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

FORM 10-Q

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

For the quarterly period ended November 30, 2018

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 0-50761

AngioDynamics, Inc.

(Exact name of registrant as specified in its charter)



angiodynamics

Delaware

(State or other jurisdiction of
incorporation or organization)

14 Plaza Drive Latham, New York

(Address of principal executive offices)

11-3146460

(I.R.S. Employer
Identification No.)

12110

(Zip Code)

(518) 795-1400

Registrant's telephone number, including area code

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

Title of each class	Name of each exchange on which registered
Common stock, par value \$.01	NASDAQ Global Select Market
Preferred Stock Purchase Rights	NASDAQ Global Select Market

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

None
(Title of Class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

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 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 or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="radio"/>		

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

Indicate the number of shares outstanding of each of the Issuer's classes of common stock, as of the latest practicable date.

<u>Class</u>	<u>Outstanding as of January 3, 2019</u>
Common Stock, par value \$.01	37,137,203

AngioDynamics, Inc. and Subsidiaries

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PART 1. FINANCIAL INFORMATION
Item 1. Financial Statements.
AngioDynamics, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF INCOME
(unaudited)
(in thousands of dollars, except per share data)

	Three Months Ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Net sales	\$ 91,503	\$ 86,706	\$ 176,843	\$ 172,117
Cost of sales (exclusive of intangible amortization)	42,394	43,975	83,267	88,157
Gross profit	49,109	42,731	93,576	83,960
Operating expenses:				
Research and development	7,363	6,107	15,025	12,548
Sales and marketing	20,269	18,967	39,702	38,369
General and administrative	9,336	7,540	17,832	15,596
Amortization of intangibles	5,188	4,146	9,304	8,242
Change in fair value of contingent consideration	244	82	256	187
Acquisition, restructuring and other items, net	2,728	4,766	7,150	7,755
Total operating expenses	45,128	41,608	89,269	82,697
Operating income	3,981	1,123	4,307	1,263
Other (expenses) income:				
Interest expense, net	(1,330)	(760)	(2,247)	(1,483)
Other income (loss), net	80	(280)	194	287
Total other expenses, net	(1,250)	(1,040)	(2,053)	(1,196)
Income before income tax expense	2,731	83	2,254	67
Income tax expense (benefit)	591	(166)	583	(147)
Net income	\$ 2,140	\$ 249	\$ 1,671	\$ 214
Earnings per share				
Basic	\$ 0.06	\$ 0.01	\$ 0.04	\$ 0.01
Diluted	\$ 0.06	\$ 0.01	\$ 0.04	\$ 0.01
Weighted average shares outstanding				
Basic	37,500	37,066	37,411	36,983
Diluted	38,117	37,383	38,131	37,322

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

AngioDynamics, Inc. and Subsidiaries**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME**
(unaudited)
(in thousands of dollars)

	Three Months Ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Net income	\$ 2,140	\$ 249	\$ 1,671	\$ 214
Other comprehensive income, before tax:				
Unrealized gain on marketable securities	—	45	33	45
Foreign currency translation	(206)	150	(331)	433
Other comprehensive income (loss), before tax	(206)	195	(298)	478
Income tax expense related to items of other comprehensive income	—	—	—	—
Other comprehensive income (loss), net of tax	(206)	195	(298)	478
Total comprehensive income, net of tax	\$ 1,934	\$ 444	\$ 1,373	\$ 692

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

AngioDynamics, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS
(unaudited)
(in thousands of dollars, except share data)

	Nov 30, 2018	May 31, 2018
Assets		
Current assets		
Cash and cash equivalents	\$ 42,820	\$ 74,096
Marketable securities	1,350	1,317
Accounts receivable, net of allowances of \$2,225 and \$2,466, respectively	43,374	39,401
Inventories	50,637	48,916
Prepaid expenses and other	4,776	4,302
Total current assets	142,957	168,032
Property, plant and equipment, net	41,945	42,461
Other assets	3,478	3,417
Intangible assets, net	168,706	130,310
Goodwill	426,874	361,252
Total assets	\$ 783,960	\$ 705,472
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 19,424	\$ 15,775
Accrued liabilities	21,272	34,426
Current portion of long-term debt	5,000	5,000
Current portion of contingent consideration	4,006	2,100
Total current liabilities	49,702	57,301
Long-term debt, net of current portion	139,266	86,621
Deferred income taxes	17,696	17,173
Contingent consideration, net of current portion	22,512	1,161
Other long-term liabilities	5,221	621
Total liabilities	234,397	162,877
Commitments and contingencies (Note 14)		
Stockholders' equity		
Preferred stock, par value \$.01 per share, 5,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, par value \$.01 per share, 75,000,000 shares authorized; 37,875,529 and 37,594,493 shares issued and 37,505,529 and 37,224,493 shares outstanding at November 30, 2018 and May 31, 2018, respectively	372	370
Additional paid-in capital	549,355	543,762
Retained earnings	6,800	5,129
Treasury stock, 370,000 shares at November 30, 2018 and May 31, 2018, respectively	(5,714)	(5,714)
Accumulated other comprehensive loss	(1,250)	(952)
Total Stockholders' Equity	549,563	542,595
Total Liabilities and Stockholders' Equity	\$ 783,960	\$ 705,472

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

AngioDynamics, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)
(in thousands of dollars)

	Six Months Ended	
	Nov 30, 2018	Nov 30, 2017
Cash flows from operating activities:		
Net income	\$ 1,671	\$ 214
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	12,291	11,677
Stock based compensation	4,741	3,763
Change in fair value of contingent consideration	256	187
Deferred income taxes	495	(106)
Change in accounts receivable allowances	(75)	280
Fixed and intangible asset impairments and disposals	12	8
Other	(17)	(557)
Changes in operating assets and liabilities:		
Accounts receivable	(3,068)	2,299
Inventories	(955)	598
Prepaid expenses and other	(1,183)	(703)
Accounts payable, accrued and other liabilities	(10,082)	(4,459)
Net cash provided by operating activities	4,086	13,201
Cash flows from investing activities:		
Additions to property, plant and equipment	(1,416)	(1,222)
Cash paid for acquisitions	(84,920)	—
Net cash used in investing activities	(86,336)	(1,222)
Cash flows from financing activities:		
Proceeds from issuance of and borrowings on long-term debt	55,000	—
Repayment of long-term debt	(2,500)	(2,500)
Payment of acquisition related contingent consideration	(2,100)	(9,500)
Proceeds from exercise of stock options and employee stock purchase plan	854	1,738
Net cash provided by (used) in financing activities	51,254	(10,262)
Effect of exchange rate changes on cash and cash equivalents	(280)	595
(Decrease) increase in cash and cash equivalents	(31,276)	2,312
Cash and cash equivalents at beginning of period	74,096	47,544
Cash and cash equivalents at end of period	\$ 42,820	\$ 49,856
Supplemental disclosure of non-cash investing and financing activities:		
Change in accounts payable for property and equipment	\$ (19)	\$ 98
Fair value of contingent consideration for acquisitions	25,100	—
Fair value of acquisition consideration included in accrued expenses and other long-term liabilities	4,863	—

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

AngioDynamics, Inc. and Subsidiaries
**CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(unaudited)
(in thousands of dollars, except share data)**

	Common Stock		Additional paid in capital	Retained earnings	Accumulated other comprehensive loss	Treasury Stock		Total
	Shares	Amount				Shares	Amount	
Balance at May 31, 2018	37,594,493	\$ 370	\$ 543,762	\$ 5,129	\$ (952)	(370,000)	\$ (5,714)	\$ 542,595
Net loss				\$ (469)				(469)
Exercise of stock options	71,336	1	607					608
Issuance/Cancellation of restricted stock units	149,446		(460)					(460)
Issuance/Cancellation of performance share units	5,235							—
Purchases of common stock under ESPP	40,547	1	556					557
Stock-based compensation			2,150					2,150
Other comprehensive loss, net of tax					(92)			(92)
Balance at August 31, 2018	<u>37,861,057</u>	<u>\$ 372</u>	<u>\$ 546,615</u>	<u>\$ 4,660</u>	<u>\$ (1,044)</u>	<u>(370,000)</u>	<u>\$ (5,714)</u>	<u>\$ 544,889</u>
Net income				2,140				2,140
Exercise of stock options	10,571		149					149
Issuance/Cancellation of restricted stock units	3,901							—
Issuance/Cancellation of performance share units								—
Purchases of common stock under ESPP								—
Stock-based compensation			2,591					2,591
Other comprehensive loss, net of tax					(206)			(206)
Balance at November 30, 2018	<u>37,875,529</u>	<u>\$ 372</u>	<u>\$ 549,355</u>	<u>\$ 6,800</u>	<u>\$ (1,250)</u>	<u>(370,000)</u>	<u>\$ (5,714)</u>	<u>\$ 549,563</u>

AngioDynamics, Inc. and Subsidiaries
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY - continued
(unaudited)
(in thousands of dollars, except share data)

	Common Stock		Additional paid in capital	Retained earnings (deficit)	Accumulated other comprehensive loss	Treasury Stock		Total
	Shares	Amount				Shares	Amount	
Balance at May 31, 2017	37,210,091	\$ 367	\$ 532,705	\$ (11,007)	\$ (1,324)	(370,000)	\$ (5,714)	\$ 515,027
Net loss				(35)				(35)
Adjustment from the adoption of ASU 2016-09			199	(199)				—
Exercise of stock options	17,897		89					89
Issuance/Cancellation of restricted stock units	119,098	1						1
Issuance/Cancellation of performance share units								—
Purchases of common stock under ESPP	50,900		722					722
Stock-based compensation			1,797					1,797
Other comprehensive loss, net of tax					283			283
Balance at August 31, 2017	37,397,986	\$ 368	\$ 535,512	\$ (11,241)	\$ (1,041)	(370,000)	\$ (5,714)	\$ 517,884
Net income				249				249
Adjustment from the adoption of ASU 2016-09								—
Exercise of stock options	78,211	1	925					926
Issuance/Cancellation of restricted stock units	5,478							—
Issuance/Cancellation of performance share units								—
Purchases of common stock under ESPP								—
Stock-based compensation			1,966					1,966
Other comprehensive loss, net of tax					195			195
Balance at November 30, 2017	37,481,675	\$ 369	\$ 538,403	\$ (10,992)	\$ (846)	(370,000)	\$ (5,714)	\$ 521,220

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

AngioDynamics, Inc. and Subsidiaries**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)****1. CONSOLIDATED FINANCIAL STATEMENTS**

The consolidated balance sheet as of November 30, 2018, the consolidated statement of stockholders' equity for the three and six months ended November 30, 2018 and 2017, and the consolidated statements of income, consolidated statements of comprehensive income (loss) for the three and six months ended November 30, 2018 and 2017, and consolidated statements of cash flows for the six months ended November 30, 2018 and 2017 have been prepared by us and are unaudited. The consolidated balance sheet as of May 31, 2018 was derived from audited consolidated financial statements but does not include all disclosures required by accounting principles generally accepted in the United States of America. In the opinion of management, all adjustments (consisting of normal recurring adjustments) necessary to state fairly the financial position, changes in stockholders' equity and comprehensive income, results of operations and cash flows as of and for the period ended November 30, 2018 (and for all periods presented) have been made.

The unaudited interim consolidated financial statements for the three and six months ended November 30, 2018 and 2017 include the accounts of AngioDynamics, Inc. and its wholly owned subsidiaries, collectively, the "Company". All intercompany balances and transactions have been eliminated.

2. ACQUISITIONS**RadiaDyne Acquisition**

On September 21, 2018, the Company acquired RadiaDyne, a privately held medical diagnostic and device company that designs and develops patient dose monitoring technology to improve cancer treatment outcomes. The aggregate purchase price of \$75.0 million included an upfront payment of \$47.9 million, contingent consideration with an estimated fair value of \$22.3 million, an indemnification holdback of \$4.6 million and a purchase price holdback of \$0.2 million. The fair value of \$22.3 million in contingent consideration is comprised of \$16.5 million for the revenue milestones and \$5.8 million for the technical milestones. The \$4.6 million indemnification holdback is recorded in other long-term liabilities and the \$0.2 million purchase price holdback is recorded in accrued liabilities.

This acquisition expands the Company's growing Oncology business by adding RadiaDyne's early-stage, proprietary OARtrac® real-time radiation dose monitoring platform and other market-leading oncology solutions, including the IsoLoc®/ImmobiLoc® and Alatus® balloon stabilizing technologies.

The Company accounted for the RadiaDyne acquisition under the acquisition method of accounting for business combinations. Accordingly, the cost to acquire the assets was allocated to the underlying net assets in proportion to estimates of their respective fair values. The excess of the purchase price over the estimated fair value of the net assets acquired was recorded as goodwill. Goodwill is deductible for income tax purposes.

