UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2018

or

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

For the transition period from_____to_____

Commission File Number 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)

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

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

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

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

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

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

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 30, 2018**
Common Stock, $.001 par value	38,526,666

Table of Contents

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, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 17,999	$ 21,809
Short-term investments	22,220	12,642
Accounts receivable, less allowance for doubtful accounts of $392 and $32	23,290	23,083
Inventories	22,258	22,451
Other current assets	2,662	2,273
Total current assets	88,429	82,258
Property and equipment, net	27,964	28,749
Intangible assets, net	49,738	50,764
Goodwill	105,257	105,257
Other noncurrent assets	574	676
Total Assets	$ 271,962	$ 267,704
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 10,587	$ 12,431
Accrued liabilities	21,598	18,911
Other current liabilities and current maturities of debt and capital leases	1,559	561
Total current liabilities	33,744	31,903
Capital leases	12,336	12,761
Long-term debt	38,554	24,100
Other noncurrent liabilities	23,560	37,774
Total Liabilities	108,194	106,538
Commitments and contingencies (Note 7)		
Stockholders' Equity:		
Common stock, $0.001 par value, 90,000 shares authorized and 35,653 and 34,586 issued and outstanding	36	35
Additional paid-in capital	407,442	386,963
Accumulated other comprehensive (loss) income	(136)	34
Accumulated deficit	(243,574)	(225,866)
Total Stockholders' Equity	163,768	161,166
Total Liabilities and Stockholders' Equity	$ 271,962	$ 267,704

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,	
	2018	2017	2018	2017
Revenue	$ 49,941	$ 42,150	$ 148,737	$ 128,654
Cost of revenue	13,993	11,232	40,207	35,174
Gross profit	35,948	30,918	108,530	93,480
Operating expenses:				
Research and development expenses	8,556	7,966	26,268	26,423
Selling, general and administrative expenses	33,440	29,799	96,782	89,901
Total operating expenses	41,996	37,765	123,050	116,324
Loss from operations	(6,048)	(6,847)	(14,520)	(22,844)
Other income (expense):				
Interest expense	(1,246)	(576)	(3,287)	(1,694)
Interest income	151	58	350	160
Other	(41)	145	(103)	132
Loss before income tax expense	(7,184)	(7,220)	(17,560)	(24,246)
Income tax expense	51	26	147	66
Net loss	$ (7,235)	$ (7,246)	$ (17,707)	$ (24,312)
Basic and diluted net loss per share	$ (0.22)	$ (0.22)	$ (0.53)	$ (0.75)
Weighted average shares outstanding—basic and diluted	33,601	32,576	33,280	32,297
Comprehensive loss:				
Unrealized gain on investments	$ 8	$ 8	$ 1	$ 14
Foreign currency translation adjustment	(46)	29	(171)	444
Other comprehensive (loss) income	(38)	37	(170)	458
Net loss	(7,235)	(7,246)	(17,707)	(24,312)
Comprehensive loss, net of tax	$ (7,273)	$ (7,209)	$ (17,877)	$ (23,854)

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,	
	2018	2017
Cash flows from operating activities:		
Net loss	$ (17,707)	$ (24,312)
Adjustments to reconcile net loss to net cash used in operating activities:		
Share-based compensation expense	11,666	10,947
Depreciation	5,505	5,831
Amortization of intangible assets	1,026	1,026
Amortization of deferred financing costs	341	198
Loss on disposal of property and equipment	106	95
Realized loss (gain) from foreign exchange on intercompany transactions	94	(163)
(Accretion) amortization of investments	(121)	42
Change in allowance for doubtful accounts	419	(149)
Change in value of contingent consideration	(6,696)	—
Payment of contingent consideration in excess of purchase accounting amount	(96)	—
Changes in operating assets and liabilities:		
Accounts receivable	(727)	(1,030)
Inventories	110	(4,632)
Other current assets	(425)	477
Accounts payable	(1,492)	55
Accrued liabilities	2,754	1,532
Other noncurrent assets and liabilities	87	(389)
Net cash used in operating activities	(5,156)	(10,472)
Cash flows from investing activities:		
Purchases of available-for-sale securities	(29,995)	(12,769)
Sales and maturities of available-for-sale securities	20,539	20,600
Purchases of property and equipment	(5,128)	(5,135)
Proceeds from sale of property and equipment	6	—
Net cash (used in) provided by investing activities	(14,578)	2,696
Cash flows from financing activities:		
Proceeds from debt borrowings	17,381	—
Payments on debt and capital leases	(1,608)	(365)
Payment of debt fees	(1,136)	(50)
Shares repurchased for payment of taxes on stock awards	(4,422)	(1,991)
Proceeds from exercise of stock options and employee stock purchase plan	6,957	5,375
Payments of contingent consideration amounts established in purchase accounting	(1,125)	—
Net cash provided by financing activities	16,047	2,969
Effect of exchange rate changes on cash and cash equivalents	(123)	43
Net decrease in cash and cash equivalents	(3,810)	(4,764)
Cash and cash equivalents—beginning of period	21,809	24,208
Cash and cash equivalents—end of period	$ 17,999	$ 19,444
Supplemental cash flow information:		
Cash paid for interest	$ 2,743	$ 1,497
Cash paid for income taxes	45	37
Non-cash investing and financing activities:		
Accrued purchases of property and equipment	335	263
Assets acquired through capital lease	24	2
Share-settled portion of contingent consideration	6,279	—
Capital lease asset early termination	(6)	—

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" 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, 2017 filed with the SEC.

