of its business operations.

The impact of COVID-19 on the Company's business is highly uncertain and difficult to predict, as information surrounding the pandemic is rapidly evolving. Although the U.S. and other countries implemented plans to ease social distancing and quarantine measures, there are still many unknowns and risks, such as the possibility of U.S. states or other countries returning to a state of quarantine or the return to more stringent social distancing, when elective procedures will return to a pre COVID-19 pace, the impact to capital markets and the possibility of local and global economic recession. Any resulting economic disruption could have a material impact on our business. In addition, the long-term impact of COVID-19 on the Company's business will depend on many factors, including, but not limited to, the duration and severity of the pandemic and the impact it has on our partners, patients and communities in which we operate, all of which are uncertain. The Company's future results of operations and liquidity will be materially impacted due to the decrease in elective procedures and could be further impacted by delays in payments from customers, supply chain interruptions, extended "shelter in place" orders or advisories, facility closures or other reasons related to the pandemic. As of the date of issuance of these condensed consolidated financial statements, the extent to which COVID-19 could materially impact the Company's financial conditions, liquidity or results of operations is uncertain.

On March 27, 2020, the CARES Act was signed into law, which is aimed at providing emergency assistance and health care for individuals, families, and businesses affected by the COVID-19 pandemic and generally supporting the U.S. economy. The CARES Act, among other things, includes provisions relating to refundable

payroll tax credits, deferment of employer social security payments, net operating loss carryback periods, alternative minimum tax credit refunds, and modifications to the net interest deduction limitations. The Company has not quantified the full impact of, the CARES Act.

The Company deferred of employer social security payroll tax payments from May 2020 until the remainder of the 2020 calendar year of which, 50% is deferred until December 31, 2021, with the remaining 50% deferred until December 31, 2022. The Company has deferred $523 as of June 27, 2020, all of which has been recorded in other long-term liabilities on the condensed consolidated balance sheet. The Company is in the process of analyzing other provision to determine the financial impact on our condensed consolidated financial statements. Refer to Note 7. Income Taxes for further information.

As a result of the CARES Act and at the direction of the U.S. Department of Health and Human Services, or HHS, the Company received a $1,247 Provider Relief Fund Payment in April 2020. The Company determined it complied with the conditions to be able to keep and use the funds to reimburse for health care related expenses and lost revenue attributable to the public health emergency resulting from COVID-19. The payment was recorded as other income on the condensed consolidated statement of operations and comprehensive income (loss) for the six months ended June 27, 2020. A second Provider Relief Fund Payment totaling $2,854 was received in July 2020.

Recent accounting pronouncements

The Company has elected to comply with non-accelerated public company filer effective dates of adoption. Therefore, the required effective dates for adopting new or revised accounting standards as described below are specific to non-accelerated public company filers, which are generally earlier than when emerging growth companies are required to adopt.

Accounting Pronouncements Recently Adopted

The FASB issued Accounting Standards Update 2016-13, *Financial Instruments-Credit Losses*, or ASU 2016-13, in June 2016 that significantly changes accounting for credit losses for most financial assets and certain other instruments that are not measured at fair value through net income. ASU 2016-13 requires that an entity measure and recognize expected credit losses for financial assets held at amortized cost and replaces the incurred loss impairment methodology in prior GAAP with a methodology that considers a broad range of information for the estimation of credit losses. The Company adopted ASU 2016-13 on January 1, 2020 prospectively and the adoption did not have a material impact on the Company’s consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-15, *Intangibles-Goodwill and Other-Internal-Use Software*, or ASU 2018-15 addressing a customer’s accounting for implementation costs incurred in a CCA that is considered a service contract. Under ASU 2018-15, implementation costs for a CCA should be evaluated for capitalization using the same approach as implementation costs associated with internal-use software. The capitalized implementation costs should be expensed over the term of the hosting arrangement, which includes any reasonably certain renewal periods. Capitalized implementation costs should be assessed for impairment like long-lived assets. The Company adopted ASU 2018-15 on January 1, 2020 prospectively and it had no material impact on the consolidated financial statements.

In August 2018, the FASB issued Accounting Standards Update 2018-13, *Fair Value Measurement*, or ASU 2018-13, modifying the disclosure requirements on fair value measurements and eliminates the requirement to disclose the amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy, the policy for timing of transfers between levels and the valuation processes for Level 3 fair value measurements. ASU 208-13 modifies certain disclosures related to investments measured at net asset value and clarifies that companies are to disclose uncertainties in measurements as of the reporting date. ASU 2018-13 requires additional disclosure related to changes in unrealized gains and losses included in other comprehensive income

for recurring Level 3 fair value measurements as well as the range and weighted average, or other quantitative information that would be a more reasonable and rational method, of significant unobservable inputs used to develop Level 3 fair value measurements. The additional disclosures and description of any measurement uncertainty amendments should be applied prospectively for the most recent interim or annual period in the initial year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. The Company adopted ASU 2018-13 on January 1, 2020 and it did not have a material impact on its consolidated financial statements.

