

**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 March 31, 2019

Commission File No. 000-52082

CARDIOVASCULAR SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

No. 41-1698056
(IRS Employer
Identification No.)

**1225 Old Highway 8 Northwest
St. Paul, Minnesota 55112-6416**
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (651) 259-1600

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

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

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, One-tenth of One Cent (\$0.001) Par Value Per Share	CSII	The Nasdaq Stock Market LLC

The number of shares outstanding of the registrant's common stock as of April 26, 2019 was: Common Stock, \$0.001 par value per share, 34,826,182 shares.

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PART I. — FINANCIAL INFORMATION

ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Cardiovascular Systems, Inc.
Consolidated Balance Sheets
(Dollars in thousands, except per share and share amounts)
(Unaudited)

	March 31, 2019	June 30, 2018
ASSETS		
Current assets		
Cash and cash equivalents	\$ 115,280	\$ 116,260
Accounts receivable, net	34,970	31,225
Inventories	19,304	16,605
Marketable securities	456	544
Prepaid expenses and other current assets	2,221	2,977
Total current assets	172,231	167,611
Property and equipment, net	27,607	27,744
Patents, net	5,242	5,231
Other assets	6,149	2,766
Total assets	\$ 211,229	\$ 203,352
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 12,396	\$ 10,441
Accrued expenses	26,489	25,776
Deferred revenue	1,612	1,243
Total current liabilities	40,497	37,460
Long-term liabilities		
Financing obligation	21,005	21,064
Deferred revenue	7,230	8,946
Other liabilities	884	1,412
Total liabilities	69,616	68,882
Commitments and contingencies (see Note 7)		
Common stock, \$0.001 par value; authorized 100,000,000 common shares; issued and outstanding 34,828,214 at March 31, 2019 and 33,360,032 at June 30, 2018, respectively	34	33
Additional paid in capital	472,501	461,927
Accumulated other comprehensive income	—	101
Accumulated deficit	(330,922)	(327,591)
Total stockholders' equity	141,613	134,470
Total liabilities and stockholders' equity	\$ 211,229	\$ 203,352

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

Cardiovascular Systems, Inc.
Consolidated Statements of Operations
(Dollars in thousands, except per share and share amounts)
(Unaudited)

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Net revenues	\$ 63,311	\$ 55,587	\$ 179,783	\$ 157,891
Cost of goods sold	12,166	9,969	34,218	28,670
Gross profit	51,145	45,618	145,565	129,221
Expenses:				
Selling, general and administrative	41,356	37,796	123,705	110,722
Research and development	9,282	7,333	23,937	20,037
Total expenses	50,638	45,129	147,642	130,759
Income (loss) from operations	507	489	(2,077)	(1,538)
Other (income) expense, net:				
Interest expense	420	429	1,266	1,291
Interest income and other, net	(671)	(338)	(1,771)	(903)
Total other (income) expense, net	(251)	91	(505)	388
Income (loss) before income taxes	758	398	(1,572)	(1,926)
Provision for income taxes	86	33	152	99
Net income (loss)	\$ 672	\$ 365	\$ (1,724)	\$ (2,025)
Basic earnings per share	\$ 0.02	\$ 0.01	\$ (0.05)	\$ (0.06)
Diluted earnings per share	\$ 0.02	\$ 0.01	\$ (0.05)	\$ (0.06)
Basic weighted average shares outstanding	33,600,148	33,237,552	33,510,368	33,105,174
Diluted weighted average shares outstanding	34,241,432	33,641,804	33,510,368	33,105,174

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

Cardiovascular Systems, Inc.
Consolidated Statements of Comprehensive Income (Loss)
(Dollars in thousands)
(Unaudited)

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Net income (loss)	\$ 672	\$ 365	\$ (1,724)	\$ (2,025)
Other comprehensive income:				
Unrealized (loss) gain on available for sale securities	—	(1)	—	27
Adjustment for net gain realized and included in interest income and other, net	—	(8)	—	(24)
Total change in unrealized gain on available for sale securities	—	(9)	—	3
Comprehensive income (loss)	<u>\$ 672</u>	<u>\$ 356</u>	<u>\$ (1,724)</u>	<u>\$ (2,022)</u>

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

Cardiovascular Systems, Inc.
Consolidated Statements of Changes in Stockholders' Equity
(Dollars in thousands, except per share amounts)
(Unaudited)

	Common Stock	Additional Paid In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
Balances at June 30, 2018	\$ 33	\$ 461,927	\$ 101	\$ (327,591)	\$ 134,470
Impact from adoption of ASU 2016-01 (See Note 5)	—	—	(101)	101	—
Stock-based compensation related to restricted stock awards, net	—	3,132	—	—	3,132
Shares withheld for payroll taxes	—	—	—	(1,058)	(1,058)
Employee stock purchase plan activity	—	252	—	—	252
Exercise of stock options at \$8.75 per share	—	71	—	—	71
Net loss	—	—	—	(2,888)	(2,888)
Balances at September 30, 2018	33	465,382	—	(331,436)	133,979
Stock-based compensation related to restricted stock awards, net	1	2,471	—	—	2,472
Shares withheld for payroll taxes	—	—	—	(319)	(319)
Employee stock purchase plan activity	—	1,849	—	—	1,849
Exercise of stock options at \$8.75 per share	—	125	—	—	125
Net income	—	—	—	492	492
Balances at December 31, 2018	34	469,827	—	(331,263)	138,598
Stock-based compensation related to restricted stock awards, net	—	2,380	—	—	2,380
Shares withheld for payroll taxes	—	—	—	(331)	(331)
Employee stock purchase plan activity	—	294	—	—	294
Net income	—	—	—	672	672
Balances at March 31, 2019	\$ 34	\$ 472,501	\$ —	\$ (330,922)	\$ 141,613

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

Cardiovascular Systems, Inc.
Consolidated Statements of Changes in Stockholders' Equity
(Dollars in thousands, except per share amounts)
(Unaudited)

	Common Stock	Additional Paid In Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Total
Balances at June 30, 2017	\$ 33	\$ 447,559	\$ 100	\$ (329,303)	\$ 118,389
Stock-based compensation related to restricted stock awards, net	—	3,129	—	—	3,129
Employee stock purchase plan activity	—	251	—	—	251
Exercise of stock options at \$7.90 per share	—	307	—	—	307
Unrealized gain on marketable securities	—	—	12	—	12
Net gain reclassified from accumulated other comprehensive income	—	—	(8)	—	(8)
Net loss	—	—	—	(1,977)	(1,977)
Balances at September 30, 2017	33	451,246	104	(331,280)	120,103
Stock-based compensation related to restricted stock awards, net	—	2,375	—	—	2,375
Employee stock purchase plan activity	—	1,680	—	—	1,680
Exercise of stock options at \$12.15 per share	—	207	—	—	207
Unrealized gain on marketable securities	—	—	16	—	16
Net gain reclassified from accumulated other comprehensive income	—	—	(8)	—	(8)
Net loss	—	—	—	(413)	(413)
Balances at December 31, 2017	33	455,508	112	(331,693)	123,960
Stock-based compensation related to restricted stock awards, net	—	1,880	—	—	1,880
Employee stock purchase plan activity	—	260	—	—	260
Unrealized loss on marketable securities	—	—	(1)	—	(1)
Net gain reclassified from accumulated other comprehensive income	—	—	(8)	—	(8)
Net income	—	—	—	365	365
Balances at March 31, 2018	\$ 33	\$ 457,648	\$ 103	\$ (331,328)	\$ 126,456

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

Cardiovascular Systems, Inc.
Consolidated Statements of Cash Flows
(Dollars in thousands)
(Unaudited)

	Nine Months Ended March 31,	
	2019	2018
Cash flows from operating activities		
Net loss	\$ (1,724)	\$ (2,025)
Adjustments to reconcile net loss to net cash provided by operating activities		
Depreciation of property and equipment	2,382	2,927
Amortization of patents	235	153
Write-off of patent costs	500	497
Provision for (recovery of) doubtful accounts (including note receivable)	125	(18)
Stock-based compensation	8,600	7,880
Changes in assets and liabilities		
Accounts receivable	(3,870)	(3,594)
Inventories	(2,699)	(105)
Prepaid expenses and other assets	647	2,879
Accounts payable	1,915	(544)
Accrued expenses and other liabilities	144	(6,945)
Deferred revenue	(1,347)	577
Net cash provided by operating activities	4,908	1,682
Cash flows from investing activities		
Purchases of property and equipment	(2,286)	(1,614)
Purchase of investment	(3,055)	—
Proceeds from convertible note receivable	—	143
Sales of marketable securities	97	144
Costs incurred in connection with patents	(665)	(880)
Net cash used in investing activities	(5,909)	(2,207)
Cash flows from financing activities		
Proceeds from employee stock purchase plan	1,551	1,385
Payment of employee taxes related to vested restricted stock	(1,708)	—
Exercise of stock options	196	513
Other	(18)	20
Net cash provided by financing activities	21	1,918
Net change in cash and cash equivalents	(980)	1,393
Cash and cash equivalents		
Beginning of period	116,260	107,912
End of period	\$ 115,280	\$ 109,305

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

CARDIOVASCULAR SYSTEMS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(For the Nine Months Ended March 31, 2019 and 2018)
(Dollars in thousands, except per share and share amounts)
(Unaudited)

1. Basis of Presentation

Cardiovascular Systems, Inc. (the “Company”), based in St. Paul, Minnesota, is a medical device company focused on developing and commercializing innovative solutions for treating vascular and coronary disease. The Company’s Orbital Atherectomy Systems (“OAS”) treat calcified and fibrotic plaque in arterial vessels throughout the leg and heart in a few minutes of treatment time, and address many of the limitations associated with existing surgical, catheter and pharmacological treatment alternatives.