Cash Equivalents—The Company considers highly liquid investments with maturities of three months or less at the date of purchase as cash equivalents.

Investments—The Company invests primarily in U.S. Government 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 or expense.

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 8 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 through consideration of a combination of specific identification and historical experience. Increases to the provision result in a reduction of revenue. The provision is included in accrued liabilities.

Allowance for Doubtful Accounts Receivable—The Company evaluates the collectability of accounts receivable to determine the appropriate allowance for doubtful accounts considering the aging of accounts, historical credit losses, customer-specific information and other relevant factors. Increases to the allowance result in an increase in selling, general and administrative expenses. The Company adjusts the allowance based on current circumstances and charges off uncollectible receivables against the allowance after exhausting collection efforts. The Company's history of write-offs against the allowance 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). The Company's industry is characterized by rapid product development and frequent new product introductions. Uncertain timing of regulatory approval, variability in product launch strategies and variation in product use cause the Company to maintain reserves for excess, obsolete, and expired products. Increases to inventory reserves result in an increase in cost of revenue. Inventories are written off against reserves when they are physically disposed. Inventories consist of the following:

	September 30, 2018	December 31, 2017
Raw materials	$ 8,817	$ 7,755
Work in process	2,658	1,299
Finished goods	10,783	13,397
Inventories	$ 22,258	$ 22,451

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

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 capital 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 capital leases	3 - 5 years

The Company assesses the useful lives of property and equipment at least annually and retires assets once 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 of generators and related equipment, which is recorded in cost of revenue, was $783 and $877 the three months ended September 30, 2018 and 2017 and $2,424 and $2,702 for the nine months ended September 30, 2018 and 2017. As of September 30, 2018 and December 31, 2017, the net carrying value of generators and related equipment included in net property and equipment was $4,724 and $4,656.

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 a business combination that has not yet reached technological feasibility. The primary basis for determining technological feasibility is obtaining specific regulatory approval. IPR&D is accounted for as an indefinite-lived intangible asset until completion or abandonment of the IPR&D project. Upon completion, IPR&D will be amortized over the estimated period benefited. If abandoned, IPR&D would be written off. IPR&D represents an estimate of the fair value of the pre-market approval (PMA) that may result from the CONVERGE IDE clinical trial.

The Company reviews intangible assets for impairment at least annually using its best estimates based on reasonable and supportable assumptions and projections. The Company has historically tested IPR&D for impairment on November 30.

Goodwill—Goodwill represents the excess of purchase price over the fair value of the net assets acquired in business combinations. The Company has historically tested goodwill for impairment annually on November 30, or more often if impairment indicators are present. The Company's goodwill is accounted for in a single reporting unit representing the Company's consolidated operations.

Other Noncurrent Liabilities—Other noncurrent liabilities consist primarily of acquisition-related contingent consideration.

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 denominated 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

(In Thousands, Except Per Share Amounts)

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, taxable income in carry-back years 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.

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 effect of 3,945 and 4,311 stock options, restricted stock shares, restricted stock units and performance award shares as of September 30, 2018 and 2017 because they are anti-dilutive. 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 losses on investments.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Total accumulated other comprehensive (loss) income at beginning of period	$ (98)	$ (47)	$ 34	$ (468)
Unrealized Losses on Investments				
Balance at beginning of period	$ (13)	$ (15)	$ (6)	$ (21)
Other comprehensive income	8	8	1	14
Balance at end of period	$ (5)	$ (7)	$ (5)	$ (7)
Foreign Currency Translation Adjustment				
Balance at beginning of period	$ (85)	$ (32)	$ 40	$ (447)
Other comprehensive (loss) income	(84)	182	(265)	607
Reclassification of accumulated other comprehensive income (loss) to other income (expense)	38	(153)	94	(163)
Balance at end of period	$ (131)	$ (3)	$ (131)	$ (3)
Total accumulated other comprehensive (loss) income at end of period	$ (136)	$ (10)	$ (136)	$ (10)

Research and Development Costs—Research and development costs are expensed as incurred. These costs include compensation and other 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, 2018 and 2017.

Share-Based Compensation—The Company records compensation for all employee share-based payment awards, including stock options, restricted stock, restricted stock units, performance shares and stock purchases related to an employee stock purchase plan, based on estimated fair values. 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 $4,242 and $3,622 for the three months ended September 30, 2018 and 2017 and $11,666 and $10,947 for the nine months ended September 30, 2018 and 2017.

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 including, but 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, restricted stock units and performance shares based upon the grant date closing market price of the Company's common stock.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
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(Unaudited)

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 in the period and the fair value of the shares based upon the Company's stock price on the first day 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 stock purchase.

