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DELTA REPORT

10-Q

PEN - PENUMBRA INC

10-Q - MARCH 31, 2024 COMPARED TO 10-Q - SEPTEMBER 30, 2023

The following comparison report has been automatically generated

TOTAL DELTAS	911
CHANGES	226
DELETIONS	388
ADDITIONS	297

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 September 30, 2023 March 31, 2024

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: 001-37557

Penumbra, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**05-0605598**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

One Penumbra Place
Alameda, CA 94502
(Address of principal executive offices, including zip code)

(510) 748-3200
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, Par value $0.001 per share	PEN	The New York Stock Exchange

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 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 October 19, 2023 April 23, 2024, the registrant had 38,596,366 38,764,917 shares of common stock, par value $0.001 per share, outstanding.

FORM 10-Q

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PART I - FINANCIAL INFORMATION

ITEM 1. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS.

Penumbra, Inc.

Condensed Consolidated Balance Sheets

(unaudited)

(in thousands)

		September 30, 2023	December 31, 2022		
		March 31, 2024		March 31, 2024	December 31, 2023
Assets	**Assets**				
Current assets:	Current assets:				

Current assets:					
Current assets:					
Cash and cash equivalents					
Cash and cash equivalents					
Cash and cash equivalents	Cash and cash equivalents	$	100,757	$	69,858
Marketable investments	Marketable investments		148,098		118,172
Accounts receivable, net of allowance for credit losses of $3,155 and $862 at September 30, 2023 and December 31, 2022, respectively			206,615		203,384
Accounts receivable, net of allowance for credit losses of $3,020 and $3,169 at March 31, 2024 and December 31, 2023, respectively					
Inventories	Inventories		374,245		334,006
Prepaid expenses and other current assets	Prepaid expenses and other current assets		38,761		30,279
Total current assets					
Total current assets					
Total current assets	Total current assets		868,476		755,699
Property and equipment, net	Property and equipment, net		65,632		65,015
Operating lease right-of-use assets	Operating lease right-of-use assets		184,520		192,636
Finance lease right-of-use assets	Finance lease right-of-use assets		31,364		33,323
Intangible assets, net	Intangible assets, net		73,452		81,161
Goodwill	Goodwill		165,954		166,046
Deferred taxes	Deferred taxes		64,236		64,213
Deferred taxes					
Deferred taxes					
Other non-current assets	Other non-current assets		14,743		12,793
Total assets	Total assets	$	1,468,377		$1,370,886
Liabilities and Stockholders' Equity	**Liabilities and Stockholders' Equity**				
Current liabilities:	Current liabilities:				
Current liabilities:					
Current liabilities:					
Accounts payable					
Accounts payable					
Accounts payable	Accounts payable	$	27,996	$	26,679
Accrued liabilities	Accrued liabilities		104,184		106,300

Current operating lease liabilities	Current operating lease liabilities	10,827	10,033	
Current finance lease liabilities	Current finance lease liabilities	2,071	1,920	
Total current liabilities	Total current liabilities	145,078	144,932	
Non-current operating lease liabilities	Non-current operating lease liabilities	192,117	198,955	
Non-current operating lease liabilities				
Non-current operating lease liabilities				
Non-current finance lease liabilities	Non-current finance lease liabilities	23,779	24,865	
Other non-current liabilities	Other non-current liabilities	3,265	3,276	
Total liabilities	Total liabilities	364,239	372,028	
Commitments and contingencies (Note 9)				
Commitments and contingencies (Note 8)				Commitments and contingencies (Note 8)
Stockholders' equity:	Stockholders' equity:			
Common stock				
Common stock				
Common stock	Common stock	38	38	
Additional paid-in capital	Additional paid-in capital	1,030,700	963,040	
Accumulated other comprehensive loss	Accumulated other comprehensive loss	(7,240)	(8,124)	
Accumulated other comprehensive loss				
Accumulated other comprehensive loss				
Retained earnings				
Retained earnings				
Retained earnings	Retained earnings	80,640	43,904	
Total stockholders' equity	Total stockholders' equity	1,104,138	998,858	
Total stockholders' equity				
Total stockholders' equity				
Total liabilities and stockholders' equity	Total liabilities and stockholders' equity	$ 1,468,377	$1,370,886	

See accompanying notes to the unaudited condensed consolidated financial statements

Penumbra, Inc.

Condensed Consolidated Statements of Operations

(unaudited)

(in thousands, except share and per share amounts)

	Three Months Ended March 31,
	2024
Revenue	
Cost of revenue	
Gross profit	
Operating expenses:	
Research and development	
Sales, general and administrative	
Total operating expenses	
Income from operations	
Interest and other income, net	

Three Months Ended March 31,
Three Months Ended March 31,
2024
2024
Revenue
Revenue
Cost of revenue
Cost of revenue
Gross profit
Gross profit
Operating expenses:
Operating expenses:
Research and development
Research and development
Sales, general and administrative
Sales, general and administrative
Total operating expenses
Total operating expenses
Income from operations
Income from operations
Interest and other income, net
Interest and other income, net

Income before income taxes

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Revenue	$ 270,946	$ 213,678	$ 773,843	$ 625,917
Cost of revenue	93,228	78,351	278,192	229,137
Gross profit	177,718	135,327	495,651	396,780
Operating expenses:				
Research and development	20,958	21,320	62,481	61,443
Sales, general and administrative	125,920	108,573	376,433	334,088
Acquired in-process research and development	18,215	—	18,215	—
Total operating expenses	165,093	129,893	457,129	395,531
Income from operations	12,625	5,434	38,522	1,249

Interest income (expense), net	1,123	(43)	2,516	(162)
Other (expense) income, net	(444)	(2,356)	454	(4,323)
Income (loss) before income taxes	13,304	3,035	41,492	(3,236)
Income before income taxes				
Income before income taxes				
Provision for income taxes				
Provision for income taxes				
Provision for income taxes Provision for income taxes	4,090	5,306	4,756	2,643
Net income (loss)	$ 9,214	$ (2,271)	$ 36,736	$ (5,879)
Net income				
Net income				
Net income				
Net income (loss) per share:				
Net income per share:				
Net income per share:				
Net income per share:				
Basic				
Basic				
Basic Basic	$ 0.24	$ (0.06)	$ 0.96	$ (0.16)
Diluted Diluted	$ 0.23	$ (0.06)	$ 0.94	$ (0.16)
Diluted				
Diluted				
Weighted average shares outstanding:				
Weighted average shares outstanding:				
Weighted average shares outstanding: Weighted average shares outstanding:				
Basic Basic	38,462,463	37,918,452	38,324,279	37,778,362
Basic				
Basic				
Diluted Diluted	39,219,966	37,918,452	39,183,635	37,778,362
Diluted				
Diluted				

See accompanying notes to the unaudited condensed consolidated financial statements

Penumbra, Inc.

Condensed Consolidated Statements of Comprehensive Income (Loss)

(unaudited)

(in thousands)

		Three Months Ended March 31,
		Three Months Ended March 31,
		Three Months Ended March 31,
	2024	
	2024	

	2024
Net income	
Net income	
Net income	
Other comprehensive (loss) income, net of tax:	
Other comprehensive (loss) income, net of tax:	
Other comprehensive (loss) income, net of tax:	
Foreign currency translation adjustments, net of tax	
Foreign currency translation adjustments, net of tax	
Foreign currency translation adjustments, net of tax	
Net change in unrealized gains or losses on available-for-sale securities, net of tax	
Net change in unrealized gains or losses on available-for-sale securities, net of tax	
Net change in unrealized gains or losses on available-for-sale securities, net of tax	
Total other comprehensive (loss) income, net of tax	
Total other comprehensive (loss) income, net of tax	
Total other comprehensive (loss) income, net of tax	
Comprehensive income	
Comprehensive income	
Comprehensive income	

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income (loss)	$ 9,214	$ (2,271)	$ 36,736	$ (5,879)
Other comprehensive (loss) income, net of tax:				
Foreign currency translation adjustments, net of tax	(2,359)	(2,812)	(1,302)	(7,013)
Net change in unrealized gains (losses) on available-for-sale securities, net of tax	698	(383)	2,186	(3,710)
Total other comprehensive (loss) income, net of tax	(1,661)	(3,195)	884	(10,723)
Comprehensive income (loss)	$ 7,553	$ (5,466)	$ 37,620	$ (16,602)

See accompanying notes to the unaudited condensed consolidated financial statements

Penumbra, Inc.

Condensed Consolidated Statements of Stockholders' Equity

(unaudited)

(in thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Common Stock					
	Common Stock					
	Shares					
Balance at December 31, 2023						
Balance at December 31, 2023						
Balance at December 31, 2023						
Issuance of common stock						
Shares held for tax withholdings	**Common Stock**		**Additional Paid-in Capital**	**Accumulated Other Comprehensive Loss**	**Retained Earnings**	**Total Stockholders' Equity**
	Shares	**Amount**	**Additional Paid-in Capital**	**Accumulated Other Comprehensive Loss**	**Retained Earnings**	**Total Stockholders' Equity**
Balance at December 31, 2022	38,107,977	$ 38			$998,858	
Issuance of common stock	134,936	—	2,209	—	—	2,209
Issuance of common stock under employee stock purchase plan	—	—	—	—	—	—
Shares held for tax withholdings						
Shares held for tax withholdings Shares held for tax withholdings	(813)	—	(204)	—	—	(204)
Stock-based compensation Stock-based compensation	—	—	13,781	—	—	13,781
Other comprehensive income	—	—	—	1,263	—	1,263
Net income	—	—	—	—	8,562	8,562
Balance at March 31, 2023	38,242,100	$ 38	$ 978,826	$ (6,861)	$ 52,466	$ 1,024,469
Other comprehensive loss						
Issuance of common stock	114,930		1,614	—	—	1,614
Issuance of common stock under employee stock purchase plan	51,264		8,385	—	—	8,385
Shares held for tax withholdings	(2,689)		(822)	—	—	(822)
Stock-based compensation	—	—	12,655	—	—	12,655
Other comprehensive income	—	—	—	1,282	—	1,282
Net income	—	—	—	—	18,960	18,960
Balance at June 30, 2023	38,405,605	$ 38	$1,000,658	$ (5,579)	$ 71,426	$ 1,066,543
Issuance of common stock	95,927		834	—	—	834

Issuance of common stock under employee stock purchase plan	—		—	—	—	—
Issuance of common stock in connection with asset acquisition[1]	71,211		17,227	—	—	17,227
Shares held for tax withholdings	(404)		(123)	—	—	(123)
Stock-based compensation			12,104	—	—	12,104
Capital contribution from non-controlling interest	—	—	—	—	—	—
Other comprehensive loss						
Other comprehensive loss	—	—	—	(1,661)	—	(1,661)
Net income	—	—	—	—	9,214	9,214
Balance at September 30, 2023	38,572,339	$ 38	$ 1,030,700	$ (7,240)	$ 80,640	$ 1,104,138
Balance at March 31, 2024						

[1] Refer to Note “5. Asset Acquisition” for more information on the impact of the asset acquisition during the quarter ended September 30, 2023.

Penumbra, Inc.

Condensed Consolidated Statements of Stockholders’ Equity

(unaudited)

(in thousands, except share amounts)

	Common Stock Common Stock Common Stock					
	Shares		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders’ Equity
Balance at December 31, 2022						
Balance at December 31, 2022						
Balance at December 31, 2022						
Issuance of common stock						
Shares held for tax withholdings						
Shares held for tax withholdings						
Shares held for tax withholdings						

Stock-based compensation	
Other comprehensive income	
Other comprehensive income	
Other comprehensive income	
Net income	
Balance at March 31, 2023	

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2021	37,578,483	$ 37	$ 910,614	$ (2,630)	$ 45,906	$ 953,927
Issuance of common stock	103,984	1	1,102	—	—	1,103
Shares held for tax withholdings	(14,243)	—	(3,181)	—	—	(3,181)
Stock-based compensation	—	—	10,716	—	—	10,716
Other comprehensive loss	—	—	—	(3,342)	—	(3,342)
Net income	—	—	—	—	79	79
Balance at March 31, 2022	37,668,224	$ 38	$ 919,251	$ (5,972)	$ 45,985	$ 959,302
Issuance of common stock	158,735	—	3,466	—	—	3,466
Issuance of common stock under employee stock purchase plan	66,098	—	7,998	—	—	7,998
Shares held for tax withholdings	(12,950)	—	(1,900)	—	—	(1,900)
Stock-based compensation	—	—	9,022	—	—	9,022
Other comprehensive loss	—	—	—	(4,186)	—	(4,186)
Net loss	—	—	—	—	(3,687)	(3,687)
Balance at June 30, 2022	37,880,107	$ 38	$ 937,837	$ (10,158)	$ 42,298	$ 970,015
Issuance of common stock	99,921	—	1,725			1,725

Shares held for tax withholdings	(11,737)	—	(1,887)	—	—	(1,887)
Stock-based compensation	—	—	9,365	—	—	9,365
Other comprehensive loss	—	—	—	(3,195)	—	(3,195)
Net loss	—	—	—		(2,271)	(2,271)
Balance at September 30, 2022	37,968,291	$ 38	$ 947,040	$ (13,353)	$ 40,027	$ 973,752

See accompanying notes to the unaudited condensed consolidated financial statements

Penumbra, Inc.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

		Nine Months Ended September 30, 2023	Nine Months Ended September 30, 2022	Three Months Ended March 31, 2024	Three Months Ended March 31, 2023
CASH FLOWS FROM OPERATING ACTIVITIES:	**CASH FLOWS FROM OPERATING ACTIVITIES:**				
Net income (loss)		$ 36,736	$ (5,879)		
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Net income					
Net income					
Net income					
Adjustments to reconcile net income to net cash provided by operating activities:					
Depreciation and amortization					
Depreciation and amortization					
Depreciation and amortization	Depreciation and amortization	20,218	17,880		
Stock-based compensation	Stock-based compensation	39,725	27,381		
Stock-based compensation					
Stock-based compensation					
Inventory write-downs					
Inventory write-downs					
Inventory write-downs	Inventory write-downs	5,250	2,051		

Deferred taxes	Deferred taxes	(35)	2,804
Acquired in-process research and development		18,215	—
Deferred taxes			
Deferred taxes			
Other			
Other			
Other	Other	2,623	879
Changes in operating assets and liabilities:	Changes in operating assets and liabilities:		
Accounts receivable	Accounts receivable	(6,609)	(57,357)
Accounts receivable			
Accounts receivable			
Inventories	Inventories	(46,466)	(62,317)
Prepaid expenses and other current and non-current assets	Prepaid expenses and other current and non-current assets	(10,288)	(1,958)
Accounts payable	Accounts payable	2,054	13,090
Accrued expenses and other non-current liabilities	Accrued expenses and other non-current liabilities	(351)	6,165
Proceeds from lease incentives		—	263
Net cash provided by (used in) operating activities		61,072	(56,998)
Net cash provided by operating activities			
Net cash provided by operating activities			
Net cash provided by operating activities			
CASH FLOWS FROM INVESTING ACTIVITIES:	**CASH FLOWS FROM INVESTING ACTIVITIES:**		
Asset acquisition, net of cash acquired		(988)	—
Purchases of non-marketable investments			
Purchases of non-marketable investments			
Purchases of non-marketable investments			
Purchases of marketable investments	Purchases of marketable investments	(73,370)	—

