UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2019

or

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

For the transition period from_____to_____

Commission File Number 000-51470

AtriCure, Inc.
(Exact name of Registrant as specified in its charter)

Delaware	**34-1940305**
(State or other jurisdiction of incorporation)	**(IRS Employer Identification No.)**

7555 Innovation Way
Mason, OH 45040
(Address of principal executive offices)

(513) 755-4100
(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $.001 par value	ATRC	NASDAQ

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 x 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 x NO ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company, 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	x	Accelerated Filer	☐
Non-Accelerated Filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

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

Class	**Outstanding at October 28, 2019**
Common Stock, $.001 par value	39,550,453

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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(In Thousands, Except Per Share Amounts)
(Unaudited)

	September 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 33,182	$ 32,231
Short-term investments	46,557	92,171
Accounts receivable, less allowance for doubtful accounts of $1,122 and $547	26,798	25,195
Inventories	27,789	22,484
Prepaid and other current assets	3,527	2,592
Total current assets	137,853	174,673
Property and equipment, net	30,788	27,080
Operating lease right-of-use assets	4,313	—
Long-term investments	20,354	—
Intangible assets, net	130,370	49,254
Goodwill	236,316	105,257
Other noncurrent assets	762	495
Total Assets	$ 560,756	$ 356,759
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 13,966	$ 9,659
Accrued liabilities	28,158	25,840
Other current liabilities and current maturities of leases and long-term debt	2,158	4,717
Total current liabilities	44,282	40,216
Finance lease liabilities	11,662	12,172
Long-term debt	59,517	35,571
Operating lease liabilities	3,076	—
Other noncurrent liabilities	183,998	19,419
Total Liabilities	302,535	107,378
Commitments and contingencies (Note 9)		
Stockholders' Equity:		
Common stock, $0.001 par value, 90,000 shares authorized and 39,547 and 38,604 issued and outstanding	40	39
Additional paid-in capital	524,658	496,544
Accumulated other comprehensive loss	(376)	(199)
Accumulated deficit	(266,101)	(247,003)
Total Stockholders' Equity	258,221	249,381
Total Liabilities and Stockholders' Equity	$ 560,756	$ 356,759

See accompanying notes to condensed consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In Thousands, Except Per Share Amounts)
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Revenue	$ 56,614	$ 49,941	$ 169,486	$ 148,737
Cost of revenue	14,817	13,993	43,925	40,207
Gross profit	41,797	35,948	125,561	108,530
Operating expenses:				
Research and development expenses	10,154	8,556	28,134	26,268
Selling, general and administrative expenses	40,280	33,440	115,223	96,782
Total operating expenses	50,434	41,996	143,357	123,050
Loss from operations	(8,637)	(6,048)	(17,796)	(14,520)
Other income (expense):				
Interest expense	(1,113)	(1,246)	(2,854)	(3,287)
Interest income	577	151	1,933	350
Other	(114)	(41)	(230)	(103)
Loss before income tax expense	(9,287)	(7,184)	(18,947)	(17,560)
Income tax expense	75	51	151	147
Net loss	$ (9,362)	$ (7,235)	$ (19,098)	$ (17,707)
Basic and diluted net loss per share	$ (0.25)	$ (0.22)	$ (0.51)	$ (0.53)
Weighted average shares outstanding—basic and diluted	37,842	33,601	37,387	33,280
Comprehensive loss:				
Unrealized gain on investments	$ 33	$ 8	$ 116	$ 1
Foreign currency translation adjustment	(255)	(46)	(293)	(171)
Other comprehensive loss	(222)	(38)	(177)	(170)
Net loss	(9,362)	(7,235)	(19,098)	(17,707)
Comprehensive loss, net of tax	$ (9,584)	$ (7,273)	$ (19,275)	$ (17,877)

See accompanying notes to condensed consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In Thousands)
(Unaudited)

	Three-Month Period Ended September 30, 2018					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance—June 30, 2018	35,313	$ 35	$ 396,088	$ (236,338)	$ (98)	$ 159,687
Issuance of common stock for settlement of nContact contingent consideration	232	—	6,279	—	—	6,279
Issuance of common stock under equity incentive plans	108	1	833	—	—	834
Share-based employee compensation expense	—	—	4,242	—	—	4,242
Other comprehensive loss	—	—	—	—	(38)	(38)
Net loss	—	—	—	(7,235)	—	(7,235)
Balance—September 30, 2018	35,653	$ 36	$ 407,442	$ (243,573)	$ (136)	$ 163,769

	Three-Month Period Ended September 30, 2019					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance—June 30, 2019	38,766	$ 39	$ 498,402	$ (256,739)	$ (154)	$ 241,548
Issuance of common stock for SentreHEART acquisition	699	1	21,991	—	—	21,992
Issuance of common stock under equity incentive plans	82	—	(22)	—	—	(22)
Share-based employee compensation expense	—	—	4,287	—	—	4,287
Other comprehensive loss	—	—	—	—	(222)	(222)
Net loss	—	—	—	(9,362)	—	(9,362)
Balance—September 30, 2019	39,547	$ 40	$ 524,658	$ (266,101)	$ (376)	$ 258,221

See accompanying notes to condensed consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In Thousands)
(Unaudited)

	Nine-Month Period Ended September 30, 2018					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance—December 31, 2017	34,586	$ 35	$ 386,963	$ (225,866)	$ 34	$ 161,166
Issuance of common stock for settlement of nContact contingent consideration	232	—	6,279	—	—	6,279
Issuance of common stock under equity incentive plans	746	1	1,138	—	—	1,139
Issuance of common stock under employee stock purchase plan	89	—	1,396	—	—	1,396
Share-based employee compensation expense	—	—	11,666	—	—	11,666
Other comprehensive loss	—	—	—	—	(170)	(170)
Net loss	—	—	—	(17,707)	—	(17,707)
Balance—September 30, 2018	35,653	$ 36	$ 407,442	$ (243,573)	$ (136)	$ 163,769

	Nine-Month Period Ended September 30, 2019					
	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
Balance—December 31, 2018	38,604	$ 39	$ 496,544	$ (247,003)	$ (199)	$ 249,381
Issuance of common stock for SentreHEART acquisition	699	1	21,991	—	—	21,992
Issuance of common stock under equity incentive plans	183	—	(8,242)	—	—	(8,242)
Issuance of common stock under employee stock purchase plan	61	—	1,549	—	—	1,549
Share-based employee compensation expense	—	—	12,816	—	—	12,816
Other comprehensive loss	—	—	—	—	(177)	(177)
Net loss	—	—	—	(19,098)	—	(19,098)
Balance—September 30, 2019	39,547	$ 40	$ 524,658	$ (266,101)	$ (376)	$ 258,221

See accompanying notes to condensed consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2019	2018
Cash flows from operating activities:		
Net loss	$ (19,098)	$ (17,707)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based compensation expense	12,816	11,666
Depreciation	5,529	5,505
Amortization of intangible assets	1,454	1,026
Amortization of deferred financing costs	233	341
Non-cash lease expense	466	—
Loss on disposal of property and equipment and impairment of assets	433	106
Realized loss from foreign exchange on intercompany transactions	227	94
Accretion of investments	(882)	(121)
Provision for doubtful accounts	580	419
Change in value of contingent consideration	(6,934)	(6,696)
Payment of nContact contingent consideration in excess of purchase accounting amount	—	(96)
Changes in operating assets and liabilities, net of amounts acquired:		
Accounts receivable	(2,045)	(727)
Inventories	(3,643)	110
Other current assets	(934)	(425)
Accounts payable	702	(1,492)
Accrued liabilities	(500)	2,754
Other noncurrent assets and liabilities	(686)	87
Net cash used in operating activities	(12,282)	(5,156)
Cash flows from investing activities:		
Purchases of available-for-sale securities	(66,726)	(29,995)
Sales and maturities of available-for-sale securities	92,985	20,539
Purchases of property and equipment	(7,825)	(5,128)
Proceeds from sale of property and equipment	28	6
Cash paid for SentreHEART business combination	(18,008)	—
Net cash provided by (used in) investing activities	454	(14,578)
Cash flows from financing activities:		
Proceeds from debt borrowings	20,000	17,381
Payments on debt and finance leases	(459)	(1,608)
Payments of debt fees	(329)	(1,136)
Proceeds from stock option exercises and employee stock purchase plan	2,283	6,957
Shares repurchased for payment of taxes on stock awards	(8,976)	(4,422)
Payments of nContact contingent consideration amounts established in purchase accounting	—	(1,125)
Proceeds from economic incentive loan	500	—
Net cash provided by financing activities	13,019	16,047
Effect of exchange rate changes on cash and cash equivalents	(240)	(123)
Net increase (decrease) in cash and cash equivalents	951	(3,810)
Cash and cash equivalents—beginning of period	32,231	21,809
Cash and cash equivalents—end of period	$ 33,182	$ 17,999

ATRICURE, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In Thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2019	**2018**
Supplemental cash flow information:		
Cash paid for interest	$ 2,639	$ 2,743
Cash paid for income taxes	227	45
Non-cash investing and financing activities:		
Accrued purchases of property and equipment	2,190	335
Assets obtained in exchange for finance lease obligations	—	24
Share-settled portion of contingent consideration	—	6,279
Finance lease early termination	—	(6)
Stock issuance in business combination	21,992	—
Contingent consideration in business combination	171,300	—
Working capital adjustment receivable from business combination	754	—

See accompanying notes to condensed consolidated financial statements.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, except per share amounts)
(Unaudited)

1. DESCRIPTION OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of the Business—The "Company" or "AtriCure" consists of AtriCure, Inc. and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. The Company is a leading innovator in treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management and sells its products to medical centers globally through its direct sales force and distributors.

Basis of Presentation—The accompanying interim financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (SEC). The accompanying interim financial statements are unaudited, but in the opinion of the Company's management, contain all normal, recurring adjustments considered necessary to present fairly the financial position, results of operations and cash flows for the periods presented in conformity with accounting principles generally accepted in the United States of America (GAAP) applicable to interim periods. Certain information and footnote disclosures included in annual financial statements prepared in accordance with GAAP have been omitted or condensed. The Company believes the disclosures herein are adequate to make the information presented not misleading. Results of operations are not necessarily indicative of the results expected for the full year or for any future period.

The accompanying Condensed Consolidated Financial Statements should be read in conjunction with the audited financial statements of the Company included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 filed with the SEC.

Cash and Cash Equivalents—The Company considers highly liquid investments with maturities of three months or less at the date of purchase as cash equivalents. Cash equivalents include demand deposits, money market funds and repurchase agreements on deposit with certain financial institutions.

Investments—The Company invests primarily in U.S. government agencies and securities, corporate bonds, commercial paper and asset-backed securities and classifies all investments as available-for-sale. Investments with maturities of less than one year are classified as short-term investments. Investments are recorded at fair value, with unrealized gains and losses recorded as accumulated other comprehensive income. Gains and losses are recognized using the specific identification method when securities are sold and are included in interest income.

Revenue Recognition—The Company recognizes revenue when control of promised goods is transferred to customers in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods. This generally occurs upon shipment of goods to customers. See Note 10 for further discussion on revenue.

Sales Returns and Allowances—The Company maintains a provision for potential returns of defective or damaged products, products shipped in error and invoice adjustments. The Company adjusts the provision using the expected value method based on historical experience. Increases to the provision reduce revenue, and the provision is included in accrued liabilities.

Allowance for Doubtful Accounts—The Company evaluates the collectability of accounts receivable to determine the appropriate reserve for doubtful accounts. In determining the amount of the reserve, the Company considers aging of account balances, historical credit losses, customer-specific information and other relevant factors. An increase to the allowance for doubtful accounts results in a corresponding increase in selling, general and administrative expenses. The Company reviews accounts receivable and adjusts the allowance based on current circumstances and charges off uncollectible receivables against the allowance when all attempts to collect the receivable have failed. The Company's history of write-offs has not been significant.

Inventories—Inventories are stated at the lower of cost or net realizable value based on the first-in, first-out cost method (FIFO) and consist of raw materials, work in process and finished goods. The Company's industry is characterized by rapid product development and frequent new product introductions. Uncertain timing of product approvals, variability in product launch strategies and variation in product use all impact inventory reserves for excess, obsolete and expired products. An increase to inventory reserves results in a corresponding increase in cost of revenue. Inventories are written off against the reserve when they are physically disposed.

