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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended October 1, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-37844

BIOVENTUS INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**81-0980861**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
4721 Emperor Boulevard, Suite 100 **Durham, North Carolina** **(Address of Principal Executive Offices)**	**27703** **(Zip Code)**

(919) 474-6700
Registrant's Telephone Number, Including Area Code

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, $0.001 par value per share	BVS	The Nasdaq Global Select Market

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	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 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of November 16, 2022, there were 61,951,858 shares of Class A common stock outstanding and 15,786,737 shares of Class B common stock outstanding.

BIOVENTUS INC.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

As used in this Quarterly Report on Form 10-Q, unless expressly indicated or the context otherwise requires, references to "Bioventus," "we," "us," "our," "the Company," and similar references refer to Bioventus Inc. and its consolidated subsidiaries, including Bioventus LLC (BV LLC).

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act), and Section 27A of the Securities Act of 1933, as amended (Securities Act), 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 including, without limitation, statements regarding our business strategy, including, without limitation, expectations relating to our recent acquisitions of Misonix, Bioness and CartiHeal, expected expansion of our pipeline and research and development investment, new therapy launches, expected costs related to, and potential future options for, MOTYS, our operations and expected financial performance and condition, and impacts of the COVID-19 pandemic and inflation. 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.

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 Quarterly Report on Form 10-Q 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. Important factors that may cause actual results to differ materially from current expectations include, among other things: the risk that the material weakness we identified or a new material risk could adversely affect our ability to report our results of operations and financial condition accurately and in a timely manner; our ability to complete acquisitions or successfully integrate new businesses, such as CartiHeal, products or technologies in a cost-effective and non-disruptive manner; we might not be able to continue to fund our operations for at least the next twelve months as a going concern; we might not meet certain of our debt covenants under our Credit Agreement and might be required to repay our indebtedness; we might not be able to fund the remainder of the deferred consideration for the acquisition of CartiHeal as it becomes due; 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; the proposed down classification of non-invasive bone growth stimulators, including our Exogen system, by the U.S. Food and Drug Administration (FDA) could increase future competition for bone growth stimulators and otherwise adversely affect the Company's sales of Exogen; failure to achieve and maintain adequate levels of coverage and/or reimbursement for our products or future products, the procedures using our products, such as our hyaluronic acid (HA) viscosupplements, or future products we may seek to commercialize, such as our recently acquired Agili-C product; pricing pressure and other competitive factors; governments outside the United States might not provide coverage or reimbursement 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; 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; our failure to properly manage our anticipated growth and strengthen our brands; risks related to product liability claims; fluctuations in demand for our products; issues relating to the supply of our products, potential supply chain disruptions and the increased cost of parts and components used to manufacture our products due to inflation; our reliance on a limited number of third-party manufacturers to manufacture certain of our products; if our facilities are damaged or become inoperable, we will be unable to continue to research, develop and manufacture our products; failure to maintain contractual relationships; security breaches, unauthorized disclosure of information, denial of service attacks or the perception that confidential information in our possession is not secure; failure of key information technology and communications systems, process or sites; risks related to international sales and operations; risks related to our debt and future capital needs; failure to comply with extensive governmental regulation relevant to us and our products; 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; 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; legislative or regulatory reforms; risks related to intellectual property matters; and other important factors described in *Part I. Item 1A. Risk Factors* in our 2021 Annual Report on Form 10-K as updated by our subsequent Quarterly Reports on Form 10-Q, this Quarterly Report on Form 10-Q and as may be further updated from time to time in our other filings with the SEC. You are urged to consider these factors carefully in evaluating these forward-looking statements. These forward-looking statements speak only as of the date hereof. 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.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Bioventus Inc.
Consolidated condensed statements of operations and comprehensive (loss) income
Three and nine months ended October 1, 2022 and October 2, 2021
(Amounts in thousands, except share amounts)
(Unaudited)

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net sales	$ 128,662	$ 108,890	$ 386,283	$ 300,484
Cost of sales (including depreciation and amortization of $11,331, $6,637, $30,233 and $17,491, respectively)	44,127	29,821	129,392	85,546
Gross profit	84,535	79,069	256,891	214,938
Selling, general and administrative expense	79,194	69,636	254,938	173,372
Research and development expense	5,840	6,153	19,134	11,936
Restructuring costs	575	1,798	2,159	1,798
Change in fair value of contingent consideration	3,142	651	3,684	1,292
Depreciation and amortization	7,442	1,878	13,392	5,655
Impairment of goodwill	189,197	—	189,197	—
Impairment of variable interest entity assets	—	—	—	5,674
Operating (loss) income	(200,855)	(1,047)	(225,613)	15,211
Interest expense, net	9,894	1,347	10,922	152
Other (income) expense	(23,272)	757	(22,350)	2,821
Other (income) expense	(13,378)	2,104	(11,428)	2,973
(Loss) income before income taxes	(187,477)	(3,151)	(214,185)	12,238
Income tax (benefit) expense, net	(41,779)	(882)	(45,667)	759
Net (loss) income	(145,698)	(2,269)	(168,518)	11,479
Loss attributable to noncontrolling interest	37,453	1,198	41,744	8,260
Net (loss) income attributable to Bioventus Inc.	$ (108,245)	$ (1,071)	$ (126,774)	$ 19,739
Net (loss) income	$ (145,698)	$ (2,269)	$ (168,518)	$ 11,479
Other comprehensive loss, net of tax				
Change in foreign currency translation adjustments	(723)	(366)	(1,912)	(1,225)
Comprehensive loss	(146,421)	(2,635)	(170,430)	10,254
Comprehensive loss attributable to noncontrolling interest	37,600	1,300	42,137	8,182
Comprehensive (loss) income attributable to Bioventus Inc.	$ (108,821)	$ (1,335)	$ (128,293)	$ 18,436
Loss per share of Class A common stock, basic and diluted[(1)]:	$ (1.76)	$ (0.03)	$ (2.07)	$ (0.15)
Weighted-average shares of Class A common stock outstanding, basic and diluted[(1)]:	61,674,254	41,837,581	61,208,941	41,816,706

[(1)] Per share information for the nine months ended October 2, 2021 represents loss per share of Class A common stock and weighted-average shares of Class A common stock outstanding from February 16, 2021 through October 2, 2021, the period following Bioventus Inc.'s initial public offering and related transactions described in *Note 1. Organization* and *Note 8. Earnings per share* within the *Notes to the unaudited condensed consolidated financial statements.*

The accompanying notes are an integral part of these consolidated financial statements.

Bioventus Inc.
Consolidated condensed balance sheets as of October 1, 2022 (Unaudited) and December 31, 2021
(Amounts in thousands, except share amounts)

	October 1, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 34,359	$ 43,933
Restricted cash	23	5,280
Accounts receivable, net	132,185	124,963
Inventory	76,952	61,688
Prepaid and other current assets	27,563	27,239
Total current assets	271,082	263,103
Restricted cash, less current portion	—	50,000
Property and equipment, net	26,643	22,985
Goodwill	15,359	147,623
Intangible assets, net	1,055,601	695,193
Operating lease assets	16,304	17,186
Deferred tax assets	—	481
Investment and other assets	13,033	29,291
Total assets	$ 1,398,022	$ 1,225,862
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 19,075	$ 16,915
Accrued liabilities	116,890	131,473
Accrued equity-based compensation	—	10,875
Current portion of long-term debt	31,302	18,038
Current portion of deferred consideration	117,615	—
Other current liabilities	3,491	3,558
Total current liabilities	288,373	180,859
Long-term debt, less current portion	393,102	339,644
Deferred income taxes	159,300	133,518
Deferred consideration	71,923	—
Contingent consideration	81,914	16,329
Other long-term liabilities	24,264	21,723
Total liabilities	1,018,876	692,073
Commitments and contingencies (Note 11)		
Stockholders' Equity:		
Preferred stock, $0.001 par value, 10,000,000 shares authorized, 0 shares issued		
Class A common stock, $0.001 par value, 250,000,000 shares authorized as of October 1, 2022 and December 31, 2021, 61,777,875 and 59,548,504 shares issued and outstanding as of October 1, 2022 and December 31, 2021, respectively	64	59
Class B common stock, $0.001 par value, 50,000,000 shares authorized, 15,786,737 shares issued and outstanding as of October 1, 2022 and December 31, 2021	16	16
Additional paid-in capital	478,033	465,272
Accumulated deficit	(133,376)	(6,602)
Accumulated other comprehensive (loss) income	(1,340)	179
Total stockholders' equity attributable to Bioventus Inc.	343,397	458,924
Noncontrolling interest	35,749	74,865
Total stockholders' equity	379,146	533,789
Total liabilities and stockholders' equity	$ 1,398,022	$ 1,225,862

The accompanying notes are an integral part of these consolidated financial statements.

Bioventus Inc.
Consolidated condensed statements of changes in stockholders' and members' equity
Three and nine months ended October 1, 2022 and October 2, 2021
(Amounts in thousands, except share amounts)
(Unaudited)

Three Months Ended October 1, 2022

	Class A Common Stock		Class B Common Stock						
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated other comprehensive (loss) income	Accumulated Deficit	Non-controlling interest	Total Stockholders' equity
Balance at July 2, 2022	61,656,499	$ 64	15,786,737	$ 16	$ 473,796	$ (764)	$ (25,131)	$ 72,209	$ 520,190
Issuance of Class A common stock for equity plans	121,376	—	—	—	482	—	—	—	482
Net (loss) income	—	—	—	—	—	—	(108,245)	(37,453)	(145,698)
Equity based compensation	—	—	—	—	3,755	—	—	893	4,648
Deconsolidation of noncontrolling interest	—	—	—	—	—	—	—	247	247
Translation adjustment	—	—	—	—	—	(576)	—	(147)	(723)
Balance at October 1, 2022	61,777,875	$ 64	15,786,737	$ 16	$ 478,033	$ (1,340)	$ (133,376)	$ 35,749	$ 379,146

Three Months Ended October 2, 2021

	Class A Common Stock		Class B Common Stock						
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated other comprehensive (loss) income	Accumulated Deficit	Non-controlling interest	Total Stockholders' equity
Balance at July 3, 2021	41,062,652	$ 41	15,786,737	$ 16	$ 146,199	$ 468	$ (5,167)	$ 77,807	$ 219,364
Effect of Organizational Transactions	—	—	—	—	7,437	—	—	—	7,437
Issuance of Class A common stock for equity plans	34,640	—	—	—	417	—	—	—	417
Distribution to Controlling LLC Owner	—	—	—	—	—	—	—	(24)	(24)
Net loss	—	—	—	—	—	—	(1,071)	(1,198)	(2,269)
Equity based compensation	—	—	—	—	4,427	—	—	1,511	5,938
Translation adjustment	—	—	—	—	—	(264)	—	(102)	(366)
Balance at October 2, 2021	41,097,292	$ 41	15,786,737	$ 16	$ 158,480	$ 204	$ (6,238)	$ 77,994	$ 230,497

Nine Months Ended October 1, 2022

	Class A Common Stock		Class B Common Stock						
	Shares	Amount	Shares	Amount	Additional Paid-in Capital	Accumulated other comprehensive (loss) income	Accumulated Deficit	Non-controlling interest	Total Stockholders' equity
Balance at December 31, 2021	59,548,504	$ 59	15,786,737	$ 16	$ 465,272	$ 179	$ (6,602)	$ 74,865	$ 533,789
Issuance of Class A common stock for equity plans	2,229,371	5	—	—	4,734	—	—	—	4,739
Net loss	—	—	—	—	—	—	(126,774)	(41,744)	(168,518)
Equity based compensation	—	—	—	—	11,379	—	—	2,774	14,153
Deconsolidation of noncontrolling interest	—	—	—	—	—	—	—	247	247
Tax withholdings on equity compensation awards	—	—	—	—	(3,352)	—	—	—	(3,352)
Translation adjustment	—	—	—	—	—	(1,519)	—	(393)	(1,912)
Balance at October 1, 2022	61,777,875	$ 64	15,786,737	$ 16	$ 478,033	$ (1,340)	$ (133,376)	$ 35,749	$ 379,146

Nine Months Ended October 2, 2021

	Members' Equity	Class A Common Stock		Class B Common Stock		Additional Paid-in Capital	Accumulated other comprehensive (loss) income	Accumulated Deficit	Non-controlling Interest	Total Stockholders' and Members' Equity
		Shares	Amount	Shares	Amount					
Balance at December 31, 2020	$ 144,160	—	$ —	—	$ —	$ —	$ —	$ —	$ —	$ 144,160
Prior to Organizational Transactions:										
Refund from members	123	—	—	—	—	—	—	—	—	123
Equity-based compensation	(39)	—	—	—	—	—	—	—	—	(39)
Net income	25,977	—	—	—	—	—	—	—	—	25,977
Other comprehensive loss	(1,507)	—	—	—	—	—	—	—	—	(1,507)
Effect of Organizational Transactions	(168,714)	31,838,589	32	15,786,737	16	41,060	—	—	79,119	(48,487)
Subsequent to Organizational Transactions:										
Initial public offering, net of offering costs	—	9,200,000	9	—	—	106,441	—	—	—	106,450
Issuance of Class A common stock for equity plans	—	58,703	—	—	—	731	—	—	—	731
Distribution to Continuing LLC Owner	—	—	—	—	—	—	—	—	(215)	(215)
Net loss	—	—	—	—	—	—	—	(6,238)	(8,260)	(14,498)
Deconsolidation of variable interest entity	—	—	—	—	—	—	—	—	3,746	3,746
Equity based compensation	—	—	—	—	—	10,248	—	—	3,526	13,774
Other comprehensive income	—	—	—	—	—	—	204	—	78	282
Balance at October 2, 2021	$ —	41,097,292	$ 41	15,786,737	$ 16	$ 158,480	$ 204	$ (6,238)	$ 77,994	$ 230,497

The accompanying notes are an integral part of these consolidated financial statements.

Bioventus Inc.
Consolidated condensed statements of cash flows
Nine months ended October 1, 2022 and October 2, 2021
(Amounts in thousands)
(Unaudited)

	Nine Months Ended	
	October 1, 2022	October 2, 2021
Operating activities:		
Net (loss) income	$ (168,518)	$ 11,479
Adjustments to reconcile net (loss) income to net cash from operating activities:		
Depreciation and amortization	43,643	23,185
Provision (recovery) for expected credit losses	3,874	(138)
Equity-based compensation from 2021 Stock Incentive Plan	14,153	13,735
Profits interest plan, liability-classified and other equity awards compensation	—	(24,356)
Change in fair value of contingent consideration	3,684	1,292
Change in fair value of interest rate swap	(6,418)	(1,391)
Deferred income taxes	(47,154)	(1,703)
Change in fair value of Equity Participation Rights	—	(2,774)
Impairment of goodwill	189,197	—
Impairments related to variable interest entity	—	7,043
Revaluation gain on previously held equity interest in CartiHeal	(23,709)	—
Unrealized loss on foreign currency fluctuations	2,926	1,224
Other, net	166	407
Changes in operating assets and liabilities:		
Accounts receivable	(12,840)	(13,149)
Inventories	(8,621)	1,496
Accounts payable and accrued expenses	(10,947)	7,247
Other current and noncurrent assets and liabilities	1,783	(13,723)
Net cash from operating activities	(18,781)	9,874
Investing activities:		
Acquisition of CartiHeal, net of cash acquired	(104,841)	—
Acquisition of Bioness, net of cash acquired	—	(46,790)
Purchase of property and equipment	(6,639)	(4,568)
Investments and acquisition of distribution rights	(1,478)	(11,124)
Other	(75)	—
Net cash from investing activities	(113,033)	(62,482)
Financing activities:		
Proceeds from issuance of Class A common stock sold in initial public offering, net of underwriting discounts and offering costs	—	107,777
Proceeds from issuance of Class A and B common stock	4,739	747
Tax withholdings on equity-based compensation	(3,352)	—
Borrowing on revolver	25,000	—
Payment on revolver	(25,000)	—
Proceeds from the issuance of long-term debt, net of issuance costs	79,659	—
Payments on long-term debt	(13,528)	(11,250)
Distributions to members	—	(183)
Other, net	(4)	(28)
Net cash from financing activities	67,514	97,063
Effect of exchange rate changes on cash	(531)	(377)
Net change in cash, cash equivalents and restricted cash	(64,831)	44,078
Cash, cash equivalents and restricted cash at the beginning of the period	99,213	86,839
Cash, cash equivalents and restricted cash at the end of the period	$ 34,382	$ 130,917
Supplemental disclosure of noncash investing and financing activities		
Accrued member distributions	$ —	$ 123
Accounts payable for purchase of property, plant and equipment	$ 1,270	$ 612

The accompanying notes are an integral part of these consolidated financial statements.

Bioventus Inc.
Notes to the unaudited consolidated condensed financial statements
(Amounts in thousands, except unit and share amounts)

1. Organization

The Company

Bioventus Inc. (together with its subsidiaries, the Company) was formed as a Delaware corporation for the purpose of facilitating an initial public offering (IPO) and other related transactions in order to carry on the business of Bioventus LLC and its subsidiaries (BV LLC). Bioventus Inc. functions as a holding company with no direct operations, material assets or liabilities other than the equity interest in BV LLC. BV LLC is a limited liability company formed under the laws of the state of Delaware on November 23, 2011 and operates as a partnership. BV LLC commenced operations in May 2012. 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. The Company is headquartered in Durham, North Carolina and has approximately 1,160 employees.