Use of Estimates—The preparation of the financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and disclosure of contingencies in the financial statements. Actual results could differ from those estimates.

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 today's accounting. The guidance is effective for interim and annual reporting periods beginning within 2019. An entity is required to use a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest comparative period in the financial statements. Full retrospective application is prohibited. Since the release of ASU 2016-02, the FASB has issued additional clarifying guidance on this topic. The Company is finalizing procedures to validate the completeness of arrangements that meet the new definition of an operating lease, in parallel with our assessment of policy elections, processes and internal controls. While the Company may identify additional impacts this standard will have on its consolidated financial statements and related disclosures, the Company currently believes the most significant change will be related to the recognition of right-of-use assets and lease liabilities. The Company intends to adopt ASU 2016-02 on the effective date of January 1, 2019.

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 annual reporting periods beginning after December 15, 2019 and interim periods within those fiscal years, 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 in this ASU modify the disclosure requirements for fair value measurements. The amendments are effective for all entities for interim and annual reporting periods beginning within 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 amendments in 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 income as that in which the fee associated with the hosting arrangement is presented. The amendments are effective for all entities for interim and annual reporting periods beginning within 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.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

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 defines a three-level valuation hierarchy for classification and disclosure of fair value measurements as follows:

- 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.

The Company classifies cash, investments in U.S. government 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 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, 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	$ —	$ 15,588	$ —	$ 15,588
Commercial paper	—	7,989	—	7,989
U.S. government securities	3,885	—	—	3,885
Corporate bonds	—	6,910	—	6,910
Asset-backed securities	—	3,436	—	3,436
Total assets	$ 3,885	$ 33,923	$ —	$ 37,808
Liabilities:				
Acquisition-related contingent consideration	—	—	22,902	22,902
Total liabilities	$ —	$ —	$ 22,902	$ 22,902

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, 2018.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

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, 2017:

	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	$ —	$ 12,774	$ —	$ 12,774
Commercial paper	—	7,472	—	7,472
U.S. government agencies and securities	2,999	—	—	2,999
Corporate bonds	—	2,920	—	2,920
Total assets	$ 2,999	$ 23,166	$ —	$ 26,165
Liabilities:				
Acquisition-related contingent consideration	—	—	37,098	37,098
Total liabilities	$ —	$ —	$ 37,098	$ 37,098

Acquisition-Related Contingent Consideration. 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 trial enrollment, regulatory approval and revenue targets. 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.

As of August 21, 2018, the Company completed full trial enrollment in the CONVERGE IDE clinical trial. As a result of the achievement of this clinical milestone, the Company made cash payments totaling approximately $1,221 and issued and delivered 232 shares of common stock to the former shareholders of nContact on September 20, 2018. The remaining contingent consideration liability was remeasured as of September 30, 2018, resulting in a decrease in fair value of $780 during the three months ended September 30, 2018. This decrease is primarily due to a decrease in forecasted revenue for the remainder of 2018 under the commercial milestone and a higher discount rate, reflecting increases in market interest rates. During the nine months ended September 30, 2018, adjustments to the fair value of contingent consideration resulted in a decrease to the liability of $6,696. Adjustments to fair value of the contingent consideration are recorded in selling, general and administrative expenses.

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, 2018	Twelve Months Ended December 31, 2017
Beginning Balance	$ 37,098	$ 41,176
Settlement of trial enrollment milestone	(7,500)	—
Changes in fair value included in selling, general and administrative expenses	(6,696)	(4,078)
Ending Balance	$ 22,902	$ 37,098

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

4. INTANGIBLE ASSETS

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

	Estimated Useful Life	September 30, 2018 Cost	September 30, 2018 Accumulated Amortization	December 31, 2017 Cost	December 31, 2017 Accumulated Amortization
Fusion technology	10 years	$ 9,242	$ 4,390	$ 9,242	$ 3,697
SUBTLE access technology	5 years	2,179	1,314	2,179	981
IPR&D		44,021	—	44,021	—
Total		$ 55,442	$ 5,704	$ 55,442	$ 4,678

Amortization expense of intangible assets with definite lives, which excludes IPR&D, was $342 for both the three months ended September 30, 2018 and 2017 and $1,026 for both the nine months ended September 30, 2018 and 2017.

Amortization expense of intangible assets with definite lives is projected as follows:

2018	$ 342	October 1, 2018 through December 31, 2018
2019	1,367	
2020	1,235	
2021	924	
2022	924	
2023 and thereafter	925	
Total	$ 5,717	

5. ACCRUED LIABILITIES

Accrued liabilities consisted of the following:

	September 30, 2018	December 31, 2017
Accrued bonus	$ 6,992	$ 4,726
Accrued commissions	6,361	6,964
Accrued payroll and employee-related expenses	4,980	4,097
Sales returns and allowances	1,362	1,169
Other accrued liabilities	716	695
Accrued royalties	636	626
Accrued taxes	551	634
Total	$ 21,598	$ 18,911

6. INDEBTEDNESS

Credit Facility. The Company has a Loan and Security Agreement (Loan Agreement) with Silicon Valley Bank (SVB). The Loan Agreement, as amended and restated effective February 23, 2018, includes a $40,000 term loan and a $20,000 revolving line of credit, with an option to increase the revolving line of credit by up to an additional $20,000. The term loan and revolving line of credit each have a five-year term, maturing or expiring, as applicable, in February 2023.

