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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2018

OR

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

For the transition period from _____ to _____

Commission file number 0-31271

RTI Surgical, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

11621 Research Circle
Alachua, Florida
(Address of principal executive offices)

59-3466543
(I.R.S. Employer
Identification No.)

32615
(Zip Code)

Registrant's telephone number, including area code: (386) 418-8888
(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 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. (Check one):

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

Shares of common stock, \$0.001 par value, outstanding on October 29, 2018: 63,461,700

RTI SURGICAL, INC.
FORM 10-Q For the Quarter Ended September 30, 2018
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RTI SURGICAL, INC. AND SUBSIDIARIES
Condensed Consolidated Balance Sheets
(Unaudited, in thousands, except share data)

	September 30, 2018	December 31, 2017
Assets		
Current Assets:		
Cash and cash equivalents	\$ 10,022	\$ 22,381
Accounts receivable—less allowances of \$1,811 at September 30, 2018 and \$1,471 at December 31, 2017	44,141	35,081
Inventories—net	103,891	111,927
Prepaid and other current assets	8,613	16,285
Total current assets	166,667	185,674
Property, plant and equipment—net	77,344	79,564
Deferred tax assets—net	11,875	9,575
Goodwill	62,864	46,242
Other intangible assets—net	26,197	23,070
Other assets—net	5,150	1,781
Total assets	<u>\$ 350,097</u>	<u>\$ 345,906</u>
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable	\$ 19,282	\$ 18,252
Accrued expenses	22,121	25,610
Current portion of deferred revenue	4,990	4,868
Current portion of short and long-term obligations	—	4,268
Total current liabilities	46,393	52,998
Long-term obligations—less current portion	49,021	42,076
Other long-term liabilities	5,759	1,431
Deferred revenue	1,968	3,741
Total liabilities	103,141	100,246
Preferred stock Series A, \$.001 par value: 5,000,000 shares authorized; 50,000 shares issued and outstanding	66,180	63,923
Stockholders' equity:		
Common stock, \$.001 par value: 150,000,000 shares authorized; 63,461,700 and 62,694,441 shares issued and outstanding, respectively	63	63
Additional paid-in capital	432,077	429,459
Accumulated other comprehensive loss	(6,980)	(6,329)
Accumulated deficit	(239,515)	(237,066)
Less treasury stock, 1,221,180 and 1,114,071 shares, respectively, at cost	(4,869)	(4,390)
Total stockholders' equity	180,776	181,737
Total liabilities and stockholders' equity	<u>\$ 350,097</u>	<u>\$ 345,906</u>

See notes to unaudited condensed consolidated financial statements.

Part I Financial Information

Item 1. Unaudited Condensed Consolidated Financial Statements

RTI SURGICAL, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Comprehensive Income (Loss)
(Unaudited, in thousands, except share and per share data)

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Revenues	\$ 69,064	\$ 66,688	\$ 209,639	\$ 208,747
Costs of processing and distribution	31,409	33,177	108,262	102,494
Gross profit	<u>37,655</u>	<u>33,511</u>	<u>101,377</u>	<u>106,253</u>
Expenses:				
Marketing, general and administrative	29,671	27,678	87,326	86,845
Research and development	3,606	2,801	10,297	10,229
Severance and restructuring costs	824	2,820	1,708	10,623
Asset impairment and abandonments	104	—	4,748	—
Acquisition and integration expenses	1,941	—	2,741	—
Cardiothoracic closure business divestiture contingency consideration	(3,000)	—	(3,000)	—
Gain on cardiothoracic closure business divestiture	—	(34,090)	—	(34,090)
Total operating expenses	<u>33,146</u>	<u>(791)</u>	<u>103,820</u>	<u>73,607</u>
Operating income (loss)	<u>4,509</u>	<u>34,302</u>	<u>(2,443)</u>	<u>32,646</u>
Other (expense) income:				
Interest expense	(611)	(741)	(2,223)	(2,475)
Interest income	14	—	31	—
Loss on extinguishment of debt	—	—	(309)	—
Foreign exchange (loss) gain	(1)	60	(23)	5
Total other expense—net	<u>(598)</u>	<u>(681)</u>	<u>(2,524)</u>	<u>(2,470)</u>
Income (loss) before income tax (provision) benefit	3,911	33,621	(4,967)	30,176
Income tax (provision) benefit	(807)	(16,135)	1,646	(16,251)
Net income (loss)	<u>3,104</u>	<u>17,486</u>	<u>(3,321)</u>	<u>13,925</u>
Convertible preferred dividend	(173)	(938)	(2,120)	(2,772)
Net income (loss) applicable to common shares	<u>2,931</u>	<u>16,548</u>	<u>(5,441)</u>	<u>11,153</u>
Other comprehensive (loss) gain:				
Unrealized foreign currency translation (loss) gain	(130)	434	(651)	1,847
Comprehensive (loss) gain	<u>\$ 2,801</u>	<u>\$ 16,982</u>	<u>\$ (6,092)</u>	<u>\$ 13,000</u>
Net income (loss) per common share—basic	<u>\$ 0.05</u>	<u>\$ 0.28</u>	<u>\$ (0.09)</u>	<u>\$ 0.19</u>
Net income (loss) per common share—diluted	<u>\$ 0.04</u>	<u>\$ 0.23</u>	<u>\$ (0.09)</u>	<u>\$ 0.19</u>
Weighted average shares outstanding—basic	<u>63,495,952</u>	<u>59,704,533</u>	<u>63,517,958</u>	<u>59,045,372</u>
Weighted average shares outstanding—diluted	<u>79,284,315</u>	<u>75,188,161</u>	<u>63,517,958</u>	<u>59,954,964</u>

See notes to unaudited condensed consolidated financial statements.

RTI SURGICAL, INC. AND SUBSIDIARIES
Condensed Consolidated Statement of Stockholders' Equity
(Unaudited, in thousands)

	Common Stock	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Treasury Stock	Total
Balance, December 31, 2017	\$ 63	\$429,459	\$ (6,329)	\$ (237,066)	\$(4,390)	\$181,737
Accumulated effect of adoption of the revenue recognition standard	—	—	—	872	—	872
Net loss	—	—	—	(3,321)	—	(3,321)
Foreign currency translation adjustment	—	—	(651)	—	—	(651)
Exercise of common stock options	—	1,225	—	—	—	1,225
Stock-based compensation	—	3,650	—	—	—	3,650
Purchase of treasury stock	—	—	—	—	(479)	(479)
Amortization of preferred stock Series A issuance costs	—	(137)	—	—	—	(137)
Preferred stock Series A dividend	—	(2,120)	—	—	—	(2,120)
Balance, September 30, 2018	<u>\$ 63</u>	<u>\$432,077</u>	<u>\$ (6,980)</u>	<u>\$ (239,515)</u>	<u>\$(4,869)</u>	<u>\$180,776</u>

See notes to unaudited condensed consolidated financial statements.

RTI SURGICAL, INC. AND SUBSIDIARIES
Condensed Consolidated Statements of Cash Flows
(Unaudited, in thousands)

	<u>Three Months Ended</u> <u>September 30,</u>		<u>Nine Months Ended</u> <u>September 30,</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Cash flows from operating activities:				
Net income (loss)	\$ 3,104	\$ 17,486	\$ (3,321)	\$ 13,925
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:				
Depreciation and amortization expense	3,726	3,575	10,794	10,704
Provision for bad debts and product returns	351	256	845	816
Provision for inventory write-downs	2,041	735	12,906	4,488
Amortization of deferred revenue	(1,217)	(1,141)	(3,652)	(3,601)
Deferred income tax provision (benefit)	1,457	5,873	(1,214)	5,312
Stock-based compensation	1,080	2,203	3,650	4,011
Asset impairment and abandonments	104	—	4,748	—
Cardiothoracic closure business divestiture contingency consideration	(3,000)	—	(3,000)	—
Gain on cardiothoracic closure business divestiture	—	(34,090)	—	(34,090)
Other	118	602	728	1,475
Change in assets and liabilities:				
Accounts receivable	1,053	2,642	(6,587)	4,770
Inventories	(5,432)	(998)	(5,843)	(831)
Accounts payable	4,629	(6,725)	826	(5,727)
Accrued expenses	(1,825)	(728)	(4,417)	(2,112)
Deferred revenue	—	—	2,000	2,000
Other operating assets and liabilities	(4,560)	(3,161)	2,544	(3,998)
Net cash provided by (used in) operating activities	<u>1,629</u>	<u>(13,471)</u>	<u>11,007</u>	<u>(2,858)</u>
Cash flows from investing activities:				
Purchases of property, plant and equipment	(3,250)	(3,198)	(7,106)	(10,358)
Patent and acquired intangible asset costs	(2,070)	(279)	(2,798)	(2,124)
Acquisition of Zyga Technology	—	—	(21,000)	—
Cardiothoracic closure business divestiture	3,000	51,000	3,000	51,000
Net cash (used in) provided by investing activities	<u>(2,320)</u>	<u>47,523</u>	<u>(27,904)</u>	<u>38,518</u>
Cash flows from financing activities:				
Proceeds from exercise of common stock options	905	297	2,334	1,872
Proceeds from long-term obligations	—	2,000	74,425	6,000
Payments on long-term obligations	(4,421)	(32,000)	(71,171)	(39,375)
Other financing activities	(9)	(315)	(1,035)	(457)
Net cash (used in) provided by financing activities	<u>(3,525)</u>	<u>(30,018)</u>	<u>4,553</u>	<u>(31,960)</u>
Effect of exchange rate changes on cash and cash equivalents	(8)	35	(15)	195
Net increase (decrease) in cash and cash equivalents	(4,224)	4,069	(12,359)	3,895
Cash and cash equivalents, beginning of period	14,246	13,675	22,381	13,849
Cash and cash equivalents, end of period	<u>\$10,022</u>	<u>\$ 17,744</u>	<u>\$ 10,022</u>	<u>\$ 17,744</u>
Supplemental cash flow disclosure:				
Cash paid for interest	\$ 543	\$ 329	\$ 2,517	\$ 2,632
Cash paid for income taxes (refunds received)	39	12,000	(6,659)	12,032
Non-cash acquisition of property, plant and equipment	455	473	471	498
Stock-based compensation related to sale of CT business	—	102	—	102
Increase in accrual for dividend payable	173	938	2,120	2,772

See notes to unaudited condensed consolidated financial statements.

RTI SURGICAL, INC. AND SUBSIDIARIES
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share data)

1. Operations and Organization

RTI Surgical is a global surgical implant company that designs, develops, manufactures and distributes biologic, metal and synthetic implants. The Company's implants are used in orthopedic, spine, sports medicine, plastic surgery, trauma and other surgical procedures to repair and promote the natural healing of human bone and other human tissues and improve surgical outcomes. The Company manufactures metal and synthetic implants and processes donated human musculoskeletal and other tissue and bovine and porcine animal tissue in producing allograft and xenograft implants using its proprietary BIOCLEANSER®, TUTOPLAST® and CANCELLE® SP sterilization processes. The Company processes tissue at its facilities in Alachua, Florida and Neunkirchen, Germany and manufactures metal and synthetic implants in Marquette, Michigan and Greenville, North Carolina, respectively. The Company is accredited in the U.S. by the American Association of Tissue Banks and the Company is a member of AdvaMed. The Company's implants are distributed directly to hospitals and free-standing surgery centers throughout the U.S. and in more than 40 countries worldwide with the support of both its and third-party representatives as well as through larger purchasing companies.

2. Basis of Presentation

The accompanying unaudited condensed consolidated financial statements include all adjustments, consisting of normal recurring accruals, which the Company considers necessary for a fair presentation of the results of operations for the periods shown. The condensed consolidated financial statements have been prepared in accordance with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X, and, therefore, do not include all information and footnotes necessary for a fair presentation of consolidated financial position, results of operations, comprehensive loss and cash flows in conformity with accounting principles generally accepted in the United States of America ("GAAP"). All intercompany balances and transactions have been eliminated in consolidation. The results of operations for any interim period are not necessarily indicative of the results to be expected for the full year. For further information, refer to the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

The condensed consolidated financial statements include the accounts of RTI Surgical, Inc. and its wholly owned subsidiaries, Pioneer Surgical Technology, Inc. ("Pioneer"), Tutogen Medical, Inc. ("TMI"), Zyga Technology, Inc. ("Zyga"), RTI Surgical, Inc. – Cardiovascular (inactive), Biological Recovery Group, Inc. (inactive) and RTI Services, Inc. (inactive). The condensed consolidated financial statements also include the accounts of RTI Donor Services, Inc. ("RTIDS"), which is a controlled entity.

3. Recently Issued and Adopted Accounting Standards

Fair Value Measurement — In August 2018, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Codification ("ASU") 2018-13, "*Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement.*" This ASU modifies the disclosure requirements on fair value measurements by removing, modifying, or adding certain disclosures. ASU 2018-13 is effective for the Company beginning December 1, 2020 (with early adoption permitted). Certain disclosures in ASU 2018-13 are required to be applied on a retrospective basis and others on a prospective basis. The Company is evaluating the effect that this ASU will have on its condensed consolidated financial statements.

Compensation—Stock Compensation — In May 2017, the FASB issued ASU 2017-09, "*Compensation—Stock Compensation*" (Topic 718): Scope of Modification Accounting. The requirement provides guidance on determining which changes to the terms and conditions of share-based payment awards require an entity to apply modification accounting under Topic 718. For public business entities, this ASU is effective for annual periods, including interim periods within those annual periods, beginning after December 15, 2017. The Company adopted ASU 2017-09 on January 1, 2018 and it did not have an impact on its condensed consolidated financial statements.

Other Income—Gains and Losses from the Derecognition of Nonfinancial Assets — In February 2017, the FASB issued ASU 2017-05, "*Other Income—Gains and Losses from the Derecognition of Nonfinancial Assets*" (Subtopic 610-20): Clarifying the Scope of Asset Derecognition Guidance and Accounting for Partial Sales of Nonfinancial Assets. This ASU requires all entities to derecognize a business or nonprofit activity in accordance with Topic 810, and requires that all entities derecognize an equity method investment in accordance with Topic 860. The amendments in this ASU eliminate the scope exceptions, and simplifies GAAP. This ASU is effective for fiscal years beginning after December 15, 2017, including interim reporting periods

within that reporting period. Public entities may apply the guidance earlier but only as of annual reporting periods beginning after December 15, 2016, including interim reporting periods within that reporting period. The Company adopted ASU 2017-05 on January 1, 2018 and it did not have an impact on its condensed consolidated financial statements.

Business Combinations – Clarifying the Definition of a Business — In January 2017, FASB issued ASU No. 2017-01, “*Business Combinations – Clarifying the Definition of a Business*” (Topic 805) (“ASU No. 2017-01”). ASU 2017-01 provides a framework to use in determining when a set of assets and activities is a business. ASU 2017-01 provides more consistency in applying the business combination guidance, reduces the costs of application, and makes the definition of a business more operable. ASU 2017-01 is effective for interim and annual periods within those annual periods beginning after December 15, 2017. The Company adopted ASU 2017-01 on January 1, 2018 and it did not have an impact on its condensed consolidated financial statements.

Leases — In February 2016, the FASB issued ASU No. 2016-02 (“ASU 2016-02”), *Leases (Topic 842)*, which supersedes existing guidance on accounting for leases in “*Leases (Topic 840)*” and requires the recognition of lease assets and lease liabilities by lessees for those leases classified as operating leases under previous U.S. GAAP. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. A lessee should recognize in the statement of financial position a liability to make lease payments (the lease liability) and a right-of-use asset representing its right to use the underlying asset for the lease term. The provisions of ASU 2016-02 are effective for reporting periods beginning after December 15, 2018; early adoption is permitted. The provisions of this ASU are to be applied using a modified retrospective approach. The Company has begun its assessment of the impact of adopting ASU 2016-02, and expects to complete that process during the fourth quarter of 2018. The Company expects the adoption of ASU 2016-02 to result in an increase in right-of-use assets and lease liabilities on its condensed consolidated financial statements related to its leases that are currently classified as operating leases, primarily for office space.

Revenue from Contracts with Customers — On January 1, 2018, the Company adopted a new accounting standard issued by the FASB on revenue recognition using the modified retrospective method. This new accounting standard outlines a single comprehensive model to use in accounting for revenue arising from contracts with customers. This standard supersedes existing revenue recognition requirements and eliminates most industry-specific guidance from GAAP. The core principle of the new accounting standard is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In addition, the adoption of this new accounting standard resulted in increased disclosure, including qualitative and quantitative disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts with customers. The new accounting standard was applied to all contracts, apart from contracts for which all or substantially all revenue was recognized before January 1, 2018. Additionally, the Company elected to account for shipping and handling activities as a fulfillment cost rather than a separate performance obligation.