The Company has not disclosed the amount of revenue and earnings for sales of RadiaDyne products since acquisition, nor proforma information, because these amounts are not significant to the Company's financial statements. Acquisition-related costs associated with the RadiaDyne acquisition, which are included in acquisition, restructuring and other expenses, net in the accompanying consolidated statements of income, were approximately \$1.6 million. The following table summarizes the preliminary aggregate purchase price allocated to the net assets acquired:

(in thousands)	Sep 21, 2018
Assets acquired	
Accounts receivable	\$ 900
Inventory	732
Prepaid and other current assets	98
Property, plant and equipment	133
Intangible assets:	
RadiaDyne trademark	400
OarTrac trademark	200
RadiaDyne legacy product technology	1,500
OarTrac product technology	16,300
RadiaDyne customer relationships	3,700
Goodwill	51,482
Total assets acquired	\$ 75,445
Liabilities assumed	
Accounts payable	\$ 352
Accrued expenses	106
Total liabilities assumed	\$ 458
Net assets acquired	\$ 74,987

The allocation of the purchase price to the assets acquired and liabilities assumed, including the amount allocated to goodwill, is subject to change within the measurement period (up to one year from the acquisition date) as additional information that existed at the date of the acquisition related to the values of assets acquired and liabilities assumed is obtained.

The values assigned to the RadiaDyne and OarTrac trademark and product technologies were derived using the relief-from-royalties method under the income approach. This approach is used to estimate the cost savings that accrue for the owner of an intangible asset who would otherwise have to pay royalties or licensing fees on revenues earned through the use of the asset if they had not owned the rights to use the assets. The net after-tax royalty savings are calculated for each year in the remaining economic life of the intangible asset and discounted to present value. The trademarks are deemed to have a useful life of five to seven years and the product technologies are deemed to have a useful life of seven to ten years. Both are amortized on a straight-line basis over their useful life.

The value assigned to customer relationships was derived using the multi-period excess earnings method under the income approach. This approach estimates the excess earnings generated over the lives of the customers that existed as of the acquisition date and discounts such earnings to present value. Customer relationships are amortized on a straight-line basis over fifteen years.

The goodwill arising from the acquisition consists largely of synergies and economies of scale the Company hopes to achieve from combining the acquired assets with the Company's current operations.

BioSentry Acquisition

On August 14, 2018, the Company acquired the BioSentry product from Surgical Specialties, LLC ("SSC"), for an aggregate purchase price of \$39.8 million of which \$37.0 million was paid on August 14, 2018 and \$2.8 million was recorded as contingent consideration. The contingent consideration liability was recorded at fair value and will be payable to SSC upon fulfillment of certain hydrogel orders.

The Company accounted for the BioSentry acquisition under the acquisition method of accounting for business combinations. Accordingly, the cost to acquire the assets was allocated to the underlying net assets in proportion to estimates of their respective fair values. The excess of the purchase price over the estimated fair value of the net assets acquired was recorded as goodwill. Goodwill is deductible for income tax purposes.

The Company has not disclosed the amount of revenue and earnings for sales of BioSentry products since acquisition, nor proforma information, because these amounts are not significant to the Company's financial statements. Acquisition-related costs associated with the BioSentry acquisition, which are included in acquisition, restructuring and other expenses, net in the accompanying consolidated statements of income, were approximately \$1.0 million. The following table summarizes the

preliminary aggregate purchase price allocated to the net assets acquired:

(in thousands)	Preliminary allocation	Adjustments ⁽¹⁾	Revised allocation
Inventory	\$ 50	\$ —	\$ 50
Property, plant and equipment	10	—	10
Intangible assets:			
BioSentry trademark	1,700	800	2,500
BioSentry product technology	13,800	7,100	20,900
Customer relationships	2,500	(300)	2,200
Goodwill	21,740	(7,600)	14,140
Net assets acquired	<u>\$ 39,800</u>	<u>\$ —</u>	<u>\$ 39,800</u>

(1) Measurement period adjustments are recognized on a prospective basis in the period of change, instead of restating prior periods. There was no impact to reported earnings in connection with these measurement period adjustments for the periods presented. Amounts represent adjustments to the preliminary purchase price allocation first presented in the Company's Quarterly Report on Form 10-Q for the quarter ended August 31, 2018 resulting from revising the Company's purchase price allocation for this acquisition.

The allocation of the purchase price to the assets acquired and liabilities assumed, including the amount allocated to goodwill, is subject to change within the measurement period (up to one year from the acquisition date) as additional information that existed at the date of the acquisition related to the values of assets acquired and liabilities assumed is obtained.

The values assigned to the BioSentry trademark and product technologies were derived using the relief-from-royalties method under the income approach. This approach is used to estimate the cost savings that accrue for the owner of an intangible asset who would otherwise have to pay royalties or licensing fees on revenues earned through the use of the asset if they had not owned the rights to use the assets. The net after-tax royalty savings are calculated for each year in the remaining economic life of the intangible asset and discounted to present value. The trademark and product technologies are deemed to have a fifteen year useful life and are amortized on a straight-line basis over their useful life.

The value assigned to customer relationships was derived using the multi-period excess earnings method under the income approach. This approach estimates the excess earnings generated over the lives of the customers that existed as of the acquisition date and discounts such earnings to present value. Customer relationships are amortized on a straight-line basis over ten years.

The goodwill arising from the acquisition consists largely of synergies and economies of scale the Company hopes to achieve from combining the acquired assets with the Company's current operations.

3. REVENUE FROM CONTRACTS WITH CUSTOMERS

Adoption of ASC Topic 606 "Revenue from Contracts with Customers"

The Company adopted ASC 606, *Revenue from Contracts with Customers* on June 1, 2018 using the modified retrospective method for all contracts not completed as of the date of adoption. The reported results for fiscal 2019 reflect the application of ASC 606 guidance while the reported results for fiscal 2018 were prepared under the guidance of ASC 605, Revenue Recognition ("ASC 605"). For discussion of the Company's accounting policy for revenue recognition under ASC 605, refer to Item 8 of the Annual Report on Form 10-K for the year ended May 31, 2018. The adoption of ASC 606 did not have an impact on the Company's consolidated balance sheet, results of operations, equity or cash flows as of the adoption date or for the periods presented, other than the enhanced disclosures included in this footnote.

Revenue Recognition

Under ASC 606, revenue is recognized when a customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that an entity determines are within the scope of ASC 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

The Company has one primary revenue stream which is the sales of its products.

Disaggregation of Revenue

The following tables summarize net product revenue by Global Business Unit ("GBU") and geography for the three and six months ended November 30, 2018:

(in thousands)	Three months ended November 30, 2018		
	United States	International	Total
Net sales			
Vascular Interventions & Therapies	\$ 42,826	\$ 9,668	\$ 52,494
Vascular Access	20,081	3,642	23,723
Oncology	8,976	6,310	15,286
Total	\$ 71,883	\$ 19,620	\$ 91,503

(in thousands)	Six months ended November 30, 2018		
	United States	International	Total
Net sales			
Vascular Interventions & Therapies	\$ 84,864	\$ 17,624	\$ 102,488
Vascular Access	40,528	6,985	47,513
Oncology	14,175	12,667	26,842
Total	\$ 139,567	\$ 37,276	\$ 176,843

Net Product Revenue

The Company's products consist of a wide range of medical, surgical and diagnostic devices used by professional healthcare providers for vascular access, for the treatment of peripheral vascular disease and for use in oncology and surgical settings. The Company's devices are generally used in minimally invasive, image-guided procedures. Most of the Company's products are intended to be used once and then discarded, or they may be temporarily implanted for short- or longer-term use. The Company sells its products to its distribution partners and to end users, such as interventional radiologists, interventional cardiologists, vascular surgeons, urologists, interventional and surgical oncologists and critical care nurses.

Contracts and Performance Obligations

The Company contracts with its customers based on customer purchase orders, which in many cases are governed by master purchasing agreements. The Company's contracts with customers are generally for product only, and do not include other performance obligations such as services or other material rights. As part of its assessment of each contract, the Company evaluates certain factors including the customer's ability to pay (or credit risk). For each contract, the Company considers the promise to transfer products, each of which is distinct, to be the identified performance obligations.

Transaction Price and Allocation to Performance Obligations

Transaction prices of products are typically based on contracted rates. Product revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring products to a customer. 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 utilizing the expected value method. As such, revenue is recorded net of rebates, returns and other deductions.

If a contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price based on the estimated relative standalone selling prices of the promised products underlying each performance obligation. The Company has standard pricing for its products and determines standalone selling prices based on the price at which the performance obligation is sold separately.

Revenue Recognition

Revenue is recognized when control of the product is transferred to the customer (i.e., when the Company's performance obligation is satisfied), which occurs at a point in time, and may be upon shipment from the Company's manufacturing site or delivery to the customer's named location, based on the contractual shipping terms of a contract.

In determining whether control has transferred, the Company considers if there is a present right to payment from the customer and when physical possession, legal title and risks and rewards of ownership have transferred to the customer.

The Company typically invoices customers upon satisfaction of identified performance obligations. As the Company's standard payment terms are 30 to 90 days from invoicing, the Company does not provide any significant financing to its customers.

Sales, value add, and other taxes collected on behalf of third parties are excluded from revenue.

Variable Consideration

Revenues from product sales are recorded at the net sales price (transaction price), which includes estimates of variable consideration for which reserves are established for discounts, returns, rebates and allowances that are offered within contracts between the Company and its customers. These reserves are based on the amounts earned or to be claimed on the related sales and are classified as a current liability.

Rebates and Allowances: The Company provides certain customers with rebates and allowances that are explicitly stated in the Company's contracts and are recorded as a reduction of revenue in the period the related product revenue is recognized. The Company establishes a liability for such amounts, which is included in accrued expenses in the accompanying condensed consolidated balance sheets. These rebates and allowances result from performance-based offers that are primarily based on attaining contractually specified sales volumes and administrative fees the Company is required to pay to group purchasing organizations.

Product Returns: The Company generally offers customers a limited right of return. Product returns after 30 days must be pre-approved by the Company and customers may be subject to a 20% restocking charge. To be accepted, a returned product must be unadulterated, undamaged and have at least twelve months remaining prior to its expiration date. The Company estimates the amount of its product sales that may be returned by its customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized. The Company currently estimates product return liabilities using its historical product return information and considers other factors that it believes could significantly impact its expected returns, including product recalls. During the six months ended November 30, 2018, such product returns were not material.

Contract Balances with Customers

A receivable is recognized in the period the Company ships the product. Payment terms on invoiced amounts are based on contractual terms with each customer and generally coincide with revenue recognition. Accordingly, the Company does not have any contract assets associated with the future right to invoice its customers. In some cases, if control of the product has not yet transferred to the customer or the timing of the payments made by the customer precedes the Company's fulfillment of the performance obligation, the Company recognizes a contract liability that is included in deferred revenue in the accompanying condensed consolidated balance sheets.

The following table presents changes in the Company's receivables, contract assets and contract liabilities with customers:

(in thousands)	Nov 30, 2018	May 31, 2018
Receivables	\$ 43,374	\$ 39,401
Contract assets	\$ —	\$ —
Contract liabilities	\$ 1,201	\$ 1,203

During the six months ended November 30, 2018, the Company recognized \$0.2 million in revenue that was included in contract liabilities as of the beginning of the period. This was offset by additions to contract liabilities of \$0.2 million.

Costs to Obtain or Fulfill a Customer Contract

Prior to the adoption of ASC 606, the Company expensed incremental commissions paid to sales representatives for obtaining product sales. Under ASC 606, the Company recognizes an asset for incremental costs of obtaining a contract with a customer if it expects to recover those costs. The Company's sales incentive compensation plans qualify for capitalization since these plans are directly related to sales achieved during a period of time. However, the Company has elected the practical expedient under ASC 340-40-25-4 to expense the costs as they are incurred within selling and marketing expenses since the amortization period is less than one year.

The Company accounts for shipping and handling activities related to contracts with customers as costs to fulfill the promise to transfer the associated products. Shipping and handling costs, associated with the distribution of finished products to customers, are recorded in costs of goods sold and are recognized when the related finished product is shipped to the customer. Amounts charged to customers for shipping are recorded in net sales.

4. INVENTORIES

Inventories are stated at lower of cost and net realizable value (using the first-in, first-out method). Inventories consisted of the following:

(in thousands)	Nov 30, 2018	May 31, 2018
Raw materials	\$ 20,282	\$ 18,678
Work in process	10,125	10,808
Finished goods	20,230	19,430
Inventories	<u>\$ 50,637</u>	<u>\$ 48,916</u>

The Company periodically reviews for both obsolescence and loss of value. The Company makes assumptions about the future demand for and market value of the inventory. Based on these assumptions, the Company estimates the amount of obsolete, expiring and slow moving inventory. The total inventory reserve at November 30, 2018 and May 31, 2018 was \$5.0 million and \$6.1 million, respectively. Of the \$5.0 million reserve as of November 30, 2018, \$0.4 million relates to the inventory reserve for Acculis inventory as a result of the recall announced in the fourth quarter of fiscal year 2017 and \$0.7 million relates to a specific reserve related to the termination of an agreement with a Japanese distributor in the second quarter of fiscal year 2018. Of the \$6.1 million reserve as of May 31, 2018, \$1.6 million relates to the inventory reserve for Acculis inventory as a result of the recall announced in the fourth quarter of fiscal year 2017 and \$0.7 million relates to a specific reserve related to the termination of an agreement with a Japanese distributor in the second quarter of fiscal year 2018.