Initial Public Offering

On February 16, 2021, the Company closed an IPO of 9,200,000 shares of Class A common stock at a public offering price of $13.00 per share, which includes 1,200,000 shares issued pursuant to the underwriters' over-allotment option. The Company received $111,228 in proceeds, net of underwriting discounts and commissions of $8,372, which was used to purchase newly-issued membership interests from BV LLC at a price per interest equal to the IPO price of $13.00. The Company also incurred offering expenses totaling $4,778 in addition to the underwriting discounts and commissions. Offering expenses of $1,327 were paid in 2020 and $3,451 were paid in 2021. The Company is the sole managing member of, has a majority economic interest in, has the sole voting interest in, and controls the management of BV LLC. As a result, the Company consolidates the financial results of BV LLC and reports a non-controlling interest for the interest not held by the Company.

IPO Transactions

In connection with the IPO, the Company completed the following transactions (Transactions).

- Amended and restated the limited liability company agreement of BV LLC (BV LLC Agreement), to, among other things, (i) provide for a new single class of common membership interests in BV LLC (LLC Interests); (ii) exchange all of the existing membership interests in BV LLC (Original BV LLC Owners) for new LLC Interests; and (iii) appoint Bioventus Inc. as the sole managing member of BV LLC. Refer to *Note 7. Stockholders' equity* for further information.
- Amended and restated the Bioventus Inc. certificate of incorporation to, among other things, (i) provide for an increase in the authorized shares of Class A common stock; (ii) provide for Class B common stock with voting rights but no economic interest, which shares were issued to the Original BV LLC Owners on a one-for-one basis with the number of LLC Interests they owned; and (iii) provide for undesignated preferred stock. Refer to *Note 7. Stockholders' equity* for further information.
- Acquired, by merger, ten entities that were Original BV LLC Owners (Former LLC Owners), for which the Company issued 31,838,589 shares of Class A common stock as merger consideration (IPO Mergers). The only assets held by the Former LLC Owners were 31,838,589 LLC Interests and a corresponding number of shares of Class B common stock. Upon consummation of the IPO Mergers, the 31,838,589 shares of Class B common stock were canceled, and the Company recognized the 31,838,589 LLC Interests at carrying value, as the IPO Mergers are considered to be a recapitalization transaction.

The financial statements for periods prior to the IPO and Transactions have been adjusted to combine the previously separate entities for presentation purposes. Prior to the Transactions, Bioventus Inc. had no operations.

Interim periods

The Company reports quarterly interim periods on a 13-week basis within a standard calendar year. Each annual reporting period begins on January 1 and ends on December 31. Each quarter ends on the Saturday closest to calendar quarter-end, with the exception of the fourth quarter, which ends on December 31. The 13-week quarterly periods for fiscal year 2022 end on April 2, July 2 and October 1. Comparable periods for 2021 ended on April 3, July 3 and October 2. The fourth and first quarters may vary in length depending on the calendar year.

Unaudited interim financial information

The accompanying unaudited consolidated financial statements of the Company have been prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP) for interim financial information and with the instructions to Form 10-Q and 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 2021 Annual Report on Form 10-K. The consolidated balance sheet at December 31, 2021 has been derived from the audited consolidated financial statements of the Company, but does not include all the disclosures required by U.S. GAAP.

Going Concern

The accompanying unaudited consolidated financial statements have been prepared under the going concern basis of accounting, which presumes that the Company's liquidation is not imminent; however, based on the Company's current financial position and liquidity sources, including current cash balances, and forecasted future cash flows, the Company is at risk of not being able to make the two initial Deferred Payments for the CartiHeal transaction, each in the principal sum of $50 million, due under the terms of the amended Option and Equity Purchase Agreement no later than July 2023 and September 2023, respectively, which may result in a cross default under the Amendment No. 3 to the Credit and Guaranty Agreement entered into with the Company's lenders at the time of the CartiHeal transaction. In addition, should the Company fail to meet certain financial thresholds established in the Credit Agreement, the Company may be at risk of violating certain of its financial covenants under that agreement. If any of the financial covenants are not met, or if the Company is otherwise deemed to be in default of its other obligations under that agreement, the aggregate outstanding principal amounts become due and payable to our lenders. Considering current liquidity sources, the Company would not be able to make the Deferred Payments due in connection with the CartiHeal transaction or repay the Company's total outstanding debt balance in the event of a default. These conditions and events raise substantial doubt about the Company's ability to continue as a going concern. In light of this, the Company is actively pursuing plans to mitigate these conditions and events, such as considering various cost cutting measures, exploring divestiture opportunities for non-core assets, considering seeking temporary covenant waivers from our lenders, and pursuing strategic options with respect to the CartiHeal transaction such as attempting to renegotiate the timing of the CartiHeal Deferred Payments or exiting that agreement by transferring back to the former CartiHeal owners all of the share capital, intellectual property and other assets of CartiHeal acquired in the transaction pursuant to the escrow and pledge agreements entered into as part of the CartiHeal acquisition if such measures fail; however, there can be no assurances that it is probable these plans will be successfully implemented or that they will successfully mitigate these conditions and events. Therefore, these plans do not alleviate the substantial doubt about the Company's ability to continue as a going concern.

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 are generally earlier than when emerging growth companies are required to adopt.

2. Balance sheet information

Cash, cash equivalents and restricted cash

A summary of cash and cash equivalents and restricted cash is as follows:

	October 1, 2022	December 31, 2021
Cash and cash equivalents	$ 34,359	$ 43,933
Restricted cash		
Current	23	5,280
Noncurrent	—	50,000
	$ 34,382	$ 99,213

As of December 31, 2021, current restricted cash consisted of an escrow deposit with a financial institution for the purpose of paying a Paycheck Protection Program loan acquired as part of a business combination. This loan was forgiven during the second quarter of 2022.

As of December 31, 2021, noncurrent restricted cash consisted of an escrow deposit with a financial institution for the acquisition of CartiHeal (2009) Ltd. Refer to *Note 3. Acquisitions and investments* for further 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:

	October 1, 2022	December 31, 2021
Accounts receivable	$ 138,029	$ 128,365
Less: Allowance for credit losses	(5,844)	(3,402)
	$ 132,185	$ 124,963

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. The Company has a diverse customer base with no single customer representing ten percent or more of sales. The Company has one customer representing approximately 11.6% of the accounts receivable balance as of October 1, 2022. Historically, the Company's reserves have been adequate to cover credit losses.

Changes in credit losses were as follows:

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Beginning balance	$ (5,292)	$ (3,019)	$ (3,402)	$ (3,990)
(Provision) recovery	(1,369)	(221)	(3,874)	138
Write-offs	1,082	243	1,907	927
Recoveries	(265)	(65)	(475)	(137)
Ending balance	$ (5,844)	$ (3,062)	$ (5,844)	$ (3,062)

Inventory

Inventory consisted of the following as of:

	October 1, 2022	December 31, 2021
Raw materials and supplies	$ 17,380	$ 12,213
Finished goods	60,812	50,805
Gross	78,192	63,018
Excess and obsolete reserves	(1,240)	(1,330)
	$ 76,952	$ 61,688

Prepaid and other current assets

Prepaid and other current assets consisted of the following as of:

	October 1, 2022	December 31, 2021
Prepaid taxes	$ 4,492	$ 12,236
Prepaid and other current assets	23,071	15,003
	$ 27,563	$ 27,239

Goodwill

Goodwill is evaluated for impairment annually or more frequently if events or changes in circumstances indicate that goodwill might be impaired. The Company assesses goodwill impairment by applying a quantitative impairment analysis comparing the carrying value of the Company's reporting units to their respective fair values. A goodwill impairment exists if the carrying value of the reporting unit exceeds its fair value.

The Company has two reporting units and assesses impairment based upon qualitative factors and if necessary, quantitative factors. A reporting unit's fair value is determined using the income approach and discounted cash flow models by utilizing Level 3 inputs and assumptions such as future cash flows, discount rates, long-term growth rates, market value and income tax considerations. Specifically, 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. On November 8, 2022, due to a significant decline in the Company's Class A common stock, circumstances became evident that a possible goodwill impairment existed as of the balance sheet date.

The Company concluded that the carrying value of the U.S. reporting unit exceeded its fair value. The Company recorded preliminary non-cash goodwill impairment charges of $189,197 within the U.S. reporting unit for both the three and nine months ended October 1, 2022. The impairment was recorded within impairment of goodwill on the consolidated condensed statements of operations and comprehensive (loss) income.

Changes in the carrying amounts of goodwill by reportable segment during the nine months ended October 1, 2022 are as follows:

	U.S.	International	Consolidated
Balance at December 31, 2021	$ 138,863	$ 8,760	$ 147,623
Additions	55,295	6,599	61,894
Deconsolidation of noncontrolling interest	(494)	—	(494)
Purchase accounting adjustments	(4,467)	—	(4,467)
Impairment of goodwill	(189,197)	—	(189,197)
Balance at October 1, 2022	$ —	$ 15,359	$ 15,359

Additions were the result of the acquisition of CartiHeal (2009) Ltd. and purchase accounting adjustments stem from changes in the preliminary fair values of assets acquired and liabilities assumed in previous acquisitions. Refer to *Note 3. Acquisitions and investments* for further details concerning acquisitions and fair value changes. There were no accumulated goodwill impairment losses as of December 31, 2021.

Accrued liabilities

Accrued liabilities consisted of the following as of:

	October 1, 2022	December 31, 2021
Gross-to-net deductions	$ 74,409	$ 67,945
Bonus and commission	8,464	23,342
Compensation and benefits	10,372	10,665
Income and other taxes	2,299	8,139
Other liabilities	21,346	21,382
	$ 116,890	$ 131,473

3. Acquisitions and investments

CartiHeal (2009) Ltd

On July 12, 2022, the Company completed the acquisition of 100% of the remaining shares in CartiHeal (2009) Ltd. (CartiHeal), a privately held company headquartered in Israel and the developer of the proprietary Agili-C implant for the treatment of joint surface lesions in traumatic and osteoarthritic joints. The Company previously held an equity interest in CartiHeal's fully diluted shares with a carrying value of $15,768 and $16,771 as of July 12, 2022 and December 31, 2021, respectively. Net equity losses associated with CartiHeal for the three months ended October 1, 2022 and October 2, 2021 and the nine months ended October 1, 2022 and October 2, 2021, totaled $322, $419, $1,003 and $1,320, respectively, which are included in other (income) expense on the consolidated condensed statements of operations and comprehensive (loss) income.

The Company acquired CartiHeal (CartiHeal Acquisition) for an aggregate purchase price of approximately $315,000 and an additional $135,000, becoming payable after closing upon the achievement of a certain sales milestone (Sales Milestone, or CartiHeal Contingent Consideration). The Company paid $100,000 of the aggregate purchase price upon closing consisting of a $50,000 deposit held in trust and $50,000 from a financing arrangement (Refer to *Note 4. Financial instruments* for further information regarding financing arrangements). The Company also paid approximately $8,622 of CartiHeal's transaction-related fees and expenses and deferred $215,000 (Deferred Amount) of the aggregate purchase price otherwise due at closing.

The Deferred Amount will be paid in five tranches commencing in 2023 and ending no later than 2027 as follows:

- $50,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents the results of the pivotal clinical trial (First Paper Milestone) or July 1, 2023;
- $50,000 due upon the earliest to occur — the implantation of Agili-C devices in 100 patients in the United States or September 1, 2023;
- $25,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents any new or additional clinical data subsequent to the First Paper Milestone with respect to Agili-C (Second Paper Milestone) or January 1, 2025;
- $25,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents any new or additional clinical data subsequent to the First and Second Paper Milestone with respect to Agili-C or January 1, 2026; and
- $65,000 due upon the earliest to occur — obtaining a U.S. Category 1 Current Procedural Terminology (CPT) code from Centers for Medicare and Medicaid Services (CMS) for Agili-C or January 1, 2027.

Pursuant to the CartiHeal Amendment (as defined below), the Company will pay interest on each tranche of the Deferred Amount at a rate of 8.0% annually, until such tranche is paid. The Sales Milestone will be payable upon the achievement of $75,000 in trailing twelve month sales pursuant to the CartiHeal Amendment.

The Company had entered into an Option and Equity Purchase Agreement with CartiHeal (Option Agreement) in January 2020 and subsequent amendment in June 2022 (CartiHeal Amendment). The Option Agreement provided the Company with an exclusive option to acquire 100% of CartiHeal's shares (Call Option), and provided CartiHeal with a put option that would require the Company to purchase 100% of CartiHeal's shares under certain conditions. In August 2021, CartiHeal achieved pivotal clinical trial success, as defined in the Option Agreement, for the Agili-C implant. In order to preserve the Company's Call Option, in accordance with the Option Agreement and upon approval of the Company's Board of Directors (BOD), the Company deposited $50,000 into escrow in August 2021 for the potential acquisition of CartiHeal, which was included in restricted cash on the consolidated balance sheets at December 31, 2021.

The fair value of consideration for the CartiHeal Acquisition is comprised of the following:

Cash consideration	$	100,000
Transaction related costs		8,622
Subtotal of cash at closing		108,622
Deferred Amount		183,400
Sales Milestone		61,901
Fair value of previously held equity interest[(a)]		39,477
Total consideration	$	393,400

(a) Remeasurement of the Company's equity method investment in CartiHeal, net of equity losses as a result of the purchase. The remeasurement included a gain of $23,709 calculated as the difference between the fair value and the carrying value of the Company's investment in CartiHeal at the acquisition date and was recognized in other income for three and nine months ended on the consolidated condensed statements of operations and comprehensive (loss) income. The fair value was based upon: (i) the consideration transferred to members owning 89.97% of CartiHeal's fully diluted shares; (ii) calculating the value of CartiHeal's fully diluted shares based upon the transferred consideration; and (iii) applying the calculated value to the Company's 10.03% ownership in CartiHeal's fully diluted shares at the acquisition date.

The Company accounted for the CartiHeal Acquisition using the acquisition method of accounting whereby the total purchase price was preliminary allocated to tangible and intangible assets acquired and liabilities assumed based on respective fair values. The following table summarizes the preliminary fair values of the assets acquired and liabilities assumed at the acquisition date:

Fair value of consideration	$	393,400
Assets acquired and liabilities assumed:		
Cash and cash equivalents and restricted cash		3,781
Inventory		642
Prepaid and other current assets		552
Property and equipment		259
Intangibles		408,600
Investment and other assets		727
Accounts payable		(18)
Accrued liabilities		(459)
Other current liabilities		(171)
Deferred income taxes		(79,863)
Other liabilities		(2,544)
Net assets acquired		331,506
Resulting goodwill	$	61,894

As of October 1, 2022, the purchase price allocation for the CartiHeal Acquisition was preliminary in nature and subject to completion. Adjustments to the current fair value estimates in the above table may occur as the process conducted for various valuations and assessments is finalized, including intangible assets, tax liabilities and other working capital accounts. Nearly 100% of the goodwill represents estimated future economic benefits arising from other assets acquired that could not be individually identified and separately recognized and is attributable to expected revenue growth in new markets. The goodwill is not expected to be deductible for tax purposes and $55,295 and $6,599 was allocated to the U.S. and International reporting units, respectively. The Company incurred $1,307 and $3,976 in acquisition costs related to CartiHeal during the three and nine months ended October 1, 2022, respectively.

CartiHeal's intangibles consists of the following:

	Useful Life		Fair Value
Intellectual Property - US Segment	20 years	$	351,500
Intellectual Property - International Segment	8 years		57,100
		$	408,600

The estimated fair value of the acquired CartiHeal intangibles was determined using an income approach, a valuation technique that estimates the fair value of an asset based on market participant expectations of the cash flows that an asset would generate over its remaining useful life. The determination of the useful lives was based upon consideration of market participant assumptions and transaction specific factors. The aggregate amortization expense related to acquired intangible assets is $6,178 for the remainder of 2022 and $24,713 annually for the years 2023 through 2026.

Misonix, Inc.

On October 29, 2021, in order to broaden its portfolio, the Company acquired 100% of the capital stock of Misonix, Inc. (Misonix) in a cash-and-stock transaction (the Misonix Acquisition). Misonix manufactures minimally invasive surgical ultrasonic medical devices used for precise bone sculpting, removal of soft and hard tumors and tissue debridement, primarily in the areas of neurosurgery, orthopedic surgery, plastic surgery, wound care and maxillo-facial surgery. Misonix also exclusively distributes skin allografts and wound care products used to support healing of wounds. The fair value of the consideration for the Misonix Acquisition comprised the following:

	Common Shares	Price per Share[(a)]	Amount
Cash			$ 182,988
Bioventus Class A shares	18,340,790	$ 14.97	274,562
Value of Misonix options settled in Bioventus options			27,636
Merger consideration			485,186
Other cash consideration			40,130
Total Misonix consideration			$ 525,316

(a) Closing price of the Company's Class A common stock as of October 28, 2021.