New Accounting Pronouncements Not Yet Adopted

In December 2019, the FASB issued Accounting Standards Update 2019-12, *Income Taxes*, or ASU 2019-12, which amended the accounting for income taxes. ASU 2019-12 eliminates certain exceptions to the guidance for income taxes related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period and the recognition of deferred tax liabilities for outside basis differences as well as simplifying aspects of the accounting for franchise taxes and enacted changes in tax laws or rates and clarifies the accounting for transactions that result in a step-up in the tax basis of goodwill. ASU 2019-12 is effective for annual and interim periods beginning after December 15, 2020. Early adoption is permitted in interim or annual periods for which financial statements have not been made available for issuance. Entities that elect to early adopt the amendments in an interim period should reflect any adjustments as of the beginning of the annual period that includes that interim period. Certain amendments are to be applied prospectively while others are retrospective. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

2. Balance sheet information

Accounts receivable, net

Accounts receivable, net are amounts billed and currently due from customers. The Company records the amounts due net of allowance for credit losses. Collection of the consideration that the Company expects to receive typically occurs within 30 to 90 days of billing. The Company applies the practical expedient for contracts with payment terms of one year or less which does not consider the effects of the time value of money. Occasionally, the Company enters into payment agreements with patients that allow payment terms beyond one year. In those cases, the financing component is not deemed significant to the contract.

Accounts receivable, net of allowances, consisted of the following as of:

	June 27, 2020	December 31, 2019
Accounts receivable	$ 72,475	$ 89,274
Less: Allowance for credit losses	(5,249)	(4,146)
	$ 67,226	$ 85,128

The Company maintains an allowance for credit losses for estimated losses resulting from the inability of its customers to make required payments. The allowance for credit losses is calculated by region and by customer type, where appropriate considering several factors including age of accounts, collection history, historical account write-offs, current economic conditions, and supportable forecasted economic expectations. Due to the short-term nature of its receivables, the estimate of expected credit losses is based on aging of the account receivable balances. The allowance is adjusted on a specific identification basis for certain accounts as well as pooling of accounts with similar characteristics. An increase in the provision for credit losses may be required when the financial condition of the Company's customers or its collection experience deteriorates. The Company has a diverse customer base with no single customer representing ten percent of sales or accounts receivable. Historically, the Company's reserves have been adequate to cover credit losses. The Company's exposure to

credit losses may increase if its customers are adversely affected by changes in health care laws, coverage and reimbursement, economic pressures or uncertainty associated with local or global economic recessions, disruption associated with the COVID-19 pandemic, or other customer-specific factors. The Company considered the current and expected future economic and market conditions surrounding the COVID-19 pandemic and determined that the estimate of credit losses was not significantly impacted. Estimates are used to determine the allowance, which are based on an assessment of anticipated payment and all other historical, current and future information that is reasonably available.

A roll-forward of the allowance for credit losses is as follows:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Beginning balance	$ (4,146)	$ (4,497)
Provision for losses	(1,162)	(1,760)
Write-offs	252	995
Recoveries	(193)	(158)
Ending balance	$ (5,249)	$ (5,420)

Inventory

Inventory consisted of the following as of:

	June 27, 2020	December 31, 2019
Raw materials and supplies	$ 3,709	$ 3,349
Finished goods	30,708	24,509
Gross	34,417	27,858
Excess and obsolete reserves	(661)	(532)
	$ 33,756	$ 27,326

Goodwill and intangible assets, net

There were no changes to goodwill during the six months ended June 27, 2020. Intangible assets consisted of the following as of:

	June 27, 2020	December 31, 2019
Intellectual property	$ 263,422	$ 263,422
Distribution rights	59,700	59,700
Customer relationships	57,700	57,700
IPR&D	11,095	11,095
Developed technology and other	4,348	4,649
Total carrying amount	396,265	396,566
Less accumulated amortization:		
Intellectual property	(109,103)	(100,982)
Distribution rights	(31,568)	(28,716)
Customer relationships	(48,827)	(46,407)
Developed technology and other	(3,243)	(3,404)
Total accumulated amortization	(192,741)	(179,509)
Intangible assets, net before currency translation	203,524	217,057
Currency translation	(586)	(547)
	$ 202,938	$ 216,510

Amortization expense related to intangible assets was $13,533 and $13,136 for the six months ended June 27, 2020 and June 29, 2019 of which $6,502 and $6,563, respectively, is included in ending inventory.

Investments

VIEs

On August 23, 2019, the Company purchased 285,714 shares of Harbor's Series C Preferred Stock or 3.1% of fully diluted shares for $1,000 in cash. The Company and Harbor entered into an exclusive Collaboration Agreement for purposes of developing a product for orthopedic uses to be commercialized by the Company and supplied by Harbor. As a result of these transactions, the Company determined that it had a variable interest in Harbor. On March 27, 2020, two convertible promissory notes to Harbor shareholders totaling $500 were converted to 142,858 of Harbor Series C Preferred Stock and warrants for 428,572 shares of the Harbor common stock exercisable at a price of $1.167 per share with a 5-year exercise period expiring March 27, 2025. The Company continues to conclude that it is the primary beneficiary since it controls the significant activities of Harbor through the Collaboration Agreement. The Company has consolidated Harbor in its consolidated financial statements with a noncontrolling interest for the remaining 95.3% and 96.9% as of June 27, 2020 and December 31, 2019, respectively.

Harbor assets that can only be used to settle Harbor obligations and Harbor liabilities for which creditors do not have recourse to the general credit of the Company are as follows:

	June 27, 2020	December 31, 2019
Cash and cash equivalents	$ 541	$ 1,127
Property and equipment, net	67	60
Intangible assets, net	5,876	6,122
Operating lease assets	207	231
Other assets	76	59
	$ 6,767	$ 7,599
Accounts payable and accrued liabilities	$ 339	$ 458
Other current liabilities	2,038	2,395
Deferred income taxes	105	215
Other long-term liabilities	684	872
	$ 3,166	$ 3,940

Other

On January 30, 2018, the Company purchased 337,397 shares of CartiHeal, a privately held entity, Series F Convertible Preferred Stock or 2.8% of fully diluted shares for $2,500 in cash. The investment does not have a readily determinable fair value. Under the measurement alternative, the investment is recorded at cost, less any impairment, plus or minus any changes resulting from observable price changes in orderly transactions for an identical or similar investment of the same issuer. There have not been any impairments or adjustments to the investment. This investment is included in investment and other assets on the consolidated balance sheet.