The Company prepared the unaudited interim consolidated financial statements and related unaudited financial information in the footnotes in accordance with accounting principles generally accepted in the United States of America (“GAAP”) and the rules and regulations of the Securities and Exchange Commission (“SEC”) for interim financial statements. The year-end consolidated balance sheet was derived from the Company’s audited consolidated financial statements, but does not include all disclosures as required by GAAP. These interim consolidated financial statements reflect all adjustments consisting of normal recurring accruals, which, in the opinion of management, are necessary for a fair statement of the Company’s consolidated financial position, the results of its operations, its changes in stockholders’ equity, and its cash flows for the interim periods. These interim consolidated financial statements should be read in conjunction with the consolidated annual financial statements and the notes thereto included in the Annual Report on Form 10-K filed by the Company with the SEC on August 23, 2018. The nature of the Company’s business is such that the results of any interim period may not be indicative of the results to be expected for the entire year.

The preparation of the Company’s consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board issued Accounting Standards Update (“ASU”) 2016-02, “Leases.” The guidance requires lessees to recognize the assets and liabilities that arise from leases on the balance sheet. ASU 2016-02 is effective for annual periods beginning after December 15, 2018, including interim periods within those annual periods, and should be applied using a modified retrospective approach. The guidance is effective for the Company on July 1, 2019.

The Company will elect the prospective transition method with the effects of adoption recognized as a cumulative effect adjustment to the opening balance of retained earnings in the Company’s fiscal 2020 financial statements, with no restatement of comparative periods. The Company will also elect the package of three practical expedients permitted under the transition guidance within the new standard, which among other things, allows the Company to carry forward the historical lease classification.

The Company is currently assessing the impact of adopting this guidance on its consolidated financial statements and related disclosures. The Company expects to record right of use assets and lease liabilities, which may be material, on its consolidated balance sheet upon adoption of this standard and is still assessing the impact to its results of operations and cash flows.

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Accounts receivable consists of the following:

	March 31, 2019	June 30, 2018
Accounts receivable	\$ 35,649	\$ 32,025
Less: Allowance for doubtful accounts	(679)	(800)
Accounts receivable, net	\$ 34,970	\$ 31,225

Inventories

Inventories consist of the following:

	March 31, 2019	June 30, 2018
Raw materials	\$ 6,042	\$ 6,820
Work in process	1,612	1,315
Finished goods	11,650	8,470
Inventories	\$ 19,304	\$ 16,605

Property and Equipment, Net

Property and equipment consists of the following:

	March 31, 2019	June 30, 2018
Land	\$ 500	\$ 500
Building	22,420	22,420
Equipment	17,869	16,510
Furniture	2,900	2,709
Leasehold improvements	540	438
Construction in progress	1,682	1,110
	45,911	43,687
Less: Accumulated depreciation	(18,304)	(15,943)
Property and equipment, net	\$ 27,607	\$ 27,744

Accrued Expenses

Accrued expenses consist of the following:

	March 31, 2019	June 30, 2018
Salaries and bonus	\$ 7,089	\$ 6,624
Commissions	6,310	7,234
Accrued vacation	4,094	3,557
Accrued excise, sales and other taxes	3,555	3,522
Clinical studies	1,968	1,422
Legal settlement	932	1,847
Other accrued expenses	2,541	1,570
Accrued expenses	\$ 26,489	\$ 25,776

3. Revenue

Effective July 1, 2018 the Company adopted Accounting Standards Codification (“ASC”) Topic 606 - *Revenue from Contracts with Customers* using the modified retrospective adoption method. Adoption did not have a material impact on the Company’s financial statements.

The Company sells its peripheral and coronary products to customers through a direct sales force in the United States and through distributors internationally and has no material concentration of credit risk or significant payment terms extended to customers and, therefore, the Company does not adjust the promised amount of consideration for the effects of a significant financing component. Sales, use, value-added, and other excise taxes are not recognized in revenue. The Company has elected to present revenue net of sales taxes and other similar taxes.

The following table disaggregates the Company’s net revenues by product category and geography for the following periods:

Product Category	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Peripheral	\$ 45,152	\$ 40,989	\$ 130,620	\$ 118,331
Coronary	18,159	14,598	49,163	39,560
Total net revenues	<u>\$ 63,311</u>	<u>\$ 55,587</u>	<u>\$ 179,783</u>	<u>\$ 157,891</u>
Geography				
United States	\$ 60,897	\$ 54,736	\$ 174,417	\$ 157,040
International	2,414	851	5,366	851
Total net revenues	<u>\$ 63,311</u>	<u>\$ 55,587</u>	<u>\$ 179,783</u>	<u>\$ 157,891</u>

Performance Obligations

The majority of the Company’s revenues are from customer arrangements containing a single performance obligation to transfer peripheral and coronary products, and thus revenue is recognized at a point in time when control is transferred. This generally occurs upon shipment or upon delivery to the customer site, based on the contract terms. Shipping and handling activities are considered to be fulfillment activities and are not considered to be a separate performance obligation. The Company does not assess whether promised goods or services are performance obligations if they are immaterial in the context of the contract with the customer. The Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less. The Company did not recognize any material revenue in the current reporting period for performance obligations that were fully satisfied in previous periods.

Significant Judgments

The Company has an exclusive distribution agreement with Medikit to sell the Company’s coronary and peripheral OAS in Japan. To secure exclusive distribution rights, Medikit made an upfront payment of \$10,000 to the Company, which is partially refundable based on the occurrence of certain events during the term of the agreement. The Company has classified the payment as current or long-term based on its expectation of when revenue will be recognized and this expectation is re-evaluated on a quarterly basis. Medikit also provides advance payments for orders under the terms of the agreement, and, therefore, deferred revenue is recorded until products are accepted by Medikit. Revenue of \$ 775 was recognized in the nine months ended March 31, 2019 that was deferred as of June 30, 2018 .

Revenue is recognized at the transaction price to which the Company expects to be entitled. The Company offers customers certain volume-based rebates, discounts, and incentives. Estimates of variable consideration from these items are taken into account using the most-likely amount method based on contractual provisions, the Company’s historical experience, and forecasted customer buying patterns. These items are recognized as a reduction to revenue in the period the revenue is recognized and recorded as a liability. As of March 31, 2019 and June 30, 2018 , the Company had a liability of \$ 1,665 and \$ 1,398 , respectively, related to these items and recorded within accounts payable on the consolidated balance sheet.

Return and warranty obligations vary by the specific terms of agreements with customers. The Company generally does not provide customers with a right of return. The Company has a limited warranty provision for goods that are nonconforming or defective at the time of shipment, which is estimated based on historical experience.

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Contract Costs

Commissions are earned by the Company's direct sales force based on sales of the Company's OAS and other products. The Company applies the practical expedient and recognizes commissions as an expense when incurred because the amortization period of the asset that the Company would have otherwise recognized is one year or less.

4. Debt

Revolving Credit Facility

In March 2017, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with Silicon Valley Bank ("SVB"). The Loan Agreement provides for a senior, secured revolving credit facility (the "Revolver") of \$40,000 (the "Maximum Dollar Amount").