Principal payments of the term loan are to be made ratably commencing eighteen months after the inception of the loan (September 2019) through the loan's maturity date. If the Company meets certain conditions, as specified by the Loan Agreement, the commencement of term loan principal payments may be deferred by an additional six months. The term loan accrues interest at the greater of the Prime Rate plus 3.75%, or 8.25%, and is subject to an additional 3.5% fee on the original $40,000 term loan principal payable at maturity or upon acceleration or prepayment of the term loan. The Company is accruing the 3.5% fee over the term of the Loan Agreement. As of September 30, 2018, the Company accrued $163 of this fee, reflected in the outstanding loan balance.

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

Financing costs related to the term loan of $657 are netted against the outstanding loan balance as of September 30, 2018, and amortized ratably over the term of the Loan Agreement.

The revolving line of credit is subject to an annual facility fee of 0.33% of the revolving line of credit, and any borrowings bear interest at the greater of the Prime Rate or 4.50%. 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. As of September 30, 2018, the Company had no borrowings under the revolving credit facility and had borrowing availability of $18,750. 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 contains prepayment and early termination fees and establishes a financial covenant related to sales growth, along with other customary terms and conditions. Specified assets have been pledged as collateral.

Capital Lease Obligations. As of September 30, 2018, the Company leases its corporate headquarters building and certain equipment under capital leases that expire at various terms through 2030. Capital lease assets are depreciated over their estimated useful lives. As of September 30, 2018, the cost of the leased assets, both building and equipment, was $14,462, and related accumulated amortization was $2,949.

In connection with the terms of the corporate headquarters lease, the Company issued a $1,250 letter of credit to the building lessor in October 2015. The letter of credit is renewed annually and remained outstanding as of September 30, 2018.

Future maturities of long-term debt, including the term loan fee payable at maturity, and capital lease obligations are projected as follows:

2018	$	372	October 1, 2018 through December 31, 2018
2019		5,303	
2020		12,943	
2021		12,947	
2022		12,968	
2023 and thereafter		16,260	
Total payments	$	60,793	
Imputed interest		(6,450)	
Net long-term debt and capital lease obligations, of which $1,559 is current and $52,784 is noncurrent	$	54,343	

7. COMMITMENTS AND CONTINGENCIES

Lease Commitments. The Company leases certain office and warehouse facilities under noncancelable operating leases with various terms that expire through 2022.

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 to at least twenty years, unless terminated earlier. Royalty expense of $661 and $537 is included in cost of revenue for the three months ended September 30, 2018 and 2017. Royalty expense of $2,028 and $1,673 is included in cost of revenue for the nine months ended September 30, 2018 and 2017.

Purchase Agreements. The Company enters into standard purchase agreements with various suppliers in the ordinary course of business. Outstanding commitments outside of the ordinary course of business were not significant at September 30, 2018.

Legal. The Company may, from time to time, become a party to legal proceedings and receive inquiries from regulators. 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. A liability is recognized when the Company has assessed that a loss is probable and an amount can be reasonably estimated. Costs associated with legal proceedings could have a material adverse effect on the Company's future consolidated results of operations, financial position, or cash flows.

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 USDOJ with documents and answers to the written interrogatories, and is cooperating with the 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 report delivered in February 2018, the Company received a letter from the representative on March 16, 2018. The letter purports to serve as an "earnout objection statement" (as that term is defined in the merger agreement) and claims that for purposes of determining the commercial milestone payment, the Company should be including revenues of certain additional items and products that the Company has not previously included in its earnout statements. The Company has corresponded with the representative regarding the earnout objection statement and disputed the basis of the representative's claims.

8. 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 and timing of revenue recognized in the Condensed Consolidated Financial Statements.

Revenue is generated primarily from the sale of disposable surgical 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 surgical 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-heart 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 certain 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 of a 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 estimated provisions for returns based on 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 11 for disaggregated revenue by geographic area and by product category.

9. 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, 2018 and 2017 was (0.71%) and (0.36%). The effective tax rate for the nine months ended September 30, 2018 and 2017 was (0.84%) and (0.27%).

The Tax Cuts and Jobs Act (TCJA) was enacted on December 22, 2017. The TCJA reduces the United States federal corporate income tax rate from 35% to 21%, along with other changes to tax law. As a result of the Company's valuation allowance on its net U.S. deferred tax assets, the TCJA did not have an impact on the effective tax rate for the three and nine months ended September 30, 2018 as compared to September 30, 2017.