On January 22, 2020, the Company made an additional investment in CartiHeal, through a SAFE by paying cash of $152. On July 15, 2020, CartiHeal completed an equity financing that the Company participated in (refer to Note 14. Subsequent Event) and as a result, the Company received 12,825 in Series G-1 Preferred Shares and the SAFE terminated.

Accrued liabilities

Accrued liabilities consisted of the following as of:

	June 27, 2020	December 31, 2019
Gross-to-net deductions	$ 25,438	$ 14,622
Bonus and commission	6,834	14,200
Reserve for estimated overpayments from third-party payers	5,181	6,801
Compensation and benefits	3,081	3,231
Income and other taxes	3,337	2,555
Other liabilities	13,128	11,418
	$ 56,999	$ 52,827

3. Financial Instruments

Long-term debt consists of the following:

	June 27, 2020	December 31, 2019
Term loan due December 2024 (2.67% at June 27, 2020)	$ 197,500	$ 200,000
Revolver due December 2024 (2.68% at June 27, 2020)	49,000	—
Total long-term debt	$ 246,500	$ 200,000
Less:		
Current portion of long-term debt	(15,000)	(10,000)
Unamortized debt issuance cost	(1,238)	(1,378)
Unamortized discount	(590)	(657)
	$ 229,672	$ 187,965

The Company increased its cash position by borrowing $49,000 on its Revolver as a precautionary measure to preserve financial flexibility in view of the current uncertainty resulting from the COVID-19 pandemic. The $49,000 balance on the Revolver at June 27, 2020 was repaid September 24, 2020. The 2019 Credit Agreement requires the Company to comply with financial and other covenants. The Company complied with all covenants as of June 27, 2020.

The estimated fair value of the Term Loan and Revolver as of June 27, 2020 was $182,979. The fair value of these obligations was determined by using a discounted cash flow model based on current market interest rates available to the Company. These inputs are corroborated by observable market data for similar obligations and are classified as Level 2 instruments within the fair value hierarchy.

The Company enters into interest rate swap agreements to limit its exposure to changes in the variable interest rate on its long-term debt. On March 26, 2020, the Company entered an interest rate swap agreement with one of its Lenders, which expires in December 2024. The interest rate swap was not designated as a hedge. The Company has no other active derivatives and the swap is carried at fair value on the balance sheet (Refer to Note 4). There were no outstanding derivatives as of December 31, 2019. Interest expense of $2,001 was recorded within the consolidated statements of operations and comprehensive income (loss) related to the change in fair value of the swap for the six months ended June 27, 2020.

The notional amount of the swap totaled $100,000, or 50.6% of the Term Loan outstanding principal at June 27, 2020. The swap locked in the variable portion of the interest rate on the $100,000 notional at 0.64%. The total long-term debt effective interest rate, with the applicable lending margin of 2.50% and the impact of the swap is fixed at 2.86% as of June 27, 2020.

4. Fair value measurements

Our process for determining fair value have not changed from those described in the December 31, 2019 audited consolidated financial statements of the Company.

There were no assets measured at fair value on a recurring basis and there were no liabilities valued at fair value using Level 1 inputs. The following table provides information for liabilities measured at fair value on a recurring basis using Level 2 and Level 3 inputs:

	June 27, 2020			December 31, 2019
	Total	Level 2	Level 3	Total
Interest rate swap	$ 2,001	$ 2,001	$ —	$ —
Management incentive plan and liability-classified awards	25,597	—	25,597	40,802
Equity Participation Right	4,669	—	4,669	5,457
Total liabilities	$ 32,267	$ 2,001	$ 30,266	$ 46,259

Interest rate swap

The Company values interest rate swaps using discounted cash flows. Forward curves and volatility levels are used to estimate future cash flows that are not certain. These are determined using observable market inputs when available and based on estimates when not available. The fair value of the swap was recorded in the Company's consolidated balance sheets as accrued liabilities. Changes in fair value are recognized as interest expense within the consolidated statements of operations and comprehensive income (loss).

MIP and liability-classified awards

The Company operates two equity-based compensation plans, the MIP and the Phantom Plan. The estimated fair value reflects assumptions made by management as of June 27, 2020, including the impact of COVID-19 on significant unobservable assumptions, such as the expected timing and volume of elective procedures and the impact of these procedures on future revenues which impact the equity value. However, as the impact of COVID-19 on the Company's business is highly uncertain and difficult to predict, and as information surrounding the pandemic is rapidly evolving, the actual amount ultimately paid could be higher or lower than the fair value. The Company has classified $7,837 of the balance as accrued equity-based compensation and $17,760 as accrued equity-based compensation, less current portion as of June 27, 2020. Any changes in fair value are recorded as an operating expense and included within selling, general and administrative expense and research and development expense on the consolidated statement of operations and comprehensive income (loss) based upon the classification of the employee.

The following table provides a reconciliation of the beginning and ending balances for the MIP and liability-classified awards at fair value using significant unobservable inputs or Level 3:

Balance at December 31, 2019	$ 40,802
Initial estimate	1,742
Forfeitures	(653)
Change in fair value	(7,849)
Payments	(8,445)
Balance at June 27, 2020	$ 25,597

The $7,849 decrease in fair value for the six months ended June 27, 2020 is primarily attributable to a change in management's forecast of future net sales because of uncertainty in the market and the economy from

the impact of COVID-19. In June 2020, the sole MIP awardee exercised the right to force a cash settlement for 150,252 of the 333,330 vested units resulting in a payment of $6,329. The Company agreed to cash settle for the remaining 183,078 units in June 2021.