Advances under the Revolver may be made from time to time up to the Maximum Dollar Amount, subject to certain borrowing limitations. The Revolver has a maturity date of March 31, 2020 and bears interest at a floating per annum rate equal to the Wall Street Journal prime rate, less 0.25%. Interest on borrowings is due monthly and the principal balance is due at maturity. Borrowings up to \$10,000 are available on a non-formula basis. Borrowings above \$10,000 are based on (i) 85% of eligible domestic accounts receivable, and (ii) the lesser of 50% of eligible inventory or \$5,000, subject to adjustment as defined in the Loan Agreement. Upon the Revolver's maturity, any outstanding principal balance, unpaid accrued interest, and all other obligations under the Revolver will be due and payable. The Company will incur a fee equal to 1% of the Maximum Dollar Amount upon termination of the Loan Agreement or the Revolver for any reason prior to the maturity date, unless refinanced with SVB.

The Company's obligations under the Loan Agreement are secured by certain of the Company's assets, including, among other things, accounts receivable, deposit accounts, inventory, equipment, general intangibles and records pertaining to the foregoing. The collateral does not include the Company's intellectual property, but the Company has agreed not to encumber its intellectual property without the consent of SVB. The Loan Agreement contains customary covenants limiting the Company's ability to, among other things, incur debt or liens, make certain investments and loans, enter into transactions with affiliates, undergo certain fundamental changes, dispose of assets, or change the nature of its business. In addition, the Loan Agreement contains financial covenants requiring the Company to maintain, at all times when any amounts are outstanding under the Revolver, either (i) minimum unrestricted cash at SVB and unused availability on the Revolver of at least \$10,000 or (ii) minimum trailing three-month Adjusted EBITDA of \$1,000. If the Company does not comply with the various covenants under the Loan Agreement, the interest rate on outstanding amounts will increase by 5% and SVB may, subject to various customary cure rights, decline to provide additional advances under the Revolver, require the immediate payment of all amounts outstanding under the Revolver, and foreclose on all collateral.

Under the Loan Agreement, the Company paid SVB a non-refundable commitment fee of \$80, which will be amortized to interest expense over the term of the Loan Agreement. The Company is required to pay a fee equal to 0.35% per annum on the unused portion of the Revolver, payable quarterly in arrears. The Company is not obligated to draw any funds under the Revolver and has not done so under the Revolver since entering into the Loan Agreement. No amounts are outstanding as of March 31, 2019.

Financing Obligation

In March 2017, in connection with the sale of the Company's headquarters facility in St. Paul, Minnesota (the "Facility"), the Company entered into a Lease Agreement to lease the Facility. The Lease Agreement has an initial term of fifteen years, with four consecutive renewal options of five years each at the Company's option, with a base annual rent in the first year of \$1,638 and annual escalations of 3% thereafter. Rent during subsequent renewal terms will be at the then fair market rental rate. As the lease terms resulted in a capital lease classification, the Company accounted for the sale and leaseback of the Facility as a financing transaction where the assets remain on the Company's balance sheet and a financing obligation was recorded for \$20,944. As lease payments are made, they will be allocated between interest expense and a reduction of the financing obligation, resulting in a value of the financing obligation that is equivalent to the net book value of the assets at the end of the lease term. The effective interest rate is 7.89%. At the end of the lease (including any renewal option terms), the Company will remove the assets and financing obligation from its balance sheet.

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Payments under the initial term of the Lease Agreement as of March 31, 2019 are as follows:

Three months ending June 30, 2019	\$	434
Fiscal 2020		1,750
Fiscal 2021		1,803
Fiscal 2022		1,857
Fiscal 2023		1,913
Thereafter		19,375
	\$	<u>27,132</u>

5. Investments

The following table provides information by level for the Company's marketable securities that were measured at fair value on a recurring basis:

	Fair Value	Fair Value Measurements as of March 31, 2019 Using Inputs Considered as		
		Level 1	Level 2	Level 3
Mutual funds	\$ 456	\$ 148	\$ 308	\$ —
Total short-term investments	\$ 456	\$ 148	\$ 308	\$ —

	Fair Value	Fair Value Measurements as of June 30, 2018 Using Inputs Considered as		
		Level 1	Level 2	Level 3
Mutual funds	\$ 544	\$ 199	\$ 345	\$ —
Total short-term investments	\$ 544	\$ 199	\$ 345	\$ —

Effective July 1, 2018 the Company adopted the provisions of ASU 2016-01. Unrealized gains and losses of marketable securities previously recognized in other comprehensive income will now be recognized in net income as a component of other income. Upon adoption, the Company recorded a cumulative-effect reclassification adjustment of \$101 from accumulated other comprehensive income to the opening balance of retained earnings as of July 1, 2018.

During the three and nine months ended March 31, 2019 and 2018, there were no purchases of marketable securities. There was \$0 and \$97 of marketable securities that were sold during the three and nine months ended March 31, 2019, respectively. There was \$48 and \$144 of marketable securities that were sold during the three and nine months ended March 31, 2018, respectively.

The Company's marketable securities classified within Level 1 are valued using real-time quotes for transactions in active exchange markets. Marketable securities within Level 2 are valued using readily available pricing sources. There were no transfers of assets between Level 1 and Level 2 of the fair value measurement hierarchy during the nine months ended March 31, 2019. Any transfers between levels would be recognized on the date of the event or when a change in circumstances causes a transfer.

The Company holds an equity investment that does not have a readily determined fair value. The Company has elected to measure this investment at cost minus impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. Impairment is reviewed each reporting period by performing a qualitative assessment considering impairment indicators to evaluate whether the investment is impaired. As of March 31, 2019 and June 30, 2018, the carrying value of the investment was \$5,593 and \$2,538, respectively. During the nine months ended March 31, 2019, no impairment indicators were noted. The investment is recorded within other long term assets on the consolidated balance sheet.

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6. Stock Options and Restricted Stock Awards

On November 15, 2017, the Company's stockholders approved the 2017 Equity Incentive Plan (the "2017 Plan") for the purpose of granting equity awards to employees, directors and consultants. The 2017 Plan replaced the 2014 Equity Incentive Plan (the "2014 Plan"), and no further equity awards may be granted under the 2014 Plan or the 2007 Equity Incentive Plan (the "2007 Plan") (the 2017 Plan, 2014 Plan and the 2007 Plan are collectively referred to as the "Plans").

Equity awards classified as restricted stock and performance-based restricted stock are treated as issued shares when granted; however, these shares are not included in the computation of basic weighted average shares outstanding. When shares vest, unless the holder elects to pay the payroll tax liability in cash or through a sale of shares, the Company withholds the appropriate amount of shares to settle the payroll tax liability, on behalf of the individual receiving the shares, as an adjustment to accumulated deficit.

Stock Options

All options granted under the Plans become exercisable over periods established at the date of grant. The option exercise price is generally not less than the estimated fair market value of the Company's common stock at the date of grant, as determined by the Company's management and Board of Directors. An employee's vested options must be exercised at or within 90 days of termination to avoid forfeiture.

Stock option activity for the nine months ended March 31, 2019 is as follows:

	Number of Options ^(a)	Weighted Average Exercise Price
Options outstanding at June 30, 2018	22,321	\$ 8.75
Options exercised	(22,321)	\$ 8.75
Options outstanding at March 31, 2019	—	\$ —

(a) Includes the effect of options granted, exercised, forfeited or expired from the 2007 Plan.

Restricted Stock

The value of each restricted stock award is equal to the fair market value of the Company's common stock at the date of grant. Vesting of time-based restricted stock awards ranges from one to three years. The estimated fair value of restricted stock awards, including the effect of estimated forfeitures, is recognized on a straight-line basis over the restricted stock's vesting period.

Restricted stock award activity for the nine months ended March 31, 2019 is as follows:

	Number of Shares	Weighted Average Fair Value
Outstanding at June 30, 2018	455,216	\$ 24.77
Granted	259,010	\$ 35.46
Forfeited	(20,889)	\$ 28.39
Vested	(209,142)	\$ 23.27
Outstanding at March 31, 2019	484,195	\$ 30.76

Performance-Based Restricted Stock

The Company also grants performance-based restricted stock awards to certain executives and other management. In August 2018, the Company granted an aggregate maximum of 210,020 shares that vest based on the Company's total shareholder return relative to total shareholder return of the Company's peer group (a market condition), as measured by the closing prices of the stock of the Company and the peer group members for the 90 trading days preceding July 1, 2018 compared to the closing prices of the stock of the Company and the peer group members for the 90 trading days preceding July 1, 2021. Vesting of these awards will be determined on the date that the Company's Annual Report on Form 10-K for the fiscal year ending June 30, 2021 is filed.

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To calculate the estimated fair value of these restricted stock awards with market conditions, the Company uses a Monte Carlo simulation, which uses the expected average stock prices to estimate the expected number of shares that will vest. The Monte Carlo simulation resulted in an aggregate fair value of approximately \$4,734, which the Company will recognize as expense using the straight-line method over the period that the awards are expected to vest. Stock-based compensation expense related to an award with a market condition will be recognized regardless of whether the market condition is satisfied, provided that the requisite service has been provided.