5. GOODWILL AND INTANGIBLE ASSETS

Intangible assets other than goodwill are amortized over their estimated useful lives on either a straight-line basis or proportionately to the benefit being realized. Useful lives range from two to eighteen years. The Company periodically reviews the estimated useful lives of its intangible assets and reviews such assets or asset groups for impairment whenever events or changes in circumstances indicate that the carrying value of the assets or asset groups may not be recoverable. If an intangible asset or asset group is considered to be impaired, the amount of the impairment will equal the excess of the carrying value over the fair value of the asset.

Goodwill is not amortized, but rather, is tested for impairment annually or more frequently if impairment indicators arise. Goodwill represents the excess of the purchase price over the fair value of the net tangible and identifiable intangible assets acquired in each business combination.

The changes in the carrying amount of goodwill for the six months ended November 30, 2018 were as follows:

(in thousands)	
Goodwill balance at May 31, 2018	\$ 361,252
Additions for BioSentry acquisition (Note 2)	14,140
Additions for RadiaDyne acquisition (Note 2)	51,482
Goodwill balance at November 30, 2018	<u>\$ 426,874</u>

The Company's annual testing for impairment of goodwill was completed as of December 31, 2017. The Company operates as a single operating segment with one reporting unit and consequently evaluates goodwill for impairment based on an evaluation of the fair value of the Company as a whole. The Company determines the fair value of the reporting unit based on the market valuation approach and concluded that it was not more-likely-than-not that the fair value of the Company's reporting unit was less than its carrying value.

Even though the Company determined that there was no goodwill impairment as of December 31, 2017, the future occurrence of a potential indicator of impairment, such as a significant adverse change in legal, regulatory, business or economic conditions or a more-likely-than-not expectation that the reporting unit or a significant portion of the reporting unit will be sold or disposed of, would require an interim assessment for the reporting unit prior to the next required annual assessment as of December 31, 2018. The Company continued to assess for potential impairment through November 30, 2018 and noted no events that would be considered a triggering event.

Intangible assets consisted of the following:

	Nov 30, 2018		
	Gross carrying value	Accumulated amortization	Net carrying value
(in thousands)			
Product technologies	\$ 185,872	\$ (74,415)	\$ 111,457
Customer relationships	62,284	(25,252)	37,032
Trademarks	31,500	(13,085)	18,415
Licenses	5,752	(4,697)	1,055
Distributor relationships	1,250	(503)	747
	<u>\$ 286,658</u>	<u>\$ (117,952)</u>	<u>\$ 168,706</u>
	May 31, 2018		
	Gross carrying value	Accumulated amortization	Net carrying value
(in thousands)			
Product technologies	\$ 147,175	\$ (68,880)	\$ 78,295
Customer relationships	56,428	(23,237)	33,191
Trademarks	28,400	(11,809)	16,591
Licenses	5,752	(4,357)	1,395
Distributor relationships	1,250	(412)	838
	<u>\$ 239,005</u>	<u>\$ (108,695)</u>	<u>\$ 130,310</u>

Amortization expense for the three months ended November 30, 2018 and 2017 was \$5.2 million and \$4.1 million, respectively. Amortization expense for the six months ended November 30, 2018 and 2017 was \$9.3 million and \$8.2 million, respectively.

Expected future amortization expense related to the intangible assets is as follows:

(in thousands)		
Remainder of 2019	\$	10,277
2020		18,963
2021		17,804
2022		16,919
2023		16,468
2024 and thereafter		88,275
	<u>\$</u>	<u>168,706</u>

6. ACCRUED LIABILITIES

Accrued liabilities consisted of the following:

	Nov 30, 2018	May 31, 2018
(in thousands)		
Payroll and related expenses	\$ 9,624	\$ 10,235
Royalties	1,522	1,537
Accrued severance	1,092	1,940
Sales and franchise taxes	1,165	683
Outside services	1,357	2,396
Litigation matters	—	12,500
Other	6,512	5,135
	<u>\$ 21,272</u>	<u>\$ 34,426</u>

7. LONG TERM DEBT

On November 7, 2016, the Company entered into a Credit Agreement (the “Credit Agreement”) with the lenders party thereto, JPMorgan Chase Bank, N.A., as administrative agent, Bank of America, N.A. and Keybank National Association as co-syndication agents, and JPMorgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Keybank National Association as joint bookrunners and joint lead arrangers.

The Credit Agreement provides for a \$100.0 million senior secured term loan facility (“Term Loan”) and a \$150.0 million senior secured revolving credit facility, which includes up to a \$20.0 million sublimit for letters of credit and a \$5.0 million sublimit for swingline loans (the “Revolving Facility”, and together with the Term Loan, the “Facilities”).

On November 7, 2016, the Company borrowed \$100.0 million under the Term Loan and approximately \$16.5 million under the Revolving Facility to repay the balance of \$116.5 million under the former credit agreement. As of November 30, 2018 and May 31, 2018 the carrying value of long-term debt approximates its fair market value.

The interest rate on the Term Loan at November 30, 2018 was 3.80%.

The Company was in compliance with the Credit Agreement covenants as of November 30, 2018.

The Company's maturities of principal obligations under the Credit Agreement are as follows, as of November 30, 2018:

(in thousands)	
Remainder of 2019	\$ 2,500
2020	7,500
2021	11,250
2022	68,750
Total term loan	<u>90,000</u>
Revolving facility (1)	55,000
Total debt	<u>145,000</u>
Less: Unamortized debt issuance costs	(734)
Total	<u>144,266</u>
Less: Current portion of long-term debt	(5,000)
Total long-term debt, net	<u>\$ 139,266</u>

(1) The revolving facility is due in fiscal year 2022.

8. INCOME TAXES

The Company provides for income taxes at the end of each interim period based on the estimated effective tax rate for the full fiscal year adjusted for any discrete events, which are recorded in the period that they occur. The estimated annual effective tax rate prior to discrete items was 26.3% in the second quarter of fiscal 2019, as compared to 59.8% for the same period in fiscal 2018. In fiscal 2019, the Company's effective tax rate differs from the U.S. statutory rate primarily due to the impact of the valuation allowance, foreign taxes and state taxes.

On December 22, 2017, the United States enacted the Tax Cuts and Jobs Act of 2017 (the "Tax Reform Act"). The Tax Reform Act is significant and has wide-ranging effects.

The Company is still studying all of the ramifications of the Tax Reform Act, but expects the primary material impact of the Act to be the remeasurement of the Company's naked credit deferred tax liability, which was recorded in fiscal 2018 as a result of the reduction in U.S. corporate tax rates from 35% to 21%. The Tax Reform Act imposes a one-time transition tax on the deemed repatriation of post-1986 undistributed foreign subsidiaries' earnings. Based on the information available as of December 31, 2017, the Company estimated undistributed foreign earnings in fiscal 2018. The taxable income arising from this deemed repatriation is expected to result in the utilization of net operating loss carryforwards and other tax credits, offset by changes in the valuation allowance, resulting in no net impact to tax expense. No changes have been made to these estimates and the Company expects to complete its accounting for these items within the prescribed measurement period.

The Tax Reform Act also creates a new requirement that certain income earned by foreign subsidiaries ("GILTI"), must be included in U.S. gross income. The FASB allows an accounting policy election of either recognizing deferred taxes for temporary differences expected to reverse as GILTI in future years or recognizing such taxes as a current period expense when incurred. The Company has not yet adopted an accounting policy.

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. In determining whether its deferred tax assets are more likely than not realizable, the Company evaluated all available positive and negative evidence, and weighted the evidence based on its objectivity. Evidence the Company considered included its history of net operating losses, which resulted in the Company recording a full valuation allowance for its deferred tax assets in fiscal 2016, except the naked credit deferred tax liability.

Based on the review of all available evidence, the Company determined that it has not yet attained a sustained level of profitability and the objectively verifiable negative evidence outweighed the positive evidence. Therefore, the Company has provided a valuation allowance on its federal and state net operating loss carryforwards, federal and state R&D credit carryforwards and other net deferred tax assets that have a limited life and are not supportable by the naked credit deferred tax liability sourced income as of November 30, 2018. The Company will continue to assess the level of the valuation allowance required. If sufficient positive evidence exists in future periods to support a release of some or all of the valuation allowance, such a release would likely have a material impact on the Company's results of operations.

9. SHARE-BASED COMPENSATION

The Company has two stock-based compensation plans that provide for the issuance of up to approximately 11.3 million shares of common stock. The 2004 Stock and Incentive Award Plan (the "2004 Plan") provides for the grant of incentive options to the Company's employees and for the grant of non-statutory stock options, restricted stock, stock appreciation rights, performance units, performance shares and other incentive awards to the Company's employees, directors and other service providers. The Company also has an employee stock purchase plan.

For the three months ended November 30, 2018 and 2017, share-based compensation expense was \$2.6 million and \$2.0 million, respectively. For the six months ended November 30, 2018 and 2017, share-based compensation expense was \$4.7 million and \$3.8 million, respectively.

During the six months ended November 30, 2018 and 2017, the Company granted stock options and restricted stock units under the 2004 Plan to certain employees and members of the Board of Directors. Stock option awards are valued using the Black-Scholes option-pricing model and then amortized on a straight-line basis over the requisite service period of the award. Restricted stock unit awards are valued based on the closing trading value of the Company's shares on the date of grant and then amortized on a straight-line basis over the requisite service period of the award.

In the first six months of fiscal year 2019, the Company granted market-based performance share awards under the 2004 Plan to certain employees. The awards may be earned by achieving relative performance levels over the three year requisite service period. The performance criteria are based on the total shareholder return ("TSR") of the Company's common stock

relative to the TSR of the common stock of a pre-defined industry peer-group. The fair value of these awards are based on the closing trading value of the Company's shares on the date of grant and use a Monte Carlo simulation model.

As of November 30, 2018, there was \$18.0 million of unrecognized compensation expense related to share-based payment arrangements. These costs are expected to be recognized over a weighted-average period of approximately four years. The Company has sufficient shares to satisfy expected share-based payment arrangements.

10. EARNINGS PER SHARE

Basic earnings per share is based on the weighted average number of common shares outstanding without consideration of potential common stock. Diluted earnings per share includes the dilutive effect of potential common stock consisting of stock options, restricted stock units and performance stock units, provided that the inclusion of such securities is not anti-dilutive. In periods with a net loss, stock options and restricted stock units are not included in the computation of diluted loss per share as the impact would be anti-dilutive.

The following table reconciles basic to diluted weighted-average shares outstanding for the three and six months ended November 30, 2018 and 2017 (in thousands):

(in thousands)	Three Months Ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Basic	37,500	37,066	37,411	36,983
Effect of dilutive securities	617	317	720	339
Diluted	38,117	37,383	38,131	37,322
Securities excluded as their inclusion would be anti-dilutive	2,384	1,124	2,354	1,095

11. SEGMENT AND GEOGRAPHIC INFORMATION

The Company considers the business to be a single operating segment engaged in the development, manufacture and sale of medical devices for vascular access, peripheral vascular disease and oncology on a global basis. The Company's chief operating decision maker, the President and Chief Executive Officer (CEO), evaluates the various global product portfolios on a net sales basis. Executives reporting to the CEO include those responsible for commercial operations, manufacturing operations, regulatory and quality and certain corporate functions. The CEO evaluates profitability, investment and cash flow metrics on a consolidated worldwide basis due to shared infrastructure and resources.

The table below summarizes net sales by Global Business Unit:

(in thousands)	Three Months Ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Net sales				
Vascular Interventions & Therapies	\$ 52,494	\$ 51,368	\$ 102,488	\$ 101,234
Vascular Access	23,723	22,574	47,513	45,812
Oncology	15,286	12,764	26,842	25,071
Total	\$ 91,503	\$ 86,706	\$ 176,843	\$ 172,117

The table below presents net sales by geographic area based on external customer location:

(in thousands)	Three Months Ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Net sales				
United States	\$ 71,883	\$ 68,301	\$ 139,567	\$ 137,232
International	19,620	18,405	37,276	34,885
Total	\$ 91,503	\$ 86,706	\$ 176,843	\$ 172,117

12. FAIR VALUE

On a recurring basis, the Company measures certain financial assets and financial liabilities at fair value based upon quoted market prices, where available. Where quoted market prices or other observable inputs are not available, the Company applies valuation techniques to estimate fair value. FASB ASC Topic 820, *Fair Value Measurements and Disclosures*, establishes a three-level valuation hierarchy for disclosure of fair value measurements. The categorization of financial assets and financial liabilities within the valuation hierarchy is based upon the lowest level of input that is significant to the measurement of fair value. The three levels of the hierarchy are defined as follows:

- Level 1 - Inputs to the valuation methodology are quoted market prices for identical assets or liabilities.
- Level 2 - Inputs to the valuation methodology are other observable inputs, including quoted market prices for similar assets or liabilities and market-corroborated inputs.
- Level 3 - Inputs to the valuation methodology are unobservable inputs based on management's best estimate of inputs market participants would use in pricing the asset or liability at the measurement date, including assumptions about risk.