EPR Unit

One member owns the only EPR Unit and its only entitlement is 0.55% of available distributions arising from the closing of a sale of units representing a percentage interest of more than 66.66%, or the sale of all or substantially all of the assets of the Company, provided such event constitutes a change of control, or Distribution Event. Upon the conclusion of a Distribution Event, the EPR Unit will cease to exist and all entitlements will end. The estimated fair value reflects assumptions made by management as of June 27, 2020, including potential payment scenarios discounted at rates reflective of the risks associated with the expected future cash flows. The fair value of the EPR Unit was recorded in the Company's condensed consolidated balance sheets as other long-term liabilities. The revaluation for the EPR liability is recognized in interest expense on the consolidated statements of operations and comprehensive income (loss).

The following table provides a reconciliation of the beginning and ending balances for the EPR Unit at fair value using significant unobservable inputs Level 3:

Balance at December 31, 2019	$5,457
Change in fair value	(788)
Balance at June 27, 2020	$4,669

The Company estimated the fair value of the Plans and EPR Unit using a Monte Carlo simulation. This fair value measurement is based on significant inputs that are unobservable in the market, and thus represents a Level 3 measurement. The key assumptions used in applying the valuation model include the Company's equity value, the expected timing until a liquidity event, applicable discount rates applied, and equity volatility. In addition, for the EPR Unit, the estimated accrued preferred distribution at the liquidity event date totaling $44,628 as it is senior in order of payment. Significant changes in these assumptions could result in a significantly higher or lower fair value.

The following table provides a range of key assumptions used within the valuation of the awards as of June 27, 2020:

Valuation technique	Unobservable inputs	Range	Weighted average
Option pricing approach	Time to liquidity event	1.0	1.0
	Risk free rate	0.16%	0.16%
	Equity volatility	40.5% - 100.17%	55.0%
	Equity value	$840,000 - $970,000	$900,000
	Lack of marketability discount	12.0%	12.0%

5. Restructuring costs

Restructuring costs are not allocated to the Company's reportable segments as they are not part of the segment performance measures regularly reviewed by management. These charges are included in restructuring expenses in the consolidated statements of operations and comprehensive income (loss).

The Company adopted a restructuring plan during the fourth quarter of 2018 to improve the performance of International operations, principally through headcount reduction and closing offices in certain countries as the Company shifted to an indirect distribution model in these countries. The plan was completed in 2019. The Company recorded total pre-tax charges of $529 during the six months ended June 29, 2019 primarily related to severance.

The Company's restructuring charges and payments for all plans are comprised of the following:

	Employee severance and temporary labor costs	Other charges	Total
Balance at December 31, 2018	$ 997	$ 206	$ 1,203
Expenses incurred	322	72	394
Payments made	(389)	(23)	(412)
Balance at March 30, 2019	930	255	1,185
Expenses incurred	129	6	135
Payments made	(230)	(10)	(240)
Balance at June 29, 2019	$ 829	$ 251	$ 1,080

6. Equity-based compensation

Excluding the $7,849 decrease in fair market value discussed in Note 4, profits interest compensation of $1,078 and $2,121 was recognized for the six months ended June 27, 2020 and June 29, 2019, respectively, with $896 and $1,909 included in selling, general and administrative expense and the balance in research and development expense. Profits interest forfeiture of $111 was recognized in loss from discontinued operations for the six months ended June 29, 2019. As of June 27, 2020, there was approximately $7,056 of unrecognized compensation expense to be recognized over a weighted-average period of 1.3 years based on time to vest.

As discussed in Note 4, 150,252 MIP units were converted to cash during the six months ended June 27, 2020 and June 29, 2019 with a grant date fair value of $4.89. A summary of the award activity of the Phantom Plan for the six months ended June 27, 2020 is as follows (number of awards in thousands):

	Number of awards	Weighted-average grant-date fair value
Outstanding at December 31, 2019	1,139	$ 10.24
Granted	50	$ 14.82
Outstanding at March 28, 2020	1,189	$ 10.44
Granted	418	$ 9.84
Converted to cash	(64)	$ 4.97
Forfeited	(62)	$ 12.45
Outstanding at June 27, 2020	1,481	$ 10.37

7. Income taxes

Income tax provisions for interim periods are based on an estimated annual income tax rate, adjusted for discrete tax items. As a result, the Company's interim effective tax rates may vary significantly from the statutory tax rate and the annual effective tax rate. The effective tax rate was 1.6% and 12.6% for the six months ended June 27, 2020 and June 29, 2019, respectively. The primary factor affecting the Company's effective tax rate for the for the six months ended June 27, 2020, was Bioventus LLC's pass-through structure for U.S. income tax purposes, while being treated as taxable in certain states and various foreign jurisdictions as well as for certain subsidiaries. The Company does not expect the CARES Act to have a significant impact on the tax provision for income.

8. Commitments and contingencies

Leases

The Company leases its office facilities as well as other property, vehicles and equipment under operating leases. The Company also leases certain office equipment under nominal finance leases. The remaining lease terms range from 5 months to 8 years.

The components of lease cost were as follows:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Operating lease cost	$ 1,292	$ 1,226
Short-term lease cost[a]	204	109
Total lease cost	$ 1,496	$ 1,335

(a) Includes variable lease cost and sublease income, which are immaterial.