(In Thousands, except per share amounts)

Inventories consist of the following:

	September 30, 2019	December 31, 2018
Raw materials	$ 10,643	$ 9,100
Work in process	2,223	1,232
Finished goods	14,923	12,152
Inventories	$ 27,789	$ 22,484

Property and Equipment—Property and equipment is stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of assets. The estimated useful life by major asset category is the following:

	Estimated Useful Life
Generators and related equipment	1 - 3 years
Building under finance lease	15 years
Computers, software and office equipment	3 years
Machinery and equipment	3 - 7 years
Furniture and fixtures	3 - 7 years
Leasehold improvements	5 - 15 years
Equipment under finance leases	3 - 5 years

The Company assesses the useful lives of property and equipment at least annually and retires assets once they are no longer in service. Maintenance and repair costs are expensed as incurred. The Company reviews property and equipment for impairment at least annually using its best estimates based on reasonable and supportable assumptions and expected future cash flows. Property and equipment impairments recorded by the Company have not been significant.

The Company's radiofrequency (RF) and cryo generators are generally placed with customers that purchase the Company's disposable products. The estimated useful lives of generators are based on anticipated usage by customers and may change in future periods with changes in usage or introduction of new technologies. Depreciation related to generators and related equipment, which is recorded in cost of revenue, is $744 and $783 in the three months ended September 30, 2019 and 2018 and $2,228 and $2,424 in the nine months ended September 30, 2019 and 2018. As of September 30, 2019 and December 31, 2018, the net carrying value of generators and related equipment included in net property and equipment was $4,561 and $4,545.

Leases—As of January 1, 2019, the Company determines if an arrangement is a lease at inception. The Company applies the short-term lease recognition exemption and recognizes lease payments in profit or loss for facility leases that have a lease term of 12 months or less at commencement and do not include a purchase option whose exercise is reasonably certain. Operating leases are included in operating lease right-of-use (ROU) assets, operating lease liabilities and other current liabilities and current maturities of leases and long-term debt. Finance leases are included in property and equipment, other current liabilities and current maturities of leases and long-term debt, and finance lease liabilities.

ROU assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are measured and recorded at the later of the application date and commencement date based on the present value of lease payments over the lease term. The Company uses the implicit rate when readily determinable; however, most of the leases do not provide an implicit rate and therefore, the Company uses its incremental borrowing rate based on information available at measurement. The operating ROU asset also includes any lease payments made and excludes lease incentives. The lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise that option. For real estate and equipment leases, the Company accounts for the lease and non-lease components as a single lease component. Additionally, the portfolio approach is applied to effectively account for the operating lease ROU assets and liabilities based on the term of the underlying lease. Lease expense for lease payments is recognized on a straight-line basis over the lease term. See Note 8 for further discussion of leases.

Intangible Assets—Intangible assets with determinable useful lives are amortized on a straight-line basis over the estimated periods benefited. Intangible assets include In Process Research and Development (IPR&D), which represents the value of technology acquired in business combinations that has not yet reached technological feasibility. The primary basis for determining technological feasibility is obtaining specific regulatory approvals. IPR&D is accounted for as an indefinite-lived intangible asset until completion or abandonment of the IPR&D projects. Upon completion of the development projects, IPR&D will be amortized over the estimated

useful lives. If an IPR&D project is abandoned, the related IPR&D intangible asset would be written off. IPR&D represents estimates of the fair value of the pre-market approval (PMA) that could result from the CONVERGE IDE and aMAZE™ IDE clinical trials.

The Company reviews intangible assets at least annually for impairment using its best estimates based on reasonable and supportable assumptions and projections. The Company performs impairment testing annually on October 1.

***Goodwill*—**Goodwill represents the excess of purchase price over the fair value of the net assets acquired in business combinations. The Company's goodwill is accounted for in a single reporting unit representing the Company as a whole. The Company performs impairment testing annually on October 1.

***Other Noncurrent Liabilities*—**Other noncurrent liabilities primarily consist of acquisition-related contingent consideration. The balance is included in noncurrent liabilities as such settlement is both required and expected to be made in shares of the Company's common stock pursuant to the nContact Surgical, Inc. (nContact) merger agreement and SentreHEART, Inc. (SentreHEART) merger agreement.

Other Income (Expense)—Other income (expense) consists primarily of foreign currency transaction gains and losses generated by settlements of intercompany balances denominated in Euros and customer invoices transacted in British Pounds.

Taxes—Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities from a change in tax rates is recognized in the period that includes the enactment date.

The Company's estimate of the valuation allowance for deferred income tax assets requires significant estimates and judgments about future operating results. Deferred income tax assets are reduced by valuation allowances if, based on the consideration of all available evidence, it is more-likely-than-not that the deferred income tax asset will not be realized. Significant weight is given to evidence that can be objectively verified. The Company evaluates deferred income tax assets on an annual basis to determine if valuation allowances are required. Deferred income tax assets are realized by having sufficient future taxable income to allow the related tax benefits to reduce taxes otherwise payable. The sources of taxable income that may be available to realize the benefit of deferred income tax assets are future reversals of existing taxable temporary differences, future taxable income, exclusive of reversing temporary differences and carryforwards, and tax planning strategies that are both prudent and feasible. In evaluating the need for a valuation allowance, the existence of cumulative losses in recent years is significant objectively verifiable negative evidence that must be overcome by objectively verifiable positive evidence to avoid the need to record a valuation allowance. The Company has recorded a full valuation allowance against substantially all net deferred income tax assets as it is more-likely-than-not that the benefit of the deferred income tax assets will not be recognized in future periods. The Tax Cut and Jobs Act (Tax Reform Act) allows companies an election to reclassify the income tax effects of the Tax Reform Act on items within accumulated other comprehensive income (loss) to retained earnings. The Company has not made this election due to its full valuation allowance.

Net Loss Per Share—Basic and diluted net loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding during the period. Since the Company has experienced net losses for all periods presented, net loss per share excludes the anti-dilutive effect of 3,613 and 3,945 stock options, restricted stock shares, restricted stock units and performance award shares as of September 30, 2019 and 2018. Therefore, the number of shares calculated for basic net loss per share is also used for the diluted net loss per share calculation.

Comprehensive Loss and Accumulated Other Comprehensive Income (Loss)—In addition to net losses, the comprehensive loss includes foreign currency translation adjustments and unrealized gains or losses on investments.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, except per share amounts)
(Unaudited)

Accumulated other comprehensive loss consisted of the following (net of tax):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Total accumulated other comprehensive (loss) income at beginning of period	$ (154)	$ (98)	$ (199)	$ 34
Unrealized Gains (Losses) on Investments				
Balance at beginning of period	$ 46	$ (13)	$ (37)	$ (6)
Other comprehensive income before reclassifications	33	8	116	1
Amounts reclassified from accumulated other comprehensive (loss) income to other income (expense)	—	—	—	—
Balance at end of period	$ 79	$ (5)	$ 79	$ (5)
Foreign Currency Translation Adjustment				
Balance at beginning of period	$ (200)	$ (85)	$ (162)	$ 40
Other comprehensive (loss) income before reclassifications	(380)	(84)	(520)	(265)
Amounts reclassified from accumulated other comprehensive (loss) income to other income (expense)	125	38	227	94
Balance at end of period	$ (455)	$ (131)	$ (455)	$ (131)
Total accumulated other comprehensive loss at end of period	$ (376)	$ (136)	$ (376)	$ (136)

Research and Development Costs—Research and development costs are expensed as incurred. These costs include compensation and other internal and external costs associated with the development of and research related to new and existing products or concepts, preclinical studies, clinical trials and regulatory affairs.

Advertising Costs—The Company expenses advertising costs as incurred. Advertising costs were not significant during the three and nine months ended September 30, 2019 and 2018.

Share-Based Compensation—The Company records share-based compensation based on estimated fair values for all employee share-based payment awards, including stock options, restricted stock awards, restricted stock units, performance shares and stock purchases related to an employee stock purchase plan. The value of the portion of an award that is ultimately expected to vest, net of estimated forfeitures, is recognized as expense over the service period. The Company estimates forfeitures at the time of grant and adjusts them in subsequent periods as actual forfeitures differ from those estimates. The Company recognized share-based compensation expense of $4,287 and $4,242 for the three months ended September 30, 2019 and 2018 and $12,816 and $11,666 for the nine months ended September 30, 2019 and 2018.

The Company estimates the fair value of time-based options on the date of grant using the Black-Scholes option-pricing model (Black-Scholes model). Fair value is affected by the Company's stock price, as well as subjective variables. These variables include, but are not limited to, the Company's expected stock price volatility over the term of the awards and actual and projected employee stock option exercise behaviors. The Company estimates the fair value of restricted stock awards and restricted stock units based upon the grant date closing market price of the Company's common stock. The Company estimates the fair value of the performance share awards based on the grant date closing market price of the Company's common stock and will adjust compensation expense over the performance period based on its estimate of performance target achievement.

The Company also has an employee stock purchase plan (ESPP) which is available to all eligible employees as defined by the plan document. Under the ESPP, shares of the Company's common stock may be purchased at a discount. At the beginning of each purchase period, the Company estimates the number of shares to be purchased under the ESPP based upon the fair value of the stock at the beginning of the purchase period using the Black-Scholes model. Estimated compensation expense is recorded during the purchase period and is adjusted to actual at the time of share purchase.

Use of Estimates—The preparation of the financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expense during the reporting period. Actual results could differ from those estimates.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, except per share amounts)
(Unaudited)

2. RECENT ACCOUNTING PRONOUNCEMENTS

In February 2016, the FASB issued ASU 2016-02, “Leases” (ASU 2016-02), codified as ASC 842, which requires lessees to record most leases onto their balance sheet but recognize expenses on their income statement in a manner similar to legacy lease guidance of ASC 840 “Leases”. The Company adopted the new guidance on January 1, 2019 using the transition method provided by ASU 2018-11, “Leases (Topic 842): Targeted Improvements”. Under this method, the Company applied the new requirements to those leases that existed as of January 1, 2019, rather than at the earliest comparative period presented in the financial statements. Prior periods are presented under legacy ASC 840 lease guidance. Upon transition, the Company applied the package of practical expedients permitted under ASC 842 transition guidance. As a result, the Company was not required to reassess (1) whether expired or existing contracts contain leases under the new definition of a lease, including whether an existing or expired contract contains an embedded lease, (2) lease classification for expired or existing leases and (3) any initial direct costs of existing leases. The Company applied the short-term lease recognition exemption and recognizes lease payments in profit or loss for leases that have a lease term of 12 months or less at commencement and do not include a renewal option whose exercise is reasonably certain. There was no cumulative effect on beginning accumulated deficit as a result of adoption. See Note 8 for further details.

In January 2017, the FASB issued ASU 2017-04, “Intangibles - Goodwill and Other (Topic 350): Simplifying the Accounting for Goodwill Impairment” (ASU 2017-04). The guidance removes the requirement to perform a hypothetical purchase price allocation to measure goodwill impairment. Under ASU 2017-04, a goodwill impairment will be the amount by which a reporting unit’s carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The guidance becomes effective for interim and annual reporting periods beginning in 2020, with early adoption permitted, and applied prospectively. The Company is evaluating the provisions of ASU 2017-04 to determine the impact on its consolidated financial statements and related disclosures.

In August 2018, the FASB issued ASU 2018-13, “Fair Value Measurement (Topic 820), Disclosure Framework – Changes to the Disclosure Requirements for Fair Value Measurement” (ASU 2018-13). The amendments modify the disclosure requirements for fair value measurements and are effective for all entities for interim and annual reporting periods beginning in 2020. Early adoption of either the entire standard or only the provisions that eliminate or modify the requirements is permitted. The Company is evaluating the provisions of ASU 2018-13 to determine the impact on its fair value measurement disclosures.

In August 2018, the FASB issued ASU 2018-15, “Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract” (ASU 2018-15). The provisions of this ASU align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal-use software license). Entities should apply the guidance in ASC 350-40 on internal-use software when capitalizing implementation costs related to a hosting arrangement that is a service contract and expense the capitalized implementation costs related to a hosting arrangement that is a service contract over the hosting arrangement's term, presenting the expense in the same line item in the statement of operations as that in which the fee associated with the hosting arrangement is presented. The provisions are effective for all entities for interim and annual reporting periods beginning in 2020. Early adoption is permitted, and entities have the option of applying either a retrospective or prospective transition method. The Company is evaluating the provisions of ASU 2018-15 to determine the impact on its consolidated financial statements and related disclosures.

3. FAIR VALUE

Fair value is defined as the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. The fair value hierarchy is based on three-levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value:

- Level 1—Quoted prices in active markets for identical assets or liabilities.
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

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The Company classifies cash and investments in U.S. government agencies and securities, accounts receivable, short-term other assets, accounts payable and accrued liabilities as Level 1 within the fair value hierarchy. The carrying amounts of these assets and liabilities approximate their fair value due to their relatively short-term nature. Cash equivalents and investments in corporate bonds, commercial paper, repurchase agreements, and asset-backed securities are classified as Level 2 within the fair value hierarchy. The fair value of fixed term debt is estimated by calculating the net present value of future debt payments at current market interest rates and is classified as Level 2. The book value of the Company's fixed term debt approximates its fair value because the interest rate varies with market rates.