Performance-based restricted stock awards granted in fiscal 2017 and 2018 that are outstanding vest based on the Company's total shareholder return relative to total shareholder return of the Company's peer group (a market condition), as measured by the closing prices of the stock of the Company and the peer group members for the 90 trading days preceding July 1, 2016 and July 1, 2017, respectively, compared to the closing prices of the stock of the Company and the peer group members for the 90 trading days preceding July 1, 2019 and July 1, 2020, respectively.

Performance-based restricted stock award activity for the nine months ended March 31, 2019 is as follows:

	Number of Shares	Weighted Average Fair Value
Outstanding at June 30, 2018	531,178	\$ 12.69
Granted	225,325	\$ 22.33
Forfeited	(2,172)	\$ 17.94
Outstanding at March 31, 2019	<u>754,331</u>	<u>\$ 15.19</u>

7. Commitment and Contingencies

Operating Leases

The Company leases manufacturing space and equipment under lease agreements that expire at various dates through March 2020. Rental expenses were \$132 and \$157 for the three months ended March 31, 2019 and 2018, respectively, and \$410 and \$496 for the nine months ended March 31, 2019 and 2018, respectively.

Future minimum lease payments under the agreements as of March 31, 2019 are as follows:

Three months ending June 30, 2019	\$ 127
Fiscal 2020	392
Fiscal 2021	36
Fiscal 2022	8
Fiscal 2023	3
Thereafter	2
	<u>\$ 568</u>

Other Matters

In the ordinary conduct of business, the Company is subject to various lawsuits and claims covering a wide range of matters including, but not limited to, employment claims and commercial disputes. While the outcome of these matters is uncertain, the Company does not believe there are any significant matters as of March 31, 2019 that are probable or estimable, for which the outcome could have a material adverse impact on its consolidated balance sheets or statements of operations.

8. Earnings Per Share

The following table presents a reconciliation of the numerators and denominators used in the basic and diluted earnings per common share computations (in thousands except share and per share amounts):

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Numerator				
Net income (loss)	\$ 672	\$ 365	\$ (1,724)	\$ (2,025)
Income allocated to participating securities	(3)	(5)	—	—
Net income (loss) available to common stockholders	\$ 669	\$ 360	\$ (1,724)	\$ (2,025)
Denominator				
Weighted average common shares outstanding – basic	33,600,148	33,237,552	33,510,368	33,105,174
Effect of dilutive stock options ⁽¹⁾	—	14,197	—	—
Effect of dilutive restricted stock units ⁽²⁾	339,929	318,122	—	—
Effect of performance-based restricted stock awards ⁽³⁾	295,048	67,918	—	—
Effect of employee stock purchase plan ⁽⁴⁾	6,307	4,015	—	—
Weighted average common shares outstanding – diluted	34,241,432	33,641,804	33,510,368	33,105,174
Earnings per common share – basic	\$ 0.02	\$ 0.01	\$ (0.05)	\$ (0.06)
Earnings per common share – diluted	\$ 0.02	\$ 0.01	\$ (0.05)	\$ (0.06)

- (1) At March 31, 2019 and 2018, 0 and 22,321 stock options, respectively, were outstanding. The effect of the shares that would be issued upon exercise of these options has been excluded from the calculation of diluted loss per share for the nine months ended March 31, 2019 and 2018, because those shares are anti-dilutive.
- (2) At March 31, 2019 and 2018, 354,176 and 335,869 additional shares of common stock, respectively, were issuable upon the settlement of outstanding restricted stock units. The effect of the shares that would be issued upon settlement of these restricted stock units has been excluded from the calculation of diluted loss per share for the nine months ended March 31, 2019 and 2018, because those shares are anti-dilutive.
- (3) At March 31, 2019 and 2018, 754,331 and 531,178 performance-based restricted stock awards, respectively, were outstanding. The effect of the potential vesting of these awards has been excluded from the calculation of diluted loss per share for the nine months ended March 31, 2019 and 2018, because those shares are anti-dilutive.
- (4) At March 31, 2019 and 2018, the Company included the number of shares that would be issued under its employee stock purchase plan based on the aggregate expected amount of withholdings and the average unrecognized compensation expense as assumed proceeds. The effect of these shares has been excluded from the calculation of diluted loss per share for the nine months ended March 31, 2019 and 2018, because those shares are anti-dilutive.

Unvested time-based restricted stock awards that contain nonforfeitable rights to dividends are participating securities and included in the computation of earnings per share pursuant to the two-class method. Under this method, earnings attributable to the Company are allocated between common stockholders and the participating awards, as if the awards were a second class of stock. During periods of net income, the calculation of earnings per share excludes the income attributable to participating securities in the numerator and the dilutive impact of these securities from the denominator. In the event of a net loss, undistributed earnings are not allocated to participating securities and the denominator excludes the dilutive impact of these securities as they do not share in the losses of the Company. During the three months ended March 31, 2019 and 2018, undistributed earnings allocated to participating securities were based on 172,839 and 462,387 time-based restricted stock awards, respectively.

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

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes appearing under Item 1 of Part I of this Quarterly Report on Form 10-Q. Some of the information contained in this discussion and analysis or set forth elsewhere in this report, including information with respect to our plans and strategy for our business and expected financial results, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" discussed in our Annual Report on Form 10-K for the year ended June 30, 2018 and subsequent Quarterly Reports on Form 10-Q, including in Item 1A of Part II of this Quarterly Report on Form 10-Q, for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

OVERVIEW

We are a medical technology company leading the way in the effort to successfully treat patients suffering from peripheral and coronary artery diseases, including those with arterial calcium, the most difficult arterial disease to treat. We are committed to clinical rigor, constant innovation and a defining drive to set the industry standard to deliver safe and effective medical devices that improve lives of patients facing these difficult disease states.

We have observed some degree of seasonality in our business, as there tends to be a lower number of procedures that use our products during the three months ending September 30. Interventional procedure volume usually grows throughout the course of the fiscal year, with the three months ending June 30 usually representing the highest volume of cases and, therefore, the highest amount of revenue generated by us during the course of the fiscal year.

Peripheral

Our peripheral arterial disease ("PAD") products are catheter-based platforms capable of treating a broad range of plaque types in leg arteries both above and below the knee, including calcified plaque, and address many of the limitations associated with other existing surgical, catheter and pharmacological treatment alternatives. The micro-invasive devices use small access sheaths that can provide procedural benefits, allow physicians to treat PAD patients in even the small and tortuous vessels located below the knee, and facilitate access through alternative sites in the ankle, foot and wrist, as well as in the groin. We refer to each of the PAD products in this report as the "Peripheral OAS."

The United States Food and Drug Administration ("FDA") has granted us 510(k) clearances for our Peripheral OAS as a therapy in patients with PAD, as discussed in Item 1 of Part I of our Annual Report on Form 10-K for the year ended June 30, 2018.

Coronary

Our coronary arterial disease ("CAD") product, the Diamondback 360 Coronary OAS ("Coronary OAS"), is marketed as a treatment for severely calcified coronary arteries. The Coronary OAS is a catheter-based platform designed to facilitate stent delivery in patients with CAD who are acceptable candidates for percutaneous transluminal coronary angioplasty or stenting due to de novo, severely calcified coronary artery lesions. The Coronary OAS design is similar to technology used in our Peripheral OAS, customized specifically for the coronary application.

In October 2013, we received premarket approval from the FDA to market the Coronary OAS as a treatment for severely calcified coronary arteries and we commenced a commercial launch that same month.

International

We commercialized our Coronary OAS Micro Crown in Japan in February 2018 through our distributor, Medikit Co., Ltd. In January 2019, we announced that Japan's Ministry of Health, Labor and Welfare approved our Coronary OAS Classic Crown, and in the third quarter of fiscal 2019, sales of this product commenced in Japan.

In fiscal 2019, we announced the first commercial use of Peripheral OAS outside of the United States, which occurred in Hong Kong, Germany, and the Middle East through our international distributor, OrbusNeich. We continue to evaluate and pursue additional international markets to expand the coronary and peripheral opportunities.

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT JUDGMENTS AND ESTIMATES

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of our consolidated financial statements requires us to make estimates, assumptions and judgments that affect amounts reported in those statements. Our estimates, assumptions and judgments, including those related to revenue recognition, deferred revenue and stock-based compensation, are updated as appropriate at least quarterly. We use authoritative pronouncements, our technical accounting knowledge, cumulative business experience, judgment and other factors in the selection and application of our accounting policies. While we believe that the estimates, assumptions and judgments that we use in preparing our consolidated financial statements are appropriate, these estimates, assumptions and judgments are subject to factors and uncertainties regarding their outcome. Therefore, actual results may materially differ from these estimates.