Adoption Impact

The Company identified three contracts which previously resulted in revenue recognition occurring at the time of shipment; however, under the new revenue recognition standard, the Company is required to recognize revenue over time. The assessment of our January 1, 2018, condensed consolidated balance sheet under ASC Topic 606 resulted in a cumulative-effect adjustment to opening retained earnings, unbilled accounts receivable and costs incurred for inventory.

The effects of the adoption under ASC Topic 606 are outlined in the following table:

	Year Ended December 31, 2017	Impact	January 1, 2018
Accounts receivable	\$ 35,081	\$3,243	\$ 38,324
Inventories—net	111,927	(995)	110,932
Accrued expenses	—	1,110	1,110
Deferred tax assets	9,575	(266)	9,309
Accumulated deficit	(237,066)	872	(236,194)

The impact of adoption of Topic 606 to the Company's condensed consolidated statements of comprehensive income (loss) for the three and nine months ended September 30, 2018, was as follows:

	For the Three Months Ended September 30, 2018		For the Nine Months Ended September 30, 2018	
	As Reported	Excluding Impact of Topic 606	As Reported	Excluding Impact of Topic 606
Total revenues	\$ 69,064	\$ 67,644	\$ 209,639	\$ 206,886
Cost of processing and distribution	31,409	30,374	108,262	107,063
Income tax (provision) benefit	(807)	(686)	1,646	2,134
Net income (loss)	2,931	2,667	(5,441)	(6,507)

Disaggregation of revenue

The Company operates in one reportable segment composed of four lines of business. Effective January 1, 2018, the reporting of the Company's lines of business are composed primarily of four franchises: spine; sports; OEM and international. The following table presents revenues from these four categories for the three and nine months ended September 30, 2018:

	For the Three Months Ended September 30, 2018	For the Nine Months Ended September 30, 2018
Revenues:		
Spine	\$ 20,741	\$ 58,938
Sports	12,271	39,896
OEM	30,092	91,382
International	5,960	19,423
Total revenues from contracts with customers	\$ 69,064	\$ 209,639

The following table presents revenues recognized at a point in time and over time for the three and nine months ended September 30, 2018:

	For the Three Months Ended September 30, 2018	For the Nine Months Ended September 30, 2018
Revenue recognized at a point in time	\$ 58,423	\$ 183,543
Revenue recognized over time	10,641	26,096
Total revenues from contracts with customers	\$ 69,064	\$ 209,639

Performance Obligations

The Company's performance obligations consist mainly of transferring control of implants identified in the contracts.

Some of the Company's contracts offer assurance-type warranties in connection with the sale of a product to a customer. Assurance-type warranties provide a customer with assurance that the related product will function as the parties intended because it complies with agreed-upon specifications. Such warranties do not represent a separate performance obligation and are not material to the condensed consolidated financial statements.

When Performance Obligations Are Satisfied

The Company typically transfers control at a point in time upon shipment or delivery of the implants for direct sales, or upon implantation for sales of consigned inventory. The customer is able to direct the use of, and obtain substantially all of the benefits from, the implant at the time the implant is shipped, delivered, or implanted, respectively based on the terms of the contract.

For performance obligations related to the aforementioned three contracts with exclusively built inventory clauses, the Company typically satisfies its performance obligations evenly over the contract term as inventory is built. Such exclusively manufactured inventory has no alternative use and the Company has an enforceable right to payment for performance to date. The Company uses the input method to measure the manufacturing activities completed to date, which depicts the progress of the Company's performance obligation of transferring control of exclusively built inventory.

For the contracts with upfront and annual exclusivity fees, revenue related to those fees is recognized over the contract term following a consistent method of measuring progress towards satisfaction of the performance obligation. The Company uses the method and measure of progress that best depicts the transfer of control to the customer of the goods or services to date relative to the remaining goods or services promised under the contract.

Significant Payment Terms

The contract with the customer states the final terms of the sale, including the description, quantity, and price of each implant distributed. Payment for OEM contracts is typically due in full within 30 days of delivery or the start of the contract term. For the remaining lines of business, payment terms are typically due in full within 30 to 60 days of delivery. The Company performs a review of each specific customer's credit worthiness and ability to pay prior to acceptance as a customer. Further, the Company performs periodic reviews of its customers' creditworthiness prospectively. Since the customer agrees to a stated price in the contract that does not vary over the contract, the majority of contracts do not contain variable consideration.

Nature of Goods and Services

The Company distributes biologic, metal and synthetic implants. In some instances, the Company also enters into contracts with customers for exclusively manufactured inventory based on customer specifications.

Returns

In the normal course of business, the Company does accept product returns. The amount of consideration the Company ultimately receives varies depending upon the return terms that the Company may offer, which are accounted for as variable consideration when estimating the amount of revenue to recognize. The Company establishes provisions for estimated returns based on historical experience. The amount recorded on the Company's balance sheets for product return allowance was \$902 and \$1,110 at September 30, 2018 and December 31, 2017, respectively. Liabilities for return allowances are included in "Accrued expenses". Actual product returns have not differed materially from estimated amounts reserved in the accompanying condensed financial statements.

Critical Accounting Estimates

Estimates are used to determine the amount of variable consideration in contracts, and the measure of progress for contracts where revenue is recognized over time. The Company reviews and updates these estimates regularly. Our contracts generally do not include multiple performance obligations, and accordingly do not generally require estimates of the standalone selling price for each performance obligation.

Some contracts with customers include variable consideration primarily related to volume rebates. The Company estimates variable consideration at the most likely amount to determine the total consideration which the Company expects to be entitled. Estimated amounts are included in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The Company's estimates of variable consideration and determination of whether to include estimated amounts in the transaction price are based largely on an assessment of our anticipated performance and all information (historical, current and forecasted) that is reasonably available.

Contract Asset and Liability

The opening and closing balances of the Company's accounts receivable, contract asset and current and long-term contract liability are as follows:

	Accounts Receivable	Contract Liability (Current)	Contract Liability (Long- Term)
Opening 1/1/2018	\$ 38,324	\$ 5,978	\$ 3,741
Closing 9/30/2018	44,141	5,892	1,968
Increase/(decrease)	<u>5,817</u>	<u>(86)</u>	<u>(1,773)</u>

Contract liabilities consist primarily of the return allowance described above, and of deferred revenue arising from upfront and annual exclusivity fees. The difference between the opening and closing balances of the Company's contract liabilities primarily results from the Company's performance of the Company's contractual obligations over time. The Company recognizes sales commissions as incurred because the amortization period is less than one year. The Company does not incur other incremental costs relating to obtaining a contract with a customer, and therefore, does not have material contract assets, or impairment losses associated therewith. Revenue recognized for the nine months ended September 30, 2018, from amounts included in contract liabilities at the beginning of the period was \$3,651.

4. Acquisition of Zyga Technology, Inc.

On January 4, 2018, the Company acquired Zyga Technology, Inc. ("Zyga"), a leading spine-focused medical device company that develops and produces innovative minimally invasive devices to treat underserved conditions of the lumbar spine. Zyga's primary product is the SIMmetry® Sacroiliac Joint Fusion System. Under the terms of the merger agreement dated January 4, 2018, the Company acquired Zyga for \$21,000 in consideration paid at closing (consisting of borrowings of \$18,000 on our revolving credit facility and \$3,000 cash on hand), \$1,000 contingent upon the successful achievement of a clinical milestone, and a revenue based earnout consideration of up to \$35,000. Based on a probability weighted model, the Company estimates a contingent liability related to the clinical milestone and revenue based earnout of \$4,986. Acquisition related costs were approximately \$1,430, of which approximately \$800 was incurred during 2018 and is reflected separately in the accompanying Condensed Consolidated Statements of Comprehensive Loss.

The Company has accounted for the acquisition of Zyga under ASC 805, *Business Combinations*. Zyga's results of operations are included in the condensed consolidated financial statements for periods ending after January 4, 2018, the acquisition date.

The purchase price was financed as follows:

	(In thousands)
Cash proceeds from revolving credit facility	\$ 18,000
Cash from RTI Surgical	3,000
Total purchase price	<u>\$ 21,000</u>

The Company is in the process of completing its valuation of the tax accounts associated with the purchase price allocation, which it expects to complete by December 31, 2018. The table below represents an allocation of the total consideration to Zyga's tangible and intangible assets and liabilities based on management's estimate of their respective fair values as of January 4, 2018. During the three months ended September 30, 2018, the Company made the following changes to the fair values of acquired assets and liabilities: decreased inventory by \$450, decreased deferred tax assets by \$1,025, increased acquisition contingencies by \$1,286, increased other intangible assets by \$4,760 and decreased goodwill by \$1,999. As a result of increasing the fair value of intangible assets, the Company recorded additional accumulated amortization of \$237 relating to the six months ended June 30, 2018.

	(In thousands)
Inventories	\$ 1,099
Accounts receivable	573
Other current assets	53
Property, plant and equipment	151
Other assets	26
Deferred tax assets	1,649
Current liabilities	(947)
Acquisition contingencies	(4,986)
Net tangible assets acquired	(2,382)
Other intangible assets	6,760
Goodwill	16,622
Total net assets acquired	<u>\$ 21,000</u>

Total net assets acquired as of January 4, 2018, are all part of the Company's only operating segment. Fair values are based on management's estimates and assumptions including variations of the income approach, the cost approach and the market approach. Other intangible assets include patents, trademarks, and selling and marketing relationships.

The Company believes that the acquisition of Zyga has offered and continues to offer the potential for substantial strategic and financial benefits. The transaction further advances our strategic transformation focused on reducing complexity, driving operational excellence and accelerating growth. The Company believes the acquisition will enhance stockholder value through, among other things, enabling the Company to capitalize on the following strategic advantages and opportunities:

- Zyga's innovative minimally invasive treatment should accentuate our spine portfolio and opens significant opportunities to accelerate our Spine-focused expansion strategy.
- Zyga should leverage the core competencies of our Spine franchise by pursuing niche differentiated products, to gain scale and customer retention and support portfolio pull-through.

These potential benefits resulted in the Company paying a premium for Zyga resulting in the recognition of \$16,622 of goodwill assigned to the Company's only operating segment and reporting unit.

The amount of Zyga's revenues and net loss since the January 4, 2018, acquisition date, included in the Company's Condensed Consolidated Statement of Comprehensive Income (Loss) for the nine months ended September 30, 2018, excluding acquisition related costs of approximately \$800, are \$3,543 and \$2,228, respectively.

The following unaudited pro forma information shows the results of the Company's operations as though the acquisition had occurred as of the beginning of that period (in thousands, except per share data):

	For the Nine Months Ended	
	September 30,	
	<u>2018</u>	<u>2017</u>
Revenues	\$ 3,595	\$ 3,323
Net loss applicable to common shares	(2,295)	(3,184)
Basic net loss per share	(0.04)	(0.05)
Diluted net loss per share	(0.04)	(0.05)

The pro forma results have been prepared for comparative purposes only and are not necessarily indicative of the actual results of operations had the acquisition taken place as of the beginning of the periods presented, or the results that may occur in the future. These amounts exclude costs incurred which are directly attributable to the acquisition, and which do not have a continuing impact on the combined companies' operating results.

5. Stock-Based Compensation

The Company's policy is to grant stock options at an exercise price equal to 100% of the market value of a share of common stock at closing on the date of the grant. The Company's stock options generally have five to ten-year contractual terms and vest over a one to five-year period from the date of grant. The Company's policy is to grant restricted stock awards at a fair value equal to 100% of the market value of a share of common stock at closing on the date of the grant. The Company's restricted stock awards generally vest over one to three-year periods.

2018 Incentive Compensation Plan – On April 30, 2018, the Company's stockholders approved and adopted the 2018 Incentive Compensation Plan (the "2018 Plan"). The 2018 Plan provides for the grant of incentive and nonqualified stock options and restricted stock to key employees, including officers and directors of the Company and consultants and advisors. The 2018 Plan allows for up to 5,726,035 shares of common stock to be issued with respect to awards granted.

2015 Incentive Compensation Plan – On April 14, 2015, the Company's stockholders approved and adopted the 2015 Incentive Compensation Plan (the "2015 Plan"). The 2015 Plan provided for the grant of incentive and nonqualified stock options and restricted stock to key employees, including officers and directors of the Company and consultants and advisors. The 2015 Plan allowed for up to 4,656,587 shares of common stock to be issued with respect to awards granted. With the adoption of the 2018 Plan, new stock options and restricted stock may no longer be awarded under the 2015 Plan.

Stock Options

As of September 30, 2018, there was \$2,548 of total unrecognized stock-based compensation related to nonvested stock options. The expense related to these stock options is expected to be recognized over a weighted-average period of 1.62 years.

Stock options outstanding, exercisable and available for grant at September 30, 2018, are summarized as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value
Outstanding at January 1, 2018	4,692,037	\$ 3.86		
Granted	709,746	4.32		
Exercised	(346,853)	3.53		
Forfeited or expired	(656,378)	5.07		
Outstanding at September 30, 2018	<u>4,398,552</u>	<u>\$ 3.78</u>	<u>5.99</u>	<u>\$ 3,461</u>
Vested or expected to vest at September 30, 2018	<u>4,098,099</u>	<u>\$ 3.76</u>	<u>5.82</u>	<u>\$ 3,301</u>
Exercisable at September 30, 2018	<u>1,069,379</u>	<u>\$ 3.99</u>	<u>4.10</u>	<u>\$ 678</u>
Available for grant at September 30, 2018	<u>5,494,918</u>			

The aggregate intrinsic value in the tables above represents the total pre-tax intrinsic value of stock options for which the fair market value of the underlying common stock exceeded the respective stock option exercise price.

Other information concerning stock options are as follows:

	For the Nine Months Ended September 30,	
	2018	2017
Weighted average fair value of stock options granted	\$ 2.05	\$ 1.54
Aggregate intrinsic value of stock options exercised	344	641

The aggregate intrinsic value of stock options exercised in a period represents the pre-tax cumulative difference, for the stock options exercised during the period, between the fair market value of the underlying common stock and the stock option exercise prices.

Restricted Stock Awards

The value of restricted stock awards is determined by the market value of the Company's common stock at the date of grant. For the nine months ended September 30, 2018, restricted stock awards in the amount of 657,798 shares and 141,176 shares were granted to employees and non-employee directors, respectively. As of September 30, 2018, there was \$3,764 of total unrecognized stock-based compensation related to unvested restricted stock awards. That expense is expected to be recognized on a straight-line basis over a weighted-average period of 1.76 years. The following table summarizes information about unvested restricted stock awards as of September 30, 2018:

	Number of Shares	Weighted Average Grant Date Fair Value
Unvested at January 1, 2018	1,120,190	\$ 4.15
Granted	798,974	4.28
Vested	(393,333)	3.95
Forfeited	(253,567)	4.11
Unvested at September 30, 2018	<u>1,272,264</u>	<u>\$ 4.30</u>

For the three and nine months ended September 30, 2018 and 2017, the Company recognized stock-based compensation as follows:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Stock-based compensation:				
Costs of processing and distribution	\$ 33	\$ 33	\$ 99	\$ 78
Marketing, general and administrative	1,032	2,257	3,506	4,001
Research and development	15	15	45	34
Total	<u>\$ 1,080</u>	<u>\$ 2,305</u>	<u>\$ 3,650</u>	<u>\$ 4,113</u>

6. Net Income Per Common Share

A reconciliation of the number of shares of common stock used in the calculation of basic and diluted net income per common share is presented below:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Basic shares	63,495,952	59,704,533	63,517,958	59,045,372
Effect of dilutive securities:				
Stock options	675,028	1,244,082	—	909,592
Preferred stock Series A	15,113,335	14,239,546	—	—
Diluted shares	<u>79,284,315</u>	<u>75,188,161</u>	<u>63,517,958</u>	<u>59,954,964</u>

For the three months ended September 30, 2018 and 2017, approximately 1,474,375 and 1,418,182, respectively, and for the nine months ended September 30, 2018 and 2017, approximately 1,456,829 and 1,474,461, respectively, of issued stock options were not included in the computation of diluted net income per common share because they were anti-dilutive because their exercise price exceeded the market price. For the nine months ended September 30, 2018, options to purchase 608,390 shares of common stock were not included in the computation of diluted loss per share because dilutive shares are not factored into this calculation when a net loss is reported.

For both the three months ended September 30, 2018 and 2017, 50,000 shares of convertible preferred stock or 15,113,335 and 14,239,546, respectively, of converted common stock and accrued but unpaid dividends were dilutive on an as if-converted basis and were included in the computation of diluted net income per common share.

7. Inventories

Inventories by stage of completion are as follows:

	September 30, 2018	December 31, 2017
Unprocessed tissue, raw materials and supplies	\$ 23,203	\$ 22,071
Tissue and work in process	31,663	40,481
Implantable tissue and finished goods	49,025	49,375
	<u>\$ 103,891</u>	<u>\$ 111,927</u>

For the three months ended September 30, 2018 and 2017, the Company had inventory write-downs of \$2,041 and \$735, respectively, and for the nine months ended September 30, 2018 and 2017, the Company had inventory write-downs of \$12,906 and \$4,488, respectively, relating primarily to product obsolescence. Included in the nine months ended September 30, 2018, are \$1,023 of product obsolescence related to the rationalization of our international distribution infrastructure and \$6,559 of inventory write-off related to lower distributions of the Company's map3[®] implant.