The Company accounted for the Misonix Acquisition 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 following table summarizes the fair values of the assets acquired and liabilities assumed at the acquisition date:

Fair value of consideration	$ 525,316
Assets acquired and liabilities assumed:	
Cash and cash equivalents	7,126
Accounts receivable	13,301
Inventory	23,428
Prepaid and other current assets	419
Property and equipment, net	10,280
Intangible assets	486,500
Operating lease assets	1,049
Deferred tax assets	6,448
Other assets	77
Accounts payable and accrued liabilities	(16,888)
Other current liabilities	(589)
Deferred income taxes	(94,012)
Other liabilities	(1,351)
Net assets acquired	435,788
Resulting goodwill	$ 89,528

Nearly 100% of the goodwill represents the estimated future economic benefits arising from other assets acquired that could not be individually identified and separately recognized. The factors contributing to the recognition of goodwill are based on several strategic and synergistic benefits that are expected to be realized from the Misonix Acquisition. The goodwill is not tax deductible and was allocated to the U.S. reporting unit for purposes of the evaluation for any future goodwill impairment. Changes in the preliminary purchase price allocation during the six months ended July 2, 2022 related to a deferred tax asset recognition of $6,448 and a reduction in inventory and property and equipment, net of $1,292 and 291, respectively.

The following table summarizes the preliminary fair values of identifiable intangible assets and their useful lives:

	Useful Life (in years)	Fair Value
Intellectual property	15 - 20 years	$ 477,000
Customer relationships	12 years	9,500
		$ 486,500

The preliminary fair value of the Misonix intellectual property was determined using a variation of the income approach or the multi-period excess earnings method, with projected earnings discounted at a rate of 12.0%. The preliminary fair value of the customer relationship asset was determined using the income approach or the profit-split method, with projected cash flow discounted at a rate of 12.0%. The determination of the useful lives was based upon consideration of market participant assumptions and transaction specific factors.

Bioness, Inc.

On March 30, 2021, the Company acquired 100% of the capital stock of Bioness, Inc. (Bioness Acquisition) for $48,933 in cash and future contingent consideration payments. Bioness, Inc. (Bioness) is a global leader in neuromodulation and advanced rehabilitation medical devices through its innovative peripheral nerve stimulation therapy and premium advanced rehabilitation solutions.

Contingent consideration is comprised of future earn-out payments contingent upon the achievement of certain research and development projects as well as sales milestones related to Bioness products. The Bioness Acquisition Agreement includes maximum earn-out payments of $65,000 as follows:

- $15,000 for obtaining FDA approval for U.S. commercial distribution of a certain product for certain indications on or before June 30, 2022;
- $20,000 for meeting net sales targets for certain implantable products over a three year period ending on June 30, 2025 at the latest;
- Up to $10,000 for meeting net sales milestones for certain implantable products over a three year period ending on June 30, 2025 at the latest; and
- $20,000 for maintaining Centers for Medicare & Medicaid Services coverage and reimbursement for certain products at specified levels as of December 31, 2024.

In December 2021, it became clear that the $15,000 FDA approval milestone would not be met, therefore, was assigned no value and was recorded as a measurement period adjustment. As of December 31, 2021, the maximum contingent earn-out payment decreased to $50,000 as a result.

Consolidated Pro Forma Results

The results of operations of Bioness, acquired March 30, 2021, Misonix, acquired October 29, 2021 and CartiHeal, acquired July 12, 2022, have been included in the accompanying consolidated financial statements since their respective acquisition dates. Net losses of CartiHeal included in the nine months ended October 1, 2022 since the acquisition date were $6,812. There are no net sales attributable to CartiHeal in the nine months ended October 1, 2022.

Revenue and earnings for the operations of Bioness, Misonix and CartiHeal as if the companies were acquired on January 1, 2021, are as follows:

	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021
Net sales	$ 386,283	$ 367,669
Net loss	$ (171,002)	$ (50,742)

The historical consolidated financial information of the Company, Misonix and Bioness have been adjusted in the pro forma information to give effect to pro forma events that are (1) directly attributable to both the Misonix and Bioness acquisitions, (2) factually supportable and (3) expected to have a continuing impact on the combined results. The unaudited pro forma results include adjustments to reflect the inventory step-up amortization, the incremental intangible asset amortization to be incurred based on the valuations of the assets acquired, transaction costs that would have been incurred in the prior period, vesting of equity-based compensation that was accelerated due to the Misonix Acquisition, adjustments to financing costs to reflect the new capital structure as well as the income tax effect and the noncontrolling interest impact of these adjustments. These pro forma amounts are not necessarily indicative of the results that would have been obtained if the acquisitions had occurred prior to the beginning of the period presented or that may occur in the future, and do not reflect future synergies, integration costs, or other such costs or savings.

Investments

VIE

The Company had a fully diluted 8.8% ownership of Harbor Medtech Inc.'s (Harbor) Series C Preferred Stock and an exclusive Collaboration Agreement with Harbor, which resulted in the consolidation of Harbor. The Company terminated the Collaboration Agreement on June 8, 2021, which resulted in the deconsolidation of Harbor and the recognition of a $5,674 impairment of Harbor's long-lived assets. The impairment was recorded within impairment of variable entity assets for the nine months ended October 2, 2021 in the consolidated condensed statements of operations and comprehensive (loss) income, of which $5,176 was attributable to the non-controlling interest. An additional impairment of $1,369, representing the Company's remaining investment balance in Harbor, was recorded within other (income) expense for the nine months ended October 2, 2021 in the consolidated condensed statements of operations and comprehensive (loss) income. The Company continues to have license rights to certain technology obtained from Harbor and is continuing product development initiated under the Collaboration Agreement.

4. Financial instruments

Long-term debt consisted of the following as of:

	October 1, 2022	December 31, 2021
Amended Term Loan due October 2026 (5.80% at October 1, 2022)	$ 427,222	$ 360,750
Less:		
Current portion of long-term debt	(31,302)	(18,038)
Unamortized debt issuance cost	(1,425)	(1,687)
Unamortized discount	(1,393)	(1,381)
	$ 393,102	$ 339,644

On July 11, 2022, the Company amended the Credit and Guaranty Agreement, dated as of December 6, 2019, as amended on October 29, 2021 (the Amended 2019 Credit Agreement) in conjunction with the CartiHeal Acquisition. Pursuant to the Amended 2019 Credit Agreement, an $80,000 term loan facility (Term Loan Facility) was extended to the Company to be used for: (i) the financing of the CartiHeal Acquisition; (ii) the payment of related fees and expenses; (iii) repayment of $25,000 on the Revolver; and (iv) working capital needs and general corporate purposes of the Company, including without limitation for permitted acquisitions. The Term Loan and Term Loan Facility (together, Amended Term Loan) will mature on October 29, 2026 (Maturity). The Company may elect either the secured overnight financial rate (SOFR) or base interest rate options for all borrowings as of July 12, 2022, which includes any outstanding balances under the Term Loan, Term Loan Facility and the Revolver. Initial SOFR loans and base rate loans had a margin of 3.25% and 2.25%, respectively, subsequent to July 12, 2022.

The Term Loan Facility had an original issue discount of $240 and deferred financing costs of $101. Scheduled principal payments increased due to the Term Loan Facility compared to the scheduled payments in the Company's 2021 Annual Report on Form 10-K. Additional scheduled principal payments of the Term Loan Facility, which commenced on September 30, 2022, are as follows with the final payment of $50,000 at Maturity:

Remainder of 2022	$ 2,000
2023 and 2024	$ 12,000
2025 and 2026	$ 16,000

The Amended 2019 Credit Agreement requires the Company to comply with financial and other covenants. The Company complied with all covenants as of October 1, 2022. The Revolver had no outstanding borrowings as of October 1, 2022 and none at December 31, 2021.

The estimated fair value of the Amended Term Loan under the Amended 2019 Credit Agreement as of October 1, 2022 was $413,702. The fair value of these obligations was determined 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. The Company has one non-designated interest rate swap agreement and has no other active derivatives. The swap is carried at fair value on the balance sheet (Refer to *Note 5. Fair value measurements*) with changes in fair value recorded as interest income or expense within the consolidated condensed statements of operations and comprehensive (loss) income. Net interest income of $2,222 and $81 was recorded related to the change in fair value of the interest rate swap for the three months ended October 1, 2022 and October 2, 2021, respectively. Net interest income of $6,418 and $1,391 was recorded related to the change in fair value of the interest rate swap for the nine months ended October 1, 2022 and October 2, 2021, respectively.

The notional amount of the swap totaled $100,000, or 23.4% of the Term Loan outstanding principal at October 1, 2022. The swap locked in the variable portion of the interest rate on the $100,000 notional at 0.64%.

5. Fair value measurements

The process for determining fair value has not changed from that described in the Company's 2021 Annual Report on Form 10-K.

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 assets and liabilities measured at fair value on a recurring basis using Level 2 and Level 3 inputs:

	October 1, 2022			December 31, 2021		
	Total	Level 2	Level 3	Total	Level 2	Level 3
Assets:						
Interest rate swap	$ 7,546	$ 7,546	$ —	$ 1,128	$ 1,128	$ —
Liabilities:						
Deferred Amount - Current	$ 117,615	$ —	$ 117,615	$ —	$ —	$ —
Deferred Amount - Long Term	71,923	—	71,923	—	—	—
CartiHeal contingent consideration- Sales Milestone	64,765	—	64,765	—	—	—
Bioness contingent consideration	17,149	—	17,149	16,329	—	16,329
Total liabilities:	$ 271,452	$ —	$ 271,452	$ 16,329	$ —	$ 16,329

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 condensed balance sheets within prepaid and other current assets. Changes in fair value are recognized as interest income or expense within the consolidated condensed statements of operations and comprehensive (loss) income.

Deferred Amount

The Deferred Amount resulting from the CartiHeal Acquisition was calculated based on the total amount payable on each due date for the five payment tranches including applicable interest as described in *Note 3. Acquisitions and investments*.

Bioness & CartiHeal contingent consideration

The Company initially values 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 for certain milestones. For other milestones, the Company used a variation of the income approach where revenue was simulated in a risk-neutral framework using Geometric Brownian Motion, a stock price behavior model.

Key assumptions used to estimate the fair value of contingent consideration include projected financial information, market data and the probability and timing of achieving the specific targets as discussed in *Note 3. Acquisitions and investment*s. After the initial valuation, the Company generally uses its best estimate to measure contingent consideration at each subsequent reporting period using unobservable Level 3 inputs.

Unobservable inputs

A summary of unobservable Level 3 inputs utilized for the above liabilities are as follows:

	Valuation Technique	Unobservable inputs	Range
CartiHeal Deferred Amount	Discounted cash flow	Payment discount rate	14.4% - 15.5%
		Payment Period	2022 - 2027
CartiHeal contingent consideration - Sales Milestone	Discounted cash flow	Payment discount rate	14.0% - 15.6%
		Payment Period	2022 - 2029
Bioness contingent consideration	Discounted cash flow	Payment discount rate	6.4% - 6.8%
		Payment period	2024 - 2025

Significant changes in these assumptions could result in a significantly higher or lower fair value. The contingent consideration reported in the above table resulted from the Bioness Acquisition on March 30, 2021 and the CartiHeal Acquisition on July 12, 2022. Contingent consideration is adjusted quarterly based upon the passage of time or the anticipated success or failure of achieving certain milestones. Changes in contingent consideration related to the Bioness Acquisition totaled $278 and $820 for the three and nine months ended October 1, 2022, respectively, and $651 and $1,292 for the three and nine months ended October 2, 2021, respectively, were recorded as the change in fair value of contingent consideration within the consolidated condensed statements of operations and comprehensive (loss) income. Changes in contingent consideration related to the CartiHeal Acquisition totaled $2,864 for three and nine months ended October 2, 2021.

Management incentive plan (MIP) and liability-classified awards

BV LLC had operated two equity-based compensation plans, the management incentive plan (MIP) and the BV LLC Phantom Profits Interest Plan (Phantom Plan and, together with the MIP, the Plans), which were terminated on February 11, 2021 in connection with the Company's IPO. Awards granted under the MIP Plan and the 2015 Phantom Units were liability-classified and the 2012 Phantom Units were equity-classified. Prior to the IPO and during the nine months ended October 2, 2021, the Company settled the remaining 183,078 units with the sole MIP awardee for $10,802. No awards under the Plans were granted post-IPO and the Phantom Plan awards were settled 12 months following the termination. Vested awardees whose BV LLC employment terminated prior to the IPO had their awards settled in March 2022 for $10,413, which was included in accrued equity-based compensation on the consolidated balance sheets at December 31, 2021. Awardees that were active BV LLC employees at the IPO were entitled to receive an aggregate of 798,422 shares of Class A common stock. In February 2022, awardees received 538,203 shares of Class A common stock, of which 260,219 shares were withheld to satisfy employee payroll taxes.

6. Equity-based compensation

Terminated plans

Prior to the IPO, BV LLC operated two equity-based compensation plans, the MIP and the Phantom Plan, which were terminated on February 11, 2021 in conjunction with the IPO. Prior to the Plans' termination, during the nine months ended October 2, 2021, (i) the Company granted 90,000 Phantom Plan units; (ii) there were no MIP awards granted; (iii) 900 Phantom Plan units were forfeited; and (iv) other Phantom Units were redeemed for $479. Compensation expense related to the Phantom Plan totaled $829 for the nine months ended October 2, 2021. This amount excludes the $25,185 decrease in fair market value of accrued equity-based compensation due to adjustments to reflect the difference between the expected pricing from the pending IPO and the actual offering price, of which $1,777 was recorded in research and development expense within the consolidated condensed statements of operations and comprehensive (loss) income for the nine months ended October 2, 2021.

2021 Plan

The Company operates an equity-based compensation plan (2021 Plan), which allows for the issuance of stock options (incentive and nonqualified), restricted stock, dividend equivalents, restricted stock units (RSUs), other stock-based awards, and cash awards (collectively, Awards). As of October 1, 2022, 11,873,784 shares of Class A common stock were authorized to be awarded and 2,182,935 shares were available for Awards.

Equity-based compensation expense for Awards granted under the 2021 Plan for the three months ended October 1, 2022 and October 2, 2021 and the nine months ended October 1, 2022 and October 2, 2021, totaled $4,512, $5,799, $13,765 and $13,521, respectively. The expense is primarily included in selling, general and administrative expense with a nominal amount in research and development expense on the consolidated condensed statements of operations and comprehensive (loss) income based upon the classification of the employee. There were $23 and $2,313 income tax benefit related to this expense for the three and nine months ended October 1, 2022, respectively. There was no income tax benefit related to equity-based compensation expense for the three and nine months ended October 2, 2021.

Restricted Stock Units

During the three and nine months ended October 1, 2022, the Company granted time-based RSUs which vest at various dates through September 6, 2026. RSU compensation expense is recognized over the vesting period, which is typically between 1 and 4 years. Unamortized compensation expense related to the RSUs totaled $11,195 at October 1, 2022, and is expected to be recognized over a weighted average period of approximately 2.98 years. A summary of the RSU award activity for the nine months ended October 1, 2022 is as follows (number of units in thousands):

	Number of units	Weighted-average grant-date fair value per unit
Unvested at December 31, 2021	1,024	$ 14.41
Granted	1,233	10.79
Vested	(746)	14.75
Forfeited or canceled	(249)	7.09
Unvested at October 1, 2022	1,262	$ 12.10

Stock Options

During the nine months ended October 1, 2022, the Company granted time-based stock options which vest over 2 to 4 years following the date of grant and expire within 10 years. The fair value of time-based stock options is determined using the Black-Scholes valuation model, with such value recognized as expense over the service period, which is typically 2 to 4 years, net of actual forfeitures. A summary of the Company's assumptions used in determining the fair value of the stock options granted during the nine months ended October 1, 2022 is shown in the following table.

Risk-free interest rate	1.8% - 3.4%
Expected dividend yield	— %
Expected stock price volatility	33.2% - 34.2%
Expected life of stock options (years)	6.25

The weighted-average grant date fair value of options granted during the nine months ended October 1, 2022 was $4.57 per share. The expected term of the options granted is estimated using the simplified method. Expected volatility is based on the historical volatility of the Company's peers common stock. The risk-free interest rate is determined based upon a constant U.S. Treasury security rate with a contractual life that approximates the expected term of the option. Unamortized compensation expense related to the options totaled $15,044 at October 1, 2022, and is expected to be recognized over a weighted average period of approximately 3.17 years.

A summary of stock option activity is as follows for the nine months ended October 1, 2022 (number of options in thousands):

	Number of options	Weighted-average exercise price	Weighted average remaining contractual term	Aggregate intrinsic value
Outstanding at December 31, 2021	8,364	$ 11.16		
Granted	2,571	12.28		
Exercised	(512)	6.69		
Forfeited or canceled	(798)	12.79		
Outstanding at October 1, 2022	9,625	11.57	7.90 years	$ 2,187
Exercisable and vested at October 1, 2022	4,065	$ 9.81	6.55 years	$ 2,187

The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying options and the market price of the Company's Class A common stock for options that had exercise prices lower than $7.00 per share, the closing price of the Company's Class A common stock on September 30, 2022.