Some of our significant accounting policies require us to make subjective or complex judgments or estimates. An accounting estimate is considered to be critical if it meets both of the following criteria: (1) the estimate requires assumptions about matters that are highly uncertain at the time the accounting estimate is made, and (2) different estimates that reasonably could have been used, or changes in the estimate that are reasonably likely to occur from period to period, would have a material impact on the presentation of our financial condition, results of operations, or cash flows.

Our critical accounting policies are identified in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018 in Management's Discussion and Analysis of Financial Condition and Results of Operations under the heading "Critical Accounting Policies and Significant Judgments and Estimates." There have been no changes in our critical accounting policies other than our adoption of ASC Topic 606 - *Revenue from Contracts with Customers*. See Note 3 to our Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q for additional discussion.

RESULTS OF OPERATIONS

The following table sets forth our results of operations expressed as dollar amounts (in thousands) and the changes between the specified periods expressed as percent increases or decreases:

	Three Months Ended March 31,			Nine Months Ended March 31,		
	2019	2018	Percent Change	2019	2018	Percent Change
Net revenues	\$ 63,311	\$ 55,587	13.9 %	\$ 179,783	\$ 157,891	13.9 %
Cost of goods sold	12,166	9,969	22.0	34,218	28,670	19.4
Gross profit	51,145	45,618	12.1	145,565	129,221	12.6
Expenses:						
Selling, general and administrative	41,356	37,796	9.4	123,705	110,722	11.7
Research and development	9,282	7,333	26.6	23,937	20,037	19.5
Total expenses	50,638	45,129	12.2	147,642	130,759	12.9
Income (loss) from operations	507	489	3.7	(2,077)	(1,538)	35.0
Other (income) expense, net	(251)	91	(375.8)	(505)	388	(230.2)
Income (loss) before income taxes	758	398	90.5	(1,572)	(1,926)	(18.4)
Provision for income taxes	86	33	160.6	152	99	53.5
Net income (loss)	\$ 672	\$ 365	84.1	\$ (1,724)	\$ (2,025)	(14.9)

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Comparison of Three Months Ended March 31, 2019 with Three Months Ended March 31, 2018

Net revenues. Net revenues increased by \$7.7 million, or 13.9%, from \$55.6 million for the three months ended March 31, 2018 to \$63.3 million for the three months ended March 31, 2019 . Peripheral revenues increased \$4.2 million, or 10.2%, and coronary revenues increased \$3.5 million, or 24.4%. Both peripheral and coronary revenue increases were primarily driven by higher unit volumes as a result of the growth of our customer base and expansion into new international markets, and new product offerings such as OrbusNeich balloons and ZILIENT guidewires, partially offset by lower average selling prices. International revenue was \$2.4 million for the three months ended March 31, 2019 , compared with international revenue of \$851,000 for the three months ended March 31, 2018 , an increase of \$1.6 million. We expect our revenue to increase as we continue to increase the number of physicians using the devices, increase the usage per physician, introduce new and improved products, generate additional clinical data, and expand into new geographies through our distribution agreements with Medikit and OrbusNeich, partially offset by potential decreases in average selling prices.

Cost of Goods Sold. Cost of goods sold increased to \$12.2 million for the three months ended March 31, 2019 from \$10.0 million for the three months ended March 31, 2018 , a 22.0% increase. These amounts represent the cost of materials, labor and overhead for single-use catheters, guide wires, pumps, and other ancillary products. The increase in cost of goods sold was due to greater unit volumes as we added new accounts, expanded internationally and offered additional products. Gross margin decreased to 80.8% for the three months ended March 31, 2019 from 82.1% for the three months ended March 31, 2018 , primarily due to increased sales of lower margin products, expansion into lower margin international markets through distributor relationships, and lower average selling prices. This decrease was partially offset by product cost reductions and manufacturing efficiencies. We expect that gross margin in the fourth quarter of fiscal 2019 will be slightly lower than gross margin in the three months ended March 31, 2019 , as an increasing amount of revenue will be derived from lower margin products and international markets. Quarterly margin fluctuations could occur based on production volumes, timing of new product introductions, sales mix, pricing changes, or other unanticipated circumstances.

Selling, General and Administrative Expenses. Our selling, general and administrative expenses increased by \$3.6 million, or 9.4%, from \$37.8 million for the three months ended March 31, 2018 to \$41.4 million for the three months ended March 31, 2019 . The increase was primarily due to increased expenses related to the expansion of our medical affairs initiatives, additional clinical specialists within our sales organization, international expansion, and incentive compensation. Selling, general and administrative expenses for the three months ended March 31, 2019 and 2018 include \$2.3 million and \$1.9 million, respectively, for stock-based compensation. We expect our selling, general and administrative expenses for the fourth quarter of fiscal 2019 to increase slightly compared to amounts incurred for the three months ended March 31, 2019, but at a rate less than the rate of revenue growth.

Research and Development Expenses. Research and development expenses increased by \$2.0 million, or 26.6%, from \$7.3 million for the three months ended March 31, 2018 to \$9.3 million for the three months ended March 31, 2019 . Research and development expenses relate to specific projects to develop new products or expand into new markets, such as the development of new versions of the Peripheral and Coronary OAS, shaft designs and crown designs, and to PAD and CAD clinical trials. The increase was primarily due to increased personnel and project costs for the three months ended March 31, 2019 as we invested in expanding our product portfolio and additional costs associated with the ECLIPSE clinical study. We expect research and development expenses in the fourth quarter of fiscal 2019 to be similar to the amounts incurred for the three months ended March 31, 2019 based on the timing of our investments in the expansion of our product portfolio and clinical studies. Fluctuations could occur based on the number of projects and studies, the progress of such projects and studies, the rate of study enrollment, and the timing of expenditures.

Comparison of Nine Months Ended March 31, 2019 with Nine Months Ended March 31, 2018

Net revenues. Net revenues increased by \$21.9 million, or 13.9%, from \$157.9 million for the nine months ended March 31, 2018 to \$179.8 million for the nine months ended March 31, 2019 . Peripheral revenues increased \$12.3 million, or 10.4%, and coronary revenues increased \$9.6 million, or 24.3%. Both peripheral and coronary revenue increases were primarily driven by higher unit volumes as a result of the growth of our customer base and expansion into new international markets, and new product offerings such as OrbusNeich balloons and ZILIENT guidewires, partially offset by lower average selling prices. International revenue was \$5.4 million for the nine months ended March 31, 2019 , compared with \$851,000 of international revenue for the nine months ended March 31, 2018 , an increase of \$4.5 million.

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Cost of Goods Sold. Cost of goods sold increased to \$34.2 million for the nine months ended March 31, 2019 from \$28.7 million for the nine months ended March 31, 2018 , a 19.4% increase. These amounts represent the cost of materials, labor and overhead for single-use catheters, guide wires, pumps, and other ancillary products. The increase in cost of goods sold was due to greater unit volumes as we added new accounts, expanded internationally and offered additional products. Gross margin decreased to 81.0% for the nine months ended March 31, 2019 from 81.8% for the nine months ended March 31, 2018 , primarily due to increased sales of lower margin products, expansion into lower margin international markets through distributor relationships, and lower average selling prices. This decrease was partially offset by product cost reductions and manufacturing efficiencies.

Selling, General and Administrative Expenses. Our selling, general and administrative expenses increased by \$13.0 million, or 11.7%, from \$110.7 million for the nine months ended March 31, 2018 to \$123.7 million for the nine months ended March 31, 2019 . The increase was primarily due to increased expenses related to the expansion of our medical affairs initiatives, additional clinical specialists within our sales organization, international expansion, and incentive compensation. Selling, general and administrative expenses for the nine months ended March 31 2019 and 2018 include \$7.3 million and \$6.9 million, respectively, for stock-based compensation.

Research and Development Expenses. Research and development expenses increased by \$3.9 million, or 19.5%, from \$20.0 million for the nine months ended March 31, 2018 to \$23.9 million for the nine months ended March 31, 2019 . Research and development expenses relate to specific projects to develop new products or expand into new markets, such as the development of new versions of the Peripheral and Coronary OAS, shaft designs and crown designs, and to PAD and CAD clinical trials. The increase was primarily due to increased personnel costs as we invested in expanding our product portfolio and additional costs associated with the ECLIPSE clinical study. Research and development expenses for the nine months ended March 31, 2019 and 2018 include \$1.0 million and \$799,000, respectively, for stock-based compensation.