8. Prepaid and Other Current Assets

Prepaid and Other Current Assets are as follows:

	September 30, 2018	December 31, 2017
Income tax receivable	\$ 3,172	\$ 9,825
Receivable for executive stock option exercise	—	1,234
Prepaid expenses	4,556	3,521
Other	885	1,705
	<u>\$ 8,613</u>	<u>\$ 16,285</u>

9. Property, Plant and Equipment

Property, plant and equipment are as follows:

	September 30, 2018	December 31, 2017
Land	\$ 2,035	\$ 2,020
Buildings and improvements	58,121	57,954
Processing equipment	40,196	44,137
Surgical instruments	23,402	21,256
Office equipment, furniture and fixtures	1,803	1,352
Computer equipment and software	18,646	19,332
Construction in process	8,208	5,980
	<u>152,411</u>	<u>152,031</u>
Less accumulated depreciation	<u>(75,067)</u>	<u>(72,467)</u>
	<u>\$ 77,344</u>	<u>\$ 79,564</u>

For the three months ended September 30, 2018 and 2017, the Company had depreciation expense in connection with property, plant and equipment of \$2,577 and \$2,623, respectively, and for the nine months ended September 30, 2018 and 2017, the Company had depreciation expense in connection with property, plant and equipment of \$7,824 and \$7,947, respectively. Included in the nine months ended September 30, 2018, are \$1,797 of asset impairment and abandonment charges relating to lower distributions of our map3® implant.

10. Goodwill

Goodwill acquired during the nine months ended September 30, 2018 includes the excess of the Zyga purchase price over the sum of the amounts assigned to assets acquired less liabilities assumed.

	September 30, 2018	December 31, 2017
Balance at January 1	\$ 46,242	\$ 54,887
Goodwill acquired related to Zyga acquisition	16,622	—
Goodwill disposed of related to sale of Cardiothoracic closure business	—	8,645
Balance at September 30	<u>\$ 62,864</u>	<u>\$ 46,242</u>

The Company considered the decreased forecasted distributions of our map3® implant to be a triggering event for long-lived asset impairment testing. As a result, the Company performed a goodwill impairment analysis on its sole reporting unit during the quarter ended June 30, 2018, and based on the analysis, the Company concluded its goodwill was not impaired.

11. Other Intangible Assets

Other intangible assets are as follows:

	September 30, 2018		December 31, 2017	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	\$17,556	\$ 5,457	\$11,373	\$ 4,890
Acquired licensing rights	10,797	6,297	14,747	9,097
Marketing and procurement and other intangible assets	20,698	11,100	20,603	9,666
Total	<u>\$49,051</u>	<u>\$ 22,854</u>	<u>\$46,723</u>	<u>\$ 23,653</u>

For the three months ended September 30, 2018 and 2017, the Company had amortization expense of other intangible assets of \$1,149 and \$952, respectively, and for the nine months ended September 30, 2018 and 2017, the Company had amortization expense of other intangible assets of \$2,970 and \$2,757, respectively. Included in the nine months ended September 30, 2018, are \$2,718 of asset impairment and abandonment charges relating to lower distributions of our map3® implant.

At September 30, 2018, management's estimates of future amortization expense for the next five years are as follows:

	Amortization Expense
2018	\$ 1,050
2019	4,200
2020	4,100
2021	4,100
2022	4,100
2023	1,800

12. Accrued Expenses

Accrued expenses are as follows:

	September 30, 2018	December 31, 2017
Accrued compensation	\$ 5,718	\$ 8,257
Accrued severance and restructuring costs	1,070	3,279
Accrued executive transition costs	301	2,300
Accrued distributor commissions	3,747	3,889
Accrued donor recovery fees	4,529	4,144
Other	6,756	3,741
	<u>\$ 22,121</u>	<u>\$ 25,610</u>

The Company accrues for the estimated donor recovery fees due to third party recovery agencies as tissue is received.

13. Short and Long-Term Obligations

Short and long-term obligations are as follows:

	September 30, 2018	December 31, 2017
Term loan	\$ —	\$ 24,250
Revolving credit facility	50,000	22,500
Less unamortized debt issuance costs	(979)	(406)
Total	49,021	46,344
Less current portion	—	(4,268)
Long-term portion	<u>\$ 49,021</u>	<u>\$ 42,076</u>

On June 5, 2018, the Company, along with our wholly-owned subsidiary, Pioneer Surgical, Inc. ("Pioneer Surgical"), entered into a Credit Agreement (the "2018 Credit Agreement"), as borrowers, with JP Morgan Chase Bank, N.A., as lender (together with the various financial institutions as in the future may become parties thereto, the "Lenders") and as administrative agent for the Lenders. The 2018 Credit Agreement provides for a revolving credit facility in the aggregate principal amount of up to \$100,000 (the "Facility"). The Company and Pioneer Surgical will be able to, at their option, and subject to customary conditions and Lender approval, request an increase to the Facility by up to \$50,000.

The Facility is guaranteed by the Company's domestic subsidiaries and is secured by: (i) substantially all of the assets of the Company and Pioneer Surgical; (ii) substantially all of the assets of each of the Company's domestic subsidiaries; and (iii) 65% of the stock of the Company's foreign subsidiaries.

The initial borrowings made under the 2018 Credit Agreement will bear interest at a rate per annum equal to the monthly REVLIBOR30 Rate (“CBFR Loans”) plus an adjustable margin of up to 2.00% (the “CBFR Rate”). The Company may elect to convert the interest rate for the initial borrowings to a rate per annum equal to the adjusted LIBO Rate (“Eurodollar Loans”) plus an adjustable margin of up to 2.00% (the “Eurodollar Rate”). For all subsequent borrowings, the Company may elect to apply either the CBFR Rate or Eurodollar Rate. The applicable margin is subject to adjustment after the end of each fiscal quarter, based upon the Company’s average quarterly availability. The maturity date of the Facility is June 5, 2023. The Company may make optional prepayments on the Facility without penalty. The Company paid certain customary closing costs and bank fees upon entering into the 2018 Credit Agreement.

The Company is subject to certain affirmative and negative covenants, including (but not limited to), covenants limiting the Company’s ability to: incur certain additional indebtedness; create certain liens; enter into sale and leaseback transactions; and consolidate or merge with, or convey, transfer or lease all or substantially all of its assets to another person. The Company is required to maintain a minimum fixed charge coverage ratio of at least 1.00:1.00 (the “Required Minimum Fixed Charge Coverage Ratio”) during either of the following periods (each, a “Covenant Testing Period”): (i) a period beginning on a date that a default has occurred and is continuing under the loan documents entered into by the Company in conjunction with the Credit Agreement (the “Loan Documents”) through the first date on which no default has occurred and is continuing; or (ii) a period beginning on a date that availability under the Facility is less than the specified covenant testing threshold and continuing until availability under the Facility is greater than or equal to the specified covenant testing threshold for thirty (30) consecutive days. The Required Minimum Fixed Charge Coverage Ratio is measured on the last day of each calendar month during the Covenant Testing Period (each a “Calculation Date”), and is calculated using the minimum fixed charge coverage ratio for the twelve (12) consecutive months ending on each Calculation Date. The amounts owed under the 2018 Credit Agreement may be accelerated upon the occurrence of certain events of default customary for facilities for similarly rated borrowers.

At September 30, 2018, the interest rate for the Facility was 3.85%. As of September 30, 2018, there was \$50,000 outstanding on the Facility and total remaining available credit on the Facility was \$41,990. The Company’s ability to access the Facility is subject to and can be limited by the Company’s compliance with the Company’s financial and other covenants. The Company was in compliance with the financial covenants related to the Facility as of September 30, 2018.

For the three months ended September 30, 2018 and 2017, interest expense associated with the amortization of debt issuance costs was \$53 and \$88, respectively, and for the nine months ended September 30, 2018 and 2017, interest expense associated with the amortization of debt issuance costs was \$476 and \$350, respectively. For the nine months ended September 30, 2018, loss on extinguishment of debt associated with refinancing the Company’s debt was \$309.

14. Other long-term liabilities

Other long-term liabilities are as follows:

	September 30, 2018	December 31, 2017
Acquisition contingencies	\$ 4,986	\$
Other	773	1,431
	<u>\$ 5,759</u>	<u>\$ 1,431</u>

Acquisition contingencies represent the Company’s fair value estimate of the Zyga acquisition clinical milestone and revenue earnout contingencies.

15. Income Taxes

The Company expects its deferred tax assets of \$11,875, net of the valuation allowance at September 30, 2018 of \$8,200, to be realized through the generation of future taxable income and the reversal of existing taxable temporary differences.

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the “Tax Legislation”). The Tax Legislation makes broad and complex changes to the U.S. tax code including, but not limited to the following:

- Reduction of the U.S. federal corporate tax rate from 35% to 21%
- Requiring a transition tax on certain unrepatriated earnings of foreign subsidiaries
- Bonus depreciation that will allow for full expensing of qualified property
- Elimination of the corporate alternative minimum tax
- The repeal of the domestic production activity deduction
- Limitations on the deductibility of certain executive compensation
- Limitations on net operating losses generated after December 31, 2017

In addition, beginning in 2018, the Tax Legislation includes a global intangible low-taxed income (“GILTI”) provision, which as currently interpreted by the Company, requires a tax on foreign earnings in excess of a deemed return on tangible assets of foreign subsidiaries. The Company has elected an accounting policy to account for GILTI as a period cost if incurred, rather than recognizing deferred taxes for temporary basis differences expected to reverse as a result of GILTI. Other provisions of the Tax Legislation continue to be assessed.

The SEC staff issued SAB 118, which provides guidance on accounting for the tax effects of the Tax Legislation. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Legislation enactment date for companies to complete the accounting under ASC 740. In accordance with SAB 118, the Company must reflect the income tax effects of those aspects of the Tax Legislation for which the accounting under ASC 740 is complete. To the extent that the Company’s accounting for certain income tax effects of the Tax Legislation is incomplete, but the Company is able to determine a reasonable estimate, it must record a provisional estimate in the consolidated financial statements. If the Company cannot determine a provisional estimate, it should continue to apply ASC 740 on the basis of the provisions of the tax laws that were in effect immediately before the enactment of the Tax Legislation.

During the three months ended September 30, 2018, the Company completed the accounting of its deferred tax assets revaluation using the reduced corporate tax rate and the transition tax. During the three months ended September 30, 2018, the Company recorded a discrete tax benefit of \$650. Analysis and accounting of the remaining aspects of the Tax Legislation may result in adjustments in the consolidated financial statements.

The Company evaluates the need for deferred tax asset valuation allowances based on a more likely than not standard. The ability to realize deferred tax assets depends on the ability to generate sufficient taxable income within the carryback or carryforward periods provided for in the tax law for each applicable tax jurisdiction.

The assessment regarding whether a valuation allowance is required or should be adjusted also considers all available positive and negative evidence. It is difficult to conclude a valuation allowance is not required when there is significant objective and verifiable negative evidence, such as cumulative losses in recent years. The Company utilizes a rolling three years of actual results as the primary measure of cumulative losses in recent years.

On a rolling three-year basis, the Company’s consolidated U.S. operations are in a cumulative income position. However, one U.S. entity (“Entity”) is in a three-year cumulative loss position. During the three months ended September 30, 2018, the Company established a valuation allowance on the Entity’s separate state deferred tax assets.

The Company’s foreign operation is in a three-year cumulative loss position. As a result, the Company has established a full valuation allowance on its foreign subsidiary’s deferred tax assets.

As such, valuation allowances of \$8,200 and \$7,258 have been established at September 30, 2018 and December 31, 2017, respectively, against a portion of the deferred tax assets.

The Company will continue to regularly assess the realizability of our deferred tax assets. Changes in historical earnings performance and future earnings projections, among other factors, may cause the Company to adjust its valuation allowance, which would impact the Company’s income tax expense in the period the Company determines that these factors have changed.

During the three months ended June 30, 2018, the Internal Revenue Service (“IRS”) completed its examination of the Company’s 2015 U.S. federal income tax return. No material adjustments were recorded to the Company’s condensed consolidated financial statements as a result of the examination.

16. Preferred Stock

On June 12, 2013, the Company and WSHP Biologics Holdings, LLC, an affiliate of Water Street Healthcare Partners, a leading healthcare-focused private equity firm (“Water Street”), entered into an investment agreement. Pursuant to the terms of the investment agreement, the Company issued \$50,000 of convertible preferred equity to Water Street in a private placement which closed on July 16, 2013, with preferred stock issuance costs of \$1,290. Before July 16, 2018, the preferred stock accrued dividends at a rate of 6% per annum. Dividends that were not paid in cash in any quarter accrued on each outstanding share of preferred stock during such three-month period and accumulated.

On August 1, 2018, the Company and Water Street, a related party, entered into an Amended and Restated Certificate of Designation of Series A Convertible Preferred Stock of RTI Surgical, Inc. (the “Amended and Restated Certificate of Designation”). Pursuant to the Amended and Restated Certificate of Designation: (1) dividends on the Series A Preferred Stock will not accrue after July 16, 2018 (in the event of a default by the Company, dividends will begin accruing and will continue to accrue until the default is cured); (2) the Company may not force a redemption of the Series A Preferred Stock prior to July 16, 2020; and (3) the holders of the Series A Preferred Stock may not convert the Series A Preferred Stock into common stock prior to July 16, 2021 (with certain exceptions). The Company evaluated and concluded on a qualitative basis the amendment qualifies as modification accounting to the preferred shares, which did not result in a change in the valuation of the shares.

Preferred stock is as follows:

	Preferred Stock Liquidation Value	Preferred Stock Issuance Costs	Net Total
Balance at January 1, 2018	\$ 64,399	\$ (476)	\$ 63,923
Accrued dividend payable	2,120	—	2,120
Amortization of preferred stock issuance costs	—	137	137
Balance at September 30, 2018	<u>\$ 66,519</u>	<u>\$ (339)</u>	<u>\$ 66,180</u>

17. Severance and Restructuring Costs

The Company recorded severance and restructuring costs related to the reduction of our organizational structure which resulted in \$1,708 of expenses for the nine months ended September 30, 2018. Severance and restructuring payments are made to terminated employees over periods ranging from one month to twelve months and are not expected to have a material impact on cash flows of the Company in any quarterly period. The following table includes a roll-forward of severance and restructuring costs included in accrued expenses, see Note 12.

Accrued severance and restructuring costs at January 1, 2018	\$ 3,279
Severance and restructuring costs accrued in 2018	<u>1,708</u>
Subtotal severance and restructuring costs	4,987
Severance and restructuring cash payments	<u>(3,917)</u>
Accrued severance and restructuring costs at September 30, 2018	<u>\$ 1,070</u>

18. Executive Transition Costs

The Company recorded Chief Executive Officer retirement and transition costs related to the retirement of our former Chief Executive Officer pursuant to the Executive Transition Agreement dated August 29, 2012 (as amended and extended to date), which resulted in \$4,404 of expenses for the year ended December 31, 2016. The total Chief Executive Officer retirement and transition costs are expected to be paid in full prior to the first quarter of 2019. In addition, the Company recorded executive transition costs of \$2,781 as a result of hiring a new Chief Executive Officer and Chief Financial and Administrative Officer for the year ended December 31, 2017. The total executive transition costs, of which \$1,169 is cash basis, was paid in full in the third quarter of 2018. The following table includes a roll-forward of executive transition costs included in accrued expenses, see Note 12.

Accrued executive transition costs at January 1, 2018	2,300
Cash payments	<u>(1,999)</u>
Accrued executive transition costs at September 30, 2018	<u>\$ 301</u>

19. Legal Actions

The Company is, from time to time, involved in litigation relating to claims arising out of its operations in the ordinary course of business. The Company believes that none of these claims that were outstanding as of September 30, 2018, will have a material adverse impact on its financial position or results of operations.

Coloplast — The Company is presently named as co-defendant along with other companies in a small percentage of the transvaginal surgical mesh (“TSM”) mass tort claims being brought in various state and federal courts. The TSM litigation has as its catalyst various Public Health Notifications issued by the U.S. Food and Drug Administration (“FDA”) with respect to the placement of certain TSM implants that were the subject of 510k regulatory clearance prior to their distribution. The Company does not process or otherwise manufacture for distribution in the U.S. any implants that were the subject of these FDA Public Health Notifications. The Company denies any allegations against it and intends to continue to vigorously defend itself.