The Company's financial instruments include cash and cash equivalents, marketable securities, accounts receivable, accounts payable and contingent consideration. The carrying amount of cash and cash equivalents, accounts receivable, and accounts payable approximates fair value due to the immediate or short-term maturities. The Company's recurring fair value measurements using significant unobservable inputs (Level 3) relate to the Company's marketable securities, which are comprised of auction rate securities, and contingent consideration.

The following tables provide information by level for assets and liabilities that are measured at fair value on a recurring basis as of November 30, 2018 and May 31, 2018:

(in thousands)	Fair Value Measurements using inputs considered as:			Fair Value at November 30, 2018
	Level 1	Level 2	Level 3	
Financial Assets				
Marketable securities	\$ —	\$ —	\$ 1,350	\$ 1,350
Total Financial Assets	\$ —	\$ —	\$ 1,350	\$ 1,350
Financial Liabilities				
Contingent consideration for acquisition earn outs	\$ —	\$ —	\$ 26,518	\$ 26,518
Total Financial Liabilities	\$ —	\$ —	\$ 26,518	\$ 26,518

(in thousands)	Fair Value Measurements using inputs considered as:			Fair Value at May 31, 2018
	Level 1	Level 2	Level 3	
Financial Assets				
Short-term investments*	\$ 2,100	\$ —	\$ —	\$ 2,100
Marketable securities	—	—	1,317	1,317
Total Financial Assets	\$ 2,100	\$ —	\$ 1,317	\$ 3,417
Financial Liabilities				
Contingent consideration for acquisition earn outs	\$ —	\$ —	\$ 3,261	\$ 3,261
Total Financial Liabilities	\$ —	\$ —	\$ 3,261	\$ 3,261

*Included in cash and cash equivalents.

There were no transfers between Level 1, 2 and 3 for the three and six months ended November 30, 2018.

The table below presents the changes in fair value components of Level 3 instruments in the three and six months ended November 30, 2018:

(in thousands)	Three Months Ended November 30, 2018	
	Financial Assets	Financial Liabilities
	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
Balance, August 31, 2018	\$ 1,350	\$ 3,973
Contingent consideration liability recorded as the result of the acquisitions (Note 2)	—	22,301
Change in present value of contingent consideration (1)	—	244
Balance, November 30, 2018	<u>\$ 1,350</u>	<u>\$ 26,518</u>
	Six Months Ended November 30, 2018	
	Financial Assets	Financial Liabilities
	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)
Balance, May 31, 2018	\$ 1,317	\$ 3,261
Contingent consideration liability recorded as the result of the acquisitions (Note 2)	—	25,101
Change in present value of contingent consideration (1)	—	256
Fair market value adjustments	33	—
Contingent consideration payments	—	(2,100)
Balance, November 30, 2018	<u>\$ 1,350</u>	<u>\$ 26,518</u>

(1) Change in the fair value of contingent consideration is included in earnings and comprised of changes in estimated earn out payments based on projections of Company performance and amortization of the present value discount.

Short-term Investments

Short-term investments consist of highly liquid investments in municipal bonds that reset on a weekly basis and can be called at any point in time.

Marketable Securities

Marketable securities consist solely of an auction rate security. Assumptions associated with the auction rate security include the interest rate benchmarks, the probability of full repayment of the principal considering the credit quality and guarantees in place, and the rate of return required by investors to own such securities given the current liquidity risk.

Contingent Consideration for Acquisition Earn Outs

Some of the Company's business combinations involve the potential for the payment of future contingent consideration upon the achievement of certain product development milestones or various other performance conditions. Payment of the additional consideration is generally contingent on the acquired company reaching certain performance milestones, including attaining specified revenue levels or product development targets. Contingent consideration is recorded at the estimated fair value of the contingent payments on the acquisition date. The fair value of the contingent consideration is remeasured at the estimated fair value at each reporting period with the change in fair value recognized as income or expense within change in fair value of contingent consideration in the consolidated statements of income.

The Company measures the initial liability and remeasures the liability on a recurring basis using Level 3 inputs as defined under authoritative guidance for fair value measurements. The fair value is determined using a discounted cash flow model applied to projected net sales, using probabilities of achieving projected net sales and projected payment dates. Projected net sales are based on the Company's internal projections and extensive analysis of the target market and the sales potential.

Increases or decreases in any valuation inputs in isolation may result in a significantly lower or higher fair value measurement in the future.

The recurring Level 3 fair value measurements of the contingent consideration liabilities include the following significant unobservable inputs as of November 30, 2018:

(in thousands)	Fair Value	Valuation Technique	Unobservable Input	Range
Revenue based payments	\$ 17,842	Discounted cash flow	Discount rate	4% - 5%
			Probability of payment	66% - 100%
			Projected fiscal year of payment	2019 - 2023
Technical milestones	\$ 5,855	Estimated probability	Estimated probability	90%
			Projected year of payment	2020
Supplier default holdback	\$ 2,821	Estimated probability	Estimated probability	95%
			Projected fiscal year of payment	2019
Total	\$ 26,518			

At November 30, 2018, the range of estimated potential undiscounted future contingent consideration that the Company expects to pay as a result of all completed acquisitions is approximately \$31.1 million to \$41.1 million. The milestones, including revenue projections and technical milestones, associated with the contingent consideration must be reached in future periods ranging from fiscal years 2019 to 2023 in order for the associated consideration to be paid.

13. MARKETABLE SECURITIES

Marketable securities, which can be government agency bonds, auction rate investments or corporate commercial paper, are classified as “available-for-sale securities” and are reported at fair value, with unrealized gains and losses excluded from operations and reported as accumulated other comprehensive income (loss), net of related tax effects, in stockholders' equity. Cost is determined using the specific identification method. The Company holds an investment in an auction rate security that is high credit quality and generally achieved with municipal bond insurance. Sell orders for any security traded through an auction process could exceed bids and, in such cases, the auction fails and the Company may be unable to liquidate its position in the security in the near term. The Company has not participated in any recent auctions. As of November 30, 2018 and May 31, 2018, the Company had \$1.4 million and \$1.3 million, respectively, in investments in one auction rate security. The authorities are current in their interest payments on the security. The auction rate security will mature in 2029.

As of November 30, 2018 and May 31, 2018, marketable securities consisted of the following:

(in thousands)	November 30, 2018			
	Amortized cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Available-for-sale securities:				
Government agency obligations	\$ 1,350	\$ —	\$ —	\$ 1,350
	<u>\$ 1,350</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,350</u>
(in thousands)	May 31, 2018			
	Amortized cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Available-for-sale securities:				
Government agency obligations	\$ 1,350	\$ —	\$ (33)	\$ 1,317
	<u>\$ 1,350</u>	<u>\$ —</u>	<u>\$ (33)</u>	<u>\$ 1,317</u>

14. COMMITMENTS AND CONTINGENCIES

Legal Proceedings

The Company is involved in various legal proceedings, including commercial, intellectual property, product liability, and regulatory matters of a nature considered normal for its business. The Company accrues for amounts related to these matters if it is probable that a liability has been incurred, and an amount can be reasonably estimated. The Company discloses such matters when there is at least a reasonable possibility that a material loss may have been incurred. However, the Company cannot predict the outcome of any litigation or the potential for future litigation.

C.R. Bard, Inc. v. AngioDynamics, Inc.

On January 11, 2012, C.R. Bard, Inc. ("Bard") filed a suit in the United States District Court of Utah claiming certain of the Company's implantable port products infringe on three U.S. patents held by Bard (the "Utah Action"). Bard's Complaint sought unspecified damages and other relief. The Company filed petitions for reexamination in the US Patent and Trademark Office ("USPTO") seeking to invalidate all three patents asserted by Bard in the litigation. The Company's petitions were granted and 40 of Bard's 41 patent claims were rejected and, following further proceedings, the Patent Office issued a Final Rejection of all 40000 claims subject to reexamination. Thereafter, Bard filed appeals to the USPTO Board of Appeals and Interferences for all three reexaminations. The Patent Office issued decisions in all three appeals. In one (issued on March 11, 2016 for US Patent No. 7,785,302), the rejections of six of the ten claims under reexamination were affirmed, but were reversed on four of the ten claims. In the second (issued on March 24, 2016 for U.S. Patent No. 7,959,615), the rejections of eight of the ten claims under reexamination were affirmed but the rejections of the other two of the ten claims were reversed. In the third (issued on March 29 for U.S. Patent No. 7,947,022) the rejections of all twenty claims under reexamination were affirmed. Thereafter, Bard filed Requests for Rehearing in all three reexamination appeals and the Company filed Requests for Rehearing in two of the reexamination appeals (the '302 and '615 patent reexaminations). The PTO denied all three Rehearing Requests - on February 1, 2017 for the '302; on February 17, 2017 for the '022; and on February 21, 2017 for the '615, but modified its characterization of one prior art reference for the '302 and '022 decisions. Bard filed a Notice of Appeal to the Federal Circuit Court of Appeals in all three reexams and the Company filed Cross-Appeals for the '302 and the '615 reexams. The parties have completed the process of filing the various appellate briefs. MedComp also filed an Amicus Brief in support of the Company on November 22, 2017. An oral hearing in the case was held on September 5, 2018 and the court rendered its decision on September 28, 2018. The Federal Circuit affirmed that claims 1-5 and 10 of the '615 patent were invalid. The Federal Circuit also affirmed the Board's decision that claims 6-7 of the 615 patent and 1-4 of the 302 patent were valid in light of the asserted prior art references. The Federal Circuit reversed the PTAB's claim construction ruling and remanded for consideration of obviousness for the remaining claims under the new claim construction ruling and further findings with respect to whether one of the asserted references qualified as a printed publication. The parties are awaiting further instruction for proceeding from the USPTO in light of the decision. Meanwhile, the Utah Action has been stayed pending final resolution of the USPTO process. On July 12, 2017, Bard assigned the asserted patents to Bard Peripheral Vascular, Inc. ("BPV") which was added as Co-Appellant before the Federal Circuit and as a co-Plaintiff in the Utah action. The Company believes these claims are without merit and intends to defend them vigorously. The Company has not recorded an expense related to the outcome of this litigation because it is not yet possible to determine if a potential loss is probable nor reasonably estimable.

On March 10, 2015, C.R. Bard, Inc. ("Bard") and Bard Peripheral Vascular, Inc. ("BPV") filed suit in the United States District Court for the District of Delaware claiming certain of the Company's implantable port products infringe on three U.S. patents held by Bard (the "Delaware Action"). Bard's complaint seeks unspecified damages and other relief. The patents asserted in the Delaware Action are different than those asserted in the Utah Action. On June 1, 2015, the Company filed two motions in response to Bard's Complaint - one sought transfer to the District of Utah where the Utah Action is currently pending, and the other sought dismissal of the entire complaint on grounds that none of the claims in the asserted patents is directed to patent eligible subject matter under Section 101 of the Patent Statute and in light of recent authority from the U. S. Supreme Court. On January 12, 2016, the Court issued a decision denying both motions. A Markman hearing was held on March 10, 2017 and the Court issued its Claim Construction Order on May 19, 2017. On May 19, 2017, Bard served its Final Infringement Contentions and on June 2, 2017, the Company served its Final Invalidity Contentions. On October 20, 2017, the scheduling order for the case was amended to, among other things, set a trial date commencing July 23, 2018. The parties completed Expert Discovery in January 2018. The parties completed briefing on their respective case dispositive motions on April 27, 2018. On June 26, 2018, the Court denied all case dispositive motions, ruling that issues of material fact remained in dispute. On July 9, 2018, the Court continued the trial until March 2019. Meanwhile, a further Markman hearing is scheduled for January 9, 2019 to resolve two claim construction issues which are needed before the case goes to trial. The Company believes these claims are without merit and intends to defend them vigorously. The Company has not recorded an expense related to the outcome of this litigation because it is not yet possible to determine if a potential loss is probable nor reasonably estimable.

AngioDynamics, Inc. v. C.R. Bard, Inc.

On May 30, 2017, the Company commenced an action in the United States District Court for the Northern District of New York entitled *AngioDynamics, Inc. v. C.R. Bard, Inc. and Bard Access Systems, Inc.* (“Bard”). In this action, the Company alleges that Bard has illegally tied the sales of its tip location systems to the sales of its PICCs. The Company alleges that this practice violates the federal antitrust laws and has had, and continues to have, an anti-competitive effect in the market for PICCs. The Company seeks both monetary damages and injunctive relief. Bard moved to dismiss on September 8, 2017. On August 6, 2018 the court denied Bard’s motion in its entirety.