Supplemental cash flow information and non-cash activity related to operating leases were as follows:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Operating cash flows from operating leases	$1,269	$ 1,118
Right-of-use assets obtained in exchange for lease obligations	$ —	$ 4,297

Supplemental balance sheet and other information related to operating leases were as follows:

	June 27, 2020	December 31, 2019
Operating lease assets	$ 14,343	$ 15,267
Operating lease liabilities- current	$ 1,817	$ 1,814
Operating lease liabilities- noncurrent	13,594	14,513
Total operating lease liabilities	$ 15,411	$ 16,327
Weighted average remaining lease term (years)	7.5	8.0
Weighted average discount rate	5.0%	5.0%

OIG's Provider Self-Disclosure

The Company identified non-compliance with certain U.S. federal statutes and requirements governing the Medicare program in 2018 related to improper completion of CMN forms and in November 2018 made a voluntary self-disclosure to the OIG pursuant to the OIG's Provider Self-Disclosure Protocol related to this matter. This non-compliance is subject to statutory CMP on a per claim basis that ranges from nothing to $1 per instance of non-compliance. The Company has estimated the number of impacted claims with improperly completed CMN forms based on the extrapolation of an occurrence rate found in a statistical sample of CMN forms and calculated the potential fine for all impacted claims based on the range above as nothing to $10,800 in aggregate. Although the statutory CMP are reasonably possible, the Company does not believe it is probable that they will be incurred. Additionally, the OIG could require repayment of the total dollar amount of the impacted claims or $30,060 as well as assessing an additional fine equivalent to half the dollar amount of impacted claims or $15,030 for an aggregate potential impact of $55,890. The Company does not believe the requirement to repay the claims and associated fines is probable. Accordingly, no accrual has been recorded for these potential repayment obligations related to improper completion of CMN forms and potential fines at this time. While these

matters are not considered probable, the ultimate outcome of these matters is uncertain. In the event of an unfavorable outcome to the Company, these contingencies could have a material adverse effect on the Company's financial position, results of operations, liquidity and cash flows.

Reserve for estimated overpayments from all third-party payers

The Company maintains a reserve for reimbursement claims related to its Bone Growth Stimulator system that may have been processed for payment by the Company without adequate medical records support. The Company held a reserve of $5,181 and $6,801 at June 27, 2020 and December 31, 2019, respectively, for these amounts. The Company refunded Medicare $7,458 in 2019 and $1,500 during the six months ended June 27, 2020 related to known and estimated overpayments for medical necessity included in this reserve for periods through December 31, 2019. Certain of these overpayments were identified as potential overpayments in the Company's OIG self-disclosure in November 2018. The OIG is currently reviewing the Company's self-disclosure. The Company's reserve was estimated using extrapolation of an error rate from a statistical sample, which represents the Company's best estimate as of the date of the financial statements, but because of the uncertainty inherent in such estimates, the ultimate resolution may be materially different.

Other matters

On December 9, 2016, the Company entered into an amended and restated license agreement for the exclusive U.S. distribution and commercialization rights of a single injection OA product with the supplier of the Company's single injection OA product for the non-U.S. market. The agreement requires the Company to meet annual minimum purchase requirements and pay royalties on net sales. Royalties related to this agreement totaled $3,969 and $3,294 for the six months ended June 27, 2020 and June 29, 2019, respectively. These royalties are included in cost of sales on the consolidated statement of operations and comprehensive income (loss).

As part of a supply agreement entered on February 9, 2016, for the Company's three injection OA product, the Company is subject to annual minimum purchase requirements for ten years. After the initial ten years, the agreement will automatically renew for an additional five years unless terminated by the Company or the seller in accordance with the agreement.

The Company has an exclusive license and supply agreement for the use of bioactive glass in certain of its BGS products. The Company has a world-wide, royalty bearing license, as well as the right to sublicense, for the use of certain developed technologies related to spine repair. The Company was required to pay a royalty on all commercial sales revenue from the licensed products. The agreement expired in April 2019. The Company has an exclusive license agreement for bioactive bone graft putty. The Company is required to pay a royalty on all commercial sales revenue from the license products with a minimum annual royalty payment through 2023, the date the agreement will expire, upon the expiration of the patent held by the licensor. These royalties are included in cost of sales on the consolidated statement of operations and comprehensive income (loss).

On October 3, 2014, the Company purchased a BGS business. The purchase price included contingent consideration which consisted of a supply agreement with the previous owner which has expired, up to $12,000 for various cash earn-out payments upon the achievement of certain net sales targets through June 30, 2020 and a royalty on future net sales of certain BGS products beginning January 1, 2019 through December 31, 2023. There are no estimated contingent consideration payments remaining as of June 27, 2020.

In the normal course of business, the Company periodically becomes involved in various claims and lawsuits, and governmental proceedings and investigations that are incidental to the business. With respect to governmental proceedings and investigations, like other companies in our industry, the Company is subject to extensive regulation by national, state and local governmental agencies in the U.S. and in other jurisdictions in which the Company and its affiliates operate. As a result, interaction with governmental agencies is ongoing. The Company's standard practice is to cooperate with regulators and investigators in responding to inquiries. The

outcomes of legal actions are not within the Company's complete control and may not be known for extended periods of time. Other than the matters discussed above, management of the Company, after consultation with legal counsel, does not believe there are any unrecorded matters that will have a material adverse effect upon the Company's financial statements.