In addition to claims made directly against the Company, Coloplast, a distributor of TSM’s and certain allografts processed and private labeled for them under a contract with the Company, has also been named as a defendant in individual TSM cases in various federal and state courts. Coloplast requested that the Company indemnify or defend Coloplast in those claims which allege injuries caused by the Company’s allograft implants, and on April 24, 2014, Coloplast sued RTI Surgical, Inc. in the Fourth Judicial District of Minnesota for declaratory relief and breach of contract. On December 11, 2014, Coloplast entered into a settlement agreement with RTI Surgical, Inc. and Tutogen Medical, Inc. (the “Company Parties”) resulting in dismissal of the case. Under the terms of the settlement agreement, the Company Parties are responsible for the defense and indemnification of two categories of present and future claims: (1) tissue only (where Coloplast is solely the distributor of Company processed allograft tissue and no Coloplast-manufactured or distributed synthetic mesh is identified) (“Tissue Only Claims”), and (2) tissue plus non-Coloplast synthetic mesh (“Tissue-Non-Coloplast Claims”) (the Tissue Only Claims and the Tissue-Non-Coloplast Claims being collectively referred to as “Indemnified Claims”). As of September 30, 2018, there are a cumulative total of 1,148 Indemnified Claims for which the Company Parties are providing defense and indemnification. The defense and indemnification of these cases are covered under the Company’s insurance policy subject to a reservation of rights by the insurer.

Based on the current information available to the Company, the impact that current or any future TSM litigation may have on the Company cannot be reasonably estimated.

The Company’s accounting policy is to accrue for legal costs as they are incurred.

20. Regulatory Actions

On September 30, 2014, the Company received a letter from the FDA regarding its map3® cellular allogeneic bone graft. The letter addresses some technical aspects of the processing of the map3® allograft, as well as language included on the Company’s website. Following the 2014 letter, the FDA conducted an on-site inspection of the Company’s Alachua, Florida facility in April 2017 to assess compliance of the manufacturing and quality controls for its map3® allograft products with the 21 CFR Part 211 (GMP) regulations. A form 483 was issued by the FDA outlining 9 instances of observed non-compliance. The Company worked diligently to resolve all cited observations in a timely manner, however, on November 9, 2017, the FDA issued a Warning Letter to the Company related to the map3® allograft. The letter reiterated the FDA’s concerns regarding the classification and manufacturing of the map3® allograft. There was no requirement to cease production or to recall distributed allografts from the market.

During the second quarter 2018 the Company, based on its ongoing dialogue with the FDA and the continued negative impact of the warning letter on map3® distributions, reduced its forecasted distributions for map3® allografts. The reduction in the forecasted distributions was considered an impairment triggering event for the related asset group under the guidance per ASC 360 – Property, Plant, and Equipment. As a result, the Company completed an asset group impairment test utilizing revised long-term forecasts and determined the carrying value was not recoverable. As a result of the valuation analysis, an impairment charge of \$1,797 was recorded against property, plant and equipment, and an impairment charge of \$2,718 was recorded against acquired licensing rights. Additionally, management performed an analysis to assess the amount of map3® inventory which would more likely than not, not be distributed prior to the inventory’s expiring shelf life and should therefore be written down. Based on the analysis a write-off of \$6,559 was recorded which has been reflected within the Costs of processing and distribution line within the Condensed Consolidated Statement of Comprehensive Loss. The asset group impairment was also a trigger for goodwill impairment under ASC 350 – Intangibles – Goodwill and Other. No impairment charges were recorded as a result of the testing.

During the third quarter 2018, the Company decided that it would not pursue the more rigorous FDA requirements applicable to biological drug products and concluded that the Company would stop distributing its map3® implants effective October 31, 2018.

21. Segment Data

The Company distributes human tissue, bovine and porcine animal tissue, metal and synthetic implants through various distribution channels. The Company operates in one reportable segment composed of four lines of business. Effective January 1, 2018, the reporting of the Company's lines of business are composed primarily of four franchises: spine; sports; OEM and international. The Company's previous lines of business were composed of: spine; sports medicine and orthopedics; surgical specialties; cardiothoracic; international; and OEM. Effective January 1, 2018, the other revenues category is included in the OEM line of business. The prior year comparable revenue information has been restated to conform to the current year presentation. The Company believes that the change in the reporting of the Company's lines of business is aligned with our focused strategy of reducing complexity and better understanding of our lines of business. Additionally, on August 3, 2017, we completed the sale of substantially all of the assets related to our CT Business to A&E Advanced Closure Systems, LLC (a subsidiary of A&E Medical Corporation) ("A&E"). In connection with the CT Business sale, we entered into a multi-year Contract Manufacturing Agreement with A&E whereby we continue to support the CT Business under A&E's ownership through the manufacturing of existing products, which generates revenue for our OEM business. Discrete financial information is not available for these four lines of business. The following table presents revenues from these four categories for the three and nine months ended September 30, 2018 and 2017, respectively:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Revenues:				
Spine	\$ 20,741	\$ 18,131	\$ 58,938	\$ 57,888
Sports	12,271	12,723	39,896	41,852
OEM	30,092	28,779	91,382	81,904
International	5,960	5,715	19,423	18,939
Cardiothoracic	—	1,340	—	8,164
Total revenues	<u>\$ 69,064</u>	<u>\$ 66,688</u>	<u>\$ 209,639</u>	<u>\$ 208,747</u>

The following table presents percentage of total revenues derived from the Company's largest distributors:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
Percent of revenues derived from:				
Distributor				
Zimmer Biomet Holdings, Inc.	22%	15%	21%	17%
Medtronic, PLC	9%	8%	8%	9%
DePuy Synthes	3%	4%	5%	4%

The following table presents property, plant and equipment—net by significant geographic location:

	September 30, 2018	December 31, 2017
Property, plant and equipment—net:		
Domestic	\$ 71,709	\$ 73,363
International	5,635	6,201
Total	<u>\$ 77,344</u>	<u>\$ 79,564</u>

22. Subsequent Events

The Company evaluated subsequent events as of the issuance date of the condensed consolidated financial statements as defined by FASB ASC 855 *Subsequent Events*, and identified no subsequent events that require adjustment to, or disclosure of, in these condensed consolidated financial statements, except for on November 1, 2018, the Company entered into a definitive agreement to acquire Paradigm Spine in a cash and stock transaction valued at up to \$300,000, consisting of \$150,000 at closing plus potential future milestone payments. Established in 2005, Paradigm Spine's primary product is the coflex® Interlaminar Stabilization® device, a differentiated and minimally invasive motion preserving stabilization implant that is FDA premarket approved for the treatment of moderate to severe lumbar spinal stenosis (LSS) in conjunction with decompression. The transaction is expected to close in the first quarter of 2019 and is subject to the satisfaction of customary closing conditions and applicable regulatory approvals.

Under the terms of the agreement, the Company shall pay \$100,000 in cash and issue 10,729,614 shares of RTI common stock at closing, and revenue based earnout consideration of up to \$150,000 in a combination of cash and RTI common stock. The shares of RTI stock to be issued at closing were valued based on the volume weighted average closing trading price for the five trading days prior to the date of execution of the definitive agreement, representing \$50,000 of value. RTI intends to fund the cash portion of the consideration with approximately \$100,000 in new, fully-committed debt financing. The Company has not completed its preliminary purchase price allocation, and as such cannot disclose the preliminary purchase price allocation.

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

Cautionary Statement Relating to Forward Looking Statements

Information contained in this filing contains “forward-looking statements” which can be identified by the use of forward-looking terminology such as “anticipates,” “expects,” “intends,” “plans,” “believes,” “seeks,” “estimates,” “requires,” “hopes,” “assumes” or comparable terminology, or by discussions of strategy. There can be no assurance that the future results covered by these forward-looking statements will be achieved. Some of the matters described in the “Risk Factors” section of our Annual Report on Form 10-K for the year ended December 31, 2017 or in subsequent Quarterly Reports on Form 10-Q (including this one), constitute cautionary statements which identify some of the factors regarding these forward-looking statements, including certain risks and uncertainties, that could cause actual results to vary materially from the future results indicated in these forward-looking statements. Other factors could also cause actual results to vary materially from the future results indicated in such forward-looking statements.

Management Overview

RTI Surgical is a global surgical implant company that designs, develops, manufactures and distributes biologic, metal and synthetic implants. Our implants are used in orthopedic, spine, sports medicine, plastic surgery, trauma and other surgical procedures to repair and promote the natural healing of human bone and other human tissues and improve surgical outcomes. We manufacture metal and synthetic implants and process donated human musculoskeletal and other tissue and bovine and porcine animal tissue in producing allograft and xenograft implants using our proprietary BIOCLEANSE®, TUTOPLAST® and CANCELLE® SP sterilization processes. We process tissue at our facilities in Alachua, Florida and Neunkirchen, Germany and manufacture metal and synthetic implants in Marquette, Michigan and Greenville, North Carolina, respectively. We are accredited in the U.S. by the American Association of Tissue Banks and we are a member of AdvaMed. Our implants are distributed directly to hospitals throughout the U.S. and in more than 40 countries worldwide with the support of both our and third-party representatives as well as through larger purchasing companies. We were founded in 1997 and are headquartered in Alachua, Florida.

Domestic distributions and services accounted for 91% of total revenues in the first nine months of 2018. Most of our implants are distributed directly to healthcare providers, hospitals and other healthcare facilities through a direct distribution force and through various original equipment manufacturer (“OEM”) relationships.

International distributions and services accounted for 9% of total revenues in the first nine months of 2018. Our implants are distributed in over 40 countries through a direct distribution force in Germany and through stocking distributors in the rest of the world outside of Germany and the U.S.

We are implementing a transformation strategy to focus on our OEM and spine franchises and create long-term, profitable growth for the company. In 2017, we introduced a new management team with extensive experience to spearhead these efforts. The core components of our strategy are:

- *Reduce Complexity.* We are working to reduce complexity in our organization by divesting non-core assets and investing in core competencies.
- *Drive Operational Excellence.* We are working to optimize material cost and drive operational efficiency to reduce other direct costs by pursuing world class manufacturing.
- *Accelerate Growth.* We are investing in innovative, niche high growth product categories leveraging core competency in the spine market; utilizing core technologies to expand OEM relationships and drive organic growth; and building relevant scale in our spinal portfolio to improve importance to the consolidating healthcare market driven by integrated delivery networks and group purchasing organizations.

In line with our strategy, on January 4, 2018, the Company acquired Zyga Technology, Inc. (“Zyga”), a leading spine-focused medical device company that develops and produces innovative minimally invasive devices to treat underserved conditions of the lumbar spine. Zyga’s primary product is the SImmetry® Sacroiliac Joint Fusion System. Under the terms of the merger agreement dated January 4, 2018, the Company acquired Zyga for \$21.0 million in consideration paid at closing (consisting of borrowings of \$18.0 million on our revolving credit facility and \$3.0 million cash on hand), \$1.0 million contingent upon the successful achievement of a clinical milestone, and a revenue based earnout consideration of up to an additional \$35.0 million.

On November 1, 2018, the Company entered into a definitive agreement to acquire Paradigm Spine.

We believe this is a significant step toward focusing our business and advancing our efforts to generate predictable and sustainable operating results through disciplined execution and building scale to extend distribution of our products in those areas that offer the greatest opportunities to benefit our patients and shareholders.

We continue to maintain our commitment to research and development and the introduction of new strategically targeted allograft, xenograft, metal and synthetic implants as well as focused clinical efforts to support their acceptance in the marketplace. In addition, we consider strategic acquisitions from time to time for new implants and technologies intended to augment our existing implant offerings, as well as strategic dispositions from time to time in response to market trends or industry developments.

Critical Accounting Policies

There have been no significant changes to our critical accounting policies from those disclosed in our 2017 Annual Report on Form 10-K except for the adoption of the new standard related to revenue recognition, as described in Note 3 to the interim unaudited condensed consolidated financial statements.

Results of Operations

Consolidated Financial Results

The following table reflects revenues for the three and nine months ended September 30, 2018 and 2017, respectively.

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
	(In thousands)			
Revenues:				
Spine	\$ 20,741	\$ 18,131	\$ 58,938	\$ 57,888
Sports	12,271	12,723	39,896	41,852
OEM	30,092	28,779	91,382	81,904
International	5,960	5,715	19,423	18,939
Cardiothoracic	—	1,340	—	8,164
Total revenues	<u>\$ 69,064</u>	<u>\$ 66,688</u>	<u>\$ 209,639</u>	<u>\$ 208,747</u>

Three Months Ended September 30, 2018 Compared With Three Months Ended September 30, 2017

Revenues

Total revenues - Our total revenues increased \$2.4 million, or 3.6%, to \$69.1 million for the three months ended September 30, 2018, compared to \$66.7 million for the three months ended September 30, 2017. Excluding cardiothoracic revenues for the three months ended September 30, 2017, our total revenues increased \$3.7 million, or 5.7%, due to timing of delivery to certain OEM distributors, primarily in the dental and trauma markets, and increased distributions of our spine hardware implants, primarily as a result of our new SImmetry® implants.

Spine - Revenues from spine implants increased \$2.6 million, or 14.4%, to \$20.7 million for the three months ended September 30, 2018, compared to \$18.1 million for the three months ended September 30, 2017. Spine revenues increased primarily as a result of increased distributions of our spine hardware implants, primarily our new SImmetry® implants, partially offset by lower distributions of our map3® implants as a result of us phasing out and ceasing distributions effective October 31, 2018.

Sports - Revenues from sports allografts decreased \$452,000, or 3.6%, to \$12.3 million for the three months ended September 30, 2018, compared to \$12.7 million for the three months ended September 30, 2017. Sports revenues decreased primarily as a result of decreased distributions of our biologic implants, partially offset by growth in our dermis based implants.

OEM - Revenues from OEM increased \$1.3 million, or 4.6%, to \$30.1 million for the three months ended September 30, 2018, compared to \$28.8 million for the three months ended September 30, 2017. OEM revenues increased primarily as a result of higher orders and due to timing of delivery to certain OEM distributors, primarily in the dental and trauma markets.

International - Revenues from international include distributions from our foreign affiliates as well as domestic export revenues. International revenues increased \$245,000, or 4.3%, to \$6.0 million for the three months ended September 30, 2018, compared to \$5.7 million for the three months ended September 30, 2017. International revenues increased primarily as a result of higher distributions in Latin America due to timing of delivery to certain international distributors.

Cardiothoracic - On August 3, 2017, we completed the sale of substantially all of the assets related to our Cardiothoracic closure business (the "CT Business") to A&E Advanced Closure Systems, LLC (a subsidiary of A&E Medical Corporation) ("A&E"). Additionally, we have entered into a multi-year Contract Manufacturing Agreement with A&E whereby we continue to support the CT Business under A&E's ownership through the manufacturing of existing products, which generates revenue for our OEM business.

Costs of Processing and Distribution

Costs of processing and distribution decreased \$1.8 million, or 5.3%, to \$31.4 million for the three months ended September 30, 2018, compared to \$33.2 million for the three months ended September 30, 2017. Costs of processing and distribution decreased as a percentage of revenues from 49.7% for the three months ended September 30, 2017 to 45.5% for the three months ended September 30, 2018. Costs of processing and distribution decreased primarily as a result of our strategic initiative to optimize material cost and drive operational efficiency.

Marketing, General and Administrative Expenses

Marketing, general and administrative expenses increased \$2.0 million, or 7.2%, to \$29.7 million for the three months ended September 30, 2018, from \$27.7 million for the three months ended September 30, 2017. The increase was primarily due to higher variable compensation and distributor commission expenses on spine revenue distributions. Marketing, general and administrative expenses increased as a percentage of revenues from 41.5% for the three months ended September 30, 2017 to 43.0% for the three months ended September 30, 2018.

Research and Development Expenses

Research and development expenses increased \$805,000, or 28.7%, to \$3.6 million for the three months ended September 30, 2018, from \$2.8 million for the three months ended September 30, 2017. The increase was primarily due to our Zyga acquisition resulting in higher compensation and project related expenses. Research and development expenses increased as a percentage of revenues from 4.2% for the three months ended September 30, 2017, to 5.2% for the three months ended September 30, 2018.

Severance and Restructuring Costs

Severance and restructuring costs related to the reduction of our organizational structure, primarily driven by simplification of our international operating infrastructure, specifically our distribution model, resulted in \$824,000 of expenses for the three months ended September 30, 2018 as compared to \$2.8 million of expenses for the three months ended September 30, 2017.

Acquisition and integration expenses

Acquisition expenses related to the agreement to acquire Paradigm Spine resulted in \$1.9 million of expenses for the three months ended September 30, 2018. There were no acquisition and integration expenses for the three months ended September 30, 2017.

Cardiothoracic closure business divestiture contingency consideration

As a result of no indemnification claims being made against us in connection with the sale of our CT Business by the applicable deadline, we received the remaining cash contingency consideration of \$3.0 million which was held in escrow for twelve months.