Employee Stock Purchase Plan

The Company operates a non-qualified Employee Stock Purchase Plan (ESPP), which provides for the issuance of shares of the Company's Class A common stock to eligible employees of the Company that elect to participate in the plan and purchase shares of Class A common stock through payroll deductions at a discounted price. As of October 1, 2022, the aggregate number of shares reserved for issuance under the ESPP was 275,372. A total of 69,334 and 172,153 shares were issued and $136 and $388 of expense was recognized during the three and nine months ended October 1, 2022, respectively. A total of 34,640 and 58,703 shares were issued and $139 and $214 of expense was recognized during the three and nine months ended October 2, 2021.

7. Stockholders' equity

Amendment and restatement of certificate of incorporation

On February 16, 2021, the Company amended and restated its certificate of incorporation to, among other things, provide for: (i) the authorization of 250,000,000 shares of Class A common stock with a par value of $0.001 per share; (ii) the authorization of 50,000,000 shares of Class B common stock with a par value of $0.001 per share; (iii) the authorization of 10,000,000 shares of undesignated preferred stock that may be issued from time to time by the BOD in one or more series; and (iv) the establishment of a classified BOD, divided into three classes, each of whose members will serve for staggered three-year terms.

Holders of Class A and Class B common stock are entitled to one vote per share and, except as otherwise required, will vote together as a single class on all matters on which stockholders generally are entitled to vote. Holders of Class B common stock are not entitled to receive dividends and will not be entitled to receive any distributions upon the liquidation, dissolution or winding up of the Company. Shares of Class B common stock may only be issued to the extent necessary to maintain the one-to-one ratio between the number of LLC Interests and the number of shares of Class B common stock held by 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 canceled on a one-for-one basis upon the redemption or exchange of any outstanding LLC Interests.

The Company must, at all times, maintain a one-to-one ratio between the number of outstanding shares of Class A common stock and the number of LLC Interests owned by the Company.

BV LLC recapitalization

As described in *Note 1. Organization*, on February 16, 2021, the Company amended and restated the BV LLC Agreement to, among other things, (i) provide for the new LLC Interests; (ii) exchange all of the then-existing membership interests of the Original BV LLC Owners for new LLC Interests; and (iii) appoint Bioventus Inc. as the sole managing member of BV LLC.

The BV LLC Agreement also provides that holders of LLC Interests may, from time to time, require the Company to redeem all or a portion of their LLC Interests for newly-issued shares of Class A common stock on a one-for-one basis. The Company may elect to settle any such redemption in shares of Class A common stock or in cash.

The amendment also requires that the Company, at all times, maintain (i) a one-to-one ratio between the number of outstanding shares of Class A common stock and the number of LLC Interests owned by the Company and (ii) 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.

Noncontrolling interest

In connection with any redemption, the Company will receive a corresponding number of LLC Interests, increasing its ownership interest in BV LLC. Future redemptions of LLC Interests will result in a change in ownership and reduce the amount recorded as noncontrolling interest and increase additional paid-in capital. There were no redemptions during the nine months ended October 1, 2022 or during the year ended December 31, 2021. The following table summarizes the ownership interest in BV LLC as of October 1, 2022 and December 31, 2021 (number of units in thousands):

	October 1, 2022		December 31, 2021	
	LLC Interests	Ownership %	LLC Interests	Ownership %
Number of LLC Interests owned				
Bioventus Inc.	61,778	79.6 %	59,548	79.0 %
Continuing LLC Owner	15,787	20.4 %	15,787	21.0 %
Total	77,565	100.0 %	75,335	100.0 %

8. Earnings per share

The following table sets forth the computation of basic and diluted loss per share of Class A common stock for the periods presented (amounts in thousands, except share and per share data):

	Three Months Ended			
	October 1, 2022	October 2, 2021	Nine Months Ended October 1, 2022	February 16, 2021 through October 2, 2021
Numerator:				
Net loss	$ (145,698)	$ (2,269)	$ (168,518)	$ (14,498)
Net loss attributable to noncontrolling interests	37,453	1,198	41,744	8,260
Net loss attributable to Bioventus Inc. Class A common stockholders	$ (108,245)	$ (1,071)	$ (126,774)	$ (6,238)
Denominator:				
Weighted-average shares of Class A common stock outstanding - basic and diluted	61,674,254	41,837,581	61,208,941	41,816,706
Net loss per share of Class A common stock, basic and diluted	$ (1.76)	$ (0.03)	$ (2.07)	$ (0.15)

Shares of Class B common stock do not share in the losses of the Company and are therefore not participating securities. As such, separate presentation of basic and diluted losses per share of Class B common stock under the two-class method has not been presented.

The following number of weighted-average potentially dilutive shares as of October 1, 2022 and October 2, 2021 were excluded from the calculation of diluted loss per share because the effect of including such potentially dilutive shares would have been antidilutive upon conversion:

	Three Months Ended			
	October 1, 2022	October 2, 2021	Nine Months Ended October 1, 2022	February 16, 2021 through October 2, 2021
LLC Interests held by Continuing LLC Owner[(a)]	15,786,737	15,786,737	15,786,737	15,786,737
Stock options	8,186,264	4,657,637	7,488,407	4,624,655
RSUs	910,521	961,429	605,212	838,818
Unvested shares of Class A common stock	—	26,946	—	30,530
Total	24,883,522	21,432,749	23,880,356	21,280,740

(a) Class A Shares reserved for future issuance upon redemption or exchange of LLC Interests by the Continuing LLC Owner.

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 costs in the consolidated condensed statements of operations and comprehensive (loss) income.

The Company adopted restructuring plans for businesses acquired to reduce headcount, reorganize management structure and consolidate certain facilities during the second half of 2021 (the 2021 Restructuring Plan) and during the first quarter of 2022 (the 2022 Restructuring Plan). The Company planned total pre-tax charges for the 2021 Restructuring Plan to be $3,500, of which $92 and $692 was recognized in the three and nine months ended October 1, 2022, respectively, and $1,798 was recorded during the three and nine months ended October 2, 2021. Expected pre-tax charges related to the 2022 Restructuring Plan is $2,300, of which $483 and $1,467 was recognized during the three and nine months ended October 1, 2022, respectively.

The Company's restructuring charges and payments for plans related to businesses recently acquired comprised of the following:

	Employee severance and temporary labor costs	Other charges	Total
Balance at December 31, 2021	$ 1,400	$ 136	$ 1,536
Expenses incurred	2,159	—	2,159
Payments made	(2,574)	(136)	(2,710)
Balance at October 1, 2022	$ 985	$ —	$ 985

10. Income taxes

As a result of the Transactions, Bioventus Inc. became the sole managing member of BV LLC, which is treated as a partnership for U.S. federal and most applicable state and local income tax purposes. As a partnership, BV LLC is not subject to U.S. federal and certain state and local income taxes. Any taxable income or loss generated by BV LLC is passed through to and included in the taxable income or loss of its members, including the Company following the Transactions, on a pro rata basis. Bioventus Inc. is subject to U.S. federal income taxes, in addition to state and local income taxes with respect to its allocable share of any taxable income of BV LLC following the Transactions. The Company also is subject to taxes in foreign jurisdictions.

The tax provision for interim periods is determined using an estimate of the Company's annual effective tax rate, adjusted for discrete items, if any, that arise during the period. Each quarter, the Company updates its estimate of its annual effective tax rate, and if the estimated annual effective tax rate changes, the Company makes a cumulative adjustment in such period. The quarterly tax provision, and estimate of the Company's annual effective tax rate, are subject to variation due to several factors, including variability in pre-tax income (or loss), the mix of jurisdictions to which such income relates, changes in how the Company conducts business, and tax law developments.

For the three months ended October 1, 2022 and October 2, 2021 and the nine months ended October 1, 2022 and October 2, 2021, the Company's effective tax rate was 22.3%, 28.0%, 21.3% and 6.2%, respectively. The decrease for the three months ended October 1, 2022 was primarily due to changes in our forecasted effective rate and a net increase in reserve for uncertain tax positions. The change for the nine months ended October 1, 2022 compared to nine months ended October 2, 2021 was primarily due to changes in our forecasted effective rate, compared to capitalized expenses resulting from the Company's IPO in 2021.

Tax Receivable Agreement

The Company expects to obtain an increase in the share of the tax basis of the assets of BV LLC when LLC Interests are redeemed or exchanged by the Continuing LLC Owner and other qualifying transactions. This increase in tax basis may have the effect of reducing the amounts that the Company would otherwise pay in the future to various tax authorities. The increase in tax basis 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.

On February 16, 2021, the Company entered into a tax receivable agreement (TRA) with the Continuing LLC Owner that provides for the payment by the Company to the Continuing LLC Owner of 85% of the amount of tax benefits, if any, that the Company actually realizes as a result of (i) increases in the tax basis of assets of BV LLC resulting from any redemptions or exchanges of LLC Interests or any prior sales of interests in BV LLC; and (ii) certain other tax benefits related to our making payments under the TRA.

The Company will maintain a full valuation allowance against deferred tax assets related to the tax attributes generated as a result of redemptions of LLC Interests or exchanges described above until it is determined that the benefits are more-likely-than-not to be realized. As of October 1, 2022, the Continuing LLC Owner had not exchanged LLC Interests for shares of Class A common stock and therefore the Company had not recorded any liabilities under the TRA.

11. 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 1 month to 6 years.

The components of lease cost were as follows:

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Operating lease cost	$ 1,238	$ 885	$ 3,544	$ 2,499
Short-term lease cost[(a)]	190	153	518	482
Total lease cost	$ 1,428	$ 1,038	$ 4,062	$ 2,981

[(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:

	Nine Months Ended	
	October 1, 2022	October 2, 2021
Operating cash flows from operating leases	$ 3,515	$ 2,598
Right-of-use assets obtained in exchange for operating lease obligations	$ 2,494	$ —

Supplemental balance sheet and other information related to operating leases were as follows:

	October 1, 2022	December 31, 2021
Operating lease assets	$ 16,304	$ 17,186
Operating lease liabilities- current	$ 3,434	$ 3,504
Operating lease liabilities- noncurrent	14,157	15,038
Total operating lease liabilities	$ 17,591	$ 18,542
Weighted average remaining lease term (years)		
Weighted average remaining lease term (years) for operating leases	5.0	5.6
Weighted average discount rate for operating leases	4.6 %	4.7 %

Governmental and legal contingencies

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. The Company accrues a liability when a loss is considered probable and the amount can be reasonably estimated. When a material loss contingency is reasonably possible but not probable, the Company does not record a liability, but instead discloses the nature and amount of the claim, and an estimate of the possible loss or range of loss, if such an estimate can be made. Legal fees are expensed as incurred. With respect to governmental proceedings and investigations, like other companies in the 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 Company is presently unable to predict the duration, scope, or result of the following matters. As such, the Company is presently unable to develop a reasonable estimate of a possible loss or range of losses, if any, related to these matters. While the Company intends to defend these matters vigorously, the outcome of such litigation or any other litigation is necessarily uncertain, are not within the Company's complete control and might not be known for extended periods of time. In the opinion of management, the outcome of any existing claims and legal or regulatory proceedings, other than the specific matters described below, if decided adversely, is not expected to have a material adverse effect on the Company's business, financial condition, results of operations, or cash flows.

Bioness Patent Litigation

On June 15, 2022, the Company, through its subsidiary Bioness, filed a lawsuit in the United States District Court for the Eastern District of Virginia against Aretech, LLC ("Aretech") alleging infringement by Aretech of various patents related the Bioness' Vector Gait and Safety Support System®. On August 8, 2022, Aretech filed an answer to the lawsuit denying infringement and asserting various affirmative defenses and counterclaims to the Bioness complaint. Bioness filed a motion to dismiss the defendant's counterclaims on September 28, 2022. In response to Bioness' motion to dismiss the counterclaims, on October 19, 2022, Aretech filed an amended answer and counterclaims. The Company is currently reviewing the amendments and plan to aggressively defend its patents in the litigation.

Misonix stockholder

On September 15, 2021, a purported stockholder of Misonix filed an action in the United States District Court for the Eastern District of New York, captioned Stein v. Misonix, Inc., et al., Case No. 2:21-cv-05127 (E.D.N.Y.) (the Stein Complaint). The Stein Complaint named Misonix and members of its board of directors as defendants. The Stein Complaint was dismissed on April 6, 2022. On September 16, 2021, a purported stockholder of Misonix filed an action in the United States District Court for the Southern District of New York, captioned Ciccotelli v. Misonix, Inc. et al., Case No. 1:21-cv-07773 (S.D.N.Y.) (the Ciccotelli Complaint) against Misonix, members of its board of directors, the Company, and its subsidiaries, Merger Sub I and Merger Sub II, as defendants. Plaintiff voluntarily dismissed the Ciccotelli Complaint on November 10, 2021. On October 12, 2021, another purported stockholder of Misonix filed an action in the United States District Court for the Eastern District of New York, captioned Rubin v. Misonix, Inc. et al., Case No. 1:21-cv-05672 (S.D.N.Y.) (the Rubin Complaint) and on October 15, 2021, another purported stockholder of Misonix filed an action in the United States District Court for the Southern District of New York, captioned Taylor v. Misonix, Inc. et al., Case No. 1:21-cv-08513 (S.D.N.Y.) (the Taylor Complaint). The Rubin Complaint and the Taylor Complaint name Misonix and members of its board of directors as defendants. Plaintiffs voluntarily dismissed the Rubin and Taylor Complaints on January 21, 2022 and February 18, 2022, respectively.

The complaints asserted claims under Section 14(a) and Section 20(a) of the Exchange Act and SEC Rule 14a-9, challenging the adequacy of disclosures in the proxy statement/prospectus filed with the SEC on September 8, 2021 or the Definitive Proxy Statement filed with the SEC on September 24, 2021, regarding Misonix and/or Bioventus' projections and J.P. Morgan's financial analysis. The complaints had sought, among other relief, (i) injunctive relief preventing the parties from proceeding with the merger; (ii) rescission in the event that the merger is consummated; and (iii) an award of costs, including attorneys' and experts' fees.

Misonix former distributor

On March 23, 2017, Misonix's former distributor in China, Cicel (Beijing) Science & Technology Co., Ltd., filed a lawsuit against Misonix and certain of its officers and directors in the United States District Court for the Eastern District of New York. The complaint alleged that Misonix improperly terminated its contract with the former distributor. The complaint sought various remedies, including compensatory and punitive damages, specific performance and preliminary and post judgment injunctive relief, and asserted various causes of action, including breach of contract, unfair competition, tortious interference with contract, fraudulent inducement, and conversion. On October 7, 2017, the court granted Misonix's motion to dismiss each of the tort claims asserted against Misonix, and also granted the individual defendants' motion to dismiss all claims asserted against them. On January 23, 2020, the Court granted Cicel's motion to amend its complaint, to include claims for alleged defamation and theft of trade secrets in addition to the breach of contract claim. Discovery in the matter ended on August 5, 2021. On January 20, 2022, the Court granted Misonix's summary judgment motion on Cicel's breach of contract and defamation claims. Cicel's motion for reconsideration of the Court's summary judgment ruling in Misonix's favor was dismissed by the Court on April 29, 2022. On July 18, 2022, Cicel voluntarily dismissed the remaining claim for trade secret theft and stated its intention to appeal the Court's January 20, 2022 ruling on the breach of contract and defamation claims to the Court of Appeals. The Company believes that it has various legal and factual defenses to these claims and intends to vigorously defend any appeal of the lower court's summary judgment rulings in its favor.

Bioness shareholder

Prior to closing the Bioness Acquisition, Bioness had been named as a defendant in a lawsuit, for which the Company is indemnified under the indemnification provisions contained in the Bioness Merger Agreement. The case relates to an action brought in February 2021 in the Delaware State Court of Chancery by a former minority shareholder and director of Bioness, seeking a temporary restraining order contesting the acquisition of Bioness. While the complaint to block the Bioness acquisition was dismissed by the court, a separate action was brought against the Company under the indemnification provisions of the Bioness Certificate of Incorporation to recover attorney fees and other expenses totaling approximately $2,400 incurred by the director and shareholder in connection with the dismissed case.

On August 19, 2021, the court issued a ruling granting, in part, plaintiff's motion for summary judgment, awarding plaintiff attorney's fees and related expenses incurred in connection with performance of the plaintiff's directorial duties, and denying fees and expenses incurred in a non-director capacity. In its ruling, the Court's order also directed the parties to agree upon a process that will govern the payment of and challenges to plaintiff's payment requests and required Bioness to pay 50% of the demanded amount into escrow if more than 50% of the total invoiced amount was in dispute. Pursuant to the court's order, to date, Bioness has paid approximately $1,200 into escrow. On November 1, 2022, at hearing before Delaware State Court of Chancery, the court ruled in favor of the former Bioness director awarding attorney's fees in connection with the underlying pre-merger litigation and the advancement action in the amounts claimed, less approximately $50. We are currently evaluating an appeal of the court's ruling.