The following table represents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of September 30, 2019:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$ —	$ 3,300	$ —	$ 3,300
Repurchase agreements	—	10,000	—	10,000
Commercial paper	—	16,677	—	16,677
U.S. government agencies and securities	9,029	—	—	9,029
Corporate bonds	—	24,874	—	24,874
Asset-backed securities	—	16,331	—	16,331
Total assets	$ 9,029	$ 71,182	$ —	$ 80,211
Liabilities:				
Acquisition-related contingent consideration	—	—	183,139	183,139
Total liabilities	$ —	$ —	$ 183,139	$ 183,139

There were no changes in the levels or methodology of measurement of financial assets and liabilities during the three and nine months ended September 30, 2019.

The following table represents the Company's fair value hierarchy for its financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2018:

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Unobservable Inputs (Level 3)	Total
Assets:				
Money market funds	$ —	$ 16,193	$ —	$ 16,193
Commercial paper	—	40,731	—	40,731
U.S. government agencies and securities	6,734	—	—	6,734
Corporate bonds	—	30,195	—	30,195
Asset-backed securities	—	14,511	—	14,511
Total assets	$ 6,734	$ 101,630	$ —	$ 108,364
Liabilities:				
Acquisition-related contingent consideration	—	—	18,773	18,773
Total liabilities	$ —	$ —	$ 18,773	$ 18,773

Acquisition-Related Contingent Consideration. The Company measures contingent consideration liabilities using unobservable inputs by applying an income approach, such as the discounted cash flow technique or the probability-weighted scenario method. Various key assumptions, such as the probability of achievement of the agreed milestones, projected revenues from acquisitions and the discount rate, are used in the determination of fair value of contingent consideration arrangements and are not observable in the market, thus representing a Level 3 measurement within the fair value hierarchy. Subsequent revisions to key assumptions, which impact the estimated fair value of contingent consideration liabilities, are reflected in selling, general and administrative expenses. Acquisition-related contingent consideration is recorded in other noncurrent liabilities.

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The Company has contingent consideration arrangements arising from the nContact and SentreHEART acquisitions. Contingent consideration arrangements under the nContact merger agreement obligate the Company to pay certain defined amounts to former shareholders of nContact if specified milestones are met related to the CONVERGE IDE trial enrollment, regulatory approval and revenue targets. Contingent consideration arrangements under the SentreHEART merger agreement obligate the Company to pay certain defined amounts to former shareholders of SentreHEART if specified milestones are met related to the aMAZE IDE clinical trial, including PMA approval, and reimbursement for the therapy involving SentreHEART's devices. In connection with the acquisition of SentreHEART on August 13, 2019, preliminary fair value of $171,300 was recorded for the SentreHEART contingent consideration. See Note 4 for more details regarding the SentreHEART acquisition-related contingent consideration.

In September 2018 as a result of the achievement of the trial enrollment milestone in the CONVERGE IDE clinical trial, the Company made cash payments totaling approximately $1,221 and issued and delivered 232 shares of common stock to the former shareholders of nContact. The remaining contingent consideration liability is periodically remeasured. The Company recorded decreases in fair value of the nContact contingent consideration of $3,062 and $6,934 during the three and nine months ended September 30, 2019, and $780 and $6,696 for the three and nine months ended September 30, 2018. These decreases are primarily due to reductions in forecasted revenue for the 2019 and 2018 commercial milestones and updates to the forecasted timing of regulatory approval.

The following table represents the Company's Level 3 fair value measurements using significant other unobservable inputs for acquisition-related contingent consideration:

	Nine Months Ended September 30, 2019	Twelve Months Ended December 31, 2018
Beginning Balance	$ 18,773	$ 37,098
Amounts acquired	171,300	—
Settlement of trial enrollment milestone	—	(7,500)
Changes in fair value included in earnings	(6,934)	(10,825)
Ending Balance	$ 183,139	$ 18,773

4. BUSINESS COMBINATIONS

On August 13, 2019, the Company acquired 100% of the outstanding equity interests of SentreHEART. Founded in 2005 and based in Redwood City, California, SentreHEART developed innovative technology for remote delivery of suture for closure of anatomic structures including the left atrial appendage (LAA). This technology is currently being studied in the aMAZE IDE clinical trial, an FDA-approved, prospective, multicenter, randomized controlled trial. The objective of the aMAZE Trial is to demonstrate that the LARIAT® device for LAA closure, plus a Pulmonary Vein Isolation (PVI) ablation, will lead to a reduced incidence of recurrent Afib compared to PVI alone. AtriCure's management believes the acquisition of SentreHEART will expand the Company's addressable markets with a product designed for electrophysiologists. The acquisition of SentreHEART deepens the Company's commitment to provide the broadest possible offering of ablation and LAA management solutions to patients and customers.

The total consideration paid to SentreHEART's former shareholders at the acquisition date was $18,008 in cash and 699 shares of AtriCure common stock valued at approximately $21,992. The cash paid at acquisition was subject to adjustment for net working capital balances outside of a specified range, resulting in an adjustment of $754 due to the Company. The merger agreement also provides for the Company to pay contingent consideration, as follows:

- *PMA Milestone* – up to $140,000 upon receiving PMA from FDA for the LARIAT system with an approved indication allowing commercial distribution in the United States for the closure of the LAA for treatment of atrial fibrillation. The full contingent consideration amount is only received if PMA approval is received on or before December 31, 2022. The potential contingent consideration is reduced by 4.17% (or one-twenty-fourth) each month following December 2022 and is reduced to zero if the milestone is achieved after December 31, 2023. Payment of $25,000 of the PMA milestone may be accelerated upon achievement of an Interim Success Milestone as defined by the merger agreement.

- *CPT Reimbursement Milestone* – up to $120,000 upon approval of a Medicare Category 1 Current Procedural Terminology (CPT) Code by the American Medical Association. The full contingent consideration amount is only received if approval of the CPT Code is received on or before December 31, 2025. The potential contingent

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consideration is reduced by 4.17% (or one-twenty-fourth) each month following December 2025 and is reduced to zero if the milestone is achieved after December 31, 2026.

Subject to the terms and conditions of the merger agreement, all contingent consideration would be paid in cash and stock at the discretion of the Company, with the maximum number of shares that may be issued after closing limited to 7,021. The maximum contingent consideration payable by AtriCure will not exceed $260 million.

The Company accounted for the acquisition in accordance with ASC 805, “Accounting for Business Combinations”. The assets acquired, liabilities assumed and the estimated future contingent consideration obligation are recorded at their respective fair values as of the date of acquisition. The process of estimating fair values of identifiable assets, certain intangible assets and assumed liabilities requires significant assumptions and estimates. The judgments used to determine the estimated fair value assigned to each class of assets acquired and liabilities assumed, as well as asset lives, can materially impact the amounts recorded and the Company’s results of operations.

The components of the aggregate purchase price for the SentreHEART acquisition, including working capital adjustments of $754, are as follows:

Fair value of AtriCure common stock issued at closing	$	21,992
Cash		17,254
Preliminary fair value of contingent consideration liabilities		171,300
Total purchase price	$	210,546

The fair value of the contingent consideration liabilities was determined by applying an income valuation approach, including the probability-weighted scenario method. Key assumptions in the valuation of the contingent consideration liabilities are based on management’s judgment and estimates and include the probability of achievement of each of the milestones, timing of achievement and discount rates, reflecting the inherent risks of achieving the respective milestones. Some assumptions are not observable in the market, and thus represent a Level 3 measurement within the fair value hierarchy.

As of September 30, 2019, the purchase price allocation has not yet been finalized as the Company evaluates certain tax attributes of SentreHEART and finalizes purchase valuations. The following table summarizes the preliminary estimated fair values of the assets acquired and the liabilities assumed on the acquisition date:

		August 13, 2019
Inventories	$	1,848
Current assets		328
Operating lease right-of-use asset		2,929
Property and equipment		94
Intangible assets		82,570
Other assets		202
Total identifiable assets	$	87,971
Current liabilities	$	5,555
Operating lease liability		2,929
Total liabilities assumed	$	8,484
Net identifiable assets acquired	$	79,487
Goodwill		131,059
Total consideration	$	210,546

The above preliminary estimated fair values of assets acquired and liabilities assumed are based on the information that was available as of the acquisition date.

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The valuation of the intangible assets acquired and related amortization periods are as follows:

	Valuation	Amortization Term (in years)
Developed technology	$ 270	15
IPR&D	82,300	
Total	$ 82,570	

The fair value of the LARIAT developed technology was estimated using the relief-from-royalty method, an income approach. The LARIAT developed technology asset is amortized on a straight-line basis over its estimated useful life. The IPR&D asset was estimated using the excess earnings method, also an income approach. The IPR&D asset represents an estimate of the fair value of the PMA approval from the in-process aMAZE IDE clinical trial and is accounted for as an indefinite-lived intangible asset until completion or abandonment of the project.

The Company recorded the excess of the aggregate purchase price over the estimated fair values of the identifiable net assets acquired as goodwill. Goodwill is primarily attributable to the benefits the Company expects to realize by enhancing its product offering and addressable markets, thereby contributing to an expanded revenue base. As discussed in Note 1, the Company accounts for goodwill in a single reporting unit representing the Company as a whole.

The operating results of SentreHEART, including $362 of appendage management revenue and $2,733 of net loss, are included in the Condensed Consolidated Statements of Operations and Comprehensive Loss beginning August 14, 2019. The Condensed Consolidated Balance Sheet as of September 30, 2019 reflects the acquisition of SentreHEART. The Company recognized approximately $2,819 and $3,645 of acquisition-related costs in the three and nine months ended September 30, 2019. The costs consisted of legal, audit, tax and other costs and are included in selling, general and administrative expenses.

The following supplemental pro forma information presents the financial results of the Company for the nine months ended September 30, 2019 and 2018 as if the acquisition of SentreHEART had occurred on January 1, 2018.

	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
Revenue	$ 171,447	$ 151,925
Net loss	(27,107)	(32,241)
Basic and diluted net loss per share	$ (0.72)	$ (0.95)

Certain pro forma adjustments have been made when calculating the amounts above to reflect the impact of the purchase transaction, primarily consisting of the exclusion of SentreHEART's interest expense incurred on debt paid off or converted to equity in the acquisition, exclusion of fair value adjustments for SentreHEART's derivative liabilities and preferred warrants settled as part of the acquisition and adjustments for amortization of intangible assets with determinable lives. The Company also eliminated transaction expenses incurred by both AtriCure and SentreHEART. The supplemental pro forma information has been prepared for comparative purposes and does not purport to be indicative of what would have occurred had the acquisition been made on January 1, 2018, nor are they indicative of any future results. The pro forma information does not include any adjustments for potential revenue enhancements, cost synergies or other operating efficiencies that could result from the acquisition.

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5. INTANGIBLE ASSETS AND GOODWILL

The following table provides a summary of the Company's intangible assets:

	Estimated Useful Life	September 30, 2019 Cost	September 30, 2019 Accumulated Amortization	December 31, 2018 Cost	December 31, 2018 Accumulated Amortization
Technology	3-15 years	$ 11,691	$ 7,642	$ 12,250	$ 7,017
IPR&D		126,321	—	44,021	—
Total		$ 138,012	$ 7,642	$ 56,271	$ 7,017

Amortization expense of intangible assets with definite lives, which excludes IPR&D, is $486 and $342 for the three months ended September 30, 2019 and 2018 and $1,454 and $1,026 for the nine months ended September 30, 2019 and 2018.

Future amortization expense is projected as follows:

2019 (excluding the nine months ended September 30, 2019)	$ 489
2020	1,822
2021	1,511
2022	18
2023	18
2024 and thereafter	191
Total	$ 4,049

The following table provides a summary of the Company's goodwill, which is not amortized, but rather tested annually for impairment:

	Nine Months Ended September 30, 2019	Twelve Months Ended December 31, 2018
Beginning Balance	$ 105,257	$ 105,257
Amounts acquired	131,059	—
Ending Balance	$ 236,316	$ 105,257

6. ACCRUED LIABILITIES

Accrued liabilities consist of the following:

	September 30, 2019	December 31, 2018
Accrued payroll and employee-related expenses	$ 6,149	$ 4,512
Accrued commissions	7,531	8,065
Accrued bonus	7,956	9,100
Sales returns and allowances	3,710	1,410
Accrued royalties	676	662
Accrued taxes and value-added taxes payable	1,117	886
Other accrued liabilities	1,019	1,205
Total	$ 28,158	$ 25,840

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7. INDEBTEDNESS

Credit Facility. The Company has a Loan and Security Agreement (Loan Agreement) with Silicon Valley Bank (SVB). The Loan Agreement (effective February 23, 2018 and modified December 28, 2018) was further amended on August 12, 2019 and September 27, 2019 and includes a $60,000 term loan and a $20,000 revolving line of credit. The total debt outstanding under the Loan Agreement cannot exceed $70,000 at any time prior to SVB's consent. The term loan and revolving credit facility both mature or expire, as applicable, on August 1, 2024.