Proceeds from sales of marketable investments		—	1,180
Purchases of marketable investments			
Purchases of marketable investments			
Proceeds from maturities of marketable investments	Proceeds from maturities of marketable investments	46,070	60,713
Proceeds from maturities of marketable investments			
Proceeds from maturities of marketable investments			
Purchases of property and equipment			
Purchases of property and equipment			
Purchases of property and equipment	Purchases of property and equipment	(11,568)	(15,736)
Other	Other	(500)	—
Net cash (used in) provided by investing activities		(40,356)	46,157
Other			
Other			
Net cash provided by investing activities			
CASH FLOWS FROM FINANCING ACTIVITIES:	**CASH FLOWS FROM FINANCING ACTIVITIES:**		
Proceeds from exercises of stock options	Proceeds from exercises of stock options	4,657	6,293
Proceeds from issuance of stock under employee stock purchase plan		8,385	7,998
Proceeds from exercises of stock options			
Proceeds from exercises of stock options			
Payment of employee taxes related to vested stock			
Payment of employee taxes related to vested stock			
Payment of employee taxes related to vested stock	Payment of employee taxes related to vested stock	(1,149)	(6,968)
Payments of finance lease obligations	Payments of finance lease obligations	(1,456)	(1,299)

Other	Other	(155)	(137)
	Net cash provided by financing activities	10,282	5,887
Other			
Other			
Net cash (used in) provided by financing activities			
Effect of foreign exchange rate changes on cash and cash equivalents	Effect of foreign exchange rate changes on cash and cash equivalents	(99)	419
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS		30,899	(4,535)
NET INCREASE IN CASH AND CASH EQUIVALENTS			
CASH AND CASH EQUIVALENTS—Beginning of period	CASH AND CASH EQUIVALENTS—Beginning of period	69,858	59,379
CASH AND CASH EQUIVALENTS—End of period	CASH AND CASH EQUIVALENTS—End of period	$100,757	$54,844
NONCASH INVESTING AND FINANCING ACTIVITIES:	**NONCASH INVESTING AND FINANCING ACTIVITIES:**		
Right-of-use assets obtained in exchange for operating lease obligations	Right-of-use assets obtained in exchange for operating lease obligations	$ 1,486	$51,495
Right-of-use assets obtained in exchange for operating lease obligations			
Right-of-use assets obtained in exchange for operating lease obligations			
Right-of-use assets obtained in exchange for finance lease obligations	Right-of-use assets obtained in exchange for finance lease obligations	$ 531	$ 278

Purchase of property and equipment funded through accounts payable and accrued liabilities	Purchase of property and equipment funded through accounts payable and accrued liabilities	$ 1,275	$ 1,847
Purchase of property and equipment funded through accounts payable and accrued liabilities			
Purchase of property and equipment funded through accounts payable and accrued liabilities			
Fair value of common stock issued as consideration in connection with an asset acquisition		$ 17,227	$ —
SUPPLEMENTAL CASH FLOW INFORMATION:			
SUPPLEMENTAL CASH FLOW INFORMATION:			
SUPPLEMENTAL CASH FLOW INFORMATION:	**SUPPLEMENTAL CASH FLOW INFORMATION:**		
Cash paid for amounts included in the measurement of operating lease liabilities	Cash paid for amounts included in the measurement of operating lease liabilities	$ 14,985	$ 13,017
Cash paid for amounts included in the measurement of operating lease liabilities			
Cash paid for amounts included in the measurement of operating lease liabilities			
Cash paid for income taxes	Cash paid for income taxes	$ 4,029	$ 2,503

See accompanying notes to the unaudited condensed consolidated financial statements

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Penumbra, Inc.

Notes to Condensed Consolidated Financial Statements

(unaudited)

1. Organization and Description of Business

Penumbra, Inc. (the “Company”) is a global healthcare company focused on innovative therapies. The Company designs, develops, manufactures and markets novel products and has a broad portfolio that addresses challenging medical conditions in markets with significant unmet need. The Company focuses on developing, manufacturing and marketing novel products for use by specialist physicians and other healthcare providers to drive improved clinical and health outcomes. The Company believes that the cost-effectiveness of our products is attractive to our customers.

2. Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying condensed consolidated balance sheet as of September 30, 2023 March 31, 2024, the condensed consolidated statements of operations, the condensed consolidated statements of comprehensive income (loss), and the condensed consolidated statements of stockholders' equity for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, and the condensed consolidated statements of cash flows for the nine three months ended September 30, 2023 March 31, 2024 and 2022 2023 are unaudited. The unaudited condensed consolidated financial statements included herein have been prepared by the Company in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and the applicable rules and regulations of the U.S. Securities and Exchange Commission (the "SEC") for interim financial information. Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. The condensed consolidated balance sheet data as of December 31, 2022 December 31, 2023 was derived from the audited financial statements as of that date.

The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to state fairly the Company's financial position as of September 30, 2023 March 31, 2024, the results of its operations for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, the changes in its comprehensive income (loss) and stockholders' equity for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, and its cash flows for the nine three months ended September 30, 2023 March 31, 2024 and 2022. 2023. The results for the three and nine months ended September 30, 2023 March 31, 2024 are not necessarily indicative of the results that may be expected for the year ending December 31, 2023 December 31, 2024 or for any other future annual or interim period. Certain changes in presentation were made to interest income (expense), net and other income (expense), net in the condensed consolidated statements of operations for the three months ended March 31, 2023 to conform to the presentation for the three months ended March 31, 2024.

The information included in this Quarterly Report on Form 10-Q should be read in conjunction with the audited consolidated financial statements and notes thereto for the fiscal year ended December 31, 2022 December 31, 2023, included in the Company's Annual Report on Form 10-K. 10-K as filed with the SEC on February 22, 2024. There have been no changes to the Company's significant accounting policies during the nine three months ended September 30, 2023 March 31, 2024, as compared to the significant accounting policies described in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, except for the granting of restricted stock units with performance conditions to senior management during the three months ended March 31, 2023 and the acquisition of In-Process Research and Development ("IPR&D") in an asset acquisition during the three months ended September 30, 2023 December 31, 2023. Refer to Note "10. Stockholders' Equity" for information on the Company's accounting policy for equity awards with performance conditions and Note "5. Asset Acquisition" for information on the Company's accounting policy for acquired IPR&D in an asset acquisition.

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and equity accounts; disclosure of contingent assets and liabilities at the date of the financial statements; and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, including those related to marketable investments, allowances for credit losses, the amount of variable consideration included in the transaction price, warranty reserve, valuation of inventories, useful lives of property and equipment, intangibles, operating and financing lease right-of-use ("ROU") assets and liabilities, income taxes, contingent consideration and other contingencies, including the probability of achieving performance targets associated with equity awards with performance conditions, among others. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which

form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other data. Actual results could differ from those estimates.

Segments

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The Company determined its operating segment on the same basis that it uses to evaluate its performance internally. The Company has one business activity: the design, development, manufacturing and marketing of innovative medical products, and operates as one operating segment. The Company's chief operating decision-maker, its Chief Executive Officer, reviews its consolidated operating results for the purpose of allocating resources and evaluating financial performance.

Recently Issued Accounting Standards

In December 2023, the FASB issued Accounting Standards Update ("ASU") No. 2023-09, Income Taxes— Improvements to Income Tax Disclosures. The standard enhances annual income tax disclosures, by requiring additional disaggregated information about an entity's effective tax rate reconciliation and income taxes paid. The ASU adds guidance that requires public business entities to disclose additional information in specified categories with respect to the reconciliation of the effective tax rate to the statutory rate (the rate reconciliation) for federal, state, and foreign income taxes. It also requires greater detail about individual reconciling items in the rate reconciliation to the extent the impact of those items exceeds a specified threshold (5%). In addition to new disclosures associated with the rate reconciliation, the ASU requires information pertaining to taxes paid (net of refunds received) to be disaggregated for federal, state, and foreign taxes and further disaggregated for specific jurisdictions to the extent the related amounts exceed the quantitative threshold. For public business entities, the amendments in ASU 2023-09 are effective for annual periods beginning after December 15, 2024. Early adoption is permitted for annual financial statements not yet issued or made available for issuance. The Company is assessing the impact the new guidance will have on the disclosures within its consolidated financial statements and does not elect to early adopt as of March 31, 2024.

In November 2023, the FASB issued ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures. The ASU expands public entities' segment disclosures by requiring disclosure of significant segment expenses that are regularly reviewed by the CODM and included within each reported measure of segment profit or loss, an amount and description of its composition for other segment items, and interim disclosures of a reportable segment's profit or loss and assets. The ASU also allows, in addition to the measure that is most consistent with U.S. GAAP, the disclosure of additional measures of segment profit or loss that are used by the CODM in assessing segment performance and deciding how to allocate resources. All disclosure requirements under ASU 2023-07 are also required for public entities with a single reportable segment. The ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, on a retrospective basis, with early adoption permitted. The Company is assessing the impact the new guidance will have on the disclosures within its consolidated financial statements and does not elect to early adopt as of March 31, 2024.

In March 2024, the SEC issued Release Nos. 33-11275; 34-99678 "The Enhancement and Standardization of Climate-Related Disclosures for Investors", which will require registrants to provide certain climate-related information in their registration statements and annual reports, including information about a registrant's climate-related risks that have materially impacted, or are reasonably likely to have a material impact on, its business strategy, results of operations, or financial condition, as well as certain disclosures related to severe weather events and other natural conditions in a registrant's audited financial statements. The disclosure requirements follow a phase-in timeline, with initial requirements beginning with the Company's annual report for the year ending December 31, 2025. On April 4, 2024, the SEC voluntarily stayed implementation of this new rule pending judicial review. The Company is currently analyzing the impact that the new climate-related rules will have on the disclosures within its consolidated financial statements and will continue to monitor the status of the rules while legal challenges are pending.

3. Investments and Fair Value of Financial Instruments

Marketable and Non-Marketable Investments

The Company's marketable and non-marketable investments have been classified and accounted for as available-for-sale. The following table presents the Company's marketable and non-marketable investments as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023 were as follows (in thousands):

	September 30, 2023				
		Securities with net gains or losses in accumulated other comprehensive income (loss)			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Loss	Fair Value
Commercial paper	$ 47,842	$ 2	$ (13)	$ —	$ 47,831
Certificate of deposit	8,190	3	(1)	—	8,192
U.S. treasury	13,079	—	(302)	$ —	12,777
U.S. agency and government sponsored securities	2,999	—	(31)	—	2,968
U.S. states and municipalities	11,615	—	(110)	—	11,505
Corporate bonds	65,686	1	(862)	—	64,825
Total	$ 149,411	$ 6	$ (1,319)	$ —	$ 148,098

	December 31, 2022				
		Securities with net gains or losses in accumulated other comprehensive income (loss)			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Loss	Fair Value
U.S. treasury	$ 14,482	$ —	$ (478)	$ —	$ 14,004
U.S. agency and government sponsored securities	6,999	—	(176)	—	6,823
U.S. states and municipalities	23,460	—	(501)	—	22,959
Corporate bonds	76,731	—	(2,345)	—	74,386
Total	$ 121,672	$ —	$ (3,500)	$ —	$ 118,172

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	March 31, 2024

			Securities with net gains or losses in accumulated other comprehensive income (loss)							
		Amortized Cost		Gross Unrealized Gains		Gross Unrealized Losses		Allowance for Credit Loss		Fair Value
Marketable investments:										
Commercial paper	$	31,449	$	7	$	(11)	$	—	$	31,445
Certificate of Deposit		4,632		4		—		—		4,636
U.S. treasury		13,210		—		(142)	$	—		13,068
U.S. states and municipalities		900		—		(9)		—		891
Corporate bonds		40,542		19		(241)		—		40,320
Total		90,733		30		(403)		—		90,360
Non-marketable investments:										
Non-marketable debt securities		10,000		—		—		—		10,000
Total		10,000		—		—		—		10,000
Total	$	100,733	$	30	$	(403)	$	—	$	100,360

	December 31, 2023									
			Securities with net gains or losses in accumulated other comprehensive income (loss)							
		Amortized Cost		Gross Unrealized Gains		Gross Unrealized Losses		Allowance for Credit Loss		Fair Value
Marketable investments:										
Commercial paper	$	39,727	$	32	$	(3)	$	—	$	39,756
Certificate of Deposit		6,392		9		—		—		6,401
U.S. treasury		10,226		—		(160)		—		10,066
U.S. states and municipalities		2,950		—		(35)		—		2,915
Corporate bonds		62,964		29		(430)		—		62,563
Total	$	122,259	$	70	$	(628)	$	—	$	121,701

As of September 30, 2023 March 31, 2024, the total amortized cost basis of the Company's available-for-sale debt securities, in excluding non-marketable debt securities, is an unrealized loss position exceeded its fair value by $1.3 million of $0.4 million, which was primarily attributable to widening credit spreads and rising interest rates since purchase. The Company reviewed its available-for-sale securities in an unrealized loss position and concluded that the decline in fair value was not related to credit losses and is recoverable. During the three and nine months ended September 30, 2023 March 31, 2024, no allowance for credit losses was recorded and instead the unrealized losses are reported as a component of accumulated other comprehensive loss.