On February 8, 2022, the above referenced minority shareholder of Bioness filed another action in the Delaware State Court of Chancery in connection with our acquisition of Bioness. This action names the former Bioness directors, the Alfred E. Mann Trust (Trust), which was the former majority shareholder of Bioness, the trustees of the Trust and Bioventus as defendants. The complaint alleges, among other things, that the individual directors, the Trust, and the trustees breached their fiduciary duty to the plaintiff in connection with their consideration and approval of our transaction. The complaint also alleges that we aided and abetted the other defendants in breaching their fiduciary duties to the plaintiff and that we breached the Merger Agreement by failing to pay the plaintiff its pro rata share of the merger consideration. We believe that we are indemnified under the indemnification provisions contained in the Bioness Merger Agreement for these claims. On July 20, 2022, we filed a motion to dismiss all claims made against us on various grounds, as did all the other named defendants in the suit. The Court has not yet ruled on any of these motions. We also believe that there are various legal and factual defenses to the claims plaintiff made against us and intend to defend ourselves vigorously.

Other matters

On November 10, 2021, the Company entered into an asset purchase agreement for an HA product and made an upfront payment of $853. An additional payment of $853 was made in 2022 upon the transfer of certain seller customer data. If the Company is able to obtain a Medical Device Regulation Certification for the product, $1,707 will be paid to the seller within five days. The Company is required to pay royalties through 2026 of 5.0% on the first $569 in sales and 2.5% thereafter.

On August 23, 2019, the Company was assigned a third-party license on a product currently in development and the Company is subject to a 3% royalty on certain commercial sales, or a nominal minimum amount per quarter, beginning in 2023.

On May 29, 2019, the Company and the Musculoskeletal Transplant Foundation, Inc. d/b/a MTF Biologics (MTF), entered into a collaboration and development agreement to develop one or more products for orthopedic application to be commercialized by the Company and supplied by MTF (the Development Agreement). The first phase has been completed, but during the second quarter of 2022, the Company elected to discontinue the development of MOTYS, the initial product candidate under development. On October 21, 2022, the Company provided notice to MTF of termination of the Development Agreement and the related cGTP Commercial Supply Agreement with MTF for MOTYS, effective December 20, 2022.

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 osteoarthritis (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 during the three months ended October 1, 2022 and October 2, 2021 and nine months ended October 1, 2022 and October 2, 2021 totaled $3,813, $3,677, $11,228 and $9,602, respectively. These royalties are included in cost of sales within the consolidated condensed statements of operations and comprehensive (loss) income.

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 10 years. After the initial 10 years, the agreement will automatically renew for an additional 5 years unless terminated by the Company or the seller in accordance with the agreement.

As part of a supply agreement for the Company's five injection OA product that was amended and restated on December 22, 2020, the Company is subject to annual minimum purchase requirements for 8 years.

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 licensed 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 condensed statements of operations and comprehensive (loss) income.

From time to time, the Company causes letters of credit (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 October 1, 2022 and December 31, 2021, the Company had one LOC outstanding for a nominal amount.

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 $200 per member per year.

12. Revenue recognition

Our policies for recognizing sales have not changed from those described in the Company's 2021 Annual Report on Form 10-K. 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 the Company's net sales disaggregated by major products (Vertical) within each segment as follows:

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
U.S.				
Pain Treatments	$ 47,010	$ 55,963	$ 152,939	$ 144,879
Restorative Therapies	38,096	25,634	102,475	71,489
Surgical Solutions	31,182	17,565	91,265	56,014
Total U.S. net sales	116,288	99,162	346,679	272,382
International				
Pain Treatments	5,090	4,672	15,128	13,990
Restorative Therapies	4,047	4,841	13,930	13,318
Surgical Solutions	3,237	215	10,546	794
Total International net sales	12,374	9,728	39,604	28,102
Total net sales	$ 128,662	$ 108,890	$ 386,283	$ 300,484

13. 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 Chief Operating Decision Maker does not review or use it to allocate resources or to assess the operating results and financial performance. Segment adjusted EBITDA is the segment profitability metric reported to the Company's Chief Operating Decision Maker for purposes of decisions about allocation of resources to, and assessing performance of, each reportable segment.

The following table presents segment adjusted EBITDA reconciled to (loss) income before income taxes:

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Segment adjusted EBITDA				
U.S.	$ 19,543	$ 19,782	$ 43,467	$ 46,929
International	1,496	1,533	7,614	5,343
Interest expense, net	(9,894)	(1,347)	(10,922)	(152)
Depreciation and amortization	(18,780)	(8,522)	(43,643)	(23,185)
Acquisition and related costs	(6,319)	(5,914)	(20,292)	(14,044)
Remeasurement gain on equity method investment	23,709	—	23,709	—
Restructuring and succession charges	(575)	(1,798)	(2,847)	(2,142)
Equity compensation	(4,648)	(5,938)	(14,153)	10,621
Equity loss in unconsolidated investments	(322)	(419)	(1,003)	(1,320)
Foreign currency impact	(581)	(17)	(1,122)	47
Impairment of goodwill	(189,197)	—	(189,197)	—
Impairments related to variable interest entity	—	—	—	(7,043)
Other items	(1,909)	(511)	(5,796)	(2,816)
(Loss) income before income taxes	$ (187,477)	$ (3,151)	$ (214,185)	$ 12,238

14. Subsequent events

On October 28, 2022, the Company terminated its non-designated interest rate swap agreement and subsequently received a settlement of $7,738.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of Bioventus Inc.'s (sometimes referred to as "we," "us," "our," "Bioventus" or "the Company") financial condition and results of operations should be read in conjunction with the "Special Note Regarding Forward-Looking Statements" and our unaudited consolidated condensed financial statements and related notes thereto appearing elsewhere in this Quarterly Report on Form 10-Q, as well as our audited consolidated financial statements and related notes included in our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the Securities and Exchange Commission (SEC) on March 11, 2022 (2021 10-K).

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 three verticals:

- Pain Treatments is comprised of non-surgical joint pain injection therapies as well as peripheral nerve stimulation (PNS) products to help the patient get back to their normal activities.
- Surgical Solutions is comprised of bone graft substitutes (BGS) to fuse and grow bones, improve results following spinal and other orthopedic surgeries as well as minimally invasive ultrasonic medical devices used for precise bone sculpting, removing tumors and tissue debridement, in various surgeries.
- Restorative Therapies is comprised of a bone healing system, skin allografts and products used to support healing of wounds as well as devices designed to help patients regain leg or hand function due to stroke, multiple sclerosis or other central nervous system disorders.

As further discussed below, there are conditions and events that raise substantial doubt about the Company's ability to continue as a going concern. In light of this, the Company is actively pursuing plans to mitigate these conditions and events; however, there can be no assurances that it is probable these plans will be successfully implemented or that they will successfully mitigate these conditions and events.

For additional information, see *Going Concern* section below and *Part II. Item 1A. Risk Factors*.

The following table sets forth total net sales, net (loss) income and Adjusted EBITDA for the periods presented:

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net sales	$ 128,662	$ 108,890	$ 386,283	$ 300,484
Net (loss) income	$ (145,698)	$ (2,269)	$ (168,518)	$ 11,479
Adjusted EBITDA[(1)]	$ 21,039	$ 21,315	$ 51,081	$ 52,272
Loss per share - basic and diluted	$ (1.76)	$ (0.03)	$ (2.07)	$ (0.15)

(1) See below under results of operations-Adjusted EBITDA for a reconciliation of net (loss) income to Adjusted EBITDA.

Strategic transactions

CartiHeal

On July 12, 2022, we acquired 100% of CartiHeal (2009) Ltd. (CartiHeal), a privately held company headquartered in Israel and the developer of the proprietary Agili-C implant for the treatment of joint surface lesions in traumatic and osteoarthritic joints. We purchased CartiHeal (CartiHeal Acquisition) for an aggregate purchase price of approximately $315.0 million and an additional $135.0 million, becoming payable after closing upon the achievement of a certain sales milestone (Sales Milestone Consideration). We paid $100.0 million of the aggregate purchase price upon closing, consisting of a $50.0 million escrow deposit and $50.0 million from a financing arrangement. We also paid approximately $8.6 million of CartiHeal's transaction-related fees and expenses and deferred $215.0 million (Deferred Amount) of the aggregate purchase price otherwise due at closing until the earlier of the achievement of certain milestones or the occurrence of certain installment payment dates. We recognized a gain of $23.7 million due to the change in fair value of our equity method investment in CartiHeal as a result of the purchase. The gain was recognized in other income within the consolidated condensed statement of operations and comprehensive (loss) income.

We previously entered into an Option and Equity Purchase Agreement with CartiHeal (Option Agreement) in July 2020. The Option Agreement provided us with an exclusive option to acquire 100% of CartiHeal's shares (Call Option), and provided CartiHeal with a put option that would require us to purchase 100% of CartiHeal's shares under certain conditions. In August 2021, CartiHeal achieved pivotal clinical trial success, as defined in the Option Agreement, for the Agili-C implant. In order to preserve the our Call Option, in accordance with the Option Agreement and upon approval of the Board of Directors (BOD), we deposited $50.0 million into escrow in August 2021 for the potential acquisition of CartiHeal, which was included in restricted cash on the consolidated balance sheet at December 31, 2021.

In April 2022, we exercised our Call Option to acquire all of the remaining shares of CartiHeal, excluding shares we already owned. Our decision to exercise the Call Option followed the U.S. Food and Drug Administration's March 29, 2022 premarket approval of CartiHeal's Agili-C implant. On June 17, 2022 the Company entered into an amendment to the Option Agreement with CartiHeal (CartiHeal Amendment) and Elron Ventures Limited, in its capacity as the shareholder representative.

The Deferred Amount will be paid in five tranches commencing in 2023 and ending no later than 2027 as follows:

- $50,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents the results of the pivotal clinical trial (First Paper Milestone) or July 1, 2023;
- $50,000 due upon the earliest to occur — the implantation of Agili-C devices in 100 patients in the United States or September 1, 2023;
- $25,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents any new or additional clinical data subsequent to the First Paper Milestone with respect to Agili-C (Second Paper Milestone) or January 1, 2025;
- $25,000 due upon the earliest to occur — the publication in a peer-reviewed orthopedic journal of an article that presents any new or additional clinical data subsequent to the First and Second Paper Milestone with respect to Agili-C or January 1, 2026; and
- $65,000 due upon the earliest to occur — obtaining a U.S. Category 1 Current Procedural Terminology (CPT) code from Centers for Medicare and Medicaid Services (CMS) for Agili-C or January 1, 2027.

Pursuant to the CartiHeal Amendment, we will pay interest on each tranche of the Deferred Amount at a rate of 8.0% annually, until such tranche is paid. The Sales Milestone Consideration will be payable upon the achievement of $75.0 million in trailing twelve month sales pursuant to the CartiHeal Amendment. In August 2022, CartiHeal submitted the results of the pivotal clinical trial for publication in a peer-reviewed orthopedic journal. Preliminary feedback from the publisher was received in November 2022 and the paper is being revised for resubmission to the publisher. We cannot project if or when the CartiHeal submission will be accepted for publication. If published prior to July 1, 2023, the Company will need to make the First Paper Milestone payment within ten days of publication.

On July 11, 2022, we further amended our Credit and Guaranty Agreement, dated as of December 6, 2019 and amended on October 29, 2021 (as amended, the Amended 2019 Credit Agreement) in conjunction with the CartiHeal Acquisition. Pursuant to the Amended 2019 Credit Agreement, an $80.0 million term loan facility (Term Loan Facility) was extended to us for: (i) the financing of the CartiHeal Acquisition; (ii) the payment of related fees and expenses; and (iii) working capital needs and general corporate purposes of the Company, including without limitation for permitted acquisitions. The Term Loan Facility will mature on October 29, 2026. Refer to *Liquidity and Capital Resources—Credit Facilities* for further information.

B.O.N.E.S. Trial

We submitted a premarket approval (PMA) supplement to the FDA in December 2020 seeking approval of an expanded indication for EXOGEN, specifically, for the adjunctive treatment of acute and delayed metatarsal fractures to reduce the risk of non-union. This PMA supplement was based on and supported by clinical data in metatarsal fractures from the ongoing B.O.N.E.S. study. In April 2021, we received a letter from the FDA identifying certain deficiencies in the PMA supplement that must be addressed before the FDA can complete its review of the PMA supplement. The deficiencies include concerns about the data and endpoints from the B.O.N.E.S. study, and requests for re-analyses of certain data and provision of other information to support the findings. In December 2021, we completed the follow-up of all patients in the scaphoid B.O.N.E.S. study. In October 2022, we elected to withdraw our PMA submission on metatarsal fractures. Presently, we are in the process of finalizing our PMA supplement for the scaphoid indication and believe it will be ready for submission in the fourth quarter of 2022. In the scaphoid study analysis plan, the applicable feedback received from FDA in the prior metatarsal submission was applied prospectively and as such we believe this second filing will address FDA's concerns on the study design. Assuming positive outcome with the FDA of the scaphoid review, we would consider resubmitting the metatarsal data at a later date. We can, however, give no assurance that we will be able to resolve the deficiencies identified by the FDA in a timely manner, or at all. Consequently, the FDA's decision on the PMA supplements might be delayed beyond the time originally anticipated. Moreover, if our responses do not satisfy the FDA's concerns, the FDA might not approve our PMA supplements seeking to expand the indications for use of EXOGEN in scaphoid and metatarsal fractures as proposed.

MOTYS Update

During the second quarter of 2022, prior to obtaining the results from our Phase 2 trial, we elected to discontinue the development of MOTYS, to focus our resources on other priorities, including the integration of our recent acquisitions and our expanded R&D and product development portfolio we inherited with these acquisitions. We incurred $1.8 million and $2.5 million during the three and nine months ended October 1, 2022, respectively, and we expect to incur approximately $4.0 million to $6.0 million exclusively to fulfill our remaining regulatory obligations related to our Phase 2 trial (MOTYS Costs).

Consolidated Appropriations Act

In July 2022, in connection with the Consolidated Appropriations Act, 2021 (CAA), the Centers for Medicare and Medicaid Services (CMS) began utilizing new pricing information the Company reported to it pursuant to the newly adopted reporting obligations to adjust the Medicare payment to healthcare providers using our Durolane and Gelsyn-3 products.

COVID-19 pandemic impact

Our business, results of operations and financial condition have been and may continue to be, materially impacted by fluctuations in patient visits and elective procedures and any future temporary cessations of elective procedures as a result of the COVID-19 pandemic and could be further impacted by delays in payments from customers, supply chain interruptions, "shelter-in-place" orders or advisories, facility closures or other reasons related to the pandemic. As of the date of this Quarterly Report on Form 10-Q, the extent to which COVID-19 could materially impact our financial conditions, liquidity or results of operations is uncertain.

To the extent COVID-19 disruptions continue to adversely impact our business, results of operations and financial condition, it might also have the effect of heightening risks relating to our ability to successfully commercialize newly developed or acquired products or therapies, consolidation in the healthcare industry, intensified pricing pressure as a result of changes in the purchasing behavior of hospitals and maintenance of our numerous contractual relationships.

Results of Operations

For a description of the components of our results of operations, refer to *Part II. Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* in our 2021 10-K.

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

	Three Months Ended		Nine Months Ended	
	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net sales	100.0 %	100.0 %	100.0 %	100.0 %
Cost of sales (including depreciation and amortization)	34.3 %	27.4 %	33.5 %	28.5 %
Gross profit	65.7 %	72.6 %	66.5 %	71.5 %
Selling, general and administrative expense	61.6 %	64.0 %	66.0 %	57.7 %
Research and development expense	4.5 %	5.7 %	5.0 %	4.0 %
Restructuring costs	0.4 %	1.7 %	0.6 %	0.6 %
Change in fair value of contingent consideration	2.4 %	0.6 %	1.0 %	0.4 %
Depreciation and amortization	5.8 %	1.7 %	3.5 %	1.9 %
Impairment of goodwill	147.0 %	— %	49.0 %	— %
Impairment of variable interest entity assets	— %	— %	— %	1.9 %
Operating (loss) income	(156.0 %)	(1.1 %)	(58.6 %)	5.0 %

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

	Three Months Ended		Nine Months Ended	
(in thousands)	October 1, 2022	October 2, 2021	October 1, 2022	October 2, 2021
Net (loss) income	**$ (145,698)**	**$ (2,269)**	**$ (168,518)**	**$ 11,479**
Interest expense, net	9,894	1,347	10,922	152
Income tax expense (benefit)	(41,779)	(882)	(45,667)	759
Depreciation and amortization[(a)]	18,780	8,522	43,643	23,185
Acquisition and related costs[(b)]	6,319	5,914	20,292	14,044
Remeasurement gain on equity method investment[(c)]	(23,709)	—	(23,709)	—
Restructuring and succession charges[(d)]	575	1,798	2,847	2,142
Equity compensation[(e)]	4,648	5,938	14,153	(10,621)
Equity loss in unconsolidated investments[(f)]	322	419	1,003	1,320
Foreign currency impact[(g)]	581	17	1,122	(47)
Impairment of goodwill[(h)]	189,197	—	189,197	—
Impairments related to variable interest entity[(i)]	—	—	—	7,043
Other items[(j)]	1,909	511	5,796	2,816
Adjusted EBITDA	**$ 21,039**	**$ 21,315**	**$ 51,081**	**$ 52,272**

(a) Includes for the three months ended October 1, 2022 and October 2, 2021 and the nine months ended October 1, 2022 and October 2, 2021, respectively, depreciation and amortization of $11,331, $6,637, $30,233 and $17,491 in cost of sales and $7,449, $1,885, $13,410 and $5,694 in operating expenses presented in the consolidated condensed statements of operations and comprehensive (loss) income.