Principal payments of the term loan are to be made ratably commencing March 1, 2021 through the loan's maturity date. If the Company meets certain conditions, as specified in the Loan Agreement, the commencement of the term loan principal payments may be deferred by an additional six months. The term loan accrues interest at the greater of the Prime Rate or 5.00%, plus 0.75% and is subject to an additional 3.00% fee on the $60,000 term loan principal payable at maturity or upon acceleration or prepayment of the term loan. The Company is accruing the 3.00% fee over the term of the Loan Agreement. As of September 30, 2019, the Company accrued $45 of this fee and included it in the outstanding loan balance. The refinancing is treated as a debt modification. Financing costs related to the term loan of $528 are netted against the outstanding loan balance and amortized ratably over the term of the Loan Agreement.

The revolving line of credit is subject to an annual facility fee of 0.15% of the revolving line of credit, and any borrowings thereunder bear interest at the greater of the Prime Rate or 5.00%. Borrowing availability under the revolving credit facility is based on the lesser of $20,000 or a borrowing base calculation as defined by the Loan Agreement. The borrowing availability is also limited to allow total debt outstanding under the Loan Agreement to not exceed $70,000 at any time prior to SVB's consent. As of September 30, 2019, the Company had no borrowings under the revolving credit facility and had borrowing availability of $10,000. Financing costs related to the revolving line of credit are included in other assets and amortized ratably over the twelve-month period of the annual fee.

The Loan Agreement also provides for certain prepayment and early termination fees, as well as establishes a minimum liquidity covenant and dividend restrictions, along with other customary terms and conditions. Specified assets have been pledged as collateral.

Future principal payments of long-term debt are projected as follows:

2019 (excluding the nine months ended September 30, 2019)	$	—
2020		—
2021		15,714
2022		17,143
2023		17,143
2024		10,000
Total long-term debt, of which $0 is current and $60,000 is noncurrent	$	60,000

8. LEASES

The Company adopted the new lease guidance on January 1, 2019 using the transition method provided by ASU 2018-11, "Leases (Topic 842): Targeted Improvements". Under this method, the Company has applied the new requirements to leases that existed as of January 1, 2019, rather than at the earliest comparative period presented in the financial statements. Prior periods are presented under legacy ASC 840 lease guidance. As a result of the adoption, the Company recorded operating right-of-use assets and operating lease liabilities of approximately $1,884 and $2,189 as of January 1, 2019. The difference between the initial operating right-of-use asset and operating lease liability of $305 is accrued rent previously recognized under ASC 840.

The Company has operating and finance leases for corporate offices, warehouse facilities and computer equipment. The Company's leases have remaining lease terms of one year to eleven years. Except for the operating lease acquired as part of the SentreHEART acquisition, options to renew or extend leases beyond their initial term have been excluded from measurement of the ROU assets and lease liabilities as exercise is not reasonably certain. The weighted average remaining lease term for operating leases and finance leases is 3.6 years and 11.0 years as of September 30, 2019. The weighted average discount rate used to measure the outstanding operating lease liabilities and finance lease liabilities is 5.9% and 7.1% as of September 30, 2019. In connection with the terms of the Company's corporate headquarters lease, a letter of credit in the amount of $1,250 was issued to the building lessor in October 2015. The letter of credit is renewed annually and remains outstanding as of September 30, 2019.

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The components of lease expense are as follows:

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Operating lease cost	$ 285	$ 600
Finance lease cost:		
Amortization of right-of-use assets	247	747
Interest on lease liabilities	216	656
Total finance lease cost	$ 463	$ 1,403

Short term lease expense is not significant during the three and nine months ended September 30, 2019.

Supplemental cash flow information related to leases is as follows:

	Nine Months Ended September 30, 2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 654
Operating cash flows from finance leases	656
Financing cash flows from finance leases	459
Right-of-use assets obtained in exchange for lease obligations:	
Operating Leases	1,884
Finance Leases	—
Operating lease right-of-use asset obtained in business combination	2,929

Supplemental balance sheet information related to leases is as follows:

	September 30, 2019
Operating Leases	
Operating lease right-of-use assets	$ 4,313
Other current liabilities and current maturities of leases and long-term debt	(1,483)
Operating lease liabilities	(3,076)
Total operating lease liabilities	$ (4,559)
Finance Leases	
Property and equipment, at cost	$ 14,462
Accumulated depreciation	(3,945)
Property and equipment, net	$ 10,517
Other current liabilities and current maturities of leases and long-term debt	$ (675)
Finance lease liabilities	(11,662)
Total finance lease liabilities	$ (12,337)

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Maturities of lease liabilities as of September 30, 2019 are as follows:

	Operating Leases	Finance Leases
2019 (excluding the nine months ended September 30, 2019)	$ 366	$ 379
2020	1,460	1,514
2021	1,337	1,519
2022	1,178	1,540
2023	708	1,562
2024	—	1,594
2025 and thereafter	—	9,799
Total payments	$ 5,049	$ 17,907
Less imputed interest	(490)	(5,570)
Total	$ 4,559	$ 12,337

Future minimum lease payments under noncancelable operating leases, including short-term operating leases, as of December 31, 2018 were projected as follows:

2019	$ 1,064
2020	893
2021	648
2022	405
Total	$ 3,010

9. COMMITMENTS AND CONTINGENCIES

Royalty Agreements. The Company has certain royalty agreements in place with terms that include payment of royalties of 3% to 5% of specified product sales. The royalty agreements have effective dates as early as 2003 and terms ranging from eighteen years to at least twenty years, unless terminated earlier. Royalty expense of $693 and $661 is included in cost of revenue for the three months ended September 30, 2019 and 2018. Royalty expense of $2,142 and $2,028 is included in cost of revenue for the nine months ended September 30, 2019 and 2018.

Purchase Agreements. The Company enters into standard purchase agreements with various suppliers in the ordinary course of business. Outstanding commitments at September 30, 2019 are not significant. The Company has committed to fund approximately $5,000 for the existing corporate headquarters expansion that is outside the ordinary course of business. The Company estimates the remaining costs of the construction project to be approximately $2,000 over the next twelve months. In connection with the headquarters expansion, the Company purchased land during the three months ended September 30, 2019 and entered into an economic incentive loan of $500 with the Mason Port Authority to reimburse the Company for a portion of the costs incurred for the expansion and provide other incentives. The loan may be forgiven pursuant to meeting various terms of the agreement.

Legal. The Company may, from time to time, become a party to legal proceedings. Such matters are subject to many uncertainties and to outcomes of which the financial impacts are not predictable with assurance and that may not be known for extended periods of time. When management has assessed that a loss is probable and an amount can be reasonably estimated, the Company records a liability.

The Company received a Civil Investigative Demand (CID) from the U.S. Department of Justice (USDOJ) in December 2017 stating that it is investigating the Company to determine whether the Company has violated the False Claims Act, relating to the promotion of certain medical devices related to the treatment of atrial fibrillation for off-label use and submitted or caused to be submitted false claims to certain federal and state health care programs for medically unnecessary healthcare services related to the treatment of atrial fibrillation. The CID covers the period from January 2010 to December 2017 and requires the production of documents and answers to written interrogatories. The Company had no knowledge of the investigation prior to receipt of the CID. The Company maintains rigorous policies and procedures to promote compliance with the False Claims Act and other applicable regulatory requirements. The Company provided the USDOJ with documents and answers to the written interrogatories and is cooperating with its investigation. However, the Company cannot predict when the investigation will be resolved, the outcome of the investigation or its potential impact on the Company.

The Company acquired nContact Surgical, Inc. pursuant to a merger agreement dated October 4, 2015. The merger agreement provides for contingent consideration or “earnout” to be paid upon attaining specified regulatory approvals and clinical and revenue

milestones. The merger agreement's earnout provisions require the Company to deliver periodic earnout reports to a designated representative of former nContact stockholders. In response to the reports delivered in February 2018 and February 2019, the Company received letters from the representative on March 16, 2018 and March 11, 2019. The letters purport to serve as "earnout objection statements" (as that term is defined in the merger agreement) and claim that for purposes of determining the commercial milestone payment, the Company should be including revenues of certain products that the Company has not included in its earnout statements. The Company has corresponded with the representative regarding the earnout objection statement and disputes the basis of the representative's claims.

10. REVENUE

The Company adopted FASB ASC 606, "Revenue from Contracts with Customers" (ASC 606) using the modified retrospective method effective January 1, 2018. The adoption of ASC 606 did not have a material impact on the amount or timing of revenue recognized in the condensed consolidated financial statements.

Revenue is generated primarily from the sale of disposable medical devices. The Company recognizes revenue in an amount that reflects the consideration the Company expects to be entitled to in exchange for those devices when control of promised devices is transferred to customers. At contract inception, the Company assesses the products promised in its contracts with customers and identifies a performance obligation for each promise to transfer to the customer a product that is distinct. The Company's disposable medical devices are distinct and represent performance obligations. These performance obligations are satisfied and revenue is recognized at a point in time upon shipment or delivery of products. Sales of devices are categorized as follows: open ablation, minimally invasive ablation (MIS), appendage management and valve tools. Shipping and handling activities performed after control over products transfers to customers are considered activities to fulfill the promise to transfer the products rather than as separate promises to customers.

Products are sold primarily through a direct sales force and through distributors in select international markets. Terms of sale are generally consistent for both end-users and distributors except that payment terms are generally net 30 days for end-users and net 60 days for distributors, with limited exceptions. The Company does not maintain any post-shipping obligations to customers. No installation, calibration or testing of products is performed by the Company subsequent to shipment in order to render products operational.

Significant judgments and estimates involved in the Company's recognition of revenue include the determination of the timing of transfer of control of products to customers and the estimation for the provision for returns. The Company considers the following indicators when determining when the control of products transfers to customers: (i) the Company has a right to payment in accordance with the shipping terms set forth in its contracts with customers; (ii) customers have legal title to products in accordance with shipping terms; (iii) the Company transfers physical possession of products either when the Company presents the products to a third party carrier for delivery to a customer (FOB shipping point) or when a customer receives the delivered goods (FOB destination); (iv) customers have the significant risks and rewards of ownership of products; and (v) customers have accepted products in connection with contractual shipping terms.

In the normal course of business, the Company does not accept product returns unless a product is defective as manufactured. The Company establishes provisions for returns based on the expected value method considering historical experience. The Company does not provide customers with the right to a refund.

The Company expects to be entitled to the total consideration for the products ordered by customers as product pricing is fixed according to the terms of customer contracts and payment terms are short. Payment terms fall within the one-year guidance for the practical expedient which allows the Company to forgo adjustment of the promised amount of consideration for the effects of a significant financing component. The Company excludes taxes assessed by governmental authorities on revenue-producing transactions from the measurement of the transaction price.

Costs associated with product sales include commissions and royalties. Considering that product sales are performance obligations in contracts that are satisfied at a point in time, commission expense associated with product sales and royalties paid based on sales of certain products is incurred at that point in time rather than over time. Therefore, the Company applies the practical expedient and recognizes commissions and royalties as expense when incurred because the expense is incurred at a point in time and the amortization period is less than one year. Commissions are recorded as selling expense and royalties are recorded as cost of revenue.

See Note 13 for disaggregated revenue by geographic area and by product category.

11. INCOME TAX PROVISION

The Company files federal, state and foreign income tax returns in jurisdictions with varying statutes of limitations. The Company uses the asset and liability method to determine its provision for income taxes. The Company's provision for income taxes in interim periods is computed by applying its estimated annual effective rate against its pre-tax results for the period. Non-recurring items are recorded during the period in which they occur. The effective tax rate for the three months ended September 30, 2019 and 2018 is (0.81%) and (0.71%). The effective tax rate for the nine months ended September 30, 2019 and 2018 is (0.80%) and (0.84%). The Company's worldwide effective tax rate differs from the US statutory rate of 21% primarily due to the Company's valuation allowance in the United States and Netherlands.