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The following tables present the gross unrealized losses and the fair value for those marketable investments that were in an unrealized loss position for less than and more twelve months or for twelve months or more as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023 (in thousands):

	March 31, 2024				
	Less than 12 months	Less than 12 months		More than 12 months	
	Fair Value	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Marketable investments:					

Commercial paper
Commercial paper
Commercial paper

U.S. treasury
U.S. treasury
U.S. treasury

	September 30, 2023					
	Less than 12 months		12 months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
Commercial paper	$ 39,535	$ (13)	$ —	$ —	$ 39,535	$ (13)
Certificate of deposit	2,403	(1)	—	—	2,403	(1)
U.S. treasury	8,454	(132)	4,324	(170)	12,778	(302)
U.S. agency and government sponsored securities	—	—	2,968	(31)	2,968	(31)
U.S. states and municipalities	—	—	7,005	(110)	7,005	(110)
Corporate bonds	21,461	(25)	40,150	(837)	61,611	(862)
Total	$ 71,853	$ (171)	$ 54,447	$ (1,148)	$ 126,300	$ (1,319)

U.S. states and municipalities
U.S. states and municipalities
U.S. states and municipalities

Total
Total

	December 31, 2022					
	Less than 12 months		12 months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. treasury	$ —	$ —	$14,004	$ (478)	$ 14,004	$ (478)
U.S. agency and government sponsored securities	—	—	6,823	(176)	6,823	(176)

December 31, 2023

Less than 12 months

Fair Value

December 31, 2023

Less than 12 months		More than 12 months		Total	
Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses

Marketable investments:

Commercial paper
Commercial paper
Commercial paper
U.S. treasury
U.S. treasury
U.S. treasury
U.S. states and municipalities

U.S. states and municipalities							
U.S. states and municipalities	U.S. states and municipalities	4,567	(68)	13,772	(433)	18,339	(501)
Corporate bonds	Corporate bonds	15,327	(101)	59,059	(2,244)	74,386	(2,345)
Total	Total	$ 19,894	$ (169)	$93,658	$ (3,331)	$113,552	$ (3,500)
Total							
Total							

The following table presents the contractual maturities of the Company's marketable investments as of September 30, 2023 March 31, 2024 (in thousands):

		September 30, 2023	
		Amortized Cost	Fair Value
Due in less than one year		$ 141,700	$ 140,612
		March 31, 2024	
		March 31, 2024	
		March 31, 2024	
Marketable investments:			
Marketable investments:			
Marketable investments:			
Due in one year			
Due in one year			
Due in one year			
Due in one to five years			
Due in one to five years			
Due in one to five years	Due in one to five years	7,711	7,486
Total	Total	$ 149,411	$ 148,098
Total			
Total			

Non-Marketable Investments

During the three months ended March 31, 2024, the Company completed a strategic investment in a privately held company. Under the terms of the investment, the Company paid $10.0 million in exchange for shares of Series B preferred stock which represented an immaterial investment in the investment in outstanding equity securities of the privately held company. The Company determined that the investment did not meet the criteria to be accounted for as an equity method investment under ASC 323. The investment was accounted for as an available-for-sale debt security in accordance with ASC 320 as the preferred stock contains a contingent redemption feature at the Company's option. The investment is included in other non-current assets on the condensed consolidated balance sheet and changes in fair value are recorded in total other comprehensive (loss) income, net of tax. There were no unrealized gains or losses recorded in connection with the Company's non-marketable debt securities during the three months ended March 31, 2024.

Fair Value of Financial Instruments

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the measurement reporting date. The accounting guidance establishes a three-tiered hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The categorization of a financial instrument within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The Company classifies its cash equivalents and marketable investments within Level 1 and Level 2, as it uses quoted market prices or alternative pricing sources and models utilizing market observable inputs. The Company classifies its non-marketable investments in preferred stock in privately held companies within Level 3, as they do not have a readily determinable fair value.

The Company determined the fair value of its Level 1 financial instruments, which are traded in active markets, using quoted market prices for identical instruments.

Marketable investments classified within Level 2 of the fair value hierarchy are valued based on other observable inputs, including broker or dealer quotations or alternative pricing sources. When quoted prices in active markets for identical assets or liabilities are not available, the Company relies on non-binding quotes from its investment managers, which are based on proprietary valuation models of independent pricing services. These models generally use inputs such as observable market data, quoted market prices for similar instruments, historical pricing trends of a security as relative to its peers. To validate the fair value determination provided by its investment managers, the Company reviews the pricing movement in the context of overall market trends and trading information from its investment managers. In addition, the Company assesses the inputs and methods used in determining the fair value in order to determine the classification of securities in the fair value hierarchy.

Non-marketable investments classified within Level 3 of the fair value hierarchy are valued based on unobservable inputs that are supported by little or no market activity. Current financial information of private companies may not be available and consequently the Company estimates the fair value using inputs that are based on the best available information at the measurement date, which may include the most recent financial information, financial projections, and financing transactions available for the investee and other quantitative and qualitative factors. Additionally, based on the timing, volume, and other characteristics of the available information, the Company may supplement this information by using one or more valuation techniques, including market and income approaches. The Company did not hold any non-marketable investments classified as Level 3 as of December 31, 2023.

The Company did not hold any Level 3 marketable investments as of September 30, 2023 March 31, 2024 or December 31, 2022 December 31, 2023. During the nine three months ended September 30, 2023 March 31, 2024 and 2022, 2023, the Company did not have any transfers between Level 1, Level 2 or Level 3 of the fair value hierarchy. Additionally, the Company did not have any financial assets and liabilities measured at fair value on a non-recurring basis as of September 30, 2023 March 31, 2024 or December 31, 2022 December 31, 2023.

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Penumbra, Inc.

Notes to Condensed Consolidated Financial Statements

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The following tables set forth the Company's financial assets and liabilities measured at fair value by level within the fair value hierarchy as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023 (in thousands):

		As of September 30, 2023				As of March 31, 2024			
		Level 1	Level 2	Level 3	Fair Value	Level 1	Level 2	Level 3	Fair Value
Financial Assets	**Financial Assets**								
Cash equivalents:	**Cash equivalents:**								
Cash equivalents:									
Cash equivalents:									
Commercial paper									
Commercial paper									
Commercial paper									
Certificate of deposit									
Money market funds	Money market funds	$ 35,400	$ —	$ —	$ 35,400				
U.S. treasury									
Marketable investments:	**Marketable investments:**								
Marketable investments:									
Marketable investments:									

Commercial paper					
Commercial paper					
Commercial paper	Commercial paper	—	47,831	—	47,831
Certificate of deposit	Certificate of deposit	—	8,192	—	8,192
U.S. treasury	U.S. treasury	12,777	—	—	12,777
U.S. agency and government sponsored securities		—	2,968	—	2,968
U.S. states and municipalities					
U.S. states and municipalities					
U.S. states and municipalities	U.S. states and municipalities	—	11,505	—	11,505
Corporate bonds	Corporate bonds	—	64,825	—	64,825
Non-marketable investments:					
Non-marketable investments:					
Non-marketable investments:					
Non-marketable investments					
Non-marketable investments					
Non-marketable investments					
Total	**Total**	$ 48,177	$ 135,321	$ —	$ 183,498

		As of December 31, 2022				As of December 31, 2023			
		Level 1	Level 2	Level 3	Fair Value	Level 1	Level 2	Level 3	Fair Value
Financial Assets	**Financial Assets**								
Cash equivalents:	**Cash equivalents:**								
Cash equivalents:									
Cash equivalents:									
Money market funds									
Money market funds									
Money market funds	Money market funds	$21,521	$ —	$—	$ 21,521				
Marketable investments:	**Marketable investments:**								
Commercial paper									
Commercial paper									
Commercial paper									
Certificate of Deposit									
U.S. treasury									
U.S. treasury		14,004	—	—	14,004				
U.S. agency and government sponsored securities		—	6,823	—	6,823				
U.S. states and municipalities									
U.S. states and municipalities									
U.S. states and municipalities	U.S. states and municipalities	—	22,959	—	22,959				

Corporate bonds	Corporate bonds	—	74,386	—	74,386
Total	**Total**	$35,525	$104,168	$—	$139,693
Total					
Total					

4. Balance Sheet Components

Inventories

The components of inventories consisted of the following (in thousands):

	March 31, 2024	December 31, 2023
Raw materials	$ 121,134	$ 119,511
Work in process	36,815	34,489
Finished goods	240,417	234,023
Inventories	$ 398,366	$ 388,023

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4. Balance Sheet Components

Inventories

The following table shows the components of inventories as of September 30, 2023 and December 31, 2022 (in thousands):

	September 30, 2023	December 31, 2022
Raw materials	$ 110,094	$ 90,786
Work in process	43,225	26,793
Finished goods	220,926	216,427
Inventories	$ 374,245	$ 334,006

Accrued Liabilities

The following table shows the components of accrued liabilities as consisted of September 30, 2023 and December 31, 2022 the following (in thousands):

		September 30, 2023	December 31, 2022	March 31, 2024	December 31, 2023
Payroll and employee-related cost		$ 58,807	$ 60,480		
Payroll and employee-related expenses					
Accrued expenses	Accrued expenses	11,920	10,902		
Deferred revenue					
Deferred revenue					
Deferred revenue	Deferred revenue	8,274	9,158		
Other accrued liabilities	Other accrued liabilities	25,183	25,760		
Other accrued liabilities					

Other accrued liabilities			
Total accrued liabilities	Total accrued liabilities	$ 104,184	$ 106,300

The following table shows the changes in the Company's estimated product warranty accrual, included in accrued liabilities, for the nine three months ended September 30, 2023 March 31, 2024 and twelve months ended December 31, 2022 December 31, 2023, respectively (in thousands):

		September 30, 2023	December 31, 2022	March 31, 2024	December 31, 2023
Balance at the beginning of the period	Balance at the beginning of the period	$ 5,370	$ 4,310		
Accruals of warranties issued		1,473	2,451		
Accruals of warranties issued, net					
Settlements of warranty claims	Settlements of warranty claims	(1,030)	(1,391)		
Balance at the end of the period	Balance at the end of the period	$ 5,813	$ 5,370		

5. Asset Acquisition

On September 29, 2023 (the "Closing Date"), the Company acquired an IPR&D asset in an asset acquisition. On the Closing Date, the Company recorded an $18.2 million charge to acquired IPR&D expense in the condensed consolidated statements of operations as the IPR&D asset had no alternative future use.

IPR&D acquired in an asset acquisition is recorded using the cost accumulation model and is immediately expensed if there is no alternative future use at the time of acquisition.

The total consideration transferred was allocated to the non-monetary assets acquired and liabilities assumed using the cost accumulation model based on their relative fair value. The following table summarizes the Closing Date fair value of the consideration transferred (in thousands):

Fair value of common stock consideration(1)	$	17,227
Payment of certain acquiree transaction costs and other liabilities on behalf of acquiree(2)		1,001
Total purchase price	$	18,228

(1)The fair value of the 71,211 shares of common stock issued as part of consideration transferred was determined based on the Closing Date market price of the Company's common stock of $241.91.

(2)Transaction costs and other pre-existing liabilities paid on behalf of the acquiree as part of the consideration transferred for the IPR&D are presented in the investing activities section of the condensed consolidated statements of cash flows.

6. Intangible Assets

Acquired Intangible Assets

The following tables present table presents details of the Company's acquired finite-lived intangible assets as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023 (in thousands, except weighted-average amortization period):

As of September 30, 2023	Weighted-Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net

As of March 31, 2024						As of March 31, 2024	Weighted-Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net
Finite-lived intangible assets:	**Finite-lived intangible assets:**									
Developed technology										
Developed technology										
Developed technology	Developed technology	8.8 years	$83,289	$ (17,259)	$66,030					
Customer relationships	Customer relationships	15.0 years	6,303	(2,626)	3,677					
Trade secrets and processes	Trade secrets and processes	20.0 years	5,256	(1,511)	3,745					
Total intangible assets	**Total intangible assets**	9.7 years	$94,848	$ (21,396)	$73,452					
Total intangible assets										
Total intangible assets										

As of December 31, 2022		Weighted-Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net					
As of December 31, 2023						As of December 31, 2023	Weighted-Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Net
Finite-lived intangible assets:	**Finite-lived intangible assets:**									
Developed technology										
Developed technology										
Developed technology	Developed technology	8.8 years	$83,289	$ (10,113)	$73,176					
Customer relationships	Customer relationships	15.0 years	6,383	(2,340)	4,043					
Trade secrets and processes	Trade secrets and processes	20.0 years	5,256	(1,314)	3,942					
Other		5.0 years	1,646	(1,646)	—					
Total intangible assets										
Total intangible assets										
Total intangible assets	**Total intangible assets**	9.6 years	$96,574	$ (15,413)	$81,161					

The gross carrying amount and accumulated amortization of the customer relationships are the only intangible assets subject to foreign currency translation effects. The Company’s $5.3 million trade secrets and processes intangible asset was recognized in connection with a royalty buyout agreement in 2018.

The following table presents the amortization expense recorded related to the Company’s finite-lived intangible assets for the three and nine months ended September 30, 2023 March 31, 2024 and 2022 2023 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cost of revenue	$ 66	$ 66	$ 197	$ 197
Sales, general and administrative	2,487	2,481	7,461	6,436
Total	$ 2,553	$ 2,547	$ 7,658	$ 6,633

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	Three Months Ended March 31,	
	2024	2023
Cost of revenue	$ 66	$ 66
Sales, general and administrative	2,487	2,486
Total	$ 2,553	$ 2,552

7. 6. Goodwill

The following table presents the changes in goodwill during the nine three months ended September 30, 2023 March 31, 2024 (in thousands):

	Total Company
Balance as of December 31, 2022 December 31, 2023	$ 166,046 166,270
Foreign currency translation	(92) (167)
Balance as of September 30, 2023 March 31, 2024	$ 165,954 166,103

Goodwill Impairment Review

The Company reviews goodwill for impairment annually during the fourth quarter on October 31, or more frequently if events or circumstances indicate that an impairment loss may have occurred. The Company determined there were no impairment indicators as of September 30, 2023 March 31, 2024.

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8. 7. Indebtedness

Credit Agreement

On April 24, 2020, the Company entered into a Credit Agreement (the "Credit Agreement") with JPMorgan Chase Bank, N.A., as administrative agent and lender, and Bank of America, N.A. and Citibank, N.A. as lenders. The Credit Agreement is was secured and provides provided for up to $100 million in available revolving borrowing capacity with an option, subject to certain conditions, for the Company to increase the aggregate borrowing capacity to up to $150 million, and originally matured on April 23, 2021. During the three months ended March 31, 2021, 2022 and 2022, 2023, the Credit Agreement was amended to extend the maturity date and make other changes to the terms of the Credit Agreement.

In the first quarter of 2023, the Company and JPMorgan Chase Bank, N.A., as administrative agent and lender, and Bank of America, N.A. and Citibank, N.A., as lenders, entered into Amendment No. 3 to the Credit Agreement. Pursuant to the amendment, (i) the maturity date of the Credit Agreement was extended from February 17, 2023 to February 16, 2024, (ii) certain changes were made to the reference benchmark interest rates, applicable margins and borrowing mechanics under the Credit Agreement, which have the overall effect of increasing the interest rates payable by the Company on amounts borrowed under the Credit Agreement, and (iii) the commitment fee payable on the average daily unused amount under the Credit Agreement was increased to 0.35% per annum.

The Credit Agreement requires the Company to maintain a minimum fixed charge coverage ratio matured on February 16, 2024 and to was not exceed a maximum leverage ratio. As of September 30, 2023, the Company was in compliance with these requirements.

As of September 30, 2023 and December 31, 2022, there were no borrowings outstanding under the Credit Agreement. renewed.

9. 8. Commitments and Contingencies

Royalty Obligations

In March 2005, the Company entered into a license agreement that requires the Company to make minimum royalty payments to the licensor on a quarterly basis. As of December 31, 2018, the license agreement required minimum annual royalty payments of $0.1 million in equal quarterly installments. In July 2019, the Company amended the license agreement to extend its term for an additional ten years and to increase the required minimum annual royalty payments by $0.2 million. As of both September 30, 2023 and December 31, 2022, the amended license agreement for a required minimum quarterly annual royalty payments payment of $0.3 million. Unless terminated earlier, the term of the amended license agreement shall expire June 30, 2029.

In April 2012, the Company entered into an agreement that requires the Company to pay, on a quarterly basis, a 5% royalty on sales of products covered under applicable patents. The first commercial sale of covered products occurred in April 2014. Unless terminated earlier, the royalty term for each applicable product shall continue for fifteen years following the first commercial sale of such patented product, or when the applicable patent covering such product has expired, whichever is sooner.