9. Revenue recognition

Our policies for recognizing sales have not changed from those described in the audited consolidated financial statements of the Company. The Company attributes net sales to external customers to the U.S. and to all foreign countries based on the legal entity from which the sale originated. The following table presents our net sales by segment disaggregated by geographic markets and major product lines as follows:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Primary geographic markets:		
U.S.	$ 125,136	$ 143,962
International	11,526	16,384
Total net sales	$ 136,662	$ 160,346
Major product lines:		
OA joint pain treatment and joint preservation	$ 70,151	$ 85,043
Minimally invasive fracture treatment	41,433	51,047
Bone graft substitutes	25,078	24,256
Total net sales	$ 136,662	$ 160,346

Contract assets and liabilities

Contract assets consist of unbilled amounts resulting from estimated future royalties from an international distributor that exceeds the amount billed and the right to payment is not solely subject to the passage of time. Contract assets totaling $126 and $261 as of June 27, 2020 and December 31, 2019, are included in prepaid and other current assets on the consolidated balance sheets.

Contract liabilities consist of customer advance payments or deposits and deferred revenue. Occasionally for certain international customers, the Company requires payments in advance of shipping product and recognizing revenue resulting in contract liabilities. Contract liabilities were nominal as of June 27, 2020 and December 31, 2019 and are included in accrued liabilities on the consolidated balance sheets.

10. Segments

The Company's two reportable segments are U.S. and International. The Company's products are primarily sold to orthopedists, musculoskeletal and sports medicine physicians, podiatrists, neurosurgeons and orthopedic spine surgeons, as well as to their patients. The Company does not disclose segment information by asset as the CODM does not review or use it to allocate resources or to assess the operating results and financial performance.

The following table presents segment adjusted EBITDA reconciled to income (loss) from continuing operations before income taxes:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Segment adjusted EBITDA from continuing operations		
U.S.	$ 21,151	$ 25,925
International	37	2,417
Depreciation and amortization	(14,513)	(15,712)
Interest expense	(5,215)	(9,384)
Equity compensation	6,771	(2,121)
COVID-19 benefits, net	1,101	—
Succession and transition charges	(4,574)	—
Restructuring costs	—	(529)
Foreign currency impact	(40)	(48)
Other non-recurring costs	(283)	(3,042)
Income (loss) from continuing operations before income taxes	$ 4,435	$ (2,494)

11. Discontinued operations

In December 2018, the Company, under the direction and authority of the Company's Board of Managers, committed to shut down the BMP research and development program, which had been reported as a segment in previous years. Substantially, all operations, including project close documentation, contract termination, vacating the facility and ultimately the termination of the employees, ceased by March 2019 and as a result the BMP research and development program met the criteria for discontinued operations. There was no activity related to BMP during the second quarter of 2019. The Company sold the $172 held for sale asset remaining from the BMP research and development program during the six months ended June 27, 2020.

The following table summarizes the statement of operations information from discontinued operations:

	Six Months Ended June 29, 2019
Research and development expense	$ 1,626
Income tax benefit	(10)
Loss from discontinued operations, net of tax	$ 1,616

12. Net income (loss) per unit

The following table presents the computation of basic and diluted net income (loss) per unit as follows:

	Six Months Ended	
	June 27, 2020	June 29, 2019
Net income (loss) from continuing operations attributable to unit holders	$ 5,178	$ (2,809)
Accumulated and unpaid preferred distributions	(3,000)	(2,937)
Net income allocated to participating shareholders	(1,249)	—
Net income (loss) from continuing operations attributable to common unit holders	929	(5,746)
Loss from discontinued operations, net of tax	—	1,616
Net income (loss) attributable to common unit holders	$ 929	$ (7,362)
Net income (loss) per unit attributable to common unit holders—basic and diluted		
Net income (loss) from continuing operations	$ 0.19	$ (1.17)
Loss from discontinued operations, net of tax	—	0.33
Net income (loss) attributable to common unit holders	$ 0.19	$ (1.50)
Weighted average units used in computing basic and diluted net income (loss) per common unit	4,900	4,900

The computation of diluted earnings per unit for the six months ended June 27, 2020 and June 29, 2019 excludes the effect of potential common units that would be issued upon the conversion of preferred units. The effect of these 6,590 units would be antidilutive due to the Company being in a net loss position and these units only convert upon completion of a Distribution Event.

13. Unaudited pro forma net income per share

Pro forma basic net income per share is calculated by dividing net loss attributable to Class A common stockholders by the number of weighted average shares of Class A common stock after giving effect to the corporate conversion. Pro forma diluted net income per share reflects the exchange of shares of Class B common stock and an adjustment to the net loss attributable to non-controlling interests.

	Six Months Ended June 27, 2020
Net income per share, basic and diluted:	
Numerator	
Net income from continuing operations	
Less: Net income attributable to non-controlling interests	
Net income from continuing operations attributable to Class A common stockholders	
Net income per share from continuing operations, basic	
Net income per share from continuing operations, diluted	
Numerator	
Net income attributable to unit holders	
Less: Net income attributable to non-controlling interests	
Net income attributable to Class A common stockholders	
Net income per share, basic	
Net income per share, diluted	
Denominator	
Shares of Class A common stock held by the Former LLC Owners	
Weighted-average shares of common stock, basic	
Shares of Class A common stock held by the Former LLC Owners	
Shares of Class B common stock held by the Former LLC Owners	
Weighted-average shares of common stock, diluted	

14. Subsequent events

On July 15, 2020, the Company entered into an Option and Equity Purchase Agreement with CartiHeal. Under the terms of the agreement, the Company purchased 1,014,267 shares of CartiHeal Series G Preferred Shares for $15,000 and the SAFE converted to 12,825 in Series G-1 Preferred Shares (discussed in Note 2. Balance Sheet Information). As a result, the Company's equity ownership in CartiHeal increased to 10.03% of fully diluted shares.