The Company is applying the guidance in Staff Accounting Bulletin No. 118, "Income Tax Accounting Implications of the Tax Cut and Jobs Act" (SAB 118) when accounting for the enactment-date effects of the TCJA. As of September 30, 2018, the Company has not adjusted the provisional amounts recognized as of December 31, 2017. The provisional amounts recorded may be affected as the Company completes additional analysis of the tax law provisions. These changes are not anticipated to be material to the Company's Condensed Consolidated Financial Statements as a result of a full valuation allowance against substantially all the Company's net U.S. deferred tax assets.

Federal, state and local tax 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 of 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.

10. 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 nonstatutory stock options, restricted stock, restricted stock units, performance shares or stock appreciation rights to employees, directors and consultants. The administrator (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, 2018, 11,099 shares of common stock had been reserved for issuance under the 2014 Plan, and 1,322 shares were available for future grants.

Effective March 1, 2018, the Compensation Committee of the Board approved the grant of performance share awards (2018 PSAs) to the Company's named executive officers and certain other executive employees pursuant to the Company's 2014 Stock Incentive Plan. The form of award agreement for the 2018 PSAs (2018 PSA Grant Form) provides, among other things, that (i) each 2018 PSA that vests represents the right to receive one share of the Company's common stock; (ii) the 2018 PSAs vest based on the

(In Thousands, Except Per Share Amounts)

Company achieving specified performance measurements over a performance period of three years, beginning January 1, 2018; (iii) the performance measurements include revenue CAGR as defined in the 2018 PSA Grant Form; (iv) threshold, target and maximum payout opportunities established for the 2018 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 2018 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 2018 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 2018 PSA Grant Form).

With respect to the 2018 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 of the Board. The Company estimated the fair value of the 2018 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 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 and four years from the date of grant. Beginning in 2018, stock options, restricted stock awards, and restricted stock units granted generally vest in one-third increments on the first, second and third anniversaries of the grant date.

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 more than 3 shares during an offering period. As of September 30, 2018, there were 636 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,	
	2018	2017	2018	2017
Cost of revenue	$ 765	$ 179	$ 1,240	$ 448
Research and development expenses	426	512	1,378	1,515
Selling, general and administrative expenses	3,051	2,931	9,048	8,984
Total	$ 4,242	$ 3,622	$ 11,666	$ 10,947

ATRICURE, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In Thousands, Except Per Share Amounts)
(Unaudited)

11. 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, was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
United States	$ 39,764	$ 33,394	$ 119,034	$ 102,196
Europe	6,382	5,096	18,947	15,973
Asia	3,601	3,493	10,089	9,929
Other international	194	167	667	556
Total international	10,177	8,756	29,703	26,458
Total revenue	$ 49,941	$ 42,150	$ 148,737	$ 128,654

United States revenue by product type was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Open-heart ablation	$ 17,948	$ 15,351	$ 53,600	$ 47,846
Minimally invasive ablation	7,877	9,049	25,604	26,056
Appendage management	13,487	8,471	38,385	26,636
Total ablation and appendage management	39,312	32,871	117,589	100,538
Valve tools	452	523	1,445	1,658
Total United States	$ 39,764	$ 33,394	$ 119,034	$ 102,196

International revenue by product type was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2018	2017	2018	2017
Open-heart ablation	$ 5,437	$ 5,255	$ 16,182	$ 15,519
Minimally invasive ablation	2,355	1,766	6,807	5,859
Appendage management	2,318	1,653	6,540	4,825
Total ablation and appendage management	10,110	8,674	29,529	26,203
Valve tools	67	82	174	255
Total international	$ 10,177	$ 8,756	$ 29,703	$ 26,458

The Company's long-lived assets are located primarily in the United States, except for $1,148 as of September 30, 2018 and $957 as of December 31, 2017, which are located primarily in Europe.

12. SUBSEQUENT EVENT

On October 3, 2018 the Company announced the commencement of an underwritten public offering of 2,500 shares of its common stock pursuant to its existing shelf registration statement. The Company also provided the underwriters with a 30-day option to purchase up to 375 additional shares of common stock. The Company issued 2,875 shares of common stock and received proceeds of $83,102, which was net of underwriting discounts and commissions, upon closing of the offering on October 10, 2018.

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, 2017 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, 2017. 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 longstanding 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 cardiac and thoracic surgery. Our cryoICE® cryosurgery product line offers a variety of cryoablation devices for use in various types of cardiothoracic surgery. Our AtriClip® Left Atrial Appendage Exclusion System is a device specifically designed to occlude the heart's left atrial appendage.