Royalty expense included in cost of revenue sales for the three months ended September 30, 2023 March 31, 2024 and 2022 2023 was $0.7 million $0.6 million and $0.7 million, respectively, and for the nine months ended September 30, 2023 and 2022, was $2.0 million and $1.9 million, respectively.

Contingencies

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of business. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

Indemnification

The Company enters into standard indemnification arrangements in the ordinary course of business. In many such arrangements, the Company agrees to indemnify, hold harmless, and reimburse the indemnified parties for losses suffered or

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incurred by the indemnified parties in connection with any trade secret, copyright, patent or other intellectual property infringement claim by any third-party with respect to the Company's technology. The Company also agrees to indemnify many indemnified parties for product defect and similar claims. The term of these indemnification agreements is generally perpetual. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable because it involves claims that may be made against the Company in the future, but have not yet been made.

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The Company has entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct of the individual.

The Company has not incurred costs to defend lawsuits or settle claims related to these indemnification agreements. No liability associated with any of these indemnification requirements has been recorded to date.

Litigation

From time to time, the Company is subject to other certain legal proceedings, as well as demands, claims and assessments threatened litigation that arise in the ordinary normal course of our business. The Company reviews the status of each significant matter quarterly and assesses its potential financial exposure. If the potential loss from a claim or legal proceeding is not currently considered probable and the amount can be reasonably estimated, the Company records a party to any such litigation matter that, individually or liability and an expense for the estimated loss and discloses it in the aggregate, Company's financial statements if it is expected to have significant. If the Company determines that a material adverse effect loss is possible and the range of the loss can be reasonably determined, the Company does not record a liability or an expense but the Company discloses the range of the possible loss. The Company bases its judgments on the Company's business, financial condition, results of operations or cash flows.

10. Stockholders' Equity

Common Stock best information available at the time. As additional information becomes available, the Company reassesses the potential liability related to its pending claims and litigation and may revise its estimates.

On September 29, 2023 April 7, 2023, a former contractor who had been retained by the Company through a third party staffing agency filed a putative class action lawsuit as well as a Private Attorney General Act ("PAGA") representative action complaint against the Company in the Superior Court of the State of California for the County of Alameda, on behalf of the contractor and similarly situated Company contractors and employees in California, alleging various claims pursuant to the California Labor Code related to wages, overtime, meal and rest breaks, reimbursement of business expenses, wage statements and records, and other similar allegations. Additionally, on April 10, 2023, a current employee of the Company filed a PAGA representative action complaint against the Company in the Superior Court of the State of California for the County of Alameda, on behalf of the employee and similarly situated Company employees in California, alleging similar claims. The complaints seek payment of various alleged unpaid wages, penalties, interest and attorneys' fees in unspecified amounts. On April 22, 2024, the Company issued 71,211 shares engaged in mediation, following which the parties agreed to settle the claims for an aggregate amount of common stock as part $4.6 million, subject to negotiation of a mutually agreeable settlement agreement and approval by the total consideration transferred court. As a result, the Company recorded an accrual of $4.6 million in connection with an asset acquisition. its financial statements for the three months ended March 31, 2024 related to these matters.

9. Stockholders' Equity

Stock-based Compensation

Stock-based compensation expense is associated with restricted stock units ("RSUs"), RSUs with performance conditions ("PSUs"), stock options, and the Company's Employee Stock Purchase Plan. Plan ("ESPP").

Certain RSUs PSUs granted to senior management during the three months ended March 31, 2023 March 31, 2024, will vest subject to the achievement of pre-established financial performance targets for the year ending December 31, 2023 December 31, 2024, and continued service. The fair value of these PSUs is based on the closing price of the Company's common stock on the date of grant. Stock-based compensation costs associated with these PSUs are recognized over the requisite service period of 4.25 years using graded vesting which results in more accelerated expense recognition compared to traditional time-based vesting over the same vesting period. Similarly, from time to time the Company grants performance-based RSUs to sales employees based on pre-established sales performance targets. Each reporting period, the Company monitors the probability of achieving the performance targets and may adjust periodic stock-based compensation expense based on its determination of the likelihood of achieving these performance targets and the estimated number of shares of common stock that will vest. The actual number of PSUs awarded is based on the actual performance during the performance period compared to the performance targets.

The following table sets forth the stock-based compensation expense included in the Company's condensed consolidated statements of operations for the three and nine months ended September 30, 2023 March 31, 2024 and 2022 2023 (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cost of revenue	$ 1,428	$ 1,020	$ 3,900	$ 2,756
Research and development	2,219	1,385	6,928	4,285
Sales, general and administrative	10,489	7,297	28,897	20,340
Total	$ 14,136	$ 9,702	$ 39,725	$ 27,381

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	Three Months Ended March 31,	
	2024	2023
Cost of revenue	$ 1,194	$ 1,191
Research and development	2,168	2,278
Sales, general and administrative	10,207	9,297
Total	$ 13,569	$ 12,766

As of September 30, 2023 March 31, 2024, total unrecognized compensation cost related to unvested share-based compensation arrangements, excluding PSUs, was $60.5 million $56.4 million, which is expected to be recognized over a weighted average period of 2.8 2.6 years.

As of September 30, 2023 March 31, 2024, total unrecognized compensation cost related to unvested PSU share-based compensation arrangements was $18.1 million $27.3 million, which is expected to be recognized over a weighted average period of 3.5 years.

The total stock-based compensation cost capitalized in inventory was $1.7 million $1.2 million and $2.2 million $1.3 million as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023, respectively.

11. 10. Accumulated Other Comprehensive Income (Loss)

Other comprehensive (loss) income consists of two components: unrealized gains or losses on the Company's available-for-sale marketable investments and gains or losses from foreign currency translation adjustments. Until realized and reported as a component of consolidated net income, (loss), these comprehensive income (loss) items accumulate and are included within

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accumulated other comprehensive income (loss). income. Unrealized gains and losses on the Company's our marketable investments are reclassified from accumulated other comprehensive income (loss) into earnings when realized upon sale, and are determined based on specific identification of securities sold. Gains and losses from the translation of assets and liabilities denominated in non-U.S. dollar functional currencies are included in accumulated other comprehensive income (loss). income.

The following table summarizes the changes in the accumulated balances during the period, and includes information regarding the manner in which the reclassifications out of accumulated other comprehensive income (loss) into earnings affect the Company's condensed consolidated statements of operations and our condensed consolidated statements of comprehensive income (loss) (in thousands):

Three Months Ended March 31, 2024	Three Months Ended March 31, 2024			Three Months Ended March 31, 2023		
Marketable Investments	Marketable Investments	Currency Translation Adjustments	Total	Marketable Investments	Currency Translation Adjustments	Total

Balance, beginning of the period

Other comprehensive loss before reclassifications:

Unrealized gains — marketable investments(1)

Unrealized gains — marketable investments(1)

Unrealized gains — marketable investments(1)

		Three Months Ended September 30, 2023			Three Months Ended September 30, 2022		
		Marketable Investments	Currency Translation Adjustments	Total	Marketable Investments	Currency Translation Adjustments	Total
Balance, beginning of the period		$ (2,012)	$ (3,567)	$(5,579)	$ (3,922)	$ (6,236)	$(10,158)
Other comprehensive income (loss) before reclassifications:							
Unrealized gains (losses) — marketable investments		698	—	698	(383)	—	(383)
Foreign currency translation losses		—	(2,359)	(2,359)	—	(2,812)	(2,812)
Foreign currency translation (losses) gains							
Foreign currency translation (losses) gains							
Foreign currency translation (losses) gains							
Income tax effect — expense							
Net of tax	Net of tax	698	(2,359)	(1,661)	(383)	(2,812)	(3,195)
Net current-year other comprehensive income (loss)	Net current-year other comprehensive income (loss)	698	(2,359)	(1,661)	(383)	(2,812)	(3,195)
Net current-year other comprehensive income (loss)							
Net current-year other comprehensive income (loss)							
Balance, end of the period	**Balance, end of the period**	$ (1,314)	$ (5,926)	$(7,240)	$ (4,305)	$ (9,048)	$(13,353)

	Nine Months Ended September 30, 2023			Nine Months Ended September 30, 2022		
	Marketable Investments	Currency Translation Adjustments	Total	Marketable Investments	Currency Translation Adjustments	Total
Balance, beginning of the period	$ (3,500)	$ (4,624)	$ (8,124)	$ (595)	$ (2,035)	$ (2,630)
Other comprehensive income (loss) before reclassifications:						

Unrealized gains (losses) — marketable investments	2,186	—	2,186	(3,710)	—	(3,710)
Foreign currency translation losses	—	(1,302)	(1,302)	—	(7,013)	(7,013)
Net of tax	2,186	(1,302)	884	(3,710)	(7,013)	(10,723)
Net current-year other comprehensive income (loss)	2,186	(1,302)	884	(3,710)	(7,013)	(10,723)
Balance, end of the period	$ (1,314)	$ (5,926)	$ (7,240)	$ (4,305)	$ (9,048)	$ (13,353)

(1) There were no unrealized gains or losses recorded in connection with the Company's non-marketable debt securities as of March 31, 2024.

12. 11. Income Taxes

The Company's income tax expense (benefit), deferred tax assets and liabilities, and reserves for unrecognized tax benefits reflect management's best assessment of estimated current and future taxes to be paid. The Company is subject to income taxes in both the United States and foreign jurisdictions. Significant judgment and estimates are required in determining the consolidated income tax expense (benefit).

During interim periods, the Company generally utilizes the estimated annual effective tax rate ("AETR") method which involves the use of forecasted information. Under the AETR method, the provision is calculated by applying the estimated

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AETR for the full fiscal year to "ordinary" income or loss (pretax income or loss excluding unusual or infrequently occurring discrete items) for the reporting period. Jurisdictions with tax assets for which the Company believes a tax benefit cannot be realized are excluded from the computation of its AETR.

In connection with an asset acquisition during the three months ended September 30, 2023, the Company recorded $18.2 million of IPR&D charge, which is not deductible for tax purposes. Refer to Note "5. Asset Acquisition" for more information. According to ASC 740-270-30-8 guidance for significant unusual or infrequently occurring items that are separately reported, the $18.2 million was excluded from the calculation of the Company's estimated annual effective tax rate.

The Company's provision for income taxes was $4.1 million and $4.8 million, $3.6 million for the three and nine months ended September 30, 2023 March 31, 2024, respectively, which compared to $0.1 million for the three months ended March 31, 2023. The effective tax rate was 24.8% for the three months ended March 31, 2024, compared to 1.0% for the three months ended March 31, 2023. The change in effective tax rate was primarily attributable to an increase in tax expense due to tax expenses attributable to its worldwide profits profit increase and a discrete tax charge resulting from the non-deductible acquired in-process research and development expense associated with the asset acquisition, offset by decrease in excess tax benefits from stock-based compensation attributable to its U.S. jurisdiction. The Company's

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provision for income taxes was $5.3 million for the three months ended September 30, 2022, which was primarily due to tax expenses attributable to its worldwide profits, combined with tax deficiencies (shortfalls) expenses from stock-based compensation attributable to its U.S. jurisdiction. The Company's provision for income taxes was $2.6 million for the nine months ended September 30, 2022, which was primarily due to tax expenses attributable to its foreign profits, combined with tax deficiencies (shortfall) expenses from stock-based compensation attributable to its U.S. jurisdiction.

The Company's effective tax rate changed to 30.7% for the three months ended September 30, 2023 from 174.8% for the three months ended September 30, 2022, and to 11.5% for the nine months ended September 30, 2023 from (81.7)% for the nine months ended September 30, 2022, which were primarily due to small tax expenses over relatively large worldwide profits for the three and nine months in 2023 comparing to large tax expenses over relatively small worldwide profits for the three months and worldwide losses for the nine months in 2022, respectively.

Significant domestic deferred tax assets ("DTAs") were generated in recent years, primarily due to excess tax benefits from stock option exercises and vesting of restricted stock units. The Company evaluates all available positive and negative evidence, objective and subjective in nature, in each reporting period to determine if sufficient taxable income will be generated to realize the benefits of its DTAs and, if not, a valuation allowance to reduce the DTAs is recorded.

As of September 30, 2023 and 2022, March 31, 2024, the Company maintains a valuation allowance against its Federal Research and Development Tax Credit DTAs as the Company could not conclude at the required more-likely-than-not level of certainty, that the benefit of these tax attributes would be realized prior to expiration. The Company intends to continue maintaining this full valuation allowance until there is sufficient evidence to reverse it. However, considering current earnings and anticipated future earnings, as well as the impact of IRC Section 174 requiring qualified research expenditures to be capitalized and amortized over 5 or 15 years, the Company anticipates net operating loss ("NOL") utilization may be accelerated. As a consequence, the Company believes there is a reasonable possibility that sufficient positive evidence may become available to conclude this valuation allowance may no longer be needed within the next 12 months. Release of the valuation allowance will result in the recognition of Federal Research and Development Tax Credit DTAs and a decrease to income tax expenses for the period in which the release is recorded. The exact timing and amount of the valuation allowance release are highly dependent on the level of taxable income in future years. The Company will continue to closely monitor the need for this valuation allowance in each subsequent reporting period.

As of September 30, 2023 and 2022, the Company maintains a full valuation allowance primarily against its California R&D tax credit DTAs as for which the Company does not expect believe a tax benefit is more likely than not to generate sufficient future taxable income in California to realize the tax benefit be realized due to the computation of California taxes under the single sales factor and non-conformity of the Section 174 capitalization rule.

The Company maintains that all foreign earnings, with the exception of a portion of the earnings of its German subsidiary, are permanently reinvested outside the United States and therefore deferred taxes attributable to such earnings are not provided for in the Company's condensed consolidated financial statements as of September 30, 2023 March 31, 2024.

13. 12. Net Income (Loss) per Share

The Company computed basic net income (loss) per share based on the weighted average number of shares of common stock outstanding during the period. The Company computed diluted net income (loss) per share based on the weighted average number of shares of common stock outstanding plus potentially dilutive common stock equivalents outstanding during the period using the treasury stock method. period. For the purposes of this calculation, stock options, restricted stock units, performance stock units, and stock sold through the Company's employee stock purchase plan ESPP are considered common stock equivalents.