The Company will, if needed, purchase an additional 338,089 of CartiHeal Series G Preferred Shares for $5,000, for the completion of a certain study. The Company has an exclusive option to acquire the remaining equity in CartiHeal which may be exercised at any time up to and within 45 days following notice of U.S. Food and Drug Administration, or FDA, approval for a CartiHeal product currently in development. In addition, upon the same FDA approval, CartiHeal may exercise an option within 45 days that requires the Company to complete the acquisition of the remaining equity in CartiHeal.

On October 5, 2020, the Company purchased 285,714 additional shares of Harbor's Series C Preferred Stock for $1,000.

Table of Contents

Until , 2020 (25 days after the date of this prospectus), all dealers that effect transactions in our securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligations to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Shares

Class A Common Stock

P r o s p e c t u s

Morgan Stanley *J.P. Morgan* *Goldman Sachs & Co. LLC*

Canaccord Genuity

, 2020

PART II

Information not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the fees and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the offer and sale of Class A common stock being registered. All amounts shown are estimates except for the SEC, registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and exchange listing fee.

Item	Amount to be paid
SEC registration fee	$ *
FINRA filing fee	*
Exchange listing fee	*
Printing expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent fees and expenses	*
Miscellaneous expenses	*
Total	$ *

* To be completed by amendment

Item 14. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law of the State of Delaware, or DGCL, permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our amended and restated certificate of incorporation provides that none of our directors shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the DGCL prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the DGCL provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Our amended and restated bylaws provide that we will indemnify each person who was or is a party or threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than an

action by or in the right of us) by reason of the fact that he or she is or was, or has agreed to become, a director or officer, or, while a director or officer, is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (all such persons being referred to as an Indemnitee), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), liabilities, losses, judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding and any appeal therefrom, if such Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, and, with respect to any criminal action or proceeding, he or she had no reasonable cause to believe his or her conduct was unlawful. Our amended and restated bylaws provide that we will indemnify any Indemnitee who was or is a party to or threatened to be made a party to any threatened, pending or completed action or suit by or in the right of us to procure a judgment in our favor by reason of the fact that the Indemnitee is or was, or has agreed to become, a director or officer, or, while a director or officer, is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) actually and reasonably incurred in connection with such action, suit or proceeding, and any appeal therefrom, if the Indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, our best interests, except that no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to us, unless a court determines that, despite such adjudication but in view of all of the circumstances, he or she is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that any Indemnitee has been successful, on the merits or otherwise, he or she will be indemnified by us against all expenses (including attorneys' fees) actually and reasonably incurred in connection therewith. Expenses must be advanced to an Indemnitee under certain circumstances.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

In any underwriting agreement we enter into in connection with the sale of Class A common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act of 1933, as amended, or the Securities Act, against certain liabilities.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. Please read "Item 17. Undertakings" for more information on the SEC's position regarding such indemnification provisions.

Item 15. Recent sales of Unregistered Securities.

On July 15, 2016, the registrant agreed to issue ten shares of common stock, par value $0.001 per share, to a former officer of the registrant in exchange for $0.01, which were transferred to an officer of the registrant on September 22, 2020 and will be redeemed upon closing of this offering. The issuance was exempt from registration under Section 4(a)(2) of the Securities Act, as a transaction by an issuer not involving any public offering.

Item 16. Exhibits and Financial Statement Schedules

(a) *Exhibits.* See the Exhibit Index attached to this registration statement, which is incorporated by reference herein.

(b) *Financial Statement Schedules.* Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the Financial Statements or notes thereto.

Item 17. Undertakings.

(a) The undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424 (§ 230.424 of this chapter);

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

(b) The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registration has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person of the Registrant in the successful defense of any action, suit, or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction, the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(d) The Registrant hereby further undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

Exhibit no.	Description
1.1*	Form of Underwriting Agreement.
3.1*	Certificate of Incorporation of Bioventus Inc., as currently in effect.
3.2*	Form of Amended and Restated Certificate of Incorporation of Bioventus Inc., to be effective upon the closing of this offering.
3.3*	Bylaws of Bioventus Inc., as currently in effect.
3.4*	Form of Amended and Restated Bylaws of Bioventus Inc., to be effective upon the closing of this offering.
4.1*	Specimen Stock Certificate evidencing the shares of Class A common stock.
5.1*	Opinion of Latham & Watkins LLP.
10.1*	Form of Tax Receivable Agreement, to be effective upon the closing of this offering.
10.2*	Form of Registration Rights Agreement, to be effective upon the closing of this offering.
10.3*	Amended and Restated Limited Liability Company Agreement of Bioventus LLC, as currently in effect.
10.4*	First Amendment to the Amended and Restated Bioventus LLC Limited Liability Company Agreement, dated as of May 21, 2015.
10.5*	Second Amendment to the Amended and Restated Bioventus LLC Limited Liability Company Agreement, dated as of November 23, 2015.
10.6*	Third Amendment to the Amended and Restated Bioventus LLC Limited Liability Company Agreement, dated as of December 8, 2017.
10.7*	Form of Stockholders Agreement, to be effective upon the closing of this offering.
10.8*†	Amended and Restated Exclusive Distribution Agreement between Seikagaku Corporation and Bioventus LLC, restated as of May 4, 2018.
10.9*	Option and Equity Purchase Agreement, dated as of July 15, 2020, among Bioventus LLC, CartiHeal (2009) Ltd., the Securityholders set forth on Schedule 1.01(a) thereto, each of the Securityholders from time to time party thereto and Elron Electronic Industries Ltd., in its capacity as the Securityholder Representative.
10.10*	Credit and Guaranty Agreement, dated as of December 6, 2019, among Bioventus LLC, Wells Fargo Bank, N.A., as administrative agent, and the lenders thereto.
10.11*#	Bioventus LLC Management Incentive Plan.
10.12*#	Bioventus LLC Phantom Profits Interest Plan, as amended and restated.
10.13*#	Management Incentive Plan Award Agreement, dated as of December 2, 2013, by and between Bioventus LLC and Anthony P. Bihl III.
10.14*#	Phantom Profits Interest Plan Award Agreement, dated as of April 21, 2016, by and between Bioventus LLC and Anthony P. Bihl III.
10.15*#	Phantom Profits Interest Plan Award Agreement, dated as of September 17, 2018, by and between Bioventus LLC and Anthony P. Bihl III.