LIQUIDITY AND CAPITAL RESOURCES

We had cash and cash equivalents of \$115.3 million and \$116.3 million at March 31, 2019 and June 30, 2018 , respectively. As of March 31, 2019 , we had an accumulated deficit of \$330.9 million . We have historically funded our operating losses primarily from the issuance of common and preferred stock, convertible promissory notes, and debt.

A summary of our cash flow activities is as follows:

	Nine Months Ended March 31,	
	2019	2018
Net cash provided by operating activities	\$ 4,908	\$ 1,682
Net cash used in investing activities	(5,909)	(2,207)
Net cash provided by financing activities	21	1,918
Net change in cash and cash equivalents	\$ (980)	\$ 1,393

Changes in Liquidity

Operating Activities

Net cash provided by operations was \$4.9 million for the nine months ended March 31, 2019 , primarily due to positive cash flow when the net loss of \$1.7 million is adjusted for non-cash expenditures such as stock-based compensation, depreciation and amortization. Contributing to positive cash flows from operations was the timing of cash payments on payables. These positive cash flows were partially offset by the timing of collections on receivables, increased use of cash as we build inventory and diversify our products, and the effects of recognizing previously deferred revenue.

Net cash provided by operations was \$1.7 million for the nine months ended March 31, 2018 , primarily due to positive cash flow when the net loss of \$2.0 million is adjusted for non-cash expenditures such as stock-based compensation, depreciation and amortization, as well as the timing of prepaid expenses and increased accounts payable due to timing of activity and payments. These positive cash flows were partially offset by the timing of collections on receivables, the use of cash for payouts of previously accrued bonuses and commissions and a litigation settlement payment.

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Investing Activities

Net cash used in investing activities was \$5.9 million for the nine months ended March 31, 2019 , primarily due to additional shares acquired in an investment, purchases of property and equipment and costs associated with capitalized patent activities.

Net cash used in investing activities was \$2.2 million for the nine months ended March 31, 2018 , primarily due to purchases of property and equipment and costs associated with capitalized patent activities.

Financing Activities

Net cash provided by financing activities was \$21,000 for the nine months ended March 31, 2019 , primarily due to proceeds from employee stock purchases and the exercise of stock options, partially offset by the payment of payroll taxes on the employee vesting of stock awards.

Net cash provided by financing activities was \$1.9 million for the nine months ended March 31, 2018 , primarily due to proceeds received from employee stock purchases and the exercises of stock options.

Our future liquidity and capital requirements will be influenced by numerous factors, including the extent and duration of future operating losses, the level and timing of future sales and expenditures, the results and scope of ongoing research and product development programs, working capital required to support our business operations, the receipt of and time required to obtain regulatory clearances and approvals, our sales and marketing programs, the continuing acceptance of our products in the marketplace, competing technologies, market and regulatory developments, ongoing facility requirements, potential strategic transactions (including the potential acquisition of, or investments in, businesses, technologies and products), international expansion, and the existence, defense and resolution of legal proceedings. As of March 31, 2019 , we believe our current cash and cash equivalents will be sufficient to fund working capital requirements, capital expenditures and operations for the foreseeable future, including at least the next twelve months, as well as to fund payments related to the Department of Justice settlement, expenses relating to compliance with our Corporate Integrity Agreement, payments under our lease agreements, payments under development agreements and anticipated costs relating to litigation. We intend to retain any future earnings to support operations and to finance the growth and development of our business. We do not anticipate paying any dividends in the foreseeable future.

Facility Sale and Lease

On December 29, 2016, we entered into a Purchase and Sale Agreement, as subsequently amended (collectively, the “Sale Agreement”), with Krishna Holdings, LLC (“Krishna”), providing for the sale to Krishna of our headquarters facility in St. Paul, Minnesota (the “Facility”) for a cash purchase price of \$21.5 million . On March 30, 2017, the sale of the Facility under the Sale Agreement closed. We received proceeds of approximately \$20.9 million (\$21.5 million less \$556,000 of transaction expenses). In connection with the closing of the facility sale, we entered into a Lease Agreement (the “Lease Agreement”) with Krishna Holdings, LLC, Apex Holdings, LLC, Kashi Associates, LLC, Keva Holdings, LLC, S&V Ventures, LLC, Polo Group LLC, SPAV Holdings LLC, Star Associates LLC, and The Global Villa, LLC. The Lease Agreement has an initial term of fifteen years, with four consecutive renewal options of five years each, with a base annual rent in the first year of \$1.6 million and annual escalations of 3%. See Note 4 to our Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q for additional discussion.

Revolving Credit Facility

On March 31, 2017, we entered into a Loan and Security Agreement (the “Loan Agreement”) with Silicon Valley Bank (“SVB”). The Loan Agreement provides for a senior, secured revolving credit facility (the “Revolver”) of \$40.0 million (the “Maximum Dollar Amount”).

Advances under the Revolver may be made from time to time up to the Maximum Dollar Amount, subject to certain borrowing limitations. The Revolver has a maturity date of March 31, 2020 and bears interest at a floating per annum rate equal to the Wall Street Journal prime rate, less 0.25% . Interest on borrowings is due monthly and the principal balance is due at maturity. Borrowings up to \$10.0 million are available on a non-formula basis. Borrowings above \$10.0 million are based on (i) 85% of eligible domestic accounts receivable, and (ii) the lesser of 50% of eligible inventory or \$5.0 million , subject to adjustment as defined in the Loan Agreement. Upon the Revolver’s maturity, any outstanding principal balance, unpaid accrued interest, and all other obligations under the Revolver will be due and payable. We will incur a fee equal to 1% of the Maximum Dollar Amount upon termination of the Loan Agreement or the Revolver for any reason prior to the maturity date, unless refinanced with SVB.

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Our obligations under the Loan Agreement are secured by certain of our assets, including, among other things, accounts receivable, deposit accounts, inventory, equipment, general intangibles and records pertaining to the foregoing. The collateral does not include our intellectual property, but we agreed not to encumber our intellectual property without the consent of SVB. The Loan Agreement contains customary covenants limiting our ability to, among other things, incur debt or liens, make certain investments and loans, enter into transactions with affiliates, undergo certain fundamental changes, dispose of assets, or change the nature of its business. In addition, the Loan Agreement contains financial covenants requiring us to maintain, at all times when any amounts are outstanding under the Revolver, either (i) minimum unrestricted cash at SVB and unused availability on the Revolver of at least \$10.0 million or (ii) minimum trailing three-month Adjusted EBITDA of \$1.0 million. If we do not comply with the various covenants under the Loan Agreement, the interest rate on outstanding amounts will increase by 5% and SVB may, subject to various customary cure rights, decline to provide additional advances under the Revolver, require the immediate payment of all amounts outstanding under the Revolver, and foreclose on all collateral.

Under the Loan Agreement, we paid SVB a non-refundable commitment fee of \$80,000, which will be amortized to interest expense over the term of the Loan Agreement. We are required to pay a fee equal to 0.35% per annum on the unused portion of the Revolver, payable quarterly in arrears. We are not obligated to draw any funds under the Revolver and have not done so under the Revolver since entering into the Loan Agreement. No amounts are outstanding as of March 31, 2019 and we currently do not have plans to borrow under the Loan Agreement.

NON-GAAP FINANCIAL INFORMATION

To supplement our consolidated financial statements prepared in accordance with GAAP, our management uses a non-GAAP financial measure referred to as “Adjusted EBITDA.” The following table sets forth, for the periods indicated, a reconciliation of Adjusted EBITDA to the most comparable GAAP measure expressed as dollar amounts (in thousands):

	Three Months Ended March 31,		Nine Months Ended March 31,	
	2019	2018	2019	2018
Net income (loss)	\$ 672	\$ 365	\$ (1,724)	\$ (2,025)
Less: Other (income) expense, net	(251)	91	(505)	388
Less: Provision for income taxes	86	33	152	99
Income (loss) from operations	507	489	(2,077)	(1,538)
Add: Stock-based compensation	2,674	2,140	8,600	7,880
Add: Depreciation and amortization	932	990	2,617	3,080
Adjusted EBITDA	\$ 4,113	\$ 3,619	\$ 9,140	\$ 9,422

Adjusted EBITDA increased for the three months ended March 31, 2019 as compared to the three months ended March 31, 2018 primarily due to the effects of higher stock-based compensation. Adjusted EBITDA decreased for the nine months ended March 31, 2019 as compared to the nine months ended March 31, 2018 primarily due to the effects of higher loss from operations and lower depreciation and amortization expense during the nine months ended March 31, 2019 compared to the nine months ended March 31, 2018.