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A reconciliation of the numerator and denominator used in the calculation of the basic and diluted net income (loss) per share is as follows (in thousands, except share and per share amounts):

		Three Months Ended September 30,				Nine Months Ended September 30,			
		2023		2022		2023		2022	
Numerator:	*Numerator:*								
Net income (loss)		$	9,214	$	(2,271)	$	36,736	$	(5,879)
Numerator:									
Numerator:									
Net income									
Net income									
Net income									
Denominator:	*Denominator:*								
Weighted average shares used to compute net income (loss) attributable to common stockholders:									
Denominator:									
Denominator:									
Weighted average shares used to compute net income attributable to common stockholders:									
Weighted average shares used to compute net income attributable to common stockholders:									
Weighted average shares used to compute net income attributable to common stockholders:									
Basic	Basic		38,462,463		37,918,452		38,324,279		37,778,362
Basic									
Basic									
Potential dilutive stock-based options and awards									
Potential dilutive stock-based options and awards									
Potential dilutive stock-based options and awards	Potential dilutive stock-based options and awards		757,503		—		859,356		—
Diluted	Diluted		39,219,966		37,918,452		39,183,635		37,778,362
Net income (loss) per share:									

Diluted					
Diluted					
Net income per share:					
Net income per share:					
Net income per share:					
Basic					
Basic					
Basic	Basic	$ 0.24	$ (0.06)	$ 0.96	$ (0.16)
Diluted	Diluted	$ 0.23	$ (0.06)	$ 0.94	$ (0.16)
Diluted					
Diluted					

For the three months ended September 30, 2023 March 31, 2024 and 2022, 2023, outstanding stock-based awards of 13 26 thousand and 1.6 million shares, respectively, and for the nine months ended September 30, 2023 and 2022 outstanding stock-based awards of 11 26 thousand and 1.9 million shares, respectively, were excluded from the computation of diluted net income (loss) per share because their effect would have been anti-dilutive. anti-dilutive in the periods presented.

13. Interest and other income (expense), net

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The following table shows the components of interest and other income (expense), net for the three months ended March 31, 2024 and 2023 and (in thousands):

	Three Months Ended March 31,	
	2024	2023
Interest income	$ 3,293	$ 970
Interest expense	(402)	(416)
Other income (expense), net(1)	(366)	90
Interest and other income, net	$ 2,525	$ 644

(1) Consists primarily of the effects of foreign currency gains or losses.

14. Revenues

Revenue Recognition

Revenue is recognized in an amount that reflects the consideration the Company expects to be entitled to in exchange for goods or services. All revenue recognized in the condensed consolidated statements of operations is considered to be revenue from contracts with customers.

Certain changes in presentation were made to the Company’s revenues disaggregated by product categories for the period ended March 31, 2023 to conform to the presentation for the period ended March 31, 2024. During the year ended December 31, 2023, the Company made changes to its product categories to provide investors with more meaningful information to understand the performance of its business and strategic direction.

The following table presents the Company’s revenues disaggregated by geography, based on the destination to which the Company ships its products, for the three and nine months ended September 30, 2023 March 31, 2024 and 2022 2023 was as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
United States	$ 194,816	$ 148,819	$ 553,467	$ 434,583
International	76,130	64,859	220,376	191,334
Total	$ 270,946	$ 213,678	$ 773,843	$ 625,917

	Three Months Ended March 31,	
	2024	2023
United States	$ 209,644	$ 171,879
International	69,011	69,519
Total	$ 278,655	$ 241,398

The following table presents the Company's revenues disaggregated by product category for the three and nine months ended September 30, 2023 March 31, 2024 and 2022 2023 was as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Vascular	$ 171,407	$ 123,361	$ 466,940	$ 369,712
Neuro	99,539	90,317	306,903	256,205
Total	$ 270,946	$ 213,678	$ 773,843	$ 625,917

China Distribution and Technology Licensing Agreement

In December 2020, the Company entered into a distribution and technology licensing arrangement with its existing distribution partner in China. In addition to modifying the Company's standard distribution agreement with its partner in China, the Company agreed to license the technology for certain products to its partner in China to permit the manufacturing and commercialization of such products in China as well as provide certain regulatory support. During the three months ended March 31, 2022, the Company further amended the distribution agreement and entered into an additional license agreement,

pursuant to which the Company agreed to license the technology for additional products to its partner in China on substantially the same terms as the existing license agreement. Apart from the standard distribution agreement, the Company will receive fixed payments upon transferring its distinct licensed technology and providing related regulatory support and royalty payments on the down-stream sale of the licensed products.

During the three months ended September 30, 2023, the Company and its existing distribution partner in China entered into an additional licensing arrangement, pursuant to which the Company agreed to license the technology for additional products to its partner in China and will receive fixed payments upon transferring its distinct licensed technology and providing related regulatory support and royalty payments on the down-stream sale of the licensed products.

	Three Months Ended March 31,	
	2024	2023
Thrombectomy	$ 187,703	$ 144,980
Embolization and Access	90,952	96,418
Total	$ 278,655	$ 241,398

Performance Obligations

Delivery of products - The Company's contracts with customers, other than the China licensing arrangements described above, below, typically contain a single performance obligation, delivery of the Company's products. Satisfaction of that performance obligation occurs when control of the promised goods transfers to the customer, which is generally upon shipment or receipt by customer for non-consignment sale agreements and upon utilization for consignment sale agreements.

Payment terms - The Company's payment terms vary by the type and location of our customer. The timing between fulfillment of performance obligations and when payment is due is not significant and does not give rise to financing transactions. The Company did not have any contracts with significant financing components as of September 30, 2023. March 31, 2024 and 2023.

Product returns - The Company may allow customers to return products purchased at the Company's discretion. The Company estimates the amount of its product sales that may be returned by its customers and records this estimate as a

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reduction of revenue in the period in which the related product revenue is recognized. The Company currently estimates product return liabilities using its own historic sales information, trends, industry data, and other relevant data points.

Warranties - The Company offers its standard warranty to all customers and it is not available for sale on a standalone basis. The Company's standard warranty represents its guarantee that its products function as intended, are free from defects, and comply with agreed-upon specifications and quality standards. This assurance does not constitute a service and is not a separate performance obligation.

Transaction Price

Revenue is recorded at the net sales price, which includes estimates of variable consideration such as product returns utilizing historical return rates, rebates, discounts, and other adjustments to net revenue. To the extent the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price. When determining if variable consideration should be constrained, management considers whether there are factors that could result in a significant reversal of revenue and the likelihood of a potential reversal. Variable consideration is included in revenue only to the extent that it is probable that a significant reversal of the revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved. These estimates are reassessed each reporting period. period as required. During the three and nine months ended September 30, 2023, March 31, 2024 and 2023, the Company made no material changes in estimates for variable consideration. When the Company performs shipping and handling activities after control of goods is transferred to the customer, they are considered as fulfillment activities, and costs are accrued for when the related revenue is recognized. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenues.

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Contract assets and liabilities

The following information summarizes the Company's contract assets and liabilities net as of September 30, 2023 and December 31, 2022 (in thousands):

			September 30, 2023		December 31, 2022		
		March 31, 2024				March 31, 2024	December 31, 2023
Contract assets	Contract assets	$	5,694	$	—		
Contract liabilities	Contract liabilities	$	7,802	$	8,783		

Contract assets for the periods presented primarily represent the difference between the revenue that was recognized based on the relative standalone selling price of the related performance obligations satisfied and the contractual billing terms in the licensing arrangements.

Contract liabilities represents amounts that the Company has already invoiced and are ultimately expected to be recognized as revenue, but for which not all revenue recognition criteria have been met and is recognized as the associated performance obligations are satisfied. Revenue recognized during

China Distribution and Technology Licensing Agreement

In December 2020, the Company entered into a distribution and technology licensing arrangement with its existing distribution partner in China. In addition to modifying the Company's standard distribution agreement with its partner in China, the Company agreed to license the technology for certain products to its partner in China to permit the manufacturing and commercialization of such products in China as well as provide certain regulatory support. During the three months ended March 31, 2022, the Company further amended the distribution agreement and nine entered into an additional license arrangement, pursuant to which the Company agreed to license the technology for additional products to its partner in China on substantially the same terms as the existing license arrangement. Apart from the standard distribution agreement, the Company will receive fixed payments upon transferring its distinct licensed technology and providing related regulatory support. During the three months ended September 30, 2023 relating , the Company entered into an additional licensing arrangement, pursuant to contract liabilities as which the Company agreed to license the technology for additional products to its partner in China and will receive fixed payments upon transferring its distinct licensed technology and providing related regulatory support and royalty payments on the down-stream sale of June 30, 2023 the licensed products. During the three months ended March 31, 2024, the Company entered into another licensing agreement, pursuant to which the Company agreed to license the technology for additional products to its partner in China and December 31, 2022 was $0.1 million will receive fixed payments upon transferring its distinct licensed technology and $1.0 million, respectively. providing related regulatory support.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated financial statements and the related notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the audited consolidated financial statements and notes thereto and management's discussion and analysis of financial condition and results of operations for the year ended December 31, 2022 December 31, 2023, included in our Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on February 23, 2023 February 22, 2024.

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 (the "Exchange Act"). In some cases, you can identify these statements by forward-looking words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "should," "estimate," or "continue," and similar expressions or variations, but these words are not the exclusive means for identifying such statements. Such forward-looking statements are subject to risks, uncertainties and other factors that could cause actual results and the timing of certain events to differ materially from future results and timing expressed or implied by such forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023. The forward-looking statements in this

Quarterly Report on Form 10-Q represent our views as of the date of this Quarterly Report on Form 10-Q. Except as may be required by law, we assume no obligation to update these forward-looking statements or the reasons that results could differ from these forward-looking statements. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

Overview

References herein to “we,” “us,” “our,” the “Company,” and “Penumbra,” refer to Penumbra, Inc. and its consolidated subsidiaries unless expressly indicated or the context requires otherwise.

Penumbra is a global healthcare company focused on innovative therapies. We design, develop, manufacture and market novel products and have a broad portfolio that addresses challenging medical conditions in markets with significant unmet need. Our team focuses on developing, manufacturing and marketing novel products for use by specialist physicians and healthcare providers to drive improved clinical outcomes and health. health outcomes. We believe that the cost-effectiveness of our products is attractive to our customers.

Since our founding in 2004, we have invested heavily in our product development capabilities in and commercial expansion that has established the foundation of our major markets: neuro, vascular, and immersive healthcare. global organization. We have successfully developed, obtained regulatory clearance or approval for, and introduced products into the neurovascular thrombectomy market since 2007, vascular access market since 2013, 2008, embolization market since 2011, neurosurgical market since 2014, and immersive healthcare market since 2020, respectively. We continue to expand our portfolio of product offerings, while developing and iterating on our currently available products. 2020.

We expect to continue to develop and build our portfolio of products, including our thrombectomy, embolization, and access and immersive technologies. healthcare technologies, while iterating on our currently available products. Generally, when we introduce a next generation product or a new product designed to replace a current product, sales of the earlier generation product or the product replaced decline. Our research and development activities are centered around the development of new products and clinical activities designed to support our regulatory submissions and demonstrate the effectiveness of our products.

To address the challenging and significant clinical needs of our key markets, we have developed products that fall into the following broad product families:

Our neuro thrombectomy products fall into four two broad product families:

- Peripheral thrombectomy - INDIGO System, including Lightning, Bolt and CAT RX, designed for continuous or modulated aspiration, computer-assisted vacuum thrombectomy, including aspiration catheters, microprocessor-controlled software algorithms that orchestrate the interaction of our pump and catheters, separators, aspiration pump and accessories, including delivery catheters used in peripheral thrombectomy procedures
- Neuro thrombectomy - Penumbra System, including Penumbra RED, JET, ACE, and BMX, MAX catheters and the 3D Revascularization Device, Penumbra ENGINE and other components and accessories

- Neuro Our embolization - Penumbra SMART COIL, Penumbra Coil 400, POD400 and PAC400
- Neuro access - delivery catheters, consisting of Neuron, Neuron MAX Select, BENCHMARK, BMX96, BMX81, DDC, PX SLIM and SENDit
- Neurosurgical - Artemis Neuro Evacuation Device

Our vascular products fall into two four broad product families:

- Vascular thrombectomy - INDIGO System designed for continuous or modulated aspiration, computer assisted vacuum thrombectomy, including aspiration catheters, microprocessor-controlled software algorithms that orchestrate the interaction of our pump and catheters, separators, aspiration pump and accessories

- Peripheral embolization - RUBY Coil System, Ruby LP, LANTERN Delivery Microcatheter and the POD System (POD and POD Packing Coil)

- Neuro embolization - Penumbra SMART COIL, Penumbra Coil 400, POD400 and PAC400
- Access - delivery catheters, consisting of Neuron, Neuron MAX Select, BENCHMARK, BMX, DDC, PX SLIM and SENDit
- Neurosurgical - Artemis Neuro Evacuation Device

Our immersive healthcare products fall into one broad product family:

- REAL Immersive System - portfolio of products that leverages immersive computer-based technologies to deliver engaging, immersive therapeutics to promote better health, motor function and cognition

We support healthcare providers, hospitals and clinics in more than 100 countries. In the nine three months ended September 30, 2023 March 31, 2024 and 2022, 28.5% 2023, 24.8% and 30.6% 28.8% of our revenue, respectively, was generated from customers located outside of the United States. Our sales outside of the United States are denominated principally in the euro, and Japanese yen, with some sales being denominated in other currencies. As a result, we have foreign exchange exposure but do not currently engage in hedging.

We generated revenue of $773.8 million $278.7 million and $625.9 million $241.4 million for the nine three months ended September 30, 2023 March 31, 2024 and 2022, 2023, respectively, an increase of $147.9 million $37.3 million. We generated income from operations of $38.5 million, which includes the $18.2 million acquired in-process research $12.1 million and development ("IPR&D") charge recorded in connection with an asset acquisition, and $1.2 million $8.0 million for the nine three months ended September 30, 2023 March 31, 2024 and 2022, 2023, respectively.

Factors Affecting Our Performance

There are a number of factors that have impacted, and we believe will continue to impact, our results of operations and growth. These factors include:

- The COVID-19 pandemic and measures taken in response thereto, which have negatively affected, and may continue to negatively affect, our revenues and results of operations. For example, as a result of the pandemic and the response thereto, global supply chains have been impacted, and we may experience significant and unpredictable fluctuations in the availability and cost of components and raw materials used in our products.
- The rate at which we grow our salesforce and the speed at which newly hired salespeople become fully effective can impact our revenue growth or our costs incurred in anticipation of such growth.
- Our industry is intensely competitive and, in particular, we compete with a number of large, well-capitalized companies. We must continue to successfully compete in light of our competitors' existing and future products and their resources to successfully market to the specialist physicians and other healthcare providers who use our products.
- We must continue to successfully introduce new products that gain acceptance with specialist physicians and other healthcare providers and successfully transition from existing products to new products, ensuring adequate supply. In addition, as we introduce new products and expand our production capacity, we anticipate additional personnel will be hired and trained to build our inventory of components and finished goods in advance of sales, which may cause quarterly fluctuations in our operating results and financial condition.
- Publications of clinical results by us, our competitors and other third parties can have a significant influence on whether, and the degree to which, our products are used by specialist physicians and the procedures and treatments those physicians choose to administer for a given condition.
- The specialist physicians who use our interventional products may not perform procedures during certain times of the year, such as those periods when they are at major medical conferences or are away from their practices for other reasons, the timing of which occurs irregularly during the year and from year to year.
- Most of our sales outside of the United States are denominated in the local currency of the country in which we sell our products. As a result, our revenue from international sales can be significantly impacted by fluctuations in foreign currency exchange rates.
- The availability and levels of reimbursement within the relevant healthcare payment system for healthcare providers for procedures in which our products are used.