Governmental Investigations

In June 2014, the Company received a subpoena from the U.S. Department of Justice (the “DOJ”) requesting documents in relation to a criminal and civil investigation the DOJ is conducting regarding BTG International, Inc.’s LC Bead® product beginning in 2003. RITA Medical Systems and AngioDynamics, Inc., after its acquisition of RITA, was the exclusive distributor of LC Beads in the United States from 2006 through December 31, 2011. The Company fully cooperated with this investigation.

In April 2015, the Company received a subpoena from the DOJ requesting documents in relation to a criminal and civil investigation the DOJ is conducting regarding purported promotion of certain of the Company’s VenaCure EVLT products for un-cleared indications. The Company fully cooperated with this investigation.

As of May 31, 2017, the Company accrued \$12.5 million for these matters and in August 2017 the Company agreed in principle with the government to resolve these matters for approximately \$12.5 million plus interest. In July 2018, the Company executed the final settlements and paid approximately \$12.7 million.

15. ACQUISITION, RESTRUCTURING, AND OTHER ITEMS, NET

Acquisition, Restructuring and Other Items

For the three and six months ended November 30, 2018 and 2017 acquisition, restructuring and other items, net consisted of:

(in thousands)	Three months ended		Six Months Ended	
	Nov 30, 2018	Nov 30, 2017	Nov 30, 2018	Nov 30, 2017
Legal*	\$ 867	\$ 2,236	\$ 3,747	\$ 3,848
Mergers and acquisitions	1,543	980	2,862	1,132
Restructuring	128	1,420	258	2,636
Other	190	130	283	139
Total	\$ 2,728	\$ 4,766	\$ 7,150	\$ 7,755

*Legal expenses related to litigation that is outside the normal course of business.

Restructuring

The Company evaluates its performance and looks for opportunities to improve the overall operations of the Company on an ongoing basis. As a result of this evaluation, certain restructuring initiatives are taken to enhance the Company’s overall operations.

Operational Consolidation

On February 1, 2017, the Company announced to employees an operational consolidation plan (the “plan”) to consolidate its manufacturing facilities in Manchester, GA and Denmead, UK into the Glens Falls and Queensbury, NY facilities. This plan will streamline and optimize the manufacturing functions into one centralized location increasing the utilization of the Glens Falls and Queensbury facilities, optimizing inventory and reducing cost of goods sold through savings in overhead expenses and direct labor. The restructuring activities associated with the plan were completed in the fourth quarter of fiscal year 2018 with immaterial costs to be incurred in fiscal year 2019.

The Company recorded restructuring charges related to the plan during the three and six months ended November 30, 2018 of \$0.1 million and \$0.3 million, respectively. During the three and six months ended November 30, 2017, the Company recorded \$1.4 million and \$2.6 million, respectively. Total restructuring charges recorded to date are \$6.2 million. Termination benefits are only earned if an employee stays until their termination date; therefore, the expenses related to termination benefits are being recorded ratably over the service period.

The table below presents the restructuring reserve for the three and six months ended November 30, 2018:

	Three Months Ended November 30, 2018				
	Termination Benefits	Plant Consolidation	Regulatory Filings	Contract Cancellation Costs	Total
(in thousands)					
Balance at August 31, 2018	\$ 317	\$ 17	\$ 14	\$ 200	\$ 548
Charges	—	126	2	—	128
Cash payments	(216)	(143)	(16)	—	(375)
Balance at November 30, 2018	\$ 101	\$ —	\$ —	\$ 200	\$ 301

	Six Months Ended November 30, 2018				
	Termination Benefits	Plant Consolidation	Regulatory Filings	Contract Cancellation Costs	Total
(in thousands)					
Balance at May 31, 2018	\$ 838	\$ 21	\$ 12	\$ 200	\$ 1,071
Charges	—	236	22	—	258
Cash payments	(737)	(257)	(34)	—	(1,028)
Balance at November 30, 2018	\$ 101	\$ —	\$ —	\$ 200	\$ 301

The Company's restructuring liability of \$0.3 million is mainly comprised of accruals for termination benefits and contract cancellation costs which are included in accrued expenses on the consolidated balance sheet.

16. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Changes in each component of accumulated other comprehensive income (loss), net of tax, are as follows for the three and six months ended November 30, 2018:

	Three months ended November 30, 2018		
	Foreign currency translation gain (loss)	Unrealized gain (loss) on marketable securities	Total
(in thousands)			
Balance at August 31, 2018	\$ (1,160)	\$ 116	\$ (1,044)
Other comprehensive loss before reclassifications, net of tax	(206)	—	(206)
Amounts reclassified from accumulated other comprehensive income	—	—	—
Net other comprehensive loss	\$ (206)	\$ —	\$ (206)
Balance at November 30, 2018	\$ (1,366)	\$ 116	\$ (1,250)

(in thousands)	Six months ended November 30, 2018		
	Foreign currency translation gain (loss)	Unrealized gain (loss) on marketable securities	Total
Balance at May 31, 2018	\$ (1,035)	\$ 83	\$ (952)
Other comprehensive income (loss) before reclassifications, net of tax	(331)	33	(298)
Amounts reclassified from accumulated other comprehensive income	—	—	—
Net other comprehensive income (loss)	\$ (331)	\$ 33	\$ (298)
Balance at November 30, 2018	\$ (1,366)	\$ 116	\$ (1,250)

17. RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

The following table provides a description of recent accounting pronouncements that may have a material effect on the Company's consolidated financial statements:

Recently Issued Accounting Pronouncements - Adopted

Standard	Description	Date Adopted	Effect on the Consolidated Financial Statements
ASU No. 2014-09, <i>Revenue from Contracts with Customers (ASU 2014-09)</i>	This ASU provides a single, comprehensive accounting model for revenues arising from contracts with customers that supersedes most of the existing revenue recognition guidance, including industry-specific guidance. Under this model, revenue is recognized at an amount that an entity expects to be entitled to upon transferring control of goods or services to a customer, as opposed to when risks and rewards transfer to a customer under existing revenue recognition guidance.	June 1, 2018	See Note 3, "Revenue from Contracts with Customers" for the required disclosures related to the impact of adopting this standard. The adoption of this standard did not have a material impact on the Company's consolidated balance sheets and statements of operations.
ASU No. 2016-15, <i>Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15)</i>	This ASU identifies how certain cash receipts and cash payments are presented and classified in the Statement of Cash Flows under Topic 230.	June 1, 2018	This adoption did not have an impact on the Company's financial statements.

Recently Issued Accounting Pronouncements - Not Yet Applicable or Adopted

Standard	Description	Effective Date	Effect on the Consolidated Financial Statements
ASU 2016-02, <i>Leases (Topic 842)</i>	This ASU increases transparency and comparability among organizations by recognizing lease assets and liabilities on the balance sheet and disclosing key information about leasing arrangements. For leases with a term of twelve months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize lease assets and liabilities.	June 1, 2019	The Company is currently in the process of evaluating the impact of this ASU on its consolidated financial statements.

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

The following information should be read together with the consolidated financial statements and the notes thereto and other information included elsewhere in this quarterly report on Form 10-Q.

Forward-Looking Statements

This quarterly report on Form 10-Q, including the sections entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements regarding AngioDynamics' expected future financial position, results of operations, cash flows, business strategy, budgets, projected costs, capital expenditures, products, competitive positions, growth opportunities, plans and objectives of management for future operations, as well as statements that include the words such as "expects," "reaffirms," "intends," "anticipates," "plans," "believes," "seeks," "estimates," or variations of such words and similar expressions, are forward-looking statements. These forward looking statements are not guarantees of future performance and are subject to risks and uncertainties. Investors are cautioned that actual events or results may differ from our expectations. Factors that may affect our actual results achieved include, without limitation, our ability to develop existing and new products, future actions by FDA or other regulatory agencies, results of pending or future clinical trials, the results of ongoing litigation, overall economic conditions, general market conditions, market acceptance, foreign currency exchange rate fluctuations, the effects on pricing from group purchasing organizations and competition, as well as our ability to integrate purchased businesses. Other risks and uncertainties include, but are not limited to, the factors described from time to time in our reports filed with the SEC.

Although we believe that the assumptions underlying the forward-looking statements contained herein are reasonable, any of the assumptions could be inaccurate and, therefore, there can be no assurance that the forward-looking statements included in this quarterly report on Form 10-Q will prove to be accurate. In light of the significant uncertainties inherent in the forward-looking statements included herein, the inclusion of such information should not be regarded as a representation by us or any other person that our objectives and plans will be achieved. Any forward-looking statements are made pursuant to the Private Securities Litigation Reform Act of 1995 and, as such, speak only as of the date made. AngioDynamics disclaims any obligation to update the forward-looking statements. Investors are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date stated, or if no date is stated, as of the date of this document.

EXECUTIVE OVERVIEW

Company and Market

We design, manufacture and sell a wide range of medical, surgical and diagnostic devices used by professional healthcare providers for vascular access, for the treatment of peripheral vascular disease and for use in oncology and surgical settings. Our devices are generally used in minimally invasive, image-guided procedures. Most of our products are intended to be used once and then discarded, or they may be temporarily implanted for short- or longer-term use.

Our business operations cross a variety of markets. Our financial performance is impacted by changing market dynamics, which have included an emergence of value-based purchasing by healthcare providers, consolidation of healthcare providers, the increased role of the consumer in health care decision-making and an aging population, among others. In addition, our growth is impacted by changes within our sector, such as the merging of competitors to gain scale and influence; changes in the regulatory environment for medical device; and fluctuations in the global economy.

Our sales and profitability growth also depends, in part, on the introduction of new and innovative products, together with ongoing enhancements to our existing products. Expansions to our product offerings are created through internal product development, technology licensing and strategic alliances. We recognize the importance of, and intend to continue to make investments in research and development activities and business development opportunities and feel confident that our existing capital structure and free cash flow generation will allow us to properly fund those activities. This was evident with the BioSentry and RadiaDyne acquisitions noted below.

On August 14, 2018, the Company acquired the BioSentry Tract Sealant System (BioSentry) technology from Surgical Specialties, LLC, a medical device company headquartered in Westwood, Massachusetts for a total purchase price of \$39.8 million of which \$37.0 million was paid on August 14, 2018 and \$2.8 million was recorded as contingent consideration. The contingent consideration liability was recorded at fair value and will be payable to SSC upon fulfillment of certain hydrogel orders. This is part of the Company's strategic focus on building a continuum of care within the oncology space. Refer to Note 2 for further disclosure on the acquisition.

On September 21, 2018, the Company acquired RadiaDyne, a privately held medical diagnostic and device company that designs and develops patient dose monitoring technology to improve cancer treatment outcomes. The aggregate purchase price of \$75.0 million included an upfront payment of \$47.9 million, contingent consideration with an estimated fair value of \$22.3 million, an indemnification holdback of \$4.6 million and a purchase price holdback of \$0.2 million. The fair value of \$22.3 million is comprised of \$16.5 million for the revenue milestones and \$5.8 million for the technical milestones. The \$4.6 million indemnification holdback is recorded in other long-term liabilities and the \$0.2 million purchase price holdback is recorded in accrued liabilities. This acquisition expands the Company's growing Oncology business by adding RadiaDyne's early-stage, proprietary OARtrac® real-time radiation dose monitoring platform and other market-leading oncology solutions, including the IsoLoc®/ImmobiLoc® and Alatus® balloon stabilizing technologies.

We sell our products in the United States primarily through a direct sales force, and outside the U.S. through a combination of a direct sales and distributor relationships. We expect our businesses to grow in both sales and profitability through geographic expansion, market penetration, new product introductions and increasing our direct presence internationally.

In evaluating the operating performance of our business, management focuses on revenue, gross margin, operating income, earnings per share and cash flow from operations. A summary of these key financial metrics for the three and six months ended November 30, 2018 compared to the three and six months ended November 30, 2017 follows:

Three months ended November 30, 2018:

- Revenue increased by 5.5% to \$91.5 million
- Gross margin increased 440 bps to 53.7%
- Operating income increased by \$2.9 million to \$4.0 million
- Earnings per share increased by \$0.05 to \$0.06

Six months ended November 30, 2018:

- Revenue increased by 2.7% to \$176.8 million
- Gross margin increased 410 bps to 52.9%
- Operating income increased by \$3.0 to \$4.3 million
- Earnings per share increased by \$0.03 to \$0.04
- Cash flow provided by operations decreased by \$9.1 million to \$4.1 million

New Accounting Pronouncements

Information regarding new accounting pronouncements is included in Note 17 to our consolidated financial statements in this Quarterly Report on Form 10-Q.

Results of Operations for the Three Months ended November 30, 2018 and 2017

For the three months ended November 30, 2018, we reported net income of \$2.1 million, or \$0.06 per diluted share, on net sales of \$91.5 million, compared with net income of \$0.2 million, or \$0.01 per share, on net sales of \$86.7 million during the same quarter of the prior year.

Net Sales

Net sales - Net sales are derived from the sale of our products and related freight charges, less discounts and returns.