(b) Includes acquisition and integration costs related to completed acquisitions, amortization of inventory step-up associated with acquired entities, and changes in fair value of contingent consideration.

(c) Represents the gain on remeasurement of the Company's equity method investment in CartiHeal based upon the fair value of consideration transferred for the CartiHeal Acquisition.

(d) Costs incurred during the three and nine months ended October 1, 2022 were the result of adopting acquisition related restructuring plans to reduce headcount, reorganize management structure and to consolidate certain facilities. Costs incurred during the corresponding periods in 2021 were primarily related to executive transitions.

(e) The three and nine months ended October 1, 2022 and the three months ended October 2, 2021 include compensation expense resulting from awards granted under the Company's equity-based compensation plans in effect after its initial public offering (IPO). The nine months ended October 2, 2021 also includes the expense and the change in fair value of the liability-classified awards granted under the compensation plans in effect prior to the Company's IPO.

(f) Represents CartiHeal equity investment losses.

(g) Includes realized and unrealized gains and losses from fluctuations in foreign currency.

(h) Represents a non-cash impairment charge due to the recent decline in the Company's market capitalization subsequent to its previously announced financial results for the three and nine months ended October 1, 2022.

(i) Represents the loss on impairment of Harbor Medtech Inc.'s (Harbor) long-lived assets and the Company's investment in Harbor.

(j) Other items primarily includes charges associated with strategic transactions, such as potential acquisitions; public company preparation costs, which primarily includes accounting and legal fees; and MOTYS Costs. During the second quarter of 2022, prior to obtaining the results from our Phase 2 trial, we elected to discontinue the development of MOTYS, to focus our resources on other priorities, including the integration of our recent acquisitions and our expanded R&D and product development portfolio we inherited with these acquisitions. We incurred $1.8 million and $2.5 million during the three and nine months ended October 1, 2022, respectively, and we expect to incur approximately $4.0 million to $6.0 million exclusively to fulfill our remaining regulatory obligations related to our Phase 2 trial (MOTYS Costs).

We present Adjusted EBITDA, a non-GAAP financial measure, because we believe it is a useful indicator that management uses as a measure of operating performance as well as for planning purposes, including the preparation of our annual operating budget and financial projections. We believe 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. We define Adjusted EBITDA as net (loss) income from continuing operations before depreciation and amortization, provision of income taxes and interest expense (income), net, 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 acquisition and related costs, remeasurement gains and losses on investments, impairments on goodwill, restructuring and succession charges, equity compensation expense, equity loss in unconsolidated investments, foreign currency impact, and other items. 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 primarily based on a ratio of net sales by segment to total consolidated net sales.

Non-GAAP financial measures have limitations as an analytical tool and should not be considered in isolation or as a substitute for, or superior to, the financial information prepared and presented in accordance with U.S. GAAP. These measures might exclude certain normal recurring expenses. Therefore, these measures might not provide a complete understanding of the Company's performance and should be reviewed in conjunction with the U.S. GAAP financial measures. Additionally, other companies might define their non-GAAP financial measures differently than we do. Investors are encouraged to review the reconciliation of the non-GAAP measure provided in this report, including in the table above, to its most directly comparable U.S. GAAP measure.

Net sales

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
U.S.				
Pain Treatments	$ 47,010	$ 55,963	(8,953)	(16.0 %)
Restorative Therapies	38,096	25,634	12,462	48.6 %
Surgical Solutions	31,182	17,565	13,617	77.5 %
Total U.S. net sales	116,288	99,162	17,126	17.3 %
International				
Pain Treatments	$ 5,090	$ 4,672	418	8.9 %
Restorative Therapies	4,047	4,841	(794)	(16.4 %)
Surgical Solutions	3,237	215	3,022	NM
Total International net sales	12,374	9,728	2,646	27.2 %
Total net sales	$ 128,662	$ 108,890	$ 19,772	18.2 %

U.S.

Net sales increased $17.1 million, or 17.3%, of which acquisitions contributed $17.3 million. Changes by vertical were: (i) Pain Treatments—($9.0) million due to more treatments being sold under contracts with major insurers at lower prices and price competition within the osteoarthritic joint pain treatment market; (ii) Restorative Therapies—$12.5 million net sales increase primarily due to acquisitions and net volume growth; and (iii) Surgical Solutions—$13.6 million net sales increase primarily due to acquisitions and volume growth.

International

Net sales increased $2.6 million, or 27.2%, of which acquisitions contributed $3.0 million, partially offset by a decline in sales volume within our Restorative Therapies vertical.

	Nine Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
U.S.				
Pain Treatments	$ 152,939	$ 144,879	$ 8,060	5.6 %
Restorative Therapies	102,475	71,489	30,986	43.3 %
Surgical Solutions	91,265	56,014	35,251	62.9 %
Total U.S. net sales	346,679	272,382	74,297	27.3 %
International				
Pain Treatments	15,128	13,990	1,138	8.1 %
Restorative Therapies	13,930	13,318	612	4.6 %
Surgical Solutions	10,546	794	9,752	NM
Total International net sales	39,604	28,102	11,502	40.9 %
Total net sales	$ 386,283	$ 300,484	$ 85,799	28.6 %

U.S.

Net sales increased $74.3 million, or 27.3%, of which acquisitions contributed $58.5 million. Changes by vertical were: (i) Pain Treatments—$8.1 million net sales increase due to volume growth, partially offset with more treatments being sold under contracts with major insurers at lower prices and price competition within the osteoarthritic joint pain treatment market; (ii) Restorative Therapies—$31.0 million net sales increase due to acquisitions and net volume growth; and (iii) Surgical Solutions—$35.3 million net sales increase due to acquisitions and volume growth.

International

Net sales increased $11.5 million, or 40.9%, due to acquisitions. Net sales also slightly increased due to sales volume growth as sales during the first quarter of 2021 were negatively affected by the economic impact of the COVID-19 pandemic.

Gross profit and gross margin

	Three Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
U.S.	$ 76,624	$ 72,571	$ 4,053	5.6 %
International	7,911	6,498	1,413	21.7 %
Total	$ 84,535	$ 79,069	$ 5,466	6.9 %

	Three Months Ended		
	October 1, 2022	October 2, 2021	Change
U.S.	65.9 %	73.2 %	(7.3 %)
International	63.9 %	66.8 %	(2.9 %)
Total	65.7 %	72.6 %	(6.9 %)

U.S.

Gross profit increased $4.1 million, or 5.6%, primarily due to the increase in net sales. Gross margin decreased due to product mix including products introduced as a result of acquisitions.

International

Gross profit increased $1.4 million, or 21.7%, primarily due to the increase in net sales. Gross margin decreased due to product mix including products introduced as a result of acquisitions.

	Nine Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
U.S.	$ 231,571	$ 196,000	$ 35,571	18.1 %
International	25,320	18,938	6,382	33.7 %
Total	$ 256,891	$ 214,938	$ 41,953	19.5 %

	Nine Months Ended		
	October 1, 2022	October 2, 2021	Change
U.S.	66.8 %	72.0 %	(5.3 %)
International	63.9 %	67.4 %	(3.5 %)
Total	66.5 %	71.5 %	(5.0 %)

U.S.

Gross profit increased $35.6 million, or 18.1%, primarily due to the increase in net sales. Gross margin decreased due to product mix including products introduced as a result of acquisitions. Gross margin was also negatively impacted by 1.0% from inventory step-up amortization of acquisition related assets in 2022 compared with the prior year.

International

Gross profit increased $6.4 million, or 33.7%, primarily due to the increase in net sales. Gross margin decreased due to product mix including products introduced as a result of acquisitions.

Selling, general and administrative expense

	Three Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
Selling, general and administrative expense	$ 79,194	$ 69,636	$ 9,558	13.7 %

Selling, general and administrative expenses increased $9.6 million, or 13.7%, primarily due to: (i) an increase in compensation related expenses of $5.5 million, primarily resulting from acquisitions; (ii) an increase in consulting and travel related expenses of $1.9 million; (iii) an increase in insurance expenses of $1.4 million; and (iv) an increase in bad debt expenses of $1.1 million.

	Nine Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
Selling, general and administrative expense	$ 254,938	$ 173,372	$ 81,566	47.0 %

Selling, general and administrative expenses increased $81.6 million, or 47.0%, primarily due to: (i) an increase in compensation related expenses of $34.6 million, primarily resulting from acquisitions; (ii) an increase in equity-based compensation of $23.1 million, which includes a $23.4 million decrease in fair market value during 2021 of accrued equity-based compensation resulting from the difference between the pricing from the pending IPO and the actual offering price; (iii) an increase in consulting and travel related expenses of $10.7 million; (iv) an increase of $4.0 million in bad debt expenses; and (v) an increase of $3.4 million in corporate and employee health insurance primarily resulting from acquisitions.

Research and development expenses

	Three Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
Research and development expense	$ 5,840	$ 6,153	$ (313)	(5.1 %)

Research and development expense decreased by $0.3 million, or (5.1%), due to cost reduction efforts implemented in 2022, which was partially offset with an increase from acquisitions.

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Research and development expense	$ 19,134	$ 11,936	$ 7,198	60.3 %

Research and development expense increased by $7.2 million, or 60.3%, primarily due to: (i) an increase of $2.2 million in compensation related expenses partially driven by acquisitions; (ii) an increase of $2.6 million in consulting costs; and (iii) an increase in equity-based compensation of $1.7 million, which includes a $1.8 million decrease in fair market value during 2021 of accrued equity-based compensation resulting from the difference between the pricing from the pending IPO and the actual offering price.

Restructuring costs

Restructuring costs for the three and nine months ended October 1, 2022 and October 2, 2021 were incurred as a result of restructuring plans for recently acquired businesses to reduce headcount, to reorganize management structure and to consolidate certain facilities.

Change in fair value of contingent consideration

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
Change in fair value of contingent consideration	$ 3,142	$ 651	$ 2,491	NM

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Change in fair value of contingent consideration	$ 3,684	$ 1,292	$ 2,392	185.1 %

The changes in fair value of contingent consideration during the three and nine months ended October 1, 2022 compared with the prior year comparable periods resulted from the additional contingent consideration recorded as a result of the CartiHeal Acquisition. The increase was partially offset with not meeting the $15,000 FDA approval milestone related to the Bioness Acquisition, thereby decreasing the amount of contingent consideration owed. Fair value changes involving contingent consideration represent changes in the present value of discounted cash flows due to the passage of time.

Depreciation and amortization

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
Depreciation and amortization	$ 7,442	$ 1,878	$ 5,564	NM

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Depreciation and amortization	$ 13,392	$ 5,655	$ 7,737	136.8 %

Depreciation and amortization increased during three and nine months ended October 1, 2022 compared with the prior year comparable periods primarily due to acquisitions, partially offset by lower amortization expense in the current year as certain assets became fully amortized.

Impairment of goodwill

We incurred a $189.2 million non-cash impairment charge due to the recent decline in our market capitalization subsequent to our previously announced financial results for the three and nine months ended October 1, 2022.

Impairment of variable interest entity assets

We terminated the Collaboration Agreement with Harbor on June 8, 2021 resulting in a $5.7 million impairment on Harbor's long-lived asset balances, of which $5.2 million was recorded in loss attributable to noncontrolling interest. Refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 3. Acquisitions and investments* of this Quarterly Report on Form 10-Q for further details concerning the impairment and deconsolidation of Harbor.

Other (income) expense

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
Interest expense, net	$ 9,894	$ 1,347	$ 8,547	NM
Other (income) expense	$ (23,272)	$ 757	$ (24,029)	NM

Interest expense, net increased $8.5 million due to: (i) an increase of $6.1 million for interest on the Deferred Amount related to the CartiHeal Acquisition; (ii) an increase of $1.1 million for interest associated with our October 2021 debt refinancing; (iii) an increase in interest of $1.0 million due to higher interest rates; (iv) an increase of $1.2 million on the additional debt used to partially fund the CartiHeal Acquisition; (v) an increase of $1.1 million due to higher margin rates. These changes were partially offset by $2.1 million of interest income from the change in the fair value of our interest rate swap.

Other (income) expense changed $24.0 million due to the $23.7 million fair market value remeasurement gain on the CartiHeal equity investment in 2022.

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Interest expense, net	$ 10,922	$ 152	$ 10,770	NM
Other (income) expense	$ (22,350)	$ 2,821	$ (25,171)	NM

Interest expense (income), net increased $10.8 million due to: (i) an increase of $6.1 million for interest on the Deferred Amount related to the CartiHeal Acquisition; (ii) an increase of $2.9 million for interest associated with our October 2021 debt refinancing; (iii) an increase in interest of $1.4 million due to higher interest rates; (iv) an increase of $1.2 million on the additional debt used to partially fund the CartiHeal Acquisition; (v) an increase of $1.1 million due to higher margin rates; and (vi) the settlement of our equity participation right (EPR) liability in 2021 resulting in interest income of $2.8 million. These changes were partially offset by a $5.0 million increase in interest income resulting from the change in the fair value of our interest rate swap.

Other (income) expense changed $25.2 million due to the $23.7 million fair market value remeasurement gain on the CartiHeal equity investment in 2022 and impairment of our Harbor investment of $1.4 million in the prior year.

Income tax expense (benefit)

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
Income tax expense (benefit)	$ (41,779)	$ (882)	$ (40,897)	NM
Effective tax rate	22.3 %	28.0 %		(5.7)%

Income tax expense for the three months ended October 1, 2022 and October 2, 2021 was primarily due to changes in our forecasted effective tax rate and in uncertain tax positions.

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Income tax (benefit) expense	$ (45,667)	$ 759	$ (46,426)	NM
Effective tax rate	21.3 %	6.2 %		15.1 %

(NM = Not Meaningful)

Income tax benefit for the nine months ended October 1, 2022 and October 2, 2021 was primarily due to changes in our forecasted effective rate. The income tax expense for the nine months ended October 2, 2021 was primarily due to capitalized expenses resulting from our IPO.

Noncontrolling interest

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
Continuing LLC Owner	$ 37,341	$ 1,198	$ 36,143	NM
Other noncontrolling interest	112	—	112	NM
Total	$ 37,453	$ 1,198	$ 36,255	

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
Continuing LLC Owner	$ 41,297	$ 2,595	$ 38,702	1491.4 %
Other noncontrolling interest	447	5,665	(5,218)	(92.1 %)
Total	$ 41,744	$ 8,260	$ 33,484	

Subsequent to the IPO and related transactions, we are the sole managing member of BV LLC in which we own 79.6%. We have a majority economic interest, the sole voting interest in, and control the management of BV LLC. As a result, we consolidate the financial results of BV LLC and report a non-controlling interest representing the 20.4% that is owned by the Continuing LLC Owner.

The decline in losses associated with other noncontrolling interest resulted from our deconsolidation of Harbor upon the termination of the Collaboration Agreement during the second quarter of 2021 in which we incurred a $5.7 million impairment charge. We ceased being the primary beneficiary upon termination as we no longer had the power to direct Harbor's significant activities.

Segment Adjusted EBITDA

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

(in thousands, except for percentage)	Three Months Ended October 1, 2022	Three Months Ended October 2, 2021	Change $	Change %
U.S.	$ 19,543	$ 19,782	$ (239)	(1.2 %)
International	$ 1,496	$ 1,533	$ (37)	(2.4) %

U.S.

Adjusted EBITDA decreased $0.2 million, or 1.2%, primarily due to higher gross profit, partially offset with an increase in compensation related charges, consulting and travel related expenses as well as higher public company costs.

International

Adjusted EBITDA decreased $— million, or 2.4%, primarily due acquisitions well as travel and consulting related expenses. These were partially offset with an increase in gross profit resulting from larger net sales.

(in thousands, except for percentage)	Nine Months Ended October 1, 2022	Nine Months Ended October 2, 2021	Change $	Change %
U.S.	$ 43,467	$ 46,929	$ (3,462)	(7.4 %)
International	$ 7,614	$ 5,343	$ 2,271	42.5 %

U.S.

Adjusted EBITDA decreased $3.5 million, or 7.4%, primarily due to an increase in compensation related charges of previously discussed as well as higher public company costs, partially offset by an increase in gross profit.

International

Adjusted EBITDA increased $2.3 million, or 42.5%, primarily due to an increase in gross profit resulting from larger net sales. This increase was partially offset by acquisitions, consulting, travel related expenses and compensation related charges.

Liquidity and Capital Resources

Sources of liquidity

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.

As discussed below under *CartiHeal*, additional capital was provided to consummate the CartiHeal Acquisition through the Term Loan Facility, extended to us through the Amended 2019 Credit Agreement, and additional capital will be required to fund the Deferred Amount under the CartiHeal Amendment.

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 payment obligations and might involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, or making capital expenditures. If we raise additional funds through collaboration and licensing arrangements with third parties, it might be necessary to relinquish valuable rights to our products, future revenue streams or product candidates, or to grant licenses on terms that might not be favorable to us. The covenants under the Amended 2019 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 might have a negative impact on our financial condition and our ability to pursue our business strategies.