In addition, we have experienced and expect to continue to experience meaningful variability in our quarterly revenue, gross profit and gross margin percentage as a result of a number of factors, including, but not limited to: the number of available selling days, which can be impacted by holidays; the mix of products sold; the geographic mix of where products are sold; the demand for our products and the products of our competitors; the timing of or failure to obtain regulatory approvals or clearances for products; increased competition; the timing of customer orders; inventory write-offs due to obsolescence; costs, benefits and timing of new product introductions; costs, benefits and timing of the acquisition and integration of businesses and

product lines we may acquire; the availability and cost of components and raw materials; and fluctuations in foreign currency exchange rates. We may experience quarters in which we have significant revenue growth sequentially followed by quarters of moderate or no revenue growth. Additionally, we may experience quarters in which operating expenses, in particular research and development expenses, fluctuate depending on the stage and timing of product development.

COVID-19 Pandemic

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which spread throughout the U.S. and the world. In response, governments issued orders restricting certain activities, and while our business falls within the category of healthcare operations, which are essential businesses that have generally been permitted to continue operating during the COVID-19 pandemic, we have experienced, and may continue to experience, disruptions to our operations as a result of the pandemic. For example, at times during the pandemic, hospital resources have been diverted to fight the pandemic, and many government agencies, in conjunction with healthcare systems, have recommended the deferral of elective and semi-elective medical procedures. In addition, the pandemic and the response thereto have impacted global supply chains and labor markets, resulting in cost inflation and raw material supply constraints, as well as an increase in employee turnover rates in certain jurisdictions, which has impacted, and may continue to impact, our business. In order to navigate the pandemic, we made certain changes to how we manufacture, inspect and ship our products to prioritize the health and safety of our employees and to operate under the protocols mandated by our local and state governments.

While the acute phase of the pandemic has subsided due to the development and widespread availability of vaccines for COVID-19,we are unable to reliably predict the full impact that COVID-19 will have on our business due to numerous uncertainties, including the severity and duration of the pandemic, the global resurgences of cases, particularly as new variants of the virus spread, additional actions that may be taken by governmental authorities in response to the pandemic, the impact of the pandemic on the business of our customers, distributors and suppliers, other businesses and worldwide economies in general, our ability to have access to our customers to provide training and case support, and other factors identified in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2022. We will continue to evaluate the nature and extent of the impact of COVID-19 on our business, consolidated results of operations, and financial condition.

Components of Results of Operations

Revenue. We sell our interventional products directly to hospitals and other healthcare providers and through distributors for use in procedures performed by specialist physicians to treat patients in two key markets: neuro thrombectomy and vascular disease. embolization and access. We sell our products through purchase orders, and we do not have long term purchase commitments from our customers. Revenue from product sales is recognized either on the date of shipment or the date of receipt by the customer, but is deferred for certain transactions when control has not yet transferred. With respect to products that we consign to hospitals, which primarily consist of coils, we recognize revenue at the time hospitals utilize products in a procedure. Revenue also includes shipping and handling costs that we charge to customers.

Cost of Revenue. Cost of revenue consists primarily of the cost of raw materials and components, personnel costs, including stock-based compensation, inbound freight charges, receiving costs, inspection and testing costs, warehousing costs, royalty expense, shipping and handling costs, and other labor and overhead costs incurred in the manufacturing of products. In addition, we record write-downs or write-offs of inventory in the event that a portion of our inventory becomes excess or obsolete.

We manufacture substantially all of our products in our manufacturing facilities in Alameda and Roseville, California.

Operating Expenses

Research and Development ("R&D"). R&D expenses primarily consist of product development, clinical and regulatory expenses, materials, depreciation and other costs associated with the development of our products. R&D expenses also include salaries, benefits and other related costs, including stock-based compensation, for personnel and consultants. We generally expense R&D costs as they are incurred, with the exception of certain costs incurred for the development of computer software for internal use related to our REAL Immersive System offerings. We capitalize certain costs when it is determined that it is probable that the project will be completed and the software will be used to perform the function intended, and the preliminary project stage is completed. Capitalized internal use software development costs are included in property and equipment, net within the condensed consolidated balance sheets. incurred.

Sales, General and Administrative ("SG&A"). SG&A expenses primarily consist of salaries, benefits and other related costs, including stock-based compensation, for personnel and consultants engaged in sales, marketing, finance, legal, compliance, administrative, facilities and information technology and human resource activities. Our SG&A expenses also include

marketing trials, medical education, training, commissions, generally based on sales, to direct sales representatives, amortization of acquired intangible assets and acquisition-related costs.

Provision For (Benefit from) Income Taxes

We are taxed at the rates applicable within each jurisdiction in which we operate. The composite income tax rate, tax provisions, deferred tax assets ("DTAs") and deferred tax liabilities will vary according to the jurisdiction in which profits arise. Tax laws are complex and subject to different interpretations by management and the respective governmental taxing authorities, and require us to exercise judgment in determining our income tax provision, our deferred tax assets and deferred tax liabilities and the potential valuation allowance recorded against our net DTAs. Deferred tax assets and liabilities are determined using the enacted tax rates in effect for the years in which those tax assets are expected to be realized. A valuation allowance is established when it is more likely than not that the future realization of all or some of the DTAs will not be achieved.

Results of Operations

The following table sets forth the components of our condensed consolidated statements of operations in dollars and as a percentage of revenue for the periods presented:

		Three Months Ended September 30,								Nine Months Ended September 30,							
		2023				2022				2023				2022			
		(in thousands, except for percentages)								(in thousands, except for percentages)							
Revenue	Revenue	$	270,946	100.0	%	$	213,678	100.0	%	$	773,843	100.0	%	$	625,917	100.0	%
Revenue																	
Revenue																	
Cost of revenue																	
Cost of revenue																	
Cost of revenue	Cost of revenue		93,228	34.4			78,351	36.7			278,192	35.9			229,137	36.6	

Gross profit	Gross profit	177,718	65.6	135,327	63.3	495,651	64.1	396,780	63.4
Gross profit									
Gross profit									
Operating expenses:									
Operating expenses:									
Operating expenses:	Operating expenses:								
Research and development	Research and development	20,958	7.7	21,320	10.0	62,481	8.1	61,443	9.8
Research and development									
Research and development									
Sales, general and administrative	Sales, general and administrative	125,920	46.5	108,573	50.8	376,433	48.6	334,088	53.4
Acquired in-process research and development		18,215	6.7	—	—	18,215	2.4	—	—
Sales, general and administrative									
Sales, general and administrative									
Total operating expenses									
Total operating expenses									
Total operating expenses	Total operating expenses	165,093	60.9	129,893	60.8	457,129	59.1	395,531	63.2
Income from operations	Income from operations	12,625	4.7	5,434	2.5	38,522	5.0	1,249	0.2
Interest income (expense), net		1,123	0.4	(43)	0.0	2,516	0.3	(162)	—
Other (expense) income, net		(444)	(0.2)	(2,356)	(1.1)	454	0.1	(4,323)	(0.7)
Income (loss) before income taxes		13,304	4.9	3,035	1.4	41,492	5.4	(3,236)	(0.5)
Income from operations									
Income from operations									
Interest and other income, net									
Interest and other income, net									
Interest and other income, net									
Income before income taxes									
Income before income taxes									
Income before income taxes									
Provision for income taxes									
Provision for income taxes									
Provision for income taxes	Provision for income taxes	4,090	1.5	5,306	2.5	4,756	0.6	2,643	0.4

Net income (loss)	$	9,214	3.4 %	$	(2,271)	(1.1) %	$	36,736	4.7 %	$	(5,879)	(0.9) %
Net income												
Net income												
Net income												

Three Months Ended September 30, 2023 March 31, 2024 Compared to the Three Months Ended September 30, 2022 March 31, 2023

Certain changes in presentation were made to the Company's revenues disaggregated by product categories for the period ended March 31, 2023 to conform to the presentation for the period ended March 31, 2024. During the year ended December 31, 2023, the Company made changes to its product categories to provide investors with more meaningful information to understand the performance of its business and strategic direction.

Revenue

	Three Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Vascular	$ 171,407	$ 123,361	$ 48,046	38.9 %
Neuro	99,539	90,317	9,222	10.2 %
Total	$ 270,946	$ 213,678	$ 57,268	26.8 %

	Three Months Ended March 31,		Change	
	2024	2023	$	%
	(in thousands, except for percentages)			
Thrombectomy	$ 187,703	$ 144,980	$ 42,723	29.5 %
Embolization and Access	90,952	96,418	(5,466)	(5.7)%
Total	$ 278,655	$ 241,398	$ 37,257	15.4 %

Revenue increased $57.3 million $37.3 million, or 26.8% 15.4%, to $270.9 million $278.7 million in the three months ended September 30, 2023 March 31, 2024, from $213.7 million $241.4 million in the three months ended September 30, 2022 March 31, 2023. Overall revenue growth was primarily due to an increase in sales of new and our existing products within our vascular and neuro businesses. thrombectomy products.

Revenue from our vascular global thrombectomy products increased $48.0 million $42.7 million, or 38.9% 29.5%, to $171.4 million $187.7 million in the three months ended September 30, 2023 March 31, 2024, from $123.4 million $145.0 million in the three months ended September 30, 2022 March 31, 2023. This increase was driven by a 50.2% The increase in sales of our vascular global thrombectomy products was primarily attributable to higher sales volume in the United States and primarily attributable to as a result of sales of new products

and further market penetration of our existing products. This increase was driven by sales of our U.S. thrombectomy products, which increased by 35.2% in the three months ended March 31, 2024. Prices for our vascular thrombectomy products remained substantially unchanged during the period.

Revenue from our neuro global embolization and access products increased $9.2 million decreased $5.5 million, or 10.2% 5.7%, to $99.5 million $91.0 million in the three months ended September 30, 2023 March 31, 2024, from $90.3 million $96.4 million in the three months ended September 30, 2022 March 31, 2023. This increase The decrease in our global embolization and access products was primarily attributable to sales of new products in United States and Europe and further market penetration of our existing products. The increase in product sales was driven by an increase in sales of our neuro international embolization and access products, and neuro thrombectomy products, which globally increased decreased by 12.9% and 10.3%, respectively, 11.6% in the three months ended September 30, 2023, partially offset by a decrease in sales of our neuro embolization products, which decreased by 18.8% in the three months ended September 30, 2023 March 31, 2024. Prices for our neuro embolization and access products remained substantially unchanged during the period.

Revenue by Geographic Area

The following table presents revenue by geographic area, based on our customers' shipping destinations, for the three months ended September 30, 2023 and 2022: destinations:

	Three Months Ended September 30,				Change	
	2023		2022		$	%
	(in thousands, except for percentages)					
United States	$ 194,816	71.9 %	$ 148,819	69.6 %	$ 45,997	30.9 %

International		76,130	28.1 %		64,859	30.4 %		11,271	17.4 %
Total	$	270,946	100.0 %	$	213,678	100.0 %	$	57,268	26.8 %

	Three Months Ended March 31,						Change		
	2024			2023			$		%
	(in thousands, except for percentages)								
United States	$	209,644	75.2 %	$	171,879	71.2 %	$	37,765	22.0 %
International		69,011	24.8 %		69,519	28.8 %		(508)	(0.7)%
Total	$	278,655	100.0 %	$	241,398	100.0 %	$	37,257	15.4 %

Revenue from product sales in international markets increased $11.3 million decreased $0.5 million, or 17.4% 0.7%, to $76.1 million $69.0 million in the three months ended September 30, 2023 March 31, 2024, from $64.9 million $69.5 million in the three months ended September 30, 2022 March 31, 2023. Revenue from international sales represented 28.1% 24.8% and 30.4% 28.8% of our total revenue for the three months ended September 30, 2023 March 31, 2024 and 2022, 2023, respectively.

Gross Margin

	Three Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Cost of revenue Cost of revenue	$ 93,228	$ 78,351	$14,877	19.0 %
Gross profit Gross profit	$177,718	$135,327	$42,391	31.3 %
Gross margin % Gross margin %	65.6 %	63.3 %		

	Three Months Ended March 31,				Change			
	2024		2023		$		%	
	(in thousands, except for percentages)							
Cost of revenue	$	97,516 $	$	90,326 $	$	7,190	8.0	8.0 %
Gross profit	$	181,139 $	$	151,072 $	$	30,067	19.9	19.9 %

Gross margin increased by 2.3 2.4 percentage points to 65.6% 65.0% in the three months ended September 30, 2023 March 31, 2024, from 63.3% 62.6% in the three months ended September 30, 2022 March 31, 2023. Gross margin is impacted by product mix, regional mix, and production initiatives to support demand and create future efficiencies. As such, with favorable product mix, improvement in productivity, and by leveraging our fixed costs on higher volume of new product sales during the year, our gross margin may be positively impacted in the future.

Research and Development ("R&D")

	Three Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
R&D R&D	$20,958	$21,320	$(362)	(1.7)%
R&D as a percentage of revenue *R&D as a percentage of revenue*	*7.7 %*	*10.0 %*		

	Three Months Ended March 31,				Change			
	2024		2023		$		%	
	(in thousands, except for percentages)							
R&D	$	24,626 $	$	19,986 $	$	4,640	23.2	23.2 %

R&D expenses decreased increased by $0.4 million $4.6 million, or 1.7% 23.2%, to $21.0 million $24.6 million in the three months ended September 30, 2023 March 31, 2024, from $21.3 million $20.0 million in the three months ended September 30, 2022 March 31, 2023. The decrease increase was primarily due to a $1.6 million decrease $2.0 million increase in personnel-related expenses driven by an increase in headcount and related expenses to support our growth and a $1.3 million increase in product development and testing costs, partially offset by a $1.2 million increase in personnel-related expenses. costs.

We have continued to make investments, and plan to continue to make investments, in the development of our products. As part of our ongoing investment in the development of our products, we may incur additional expenses related to research and development milestones. In addition, we have experienced in the past, and may continue to experience in the future, variability in expenses incurred due to the timing and costs of clinical trials and product development, which may include additional personnel-related expenses in conjunction with the launch of new products.

Sales, General and Administrative ("SG&A")

		Three Months Ended September 30,		Change			Three Months Ended March 31,				
		2023	2022	$	%		2024		2023		
		(in thousands, except for percentages)					(in thousands, except for percentages)				
SG&A	SG&A	$ 125,920	$ 108,573	$ 17,347	16.0 %	SG&A	$ 144,412	$	$ 123,078	$	$
SG&A as a percentage of revenue	*SG&A as a percentage of revenue*	*46.5 %*	*50.8 %*								

SG&A expenses increased by $17.3 million $21.3 million, or 16.0% 17.3%, to $125.9 million $144.4 million in the three months ended September 30, 2023 March 31, 2024, from $108.6 million $123.1 million in the three months ended September 30, 2022 March 31, 2023. The increase was primarily due to a $11.0 million $6.4 million increase in personnel-related expenses driven by an increase in headcount and related expenses to support our growth, $4.8 million in non-recurring litigation related expenses, including settlement costs and legal fees, associated with wage and hour complaints filed against the Company in 2023, a $3.0 million increase in costs related to marketing events. events, and a $2.1 million increasein other professional services.