Net sales for the three months ended November 30, 2018 and 2017:

(in thousands)	Three months ended		
	Nov 30, 2018	Nov 30, 2017	% Growth
Net Sales by Global Business Unit			
Vascular Interventions & Therapies	\$ 52,494	\$ 51,368	2.2%
Vascular Access	23,723	22,574	5.1%
Oncology	15,286	12,764	19.8%
Total	<u>\$ 91,503</u>	<u>\$ 86,706</u>	5.5%
Net Sales by Geography			
United States	\$ 71,883	\$ 68,301	5.2%
International	19,620	18,405	6.6%
Total	<u>\$ 91,503</u>	<u>\$ 86,706</u>	5.5%

For the three months ended November 30, 2018, net sales increased \$4.8 million to \$91.5 million compared to the same period in the prior year.

Vascular Interventions & Therapies

- Total Vascular Interventions & Therapies sales increased \$1.1 million primarily attributable to strong performance in Fluid Management and AngioVac. The increase in Fluid Management was attributed to continued efforts around new custom kits. The Company continues to see strong case volumes in AngioVac. AngioVac case volume increased 10% from the prior year due to increased adoption of the Company's unique technology. These increases were partially offset by decreased sales volume of Venous products due to reimbursement challenges.
- U.S. Vascular Interventions & Therapies sales increased \$0.6 million due to an increase in volume in Fluid Management and AngioVac. This was partially offset by decreased sales volume of Venous products.
- International Vascular Interventions & Therapies sales increased \$0.5 million due to an increase in volume in Angiographic catheters.

Vascular Access

- Total Vascular Access sales increased \$1.1 million due to growth primarily in our BioFlo businesses. Our BioFlo product lines increased \$0.7 million year over year. The Company's BioFlo portfolio now comprises 50% of overall Vascular Access sales, compared to 49% a year ago.
- U.S. Vascular Access sales increased by \$0.2 million due to growth in Midlines and BioFlo Dialysis products which continue to gain traction in the marketplace. In addition, there was \$0.2 million of sales of the BIIM ultrasound product which was launched in FY19. This was partially offset by competitive pressures in the PICC product lines.
- International Vascular Access sales increased by \$0.9 million as the Company continues to expand its global reach of its Vascular Access product offerings.

Oncology

- Total Oncology sales increased \$2.5 million year over year primarily due to increased sales of NanoKnife capital and disposables along with \$1.6 million in sales related to BioSentry products and \$1.3 million in sales related to RadiaDyne products. This was partially offset by decreased sales in Radiofrequency Ablation and Microwave disposables. Microwave sales were negatively impacted by the timing of the Company's prior year replacement shipments of \$0.9 million which took place in the second quarter of the prior year as a result of the market withdrawal of Acculis.
- U.S. Oncology sales increased by \$3.0 million, driven by BioSentry sales of \$1.6 million and RadiaDyne sales of \$1.3 million.
- International Oncology sales decreased by \$0.5 million year over year as a result of decreased RadioFrequency Ablation and Microwave sales which were partially offset by increased NanoKnife disposable sales.

Gross Profit, Operating expenses, and Other income (expense)

(in thousands)	Three months ended		
	Nov 30, 2018	Nov 30, 2017	% Change
Gross profit	\$ 49,109	\$ 42,731	15%
Gross profit % of sales	53.7%	49.3%	
Research and development	\$ 7,363	\$ 6,107	21%
% of sales	8.0%	7.0%	
Selling and marketing	\$ 20,269	\$ 18,967	7%
% of sales	22.2%	21.9%	
General and administrative	\$ 9,336	\$ 7,540	24%
% of sales	10.2%	8.7%	

Gross profit - Gross profit consists of net sales less the cost of goods sold, which includes the costs of materials, products purchased from third parties and sold by us, manufacturing personnel, royalties, freight, business insurance, depreciation of property and equipment and other manufacturing overhead, exclusive of intangible amortization.

Gross profit increased by \$6.4 million compared to the prior year. The increase is primarily attributable to the following:

- Sales volume and mix contributed \$2.0 million of favorability offset by increased freight expense of \$0.3 million.
- Sales of BioSentry and RadiaDyne products contributed \$2.0 million to gross profit.
- \$1.0 million of favorability as a result of the plant consolidation.
- Prior year reserve of \$1.7 million related to the discontinuation of our RadioFrequency Ablation product in Japan.
- The expiration of a royalty agreement in fiscal year 2018 resulted in \$0.2 million of favorability compared to the prior year.
- Currency fluctuations had an unfavorable impact of \$0.2 million.

Research and development expenses - Research and development (“R&D”) expenses include internal and external costs to develop new products, enhance existing products, validate new and enhanced products, and manage clinical, regulatory and medical affairs.

R&D expense increased \$1.3 million compared to the prior year. The increase is primarily attributable to the following:

- \$1.2 million increase in new product development and clinical efforts related to the Company’s investment areas of NanoKnife, Thrombus Management and BioFlo.
- \$0.2 million increase in backfilling of open positions from prior year.

Sales and marketing expenses - Sales and marketing (“S&M”) expenses consist primarily of salaries, commissions, travel and related business expenses, attendance at medical society meetings, product promotions and marketing activities.

S&M expense increased \$1.3 million compared to the prior year. The increase is primarily attributable to the following:

- Compensation and benefits increase of approximately \$0.4 million. \$0.9 million of the increase is attributed to increased headcount as a result of the BioSentry and RadiaDyne acquisitions offset by lower variable compensation and decreased severance expense.
- Increased travel of \$0.3 million as a result of the increased headcount.
- Increased consulting spend of \$0.2 million and increased spend related to marketing efforts for new product introductions of \$0.4 million.

General and administrative expenses - General and administrative (“G&A”) expenses include executive management, finance, information technology, human resources, business development, legal, and the administrative and professional costs associated with those activities.

G&A expense increased \$1.8 million compared to the prior year. The increase is primarily attributable to the following:

- Compensation and benefits increase of approximately \$1.0 million primarily as a result of increased variable compensation, inflation of salaries and benefits, backfilling of prior year openings, increased headcount from the RadiaDyne acquisition and stock based compensation.
- Increased legal and professional fees relating to ongoing litigation that is within the normal course of business of \$0.3 million.
- Increased other expenses including supplies of \$0.3 million.

(in thousands)	Three months ended		
	Nov 30, 2018	Nov 30, 2017	\$ Change
Amortization of intangibles	\$ 5,188	\$ 4,146	\$ 1,042
Change in fair value of contingent consideration	\$ 244	\$ 82	\$ 162
Acquisition, restructuring and other items, net	\$ 2,728	\$ 4,766	\$ (2,038)
Other expense	\$ (1,250)	\$ (1,040)	\$ (210)

Amortization of intangibles - Represents the amount of amortization expense that was taken on intangibles assets held by the Company.

- The increase in amortization expense from the prior year is due to intangible asset additions as a result of the BioSentry and RadiaDyne acquisitions. The BioSentry acquisition increased intangible assets by \$25.6 million and resulted in additional amortization expense of \$0.6 million. The RadiaDyne acquisition increased intangible assets by \$22.1 million and resulted in additional amortization expense of \$0.4 million.

Change in fair value of contingent consideration - Represents changes in contingent consideration driven by changes to estimated future payments on earn-out liabilities created through acquisitions and amortization of present value discounts on long-term contingent consideration.

- The increase from the prior year is due to the contingent considerations that were recorded as part of the BioSentry and RadiaDyne acquisitions of \$2.8 million and \$22.3 million, respectively. The change in the fair value in contingent consideration is the result of amortization of the present value discount of \$0.2 million. In addition, in the second quarter of fiscal year 2018, the final minimum payment was made on the AngioVac product contingent consideration and a \$2.1 million payment was made on the Microsulis contingent consideration during the first quarter of fiscal 2019. Only one minimum payment is remaining on the Microsulis contingent consideration.

Acquisition, restructuring and other items, net - Represents costs associated with mergers and acquisitions, restructuring expenses, legal costs that are related to litigation that is not in the ordinary course of business, legal settlements and other one-time items.

Acquisition, restructuring and other items, net decreased by \$2.0 million compared to the prior year. The decrease is primarily attributable to the following:

- M&A expenses of \$1.5 million were incurred in the second quarter of fiscal year 2019 compared to \$1.0 million in the prior year.
- Legal expenses, related to litigation that is outside of the normal course of business, of \$0.9 million were recorded in the second quarter of fiscal year 2019 compared to \$2.2 million in the prior year.
- In the second quarter of fiscal year 2018, the Company incurred \$1.4 million of expense which consisted of \$0.6 million of severance and \$0.8 million of costs to move the product lines related to the plant consolidation that was announced in the third quarter of fiscal year 2017. The plant consolidation was completed in the fourth quarter of fiscal year 2018; therefore, only \$0.1 million of expense was incurred in the second quarter of fiscal year 2019.

Other expenses - Other expenses include interest expense, foreign currency impacts, bank fees, and amortization of deferred financing costs.

- The increase in other expenses from the prior year of \$0.2 million is due to increased interest expense of \$0.6 million primarily due to the \$55.0 million draw on the revolver during the second quarter. In addition, other expenses also increased by \$0.3 million. These increases were partially offset by foreign currency fluctuations of \$0.6 million.

Income Tax Provision (Benefit)

(in thousands)	Three months ended	
	Nov 30, 2018	Nov 30, 2017
Income tax expense (benefit)	\$ 0.6	\$ (0.2)
Effective tax rate including discrete items	21.6%	(200.0)%

Our effective tax rate including discrete items for the three month periods ended November 30, 2018 and 2017 was 21.6% and negative (200.0)%, respectively. In fiscal 2019, the Company's effective tax rate differs from the U.S. statutory rate primarily due to the impact of the valuation allowance, foreign taxes and state taxes.

The estimated annual effective tax rate, however, prior to discrete items was 26.3% in the second quarter of fiscal 2019, as compared to 59.8% for the same period in fiscal 2018.

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. In determining whether its deferred tax assets are more likely than not realizable, the Company evaluated all available positive and negative evidence, and weighted the evidence based on its objectivity. Evidence the Company considered included its history of net operating losses, which resulted in the Company recording a full valuation allowance for its deferred tax assets in fiscal 2016, except the naked credit deferred tax liability.

Based on the review of all available evidence, the Company determined that it has not yet attained a sustained level of profitability and the objectively verifiable negative evidence outweighed the positive evidence. Therefore, the Company has provided a valuation allowance on its federal and state net operating loss carryforwards, federal and state R&D credit carryforwards and other net deferred tax assets that have a limited life and are not supportable by the naked credit deferred tax liability sourced income as of November 30, 2018. The Company will continue to assess the level of the valuation allowance required. If sufficient positive evidence exists in future periods to support a release of some or all of the valuation allowance, such a release would likely have a material impact on the Company's results of operations.

Results of Operations for the Six Months ended November 30, 2018 and 2017

For the six months ended November 30, 2018, we reported net income of \$1.7 million, or \$0.04 per diluted share, on net sales of \$176.8 million, compared with net income of \$0.2 million, or \$0.01 per share, on net sales of \$172.1 million during the same quarter of the prior year.

Net Sales

Net sales - Net sales are derived from the sale of our products and related freight charges, less discounts and returns.

Net sales for the six months ended November 30, 2018 and 2017:

(in thousands)	Six Months Ended		
	Nov 30, 2018	Nov 30, 2017	% Growth
Net Sales by Global Business Unit			
Vascular Interventions & Therapies	\$ 102,488	\$ 101,234	1.2%
Vascular Access	47,513	\$ 45,812	3.7%
Oncology	26,842	\$ 25,071	7.1%
Total	<u>\$ 176,843</u>	<u>\$ 172,117</u>	2.7%
Net Sales by Geography			
United States	\$ 139,567	\$ 137,232	1.7%
International	37,276	\$ 34,885	6.9%
Total	<u>\$ 176,843</u>	<u>\$ 172,117</u>	2.7%

For the six months ended November 30, 2018, net sales increased \$4.7 million to \$176.8 million compared to the same period in the prior year.

Vascular Interventions & Therapies

- Total Vascular Interventions & Therapies sales increased \$1.3 million primarily attributable to strong performance in Fluid Management, Angiographic catheters and AngioVac. The increase in Fluid Management was attributed to continued efforts around new custom kits. The Company continues to see strong results in the Angiographic catheters business and has maintained the majority of the business from a competitor's recall. The Company continues to see strong case volumes in AngioVac. AngioVac case volume increased 12% percent from the prior year due to increased adoption of the Company's unique technology. These increases were partially offset by decreased sales volume of Venous products due to reimbursement challenges.
- U.S. Vascular Interventions & Therapies sales increased \$0.8 million due to an increase in volume in Fluid Management, Angiographic catheters and AngioVac. This was partially offset by decreased sales volume of Venous products.
- International Vascular Interventions & Therapies sales increased \$0.5 million due to an increase in volume in Venous and Angiographic catheters.