Net Other Expense

Net other expense, which includes interest expense, interest income, and foreign exchange gain, decreased \$83,000, or 12.2%, to \$598,000 for the three months ended September 30, 2018, from \$681,000 for the three months ended September 30, 2017. The decrease in net other expense is primarily due to lower interest expense of \$130,000 as a result of refinancing our debt and lower interest rate applied to our average debt balance as compared to the prior year period.

Income Tax Provision

Income tax provision for the three months ended September 30, 2018, was \$807,000 compared to \$16.1 million for the three months ended September 30, 2017. Our effective tax rate for the three months ended September 30, 2018, was 20.6% compared to 48.0% for the three months ended September 30, 2017. Our effective tax rate for the three months ended September 30, 2018, was primarily impacted due to the U.S. federal corporate tax rate decreasing from 35% to 21% (The U.S. federal corporate rate decreased as a result of the Tax Cuts and Jobs Act (the “Tax Legislation”) which was enacted on December 22, 2017); recording a discrete tax benefit of \$650,000 relating to our accounting for the Tax Legislation; favorable permanent tax adjustments offset by net valuation allowances established.

Nine Months Ended September 30, 2018 Compared With Nine Months Ended September 30, 2017

Revenues

Total revenues - Our total revenues increased \$892,000, or 0.4%, to \$209.6 million for the nine months ended September 30, 2018, compared to \$208.7 million for the nine months ended September 30, 2017. Excluding cardiothoracic revenues for the nine months ended September 30, 2017, our total revenues increased \$9.1 million, or 4.5%, due to timing of delivery to certain OEM distributors, primarily in the dental and trauma markets, and increased distributions of our spine hardware implants, primarily as a result of our new SImmetry® implants.

Spine - Revenues from spine implants increased \$1.1 million, or 1.8%, to \$58.9 million for the nine months ended September 30, 2018, compared to \$57.9 million for the nine months ended September 30, 2017. Spine revenues increased primarily as a result of increased distributions of our spine hardware implants, primarily our new SImmetry® implants, partially offset by lower distributions of our map3® implants as a result of us phasing out and ceasing distributions effective October 31, 2018.

Sports - Revenues from sports allografts decreased \$2.0 million, or 4.7%, to \$39.9 million for the nine months ended September 30, 2018, compared to \$41.9 million for the nine months ended September 30, 2017. Sports revenues decreased primarily as a result of decreased distributions of our biologic implants, partially offset by growth in our dermis based implants.

OEM - Revenues from OEM increased \$9.5 million, or 11.6%, to \$91.4 million for the nine months ended September 30, 2018, compared to \$81.9 million for the nine months ended September 30, 2017. OEM revenues increased primarily as a result of higher orders and due to timing of delivery to certain OEM distributors, primarily in the dental and trauma markets.

International - Revenues from international include distributions from our foreign affiliates as well as domestic export revenues. International revenues increased \$484,000, or 2.6%, to \$19.4 million for the nine months ended September 30, 2018, compared to \$18.9 million for the nine months ended September 30, 2017. International revenues increased primarily as a result of higher distributions in Europe due to a strengthened and focused distribution channel, partially offset by lower distributions in Asia Pacific due to timing of delivery to certain international distributors.

Cardiothoracic - On August 3, 2017, we completed the sale of substantially all of the assets related to the CT Business to A&E. Additionally, we have entered into a multi-year Contract Manufacturing Agreement with A&E whereby we continue to support the CT Business under A&E’s ownership through the manufacturing of existing products, which generates revenue for our OEM business.

Costs of Processing and Distribution

Costs of processing and distribution increased \$5.8 million, or 5.6%, to \$108.3 million for the nine months ended September 30, 2018, compared to \$102.5 million for the nine months ended September 30, 2017. Costs of processing and distribution increased as a percentage of revenues from 49.1% for the nine months ended September 30, 2017 to 51.6% for the nine months ended September 30, 2018. Costs of processing and distribution as a percentage was negatively impacted by an inventory write-off of \$6.6 million related to decreased distributions of our map3® implant; \$1.0 million as a result of writing-off certain obsolete quantities primarily of bone graft substitute inventory due to the rationalization of our international distribution infrastructure; purchase accounting step up adjustments to Zyga inventory of \$456,000 charged to costs of processing and distribution as inventory was sold; offset by our strategic initiative to optimize material cost and drive operational efficiency. Adjusted for the impact of the inventory write-off; write-off of obsolete inventory and the purchase accounting step up, costs of processing and distribution as a percentage of revenues were 47.8% for the nine months ended September 30, 2018.

Marketing, General and Administrative Expenses

Marketing, general and administrative expenses increased \$481,000, or 0.6%, to \$87.3 million for the nine months ended September 30, 2018, from \$86.8 million for the nine months ended September 30, 2017. The increase was primarily due to higher variable compensation and distributor commission expenses on spine revenue distributions. Marketing, general and administrative expenses increased as a percentage of revenues from 41.6% for the nine months ended September 30, 2017 to 41.7% for the nine months ended September 30, 2018.

Research and Development Expenses

Research and development expenses were \$10.3 million for the nine months ended September 30, 2018 which were comparable to the nine months ended September 30, 2017. Research and development expenses as a percentage of revenues were 4.9% for the nine months ended September 30, 2018 and 2017, respectively.

Severance and Restructuring Costs

Severance and restructuring costs related to the reduction of our organizational structure, primarily driven by simplification of our international operating infrastructure, specifically our distribution model, resulted in \$1.7 million of expenses for the nine months ended September 30, 2018 as compared to \$10.6 million of expenses for the nine months ended September 30, 2017.

Asset impairment and abandonments

Asset impairment and abandonments primarily related to lower distributions of our map3® implant for the nine months ended September 30, 2018 was \$4.7 million. There were no asset impairment and abandonments for the nine months ended September 30, 2017.

Acquisition and integration expenses

Acquisition and integration expenses related to the purchase of Zyga and the agreement to acquire Paradigm Spine resulted in \$2.7 million of expenses for the nine months ended September 30, 2018. There were no acquisition and integration expenses for the nine months ended September 30, 2017.

Cardiothoracic closure business divestiture contingency consideration

As a result of no indemnification obligations from us selling our CT Business to A&E on August 3, 2017, we received the remaining cash contingency consideration of \$3.0 million which was held in escrow for twelve months.

Net Other Expense

Net other expense, which includes interest expense, interest income, loss on extinguishment of debt and foreign exchange gain were \$2.5 million for the nine months ended September 30, 2018 which were comparable to the nine months ended September 30, 2017.

Income Tax Benefit (Provision)

Income tax benefit for the nine months ended September 30, 2018, was \$1.6 million compared to income tax provision of \$16.3 million for the nine months ended September 30, 2017. Our effective tax rate for the nine months ended September 30, 2018, was 33.1% compared to 53.9% for the nine months ended September 30, 2017. Our effective tax rate for the nine months ended September 30, 2018, was primarily impacted due to recording a discrete tax benefit of \$3.1 million relating to inventory write-off and asset impairment and abandonments due to decreased forecasted distributions of our map3® implant; recording a discrete tax benefit of \$415,000 relating to previously unrecognized tax benefits; the U.S. federal corporate tax rate decreasing from 35% to 21% (The U.S. federal corporate rate decreased as a result of the Tax Cuts and Jobs Act (the "Tax Legislation") which was enacted on December 22, 2017); recording a discrete tax benefit of \$650,000 relating to our accounting for the Tax Legislation; favorable permanent tax adjustments offset by net valuation allowances established.

Non-GAAP Financial Measures

We utilize certain financial measures that are not calculated based on Generally Accepted Accounting Principles (“GAAP”). Certain of these financial measures are considered “non-GAAP” financial measures within the meaning of Item 10 of Regulation S-K promulgated by the SEC. We believe that non-GAAP financial measures provide an additional way of viewing aspects of our operations that, when viewed with the GAAP results, provide a more complete understanding of our results of operations and the factors and trends affecting our business. These non-GAAP financial measures are also used by our management to evaluate financial results and to plan and forecast future periods. However, non-GAAP financial measures should be considered as a supplement to, and not as a substitute for, or superior to, the corresponding measures calculated in accordance with GAAP. Non-GAAP financial measures used by us may differ from the non-GAAP measures used by other companies, including our competitors.

To supplement our unaudited condensed consolidated financial statements presented on a GAAP basis, we disclose certain non-GAAP financial measures that exclude certain amounts, including non-GAAP net income applicable to common shares, adjusted. The calculation of the tax effect on the adjustments between GAAP net income (loss) applicable to common shares and non-GAAP net income applicable to common shares is based upon our estimated annual GAAP tax rate, adjusted to account for items excluded from GAAP net income (loss) applicable to common shares in calculating non-GAAP net income applicable to common shares. Reconciliations of each of these non-GAAP financial measures to the corresponding GAAP measures are included in the reconciliation below:

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2018	2017	2018	2017
	(In thousands)			
Net income (loss) applicable to common shares, as reported	\$ 2,931	\$ 16,548	\$ (5,441)	\$ 11,153
Severance and restructuring costs	824	2,820	1,708	10,623
Asset impairment and abandonments	—	—	4,515	—
Acquisition and integration expenses	1,941	—	2,741	—
Inventory write-off	—	—	7,582	—
Inventory purchase price adjustment	—	—	456	—
Loss on extinguishment of debt	—	—	309	—
Cardiothoracic closure business divestiture contingency consideration	(3,000)	—	(3,000)	—
Gain on cardiothoracic closure business divestiture	—	(34,090)	—	(34,090)
Tax effect on new tax legislation	(650)	—	(650)	—
Tax effect on adjustments	—	15,159	(3,654)	13,855
Non-GAAP net income applicable to common shares, adjusted	<u>\$ 2,046</u>	<u>\$ 437</u>	<u>\$ 4,566</u>	<u>\$ 1,541</u>

The following is an explanation of the adjustments that management excluded as part of the non-GAAP measures for the three and nine months ended September 30, 2018 and 2017, as well as the reasons for excluding the individual items:

Severance and restructuring costs – These costs relate to the reduction of our organizational structure, primarily driven by simplification of our international operating infrastructure, specifically our distribution model. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Asset impairment and abandonments – These costs represent asset impairment and abandonments related to lower distributions of our map3® implant. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Acquisition and integration expenses – These costs relate to acquisition and integration expenses due to the purchase of Zyga and certain other business development activities. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Inventory write-off – These costs relate to an inventory write-off due to the rationalization of our international distribution infrastructure and an inventory write-off related to lower distributions of our map3® implant. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Inventory purchase price adjustment – These costs relate to the purchase price effects of acquired Zyga inventory that was sold during the nine months ended September 30, 2018. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Loss on extinguishment of debt – These costs relate to refinancing our debt. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Gain on cardiothoracic closure business divestiture – This adjustment represents the gain relating to the sale of substantially all of the assets of our CT Business to A&E. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Cardiothoracic closure business divestiture contingency consideration – This adjustment represents the remaining cash contingency consideration received from the sale of substantially all of the assets of our CT Business to A&E. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Tax effect on new tax legislation – This adjustment represents charges relating to the Tax Cuts and Jobs Act tax legislation which was enacted on December 22, 2017. Management removes the amount of these costs from our operating results to supplement a comparison to our past operating performance.

Liquidity and Capital Resources

Our working capital at September 30, 2018, decreased \$12.4 million to \$120.3 million from \$132.7 million at December 31, 2017, primarily as a result of the purchase of Zyga. We acquired Zyga for \$21.0 million in consideration paid at closing.

At September 30, 2018, we had 57 days of revenues outstanding in trade accounts receivable, an increase of 11 days compared to December 31, 2017. The increase is driven by the longer period receivables remain outstanding for contracts with customers where inventory is exclusively built with no alternative use to us, and where revenue is recognized over time under ASC 606. Whereas previously, revenue and receivables were recorded at the time of shipment, they are now recorded over time. The customer, however, is only billed at the time of shipment.

At September 30, 2018, we had 266 days of inventory on hand, a decrease of 32 days compared to December 31, 2017. The decrease in inventory days is primarily due to higher distributions; inventory obsolescence due to the rationalization of our international distribution infrastructure; and an inventory write-off related to decreased forecasted distributions of our map3® implant during the nine months ended September 30, 2018. We believe that our inventory levels will be adequate to support our on-going operations for the next twelve months.

We had \$10.0 million of cash and cash equivalents at September 30, 2018. At September 30, 2018, our foreign subsidiaries held \$1.7 million in cash. We intend to indefinitely reinvest the earnings of our foreign subsidiaries. We do not believe that this policy of indefinitely reinvesting the earnings of our foreign subsidiaries will have a material adverse effect on the business as a whole.

Our short and long-term obligations at September 30, 2018, increased \$2.7 million to \$49.0 million from \$46.3 million at December 31, 2017. The increase in short and long-term obligations was primarily due to increased borrowing to finance the Zyga acquisition.

On January 4, 2018, we acquired Zyga, as discussed above under “Management Overview.”

On June 5, 2018, we, along with our wholly-owned subsidiary, Pioneer Surgical, Inc., entered into a Credit Agreement (the “2018 Credit Agreement”), as borrowers, with JP Morgan Chase Bank, N.A., as lender (together with the various financial institutions as in the future may become parties thereto, the “Lenders”) and as administrative agent for the Lenders. The 2018 Credit Agreement provides for a revolving credit facility in the aggregate principal amount of up to \$100 million (the “Facility”). We will be able to, at our option, and subject to customary conditions and Lender approval, request an increase to the Facility by up to \$50 million.

The Facility is guaranteed by our domestic subsidiaries and is secured by: (i) substantially all of the assets of the Company and Pioneer Surgical; (ii) substantially all of the assets of each of our domestic subsidiaries; and (iii) 65% of the stock of our foreign subsidiaries.

The initial borrowings made under the 2018 Credit Agreement will bear interest at a rate per annum equal to the monthly REVLIBOR30 Rate (“CBFR Loans”) plus an adjustable margin of up to 2.00% (the “CBFR Rate”). We may elect to convert the interest rate for the initial borrowings to a rate per annum equal to the adjusted LIBO Rate (“Eurodollar Loans”) plus an adjustable margin of up to 2.00% (the “Eurodollar Rate”). For all subsequent borrowings, we may elect to apply either the CBFR Rate or Eurodollar Rate. The applicable margin is subject to adjustment after the end of each fiscal quarter, based upon our average quarterly availability. The maturity date of the Facility is June 5, 2023. We may make optional prepayments on the Facility without penalty. We paid certain customary closing costs and bank fees upon entering into the 2018 Credit Agreement.

We are subject to certain affirmative and negative covenants, including (but not limited to), covenants limiting our ability to: incur certain additional indebtedness; create certain liens; enter into sale and leaseback transactions; and consolidate or merge with, or convey, transfer or lease all or substantially all of its assets to another person. We are required to maintain a minimum fixed charge coverage ratio of at least 1.00:1.00 (the “Required Minimum Fixed Charge Coverage Ratio”) during either of the following periods (each, a “Covenant Testing Period”): (i) a period beginning on a date that a default has occurred and is continuing under the loan documents entered into by us in conjunction with the Credit Agreement (the “Loan Documents”) through the first date on which no default has occurred and is continuing; or (ii) a period beginning on a date that availability under the Facility is less than the specified covenant testing threshold and continuing until availability under the Facility is greater than or equal to the specified covenant testing threshold for thirty (30) consecutive days. The Required Minimum Fixed Charge Coverage Ratio is measured on the last day of each calendar month during the Covenant Testing Period (each a “Calculation Date”), and is calculated using the minimum fixed charge coverage ratio for the twelve (12) consecutive months ending on each Calculation Date. The amounts owed under the 2018 Credit Agreement may be accelerated upon the occurrence of certain events of default customary for facilities for similarly rated borrowers.

At September 30, 2018, the interest rate for the Facility was 3.85%. As of September 30, 2018, there was \$50.0 million outstanding on the Facility and total remaining available credit on the Facility was \$42.0 million. Our ability to access our Facility is subject to and can be limited by our compliance with our financial and other covenants. We were in compliance with the financial covenants related to our revolving credit facility as of September 30, 2018.

As of September 30, 2018, we believe that our working capital, together with our borrowing ability under the Facility, will be adequate to fund our ongoing operations for the next twelve months.

As of September 30, 2018, we have no material off-balance sheet arrangements.

Certain Commitments.

Our long-term debt obligations and availability of credit as of September 30, 2018 are as follows:

	Outstanding Balance	Available Credit
	(In thousands)	
Revolving credit facility	\$ 50,000	\$ 41,990
Less unamortized debt issuance costs	<u>(979)</u>	
Total	<u>\$ 49,021</u>	

The following table provides a summary of our long-term debt obligations, operating lease obligations and other significant obligations as of September 30, 2018.