Going Concern

Based on the Company's current financial position and liquidity sources, including current cash balances, and forecasted future cash flows, the Company is at risk of not being able to make the two initial Deferred Payments for the CartiHeal transaction, each in the principal sum of $50 million, due under the terms of the amended Option and Equity Purchase Agreement no later than July 2023 and September 2023, respectively, which may result in a cross default under the Amendment No. 3 to the Credit and Guaranty Agreement entered into with the Company's lenders at the time of the CartiHeal transaction. In addition, should the Company fail to meet certain financial thresholds established in the Credit Agreement, the Company may be at risk of violating certain of its financial covenants under that agreement. If any of the financial covenants are not met, or if the Company is otherwise deemed to be in default of its other obligations under that agreement, the aggregate outstanding principal amounts become due and payable to our lenders. Considering current liquidity sources, the Company would not be able to make the Deferred Payments due in connection with the CartiHeal transaction or repay the Company's total outstanding debt balance in the event of a default.

These conditions and events raise substantial doubt about the Company's ability to continue as a going concern. In light of this, the Company is actively pursuing plans to mitigate these conditions and events, such as considering various cost cutting measures, exploring divestiture opportunities for non-core assets, considering seeking temporary covenant waivers from our lenders, pursuing strategic options with respect to the CartiHeal transaction, attempting to renegotiate the timing of the CartiHeal Deferred Payments or exiting that agreement by transferring back to the former CartiHeal owners all of the share capital, intellectual property and other assets of CartiHeal acquired in the transaction pursuant to the escrow and pledge agreements entered into as part of the CartiHeal acquisition if such measures fail; however, there can be no assurances that it is probable these plans will be successfully implemented or that they will successfully mitigate these conditions and events. Therefore, these plans do not alleviate the substantial doubt about the Company's ability to continue as a going concern.

For additional information, see *Part II. Item 1A. Risk Factors*.

Interest rate swap

On October 28, 2022, we terminated our non-designated interest rate swap agreement and subsequently received a settlement of $7.7 million.

Initial public offering

On February 16, 2021, in connection with our IPO, we issued and sold 9,200,000 shares of our Class A common stock at a price to the public of $13.00 per share, resulting in gross proceeds to us of approximately $119.6 million, before deducting the underwriting discount, commissions and estimated offering expenses payable by us. Bioventus Inc. is a holding company and has no material assets other than the ownership of LLC Interests and has no independent means of generating revenue. Deterioration in the financial condition, earnings, or cash flow of BV LLC and its subsidiaries for any reason could limit or impair their ability to pay such distributions. In addition, the terms of our financing arrangements, including the Amended 2019 Credit Agreement, contain covenants that may restrict BV LLC and its subsidiaries from paying such distributions, subject to certain exceptions. Further, BV LLC is generally prohibited under Delaware law from making a distribution to a member to the extent that, at the time of the distribution, after giving effect to the distribution, liabilities of BV LLC (with certain exceptions), as applicable, exceed the fair value of its assets. Subsidiaries of BV LLC are generally subject to similar legal limitations on their ability to make distributions to BV LLC. Bioventus Inc., as the managing member, causes BV LLC to make cash distributions to the owners of LLC Interests in an amount sufficient to (i) fund tax obligations in respect of allocations of taxable income from BV LLC; and (ii) cover Bioventus Inc. operating expenses, including payments under the Tax Receivable Agreement (TRA).

Cash requirements

Except as provided below under "Contractual obligations" and the previously discussed capital requirements for the CartiHeal Acquisition, there have been no material changes to our future cash requirements as disclosed in *Part II. Item 7* of our 2021 10-K.

We enter into contracts in the normal course of business with various third parties for development, collaboration and other services for operating purposes. These contracts provide for termination upon notice. Payments due upon cancellation generally consist only of payments for services provided or expenses incurred, including non-cancellable obligations of our service providers, up to the date of cancellation. Certain agreements include contingent events that upon occurrence would require payment. For information regarding Commitments and Contingencies, refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 11. Commitment and contingencies* in of this Quarterly Report on Form 10-Q for further information regarding other matters.

Tax Receivable Agreement

The BV LLC Agreement provides for the payment of certain distributions to the Continuing LLC Owner in amounts sufficient to cover the income taxes imposed with respect to the allocation of taxable income from BV LLC as well as obligations under the Tax Receivable Agreement (TRA). Under the TRA, we are 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 BV LLC resulting from (a) any future redemptions or exchanges of LLC Interests, and (b) certain distributions (or deemed distributions) by BV LLC and (2) certain other tax benefits arising from payments under the TRA. We expect the amount of the cash payments required to be made under the TRA will be significant. The actual amount and timing of any payments under the TRA 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 TRA 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 payments under the TRA 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 TRA and therefore accelerate payments due under the TRA.

CartiHeal

As disclosed under *Strategic Transactions—CartiHeal*, we exercised the Call Option in April 2022 for the acquisition of all the remaining shares of CartiHeal, excluding shares we already own, for approximately $315.0 million. An additional $135.0 million is payable contingent upon the achievement of $75.0 million in trailing twelve month sales. Pursuant to the CartiHeal Amendment, we deferred $215.0 million of the aggregate purchase price otherwise due at closing until the earlier of the achievement of certain milestones and the occurrence of certain installment payment dates. The first two milestones, each of which are $50.0 million, will be paid no later than the end of the third quarter of 2023. The next two milestones, each of which are $25.0 million, will be paid by the end of 2024 and 2025, respectively. The final milestone of $65.0 million is to be paid by 2027. As discussed above, we are currently exploring plans to improve our liquidity position in order to fund Deferred Amount payable in connection with the CartiHeal Acquisition; however, given our current liquidity position, we are at risk of failing to make the Deferred Payments. For additional information, see *Part II. Item 1A. Risk Factors*.

Credit Facilities

Our Credit and Guaranty Agreement, dated as of December 6, 2019, and as amended on October 29, 2021 (the 2019 Credit Agreement) consisted of a $360.8 million term loan (Term Loan) and a $50.0 million revolving credit facility (Revolver). On July 11, 2022, we amended the 2019 Credit Agreement (as amended, the Amended 2019 Credit Agreement) in conjunction with the CartiHeal Acquisition. Pursuant to the Amended 2019 Credit Agreement, an $80.0 million term loan facility (Term Loan Facility) was extended to us to be used for: (i) the financing of the CartiHeal Acquisition; (ii) the payment of related fees and expenses; and (iii) working capital needs and general corporate purposes, including without limitation for permitted acquisitions. The Term Loan Facility will mature on October 29, 2026. We may elect either the secured overnight financial rate (SOFR) or base interest rate options for all borrowings as of July 12, 2022, which includes any outstanding balances under the Term Loan, Term Loan Facility and Revolver. Initial SOFR loans and base rate loans had a margin of 3.25% and 2.25%, respectively, subsequent to July 12, 2022.

We were in compliance with all required financial covenants under the Amended 2019 Credit Agreement as of October 1, 2022.

Other

For information regarding Commitments and Contingencies, refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 11. Commitments and Contingencies—Note 3. Acquisitions and investments* of this Quarterly Report on Form 10-Q.

Information regarding cash flows

Cash, cash equivalents and restricted cash as of October 1, 2022 totaled $34.4 million, compared to $99.2 million as of December 31, 2021. The decrease in cash was primarily due to the following:

	Nine Months Ended		Change	
(in thousands, except for percentage)	October 1, 2022	October 2, 2021	$	%
Net cash from operating activities	$ (18,781)	$ 9,874	$ (28,655)	NM
Net cash from investing activities	(113,033)	(62,482)	(50,551)	80.9 %
Net cash from financing activities	67,514	97,063	(29,549)	(30.4 %)
Effect of exchange rate changes on cash	(531)	(377)	(154)	40.8 %
Net change in cash, cash equivalents and restricted cash	$ (64,831)	$ 44,078	$ (108,909)	NM

NM = Not Meaningful

Operating Activities

Net cash from operating activities decreased $28.7 million, primarily due to completed acquisitions and the resulting integration costs, higher employee compensation, increased operating expenses and a rise in interest payments. These outflows were partially offset by increased collections from higher sales.

Investing Activities

Cash flows used in investing activities increased $50.6 million, primarily due to the $104.8 million acquisition of CartiHeal and an increase of $2.1 million in capital expenditures, partially offset by the $46.8 million acquisition of Bioness in 2021 and $9.6 million less in other investments and distribution rights.

Financing Activities

Cash flows provided by financing activities decreased $29.5 million, primarily due to the $107.8 million in net proceeds from the issuance of Class A common stock sold during our 2021 IPO. This was partially offset by $79.7 million of proceeds from the issuance of long-term debt in 2022.

Off-balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Contractual Obligations

Increases to our contractual obligations compared to amounts disclosed in our 2021 10-K includes the following:

	Remainder of 2022	2023 and thereafter	Total
Long-term debt[(a)]	$ 2,000	$ 78,000	$ 80,000
Interest payments on long-term debt obligations[(a)]	6,800	76,039	82,839
Deferred Amount[(b)]	—	215,000	215,000
Interest on Deferred Amount[(b)]	—	43,599	43,599
	$ 8,800	$ 412,638	$ 421,438

(a) On July 11, 2022, our Term Loan was extended for an additional $80.0 million. Interest rates have increased as a result of the Term Loan extension and rising interest rates. Refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 4. Financial instruments* in this Quarterly Report on Form 10-Q for further information regarding long-term debt.

(b) On July 12, 2022, we acquired CartiHeal for $315.0 million, of which $215.0 million was deferred with an annual interest rate of 8.0% and payable either upon the of achievement of certain milestones or specified dates. Refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements* in this Quarterly Report on Form 10-Q for further information regarding the Deferred Amount.

Except as discussed above, there have been no material changes to our contractual obligations as disclosed in our 2021 10-K.

Critical Accounting Estimates

Our discussion of operating results is based upon the unaudited consolidated condensed financial statements and accompanying notes. The preparation of these statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. Our critical accounting estimates are detailed in *Item 7* of our 2021 10-K and we have no material changes from such disclosures.

Recently Issued Accounting Pronouncements

There were no recently issued accounting pronouncements that are expected to materially impact our financial statements.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

There have been no material changes to our market risks as disclosed in our 2021 10-K.

Item 4. Controls and Procedures.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures must reflect that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, because a material weakness in the Company's internal control over financial reporting our disclosure controls and procedures were not effective as of October 1, 2022. This material weakness in the Company's internal control over financial reporting and the Company's remediation efforts are described below.

Material Weakness in Internal Control over Financial Reporting

The Company's management, including our Chief Executive Officer and Chief Financial Officer, identified a material weakness related to the Company's internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected and corrected on a timely basis.

The Company's internal control over financial reporting was not performed at a sufficient level of precision to ensure that the third quarter 2022 rebates accrual was complete and accurate. The process undertaken to estimate the expected reduction in revenue from rebates was consistent with the Company's historical practice. However, subsequent to the initial calculation of the third quarter rebates accrual, an unexpectedly large invoice was received and there were not processes in place to ensure it was reviewed timely in order to update the accrual.

The Company reassessed open rebates accruals and the approach for calculating the rebate accruals based on this invoice. The Company revised its estimation methodology resulting in a decrease of revenue of $8.4 million. This adjustment was recorded subsequent to the earnings release but prior to the filing of this Quarterly Report on Form 10-Q. Further, this change in revenue projection related to the rebates accrual adjustment for 2022 and cascading effect on future revenue projections materially impacted the Company's evaluation of its ability to meet debt covenants, resulting in liquidity and going concern disclosures in the Company's Quarterly Report on Form 10-Q.

Notwithstanding the identified material weakness, management believes that the Financial Statements and related financial information included in this Quarterly Report on Form 10-Q fairly present, in all material respects, our balance sheets, statements of operations and comprehensive (loss) income, statement of changes in stockholders' and members' equity and statements of cash flows as of and for the periods presented.

Remediation Measures

We are designing and implementing new processes and enhanced controls to address the underlying causes of this material weakness, including:

- Reassessing open rebates accruals and changing the estimation method for calculating the rebates accruals, including enhancing the precision of the controls;
- Implementing enhanced controls and status tracking to ensure that rebates invoices from third-party payers are received and reviewed timely; and
- Increasing rigor of documenting key conversations with payers.

We believe the actions described above will be sufficient to remediate the identified material weakness and strengthen our internal control over financial reporting. However, the new and enhanced controls have not operated for a sufficient amount of time to conclude that the material weakness has been remediated. We will continue to monitor the effectiveness of these controls and will make any further changes management determines appropriate.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the quarterly period covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting except for changes to controls resulting from a system integration related to our acquisition of Misonix, and the material weakness described above.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

On June 15, 2022, the Company, through its subsidiary Bioness, filed a lawsuit in the United States District Court for the Eastern District of Virginia against Aretech, LLC ("Aretech") alleging infringement by Aretech of various patents related to our Vector Gait and Safety Support System®. On August 8, 2022, Aretech filed an answer to the lawsuit denying infringement and asserting various affirmative defenses and counterclaims to the Bioness complaint. Bioness filed a motion to dismiss the defendant's counterclaims on September 28, 2022. In response to Bioness' motion to dismiss the counterclaims, on October 19, 2022, Aretech filed an amended answer and counterclaims. We are currently reviewing the amendments and plan to aggressively defend our patents in the litigation.

On March 23, 2017, Misonix's former distributor in China, Cicel (Beijing) Science & Technology Co., Ltd., filed a lawsuit against Misonix and certain of its officers and directors in the United States District Court for the Eastern District of New York. The complaint alleged that Misonix improperly terminated its contract with the former distributor. The complaint sought various remedies, including compensatory and punitive damages, specific performance and preliminary and post judgment injunctive relief, and asserted various causes of action, including breach of contract, unfair competition, tortious interference with contract, fraudulent inducement, and conversion. On October 7, 2017, the court granted Misonix's motion to dismiss each of the tort claims asserted against Misonix, and also granted the individual defendants' motion to dismiss all claims asserted against them. On January 23, 2020, the Court granted Cicel's motion to amend its complaint, to include claims for alleged defamation and theft of trade secrets in addition to the breach of contract claim. Discovery in the matter ended on August 5, 2021. On January 20, 2022, the Court granted Misonix's summary judgment motion on Cicel's breach of contract and defamation claims. Cicel's motion for reconsideration of the Court's summary judgment ruling in Misonix's favor was dismissed by the Court on April 29, 2022. On July 18, 2022, Cicel voluntarily dismissed the remaining claim for trade secret theft and stated its intention to appeal the Court's January 20, 2022 ruling on the breach of contract and defamation claims to the Court of Appeals. We believe that we have various legal and factual defenses to these claims and intend to vigorously defend any appeal of the lower court's summary judgement rulings in our favor.

Prior to the closing of our acquisition of Bioness, Bioness had been named as a defendant in a lawsuit, for which we are indemnified under the indemnification provisions contained in the Bioness Merger Agreement. The case relates to an action brought in February 2021 in the Delaware State Court of Chancery by a former minority shareholder and director of Bioness, seeking a temporary restraining order contesting our acquisition of Bioness. While the complaint to block the Bioness acquisition was dismissed by the court, a separate action was brought against the Company under the indemnification provisions of the Bioness Certificate of Incorporation to recover approximately $2.4 million in attorney fees and other expenses incurred by the director and shareholder in connection with the dismissed case.

On August 19, 2021, the court issued a ruling granting, in part, plaintiff's motion for summary judgment, awarding plaintiff attorney's fees and related expenses incurred in connection with performance of the plaintiff's directorial duties, and denying fees and expenses incurred in a non-director capacity. In its ruling, the Court's order also directed the parties to agree upon a process that will govern the payment of and challenges to plaintiff's payment requests and required Bioness to pay 50% of the demanded amount into escrow if more than 50% of the total invoiced amount was in dispute. Pursuant to the court's order, to date, Bioness has paid approximately $1.2 million into escrow. On November 1, 2022, at hearing before Delaware State Court of Chancery, the court ruled in favor of the former Bioness director awarding attorney's fees in connection with the underlying pre-merger litigation and the advancement action in the amounts claimed, less approximately $50,000. We are currently evaluating an appeal of the court's ruling.

On February 8, 2022, the above referenced minority shareholder of Bioness filed another action in the Delaware State Court of Chancery in connection with our acquisition of Bioness. This action names the former Bioness directors, the Alfred E. Mann Trust (Trust), which was the former majority shareholder of Bioness, the trustees of the Trust and Bioventus as defendants. The complaint alleges, among other things, that the individual directors, the Trust, and the trustees breached their fiduciary duty to the plaintiff in connection with their consideration and approval of our transaction. The complaint also alleges that we aided and abetted the other defendants in breaching their fiduciary duties to the plaintiff and that we breached the Merger Agreement by failing to pay the plaintiff its pro rata share of the merger consideration. We believe that we are indemnified under the indemnification provisions contained in the Bioness Merger Agreement for these claims. On July 20, 2022, we filed a motion to dismiss all claims made against us on various grounds, as did all the other named defendants in the suit. The Court has not yet ruled on any of these motions. We also believe that there are various legal and factual defenses to the claims plaintiff made against us and intend to defend ourselves vigorously.