Federal, state and local returns of the Company are routinely subject to review by various taxing authorities. The Company has not accrued any interest and penalties related to unrecognized income tax benefits as a result of offsetting net operating losses. However, if the situation occurs, the Company will recognize interest and penalties within income tax expense and within the related tax liability.

12. EQUITY COMPENSATION PLANS

The Company has two share-based incentive plans: the 2014 Stock Incentive Plan (2014 Plan) and the 2018 Employee Stock Purchase Plan (ESPP).

Stock Incentive Plan

Under the 2014 Plan, the Board of Directors may grant incentive stock options to employees and may grant restricted stock and restricted stock units (collectively RSAs), nonstatutory stock options, performance share awards (PSAs) or stock appreciation rights to employees, directors and consultants. The administrator (currently the Compensation Committee of the Board of Directors) has the authority to determine the terms of any awards, including the number of shares subject to each award, the exercisability of the awards and the form of consideration. As of September 30, 2019, 11,999 shares of common stock had been reserved for issuance under the 2014 Plan, and 1,621 shares were available for future grants.

During 2019 and 2018, the Compensation Committee approved the grant of performance share awards to the Company's named executive officers and certain other employees pursuant to the 2014 Plan. The form of award agreement for the PSAs (PSA Grant Form) provides, among other things, that (i) each PSA that vests represents the right to receive one share of the Company's common stock; (ii) the PSAs vest based on the Company achieving specified performance measurements over a performance period of three years; (iii) the performance measurements include revenue CAGR as defined in the PSA Grant Form; (iv) threshold, target and maximum payout opportunities established for the PSAs will be used to calculate the number of shares that will be issuable when the award vests, which may range from 0% to 200% of the target amount; (v) any PSAs that are earned are scheduled to vest and be settled in shares of the Company's common stock at the end of the performance period; and (vi) all or a portion of the PSAs may vest following a change of control or a termination of service by reason of death or disability (each as described in greater detail in the PSA Grant Form).

With respect to the PSAs, the number of shares that vest and are issued to the recipient is based upon the Company's performance as measured against the specified targets at the end of the three-year performance period as determined by the Compensation Committee. The Company estimates the fair value of the PSAs based on its closing stock price on the grant date and will adjust compensation expense over the performance period based on its estimate of performance target achievement.

Stock options and RSAs granted generally vest at a rate of 33.3% on the first, second and third anniversaries of the grant date. Stock options granted prior to 2018 under the 2014 Plan generally expire ten years from the date of grant and generally vest at a rate of 25% on the first anniversary date of the grant and ratably each month thereafter over the following three years. Restricted stock awards granted prior to 2018 generally vest between one year and four years from the date of grant.

(In Thousands, except per share amounts)

Employee Stock Purchase Plan

The ESPP is available to eligible employees as defined in the plan document. Under the ESPP, shares of the Company's common stock may be purchased at a discount (15%) of the lesser of the closing price of the Company's common stock on the first trading day or the last trading day of the offering period. The offering period (currently six months) and the offering price are subject to change. Participants may not purchase a value of more than $25 of the Company's common stock in a calendar year and may not purchase a value of more than 3 shares during an offering period. As of September 30, 2019, there were 534 shares available for future issuance under the ESPP.

Expense Information Under FASB ASC 718

The following table summarizes the allocation of share-based compensation expense:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Cost of revenue	$ 239	$ 765	$ 656	$ 1,240
Research and development expenses	601	426	1,692	1,378
Selling, general and administrative expenses	3,447	3,051	10,468	9,048
Total	$ 4,287	$ 4,242	$ 12,816	$ 11,666

13. SEGMENT AND GEOGRAPHIC INFORMATION

The Company develops, manufactures, and sells devices designed primarily for the surgical ablation of cardiac tissue and systems designed for the exclusion of the left atrial appendage. These devices are developed and marketed to a broad base of medical centers globally. Management considers all such sales to be part of a single operating segment. Revenue attributed to geographic areas, based on the location of customers, is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
United States	$ 46,123	$ 39,764	$ 136,292	$ 119,034
Europe	6,325	6,382	20,097	18,947
Asia	3,927	3,601	12,311	10,089
Other international	239	194	786	667
Total international	10,491	10,177	33,194	29,703
Total revenue	$ 56,614	$ 49,941	$ 169,486	$ 148,737

United States revenue by product type is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Open ablation	$ 19,754	$ 17,948	$ 59,311	$ 53,600
Minimally invasive ablation	9,006	7,877	25,860	25,604
Appendage management	16,907	13,487	49,075	38,385
Total ablation and appendage management	45,667	39,312	134,246	117,589
Valve tools	456	452	2,046	1,445
Total United States	$ 46,123	$ 39,764	$ 136,292	$ 119,034

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, except per share amounts)
(Unaudited)

International revenue by product type is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Open ablation	$ 5,850	$ 5,437	$ 18,942	$ 16,182
Minimally invasive ablation	2,058	2,355	6,122	6,807
Appendage management	2,532	2,318	7,963	6,540
Total ablation and appendage management	10,440	10,110	33,027	29,529
Valve tools	51	67	167	174
Total international	$ 10,491	$ 10,177	$ 33,194	$ 29,703

The Company's long-lived assets are located primarily in the United States, except for $1,347 as of September 30, 2019 and $1,296 as of December 31, 2018, which are located primarily in Europe.

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

(Dollar amounts referenced in this Item 2 are in thousands, except per share amounts.)

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the accompanying Condensed Consolidated Financial Statements and notes thereto contained in Item 1 of Part I of this Form 10-Q and our audited financial statements and notes thereto as of and for the year ended December 31, 2018 included in our Form 10-K filed with the Securities and Exchange Commission (SEC) to provide an understanding of our results of operations, financial condition and cash flows.

Forward-Looking Statements

This Form 10-Q, including the sections titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors," contains forward-looking statements regarding our future performance. All forward-looking information is inherently uncertain and actual results may differ materially from assumptions, estimates or expectations reflected or contained in the forward-looking statements as a result of various factors, including those set forth under "Risk Factors" and elsewhere in this quarterly report on Form 10-Q, and in our annual report on Form 10-K for the year ended December 31, 2018. Forward-looking statements address our expected future business, financial performance, financial condition and results of operations, and often contain words such as "intends," "estimates," "anticipates," "hopes," "projects," "plans," "expects," "seek," "believes," "see," "should," "will," "would," "target," and similar expressions and the negative versions thereof. Such statements are based only upon current expectations of AtriCure. Any forward-looking statement speaks only as of the date made. Reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors which may cause actual results, performance or achievements to differ materially from those expressed or implied. Forward-looking statements include statements that address activities, events or developments that AtriCure expects, believes or anticipates will or may occur in the future. Forward-looking statements are based on AtriCure's experience and perception of current conditions, trends, expected future developments and other factors it believes are appropriate under the circumstances and are subject to numerous risks and uncertainties, many of which are beyond AtriCure's control. With respect to the forward-looking statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. These forward-looking statements speak only as of the date of this Form 10-Q. We undertake no obligation to publicly update or revise any forward-looking statements to reflect new information or future events or otherwise unless required by law.

Overview

We are a leading innovator in treatments for atrial fibrillation (Afib) and left atrial appendage (LAA) management. We have several product lines for the ablation of cardiac tissue, including our Isolator® Synergy™ Ablation System, the first and only surgical device approved by the United States Food and Drug Administration (FDA) for the treatment of persistent and long-standing persistent forms of Afib in patients undergoing certain open concomitant procedures. We also offer a variety of minimally invasive ablation devices and access tools to facilitate the growing trend in less invasive cardiothoracic surgery, as well as percutaneous procedures performed in the catheterization lab. Our cryoICE® cryosurgery product line offers a variety of cryoablation devices for use in various types of cardiothoracic surgery, and our AtriClip® Left Atrial Appendage Exclusion System is a device specifically designed to exclude the heart's left atrial appendage. The SentreHEART LARIAT system was recently added to AtriCure's product portfolio as a result of the acquisition during the quarter. It is cleared for soft tissue approximation and is currently being studied to support an indication of exclusion of the LAA in patients with persistent and long-standing persistent Afib.

We believe that we are currently the market leader in the surgical treatment of Afib. Our products are used by physicians during both open and minimally invasive surgical procedures, either in conjunction with heart surgery for other conditions ("concomitant" to such a procedure) or on a standalone basis. Our Isolator Synergy Ablation System is approved by FDA for the treatment of persistent and long-standing persistent Afib concomitant to other open-heart surgical procedures. All of our other ablation devices are 510(k) cleared by the FDA for sale in the United States, including our other RF and cryoablation products, which are indicated for the ablation of cardiac tissue and/or treatment of cardiac arrhythmias. In addition, certain cryoablation probes are cleared for managing pain by temporarily ablating peripheral nerves. Our AtriClip products are 510(k)-cleared with an indication for the exclusion of the heart's LAA, performed under direct visualization and in conjunction with other cardiac surgical procedures. Direct visualization, in this context, requires that the surgeon is able to see the heart directly, with or without assistance from a camera, endoscope or other appropriate viewing technologies. We also offer reusable surgical instruments typically used for cardiac valve replacement or repair. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail® linear pen, cryosurgery devices, products of the AtriClip LAA Exclusion System, COBRA Fusion® Ablation System, Numeris™ System, the EPi-Sense® Guided Coagulation System with VisiTrax® technology, and LARIAT Suture Delivery Device bear the CE mark and may be commercially distributed throughout the member states of the European Union and other countries that comply with or mirror the Medical Device Directive. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail linear pen, cryosurgery devices, and certain products of the AtriClip LAA Exclusion System are available in select Asia-Pacific countries. We anticipate that substantially all of our revenue for the foreseeable future will relate to products we currently sell, or are in the process of developing.

We sell our products to medical centers through our direct sales force in the United States and in certain international markets, such as Germany, France, the United Kingdom and the Benelux region. We also sell our products to distributors who in turn sell our products to medical centers in other international markets. Our business is transacted in U.S. Dollars with the exception of transactions with our European subsidiaries, which are transacted in Euros or British Pounds.

Recent Developments

In August 2019, we acquired SentreHEART, a privately-held developer of percutaneous left atrial appendage management solutions. The transaction consideration consisted of an upfront payment of approximately $40,000 in cash and AtriCure common stock, plus additional contingent consideration based on the achievement of certain clinical and reimbursement milestones over the next several years. Of the contingent consideration, $140,000 is based on milestones related to the aMAZE IDE clinical trial, including PMA approval, and $120,000 is based on a milestone related to reimbursement for the therapy involving SentreHEART devices. All contingent consideration would be payable in a combination of cash and AtriCure common stock.

In August 2019, we received the FDA 510(k) clearance of additional labeling claims for AtriClip LAA management devices, including changing the indication from occlusion of the LAA to exclusion, and also adding electrical isolation as a labeling claim. Exclusion shuts off and/or eliminates the appendage from the left atrium, whereas occlusion plugs the opening to prevent flow into the LAA. The electrical isolation claim was granted after testing demonstrated that when excluding the LAA using an AtriClip device, the appendage can no longer conduct electrical activity.

In February 2019, we launched the cryoICE® cryoSPHERE™ probe in the United States. The cryoSPHERE probe is the first device in the cryoICE family solely dedicated to blocking pain by temporarily ablating peripheral nerves. The cryoSPHERE probe offers a unique 8mm ball-tip design, bendable distal shaft and an ergonomic handle to provide cardiac, thoracic and general surgeons ease of use when applying the device to the targeted peripheral nerves to block pain. The launch of the cryoSPHERE probe demonstrates AtriCure's commitment to continued innovation in Cryo Nerve Block Therapy (cryoNB). The cryoSPHERE technology uses a unique freezing method to temporarily block nerves from transmitting pain signals. The effect of the therapy typically lasts several months, during which time the nerve regenerates, giving the body time to heal. Because of the long-lasting nature of the therapy, physicians are adopting cryoNB as an adjunct to their pain management modalities, offering a unique solution for patients undergoing cardiothoracic surgery.