	Contractual Obligations Due by Period				
	Total	Less than 1 Year	1-3 Years (In thousands)	4-5 Years	More than 5 Years
Long-term debt obligations	\$ 49,021	\$ —	\$ —	\$ 49,021	\$ —
Operating lease obligations	4,078	438	2,428	329	883
Purchase obligations (1)	13,088	13,088	—	—	—
Total	<u>\$ 66,187</u>	<u>\$ 13,526</u>	<u>\$ 2,428</u>	<u>\$ 49,350</u>	<u>\$ 883</u>

(1) These amounts consist of contractual obligations for capital expenditures and open purchase orders.

We were in compliance with the financial and other covenants related to the Facility as of September 30, 2018.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are subject to market risk from exposure to changes in interest rates based upon our financing, investing and cash management activities. We are exposed to interest rate risk in the United States and Germany. Changes in interest rates affect interest income earned on cash and cash equivalents and interest expense on revolving credit arrangements. We have not entered into derivative transactions related to cash and cash equivalents or debt. Our borrowings under our credit facility expose us to market risk related to changes in interest rates. As of September 30, 2018, our outstanding floating rate indebtedness totaled \$50.0 million. The primary base interest rate is LIBOR. Other outstanding debt consists of fixed rate instruments. We do not expect changes in interest rates to have a material adverse effect on our income or our cash flows in 2018. However, we can give no assurance that interest rates will not significantly change in the future.

The value of the U.S. dollar compared to the Euro affects our financial results. Changes in exchange rates may positively or negatively affect revenues, gross margins, operating expenses and net income. Our international operations currently transact business primarily in the Euro. Assets and liabilities of foreign subsidiaries are translated at the period end exchange rate while revenues and expenses are translated at the average exchange rate for the period. Intercompany transactions are translated from the Euro to the U.S. dollar. We do not expect changes in exchange rates to have a material adverse effect on our income or our cash flows for the remainder of 2018. However, we can give no assurance that exchange rates will not significantly change in the future.

Item 4. Controls and Procedures

As of the end of the period covered by this report, an evaluation was performed on the effectiveness of the design and operation of our disclosure controls and procedures under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer pursuant to Rules 13a-15(b) or 15d-15(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Disclosure controls and procedures include controls and other procedures that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and accumulated and communicated to the Company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that the design and operation of our disclosure controls and procedures were effective as of the end of the period covered by this report.

There have not been any changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the three months ended September 30, 2018 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The Company is, from time to time, involved in litigation relating to claims arising out of its operations in the ordinary course of business. The Company believes that none of these claims that were outstanding as of September 30, 2018 will have a material adverse impact on its financial position or results of operations.

For a further description, we refer you to Part I, Item 1, Note 19 entitled “Legal Actions” to the condensed consolidated financial statements included in this Quarterly Report on Form 10-Q for a description of current legal proceedings.

Item 1A. Risk Factors

There has been no material change in our risk factors as previously disclosed in Part I, Item 1.A., Risk Factors, of our Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission on March 2, 2018.

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

The following table presents information with respect to our repurchases of our common stock during the nine months ended September 30, 2018.

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
January 1, 2018 to January 31, 2018	81,830	\$ 4.44	—	—
February 1, 2018 to February 28, 2018	—	—	—	—
March 1, 2018 to March 31, 2018	—	—	—	—
April 1, 2018 to April 30, 2018	12,453	\$ 4.47	—	—
May 1, 2018 to May 31, 2018	4,655	\$ 4.25	—	—
June 1, 2018 to June 30, 2018	—	—	—	—
July 1, 2018 to July 31, 2018	339	\$ 4.25	—	—
August 1, 2018 to August 31, 2018	7,832	\$ 4.90	—	—
September 1, 2018 to September 30, 2018	—	—	—	—
Total	<u>107,109</u>	<u>\$ 4.47</u>	<u>—</u>	<u>—</u>

- (1) The purchases include amounts that are attributable to shares surrendered to us by employees to satisfy, in connection with the vesting of restricted stock awards, their tax withholdings obligations.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

- 3.1 [Amended and Restated Certificate of Incorporation of RTI Surgical, Inc.](#)
- 3.2 [Amended and Restated Certificate of Designation of Series A Convertible Preferred Stock of RTI Surgical, Inc.](#)
- 3.3⁽¹⁾ [Amended and Restated Bylaws of RTI Surgical, Inc.](#)
- 31.1 [Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14\(a\)/15d-14\(a\) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 31.2 [Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14\(a\)/15d-14\(a\) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.](#)
- 32.1 [Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.](#)
- 32.2 [Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350 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 Extension Definition Linkbase Document
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

⁽¹⁾ Incorporated by reference to the Registrant's Current Report on Form 8-K (File No. 000-31271) filed by the Registrant on July 11, 2016.

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
RTI SURGICAL, INC.

FIRST: The name of the corporation is RTI Surgical, Inc.

SECOND: The address of the registered office of the corporation in the State of Delaware is United Corporate Services, Inc., 874 Walker Road, Suite C, Dover, Kent County, DE 19901. The name of corporation's registered agent at such address is United Corporate Services, Inc.

THIRD: The purpose of the corporation is to engage in any lawful act or activity for which a corporation may be organized under the General Corporation Law of Delaware as set forth in Title 8 of the Delaware Code 1953, as amended (the "GCL").

FOURTH: Capital Stock:

This corporation is authorized to issue 155,000,000 shares of capital stock, \$0.001 par value, of which 150,000,000 shares shall be Common Stock, \$0.001 par value and 5,000,000 shares shall be Preferred Stock, \$0.001 par value.

- (A) Preferred Stock. The Board of Directors is expressly authorized to provide for the issue of all or any shares of the Preferred Stock, in one or more series, and to fix for each such series such voting powers, full or limited, and such designations, preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issue of such series (a "Preferred Stock Designation") and as may be permitted by the GCL. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of all the then outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class, without a separate vote of the holders of the Preferred Stock, or any series thereof, unless a vote of any such holders is required pursuant to any Preferred Stock Designation.
- (B) Common Stock. Except as otherwise required by law or as otherwise provided in any Preferred Stock Designation, the holders of the Common Stock shall exclusively possess all voting power and each share of Common Stock shall have one vote.

FIFTH: The corporation is to have perpetual existence.

SIXTH: In furtherance and not in limitation of the powers conferred by statute, the board of directors is expressly authorized to make, alter or repeal the by-laws of the corporation. Notwithstanding anything in this Amended and Restated Certificate of Incorporation to the contrary, Bylaw Sections 2.04, 2.07 and paragraphs Ninth and Twelfth of this Amended and Restated Certificate of Incorporation may not be repealed or amended in any respect, and no provision inconsistent therewith may be adopted by the stockholders unless such action is approved by the affirmative vote of the holders of sixty-six and two-thirds percent (66 2/3%) of the outstanding shares of all classes and series of the corporation entitled to vote generally in the election of the corporation's directors.

SEVENTH: Prior to the 2014 Annual Meeting of Stockholders, directors shall be divided into three classes, designated Class I, Class II and Class III, with the term of office of one class expiring each year. Class I directors shall serve until the 2014 Annual Meeting of Stockholders, Class II directors shall serve until the 2015 Annual Meeting of Stockholders and Class III directors shall serve until the 2016 Annual Meeting of Stockholders. Commencing with the annual meeting of stockholders 2014, successors to the class of directors whose term expires at that annual meeting and other director nominees shall be elected for a one-year term expiring at the next annual meeting of stockholders and until his or her successor shall be duly elected and qualified, subject to his or her earlier death, resignation, retirement or removal from service as a director. Any vacancy on the Board of Directors for any reason, and any directorships resulting from any increase in the number of directors of the Board of Directors, may be filled by a majority of the Board of Directors then in office, although less than a quorum, or a sole remaining director and any directors so chosen shall hold office until the next annual meeting of the stockholders and until their successors shall be duly elected and qualified, subject to their earlier death, resignation, retirement or removal from service as a director. Notwithstanding the foregoing, whenever the holders of any one or more classes or series of stock issued by the Corporation shall have the right, voting separately by class or series, to elect directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies and other features of such directorships shall be governed by the terms of this Amended and Restated Certificate of Incorporation applicable thereto, and the number of such directors shall not be counted in determining the maximum number of directors permitted under the foregoing provision of this paragraph Seventh in each case unless expressly provided by such terms.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the by-laws may provide. Upon consummation of the corporation's initial public offering of its Common Stock, stockholder action may not be taken by written consent in lieu of a meeting. The books of the corporation may be kept (subject to any provision of the GCL) outside the State of Delaware at such place or places as may be designated from time to time by the board of directors or in the by-laws of the corporation. Election of directors need not be by written ballot unless the by-laws of the corporation shall so provide.

NINTH: The corporation shall indemnify each person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or is or was a director, officer, employee or agent of a foreign or domestic corporation that was a predecessor corporation of this corporation or another enterprise at the request of the predecessor corporation to the fullest extent permitted by Section 145 of the GCL, as amended. The indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any by-law, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, and such indemnification shall continue as to a person who has ceased to be such a person and shall inure to the benefit of the heirs, executors and administrators of such a person.

Any amendment, repeal or modification of the foregoing provisions of this paragraph Ninth shall not adversely affect any right or protection of a director, officer, agent, or other person existing at the time of, or increase the liability of any director of this corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal or modification.

TENTH: The corporation reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or thereafter prescribed by statute, and all rights conferred on the stockholders herein are granted subject to this reservation.

ELEVENTH: Whenever a compromise or arrangement is proposed between this corporation and its creditors or any class of them and/or between this corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this corporation under the provisions of Section 291 of the GCL or on the application of trustees in dissolution or of any receiver or receivers appointed for this corporation under the provisions of Section 279 of the GCL, order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this corporation as consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all the stockholders or class of stockholders, of this corporation, as the case may be, and also on this corporation.

TWELFTH: A director of this corporation shall not be personally liable to the corporation or its stockholders for monetary damages for the breach of any fiduciary duty as a director, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or that involve intentional misconduct or knowing violation of law, (iii) under Section 174 of GCL, as the same exists or hereafter may be amended, or (iv) for any transaction from which the director derived an improper personal benefit. If the GCL is amended after the date of incorporation of the corporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the GCL, as so amended.

Any repeal or modification of the foregoing paragraph by the stockholders of the corporation shall be prospective only, and shall not adversely affect any limitation on the personal liability of a director of the corporation existing at the time of such repeal or modification.

* * *

AMENDED AND RESTATED
CERTIFICATE OF DESIGNATION OF
SERIES A CONVERTIBLE PREFERRED STOCK
OF
RTI SURGICAL, INC.

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

RTI SURGICAL, INC. (the "Corporation"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "DGCL"), certifies that, pursuant to authority conferred upon the board of directors of the Corporation (the "Board") by the FOURTH Article of the Amended and Restated Certificate of Incorporation of the Corporation, as amended from time to time (the "Certificate of Incorporation"), and pursuant to the provisions of DGCL Section 242, the Board adopted and approved the following resolution providing for the designations, preferences and relative, participating, optional and other rights, and the qualifications, limitations and restrictions of the Series A Convertible Preferred Stock:

WHEREAS, the Certificate of Incorporation provides for two classes of shares of capital stock known as common stock, par value \$0.001 per share (the "Common Stock"), and preferred stock, par value \$0.001 per share (the "Preferred Stock");

WHEREAS, the Certificate of Incorporation authorizes the issuance of 5,000,000 shares of Preferred Stock;

WHEREAS, the Board is authorized by the Certificate of Incorporation as permitted by the DGCL to provide for the issuance of the shares of Preferred Stock in one or more series and to establish from time to time the number of shares to be included in each such series and to fix the voting powers, designations, preferences and relative, participating, optional and other rights of the shares of each such series and the qualifications, limitations and restrictions thereof;

WHEREAS, on July 16, 2013, the Corporation issued 50,000 shares of Series A Convertible Preferred Stock with such voting powers, designations, preferences and relative, participating, optional and other rights and the qualifications, limitations and restrictions set forth in that certain Certificate of Designation of Series A Convertible Preferred Stock, dated July 16, 2013 (the "Certificate of Designation"); and

WHEREAS, the Board, with the consent of the holders of Series A Convertible Preferred Stock, desires the Corporation to enter into this Amended and Restated Certificate of Designation of Series A Convertible Preferred Stock.

NOW, THEREFORE, BE IT RESOLVED, that the Board does hereby fix the number of shares to be included in such series of Preferred Stock and the voting powers, designations, preferences, rights, qualifications, limitations and restrictions of the shares of such series of Preferred Stock as follows:

Section 1. Designation. The designation of this series of Preferred Stock is "Series A Convertible Preferred Stock," par value \$0.001 per share (the "Series A Preferred").

Section 2. Number of Series A Preferred Shares. The authorized number of shares of Series A Preferred is 50,000.

Section 3. Defined Terms and Rules of Construction.

(a) Definitions. As used herein with respect to the Series A Preferred:

“Affiliate” of any Person shall mean any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such Person. For purposes of this definition, “control” when used with respect to any Person has the meaning specified in Rule 12b 2 under the Exchange Act; and the terms “controlling” and “controlled” have meanings correlative to the foregoing.

“Board” shall have the meaning set forth in the preamble hereto.

“Business Day” means any day except Saturday, Sunday and any day on which banking institutions in New York, New York generally are closed as a result of federal, state or local holiday.

“Bylaws” shall mean the Amended and Restated Bylaws of the Corporation in effect on the date hereof and as amended from time to time in accordance with the terms therein and herein.

“Capital Stock” shall mean any and all shares, interests, rights to purchase, warrants, options, participations or other equivalents of or interests in (in each case however designated) stock issued by the Corporation.

“Certificate of Designation” shall mean this Amended and Restated Certificate of Designation relating to the Series A Preferred, as it may be amended from time to time in accordance with the terms hereof.

“Certificate of Incorporation” shall have the meaning set forth in the preamble hereto.

“Change of Control” shall mean (a) any sale or other disposition of all or substantially all of the assets of the Corporation and its Subsidiaries on a consolidated basis in any transaction or series of related transactions, (b) any sale, transfer or issuance or series of related sales, transfers and/or issuances of shares of the Capital Stock by the Corporation or any holder thereof which results in any single Person or group (as defined in Rule 13d-5 of the Exchange Act) becoming the beneficial owners of Capital Stock representing (x) 50% or more of the voting power of all outstanding voting Capital Stock or (y) the power to elect a majority of the Board (under ordinary circumstances, by contract or otherwise), or (c) any merger or consolidation to which the Corporation is a party unless after giving effect to such merger no single Person or group (as defined in Rule 13d-5 of the Exchange Act) is the beneficial owner of Capital Stock possessing the voting power to elect a majority of the Board or the surviving Person’s board of directors (or similar governing body) or becomes the beneficial owner of greater than 50% of the Corporation’s or such surviving Person’s issued and outstanding common stock or securities convertible into common stock of such Person.

“Closing Price” shall mean the price per share of the final trade of the Common Stock, other Capital Stock or similar equity interest, as applicable, on the applicable Trading Day (or the last trade of the Capital Stock or similar equity interest preceding the applicable Trading Day if no trades of such securities were made on the applicable Trading Day) on the principal national securities exchange or securities market on which the Common Stock, other Capital Stock or similar equity interest is listed or admitted to trading; provided that if the Capital Stock is not so listed or traded, the Closing Price shall be equal to the fair market value, as reasonably determined in good faith by the Board.

“Commission” shall mean the U.S. Securities and Exchange Commission, including the staff thereof.

“Common Stock” shall have the meaning set forth in the recitals hereto.

“Common Stock Deemed Outstanding” shall mean, at any given time, the sum of (a) the number of shares of Common Stock actually outstanding at such time, plus (b) the number of shares of Common Stock issuable upon exercise of Options actually outstanding at such time, plus (c) the number of shares of Common Stock issuable upon conversion or exchange of Convertible Securities actually outstanding at such time (treating as actually outstanding any Convertible Securities issuable upon exercise of Options actually outstanding at such time), in each case, regardless of whether or not the Options or Convertible Securities are actually exercisable at such time.

“Conversion Cap” shall have the meaning ascribed to it in Section 8(a).

“Conversion Price” shall mean \$4.39, but as it may be adjusted from time to time in accordance with Section 9.

“Conversion Restriction” shall have the meaning set forth in Section 8(a).

“Conversion Standstill Period” shall have the meaning ascribed to it in Section 8(a).

“Conversion Stock” shall mean Common Stock or other capital stock of the Corporation then issuable upon conversion of the Series A Preferred in accordance with the terms of Section 8.

“Convertible Securities” shall mean any stock, securities (other than Options) or obligations of indebtedness directly or indirectly convertible into or exchangeable for Common Stock.

“Corporation” shall have the meaning set forth in the preamble hereto.

“Date of Issuance” shall mean, for any Series A Preferred Share, the date on which the Corporation initially issues such Series A Preferred Share (without regard to any subsequent transfer of such Series A Preferred Share or reissuance of the certificate(s) representing such Series A Preferred Share).

“Deemed Liquidation” shall have the meaning ascribed to it in Section 5(b).