As we continue to invest in our growth, we have expanded and may continue to expand our sales, marketing, and general and administrative teams through the hiring of additional employees in critical roles that support our strategic initiatives. In addition, we have experienced in the past, and may continue to experience in the future, variability in expenses incurred due to the timing and costs of investments to support the business.

Acquired In-Process Research and Development

	Three Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Acquired in-process research and development	$ 18,215	$ —	$ 18,215	not meaningful
Acquired in-process research and development as a percentage of revenue	6.7 %	— %		

During the three months ended September 30, 2023, we recorded an $18.2 million acquired IPR&D charge in connection with an asset acquisition.

Provision for income taxes

		Three Months Ended September 30,		Change			Three Months Ended March 31,					C
		2023	2022	$	%		2024		2023			$
		(in thousands, except for percentages)					(in thousands, except for percentages)					
Provision for income taxes	Provision for income taxes	$ 4,090	$ 5,306	$ (1,216)	(22.9) %	Provision for income taxes	$ 3,624	$	$ 90	$	$	3,534
Effective tax rate	*Effective tax rate*	*30.7 %*	*174.8 %*									

Our provision for income taxes was $4.1 million $3.6 million for the three months ended September 30, 2023 March 31, 2024, which compared to $0.1 million for the three months ended March 31, 2023. Our effective tax rate was24.8% for the three months ended March 31, 2024, compared to 1.0% for the three months ended March 31, 2023. The change in effective tax rate was primarily attributable to an increase in tax expense due to tax expenses attributable to our worldwide profits profit increase and a discrete tax charge resulting from the non-deductible IPR&D charge associated with an asset acquisition (see Note "5. Asset Acquisition" to our condensed consolidated financial statements decrease in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information), offset by excess tax benefits from stock-based compensation attributable to our U.S. jurisdiction. Our provision for income taxes was $5.3 million for the three months ended September 30, 2022, which was primarily due to tax expenses attributable to our worldwide profits, combined with tax deficiencies (shortfalls) expenses from stock based compensation attributable to our U.S. jurisdiction as a result of stock price fluctuation.

Our effective tax rate changed to30.7% for the three months ended September 30, 2023 from 174.8% for the three months ended September 30, 2022, primarily due to small tax expenses over relatively large worldwide profits for the three months in 2023 comparing to large tax expenses over relatively small worldwide profits for the three months in 2022.

Prospectively, our effective tax rate will likely be driven by (1) permanent differences in taxable income for tax and financial reporting purposes, (2) tax expense or benefit attributable to our worldwide financial result, and (3) discrete tax adjustments such as excess tax benefits or deficiencies related to stock-based compensation. Our income tax provision is subject to volatility as the amount of excess tax benefits or deficiencies can fluctuate from period to period based on the price of our stock, the volume of share-based grants settled or vested, and the fair value assigned to equity awards under U.S. GAAP.

As of September 30, 2023 and 2022, we maintain a valuation allowance against our Federal Research and Development Tax Credit DTAs as we could not conclude at the required more-likely-than-not level of certainty, that the benefit of these tax attributes would be realized prior to expiration. We intend to continue maintaining this full valuation allowance until there is

sufficient evidence to reverse it. However, considering current earnings and anticipated future earnings, as well as the impact of IRC Section 174 requiring qualified research expenditures to be capitalized and amortized over 5 or 15 years, we anticipate net operating loss ("NOL") utilization may be accelerated. As a consequence, we believe there is a reasonable possibility that sufficient positive evidence may become available to conclude this valuation allowance may no longer be needed within the next 12 months. Release of the valuation allowance will result in the recognition of Federal Research and Development Tax Credit DTAs and a decrease to income tax expenses for the period in which the release is recorded. The exact timing and amount of the valuation allowance release are highly dependent on the level of taxable income in future years. We will continue to closely monitor the need for this valuation allowance in each subsequent reporting period.

Nine Months Ended September 30, 2023 Compared to the Nine Months Ended September 30, 2022

Revenue

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Vascular	$ 466,940	$ 369,712	$ 97,228	26.3 %
Neuro	306,903	256,205	50,698	19.8 %
Total	$ 773,843	$ 625,917	$ 147,926	23.6 %

Revenue increased $147.9 million, or 23.6%, to $773.8 million in the nine months ended September 30, 2023, from $625.9 million in the nine months ended September 30, 2022. Overall revenue growth was primarily due to an increase in sales of new and existing products within our vascular and neuro businesses.

Revenue from our vascular products increased $97.2 million, or 26.3%, to $466.9 million in the nine months ended September 30, 2023, from $369.7 million in the nine months ended September 30, 2022. This increase in revenue from our vascular products was primarily attributable to increased revenue in the United States and was driven by sales of our vascular thrombectomy products and peripheral embolization products, which globally increased by 34.6% and 12.2%, respectively, in the nine months ended September 30, 2023. These increases were primarily due to higher sales volume in the United States as a result of sales of new products and further market penetration of our existing products. Prices for our vascular products remained substantially unchanged during the period.

Revenue from our neuro products increased $50.7 million, or 19.8%, to $306.9 million in the nine months ended September 30, 2023, from $256.2 million in the nine months ended September 30, 2022. This increase in revenue from our neuro products was primarily attributable to increased revenue in the United States and Europe, sales of new products, and further market penetration of our existing products. This increase was driven by an increase in sales of our neuro access products and neuro thrombectomy products, which globally increased by 24.9% and 20.1%, respectively, in the nine months ended September 30, 2023, partially offset by a decrease in sales of our neuro embolization products of 16.2% in the nine months ended September 30, 2023. Prices for our neuro products remained substantially unchanged during the period.

Revenue by Geographic Area

The following table presents revenue by geographic area, based on our customer's shipping destination, for the nine months ended September 30, 2023 and 2022:

	Nine Months Ended September 30,				Change	
	2023		2022		$	%
	(in thousands, except for percentages)					
United States	$ 553,467	71.5 %	$ 434,583	69.4 %	$ 118,884	27.4 %
International	220,376	28.5 %	191,334	30.6 %	29,042	15.2 %
Total	$ 773,843	100.0 %	$ 625,917	100.0 %	$ 147,926	23.6 %

Revenue from sales in international markets increased $29.0 million, or 15.2%, to $220.4 million in the nine months ended September 30, 2023, from $191.3 million in the nine months ended September 30, 2022. Revenue from international sales represented 28.5% and 30.6% of our total revenue for the nine months ended September 30, 2023 and 2022, respectively.

Gross Margin

	Nine Months Ended September 30,	Change

	2023	2022	$	%
	(in thousands, except for percentages)			
Cost of revenue	$ 278,192	$ 229,137	$ 49,055	21.4 %
Gross profit	$ 495,651	$ 396,780	$ 98,871	24.9 %
Gross margin %	64.1 %	63.4 %		

Gross margin increased by 0.7 percentage point to 64.1% in the nine months ended September 30, 2023, from 63.4% in the nine months ended September 30, 2022. Gross margin is impacted by product mix, regional mix, start-up costs associated with new product launches, and production initiatives to support demand and create future efficiencies. As such, with favorable product mix, improvement in productivity, and by leveraging our fixed costs on higher volume of new product sales during the year, our gross margin may be positively impacted in the future.

Research and Development ("R&D")

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
R&D	$ 62,481	$ 61,443	$ 1,038	1.7 %
R&D as a percentage of revenue	*8.1 %*	*9.8 %*		

R&D expenses increased by $1.0 million, or 1.7%, to $62.5 million in the nine months ended September 30, 2023, from $61.4 million in the nine months ended September 30, 2022. The increase was primarily due to a $3.8 million increase in personnel-related expenses, partially offset by a $3.1 million decrease in product development and testing costs.

We have continued to make investments, and plan to continue to make investments, in the development of our products. As part of our ongoing investment in the development of our products, we may incur additional expenses related to research and development milestones. In addition, we have experienced in the past, and may continue to experience in the future, variability in expenses incurred due to the timing and costs of clinical trials and product development, which may include additional personnel-related expenses in conjunction with the launch of new products.

Sales, General and Administrative (SG&A)

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
SG&A	$ 376,433	$ 334,088	$ 42,345	12.7 %
SG&A *as a percentage of revenue*	*48.6 %*	*53.4 %*		

SG&A expenses increased by $42.3 million, or 12.7%, to $376.4 million in the nine months ended September 30, 2023, from $334.1 million in the nine months ended September 30, 2022. The increase was primarily due to a $30.7 million increase in personnel-related expense driven by an increase in headcount and related expenses to support our growth and a $4.9 million increase in costs related to marketing events.

As we continue to invest in our growth, we have expanded and may continue to expand our sales, marketing, and general and administrative teams through the hiring of additional employees in critical roles that support our strategic initiatives. In addition, we have experienced in the past, and may continue to experience in the future, variability in expenses incurred due to the timing and costs of investments to support the business.

Acquired In-Process Research and Development

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Acquired in-process research and development	$ 18,215	$ —	$ 18,215	not meaningful
Acquired in-process research and development as a percentage of revenue	*2.4 %*	*— %*		

During the nine months ended September 30, 2023, we recorded an $18.2 million acquired IPR&D charge in connection with an asset acquisition.

Provision for income taxes

	Nine Months Ended September 30,		Change	
	2023	2022	$	%
	(in thousands, except for percentages)			
Provision for income taxes	$ 4,756	$ 2,643	$ 2,113	79.9 %
Effective tax rate	*11.5 %*	*(81.7)%*		

Our provision for income taxes was $4.8 million for the nine months ended September 30, 2023, which was primarily due to tax expenses attributable to our worldwide profits and a discrete tax charge resulting from the non-deductible IPR&D charge associated with an asset acquisition (see Note “5. Asset Acquisition” to our condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information), offset by excess tax benefits from stock-based compensation attributable to our U.S. jurisdiction. Our benefit from income taxes was $2.6 million for the nine months ended September 30, 2022, which was primarily due to tax expenses attributable to our foreign profits, combined with tax deficiencies (shortfalls) expenses from stock-based compensation attributable to our U.S. jurisdiction as a result of stock price fluctuation.

The effective tax rate changed to 11.5% for the nine months ended September 30, 2023 from (81.7)% for the nine months ended September 30, 2022, primarily due to small tax expenses over relatively large worldwide profits for the nine months in 2023 comparing to large tax expenses over relatively small worldwide losses for the nine months in 2022.

Prospectively, our effective tax rate will likely be driven by (1) permanent differences in taxable income for tax and financial reporting purposes, (2) tax expense or benefit attributable to our worldwide financial results, and (3) discrete tax adjustments such as excess tax benefits or deficiencies related to stock-based compensation. Our income tax provision can be volatile as the amount of excess tax benefits or deficiencies can fluctuate from period to period due to the price of our stock, the volume of share-based grants exercised or vested, and the fair value assigned to equity awards under U.S. GAAP. In addition, changes in tax law or our interpretation thereof, and changes to our valuation allowance could result in fluctuations in our effective tax rate.

As of September 30, 2023 and 2022, we maintain a valuation allowance against our Federal Research and Development Tax Credit DTAs as we could not conclude at the required more-likely-than-not level of certainty, that the benefit of these tax attributes would be realized prior to expiration. We intend to continue maintaining this full valuation allowance until there is sufficient evidence to reverse it. However, considering current earnings and anticipated future earnings, as well as the impact of IRC Section 174 requiring qualified research expenditures to be capitalized and amortized over 5 or 15 years, we anticipate net operating loss (“NOL”) utilization may be accelerated. As a consequence, we believe there is a reasonable possibility that sufficient positive evidence may become available to conclude this valuation allowance may no longer be needed within the next 12 months. Release of the valuation allowance will result in the recognition of Federal Research and Development Tax Credit DTAs and a decrease to income tax expenses for the period in which the release is recorded. The exact timing and amount of the valuation allowance release are highly dependent on the level of taxable income in future years. We will continue to closely monitor the need for this valuation allowance in each subsequent reporting period.

Liquidity and Capital Resources

As of September 30, 2023 March 31, 2024, we had $723.4 million $782.2 million in working capital, which included $100.8 million $223.1 million in cash and cash equivalents and $148.1 million $90.4 million in marketable investments. As of September 30, 2023 March 31, 2024, we held approximately 16.9% 7.7% of our cash and cash equivalents in foreign entities.

In addition to our existing cash and cash equivalents and marketable investment balances, our principal source of liquidity is our accounts receivable. In order to further strengthen our liquidity position and financial flexibility, on April 24, 2020 we entered into a Credit Agreement (the “Credit Agreement”) with JPMorgan Chase Bank, N.A., as administrative agent and lender, and Bank of America, N.A. and Citibank, N.A. as lenders. The Credit Agreement is secured and provides for up to $100 million in available revolving borrowing capacity with an option, subject to certain conditions, for us to increase the aggregate borrowing capacity to up to $150 million. The Credit Agreement originally matured on April 23, 2021 and was subsequently amended during the three months ended March 31, 2021, 2022 and 2023 to extend the maturity date and make other changes to the terms of the Credit Agreement. The Credit Agreement currently matures on February 16, 2024. See Note “8. Indebtedness” to our condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

We believe these our current sources of liquidity will be sufficient to meet our liquidity requirements for at least the next 12 months. Our principal liquidity requirements are to fund our operations, expand manufacturing operations which includes, but is not limited to, maintaining sufficient levels of inventory to meet the anticipated demand of our customers, fund research and development activities and fund our capital expenditures. We may also lease or purchase additional facilities to facilitate our growth. We expect to continue to make investments as we launch new products, expand our manufacturing operations and information technology infrastructures and further expand into international markets. We may, however, require or elect to secure additional financing as we continue to execute our business strategy. If we require or elect to raise additional funds, we may do so through equity or debt financing, which may not be available on favorable terms, could result in dilution to our stockholders, could result in changes to our capital structure, and could require us to agree to covenants that limit our operating flexibility.

The following table summarizes our cash and cash equivalents, marketable investments and selected working capital data as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023:

		September 30, 2023	December 31, 2022	March 31, 2024	December 31, 2023
		(in thousands)		(in thousands)	
Cash and cash equivalents	Cash and cash equivalents	$100,757	$69,858		
Marketable investments	Marketable investments	148,098	118,172		
Accounts receivable, net	Accounts receivable, net	206,615	203,384		

Accounts payable	Accounts payable	27,996	26,679
Accrued liabilities	Accrued liabilities	104,184	106,300
Working capital(1)	Working capital(1)	723,398	610,767

(1) Working capital consists of total current assets less total current liabilities.