Use and Economic Substance of Non-GAAP Financial Measures Used and Usefulness of Such Non-GAAP Financial Measures to Investors

We use Adjusted EBITDA as a supplemental measure of performance and believe this measure facilitates operating performance comparisons from period to period and company to company by factoring out potential differences caused by depreciation and amortization expense and non-cash charges such as stock-based compensation. Our management uses Adjusted EBITDA to analyze the underlying trends in our business, assess the performance of our core operations, establish operational goals and forecasts that are used to allocate resources and evaluate our performance period over period and in relation to our competitors' operating results. Additionally, our management is partially evaluated on the basis of Adjusted EBITDA when determining achievement of their incentive compensation performance targets. Management does not use Adjusted EBITDA as a liquidity measure or in the calculation of our financial covenants under the revolving credit facility with Silicon Valley Bank.

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We believe that presenting Adjusted EBITDA provides investors greater transparency to the information used by our management for its financial and operational decision-making and allows investors to see our results “through the eyes” of management. We also believe that providing this information better enables our investors to understand our operating performance and evaluate the methodology used by our management to evaluate and measure such performance.

The following is an explanation of each of the items that management excludes from Adjusted EBITDA and the reasons for excluding each of these individual items:

- *Stock-based compensation.* Our management believes that excluding this item from Adjusted EBITDA is useful to investors to understand the application of stock-based compensation guidance and its impact on our operational performance and ability to make additional investments in our company, and excluding this item allows for greater transparency to certain line items in our financial statements.
- *Depreciation and amortization expense.* Our management believes that excluding these items from our Adjusted EBITDA is useful to investors to understand our operational performance and ability to make additional investments in our company.

Material Limitations Associated with the Use of Non-GAAP Financial Measures and Manner in Which We Compensate for these Limitations

Non-GAAP financial measures have limitations as analytical tools and should not be considered in isolation or as a substitute for our financial results prepared in accordance with GAAP. Some of the limitations associated with our use of these non-GAAP financial measures are:

- Items such as stock-based compensation do not directly affect our cash flow position; however, such items reflect economic costs to us and are not reflected in our Adjusted EBITDA, and therefore Adjusted EBITDA does not reflect the full economic effect of these items.
- Non-GAAP financial measures are not based on any comprehensive set of accounting rules or principles and therefore other companies may calculate similarly titled non-GAAP financial measures differently than we do, limiting the usefulness of those measures for comparative purposes.
- Our management exercises judgment in determining which types of charges or other items should be excluded from the non-GAAP financial measures we use.

We compensate for these limitations by relying primarily upon our GAAP results and using non-GAAP financial measures only supplementally.

INFLATION

We do not believe that inflation had a material impact on our business and operating results during the periods presented.

OFF-BALANCE SHEET ARRANGEMENTS

Since inception, we have not engaged in any off-balance sheet activities as defined in Item 303(a)(4) of Regulation S-K.

RECENT ACCOUNTING PRONOUNCEMENTS

For a description of recent accounting pronouncements, see Note 1 to the Consolidated Financial Statements included in Item 1 of Part I of this Quarterly Report on Form 10-Q.

PRIVATE SECURITIES LITIGATION REFORM ACT

The Private Securities Litigation Reform Act of 1995 provides a “safe harbor” for forward-looking statements. Such “forward-looking” information is included in this report and in other materials filed or to be filed by us with the Securities and Exchange Commission (as well as information included in oral statements or other written statements made or to be made by us). Forward-looking statements include all statements based on future expectations. This report contains forward-looking statements that involve risks and uncertainties, including, but not limited to, (i) our expectation of continued sales of our products internationally, including the specific products to be sold, the territories in which such products will be sold, and the timing of such sales; (ii) seasonality in our business; (iii) our expectation that our revenue will increase; (iv) our expectation of

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increased selling, general and administrative expenses and the rate of such growth; (v) our expectation that gross margin in the fourth quarter of fiscal 2019 will be slightly lower than gross margin in the three months ended March 31, 2019; (vi) our expectation that we will incur research and development expenses in the fourth quarter of fiscal 2019 that are similar to the amounts incurred in the three months ended March 31, 2019; (vii) our belief that our current cash and cash equivalents will be sufficient to fund working capital requirements, capital expenditures and operations for the foreseeable future, as well as to fund certain other anticipated expenses; (viii) our intention to retain any future earnings to support operations and to finance the growth and development of our business; (ix) our dividend expectations; (x) our plan not to borrow under our loan and security agreement; and (xi) the anticipated impact of adoption of recent accounting pronouncements on our financial statements.

In some cases, you can identify forward-looking statements by the following words: “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “ongoing,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. Forward-looking statements are only predictions and are not guarantees of performance. These statements are based on our management’s beliefs and assumptions, which in turn are based on their interpretation of currently available information.

These statements involve known and unknown risks, uncertainties and other factors that may cause our results or our industry’s actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. These factors include regulatory developments, clearances and approvals; approval of our products for distribution in foreign countries; approval of products for reimbursement and the level of reimbursement in the United States, Japan and other foreign countries; dependence on market growth; agreements with third parties to sell their products; the ability of OrbusNeich to successfully launch our products outside of the United States and Japan; our ability to maintain third-party supplier relationships and renew existing purchase agreements; our ability to maintain our relationships with Medikit and OrbusNeich; the experience of physicians regarding the effectiveness and reliability of the products we sell; the reluctance of physicians, hospitals and other organizations to accept new products; the potential for unanticipated delays in enrolling medical centers and patients for clinical trials; actual clinical trial and study results; the impact of competitive products and pricing; our ability to comply with the financial covenants in our loan and security agreement and to make payments under and comply with the lease agreement for our corporate headquarters; unanticipated developments affecting our estimates regarding expenses, future revenues and capital requirements; the difficulty of successfully managing operating costs; our ability to manage our sales force strategy; actual research and development efforts and needs, including the timing of product development programs; our ability to obtain and maintain intellectual property protection for product candidates; fluctuations in results and expenses based on new product introductions, sales mix, unanticipated warranty claims, and the timing of project expenditures; our ability to manage costs; our actual financial resources and our ability to obtain additional financing; investigations or litigation threatened or initiated against us; court rulings and future actions by the FDA and other regulatory bodies; international trade developments; the impact of federal corporate tax reform on our business, operations and financial statements; shutdowns of the U.S. federal government; and general economic conditions.

These and additional risks and uncertainties are described more fully in our Annual Report on Form 10-K filed with the SEC on August 23, 2018 and subsequent Quarterly Reports on Form 10-Q, including in Item 1A of Part II of this Quarterly Report on Form 10-Q. Copies of filings made with the SEC are available through the SEC’s electronic data gathering analysis and retrieval system (EDGAR) at www.sec.gov.

You should read these risk factors and the other cautionary statements made in this report as being applicable to all related forward-looking statements wherever they appear in this report. We cannot assure you that the forward-looking statements in this report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. You should read this report completely. Other than as required by law, we undertake no obligation to update these forward-looking statements, even though our situation may change in the future.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

There have been no material changes in our primary risk exposures or management of market risks from those disclosed in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our Chief Executive Officer and Chief Financial Officer, referred to collectively herein as the Certifying Officers, are responsible for establishing and maintaining our disclosure controls and procedures. The Certifying Officers have reviewed and evaluated the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of March 31, 2019. Based on that review and evaluation, which included inquiries made to certain other employees of the Company, the Certifying Officers have concluded that, as of the end of the period covered by this report, the Company's disclosure controls and procedures, as designed and implemented, are effective.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended March 31, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

[Table of Contents](#)**PART II. — OTHER INFORMATION****ITEM 1. LEGAL PROCEEDINGS**

None.

ITEM 1A. RISK FACTORS

In addition to the other information set forth in this report, including the important information in the section entitled “Private Securities Litigation Reform Act,” you should carefully consider the “Risk Factors” discussed in our Annual Report on Form 10-K for the year ended June 30, 2018 filed with the SEC on August 23, 2018 for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in this report and materially adversely affect our financial condition or future results. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial might materially adversely affect our actual business, financial condition and/or operating results.

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

The following table presents the information with respect to purchases made by us of our common stock during the third quarter of fiscal 2019:

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased under the Plans or Programs
January 1 to January 31, 2019	—	—	N/A	N/A
February 1 to February 28, 2019 ⁽¹⁾	9,706	\$ 34.20	N/A	N/A
March 1 to March 31, 2019	—	—	N/A	N/A
	<u>9,706</u>	<u>\$ 34.20</u>		

⁽¹⁾ Comprised of shares withheld pursuant to the terms of restricted stock awards under our stock-based compensation plans to offset tax withholding obligations that occur upon vesting and release of shares. The value of the shares withheld is the closing price of our common stock on the date the relevant transaction occurs.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

None.