In the United States, a significant risk device requires the prior submission of an application for an Investigational Device Exemption (IDE) to FDA for approval before initiating a clinical trial. Clinical trials are required to support a pre-market approval (PMA) and are sometimes required for 510(k) clearance. Some trials require a feasibility study followed by a pivotal trial. An IDE supplement is a means of obtaining approval to initiate a pivotal trial following the conclusion of a feasibility trial. We are conducting several clinical trials to validate the long-term results of procedures using our products and to support applications to regulatory agencies for expanded indications. In addition, we also conduct various studies to gather clinical data regarding our products. Key trials and studies are:

CONVERGE. We are conducting the CONVERGE IDE clinical trial to evaluate the safety and efficacy of the EPi-Sense Guided Coagulation System with VisiTrax technology to treat symptomatic persistent and long-standing persistent Afib patients who are refractory or intolerant to at least one Class I and/or III anti-arrhythmic drug. The trial provides for enrollment of up to 153 patients at 27 domestic medical centers and three international medical centers. Enrollment began in 2014 and was completed in August 2018. The study protocol requires patient follow-up for twelve months post procedure for the primary effectiveness endpoint assessment and long-term follow-up through five years. In September 2019, we received approval for the Continued Access Protocol (CAP) for the CONVERGE study. The CAP is a single arm study of patients undergoing hybrid ablation only and currently provides for initial enrollment of up to 30 patients at 27 domestic sites, with the possibly of expanding the CAP study to enroll additional patients by submitting an IDEA Supplement to FDA. Enrollment is expected to begin in the fourth quarter of 2019.

aMAZE. In connection with the acquisition of SentreHEART, we are conducting the aMAZE IDE clinical trial. aMAZE is an FDA-approved, prospective, multicenter, randomized controlled trial evaluating the LARIAT Suture Delivery Device for LAA closure adjunctive to Pulmonary Vein Isolation (PVI) catheter ablation for the treatment of persistent and long-standing persistent Afib. The objective of the aMAZE Trial is to demonstrate that using the LARIAT device for LAA closure, plus a PVI ablation, will lead to a reduced incidence of recurrent Afib compared to PVI alone, with a favorable safety profile. The aMAZE Trial is designed to enroll up to 600 patients at up to 65 sites with one-year follow up. Primary endpoint measures are freedom from episodes of Afib greater than 30 seconds at one-year post treatment. Enrollment remains ongoing.

ATLAS. The ATLAS study is a non-IDE randomized pilot study evaluating outcomes of patients with risk factors for developing postoperative Afib as well as risk of bleeding on oral anticoagulation. There are two types of patients subject to this study: those with a postoperative Afib diagnosis and receiving prophylactic exclusion of the left atrial appendage with the AtriClip device

concomitant to cardiac surgery and those with a postoperative Afib diagnosis who are medically managed. Enrollment began in February 2016 and ended in March 2018. Preliminary data was presented at the Heart Rhythm Society meeting in May 2019.

FROST. The FROST cryo nerve block study is a non-IDE randomized pilot study evaluating intraoperative intercostal cryoanalgesia. The study involves treatment arm patients who receive intercostal cryoanalgesia in conjunction with standard post-operative pain management and control arm patients who receive standard post-operative pain management only. The study provides for enrollment of up to 100 patients at five medical centers. Enrollment began in June 2016 and an interim data analysis was completed when a total of 80 patients were enrolled. Results are being reviewed and discussed with study investigators and other key opinion leaders.

DEEP AF Pivotal Study. The DEEP AF IDE pivotal trial evaluates the safety and efficacy of the Isolator Synergy System when used in a staged approach where a minimally invasive surgical ablation procedure is first performed and the patient undergoes the intracardiac catheter procedure approximately 90-120 days later. The trial was paused during 2016-2017 due to our work to mitigate the risk related to atrioesophageal injury during one of the trial procedures. We are committed to patient safety, and we worked collaboratively with FDA and obtained approval to resume enrollment in the trial in 2018. We currently have FDA approval to enroll an additional 40 patients, and we plan to seek approval of more patients pending FDA's review of additional safety data.

CEASE AF. We are also pursuing a non-IDE trial in Europe to compare staged hybrid ablation treatment (minimally invasive surgical ablation procedure is first performed and the patient undergoes the intracardiac catheter procedure approximately 91-180 days later) versus catheter ablation alone. We expect the study to have enrollment of approximately 210 patients at twelve sites. Enrollment began in November 2015 and remains ongoing.

ICE-AFIB. The ICE-AFIB clinical trial is designed to study the safety and efficacy of the cryoICE system for persistent and long-standing persistent Afib treatment during concomitant on-pump cardiac surgery. The trial provides for enrollment of up to 150 patients at up to 20 sites in the United States. Enrollment began in February 2019 and remains ongoing.

Results of Operations

Three months ended September 30, 2019 compared to three months ended September 30, 2018

The following table sets forth, for the periods indicated, our results of operations expressed as dollar amounts and as percentages of revenue:

	Three Months Ended September 30,			
	2019		2018	
	Amount	% of Revenues	Amount	% of Revenues
Revenue	$ 56,614	100.0 %	$ 49,941	100.0 %
Cost of revenue	14,817	26.2 %	13,993	28.0 %
Gross profit	41,797	73.8 %	35,948	72.0 %
Operating expenses:				
Research and development expenses	10,154	17.9 %	8,556	17.1 %
Selling, general and administrative expenses	40,280	71.1 %	33,440	67.0 %
Total operating expenses	50,434	89.1 %	41,996	84.1 %
Loss from operations	(8,637)	(15.3) %	(6,048)	(12.1) %
Other income (expense):				
Interest expense	(1,113)	(2.0) %	(1,246)	(2.5) %
Interest income	577	1.0 %	151	0.3 %
Other	(114)	(0.2) %	(41)	(0.1) %
Total other expense	(650)	(1.1) %	(1,136)	(2.3) %
Loss before income tax expense	(9,287)	(16.4) %	(7,184)	(14.4) %
Income tax expense	75	0.1 %	51	0.1 %
Net loss	$ (9,362)	(16.5) %	$ (7,235)	(14.5) %

Revenue. Revenue increased 13.4% (14.0% on a constant currency basis). Revenue from customers in the United States increased $6,359, or 16.0%, and revenue from international customers increased $314, or 3.1% (6.0% on a constant currency basis). Sales in the United States grew across several key product categories. Open ablation sales increased $1,806, or 10.1%, primarily due to the positive impact of the CryoSPHERE device launch, along with continued volume increases for cardiac ablation devices. Appendage management sales in the United States increased $3,420, or 25.4%, reflecting the positive impact of the AtriClip FLEX•V® LAA Exclusion System that launched in the first quarter of 2018 and volume growth of minimally invasive LAA Exclusion System devices. Minimally invasive (MIS) ablation sales increased $1,129, or 14.3%, driven by increases in Epi-Sense and legacy RF devices. International revenue grew primarily in Australia and the United Kingdom, as a result of increased volumes across open ablation and

appendage management products, along with slight increases throughout Europe and Asia markets. International growth was partially offset by a decline in revenue from the Benelux region stemming primarily from declines in minimally invasive ablation product sales.

Revenue reported on a constant currency basis is a non-GAAP measure and is calculated by applying previous period foreign currency (Euro) exchange rates, which are determined by the average daily Euro to Dollar exchange rate, to each of the comparable periods. Revenue is analyzed on a constant currency basis to better measure the comparability of results between periods. Because changes in foreign currency exchange rates have a non-operating impact on revenue, we believe that evaluating revenue growth on a constant currency basis provides additional and meaningful assessment of revenue to both management and our investors.

Cost of revenue and gross margin. Cost of revenue increased $824 and gross margin increased 1.8%. The improvement in gross margin was driven primarily by a decrease of $526 in share-based compensation reflecting acceleration of vesting of restricted stock awards in 2018, as well as both product and geographic mix and improvements to operating costs.

Research and development expenses. Research and development expenses increased $1,598, or 18.7%, primarily due to $536 incremental clinical and consulting expenses associated with the aMAZE trial and $435 greater expense from higher personnel and related expenses for product development, regulatory and clinical activities. Clinical studies expense increased $149 related to the timing of activities. Additionally, there was incremental share-based compensation expense of $175 and amortization expense of $144, in addition to increases in various operating costs.

Selling, general and administrative expenses. Selling, general and administrative expenses increased $6,840, or 20.5% primarily due to $3,969 higher headcount and related costs and $2,819 of acquisition-related costs. Other expense drivers include $396 incremental share-based compensation cost, $498 increase in marketing, tradeshow and training activities expenses, and $1,042 rise in other operating costs, including the provision for doubtful accounts and additional bank fees. These increases were offset by a $2,282 higher reduction in the contingent consideration liability as compared to prior year (see Note 3 for further discussion).

Net interest expense. Net interest expense decreased $559 due to $426 higher interest income from investments, along with a reduction in the term loan interest rate.

Other income and expense. Other income and expense consists primarily of foreign currency transaction gains and losses.

Nine months ended September 30, 2019 compared to nine months ended September 30, 2018

The following table sets forth, for the periods indicated, our results of operations expressed as dollar amounts and as percentages of revenue:

	Nine Months Ended September 30,			
	2019		2018	
	Amount	% of Revenues	Amount	% of Revenues
Revenue	$ 169,486	100.0 %	$ 148,737	100.0 %
Cost of revenue	43,925	25.9 %	40,207	27.0 %
Gross profit	125,561	74.1 %	108,530	73.0 %
Operating expenses:				
Research and development expenses	28,134	16.6 %	26,268	17.7 %
Selling, general and administrative expenses	115,223	68.0 %	96,782	65.1 %
Total operating expenses	143,357	84.6 %	123,050	82.7 %
Loss from operations	(17,796)	(10.5) %	(14,520)	(9.8) %
Other income (expense):				
Interest expense	(2,854)	(1.7) %	(3,287)	(2.2) %
Interest income	1,933	1.1 %	350	0.2 %
Other	(230)	(0.1) %	(103)	(0.1) %
Total other expense	(1,151)	(0.7) %	(3,040)	(2.0) %
Loss before income tax expense	(18,947)	(11.2) %	(17,560)	(11.8) %
Income tax expense	151	0.1 %	147	0.1 %
Net loss	$ (19,098)	(11.3) %	$ (17,707)	(11.9) %

Revenue. Revenue increased 14.0% (14.8% on a constant currency basis). Revenue from customers in the United States increased $17,258 or 14.5%, and revenue from international customers increased $3,491, or 11.8% (15.9% on a constant currency basis). Sales in the United States grew across several key product categories. Open ablation sales increased $5,711, or 10.7%,

primarily due to the launch of the CryoSPHERE device and other volume growth in our RF and legacy cryo products lines. Minimally invasive (MIS) ablation sales increased $256, or 1.0%, reflecting mixed results within underlying products. Appendage management sales increased $10,690, or 27.8%, reflecting continued volume growth across most product lines. Appendage management sales reflect the positive impact of the AtriClip FLEX•V LAA Exclusion System, which launched in the first quarter of 2018. International revenue grew across key markets, with significant increases in China, the United Kingdom, France and Australia and offset partially by decreases revenue in the Benelux region and Switzerland. International revenue growth results from increased volumes in open ablation and appendage management categories, offsetting a decline in minimally invasive ablation products.

Revenue reported on a constant currency basis is a non-GAAP measure and is calculated by applying previous period foreign currency (Euro) exchange rates, which are determined by the average daily Euro to Dollar exchange rate, to each of the comparable periods. Revenue is analyzed on a constant currency basis to better measure the comparability of results between periods. Because changes in foreign currency exchange rates have a non-operating impact on revenue, we believe that evaluating revenue growth on a constant currency basis provides additional and meaningful assessment of revenue to both management and our investors.

Cost of revenue and gross margin. Cost of revenue increased $3,718, demonstrating improvements in gross margin of 1.1%, from 73.0% in 2018 to 74.1% in 2019. The overall increase in gross margin was driven largely by a decrease of $584 in share-based compensation as a result of acceleration of vesting of restricted stock awards in the third quarter of 2018, operational improvements and lower production costs. Additionally, increased sales of devices from recent product launches are realizing higher gross margin than legacy products.

Research and development expenses. Research and development expenses increased $1,866, or 7.1%, primarily due to $902 higher personnel and related costs, $428 higher amortization expense, $337 rise in expenses for clinical trials and grants, $314 incremental share-based compensation cost, and $298 increase in various operating costs. These increases were partially offset by $466 lower expense related to the timing of product development project activities.

Selling, general and administrative expenses. Selling, general and administrative expenses increased $18,441, or 19.1%, primarily due to $10,827 higher headcount and related expenses and $3,645 of acquisition-related expenses. Other expense drivers include $1,730 rise in operating costs, including organization meetings, facility expenses and the provision for doubtful accounts, $1,420 increase in share-based compensation, and $1,018 increase in marketing, training, and tradeshow activities. These expenses were offset by a $238 higher reduction in the contingent consideration liability as compared to prior year (see Note 3 for further discussion).

Net interest expense. Net interest expense decreased $2,016, from $2,937 to $921 due to $1,583 higher interest income from investments and $433 lower interest expense reflecting the lower interest rate on the term loan.

Other income and expense. Other income and expense consists primarily of foreign currency transaction gains and losses.