The following table sets forth, for the periods indicated, our beginning balance of cash and cash equivalents, net cash flows provided by (used in) operating, investing and financing activities and our ending balance of cash and cash equivalents:

	Nine Months Ended September 30,	
	2023	2022
	(in thousands)	
Cash and cash equivalents and restricted cash at beginning of period	$ 69,858	$ 59,379
Net cash provided by (used in) operating activities	61,072	(56,998)
Net cash (used in) provided by investing activities	(40,356)	46,157
Net cash provided by financing activities	10,282	5,887
Cash and cash equivalents and restricted cash at end of period	100,757	54,844

	Three Months Ended March 31,	
	2024	2023
	(in thousands)	
Cash and cash equivalents at beginning of period	$ 167,486	$ 69,858
Net cash provided by operating activities	38,295	13,129
Net cash provided by investing activities	18,384	10,711
Net cash (used in) provided by financing activities	(794)	1,376
Cash and cash equivalents and at end of period	223,114	94,688

Net Cash Provided By (Used In) Operating Activities

Net cash provided by (used in) operating activities consists primarily of consolidated net income adjusted for certain non-cash items (including depreciation and amortization, stock-based compensation expense, acquired in-process research inventory write-offs and development, inventory write-downs, and changes in deferred tax balances), balances, and the effect of changes in working capital and other activities.

activities).

Net cash provided by operating activities was $61.1 million $38.3 million during the nine three months ended September 30, 2023 March 31, 2024 and consisted of consolidated net income of $36.7 million $11.0 million and non-cash items of $86.0 million $21.7 million, offset by net changes in operating assets and liabilities of $61.7 million $5.6 million. The change in operating assets and liabilities primarily relates to an increase in inventories of $46.5 million to support our growth, an increase a decrease in accounts receivable of $6.6 million $8.5 million due to timing of invoicing and collections, and an increase in accounts payable of $5.2 million due to timing of payments, and a decrease in prepaid expenses and other current and non-current assets of $10.3 million $4.6 million. This was partially offset by an increase in accounts payable inventories of $2.1 million $11.6 million to support our growth and a decrease in accrued expenses and other non-current liabilities of $1.0 million due to timing of payments.

Net cash used in provided by operating activities was $57.0 million $13.1 million during the nine three months ended September 30, 2022 March 31, 2023 and consisted of consolidated net loss income of $5.9 million $8.6 million and non-cash items of $51.0 million $19.5 million, offset by net changes in operating assets and liabilities of $102.1 million $15.0 million. The change in operating assets and liabilities includes an increase in inventories of $62.3 million $10.6 million to support our growth, an increase in accounts receivable of $57.4 million $3.5 million due to timing of receipt of payment, and an increase in prepaid expenses and other current and non-current assets of $2.0 million $4.0 million. This was partially offset by an increase in accounts payable of $13.1 million, $2.1 million and an increase in accrued expenses and other non-current liabilities of $6.2 million, and proceeds of $0.3 million received related to lease incentives from operating leases. $1.1 million.

Net Cash (Used In) Provided By Investing Activities

Net cash (used in) provided by investing activities relates primarily to purchases of marketable and non-marketable investments net of and capital expenditures, partially offset by proceeds from maturities and sales, capital expenditures and payments in connection with asset acquisitions.

Net cash used in investing activities was $40.4 million during the nine months ended September 30, 2023 and primarily consisted of $27.3 million in purchases of marketable investments, net of proceeds from maturities, capital expenditures of $11.6 million and $1.0 million in payments in connection with an asset acquisition. investments.

Net cash provided by investing activities was $46.2 million $18.4 million during the nine three months ended September 30, 2022 March 31, 2024 and primarily consisted of $32.1 million in proceeds from maturities of marketable investments, net of purchases, partially offset by purchases of non-marketable investments of $10.0 million and capital expenditures of $5.8 million.

Net cash provided by investing activities was $10.7 million during the three months ended March 31, 2023 and primarily consisted of proceeds from maturities and sales of marketable investments of $61.9 million $14.6 million, partially offset by capital expenditures of $15.7 million $3.9 million.

Net Cash (Used In) Provided By Financing Activities

Net cash (used in) provided by financing activities primarily relates to proceeds from exercises of stock options and issuances of common stock under our employee stock purchase plan, partially offset by payments of employee taxes related to vested restricted stock units and payments towards the reduction of our finance lease obligations, obligations.

Net cash used in financing activities was $0.8 million during the three months ended March 31, 2024 and primarily consisted of $0.6 million in payments towards finance leases and $0.4 million of payments of employee taxes related to vested restricted stock units, partially offset by proceeds from exercises of stock options and issuance of common stock under our employee stock purchase plan. $0.2 million.

Net cash provided by financing activities was $10.3 million $1.4 million during the nine three months ended September 30, 2023 March 31, 2023 and primarily consisted of proceeds from the issuance of common stock under our employee stock purchase plan of $8.4 million and proceeds from exercises of stock options of $4.7 million $2.2 million, partially offset by $1.5 million $0.5 million in payments towards finance leases and $1.1 million $0.2 million of payments of employee taxes related to vested restricted stock units.

Net cash provided by financing activities was $5.9 million during the nine months ended September 30, 2022 and primarily consisted of proceeds from the issuance of common stock under our employee stock purchase plan of $8.0 million and proceeds from exercises of stock options of $6.3 million. This was partially offset by $7.0 million of payments of employee taxes related to vested restricted stock units and $1.3 million in payments towards finance leases.

Contractual Obligations and Commitments

There have been no other material changes to our contractual obligations and commitments as of September 30, 2023 March 31, 2024 from those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023.

Critical Accounting Policies and Estimates

We have prepared our financial statements in accordance with U.S. GAAP. Our preparation of these financial statements requires us to make estimates, assumptions, and judgments that affect the reported amounts of assets, liabilities, expenses, and related disclosures at the date of the financial statements, as well as revenue and expenses recorded during the reporting periods. We evaluate our estimates and judgments on an ongoing basis. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could therefore differ materially from these estimates under different assumptions or conditions.

There have been no material changes to our critical accounting policies from those described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included in our Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023.

Recently Issued Accounting Standards

No For information with respect to recently issued accounting standards are expected and the impact of these standards on our consolidated financial statements, refer to impact the Company. Note “2. Summary of Significant Accounting Policies” to our consolidated financial statements in Part I, Item 1 of this Form 10-Q.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

We are exposed to various market risks, which may result in potential losses arising from adverse changes in market rates, such as interest rates and foreign exchange rates. We do not enter into derivatives or other financial instruments for trading or speculative purposes and do not believe we are exposed to material market risk with respect to our cash and cash equivalents and/or our marketable investments.

Interest Rate Risk. We had cash and cash equivalents of $100.8 million $223.1 million as of September 30, 2023 March 31, 2024, which consisted of funds held in money market funds, general checking and savings accounts. In addition, we had marketable investments of $148.1 million $90.4 million, which consisted primarily of corporate bonds, certificate commercial paper, U.S. treasury securities, certificates of deposit, U.S. agency and government sponsored securities, and U.S. states and municipalities. Our investment policy is focused on the preservation of capital and supporting our liquidity needs. Under the policy, we invest in highly rated securities, while limiting the amount of credit exposure to any one issuer other than the U.S. government. We do not invest in financial instruments for trading or speculative purposes, nor do we use leveraged financial instruments. We utilize external investment managers who adhere to the guidelines of our investment policy. The revolving loans under the Credit Agreement bear interest at: (1) the adjusted EURIBOR rate, plus an applicable rate, for euro currency revolving borrowing; or (2) an alternate base rate, daily simple SOFR, or adjusted term SOFR rate, as applicable, plus an applicable rate, for revolving borrowing in U.S. dollars. As of September 30, 2023, there were no borrowings outstanding under the Credit Agreement. A hypothetical 100 basis point change in interest rates would not have a material impact on the value of our cash and cash equivalents or marketable investments.

Foreign Exchange Risk Management. We operate in countries other than the United States, and, therefore, we are exposed to foreign currency risks. We bill most sales outside of the United States in local currencies, primarily euro and Japanese yen, in euros, with some sales being denominated in other currencies. We expect that the percentage of our sales denominated in foreign currencies may increase in the foreseeable future as we continue to expand into international markets. When sales or expenses are not denominated in U.S. dollars, a fluctuation in exchange rates could affect our net income. We do not believe our net income would be materially impacted by an immediate 10% adverse change in foreign exchange rates. We do not currently hedge our exposure to foreign currency exchange rate fluctuations; however, we may choose to hedge our exposure in the future.

While our gross margin for the nine three months ended September 30, 2023 March 31, 2024 was primarily impacted by product mix, regional mix, start-up costs associated with new product launches, and production initiatives to support demand and create future efficiencies, changes in prices did not have a significant impact on our results of operations for any periods presented on our consolidated financial statements.

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

An evaluation as of September 30, 2023 March 31, 2024 was carried out under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, of the effectiveness of our "disclosure controls and procedures," which are defined in Rule Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as controls and other procedures of a company that are designed to ensure that the information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the company's management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure. Based upon that evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) were effective at September 30, 2023 as of March 31, 2024.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the quarterly period ended September 30, 2023 March 31, 2024 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues, if any, within a company have been detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our principal executive officer and principal financial officer have concluded, based on their evaluation as of the end of the period covered by this report, that our disclosure controls and procedures were effective to provide reasonable assurance that the objectives of our disclosure control system were met.

PART II - OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

For information with respect to Legal Proceedings, see Note "9. "8. Commitments and Contingencies" to our condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q.

On April 7, 2023, a former contractor who had been retained by the Company through a third party staffing agency filed a putative class action lawsuit as well as a Private Attorney General Act ("PAGA") representative action complaint against the Company in the Superior Court of the State of California for the County of Alameda, on behalf of the contractor and similarly situated Company contractors and employees in California, alleging various claims pursuant to the California Labor Code related to wages, overtime, meal and rest breaks, reimbursement of business expenses, wage statements and records, and other similar allegations. Additionally, on April 10, 2023, a current employee of the Company filed a PAGA representative action complaint against the Company in the Superior Court of the State of California for the County of Alameda, on behalf of the employee and similarly situated Company employees in California, alleging similar claims. The complaints seek payment of various alleged unpaid wages, penalties, interest and attorneys' fees in unspecified amounts. The Company believes the claims lack merit, and intends to defend itself vigorously. Given the early stage of these proceedings, it is not yet possible to reliably determine any potential liability that could result from these matters. Accordingly, the Company has not accrued any amount for potential losses associated with these matters.

ITEM 1A. RISK FACTORS.

There have been no material changes to our risk factors reported in, or new risk factors identified since the filing of, our Annual Report on Form 10-K for the year ended December 31, 2022 December 31, 2023, which was filed with the SEC on February 23, 2023 February 22, 2024.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

As partial consideration for an acquisition, which closed on September 29, 2023, the Company issued 71,211 shares of its common stock representing purchase consideration calculated by using the closing price of the Company's common stock on September 29, 2023. See Note "5. Asset Acquisition" to our condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for more information.

The issuance of shares of common stock by the Company in connection with the acquisition was deemed to be exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"), in reliance on Section 4(a)(2) of the Securities Act, on the basis that, among other factors: (1) such issuance did not involve a public offering of securities; (2) no underwriter was involved with the issuance, and no commissions were paid; (3) all purchasers of the securities had access to information about the Company necessary to make an informed investment decision; (4) all purchasers are able to bear the economic risk of their investment and are aware that the securities were not registered under the Securities Act and cannot be re-offered or re-sold unless they are registered or are qualified for sale pursuant to an exemption from registration; and (5) appropriate legends were placed upon the book-entry positions representing the shares. None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES.

None.

ITEM 4. MINE SAFETY DISCLOSURE.

None.

ITEM 5. OTHER INFORMATION.

Rule 10b5-1 Trading Plans

During the quarterly period ended September 30, 2023 March 31, 2024, certain of our directors and officers no director or officer adopted or terminated trading plans, each of which was or is, as applicable, intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) under the Exchange Act (the any "Rule 10b5-1 Trading Arrangements"). Each Rule trading arrangement" or "non-Rule 10b5-1 Trading Arrangement was entered into or terminated, trading arrangement", as applicable, during an open trading window under our Securities Trading Policy. The following table presents the material terms each term is defined in Item 408(a) of each Rule 10b5-1 Trading Arrangement adopted or terminated by our officers and directors during the three

months ended September 30, 2023, other than terms with respect to the price at which the individual executing the Rule 10b5-1 Trading Arrangement is authorized to trade:

Name and Title of Officer or Director	Plan Action	Plan Action Date	Plan Duration	Total Securities to be Sold
Lambert Shiu, Chief Accounting Officer	Adoption	8/31/2023	11/30/2023 -5/10/2024	9,204
Thomas Wilder, Director	Adoption	8/14/2023	11/13/2023 - 8/30/2024	840
Thomas Wilder, Director	Termination(1)	8/14/2023	8/7/2023 - 1/12/2024	680

(1) As of the termination date of his Rule 10b5-1 Trading Arrangement, Mr. Wilder had sold 340 shares of common stock under the terms thereof.

Regulation S-K.

ITEM 6. EXHIBITS.

Exhibit Number	Description	Form	File No.	Exhibit(s)	Filing Date
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.				
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.				
32.1*	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.				
101	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2023 March 31, 2024 formatted in Inline Extensible Business Reporting Language (iXBRL) includes: (i) Condensed Consolidated Balance Sheets as of September 30, 2023 March 31, 2024 and December 31, 2022 December 31, 2023, (ii) Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, (ii) Condensed Consolidated Statements of Comprehensive Income (Loss) for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, (iii) Condensed Consolidated Statements of Stockholders' Equity for the three and nine months ended September 30, 2023 March 31, 2024 and 2022, 2023, (iv) Condensed Consolidated Statements of Cash Flows for the nine three months ended September 30, 2023 March 31, 2024 and 2022, 2023, and (v) Notes to Condensed Consolidated Financial Statements.				
104	Cover Page Interactive Data File (formatted as iXBRL with applicable taxonomy extension information contained in Exhibit 101).				

* Furnished herewith.

SIGNATURES

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 hereunto duly authorized.

PENUMBRA, INC.

Date: November 2, 2023 May 7, 2024

By: /s/ Maggie Yuen
Maggie Yuen
Chief Financial Officer
(Principal Financial Officer)

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Adam Elsesser, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Penumbra, 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.

Date: November 2, 2023 May 7, 2024

/s/ Adam Elsesser

Adam Elsesser

Chairman, Chief Executive Officer and President

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a) OF THE SECURITIES EXCHANGE ACT, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Maggie Yuen, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Penumbra, 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.

Date: November 2, 2023 May 7, 2024

/s/ Maggie Yuen

Maggie Yuen

Chief Financial Officer

Exhibit 32.1

PENUMBRA, INC.

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

In connection with the Quarterly Report of Penumbra, Inc. (the "Company") on Form 10-Q for the fiscal quarter ended September 30, 2023 March 31, 2024, as filed with the Securities and Exchange Commission (the "Report"), Adam Elsesser, Chairman, Chief Executive Officer and President of the Company, and Maggie Yuen, Chief Financial Officer of the Company, respectively, do each hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods presented.

/s/ Adam Elsesser

Adam Elsesser

Chairman, Chief Executive Officer and President

/s/ Maggie Yuen

Maggie Yuen

Chief Financial Officer

Date: November 2, 2023 May 7, 2024

DISCLAIMER