“Dividend Reference Date” shall have the meaning set forth in Section 4(a).

“DGCL” shall have the meaning set forth in the preamble hereto.

“Event of Noncompliance” shall have the meaning set forth in Section 12.

“Exchange Act” shall mean the Securities Exchange Act of 1934, as amended.

“Excluded Issuances” means any issuance or sale (or deemed issuance or sale in accordance with Section 9(d)) by the Corporation after the Date of Issuance of: (a) shares of Common Stock issued on the conversion of the Series A Preferred; (b) up to an aggregate of 5,700,000 shares of Common Stock (as such number of shares is equitably adjusted for subsequent stock splits, stock combinations, stock dividends and recapitalizations) issued directly or upon the exercise of Options to directors, officers, employees, or consultants of the Corporation in connection with their service as directors of the Corporation, their employment by the Corporation or their retention as consultants by the Corporation, in each case authorized by the Board and issued pursuant to the Incentive Plans (including all such shares of Common Stock and Options outstanding prior to the Date of Issuance); or (c) shares of Common Stock issued upon the conversion or exercise of Options (other than Options covered by clause (b) above) issued prior to the Date of Issuance, provided that such securities are not amended after the date hereof to increase the number of shares of Common Stock issuable thereunder or to lower the exercise or conversion price thereof.

“Forced Conversion” shall have the meaning set forth in Section 8(b).

“Forced Conversion Noncompliance Event” shall mean (i) the failure of the Corporation to make any redemption payment with respect to any Series A Preferred Share which it is required to make hereunder, whether or not such payment is legally permissible or is prohibited by any debt financing agreement of the Corporation or any of its Subsidiaries or any other agreement to which the Corporation is subject or (ii) the breach by the Corporation of its obligations under Section 8(e). The foregoing shall constitute Forced Conversion Noncompliance Events whatever the reason or cause for any such Forced Conversion Noncompliance Event and whether it is voluntary or involuntary or is effected by operation of law or pursuant to any judgment, decree or order of any court or any order, rule or regulation of any administrative or governmental body and regardless of the effects of any subordination provisions.

“Incentive Plans” means the Corporation’s 1998 Stock Option Plan, 2004 Equity Incentive Plan, 2010 Equity Incentive Plan, 2015 Incentive Compensation Plan, 2018 Incentive Compensation Plan, 1996 TMI Stock Option Plan, TMI 2006 Incentive and Non-Statutory Stock Option Plan, and any other equity incentive plan of the Corporation adopted and approved by the Board after the date of this Certificate, in each case as may be amended, supplemented or modified from time to time as approved by the Board.

“Investment Agreement” shall mean that certain Investment Agreement by and between the Corporation and Investor, dated as of June 12, 2013.

“Investor Rights Agreement” shall mean that certain Investor Rights Agreement by and between the Corporation and Investor, dated on or about the Date of Issuance.

“Investor” shall mean WSHP Biologics Holdings, LLC.

“Junior Securities” shall mean any class or series of Capital Stock other than (i) the Series A Preferred or (ii) any class or series of Capital Stock that is specifically designated as senior or pari passu to the Series A Preferred in any amendment, modification or supplement to the Certificate of Incorporation (including as a result of a new certificate of designation), which the holders of Series A Preferred have consented to in accordance with Section 11 hereof and, if applicable, Section 3.5 of the Investor Rights Agreement.

“Liquidation” shall have the meaning ascribed to it in Section 5(a).

“Liquidation Preference” shall have the meaning ascribed to it in Section 5(a).

“Liquidation Value” of any Series A Preferred Share as of any particular date shall mean \$1,000.

“Noncompliance Period” shall have the meaning ascribed to it in Section 12(c).

“Optional Conversion Eligibility Time” shall mean the earlier of the following: (i) immediately prior to a Change of Control and (ii) the eighth anniversary of the Date of Issuance.

“Optional Redemption Eligibility Time” shall mean the earlier of the following: (i) immediately prior to a Change of Control and (ii) the seventh anniversary of the Date of Issuance.

“Options” shall mean any rights, warrants or options to subscribe for or purchase Common Stock or Convertible Securities.

“Organic Change” shall have the meaning ascribed to it in Section 9(e).

“Person” or “person” shall mean an individual, corporation, limited liability company, association, partnership, group (as such term is used in Section 13(d)(3) of the Exchange Act), trust, joint venture, business trust or unincorporated organization, or a government or any agency or political subdivision thereof.

“Preferred Director” shall have the meaning ascribed to it in Section 10(b).

“Preferred Percentage” shall mean, at any time of determination, the percentage equal to (i) the number of shares of Common Stock issuable upon the conversion of all of the Series A Preferred Shares outstanding at such time of determination (without regard to any restrictions on conversion (including the Conversion Standstill Period, the Conversion Cap and the Conversion Restriction)), plus the number of shares of Common Stock outstanding at such time of determination that were issued pursuant to the conversion of any Series A Preferred Shares, divided by (ii) the number of shares of Common Stock issued and outstanding at such time of determination, plus the number of shares of Common Stock issuable upon conversion of the Series A Preferred outstanding at such time (without regard to any restrictions on conversion (including the Conversion Standstill Period, the Conversion Cap and the Conversion Restriction)).

“Preferred Stock” shall have the meaning set forth in the recitals hereto.

“Purchase Rights” shall have the meaning ascribed to it in Section 11.

“Redemption Date” shall mean, as to any Series A Preferred Share, the date specified in the notice of any redemption at the Corporation’s option or at the holder’s option; provided that no such date shall be a Redemption Date unless the amount payable to such Series A Preferred Share hereunder is actually paid in full on such date, and if not so paid in full, the Redemption Date shall be the date on which such amount is fully paid.

“Registrable Securities” shall have the meaning set forth in the Investor Rights Agreement.

“Related Party” shall mean (i) any officer or director of the Corporation or other Person that owns at least 5% of the Common Stock on an as-converted fully diluted basis (which for such calculation shall aggregate stockholdings of Affiliates and of immediate family members sharing the same household with such Persons), (ii) any officer or director of any of the Corporation’s Subsidiaries, or (iii) any member of any such Person’s immediate family sharing the same household or any of their respective Affiliates.

“Series A Dividend Reference Dates” shall have the meaning ascribed to it in Section 4(b).

“Series A Preferred Majority Holders” shall mean, as of any time of determination, the holders of a majority of the Series A Preferred Shares outstanding as of such time of determination.

“Series A Preferred” shall have the meaning ascribed to it in Section 1.

“Series A Preferred Share” shall have the meaning ascribed to it in Section 4(a).

“Series A Unpaid Dividends” shall have the meaning ascribed to it in Section 4(a).

“Shareholder Approval” shall mean all approvals of the stockholders of the Corporation necessary to approve the transactions contemplated under the Investment Agreement and the issuance of the Series A Shares contemplated thereby, including any approvals by the holders of Common Stock for the issuance of twenty percent (20%) or more of the number of shares of Common Stock outstanding before such issuance, and the issuance of twenty percent (20%) or more of the voting power of the Company to any one holder of Series A Shares as may be required under law or the listing standards of NASDAQ (or any successor thereto or other trading market on which the Common Stock is listed), including NASDAQ Market Place Rule 5635(b) and (d) or NASDAQ Market Place Rule 5640, and Interpretative Material (IM) 5635-2, as applicable.

“Shareholder Approval Deadline” shall have the meaning ascribed to it in Section 4(e).

“Shelf Registration Statement” shall have the meaning set forth in Investor Rights Agreement.

“Stock Price Forced Conversion Event” shall have the meaning ascribed to it in Section 8(b).

“Subsidiary” means any Person of which at least (i) a majority of the equity and (ii) a majority of the voting interests, are owned or controlled, directly or indirectly, by the Corporation, by any one or more of its Subsidiaries, or by any combination of the Corporation and one or more of its Subsidiaries. For the avoidance of doubt, any reference to any Subsidiary of the Company shall include RTI Donor Services, Inc.

“Taxes” shall mean any federal, state, local or foreign income, gross receipts, branch profits, license, payroll, employment, excise, severance, stamp, occupation, premium, windfall profits, escheat, environmental, customs duties, capital stock, franchise, profits, withholding, social security, unemployment, disability, real property, personal property, sales, use, transfer, registration, ad valorem, value added, alternative or add-on minimum or estimated tax or other tax of any kind whatsoever, including any interest, penalty or addition thereto, whether disputed or not and including any obligation to indemnify or otherwise assume or succeed to the Tax liability of any other Person by law, by contract or otherwise.

“Trading Day” shall mean any Business Day on which the Common Stock is traded, or able to be traded, on the principal national securities exchange on which the Common Stock is listed or admitted to trading.

(b) Rules of Construction. Unless the context otherwise requires: (i) words in the singular include the plural, and in the plural include the singular; (ii) “including” means including without limitation; (iii) references to any Section or clause refer to the corresponding Section or clause, respectively, of this Certificate of Designation; (iv) any reference to a day or number of days, unless expressly referred to as a Business Day or Trading Day, shall mean the respective calendar day or number of calendar days; (v) references to Sections of or Rules under the Exchange Act shall be deemed to include substitute, replacement or successor Sections or Rules, and any term defined by reference to a Section of or Rule under the Exchange Act shall include Commission and judicial interpretations of such Section or Rule; and (vi) headings are for convenience of reference only.

Section 4. Dividends.

(a) General Obligations. When, as and if declared by the Board and to the extent permitted under the DGCL, the Corporation shall pay preferential dividends in cash to the holders of the Series A Preferred as provided in this Section 4(a). Dividends on each share of the Series A Preferred (each a “Series A Preferred Share,” and collectively, the “Series A Preferred Shares”) shall accrue on a daily basis at the rate of six percent (6.0%) per annum (or twelve percent (12.0%) per annum if, and for so long as, required pursuant to Section 4(e)) on the sum of (x) the Liquidation Value thereof, plus (y) all accrued and accumulated but unpaid dividends on such Series A Preferred Share (such amount in clause (y), the “Series A Unpaid Dividends”), from and including the Date of Issuance and until the fifth anniversary of the Date of Issuance. For the avoidance of doubt (but subject to Section 12(c)), dividends shall not accrue for Series A Preferred Shares after the fifth anniversary of the Date of Issuance. Series A Unpaid Dividends shall be fully paid or declared with funds irrevocably set apart for payment before any dividends, distributions, redemptions or other payments may be made with respect to any Junior Securities, other than to (A) declare or pay any dividend or distribution payable on the Common Stock in shares of Common Stock or (B) repurchase Common Stock held by employees or consultants of the Corporation for not more than \$0.001 per share or other de minimis amounts per share upon termination of their employment or services in accordance with agreements providing for such repurchase existing as of the date of this Certificate or in accordance with any Incentive Plan or any other equity incentive plan of the Corporation adopted and approved by the Board after the date of this Certificate.

(b) Dividend Reference Dates. To the extent not paid in cash on March 31, June 30, September 30, and December 31 of each year, beginning September 30, 2013 (the “Series A Dividend Reference Dates”), all dividends which have accrued on each Series A Preferred Share during the three-month period (or other period, if any, in the case of the initial Series A Dividend Reference Date) ending upon each such Series A Dividend Reference Date shall be accumulated and shall remain accumulated dividends with respect to such Series A Preferred Share until paid in cash to the holder thereof.

(c) Distribution of Partial Dividend Payments. Except as otherwise provided herein, if at any time the Corporation pays less than the total amount of dividends then accrued and accumulated with respect to the Series A Preferred Shares, such payment shall be made pro rata among the holders thereof based upon the aggregate Series A Unpaid Dividends in respect of the Series A Preferred Shares held by each such holder.

(d) Participating Dividends. In addition to any other dividends accruing, accumulating or declared hereunder, in the event that the Corporation declares or pays any dividends upon the Common Stock (whether payable in cash, securities or other property), other than (i) dividends payable on the Common Stock solely in shares of Common Stock and (ii) to the extent constituting a dividend, any repurchases of Common Stock held by employees or consultants of the Corporation for not more than \$0.001 per share or other de minimis amounts per share upon termination of their employment or services in accordance with agreements providing for such repurchase existing as of the date of this Certificate or in accordance with any Incentive Plan or any other equity incentive plan of the Corporation adopted and approved by the Board after the date of this Certificate, the Corporation shall also declare and pay to the holders of the Series A Preferred at the same time that it declares and pays such dividends to the holders of the Common Stock the dividends which would have been declared and paid with respect to the Common Stock issuable upon conversion of the Series A Preferred Shares had all (*i.e.*, without regard to any restrictions on conversion (including the Conversion Standstill Period, the Conversion Cap and the Conversion Restriction) at such time) of such outstanding Series A Preferred Shares been converted immediately prior to the record date for such dividend, or if no record date is fixed, the date as of which the record holders of Common Stock entitled to such dividends are to be determined.

(e) Dividend Rate Adjustment. In the event that Shareholder Approval has not been obtained within 180 days after the Date of Issuance (the “Shareholder Approval Deadline”), then the dividend rate on each Series A Preferred Share shall automatically (without any further action) increase to the rate of twelve percent (12.0%) per annum, commencing on the day after the Shareholder Approval Deadline and ending on (and including) the date on which Shareholder Approval has been obtained.

Section 5. Liquidation

(a) Normal Liquidation. Upon any liquidation, dissolution or winding up of the Corporation (whether voluntary or involuntary) (collectively with a Deemed Liquidation, a “Liquidation”), each holder of Series A Preferred then outstanding shall be entitled to be paid, out of the assets of the Corporation available for distribution to its stockholders, before any distribution or payment is made upon any Junior Securities by reason of their ownership thereof, an amount in cash equal to the greater of (i) the sum of (x) the aggregate Liquidation Value of all Series A Preferred Shares held by such holder, plus (y) all Series A Unpaid Dividends thereon and (ii) the amount to which such holder would be entitled to receive upon such Liquidation if all (without regard to any restrictions on conversion (including the Conversion Standstill Period, the Conversion Cap and the Conversion Restriction) at such time) of such holder’s Series A Preferred was converted into Conversion Stock immediately prior to such event (such greater amount, the “Liquidation Preference”), and the holders of Series A Preferred shall not be entitled to any further payment with respect to their Series A Preferred Shares. If, upon any Liquidation, the Corporation’s assets available to be distributed among the holders of the Series A Preferred are insufficient to permit payment to such holders of the aggregate amount which they are entitled to be paid under this Section 5(a), then the entire assets available to be distributed to the Corporation’s stockholders shall be distributed pro rata among such holders of Series A Preferred Shares based upon the aggregate Liquidation Value plus all Series A Unpaid Dividends of the Series A Preferred held by each such holder. Not less than 30 days prior to the payment date stated therein (or such lesser period as may be agreed by the Series A Preferred Majority Holders), the Corporation shall deliver written notice of any Liquidation to each record holder of Series A Preferred, setting forth in reasonable detail the amount of proceeds to be paid with respect to each Series A Preferred Share and each Junior Security in connection with such Liquidation.

(b) Deemed Liquidation. The occurrence of a Change of Control shall be deemed to be a liquidation, dissolution and winding up of the Corporation for purposes of this Section 5(b) (a “Deemed Liquidation”), and the holders of the Series A Preferred shall be entitled to receive from the Corporation the Liquidation Preference with respect to the Series A Preferred upon such occurrence. The Corporation shall mail written notice of any Change of Control to each record holder of Series A Preferred Shares not less than 30 nor more than 60 days prior to the date on which such Change of Control is consummated.

Section 6. Redemption.

(a) Redemptions at the Option of the Holder. Beginning at the Optional Redemption Eligibility Time, any holder of Series A Preferred may, at any time and from time to time, request redemption, out of funds legally available therefor, of all or any portion of the Series A Preferred Shares held by such holder by delivering written notice of such request to the Corporation specifying the number of Series A Preferred Shares to be so redeemed and the date of such redemption (which may not be earlier than 60 days after delivery of such redemption notice). The Corporation shall be required to redeem on the date so specified in such holder's written notice delivered to the Corporation all or any portion of their Series A Preferred Shares with respect to which such redemption requests have been made at a price per Series A Preferred Share in cash equal to the Series A Liquidation Value thereof, plus all Series A Unpaid Dividends thereon.

(b) Redemptions at the Option of the Corporation. Beginning on the fifth anniversary of the Date of Issuance, the Corporation may at any time and from time to time, redeem, out of funds legally available therefor, all or any portion of the Series A Preferred Shares held by such holder by delivering written notice of such request to such holder in accordance with Section 6(d). Upon any such redemption, the Corporation shall pay a price per Series A Preferred Share with respect to which such redemption requests have been made in cash equal to the Series A Liquidation Value thereof, plus all Series A Unpaid Dividends thereon. Notwithstanding anything to the contrary herein, each holder of Series A Preferred Shares to be redeemed by the Corporation may elect to convert all or any portion of the Series A Preferred Shares held by such holder into Conversion Stock pursuant to Section 8 at any time prior to the applicable Redemption Date.