Physicians have adopted our radiofrequency (RF) ablation and cryoablation systems to treat Afib, and we believe that we are currently the market leader in the surgical treatment of Afib. Our products are used by physicians during both open-heart and minimally invasive surgical procedures, either on a concomitant or standalone basis. During a concomitant procedure, the physician ablates cardiac tissue and/or occludes the LAA, secondary, or concomitant, to a primary structural heart procedure such as a valve repair or replacement or coronary artery bypass graft (CABG). Our Isolator Synergy 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 cleared for sale in the United States under FDA 510(k) clearances, including our other RF and cryoablation products, which are indicated for the ablation of cardiac tissue and/or treatment of cardiac arrhythmias. In addition, our cryoICE probe is cleared for managing pain by temporarily ablating peripheral nerves. Our AtriClip products are 510(k)-cleared with an indication for the occlusion 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 have a line of reusable surgical instruments typically used for cardiac valve replacement or repair. Our Isolator Synergy clamps, Isolator Synergy pens, Coolrail® linear pen, cryosurgery devices, AtriClip LAA Exclusion System, COBRA® Fusion Ablation System, Numeris System and the EPi-Sense® Guided Coagulation System with VisiTrax® technology 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 directives. 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 customers, which are transacted in Euros or British Pounds.

Recent Developments

Clinical trials are required to support a pre-market approval (PMA) and are sometimes required for 510(k) clearance. In the United States, clinical trials for a significant risk device require the prior submission of an application for an Investigational Device Exemption (IDE) to FDA for approval. An IDE application must be submitted before initiating a new clinical trial. Some trials require a feasibility study followed by a pivotal trial. An IDE supplement is requested as 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 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 follow-up on patients for 12 months post procedure for the primary effectiveness endpoint assessment and long-term follow-up through 5 years.

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 the second quarter of 2018. We are analyzing preliminary data obtained from this trial.

FROST. We are conducting a cryoanalgesia study, which is a non-IDE randomized pilot study evaluating whether intraoperative intercostal cryoanalgesia in conjunction with standard of care provides improved analgesic efficacy in patients undergoing unilateral thoracotomy cardiac procedures as compared to the current standard of care. 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 remains ongoing.

DEEP AF Pivotal Study. The DEEP AF 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 provides for enrollment of up to 220 patients at 23 U.S. medical centers and two international medical centers. The trial was paused during 2016-2017 due to our work to mitigate the risk related to esophageal injury during the procedure. We are committed to patient safety, and we are working collaboratively with FDA to obtain final clearance to move toward full enrollment of the trial.

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. The study protocol provides for 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 effectiveness of the cryoICE® system and the AtriClip® Left Atrial Appendage Exclusion System for persistent and long-standing persistent atrial fibrillation treatment during concomitant on-pump cardiac surgery. The trial provides for enrollment of up to 150 subjects at up to 20 sites in the U.S. We received conditional approval from FDA to proceed with the ICE-AFIB trial in August 2018, and we have responded to the conditions of approval.

Results of Operations

Three months ended September 30, 2018 compared to three months ended September 30, 2017

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,			
	2018		2017	
	Amount	% of Revenues	Amount	% of Revenues
Revenue	$ 49,941	100.0 %	$ 42,150	100.0 %
Cost of revenue	13,993	28.0 %	11,232	26.6 %
Gross profit	35,948	72.0 %	30,918	73.4 %
Operating expenses:				
Research and development expenses	8,556	17.1 %	7,966	18.9 %
Selling, general and administrative expenses	33,440	67.0 %	29,799	70.7 %
Total operating expenses	41,996	84.1 %	37,765	89.6 %
Loss from operations	(6,048)	(12.1) %	(6,847)	(16.2) %
Other income (expense):				
Interest expense	(1,246)	(2.5) %	(576)	(1.4) %
Interest income	151	0.3 %	58	0.1 %
Other	(41)	(0.1) %	145	0.3 %
Total other expense	(1,136)	(2.3) %	(373)	(0.9) %
Loss before income tax expense	(7,184)	(14.4) %	(7,220)	(17.1) %
Income tax expense	51	0.1 %	26	0.1 %
Net loss	$ (7,235)	(14.5) %	$ (7,246)	(17.2) %

Revenue. Revenue increased 18.5% (18.6% on a constant currency basis). Revenue from customers in the United States increased $6,370, or 19.1%, and revenue from international customers increased $1,421, or 16.2% (16.9% on a constant currency basis). Sales growth in the United States was driven primarily from Open and Appendage Management products. Ablation-related open-heart sales increased $2,597, or 16.9%, primarily due to volume growth in both RF and cryoablation product lines. Ablation-related minimally invasive (MIS) sales decreased by $1,172 as a result of declines across key MIS product lines and in comparison to a strong third quarter of 2017. Appendage management sales increased $5,016 or 59.2%, due to increased volume across product lines, and contribution from the AtriClip PRO·V LAA Exclusion System device, which launched in the third quarter of 2017, and the AtriClip FLEX·V® LAA Exclusion System, which launched in the first quarter of 2018. International revenue grew primarily in Germany, the United Kingdom, France, and Australia. The overall increase in international revenue is a result of increased volumes in appendage management, cryoablation and MIS products.

Revenue reported on a constant currency basis is a non-GAAP measure and is calculated by applying previous period foreign currency 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 $2,761 and gross margin decreased 1.4%, from 73.4% in 2017 to 72.0% in 2018. The decrease in gross margin was driven by an increase in share-based compensation expense of $586, resulting from an acceleration of vesting of certain stock awards. Additionally, 2018 included a higher volume of lower-margin capital equipment sales than 2017.