On September 15, 2021, a purported stockholder of Misonix filed an action in the United States District Court for the Eastern District of New York, captioned Stein v. Misonix, Inc., et al., Case No. 2:21-cv-05127 (E.D.N.Y.) (the Stein Complaint). The Stein Complaint named Misonix and members of its board of directors as defendants. The Stein Complaint was dismissed on April 6, 2022. On September 16, 2021, a purported stockholder of Misonix filed an action in the United States District Court for the Southern District of New York, captioned Ciccotelli v. Misonix, Inc. et al., Case No. 1:21-cv-07773 (S.D.N.Y.) (the Ciccotelli Complaint) against Misonix, members of its board of directors, the Company, and its subsidiaries, Merger Sub I and Merger Sub II, as defendants. Plaintiff voluntarily dismissed the Ciccotelli Complaint on November 10, 2021. On October 12, 2021, another purported stockholder of Misonix filed an action in the United States District Court for the Eastern District of New York, captioned Rubin v. Misonix, Inc. et al., Case No. 1:21-cv-05672 (S.D.N.Y.) (the Rubin Complaint) and on October 15, 2021, another purported stockholder of Misonix filed an action in the United States District Court for the Southern District of New York, captioned Taylor v. Misonix, Inc. et al., Case No. 1:21-cv-08513 (S.D.N.Y.) (the Taylor Complaint). The Rubin Complaint and the Taylor Complaint name Misonix and members of its board of directors as defendants. Plaintiffs voluntarily dismissed the Rubin and Taylor Complaints on January 21, 2022 and February 18, 2022, respectively.

Each of the complaints relating to the Misonix Acquisition asserted claims under Section 14(a) and Section 20(a) of the Exchange Act and SEC Rule 14a-9, challenging the adequacy of disclosures in the proxy statement/prospectus filed with the SEC on September 8, 2021 or the Definitive Proxy Statement filed with the SEC on September 24, 2021, regarding Misonix and/or Bioventus' projections and J.P. Morgan's financial analysis. The complaints sought, among other relief, (i) injunctive relief preventing the parties from proceeding with the merger; (ii) rescission in the event that the merger is consummated; and (iii) an award of costs, including attorneys' and experts' fees.

Please refer to *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 11. Commitments and Contingencies* of this Quarterly Report on Form 10-Q for information pertaining to legal proceedings. In addition, we are party to legal proceedings incidental to our business. While our management currently believes the ultimate outcome of these proceedings, individually and in the aggregate, will not have a material adverse effect on our consolidated condensed financial statements, litigation is subject to inherent uncertainties. Were an unfavorable ruling to occur, there exists the possibility of a material adverse impact on our financial condition and results of operations.

Item 1A. Risk Factors

In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the risk factors and other cautionary statements described in *Part I. Item 1A,. Risk Factors* included in our 2021 10-K, which could materially affect our businesses, financial condition, or future results. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial also may materially adversely affect our business, financial condition, or future results. There have been no material updates to our risk factors presented in our 2021 10-K except for the following:

We have identified a material weakness in our internal control over financial reporting, and we might identify additional material weaknesses in the future that might cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we otherwise fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

Our management is responsible for establishing and maintaining adequate internal controls over financial reporting designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our management is likewise required, on a quarterly basis, to evaluate the effectiveness of our internal controls and to disclose any changes and material weaknesses identified through such evaluation of those internal controls. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected and corrected on a timely basis.

As described elsewhere in this Quarterly Report on Form 10-Q, we have identified a material weakness in our internal control over financial reporting related to the accounting for rebates from third-party payers. As a result of this material weakness, our management has concluded that our internal control over financial reporting was not effective as of October 1, 2022. This material weakness resulted in a reduction to revenue of $8.4 million. For a discussion of management's consideration of the material weakness identified, see *Part I. Item 4. Controls and Procedures* included in this Quarterly Report on Form 10-Q.

Although management is working to remediate the material weakness, as described in *Part I. Item 4. Controls and Procedures*, we cannot provide assurance that these measures will be sufficient to remediate the material weakness that has been identified or prevent future material weaknesses or significant deficiencies from occurring.

We might identify future material weaknesses in our internal controls over financial reporting and we might be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations. We cannot provide assurance that our existing material weakness will be remediated or that additional material weaknesses will not exist or otherwise be discovered, any of which could adversely affect our reputation, financial condition and results of operations.

There are doubts about our ability to continue as a going concern and if we are unable to continue our business, our common stock might have little or no value.

We are subject to certain covenants under our Credit and Guaranty Agreement dated December 6, 2019 (as amended, the Credit Agreement), including, but not limited to, a minimum interest coverage ratio and a maximum debt leverage ratio requirement as defined in the Credit Agreement. As described in *Part I. Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations* included in this Quarterly Report on Form 10-Q, the Company has identified substantial doubt about its ability to make the two initial Deferred Payments for the CartiHeal transaction, each in the principal sum of $50 million, due under the terms of the amended Option and Equity Purchase Agreement no later than July 2023 and September 2023, respectively, which might result in a cross default under the Credit Agreement. In addition, should our future cash flows fail to meet certain thresholds established in the Credit Agreement, we might be at risk of violating the covenants regarding the minimum interest coverage ratio and the maximum debt leverage ratio requirement under the Credit Agreement. If any of the financial covenants are not met, or if we are otherwise deemed to be in default of our other obligations under the Credit Agreement, the lenders of the notes are permitted under the Credit Agreement to accelerate the debt. Considering our current liquidity sources, we would not be able to make the Deferred Payments due in connection with the CartiHeal transaction or repay our total outstanding debt balance under the Credit Agreement in the event of a default. These conditions and events raise substantial doubt about our ability to continue as a going concern. In light of this, we are actively pursuing plans to mitigate these conditions and events, such as considering various cost cutting measures, exploring divestiture opportunities for non-core assets, considering seeking temporary covenant waivers from our lenders, pursuing strategic options with respect to the CartiHeal transaction such as attempting to renegotiate the timing of the Deferred Payments or exiting that agreement by transferring back to the former CartiHeal owners all of the share capital, intellectual property and other assets of CartiHeal acquired in the transaction pursuant to the escrow and pledge agreements entered into as part of the CartiHeal acquisition if such measures fail; however, there can be no assurances that it is probable these plans will be successfully implemented or that they will successfully mitigate these conditions and events. Therefore, these plans do not alleviate the substantial doubt about our ability to continue as a going concern. See *Part I. Item 1. Notes to the unaudited consolidated condensed financial statements—Note 1. Organization—Going Concern* of this Quarterly Report on Form 10-Q for additional information.

Our Credit Agreement contains financial and other covenants. If we fail to comply with any of these covenants, we might be required to repay the indebtedness, which would significantly harm our liquidity and our operations.

We are subject to certain covenants under the Credit Agreement, including, but not limited to, a minimum interest coverage ratio and a maximum debt leverage ratio requirement as defined in the Credit Agreement. As described in *Part I. Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations* included in this Quarterly Report on Form 10-Q, the Company has identified substantial doubt about its ability to make the deferred payments for the CartiHeal transaction when due under the terms of the Option and Equity Purchase Agreement, as amended, which might result in a cross default under the Credit Agreement. In addition, should our future cash flows fail to meet certain thresholds established in the Credit Agreement, we might be at risk of violating the covenants regarding the minimum interest coverage ratio and the maximum debt leverage ratio requirement under the Credit Agreement. If any of the financial covenants are not met, or if we are otherwise deemed to be in default of our other obligations under the Credit Agreement, a majority of the lenders of the notes are permitted under the Credit Agreement to accelerate the debt. Considering our current liquidity sources, we would not be able to make the deferred payments due in connection with the CartiHeal transaction or repay our total outstanding debt balance under the Credit Agreement in the event of a default.

In the absence of a waiver from or other satisfactory arrangement with our lenders, the failure by us to comply with these covenants and the resulting declaration of an event of default would adversely affect our business, results of operations and financial position.

We might be unable to make deferred payments due under our Option Agreement with CartiHeal.

In April 2022, we exercised our option to acquire all of the remaining shares of CartiHeal, excluding shares already owned by us, for approximately $315.0 million. An additional $135.0 million is payable contingent upon the achievement of $75.0 million in trailing twelve-month sales. Pursuant to the CartiHeal Option and Equity Purchase Agreement, as amended, we deferred $215.0 million of the aggregate purchase price otherwise due at closing until the earlier of the achievement of certain milestones and the occurrence of certain installment payment dates. The first two milestones, each of which are $50.0 million, are to be paid no later than the end of the third quarter of 2023. The next two milestones, each of which are $25.0 million, are to be paid by the end of 2024 and 2025, respectively. The final milestone of $65.0 million is to be paid by 2027.

Given our cash position at October 1, 2022, we are at risk of not being able to make the deferred payments for the CartiHeal transaction when due, which would cause a breach of the CartiHeal Option Agreement. The breach would require the payment of the remaining amounts due, less certain payroll payments, as well as trigger a default under the related escrow and pledge agreements. In addition, the failure to make the required deferred payments for the CartiHeal transaction might result in a cross default under the Credit Agreement. Any of these failures would adversely affect our business, results of operations and financial position. If such an event occurs, we might be forced to curtail our operations or to cease operations entirely, either of which could cause our stockholders to lose some or all of their investment.

Regulatory reforms, such as the EU Medical Devices Regulation, could limit our ability to market and distribute our products after clearance, approval or certification is obtained and make it more difficult or costly for us to obtain regulatory clearance, approval or certification of any future products, which could adversely affect our competitive position and materially affect our business and financial results.

The EU Medical Devices Regulation, which became effective in May 2021, was adopted with the aim of ensuring better protection of public health and patient safety. Among other things, the EU Medical Devices Regulation (MDR) imposed changes in the clinical evidence 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 (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 are able to continue marketing our currently CE-marked products in the Europe after the effective date of the EU MDR until the associated CE mark certificates expire, securing renewals of our existing CE mark certificates to allow for continued marketing of the product after CE mark expiration or obtaining certifications for new products requires the performance of certain conformity assessment procedures by a notified body. Notified bodies are independent organizations designated by EU member states which are responsible for, among other things, auditing and examining a product's technical dossiers and the manufacturers' quality system. If satisfied that the relevant product conforms to the relevant essential requirements, the notified body issues a certificate of conformity, which allows the manufacturer to place the CE mark on the device and for it to be marketed throughout the EU. Given the additional requirements of the MDR, the renewal of our existing CE mark certificates once they expire or obtaining certifications for new products could be more challenging, time consuming and costly.

For example, technical documentation for certain of our products requiring recertification, such as our L300 GO® Foot Drop System and our single injection HA treatment Durolane®, have been submitted to our notified body. While we are actively engaged with our notified body to renew the CE marks for these and our other products, CE mark renewals for these products are still pending. Our inability to timely review and obtain CE mark certificates for these and other of our products could prohibit their distribution and marketing in EU member states, which would adversely affect our business, prospects, financial condition and results of operations.

Recent environmental regulatory actions regarding medical device sterilization facilities could result in disruptions in the supply of certain of our products and could adversely affect our business, results of operations and financial condition.

Our disposable products that are used with our neXus® Ultrasonic Surgical Aspirator System require sterilization using ethylene oxide prior to sale. Ethylene oxide sterilization is a common and scientifically proven sterilization method that is widely used in the medical device industry. We contract with third party sterilizers to perform this service. Concerns about unsafe levels of ethylene oxide emissions in the air around some sterilization facilities have resulted in certain state environmental protection agency actions against those facilities that have impacted medical device manufacturers' ability to use the ethylene oxide process to sterilize their devices. For example, recently the operations of certain of our contracted sterilization providers were temporarily suspended by the supplier as a voluntary response to a state environmental agency investigation. While such actions have not disrupted our ability to supply products and the previously shut down facilities have been permitted to resume certain operations after implementation of increased emissions controls, it is uncertain as to whether these facilities will be shut down again for environmental, health and safety concerns, or whether any other sterilization facilities we may contract with in the future will be required to shut down for environmental, health and safety concerns, especially given the increased scrutiny on the use and emission of ethylene oxide for sterilization. To the extent that our third party sterilizers are unable to sterilize our products, whether due to these regulatory or other limitations (such as capacity, reductions in operations, or availability of materials for sterilization), we may be unable to transition to other third party sterilizers, sterilizer locations or sterilization methods in a timely or cost effective manner, or at all, which could have a material adverse impact on our results of operations and financial condition.

If we are unable to fund the remainder of the deferred consideration for the CartiHeal Acquisition as it becomes due, we will be subject to penalty interest payment and might lose the assets we acquired in the CartiHeal Acquisition.

On April 4, 2022, we exercised our Call Option to acquire CartiHeal, excluding the ownership interest already owned by us, for approximately $315.0 million with an additional approximately $135.0 million payable contingent upon the achievement of $75.0 million in trailing twelve-month sales. Pursuant to the CartiHeal Amendment entered into on June 17, 2022, we deferred $215.0 million of upfront consideration otherwise payable to CartiHeal stockholders at the closing of the CartiHeal Acquisition. We closed the acquisition on July 12, 2022 with an upfront payment of $100.0 million, funded through the $50.0 million previously deposited in escrow and an extension of an $80.0 million Term Loan Facility under the Amended 2019 Credit Agreement. We are required to pay the Deferred Amount in five tranches commencing in 2023 and ending no later than 2027, upon the earlier of the achievement of certain milestones and the occurrence of such installment payment dates. Interest on each tranche of the Deferred Amount is accrued at a rate of 8.0% annually until such tranche becomes due and payable and is paid, subject to a penalty interest at a rate of 10.0% per annum if we are unable to pay the amount when due and payable. Our obligation to pay the Deferred Amount also is secured by a first ranking fixed pledge of all of the share capital and intellectual property of CartiHeal and a first ranking floating pledge of all of the assets acquired in the CartiHeal Acquisition.

We expect to fund the Deferred Amount with cash on hand, in combination with the borrowing availability under our credit facility and our expected cash from operations. However, in the event our expected cash from operations together with the borrowing availability under our credit facility are not sufficient, we might require additional capital. If we were to seek additional funds from public and private stock offerings, borrowings under our existing or new credit facilities or other sources in order to fund the Deferred Amount under the CartiHeal Amendment and other future initiatives related to the expansion of our business, such financing might not be available on acceptable or commercially reasonable terms, if at all. Such alternative sources of borrowing might be subject to the approval of the requisite lenders under our credit facilities, which we might not be able to secure under reasonable terms.

Furthermore, if we issue equity or debt securities to raise additional capital, our existing stockholders might experience dilution, and the new equity or debt securities might 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 might 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 fund any tranche of the Deferred Amount as such tranche becomes due, such unfunded amount will thereafter bear interest at a penalty rate of 10.0% per annum (as opposed to 8.0%) until paid, and CartiHeal's former security holders will be entitled to enforce the pledge agreements securing our obligation to pay such Deferred Amounts when due and payable pursuant to the CartiHeal Amendment. If such events were to occur, it could adversely affect our results of operations, financial condition and business.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

There were no sales of unregistered securities during the three months ended October 1, 2022.

Item 3. Defaults Upon Senior Securities

Not Applicable

Item 4. Mine Safety Disclosures

Not Applicable

Item 5. Other Information

Not Applicable

Item 6. Exhibits

Exhibit No.	Description	Form	File No.	Exhibit	Filing Date	Filed / Furnished Herewith
10.1	Amendment No. 3 to Credit and Guaranty Agreement between Bioventus LLC, Wells Fargo Bank, National Association, as administrative agent and collateral agent, and the lenders and other financial institutions party thereto, dated July 11, 2022	8-K	001-37844	10.1	7/12/2022	
31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended					*
31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as amended					*
32	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					**
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					***
101.SCH	Inline XBRL Taxonomy Extension Schema Document					***
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					***
101.DEF	Inline XBRL Extension Definition Linkbase Document					***
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					***
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					***
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					***

* Filed herewith
** Furnished herewith
*** Submitted electronically herewith

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned duly authorized.

BIOVENTUS INC.

November 21, 2022
Date

/s/ Mark L. Singleton
Mark L. Singleton
Senior Vice President and Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

Exhibit 31.1

CERTIFICATIONS

I, Kenneth M. Reali, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bioventus Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Kenneth M. Reali

Name: Kenneth M. Reali

Title: Chief Executive Officer and Director (Principal Executive Officer)

Date: November 21, 2022

Exhibit 31.2

CERTIFICATIONS

I, Mark L. Singleton, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bioventus Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Mark L. Singleton

Name: Mark L. Singleton

Title: Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Date: November 21, 2022

Exhibit 32

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, in connection with the Quarterly Report on Form 10-Q of Bioventus Inc. (the Company) for the quarter ended October 1, 2022, as filed with the Securities and Exchange Commission on the date hereof (the Report), each of Kenneth M. Reali, Chief Executive Officer and Director of the Company and Mark L. Singleton, Senior Vice President and Chief Financial Officer of the Company, hereby certifies, that, to such officer's knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Kenneth M. Reali

Name: Kenneth M. Reali
Title: Chief Executive Officer and Director (Principal Executive Officer)

/s/ Mark L. Singleton

Name: Mark L. Singleton
Title: Senior Vice President and Chief Financial Officer (Principal Financial Officer)

Date: November 21, 2022