Liquidity and Capital Resources

As of September 30, 2019 the Company had cash, cash equivalents and investments of $100,093 and outstanding debt of $60,000. We had unused borrowing capacity of $10,000 under our revolving credit facility. Most of our operating cash and all cash equivalents and investments are held by United States financial institutions. We had net working capital of $93,571 and an accumulated deficit of $266,101 as of September 30, 2019.

Cash flows used in operating activities. Net cash used in operating activities was $12,282 during the nine months ended September 30, 2019. The primary net uses of cash for operating activities are as follows:

- Net loss of $19,098, offset by $13,922 of non-cash expenses, including $12,816 of share-based compensation, $6,983 of depreciation and amortization, offset by a $6,934 reduction in the contingent consideration liability; and

Net increase in cash used related to changes in operating assets and liabilities of $7,106, due primarily to the following:

- a decrease in accrued liabilities of $500 due primarily to payment of variable compensation;
- an increase in accounts payable of $702 from increased inventory and operating costs;
- an increase in all categories of inventories of $3,643 in anticipation of future growth; and
- an increase in accounts receivable of $2,045 due to revenue growth.

Cash flows provided by investing activities. Net cash provided by investing activities was $454 during the nine months ended September 30, 2019. Cash from investing activities was primarily $92,985 of maturities of available-for-sale securities based on timing of investment maturities and cash used to fund operations. This source of cash was offset by $18,008 of cash paid in the

acquisition of SentreHEART, $7,825 of purchases of property and equipment and $66,726 of purchases of available-for-sale securities.

Cash flows used in financing activities. Net cash provided by financing activities during the nine months ended September 30, 2019 was $13,019, which was primarily $20,000 of proceeds from credit facility borrowings and $2,283 of proceeds from stock option exercises, offset by shares repurchased for payment of taxes on stock awards of $8,976.

Credit facility. Our Loan and Security Agreement with Silicon Valley Bank (SVB), as amended August 12, 2019 and as further amended September 27, 2019 (Loan Agreement), provides for a $60,000 term loan and a $20,000 revolving line of credit. The term loan and revolving credit facility both mature or expire, as applicable, on August 1, 2024. Principal payments on the term loan are to be made ratably commencing March 1, 2021 through the loan's maturity date. If the Company meets certain conditions, as specified in the Loan Agreement, the commencement of the term loan principal payments may be deferred by an additional six months. The term loan accrues interest at the greater of the Prime Rate or 5.00% plus 0.75% and is subject to an additional 3.00% fee on the $60,000 term loan principal amount at maturity or upon acceleration or prepayment of the term loan. Borrowing availability under the revolving credit facility is based on the lesser of $20,000 or a borrowing base calculation as defined by the Loan Agreement. Borrowing availability under the revolving credit facility is further limited by a cap on total debt outstanding under the Loan Agreement of $70,000. As of September 30, 2019 we had no borrowings under the revolving credit facility, and we had borrowing availability of $10,000. The Loan Agreement also provides for certain prepayment and early termination fees only if the term loan is repaid before August 2020 and establishes a minimum liquidity ratio, along with other customary terms and conditions. Specified assets have been pledged as collateral.

In connection with the terms of our corporate headquarters lease agreement, a letter of credit in the amount of $1,250 was issued to the landlord in October 2015. The letter of credit is renewed annually and remains outstanding as of September 30, 2019.

Uses of liquidity and capital resources. Our future capital requirements depend on a number of factors, including market acceptance of our current and future products; the resources we devote to developing and supporting our products; future expenses to expand and support our sales and marketing efforts; costs relating to changes in regulatory policies or laws that affect our operations and cost of filings; costs associated with clinical trials and securing regulatory approval for new products; costs associated with acquiring and integrating businesses; costs associated with prosecuting, defending and enforcing our intellectual property rights; payments made for acquisition-related earnouts; and possible future acquisitions and joint ventures. Global economic turmoil may adversely impact our revenue, access to the capital markets or future demand for our products.

We have on file with the SEC a shelf registration statement which allows us to sell any combination of senior or subordinated debt securities, common stock, preferred stock, warrants, depository shares and units in one or more offerings should we choose to do so in the future. We expect to maintain the effectiveness of the shelf registration statement for the foreseeable future.

We believe that our current cash, cash equivalents and investments, along with the cash we expect to generate or use for operations or access via our revolving line of credit, will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least the next twelve months. The nContact transaction provides for contingent consideration to be paid upon attaining specified regulatory approvals before January 2021 and revenue milestones in 2019. The SentreHEART acquisition provides for contingent consideration to be paid upon attaining specified PMA approval before December 2023 and CPT reimbursement before December 2026. Subject to the terms and conditions of the nContact and SentreHEART merger agreements, such contingent consideration will be paid in AtriCure common stock and cash up to a specified maximum number of shares. Over the next twelve months, we do not expect our cash requirements to include significant payments of contingent consideration based on terms of the acquisition agreements and related milestones. See the heading "Legal" in Note 9 for a description of an earnout objection statement received from the nContact shareholder representative.

If our sources of cash are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities or obtain a revised or additional credit facility. The sale of additional equity or convertible debt securities could result in dilution to our stockholders. If additional funds are raised through the issuance of debt securities, these securities could have rights senior to those associated with our common stock and could contain covenants that would restrict our operations. Finally, our term loan agreement and revolving line of credit require compliance with certain financial and other covenants. If we are unable to maintain these financing arrangements, we may be required to reduce the scope of our planned research and development, clinical activities and selling, training, education and marketing efforts.

Seasonality

During the third quarter, we typically experience a moderate decline in revenue from the preceding quarter that we attribute primarily to the elective nature of certain procedures in which our products are used. We believe this is due to fewer people choosing to undergo elective procedures during the summer months.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of financial statements requires management to make estimates and judgments that affect the reported amounts of assets and liabilities, revenue and expenses and disclosures of contingent assets and liabilities at the date of the financial statements. On a periodic basis, we evaluate our estimates, including those related to sales returns and allowances, accounts receivable, inventories, intangible assets including goodwill, contingent liabilities and share-based compensation. We use authoritative pronouncements, historical experience and other assumptions as the basis for making estimates. Actual results could differ from those estimates under different assumptions or conditions. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 includes additional information about the Company, our operations, our financial position and our critical accounting policies and estimates and should be read in conjunction with this Quarterly Report on Form 10-Q.

Recent Accounting Pronouncements

See Note 2 in the Notes to the Condensed Consolidated Financial Statements for a discussion of recent accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As of September 30, 2019 there were no material changes to the information provided under Item 7A, “Quantitative and Qualitative Disclosures About Market Risk” in the Company’s Form 10-K for the year ended December 31, 2018.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

The Company’s management, with the participation of the President and Chief Executive Officer (the Principal Executive Officer) and Senior Vice President and Chief Financial Officer (the Principal Accounting and Financial Officer), has evaluated the effectiveness of the Company’s disclosure controls and procedures, as defined in Rules 13(a)-15(e) and 15(d) -15(e) of the Securities Exchange Act of 1934 (Exchange Act), as of the end of the period covered by this report. Based on this evaluation, we concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were effective in providing reasonable assurance that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s forms and rules, and the material information relating to the Company is accumulated and communicated to management, including the President and Chief Executive Officer and the Senior Vice President and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosures.

Control systems, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that control objectives are met. Because of inherent limitations in all control systems, no evaluation of controls can provide assurance that all control issues and instances of fraud, if any, within a company will be detected. Additionally, controls can be circumvented by individuals, by collusion of two or more people or by management override. Over time, controls can become inadequate because of changes in conditions or the degree of compliance may deteriorate. Further, the design of any system of controls is based in part upon assumptions about the likelihood of future events. There can be no assurance that any design will succeed in achieving its stated goals under all future conditions. Because of the inherent limitations in any cost-effective control system, misstatements due to errors or fraud may occur and not be detected.

Changes in Internal Control Over Financial Reporting

In the ordinary course of business, we routinely enhance our information systems by either upgrading current systems or implementing new ones. There were no changes in our internal control over financial reporting that occurred during the three months ended September 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Information with respect to legal proceedings can be found under the heading “Legal” in Note 9 – Commitments and Contingencies to the Condensed Consolidated Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q and is incorporated herein by reference.

Item 1A. Risk Factors

In addition to the other information set forth in this report, careful consideration should be given to the factors discussed in Item 1A, “Risk Factors” in our Form 10-K for the year ended December 31, 2018, all of which could materially affect our business, financial condition or future results. The risks described herein and therein are not the only risks facing us. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, also may adversely affect our business, financial condition and/or operating results. There have been no material changes with respect to the risk factors disclosed in our Annual Report on Form 10-K for the year ended December 31, 2018.

Item 6. Exhibits

Exhibit No.	Description
2.1	Agreement and Plan of Merger, dated as of August 11, 2019 among SentreHEART, Inc., AtriCure, Inc., Stetson Merger Sub, Inc., Second Stetson Merger Sub, LLC and Shareholder Representative Services, LLC, as Securityholder Representative (incorporated by reference from the Registrant's Form 8-K filed on August 12, 2019)
10.1	Joinder and Third Amendment to Loan and Security Agreement dated September 27, 2019
10.2	Second Amendment to Loan and Security Agreement dated August 12, 2019 among AtriCure, Inc., Silicon Valley Bank, and the other parties named therein (incorporated by reference from the Registrant's Form 8-K filed on August 12, 2019)
31.1	Rule 13a-14(a) Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Rule 13a-14(a) Certification of Principal Accounting and Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification pursuant to 18 U.S.C. Section 1350 by the Principal Executive Officer, as adopted, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification pursuant to 18 U.S.C. Section 1350 by the Principal Accounting and Financial Officer, as adopted, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

Compensatory plan or arrangement

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.

AtriCure, Inc.
(REGISTRANT)

Date: October 31, 2019

/s/ Michael H. Carrel
Michael H. Carrel
President and Chief Executive Officer
(Principal Executive Officer)

Date: October 31, 2019

/s/ M. Andrew Wade
M. Andrew Wade
Senior Vice President and Chief Financial Officer
(Principal Accounting and Financial Officer)

JOINDER AND THIRD AMENDMENT TO LOAN AND SECURITY AGREEMENT

This Joinder and Third Amendment to Loan and Security Agreement (this "**Amendment**") is entered into this 27th day of September, 2019, among (a) **SILICON VALLEY BANK**, a California corporation ("**SVB**"), in its capacity as Administrative Agent ("**Agent**"), (b) SVB, and each other lender and other financial institutions party to the Loan Agreement (as defined below) from time to time (each, a "**Lender**" and collectively, the "**Lenders**"), (c) (i) **ATRICURE, INC**., a Delaware corporation with its chief executive office located at 7555 Innovation Way, Mason, Ohio 45040 ("**AtriCure**"), (ii) **ATRICURE, LLC**, a Delaware limited liability company ("**AtriCure LLC**"), (iii) **ENDOSCOPIC TECHNOLOGIES, LLC**, a Delaware limited liability company ("**Endoscopic**"), and (iv) **nCONTACT SURGICAL, LLC**, a Delaware limited liability company ("**nContact**", and together with AtriCure, AtriCure LLC and Endoscopic, individually and collectively, jointly and severally, the "**Borrower**"), and (d) **SENTREHEART LLC**, a Delaware limited liability company ("**New Borrower**").

RECITALS

A. Agent, the Lenders and the Borrower have entered into that certain Loan and Security Agreement dated as of February 23, 2018, as amended by that certain First Amendment to Loan and Security Agreement dated December 28, 2018, and as further amended by that certain Consent and Second Amendment to Loan and Security Agreement dated August 12, 2019 (as the same may from time to time be further amended, modified, supplemented or restated, the "**Loan Agreement**").

B. Lenders have extended credit to Borrower for the purposes permitted in the Loan Agreement.

C. Borrower has requested that Agent and Lenders amend the Loan Agreement to make certain revisions to the Loan Agreement as more fully set forth herein.

D. Agent and Lenders have agreed to so amend certain provisions of the Loan Agreement, but only to the extent, in accordance with the terms, subject to the conditions and in reliance upon the representations and warranties set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. Definitions. Capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Loan Agreement.

2. Joinder and Assumption. New Borrower is a wholly-owned Subsidiary of AtriCure. New Borrower hereby joins the Loan Agreement and each of the other appropriate Loan Documents, and agrees to comply with and be bound by all of the terms, conditions and

covenants of the Loan Agreement and each of the other appropriate Loan Documents, as if such New Borrower were originally named a "Borrower" and/or a "Debtor" therein. Without limiting the generality of the preceding sentence, New Borrower hereby assumes and agrees to pay and perform when due all present and future indebtedness, liabilities and obligations of Borrower under the Loan Agreement, including, without limitation, the Obligations. From and after the date hereof, all references in the Loan Documents to "Borrower" and/or "Debtor" shall be deemed to refer to and include New Borrower. Further, all present and future Obligations of Borrower shall be deemed to refer to all present and future Obligations of New Borrower. New Borrower acknowledges that the Obligations are due and owing to Agent and the Lenders from Borrower including, without limitation, New Borrower, without any defense, offset or counterclaim of any kind or nature whatsoever as of the date hereof.