Research and development expenses. Research and development expenses increased $590, or 7.4% due to $517 increase in expenses associated with personnel and related costs, $142 increase in regulatory filings and submissions, and $374 increase in spend on development projects. These increases were partially offset by $355 decrease in clinical trial expenses associated with the varying stages of completion of outstanding trials and $86 decrease in share-based compensation expense.

Selling, general and administrative expenses. Selling, general and administrative expenses increased $3,641, or 12.2% primarily due to $5,024 increase in personnel and related costs, $198 increase in software maintenance and facilities costs, and $163 increase in professional education training expenses. This increase was partially offset by $632 decrease in events and internal meetings, as well as a reduction in product samples, $780 reduction in the contingent consideration liability (see Note 3 for further discussion), $307 decrease in legal expenses primarily on the inclusion of legal settlement costs in 2017, and $282 decrease in various other operating costs, including consulting and professional services.

Net interest expense. Net interest expense of $1,095 includes interest costs associated with our term loan and capital lease obligations, as well as the amortization of financing costs, offset by interest income from investments, including gains and losses on investments sold during the periods. Net interest expense increased $577 from 2017 to 2018, driven by our debt refinancing effective February 2018, which increased outstanding term loan borrowings from $25,000 to $40,000 and increased the borrowing rate on the term loan from the Prime Rate to the greater of the Prime Rate plus 3.75% or 8.25%.

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

Nine months ended September 30, 2018 compared to nine months ended September 30, 2017

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,			
	2018		2017	
	Amount	% of Revenues	Amount	% of Revenues
Revenue	$ 148,737	100.0 %	$ 128,654	100.0 %
Cost of revenue	40,207	27.0 %	35,174	27.3 %
Gross profit	108,530	73.0 %	93,480	72.7 %
Operating expenses:				
Research and development expenses	26,268	17.7 %	26,423	20.5 %
Selling, general and administrative expenses	96,782	65.1 %	89,901	69.9 %
Total operating expenses	123,050	82.7 %	116,324	90.4 %
Loss from operations	(14,520)	(9.8)%	(22,844)	(17.8)%
Other income (expense):				
Interest expense	(3,287)	(2.2)%	(1,694)	(1.3)%
Interest income	350	0.2 %	160	0.1 %
Other	(103)	(0.1)%	132	0.1 %
Total other expense	(3,040)	(2.0)%	(1,402)	(1.1)%
Loss before income tax expense	(17,560)	(11.8)%	(24,246)	(18.8)%
Income tax expense	147	0.1 %	66	0.1 %
Net loss	$ (17,707)	(11.9)%	$ (24,312)	(18.9)%

Revenue. Revenue increased 15.6% (14.7% on a constant currency basis). Revenue from customers in the United States increased $16,838, or 16.5%, and revenue from international customers increased $3,245, or 12.3% (7.9% on a constant currency basis). Sales in the United States grew across key product categories. Ablation-related open-heart sales increased $5,754, or 12.0%, from volume growth in both RF and cryoablation product lines. Ablation-related minimally invasive (MIS) sales decreased $452, or 1.7%, reflecting a decline in legacy MIS and Fusion product and offsetting growth in EPi-Sense. Appendage management sales increased $11,749, or 44.1%, due to increased volume across product lines, as well as, the positive impact of the AtriClip PRO·V LAA Exclusion System device, which launched in the third quarter of 2017, and the AtriClip FLEX·V LAA Exclusion System, which launched in the first quarter of 2018. International revenue grew primarily in Germany, the United Kingdom, Italy, and Japan, offset partially by decreased revenue in China. The overall increase in international revenue is a result of increased volumes in appendage management, cryoablation and MIS products.

Revenue reported on a constant currency basis is a non-GAAP measure and is calculated by applying previous period foreign currency 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 $5,033, and gross margin increased 0.3%. The overall increase in gross margin was driven by both product and geographic mix. Sales in 2018 reflect a slightly higher concentration of higher-margin sales in the United States and direct market in Europe, and a lower contribution to revenue from lower-margin sales to Asia and other distributor markets. Additionally, appendage management products launched in late 2017 and early 2018 are realizing a higher gross margin than legacy appendage management products, partially offsetting $792 increase in share-based compensation expense in 2018.

Research and development expenses. Research and development expenses decreased $155, or -0.6%, primarily due to $677 decrease in compliance-related consulting, a decrease of $137 in share-based compensation expense, and a $524 decrease in clinical trial expenses associated with the varying stages of completion of outstanding trials. These decreases were partially offset by $905 increase in expense from increased headcount, $134 increase in regulatory filings and submissions, and $146 increase in spending on development projects.

Selling, general and administrative expenses. Selling, general and administrative expenses increased $6,881, or 7.7%, primarily due to $11,150 increase in personnel and related expenses, resulting from additional headcount and higher variable compensation expense in 2018, $1,106 increase in legal expenses, $375 increase in professional education expenses; and $593 increase in various other operating costs, including software maintenance and facilities costs. These increases were partially offset by $6,696 reduction in the contingent consideration liability (see Note 3 for further discussion), $789 decrease in expense related to tradeshow events and internal meetings, as well as a reduction in product samples, and $285 decrease in professional services due to timing of services performed.