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ITEM 5. OTHER INFORMATION

As previously disclosed, on January 9, 2019, the Company entered into a Transition Agreement with Laura Gillund, the Company's Chief Talent Officer, relating to her retirement from the Company. Ms. Gillund's successor as the leader of the Human Resources department is expected to commence employment with the Company on May 6, 2019, at which time Ms. Gillund will cease to be an executive officer of the Company and will become the Company's Vice President, Administration, through August 30, 2019, in accordance with the Transition Agreement. The Transition Agreement is attached hereto as Exhibit 10.1.

ITEM 6. EXHIBITS

<u>Exhibit No.</u>	<u>Description</u>
10.1*	<u>Transition Agreement, dated January 9, 2019, by and between the Company and Laura J. Gillund.</u>
31.1*	<u>Certification of Chairman, President and Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
31.2*	<u>Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1**	<u>Certification of Chairman, President and Chief Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
32.2**	<u>Certification of Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
101*	Financial statements from the Quarterly Report on Form 10-Q of the Company for the quarter ended March 31, 2019, formatted in XBRL: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Operations, (iii) the Consolidated Statements of Comprehensive Income (Loss), (iv) the Consolidated Statements of Changes in Stockholders' Equity, (v) the Consolidated Statements of Cash Flows, and (vi) the Notes to Financial Statements.

* Filed herewith.

** Furnished herewith.

SIGNATURES

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

Dated: May 3, 2019

CARDIOVASCULAR SYSTEMS, INC.

By /s/ Scott R. Ward
Scott R. Ward
Chairman, President and Chief Executive Officer
(Principal Executive Officer)

By /s/ Jeffrey S. Points
Jeffrey S. Points
Chief Financial Officer
(Principal Financial and Accounting Officer)

Via Email

To: Laura Gillund

Re: Transition Agreement

Dear Laura:

As you know, you have indicated to Cardiovascular Systems, Inc. (“CSI”) that you plan to voluntarily resign your employment with CSI for the purpose of retirement. The purpose of this letter agreement is to confirm your and CSI’s agreement with regard to the upcoming transition and end of your employment relationship with CSI, which are intended to extend your employment and services for a period of time to provide for a smooth transition for CSI. As used herein, the “Transition Period” shall be the period commencing as of the date you sign this letter agreement (this “Agreement”) below and ending at the close of business on August 30, 2019 (the “Separation Date”). This Agreement supplements the Employment Agreement between you and CSI dated September 24, 2013 (the “Employment Agreement”).

Following the execution of this letter agreement, you will remain employed in your current role of Chief Talent Officer under your current terms and conditions of employment. Your resignation from your position as an executive officer of CSI will be effective at the earlier of (i) the close of business on the day immediately prior to the date that your successor as leader of the Human Resources Department of CSI commences employment (the “Successor Commencement Date”), or (ii) the Separation Date. If the Successor Commencement Date occurs prior to the Separation Date, you will remain as an employee but not an officer of CSI through the Separation Date. Effective as of the Successor Commencement Date, you will no longer be eligible for CSI’s Executive Officer Severance Plan, as restated August 22, 2018 (the “Plan”), or under any other then-existing severance plan of CSI; instead, you will be offered the Severance Package summarized below. Notwithstanding the foregoing, if, prior to the Separation Date, CSI terminates your employment: (i) without Cause (including due to Reduction-In-Force) or (ii) you resign for Good Reason following a Change of Control, as those terms are defined in the Plan, CSI will offer you a severance package equal to what you would have been offered under such Plan as a Section 16 Officer and the terms of this letter agreement will be null and void.

Effective on the Successor Commencement Date, you will assume a new position of Vice President, Administration and your current pay (annualized salary of \$315,655) and employee benefits will remain in place. Your annual bonus eligibility for FY19 (July 1, 2018 - June 30, 2019) will remain in place unchanged per the terms and conditions of the applicable bonus plan. You will not be eligible to earn or receive any bonus pay for any period commencing July 1, 2019. You agree that the change of your title from Chief Talent Offer to Vice President, Administration and any and all related changes to your status in connection with such change (including, without limitation, your authority, duties or responsibilities, reporting structure or relationships, budget authority, and/or target bonus), will not constitute Good Reason under the Plan under any circumstances.

Your employment with CSI will end on the Separation Date as a result of your voluntary resignation due to retirement. As of the Separation Date, CSI will offer you a severance package (collectively, the “Severance Package”) consisting of (1) a twelve month consulting arrangement, effective on the day after the Separation Date, under which you will be paid \$3,333 per month, provided, however, that in no event shall such consulting services be greater than 16 hours per month (which is less than twenty percent (20%) of the level of services performed by you over the 36-month period ending on the Separation Date), and provided that you sign a consulting agreement in a form supplied by CSI (the “Consulting Agreement”), (2) allowing your time-based restricted stock awards to continue to vest during the period the Consulting Agreement is in effect, (3) allowing your performance-based restricted stock awards granted on August 8, 2016 and August 7, 2017 to continue to vest through the period the Consulting Agreement is in effect (provided, that the performance criteria for such vesting are met as determined by CSI in accordance with the terms for such restricted stock (in or around August or September 2019 and 2020 (as applicable) such that, if and to the extent applicable, such shares will vest as of such determination), (4) allowing your performance-based restricted stock award granted on August 28, 2018 to vest through the period the Consulting Agreement is in effect on a pro rata basis in accordance with the respective award agreement (provided, that the performance criteria for such vesting are met as determined by CSI in accordance with the terms for such restricted stock (in or around August or September 2021) such that, if and to the extent applicable, such shares will vest as of such determination), and (5) paying COBRA premiums for you and your eligible dependents for up to 18 months following the Separation Date or, if earlier, such time as you or your eligible dependents are eligible for other health insurance coverage, provided you take all steps necessary to timely elect COBRA coverage. Your eligibility for and receipt of the Severance Package is conditioned upon your remaining in compliance with any restrictive covenant agreements you have with CSI, including those set forth in Sections 9-13 of your Employment Agreement, and you executing, not rescinding and complying with a full and final release of claims agreement in favor of CSI in a form supplied by CSI, to include other standard terms such

as cooperation, non-disparagement and confidentiality (the "Separation Agreement"). The Separation Agreement and the Consulting Agreement will be provided to you on or after the Separation Date for your signature, and will be in substantially the form that has been provided to you contemporaneously with this letter.

Notwithstanding anything herein to the contrary, during the Transition Period, you will remain employed on an at-will basis as provided in Section 8 of your Employment Agreement. If your employment is terminated with Cause (as defined in the Plan) prior to the Separation Date, you will not be eligible for the Severance Package set forth herein (or any severance benefits under the Plan or any other severance plan of CSI). If you resign your employment with CSI for any reason or die prior to the Separation Date, you will not be eligible for the Severance Package set forth herein (or any severance benefits under the Plan or any other severance plan of CSI), unless otherwise agreed by CSI in writing. For the avoidance of doubt, the parties agree that as of your signing of this Agreement, any severance provisions of your Employment Agreement shall be of no further force or effect and shall be superseded by this Agreement.

If you agree with the terms outlined in this Agreement, please sign and date below, and return to me by January 9, 2019. Laura, we are grateful for your years of service to CSI and look forward to working with you during the Transition Period. Please do not hesitate to contact me if you have any questions.

Sincerely,

/s/ Scott R. Ward

Scott R. Ward
President & Chief Executive Officer

Agreed:

/s/ Laura Gillund
Laura Gillund

January 9, 2019
Date

CERTIFICATION UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Scott R. Ward, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cardiovascular Systems, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 3, 2019

/s/ Scott R. Ward

Scott R. Ward
Chairman, President and Chief Executive Officer

CERTIFICATION UNDER SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jeffrey S. Points, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cardiovascular Systems, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: May 3, 2019

/s/ Jeffrey S. Points

Jeffrey S. Points
Chief Financial Officer

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

In connection with the filing of the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 (the "Report") by Cardiovascular Systems, Inc. ("Registrant"), I, Scott R. Ward, the Chief Executive Officer of 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 Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Dated: May 3, 2019

/s/ Scott R. Ward

Scott R. Ward

Chairman, President and Chief Executive Officer

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

In connection with the filing of the Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 (the "Report") by Cardiovascular Systems, Inc. ("Registrant"), I, Jeffrey S. Points, the Chief Financial Officer of 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 Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Dated: May 3, 2019

/s/ Jeffrey S. Points

Jeffrey S. Points
Chief Financial Officer