Vascular Access

- Total Vascular Access sales increased \$1.7 million due to growth primarily in our BioFlo businesses. Our BioFlo product lines increased \$1.3 million year over year. The Company's BioFlo portfolio now comprises 50% of overall Vascular Access sales, compared to 49% a year ago.
- U.S. Vascular Access sales increased by \$0.1 million due to growth in Midlines and BioFlo Dialysis products which continue to gain traction in the marketplace. This was partially offset by competitive pressures in the PICC product line.
- International Vascular Access sales increased by \$1.6 million as the Company continues to expand its global reach of its Vascular Access product offerings.

Oncology

- Total Oncology sales increased \$1.8 million year over year primarily due to increased sales of NanoKnife capital and disposables of \$1.2 million along with \$1.9 million in sales from BioSentry products and \$1.3 million in sales from RadiaDyne products. This was partially offset by decreased sales in Radiofrequency Ablation and Microwave disposables. Microwave sales were negatively impacted by the timing of the Company's prior year replacement shipments of \$2.5 million which took place in the first and second quarters of the prior year as a result of the market withdrawal of Acculis.
- U.S. Oncology sales increased by \$2.0 million primarily due to increased sales of NanoKnife capital and disposables along with \$1.9 million in sales related to BioSentry products and \$1.3 million in sales related to RadiaDyne products. This was partially offset by a \$0.7 million decrease in sales of RadioFrequency Ablation and Microwave capital and disposables.
- International Oncology sales decreased by \$0.2 million due to decreased RadioFrequency Ablation and Microwave sales of \$1.4 million, partially offset by increased NanoKnife capital and disposable sales of \$1.2 million.

Gross Profit, Operating expenses, and Other income (expense)

(in thousands)	Six months ended		
	Nov 30, 2018	Nov 30, 2017	% Change
Gross profit	\$ 93,576	\$ 83,960	11%
Gross profit % of sales	52.9%	48.8%	
Research and development	\$ 15,025	\$ 12,548	20%
% of sales	8.5%	7.3%	
Selling and marketing	\$ 39,702	\$ 38,369	3%
% of sales	22.5%	22.3%	
General and administrative	\$ 17,832	\$ 15,596	14%
% of sales	10.1%	9.1%	

Gross profit - Gross profit consists of net sales less the cost of goods sold, which includes the costs of materials, products purchased from third parties and sold by us, manufacturing personnel, royalties, freight, business insurance, depreciation of property and equipment and other manufacturing overhead, exclusive of intangible amortization.

Gross profit increased by \$9.6 million compared to the prior year. The increase is primarily attributable to the following:

- Sales volume/mix contributed \$2.6 million of favorability year over year offset by increased freight expense of \$0.6 million.
- Sales of BioSentry and RadiaDyne products contributed \$2.3 million to gross profit.
- \$2.0 million of favorability as a result of the plant consolidation.
- Prior year reserve of \$1.7 million related to the discontinuation of our RadioFrequency Ablation product in Japan.
- The expiration of a royalty agreement in fiscal year 2018 resulted in \$1.5 million of favorability compared to the prior year.

Research and development expenses - Research and development (“R&D”) expenses include internal and external costs to develop new products, enhance existing products, validate new and enhanced products, and manage clinical, regulatory and medical affairs.

R&D expense increased \$2.5 million compared to the prior year. The increase is primarily attributable to the following:

- \$1.8 million increase in new product development and clinical efforts related to the Company’s investment areas of NanoKnife, Thrombus Management and BioFlo.
- \$0.6 million increase in backfilling of open positions from prior year.

Sales and marketing expenses - Sales and marketing (“S&M”) expenses consist primarily of salaries, commissions, travel and related business expenses, attendance at medical society meetings, product promotions and marketing activities.

S&M expense increased \$1.3 million compared to the prior year. The increase is primarily attributable to the following:

- Compensation and benefits increase of approximately \$0.5 million. \$0.8 million of the increase is attributed to increased headcount as a result of the BioSentry and RadiaDyne acquisitions offset by lower variable compensation and decreased severance expense.
- Increased travel of \$0.5 million as a result of the increased headcount.
- Increased consulting spend of \$0.2 million and increased spend for trade shows and meeting expenses of \$0.4 million were partially offset by \$0.2 million decrease in office supplies and \$0.1 million in lease expense.

General and administrative expenses - General and administrative (“G&A”) expenses include executive management, finance, information technology, human resources, business development, legal, and the administrative and professional costs associated with those activities.

G&A expense increased \$2.2 million compared to the prior year. The increase is primarily attributable to the following:

- Compensation and benefits increase of approximately \$1.8 million primarily as a result of increased variable compensation, inflation of salaries and benefits, backfilling of prior year openings, increased headcount from the RadiaDyne acquisition and stock based compensation.
- Increased other expenses including supplies of \$0.2 million and lease expense of \$0.1 million.

(in thousands)	Six months ended		
	Nov 30, 2018	Nov 30, 2017	\$ Change
Amortization of intangibles	\$ 9,304	\$ 8,242	\$ 1,062
Change in fair value of contingent consideration	\$ 256	\$ 187	\$ 69
Acquisition, restructuring and other items, net	\$ 7,150	\$ 7,755	\$ (605)
Other expense	\$ (2,053)	\$ (1,196)	\$ (857)

Amortization of intangibles - Represents the amount of amortization expense that was taken on intangibles assets held by the Company.

- The increase in amortization expense from the prior year is due to intangible asset additions as a result of the BioSentry and RadiaDyne acquisitions. The BioSentry acquisition increased intangible assets by \$25.6 million and resulted in additional amortization expense of \$0.6 million. The RadiaDyne acquisition increased intangible assets by \$22.1 million and resulted in additional amortization expense of \$0.4 million.

Change in fair value of contingent consideration - Represents changes in contingent consideration driven by changes to estimated future payments on earn-out liabilities created through acquisitions and amortization of present value discounts on long-term contingent consideration.

- The increase from the prior year is due to the contingent considerations that were recorded as part of the BioSentry and RadiaDyne acquisitions of \$2.8 million and \$22.3 million, respectively. The change in the fair value in contingent consideration is the result of amortization of the present value discount of \$0.3 million. In addition, in the second quarter of fiscal year 2018, the final minimum payment was made on the AngioVac product contingent consideration and a \$2.1 million payment was made on the Microsulis contingent consideration during the first quarter of fiscal 2019. Only one minimum payment is remaining on the Microsulis contingent consideration.

Acquisition, restructuring and other items, net - Represents costs associated with mergers and acquisitions, restructuring expenses, legal costs that are related to litigation that is not in the ordinary course of business, legal settlements and other one-time items.

Acquisition, restructuring and other items, net decreased by \$0.6 million compared to the prior year. The decrease is primarily attributable to the following:

- M&A expenses of \$2.9 million were incurred in fiscal year 2019 compared to \$1.1 million in the prior year.
- Legal expenses, related to litigation that is outside of the normal course of business, of \$3.7 million was recorded in fiscal year 2019 compared to \$3.8 million in fiscal year 2018.
- For the six months ended 2018, the Company incurred \$2.6 million of expense which consisted of \$1.1 million of severance and \$1.4 million of costs to move the product lines related to the plant consolidation that was announced in the third quarter of fiscal year 2017. The plant consolidation was completed in the fourth quarter of fiscal year 2018; therefore, only \$0.3 million of expense was incurred for the six months ended 2019.

Other expenses - Other expenses include interest expense, foreign currency impacts, bank fees, and amortization of deferred financing costs.

- The increase in other expenses from the prior year of \$0.9 million is due to increased interest expense of \$0.7 million primarily due to the \$55.0 million draw on the revolver during the second quarter. In addition, other expenses also increased by \$0.5 million. These increases were partially offset by foreign currency fluctuations of \$0.1 million.

Income Tax Provision (Benefit)

(in thousands)	Six months ended	
	Nov 30, 2018	Nov 30, 2017
Income tax expense (benefit)	\$ 0.6	\$ (0.1)
Effective tax rate including discrete items	25.9%	(219.4)%

Our effective tax rate including discrete items for the three month periods ended November 30, 2018 and 2017 was 25.9% and negative (219.4)%, respectively. In fiscal 2019, the Company's effective tax rate differs from the U.S. statutory rate primarily due to the impact of the valuation allowance, foreign taxes and state taxes.

The estimated annual effective tax rate, however, prior to discrete items was 26.3% in the second quarter of fiscal 2019, as compared to 59.8% for the same period in fiscal 2018.

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. In determining whether its deferred tax assets are more likely than not realizable, the Company evaluated all available positive and negative evidence, and weighted the evidence based on its objectivity. Evidence the Company considered included its history of net operating losses, which resulted in the Company recording a full valuation allowance for its deferred tax assets in fiscal 2016, except the naked credit deferred tax liability.

Based on the review of all available evidence, the Company determined that it has not yet attained a sustained level of profitability and the objectively verifiable negative evidence outweighed the positive evidence. Therefore, the Company has provided a valuation allowance on its federal and state net operating loss carryforwards, federal and state R&D credit carryforwards and other net deferred tax assets that have a limited life and are not supportable by the naked credit deferred tax liability sourced income as of November 30, 2018. The Company will continue to assess the level of the valuation allowance required. If sufficient positive evidence exists in future periods to support a release of some or all of the valuation allowance, such a release would likely have a material impact on the Company's results of operations.

Liquidity and Capital Resources

Our cash and cash equivalents totaled \$42.8 million as of November 30, 2018, compared with \$74.1 million as of May 31, 2018. Marketable securities totaled \$1.4 million as of November 30, 2018 and \$1.3 million as of May 31, 2018, and consist of an auction rate security. As of November 30, 2018, total principal debt outstanding was \$145.0 million and the fair value of contingent consideration payments was \$26.5 million.

The table below summarizes our cash flows for the six months ended November 30, 2018 and 2017:

(in thousands)	Six Months Ended	
	Nov 30, 2018	Nov 30, 2017
Cash provided by (used in):		
Operating activities	\$ 4,086	\$ 13,201
Investing activities	(86,336)	(1,222)
Financing activities	51,254	(10,262)
Effect of exchange rate changes on cash and cash equivalents	(280)	595
Net change in cash and cash equivalents	\$ (31,276)	\$ 2,312

During the six months ended November 30, 2018 and 2017, cash flows consisted of the following:

Cash provided by operating activities

Six months ended November 30, 2018:

- Net income was driven by increased sales and increased gross profit. This was partially offset by higher operating expenses in research and development, selling and marketing and general administrative as well as costs related to our acquisition and restructuring activities.
- The Company continues to focus on optimizing its cash conversion cycle. In the second quarter of fiscal year 2019, working capital was negatively impacted by increased inventory on hand of \$1.0 million. Additionally, even though days sales outstanding ("DSO") decreased by two days, receivables negatively impacted working capital by \$3.1 million as a result of increased sales in the quarter. Also, the \$12.5 million DOJ settlement payment that was made during the first quarter of fiscal year 2019 negatively impacted working capital from accounts payable and accrued liabilities.

Six months ended November 30, 2017:

- Net income was driven by higher sales and higher gross margins.
- With regards to working capital, the Company focused on optimizing DSO which contributed to \$2.3 million of working capital improvement. This working capital improvement was offset by a \$4.5 million decrease in accounts payable and accrued liabilities.

Cash used in investing activities

Six months ended November 30, 2018 and 2017:

- \$1.4 million in fixed asset additions, primarily for maintenance of equipment versus \$1.2 million in the prior year.
- \$37.0 million cash payment to acquire the BioSentry product from SSC and a \$47.9 million cash payment to acquire RadiaDyne as described in Note 2 to the financial statements.

Cash used in financing activities

Six months ended November 30, 2018 and 2017:

- \$55.0 million draw on the revolver as a result of the RadiaDyne acquisition described in Note 2 to the financial statements.
- \$2.5 million in repayments on long-term debt in both the current year and prior year. This is consistent with the required amortization payment on the Term Loan.
- \$0.9 million of proceeds from stock option and ESPP activity versus \$1.7 million in the prior year.
- \$2.1 million payment on earn-out liabilities in the current year compared to \$9.5 million in the prior year as the Company made the final minimum payment on the AngioVac product contingent consideration.

On November 7, 2016, the Company entered into a Credit Agreement that provides for a \$100.0 million senior secured term loan facility and a \$150.0 million senior secured revolving credit facility, which includes up to a \$20.0 million sublimit for letters of credit and a \$5.0 million sublimit for swingline loans.

We believe that our current cash and investment balances, together with future cash generated from operations and our revolving credit facility capacity of up to \$150.0 million as of November 30, 2018, will provide sufficient liquidity to meet our anticipated needs for capital for at least the next 12 months. As part of the RadiaDyne acquisition that closed on September 21, 2018, the Company drew \$55.0 million on the revolving credit facility. Based on our current leverage ratio of net debt to EBITDA, as defined by the Credit Agreement, the Company could draw approximately \$85.0 million more on the remaining \$95.0 million of the revolving credit facility. If we seek to make significant acquisitions of other businesses or technologies in the future, we may require additional external financing.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Foreign Currency Exchange Rate Risk

We are exposed to market risk from changes in currency exchange rates, as well as interest rate fluctuations on our credit facility and investments that could impact our results of operations and financial position.