3. Grant of Security Interest. To secure the payment and performance of all of the Obligations, New Borrower hereby grants to Agent, for the ratable benefit of the Lenders, a continuing lien upon and security interest in all of New Borrower's now existing or hereafter arising rights and interest in the Collateral, whether now owned or existing or hereafter created, acquired, or arising, and wherever located, including, without limitation, all of New Borrower's assets listed on Exhibit A attached hereto and all of New Borrower's books and records relating to the foregoing and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing. New Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of the Loan Agreement to have superior priority to Agent's Lien under the Loan Agreement). If New Borrower shall acquire a commercial tort claim, New Borrower shall promptly notify Agent in a writing signed by New Borrower of the general details thereof and grant to Agent, for the ratable benefit of the Lenders, in such writing a security interest therein and in the proceeds thereof, all upon the terms of the Loan Agreement, with such writing to be in form and substance reasonably satisfactory to Agent. New Borrower further covenants and agrees that by its execution hereof it shall provide all such information, complete all such forms, and take all such actions, and enter into all such agreements, in form and substance reasonably satisfactory to Agent that are reasonably deemed necessary by Agent in order to grant and continue a valid, first perfected security interest to Agent, for the ratable benefit of the Lenders, in the Collateral (subject only to Permitted Liens that are permitted pursuant to the terms of the Loan Agreement to have superior priority to Agent's Lien under the Loan Agreement). New Borrower hereby authorizes Agent, on behalf of the Lenders, to file financing statements, without notice to any Borrower, with all appropriate jurisdictions in order to perfect or protect Agent's and Lenders' interest or rights under the Loan Agreement. Such financing statements may indicate the Collateral as "all assets of the Debtor" or words of similar effect, or as being of an equal or lesser scope, or with greater detail, all in Agent's discretion.

4. Subrogation and Similar Rights. Borrower (in each case including, without limitation, New Borrower) waives any suretyship defenses available to it under the Code or any other applicable law. Borrower (in each case, including, without limitation, New

Borrower) waives any right to require Agent and/or any Lender to: (i) proceed against any other Borrower or any other Person; (ii) proceed against or exhaust any security; or (iii) pursue any other remedy. Agent and/or any Lender may exercise or not exercise any right or remedy it has against any Borrower or any security it holds (including the right to foreclose by judicial or non-judicial sale) without affecting any Borrower's liability. Notwithstanding any other provision of this Amendment, the Loan Agreement, or any other Loan Documents, Borrower irrevocably subordinates to the prior payment in full of the Obligations and the termination of each Lender's commitment to make Credit Extensions to Borrower and agrees not to assert or enforce prior to the payment in full of the Obligations and the termination of each Lender's commitment to make Credit Extensions to Borrower, all rights that it may have at law or in equity (including, without limitation, any law subrogating such Borrower to the rights of Agent and/or any Lender under the Loan Agreement), to seek contribution, indemnification or any other form of reimbursement from any other Borrower or any other Person now or hereafter primarily or secondarily liable for any of the Obligations, for any payment made by a Borrower with respect to the Obligations in connection with the Loan Agreement or otherwise and all rights that it might have to benefit from, or to participate in, any security for the Obligations as a result of any payment made by any Borrower with respect to the Obligations in connection with the Loan Agreement or otherwise. Any agreement providing for indemnification, reimbursement or any other arrangement prohibited under this Section shall be null and void. If any payment is made to any Borrower in contravention of this section, such Borrower shall hold such payment in trust for Agent and the Lenders and such payment shall be promptly delivered to Agent for application to the Obligations, whether matured or unmatured. Any Borrower may, acting singly, request Credit Extensions under the Loan Agreement. Each Borrower hereby appoints the other as agent for the other for all purposes under the Loan Agreement, including with respect to requesting Credit Extensions thereunder. Each Borrower shall be jointly and severally obligated to repay all Credit Extensions made under the Loan Agreement or any other Loan Documents, regardless of which Borrower actually received said Credit Extension, as if each Borrower directly received all Credit Extensions.

5. Exhibit B (Compliance Certificate). The Compliance Certificate attached to the Loan Agreement as Exhibit B is amended in its entirety and replaced with the Compliance Certificate in the form of Exhibit B attached hereto.

6. Limitation of Amendments.

6.1 The amendments set forth in Section 5, above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right or remedy which Agent and Lenders may now have or may have in the future under or in connection with any Loan Document.

6.2 This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

7. Representations and Warranties. To induce Agent and each Lender to enter into this Amendment, Borrower and New Borrower hereby represent and warrant to Agent and each Lender as follows:

7.1 Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct as of such date), and (b) no Event of Default has occurred and is continuing;

7.2 Borrower and New Borrower have the power and authority to execute and deliver this Amendment and to perform their respective obligations under the Loan Agreement, as amended by this Amendment;

7.3 The organizational documents of Borrower previously delivered to Agent either (i) remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect; or (ii) have been amended and have been delivered to Agent in connection with this Amendment;

7.4 The execution and delivery by Borrower and New Borrower of this Amendment and the performance by Borrower and New Borrower of their respective obligations under the Loan Agreement, as amended by this Amendment, have been duly authorized;

7.5 The execution and delivery by Borrower and New Borrower of this Amendment and the performance by Borrower and New Borrower of their respective obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (a) any law or regulation binding on or affecting Borrower or New Borrower, (b) any contractual restriction with a Person binding on Borrower or New Borrower, (c) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower or New Borrower, or (d) the organizational documents of Borrower or New Borrower;

7.6 The execution and delivery by Borrower and New Borrower of this Amendment and the performance by Borrower and New Borrower of their respective obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower or New Borrower, except as already has been obtained or made; and

7.7 This Amendment has been duly executed and delivered by Borrower and New Borrower and is the binding obligation of Borrower and New Borrower, enforceable against Borrower and New Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights.

8. Ratification of Intellectual Property Security Agreement. Borrower hereby ratifies, confirms and reaffirms, all and singular, the terms and conditions of a certain Intellectual Property Security Agreement dated as of February 23, 2018, between Borrower and Agent, and acknowledges, confirms and agrees that said Intellectual Property Security

Agreement (a) contains an accurate and complete listing of all Intellectual Property Collateral (as defined therein) and (b) shall remain in full force and effect.

9. Perfection Certificate. Borrower hereby ratifies, confirms and reaffirms, all and singular, the terms and disclosures contained in a certain Perfection Certificate dated on February 23, 2018, as amended as set forth on Schedule 2 attached that certain First Amendment to Loan and Security Agreement dated December 28, 2018 (as amended, the "**Original Perfection Certificate**") and acknowledges, confirms and agrees the disclosures and information Borrower provided to Agent in the Perfection Certificate, have not changed, and remain true, complete and correct as of the date hereof. Borrower and New Borrower hereby agree that all references to the "Perfection Certificate" in any Loan Document shall be deemed to refer collectively to the Original Perfection Certificate and the New Borrower Perfection Certificate (as defined below).

10. Integration. This Amendment and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Amendment and the Loan Documents merge into this Amendment and the Loan Documents.

11. Counterparts. This Amendment may be executed in any number of counterparts and all of such counterparts taken together shall be deemed to constitute one and the same instrument.

12. Conditions to Effectiveness. Borrower hereby agrees that the following documents shall be delivered to the Agent prior to or concurrently with the execution of this Amendment, each in form and substance reasonably satisfactory to the Agent:

12.1 copies, certified in a certificate executed by a duly authorized officer of New Borrower, to be true and complete as of the date of such certificate, of each of (i) the governing documents of New Borrower, as in effect on the date of such certificate, (ii) the resolutions of New Borrower authorizing the execution and delivery of this Amendment, all documents executed by it in connection herewith, and New Borrower's performance of all of the transactions contemplated hereby, and (iii) an incumbency certificate giving the name and bearing a specimen signature of each individual who shall be so authorized;

12.2 a long-form good standing certificate of New Borrower, certified by the Secretary of State of the state of formation of New Borrower, and each jurisdiction in which New Borrower is qualified to do business, dated as of a date no earlier than thirty (30) days prior to the date hereof;

12.3 certified copies, dated as of a recent date, of UCC and other lien searches of New Borrower, as Agent may request and which shall be obtained by Agent, accompanied by written evidence (including any UCC termination statements) that the Liens revealed in any such searches either (i) will be terminated prior to or in connection with this Amendment, or (ii) will constitute Permitted Liens;

12.4 Intellectual Property search results for New Borrower, which shall be obtained by Agent;

12.5 completed exhibits to that certain Intellectual Property Security Agreement dated even date herewith by and between New Borrower and Agent;

12.6 a filed copy, which shall be filed by Agent, acknowledged by the appropriate filing office, of a UCC-1 Financing Statement, naming New Borrower as "Debtor" and Agent as "Secured Party";

12.7 a Perfection Certificate of New Borrower, together with the duly executed signature thereto (the "**New Borrower Perfection Certificate**");

12.8 Evidence satisfactory to Bank that the insurance policies and endorsements required by Section 6.7 of the Loan Agreement are in full force and effect with respect to New Borrower;

12.9 a landlord's access and waiver agreement in favor of Agent for 300 Saginaw Drive, Redwood City, California 94063 by the landlord thereof, together with the duly executed signatures thereto;

12.10 a legal opinion (authority and enforceability) of New Borrower's counsel dated as of the date hereof together with the duly executed signature thereto;

12.11 Borrower's payment of Agent's legal fees and expenses incurred in connection with this Amendment;

12.12 the original membership interest certificate for all membership interest in New Borrower together with an original, undated transfer powers satisfactory to Agent for such certificate executed in blank by an Authorized Signer of AtriCure; and

12.13 such other documents as Agent may reasonably request.

[Signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first written above.

The undersigned hereby certifies, to the best of his or her knowledge, that the information set out in the Perfection Certificate is true, complete and correct.

BORROWER:

ATRICURE, INC.

By:_____
Name: _____
Title: _____

ATRICURE, LLC

By:_____
Name: _____
Title: _____

ENDOSCOPIC TECHNOLOGIES, LLC

By: _____
Name: _____
Title:_____

nCONTACT SURGICAL, LLC

By: _____
Name: _____
Title:_____

SENTREHEART LLC

By: _____
Name: _____
Title: _____

AGENT:

SILICON VALLEY BANK

By: _____
Name: _____
Title: _____

LENDER:

SILICON VALLEY BANK

By: _____
Name: _____
Title: _____

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Michael H. Carrel, certify that:

1. I have reviewed this quarterly report on Form 10-Q of AtriCure, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: October 31, 2019

By: /s/ Michael H. Carrel
Michael H. Carrel
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF PRINCIPAL ACCOUNTING AND FINANCIAL OFFICER
PURSUANT TO
SECTION 13(a) OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, M. Andrew Wade, certify that:

1. I have reviewed this quarterly report on Form 10-Q of AtriCure, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: October 31, 2019

By: /s/ M. Andrew Wade
M. Andrew Wade
Senior Vice President and Chief Financial Officer
(Principal Accounting and Financial Officer)

Exhibit 32.1

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

In connection with the quarterly report of AtriCure, Inc. (Company) on Form 10-Q for the quarter ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (Report), I, Michael H. Carrel, President and Chief Executive Officer and Principal Executive Officer of the Company, certify, pursuant to Rule 13a–14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: October 31, 2019

By: /s/ Michael H. Carrel
Michael H. Carrel
President and Chief Executive Officer
(Principal Executive Officer)

A signed original of this written statement or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement has been provided to AtriCure, Inc. and will be retained by AtriCure, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the report or as a separate disclosure document.

Exhibit 32.2

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

In connection with the quarterly report of AtriCure, Inc. (Company) on Form 10-Q for the quarter ended September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (Report), I, M. Andrew Wade, Vice President and Chief Financial Officer and Principal Accounting and Financial Officer of the Company, certify, pursuant to Rule 13a–14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

Date: October 31, 2019

By: /s/ M. Andrew Wade
M. Andrew Wade
Senior Vice President and Chief Financial Officer
(Principal Accounting and Financial Officer)

A signed original of this written statement or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement has been provided to AtriCure, Inc. and will be retained by AtriCure, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the report or as a separate disclosure document.