Net interest expense. Net interest expense increased $1,403, from $1,534 to $2,937. The increase in interest expense was driven by our debt refinancing effective February 2018, which increased outstanding term loan borrowings from $25,000 to $40,000 and increased the borrowing rate on the term loan from the Prime Rate to the greater of the Prime Rate plus 3.75% or 8.25%.

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, 2018 we had cash, cash equivalents and investments of $40,219 and outstanding debt of $40,000. We had unused borrowing capacity of $18,750 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 $54,685 and an accumulated deficit of $243,574 as of September 30, 2018.

Cash flows used in operating activities. Net cash used in operating activities was $5,156 during the nine months ended September 30, 2018. The primary net uses of cash for operating activities were as follows:

- Net loss of $17,707, offset by $12,340 of non-cash expenses, including $11,666 of share-based compensation and $6,531 of depreciation and amortization offset by a change in fair value of contingent consideration of $6,696 and cash payment of contingent consideration in excess of purchase accounting of $96; and
- Net decrease in cash used related to changes in operating assets and liabilities of $307, due primarily to the following:
  - $1,492 use of cash on decreasing accounts payable balance as a result of both timing and taking discount terms on payments to certain key vendors;
  - Increase in other current assets of $425, due primarily to the timing of insurance premium and annual subscription payments;
  - Increase in accounts receivable of $727 due to strong sales volume in the third quarter and the timing of collections; and
  - Offsetting $2,754 increase in accrued expense, which is driven primarily by increased headcount and variable compensation.

Cash flows used in investing activities. Net cash used in investing activities was $14,578 during the nine months ended September 30, 2018. Cash provided by investing activities included $20,539 of maturities of available-for-sale securities, partially offsetting $29,995 of purchases of available-for sale securities. Additionally, purchases of property and equipment, including placement of our RF and cryo generators with customers, totaled $5,128.

Cash flows provided by financing activities. Net cash provided by financing activities during the nine months ended September 30, 2018 was $16,047, which included proceeds from debt borrowings of $17,381 related to the amendment and restatement of our credit facility and $6,957 of proceeds from the exercise of stock options and the employee stock purchase plan, partially offset by shares repurchased for payment of taxes on stock awards of $4,422, debt and capital lease payments of $1,608, payment of debt fees of $1,136, and payment of contingent consideration of $1,125.

Credit facility. Our Loan and Security Agreement with Silicon Valley Bank (SVB), as amended and restated effective February 23, 2018 (Loan Agreement), provides for a $40,000 term loan and a $20,000 revolving line of credit, with an option to increase the revolving line of credit by up to an additional $20,000. Such term loan and revolving line of credit each have a five-year term, maturing or expiring, as applicable, in February 2023. Principal payments of the term loan are to be made ratably commencing eighteen months after the inception of the loan (September 2019) through the loan's maturity date. If we meet certain conditions, as specified by the Loan Agreement, the commencement of term loan principal payments may be deferred by an additional six months. The term loan accrues interest at the greater of the Prime Rate plus 3.75% or 8.25% and is subject to an additional 3.5% fee on the original $40,000 term loan principal amount at maturity or upon acceleration or prepayment of the term loan. The revolving line of credit is subject to an annual facility fee of 0.33% of the revolving line of credit, and any borrowings bear interest at the greater of the

Prime Rate or 4.50%. Borrowing availability under the revolving credit facility is based on the lesser of the line of credit or a borrowing base calculation as defined by the Loan Agreement. As of September 30, 2018 we had no borrowings under the revolving credit facility, and we had borrowing availability of $18,750. The Loan Agreement also contains prepayment and early termination fees and establishes a financial covenant related to sales growth, along with other customary terms and conditions.

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 lessor and remains outstanding as of September 30, 2018.

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; resources to develop and support our products; future resources to expand and support our sales and marketing efforts; costs relating to changes in regulatory policies or laws; 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, as well as other legal matters; and possible 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 this shelf registration statement for the foreseeable future. In October 2018, we completed a public offering of 2,875 shares of our common stock, and received proceeds of $83,102 after underwriting discounts and commissions.

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 and clinical and revenue milestones over the next three years. Subject to the terms and conditions of the nContact merger agreement, such contingent consideration will be paid in AtriCure common stock and cash, with a requirement to make payments in AtriCure common stock first, 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 merger agreement and related milestones. See the heading “Legal” in Note 7 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 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, 2017 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, 2018 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, 2017.

Item 4. Controls and Procedures

Evaluation of 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), 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 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, 2018 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 7 – 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, 2017, 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, 2017.

Table of Contents

Item 6. Exhibits

Exhibit No.	Description
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	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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: November 2, 2018

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

Date: November 2, 2018

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

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: November 2, 2018

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: November 2, 2018

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, 2018 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: November 2, 2018

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, 2018 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: November 2, 2018

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.