Exhibit no.	Description
10.16*#	Phantom Profits Interests Plan Award Agreement, dated as of January 1, 2016, by and between Bioventus LLC and William A. Hawkins.
10.17*#	Phantom Profits Interests Plan Award Agreement, dated as of October 9, 2018, by and between Bioventus LLC and Susan M. Stalnecker.
10.18*#	Phantom Profits Interests Plan Award Agreement, dated as of June 25, 2020, by and between Bioventus LLC and Kenneth M. Reali.
10.19*#	Phantom Profits Interests Plan Award Agreement, dated as of April 5, 2016, by and between Bioventus LLC and Gregory O. Anglum.
10.20*#	Phantom Profits Interests Plan Award Agreement, dated as of May 1, 2017, by and between Bioventus LLC and Gregory O. Anglum.
10.21*#	Phantom Profits Interests Plan Award Agreement, dated as of September 17, 2018, by and between Bioventus LLC and Gregory O. Anglum.
10.22*#	Phantom Profits Interests Plan Award Agreement, dated as of February 6, 2017, by and between Bioventus LLC and John E. Nosenzo.
10.23*#	Phantom Profits Interests Plan Award Agreement, dated as of September 17, 2018, by and between Bioventus LLC and John E. Nosenzo.
10.24*#	Phantom Profits Interests Plan Award Agreement, dated as of July 22, 2013, by and between Bioventus LLC and Alessandra Pavesio.
10.25*#	Phantom Profits Interests Plan Award Agreement, dated as of June 1, 2015, by and between Bioventus LLC and Alessandra Pavesio.
10.26*#	Phantom Profits Interests Plan Award Agreement, dated as of April 21, 2016, by and between Bioventus LLC and Alessandra Pavesio.
10.27*#	Phantom Profits Interests Plan Award Agreement, dated as of September 17, 2018, by and between Bioventus LLC and Alessandra Pavesio.
10.28*#	Phantom Profits Interests Plan Award Agreement, dated as of August 14, 2017, by and between Bioventus LLC and Anthony D’Adamio.
10.29*#	Phantom Profits Interests Plan Award Agreement, dated as of September 17, 2018, by and between Bioventus LLC and Anthony D’Adamio.
10.30*#	Employment Letter, dated as of June 13, 2013, by and between Bioventus LLC and Alessandra Pavesio.
10.31*#	Employment Letter, dated as of November 4, 2013, by and between Bioventus LLC and Anthony P. Bihl III.
10.32*#	Director Offer Letter, dated as of December 11, 2015, by and between Bioventus LLC and William A. Hawkins.
10.33*#	Employment Letter, dated as of November 18, 2016, by and between Bioventus LLC and John E. Nosenzo.
10.34*#	Retention Letter, dated April 13, 2020, by and between Bioventus LLC and John E. Nosenzo.
10.35*#	Employment Letter, dated as of July 11, 2017, by and between Bioventus LLC and Anthony D’Adamio.

Exhibit no.	Description
10.36*#	Employment Letter, dated as of August 2, 2017, by and between Bioventus LLC and Gregory O. Anglum.
10.37*#	Director Offer Letter, dated as of October 3, 2018, by and between Bioventus LLC and Susan M. Stalnecker.
10.38*#	Employment Letter, dated as of March 12, 2020, by and between Bioventus LLC and Kenneth M. Reali.
10.39*#	Amendment to Employment Letter, dated as of April 24, 2020, by and between Bioventus LLC and Kenneth M. Reali.
10.40*#	Payout Agreement Letter, dated as of June 12, 2020, by and between Bioventus LLC and Anthony P. Bihl, III.
10.41*	Form of Indemnification Agreement.
16.1*	Letter from PricewaterhouseCoopers LLP.
21.1*	List of subsidiaries of Bioventus Inc.
23.1*	Consent of Grant Thornton LLP.
23.1*	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on signature page).

* To be filed by amendment.
\# Indicates management contract or compensatory plan.
† Certain portions of this exhibit have been omitted pursuant to Regulation S-K, Item (601)(b)(10).

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Durham, North Carolina, on this day of , 2020.

Bioventus Inc.

By: _____

Name: Kenneth M. Reali
Title: Chief Executive Officer and Director

SIGNATURES AND POWER OF ATTORNEY

Each of the undersigned officers and directors of Bioventus Inc. hereby constitutes and appoints Kenneth M. Reali and Gregory O. Anglum, and each of them any of whom may act without joinder of the other, the individual's true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution for the person and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on , 2020:

Name	Title
Kenneth M. Reali	Chief Executive Officer and Director (Principal Executive Officer)
Gregory O. Anglum	Senior Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
William A. Hawkins III	Chairman
Bradley J. Cannon	Director
Phillip G. Cowdy	Director
Guido J. Neels	Director
Guy P. Nohra	Director
David J. Parker	Director
Susan M. Stalnecker	Director
Martin P. Sutter	Director