We transact sales in currencies other than the U.S. Dollar, particularly the Euro, British pound and Canadian dollar. Approximately 8% of our sales in the second quarter of fiscal 2019 were denominated in foreign currencies. We do not have expenses denominated in foreign currencies at the level of our sales and as a result, our profitability is exposed to currency fluctuations. When the U.S. Dollar strengthens, our sales and gross profit will be negatively impacted. In addition, we have assets and liabilities denominated in non-functional currencies which are remeasured at each reporting period, with the offset to changes presented as a component of Other (Expenses) Income. Significant non-functional balances include accounts receivable due from a sub-section of our international customers.

Interest Rate Risk

On November 7, 2016, we entered into the Credit Agreement which provides for a \$100 million senior secured Term Loan and a \$150 million Revolving Facility. Interest on both the Term Loan and Revolving Facility is based on a base rate or Eurodollar rate plus an applicable margin which increases as our total leverage ratio increases, with the base rate and Eurodollar rate having ranges of 0.50% to 1.25% and 1.50% to 2.25% respectively. In the event of default, the interest rate may be increased by 2.0%. A 50 basis point (0.50%) increase or decrease in the interest rate would result approximately in a \$2.0 million increase or decrease in interest expense over the life of the agreement.

Concentration of Credit Risk

Financial instruments, which potentially subject the Company to significant concentrations of credit risk, consist primarily of cash and cash equivalents, our credit facility and trade accounts receivable.

The Company maintains cash and cash equivalents at various institutions and performs periodic evaluations of the relative credit standings of these financial institutions to ensure their credit worthiness. In addition, the Credit Agreement is structured across five above investment grade banks. The Company has the ability to draw equally amongst the five banks which limits the concentration of credit risk of one institution.

Concentration of credit risk with respect to trade accounts receivable is limited due to the large number of customers that purchase products from the Company. No single customer represents more than 10% of total sales. The Company monitors the creditworthiness of its customers to which it grants credit terms in the normal course of business. Although the Company does not currently foresee a significant credit risk associated with the outstanding accounts receivable, repayment is dependent upon the financial stability of our customers.

Item 4. Controls and Procedures.

Evaluation of disclosure controls and procedures

As of the end of the period covered by this report, our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the design and operation of our disclosure controls and procedures pursuant to Rule 13a-15(b) of the Securities Exchange Act of 1934, as amended. Based on that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that our disclosure controls and procedures as of the end of the period covered by this report were effective to provide reasonable assurance that the information required to be disclosed by us in reports filed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and is accumulated and communicated to management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting for the fiscal quarter ended November 30, 2018 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

AngioDynamics, Inc. and Subsidiaries

PART II: OTHER INFORMATION

Item 1. Legal Proceedings.

C.R. Bard, Inc. v. AngioDynamics, Inc.

On January 11, 2012, C.R. Bard, Inc. ("Bard") filed a suit in the United States District Court of Utah claiming certain of the Company's implantable port products infringe on three U.S. patents held by Bard (the "Utah Action"). Bard's Complaint sought unspecified damages and other relief. The Company filed petitions for reexamination in the US Patent and Trademark Office ("USPTO") seeking to invalidate all three patents asserted by Bard in the litigation. The Company's petitions were granted and 40 of Bard's 41 patent claims were rejected and, following further proceedings, the Patent Office issued a Final Rejection of all 40000 claims subject to reexamination. Thereafter, Bard filed appeals to the USPTO Board of Appeals and Interferences for all three reexaminations. The Patent Office issued decisions in all three appeals. In one (issued on March 11, 2016 for US Patent No. 7,785,302), the rejections of six of the ten claims under reexamination were affirmed, but were reversed on four of the ten claims. In the second (issued on March 24, 2016 for U.S. Patent No. 7,959,615), the rejections of eight of the ten claims under reexamination were affirmed but the rejections of the other two of the ten claims were reversed. In the third (issued on March 29 for U.S. Patent No. 7,947,022) the rejections of all twenty claims under reexamination were affirmed. Thereafter, Bard filed Requests for Rehearing in all three reexamination appeals and the Company filed Requests for Rehearing in two of the reexamination appeals (the '302 and '615 patent reexaminations). The PTO denied all three Rehearing Requests - on February 1, 2017 for the '302; on February 17, 2017 for the '022; and on February 21, 2017 for the '615, but modified its characterization of one prior art reference for the '302 and '022 decisions. Bard filed a Notice of Appeal to the Federal Circuit Court of Appeals in all three reexams and the Company filed Cross-Appeals for the '302 and the '615 reexams. The parties have completed the process of filing the various appellate briefs. MedComp also filed an Amicus Brief in support of the Company on November 22, 2017. An oral hearing in the case was held on September 5, 2018 and the court rendered its decision on September 28, 2018. The Federal Circuit affirmed that claims 1-5 and 10 of the '615 patent were invalid. The Federal Circuit also affirmed the Board's decision that claims 6-7 of the 615 patent and 1-4 of the 302 patent were valid in light of the asserted prior art references. The Federal Circuit reversed the PTAB's claim construction ruling and remanded for consideration of obviousness for the remaining claims under the new claim construction ruling and further findings with respect to whether one of the asserted references qualified as a printed publication. The parties are awaiting further instruction for proceeding from the USPTO in light of the decision. Meanwhile, the Utah Action has been stayed pending final resolution of the USPTO process. On July 12, 2017, Bard assigned the asserted patents to Bard Peripheral Vascular, Inc. ("BPV") which was added as Co-Appellant before the Federal Circuit and as a co-Plaintiff in the Utah action. The Company believes these claims are without merit and intends to defend them vigorously. The Company has not recorded an expense related to the outcome of this litigation because it is not yet possible to determine if a potential loss is probable nor reasonably estimable.

On March 10, 2015, C.R. Bard, Inc. ("Bard") and Bard Peripheral Vascular, Inc. ("BPV") filed suit in the United States District Court for the District of Delaware claiming certain of the Company's implantable port products infringe on three U.S. patents held by Bard (the "Delaware Action"). Bard's complaint seeks unspecified damages and other relief. The patents asserted in the Delaware Action are different than those asserted in the Utah Action. On June 1, 2015, the Company filed two motions in response to Bard's Complaint - one sought transfer to the District of Utah where the Utah Action is currently pending, and the other sought dismissal of the entire complaint on grounds that none of the claims in the asserted patents is directed to patent eligible subject matter under Section 101 of the Patent Statute and in light of recent authority from the U. S. Supreme Court. On January 12, 2016, the Court issued a decision denying both motions. A Markman hearing was held on March 10, 2017 and the Court issued its Claim Construction Order on May 19, 2017. On May 19, 2017, Bard served its Final Infringement Contentions and on June 2, 2017, the Company served its Final Invalidity Contentions. On October 20, 2017, the scheduling order for the case was amended to, among other things, set a trial date commencing July 23, 2018. The parties completed Expert Discovery in January 2018. The parties completed briefing on their respective case dispositive motions on April 27, 2018. On June 26, 2018, the Court denied all case dispositive motions, ruling that issues of material fact remained in dispute. On July 9, 2018, the Court continued the trial until March 2019. Meanwhile, a further Markman hearing is scheduled for January 9, 2019 to resolve two claim construction issues which are needed before the case goes to trial. The Company believes these claims are without merit and intends to defend them vigorously. The Company has not recorded an expense related to the outcome of this litigation because it is not yet possible to determine if a potential loss is probable nor reasonably estimable.

AngioDynamics, Inc. v. C.R. Bard, Inc.

On May 30, 2017, the Company commenced an action in the United States District Court for the Northern District of New York entitled *AngioDynamics, Inc. v. C.R. Bard, Inc. and Bard Access Systems, Inc.* (“Bard”). In this action, the Company alleges that Bard has illegally tied the sales of its tip location systems to the sales of its PICCs. The Company alleges that this practice violates the federal antitrust laws and has had, and continues to have, an anti-competitive effect in the market for PICCs. The Company seeks both monetary damages and injunctive relief. Bard moved to dismiss on September 8, 2017. On August 6, 2018 the court denied Bard’s motion in its entirety.

Governmental Investigations

In June 2014, the Company received a subpoena from the U.S. Department of Justice (the “DOJ”) requesting documents in relation to a criminal and civil investigation the DOJ is conducting regarding BTG International, Inc.’s LC Bead® product beginning in 2003. RITA Medical Systems and AngioDynamics, Inc., after its acquisition of RITA, was the exclusive distributor of LC Beads in the United States from 2006 through December 31, 2011. The Company fully cooperated with this investigation.

In April 2015, the Company received a subpoena from the DOJ requesting documents in relation to a criminal and civil investigation the DOJ is conducting regarding purported promotion of certain of the Company’s VenaCure EVLT products for un-cleared indications. The Company fully cooperated with this investigation.

As of May 31, 2017, the Company accrued \$12.5 million for these matters and in August 2017 the Company agreed in principle with the government to resolve these matters for approximately \$12.5 million plus interest. In July 2018, the Company executed the final settlements and paid approximately \$12.7 million.

Item 1A. Risk Factors.

In addition to information set forth in this report, you should carefully consider the factors discussed in “Part I, Item 1A. Risk Factors” of our annual report on Form 10-K for our fiscal year ended May 31, 2018 which set forth information relating to important risks and uncertainties that could materially adversely affect our business, financial condition or operating results. You should review and consider such Risk Factors in making any investment decision with respect to our securities. An investment in our securities continues to involve a high degree of risk. There have been no material changes to the risk factors previously disclosed in our annual report on Form 10-K.

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

The following table provides information with respect to the shares of the Company's common stock repurchased during the three months ended November 30, 2018:

	Issuer Purchases of Equity Securities			
	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Programs (2)	Maximum Approximate Dollar Value of Shares that May Yet Be Purchased Under Plans or Programs (2)
September 1, 2018 - September 30, 2018	—	\$ —	—	\$ —
October 1, 2018 - October 31, 2018	—	\$ —	—	\$ —
November 1, 2018 - November 30, 2018	—	\$ —	—	\$ —
Total	—	\$ —	—	\$ —

(1) The Company did not repurchase shares during the three months ended November 30, 2018 from employees to satisfy tax withholding requirements on the vesting of restricted shares from equity-based awards.

(2) These amounts are not applicable as the Company currently does not have a share repurchase program in effect.

Item 3. Defaults on Senior Securities.

None.

Item 4. Mine Safety Disclosures.

None.

Item 5. Other Information.

None.

Item 6. Exhibits.

EXHIBIT INDEX

<u>No.</u>	<u>Description</u>
31.1	Certification pursuant to Rule 13a-14(a) or 15d-14 under the Securities Exchange Act of 1934.
31.2	Certification pursuant to Rule 13a-14(a) or 15d-14 under the Securities Exchange Act of 1934.
32.1	Certification of Chief Executive Officer pursuant to Title 18, United States Code, Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to Title 18, United States Code, Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document
101.SCH	XBRL Schema Document
101.CAL	XBRL Calculation Linkbase Documents
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Labels Linkbase Documents
101.PRE	XBRL Presentation Linkbase Documents

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 thereunto duly authorized.

ANGIODYNAMICS, INC.
(Registrant)

Date: January 7, 2019

/ S / JAMES C. CLEMMER

**James C. Clemmer, President,
Chief Executive Officer
(Principal Executive Officer)**

Date: January 7, 2019

/ S / MICHAEL C. GREINER

**Michael C. Greiner, Executive Vice President,
Chief Financial Officer
(Principal Financial and Accounting Officer)**

CERTIFICATION

I, James C. Clemmer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of AngioDynamics, 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 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;
 - (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: January 7, 2019

/S/ JAMES C. CLEMMER

James C. Clemmer, President,
Chief Executive Officer

CERTIFICATION

I, Michael C. Greiner, certify that:

1. I have reviewed this quarterly report on Form 10-Q of AngioDynamics, 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 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;
 - (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: January 7, 2019

/S/ MICHAEL C. GREINER

Michael C. Greiner Executive Vice President,
Chief Financial Officer

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO TITLE 18,
UNITED STATES CODE, SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, James C. Clemmer, President, Chief Executive Officer and Director of ANGIODYNAMICS, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that, to the best of my knowledge:

1. the quarterly report on Form 10-Q of the Company for the fiscal quarter ended November 30, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: January 7, 2019

/ s / James C. Clemmer

James C. Clemmer, President,
Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO TITLE 18,
UNITED STATES CODE, SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Michael C. Greiner, Executive Vice President and Chief Financial Officer of ANGIODYNAMICS, Inc. (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that, to the best of my knowledge:

1. the quarterly report on Form 10-Q of the Company for the fiscal quarter ended November 30, 2018 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: January 7, 2019

/ s / Michael C. Greiner

Michael C. Greiner, Executive Vice President and
Chief Financial Officer