(c) Redemption Payments. For each Series A Preferred Share to be redeemed hereunder, the Corporation shall be obligated on the date specified in the notice of redemption delivered by the holder(s) of Series A Preferred Shares pursuant to Section 6(a) or by the Corporation pursuant to Section 6(b), as the case may be, to pay to the holder thereof (upon surrender by such holder at the Corporation's principal office of the certificate representing such Series A Preferred Share) in immediately available funds the amount required pursuant to Section 6(a) or Section 6(b), as applicable. If the funds of the Corporation legally available for redemption of Series A Preferred Shares pursuant to Section 6(a) on any Redemption Date are insufficient to redeem the total number of Series A Preferred Shares to be redeemed on such date, then without limiting any rights or remedies herein or otherwise, those funds which are legally available shall be used to redeem the maximum possible number of Series A Preferred Shares pro rata among the holders of the Series A Preferred Shares to be redeemed pursuant to Section 6(a) based upon the aggregate Liquidation Value, plus Series A Unpaid Dividends of such Series A Preferred Shares held by each such holder. At any time thereafter when additional funds of the Corporation are legally available for the redemption of Series A Preferred Shares pursuant to Section 6(a) such funds shall immediately be used to redeem the balance of the Series A Preferred Shares which the Corporation has become obligated to redeem on any Redemption Date but which it has not redeemed. For the avoidance of doubt, (x) references to "legally available" funds herein shall mean the amount of assets of the Corporation that may be used for a redemption of shares under Section 160 of the DGCL, and (y) the Corporation shall be required to take all actions as are necessary to obtain available funds to satisfy its redemption obligations, including selling assets and borrowing funds. For the avoidance of doubt, the Corporation shall be in breach of its obligations under this Certificate of Designation if it fails to pay in cash all amounts required to be paid by the Corporation pursuant to Section 6(a) on the redemption date specified in any redemption notice delivered by Investor in accordance with Section 6(a).

(d) Notice of Redemption by Corporation. The Corporation shall mail written notice of each redemption of Series A Preferred (other than a redemption at the request of a holder or holders of Series A Preferred) to each record holder thereof not more than 60 nor less than 30 days prior to the date on which such redemption is to be made. Upon mailing any notice of redemption which relates to a redemption at the Corporation's option, the Corporation shall become obligated to redeem the total number of Series A Preferred Shares specified in such notice at the time of redemption specified therein except to the extent such holder converts such Series A Preferred Shares into Conversion Stock prior to such redemption.

(e) Reissuances of Certificates. In case fewer than the total number of Series A Preferred Shares represented by any certificate are redeemed, a new certificate representing the number of unredeemed Series A Preferred Shares shall be issued to the holder thereof without cost to such holder within five business days after surrender of the certificate representing the redeemed Series A Preferred Shares.

(f) Determination of the Number of Each Holder's Series A Preferred Shares to be Redeemed. Except as otherwise provided in Section 6(c), the number of Series A Preferred Shares to be redeemed from each holder thereof in redemptions hereunder shall be the number of Series A Preferred Shares determined by multiplying the total number of Series A Preferred Shares to be redeemed times a fraction, the numerator of which shall be the total number of Series A Preferred Shares then held by such holder and the denominator of which shall be the total number of Series A Preferred Shares then outstanding.

(g) Redeemed or Otherwise Acquired Series A Preferred Shares. Any Series A Preferred Shares which are redeemed or otherwise acquired by the Corporation shall be canceled and retired to authorized but unissued shares and shall not be reissued, sold or transferred.

(h) Other Redemptions or Acquisitions. The Corporation shall not, nor shall it permit any Subsidiary to, redeem or otherwise acquire any Series A Preferred Shares, except as expressly authorized herein.

Section 7. Priority of Series A Preferred Shares. Except as specifically provided herein, so long as any Series A Preferred Shares remain outstanding, without the prior written consent of the Series A Preferred Majority Holders, the Corporation shall not, nor shall it permit any Subsidiary to, redeem, purchase or otherwise acquire directly or indirectly any Junior Securities, nor shall the Corporation directly or indirectly declare or pay any dividend or make any distribution upon any Junior Securities.

Section 8. Conversion.

(a) Conversion at the Option of the Holder. From and after the end of the period beginning on the Date of Issuance and ending at the Optional Conversion Eligibility Time (such period, the “Conversion Standstill Period”), each Series A Preferred Share may be converted, at any time and from time to time, at the option of the holder thereof into a number of shares of Common Stock equal to the quotient determined by dividing (i) the sum of the Liquidation Value, plus the Series A Unpaid Dividends thereon at such time, by (ii) the Conversion Price then in effect; provided, that (i) prior to the receipt of the Shareholder Approval, the Series A Preferred shall not be convertible pursuant to this Section 8 into more than 19.99% of the number of shares of Common Stock outstanding immediately prior to the Date of Issuance (subject to a proportionate adjustment in the event of a stock split, stock dividend, combination or other proportionate reduction or increase for the Common Stock) such conversion (such limitation, the “Conversion Cap”); and (ii) prior to the first vote of the shareholders of the Corporation with respect to the Shareholder Approval, no Series A Preferred Shares may be converted (the “Conversion Restriction”). Series A Preferred Shares shall immediately and permanently cease to be subject to the Conversion Cap upon receipt of Shareholder Approval. The Conversion Restriction shall no longer apply after the first vote of the shareholders of the Corporation with respect to the Shareholder Approval, whether or not Shareholder Approval is obtained. Notwithstanding anything herein to the contrary, (x) Section 6(b) and Section 6(d) shall govern the timing of any conversion if the Company exercises its rights to redeem Series A Preferred Shares pursuant to Section 6(b); and (y) each holder of Series A Preferred Shares may elect to convert all or any portion of the Series A Preferred Shares held by such holder into Conversion Stock pursuant to Section 8 immediately prior to or in connection with a Change of Control.

(b) Conversion at the Option of the Corporation. On any date following the earlier to occur of (i) the date, if any, that the average Closing Price during any 20 consecutive Trading Day period is greater than \$10.25 (subject to a proportionate adjustment in the event of a stock split, stock dividend, combination or other proportionate reduction or increase to the Common Stock) (a “Stock Price Forced Conversion Event”), and (ii) the eighth anniversary of the Date of Issuance, if (A) no Forced Conversion Noncompliance Event has occurred and is continuing, (B) there is an effective Shelf Registration Statement covering the resale of all of the Registrable Securities and (C) in the case of a Stock Price Forced Conversion Event, the Closing Price on the Trading Day immediately preceding the date on which the Corporation delivers notice of conversion pursuant to Section 8(c) is greater than \$10.25 (subject to a proportionate adjustment in the event of a stock split, stock dividend, combination or other proportionate reduction or increase to the Common Stock), then the Corporation may, cause the conversion of all, but (subject to the Conversion Cap and the Conversion Restriction) not less than all, of the Series A Preferred Shares into a number of shares of Common Stock per Series A Preferred Share equal to the quotient determined by dividing (x) the sum of the Liquidation Value, plus the Series A Unpaid Dividends thereon at such time, by (y) the Conversion Price then in effect. Any Series A Preferred Shares not converted due to the Conversion Cap and/or the Conversion Restriction shall continue outstanding on the terms set forth herein after such conversion. In connection with any such conversion, any Unpaid Series A Dividends shall be deemed to convert into Conversion Stock prior to any Series A Preferred Shares. The exercise by the Corporation of its rights under this Section 8(b) shall be referred to as the “Forced Conversion”. Notwithstanding the foregoing, no Forced Conversion shall be permitted until all governmental body filings, consents, authorizations and approvals (including under the Hart-Scott Rodino Antitrust Improvements Act of 1976, as amended) that are required for such Forced Conversion shall have been made and obtained by the Corporation; accordingly, the holders of the Series A Preferred Shares and the Corporation will promptly take all actions necessary to make any such required filings and cooperate in connection with any such required filings.

(c) Conversion Procedure. In the case of a conversion pursuant to Section 8(a), the conversion date shall be the date on which the certificate(s) representing such Series A Preferred Shares and a duly signed and completed notice of conversion of such Series A Preferred Share is received by the Corporation. In the case of a conversion pursuant to Section 8(b), the conversion date shall be a date specified in the notice from the Corporation to the holder(s) of Series A Preferred, which may not be less than ten (10) days after the holder of such Series A Preferred Shares has received written notice from the Corporation of its election to convert the Series A Preferred Shares; provided, that, for the avoidance of doubt, at any time after delivery of the Corporation's conversion notice pursuant to Section 8(b), any holder of Series A Preferred may cause all or any portion of such holder's Series A Preferred Shares to be redeemed by the Corporation if permitted by, and in accordance with, Section 6(a). As soon as possible (but in any event within five (5) business days) after a conversion of Series A Preferred Shares has been effected, the Corporation shall deliver to the converting holder, a certificate or certificates representing the number of shares of Common Stock issuable by reason of such conversion in such names or names and such denominations as the converting holder has specified. In case fewer than the total number of Series A Preferred Shares represented by any certificate are converted, a new certificate representing the number of Series A Preferred Shares not converted shall be issued to the holder thereof without cost to such holder within five business days after surrender of the certificate representing the redeemed Series A Preferred Shares.

(d) Cooperation. The Corporation shall not close its books against the transfer of Series A Preferred Shares or of Common Stock issued or issuable upon conversion of Series A Preferred Shares in any manner which interferes with the timely conversion of the Series A Preferred Shares. Without limiting Section 6.6 of the Investment Agreement or Section 8(b) above, the Corporation shall assist and cooperate (at its expense) with any holder of Series A Preferred Shares required to make any governmental filings or obtain any governmental approval prior to or in connection with any conversion of Series A Preferred Shares hereunder (including, without limitation, making any governmental filings required to be made by the Corporation).

(e) Common Stock Reserved for Issuance. The Corporation shall at all times when any Series A Preferred Shares are outstanding reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of issuance upon the conversion of the Series A Preferred Shares, the number of shares of Common Stock that would be issuable upon the conversion of all outstanding Series A Preferred Shares, assuming for the purposes of this calculation that at all times (i) the Shareholder Approval has been obtained, (ii) the Conversion Restriction does not apply, and (iii) the Conversion Standstill Period does not apply. All shares of Common Stock which are so issuable shall, when issued, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens, charges and encumbrances. The Corporation shall take all such actions as may be necessary to assure that all such shares of Common Stock may be so issued without violation of any applicable law or governmental regulation or any requirements of any domestic securities exchange or market upon which shares of Common Stock may be listed (except for official notice of issuance which shall be immediately delivered by the Corporation upon each such issuance and except for any such law, regulation or requirement applicable because of the business or nature of the holder). The Corporation shall not take any action which would cause the number of authorized but unissued shares of Common Stock to be less than the number of such shares required to be reserved hereunder for issuance upon conversion of the Series A Preferred Shares in accordance with this Section 8(d).

(f) Taxes. The Corporation shall pay any and all transfer Taxes that may be payable in respect of the issue or delivery of shares of Common Stock on conversion of the Series A Preferred Shares; provided that the Corporation shall not be required to pay transfer Taxes in respect of shares of Conversion Stock issued in the name of, or delivered to, a person other than Investor.

Section 9. Adjustments to Conversion Price. In order to prevent dilution of the conversion rights granted under Section 8, the Conversion Price and the number of shares of Conversion Stock issuable on conversion of the Shares of Series A Preferred shall be adjusted from time to time pursuant to this Section 9.

(a) Adjustment to Conversion Price upon Issuance of Common Stock. Except as provided in Section 9(b) and except in the case of an event described in either Section 9(d) or Section 9(e), if the Corporation, at any time or from time to time after the Date of Issuance, issues or sells, or in accordance with Section 9(c) is deemed to have issued or sold, any shares of Common Stock without consideration or for consideration per share less than the Conversion Price in effect immediately prior to such issuance or sale (or deemed issuance or sale), then immediately upon such issuance or sale (or deemed issuance or sale) the Conversion Price shall be reduced (and in no event increased) to a Conversion Price equal to the quotient determined by dividing: (i) the sum of (1) the product derived by multiplying the Conversion Price in effect immediately prior to such issuance or sale (or deemed issuance or sale) by the number of shares of Common Stock Deemed Outstanding immediately prior to such issuance or sale (or deemed issuance or sale), plus (2) the aggregate consideration, if any, received by the Corporation upon such issuance or sale (or deemed issuance or sale); by (ii) the sum of (1) the number of shares of Common Stock Deemed Outstanding immediately prior to such issuance or sale (or deemed issuance or sale) plus (2) the aggregate number of shares of Common Stock issued or sold (or deemed issued or sold) by the Corporation in such issuance or sale (or deemed issuance or sale).

(b) Exceptions To Adjustment Upon Issuance of Common Stock. Anything herein to the contrary notwithstanding, there shall be no adjustment to the Conversion Price with respect to any Excluded Issuance.

(c) Effect on Conversion Price of Certain Events. For purposes of determining the adjusted Conversion Price under Section 9(a), the following shall be applicable:

(1) Issuance of Rights or Options. If the Corporation, at any time or from time to time after the Date of Issuance, in any manner grants or sells (whether directly or by assumption in a merger or otherwise) any Options, whether or not such Options or the right to convert or exchange any Convertible Securities issuable upon the exercise of such Options are immediately exercisable, and the price per share (determined as provided in this paragraph and in Section 9(c)(5)) for which Common Stock is issuable upon the exercise of such Options, or upon the conversion or exchange of Convertible Securities issuable upon the exercise of such Options, is less than the Conversion Price in effect immediately prior to the time of the granting or sale of such Options, then the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon conversion or exchange of the total maximum amount of Convertible Securities issuable upon the exercise of such Options shall be deemed to have been issued by the Corporation at the time of the granting or sale of such Options (and thereafter shall be deemed to be outstanding for purposes of adjusting the Conversion Price under Section 9(a)), at a price per share equal to the quotient determined by dividing (i) the sum (which sum shall constitute the applicable consideration received for purposes of Section 9(a)) of (x) the total amount, if any, received or receivable by the Corporation as consideration for the granting or sale of all such Options, plus (y) the minimum aggregate amount of additional consideration payable to the Corporation upon the exercise of all such Options, plus (z), in the case of such Options which relate to Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable to the Corporation upon the issuance or sale of all such Convertible Securities and the conversion or exchange of all such Convertible Securities, by (ii) the total maximum number of shares of Common Stock issuable upon the exercise of all such Options or upon the conversion or exchange of all Convertible Securities issuable upon the exercise of all such Options. Except as otherwise provided in Section 9(c)(3), no further adjustment of the Conversion Price shall be made when Convertible Securities are actually issued upon the exercise of such Options or when Common Stock is actually issued upon the exercise of such Options or the conversion or exchange of such Convertible Securities.

(2) Issuance of Convertible Securities. If the Corporation, at any time or from time to time after the Date of Issuance, in any manner issues or sells (whether directly or by assumption in a merger or otherwise) any Convertible Securities, whether or not the right to convert or exchange any such Convertible Securities is immediately exercisable, and the price per share (determined as provided in this paragraph and in Section 9(c)(5)) for which Common Stock is issuable upon conversion or exchange of such Convertible Securities is less than the Conversion Price in effect immediately prior to the time of such issue or sale, then the total maximum number of shares of Common Stock issuable upon conversion or exchange of the total maximum amount of such Convertible Securities shall be deemed to have been issued by the Corporation at the time of the issuance or sale of such Convertible Securities (and thereafter shall be deemed to be outstanding for purposes of adjusting the Conversion Price pursuant to Section 9(a)), at a price per share equal to the quotient determined by dividing (i) the sum (which sum shall constitute the applicable consideration received for purposes of Section 9(a)) of (x) the total amount, if any, received or receivable by the Corporation as consideration for the issue or sale of such Convertible Securities, plus (y) the minimum aggregate amount of additional consideration, if any, payable to the Corporation upon the conversion or exchange of all such Convertible Securities, by (ii) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such Convertible Securities. Except as otherwise provided in Section 9(c)(3), no further adjustment of the Conversion Price shall be made when Common Stock is actually issued upon the conversion or exchange of such Convertible Securities, and if any such issue or sale of such Convertible Securities is made upon exercise of any Options for which adjustments of the Conversion Price had been or are to be made pursuant to other provisions of this Section 9(c), no further adjustment of the Conversion Price shall be made by reason of such issue or sale.

(3) Change in Option Price or Conversion Rate. Upon any change in any of (A) the total amount received or receivable by the Corporation as consideration for the granting or sale of any Options or Convertible Securities referred to in Section 9(c)(1) or Section 9(c)(2), (B) the minimum aggregate amount of additional consideration, if any, payable to the Corporation upon the exercise of any Options or upon the issuance, conversion or exchange of any Convertible Securities referred to in Section 9(d) (1) or Section 9(c)(2), (C) the rate at which Convertible Securities referred to in Section 9(c)(1) or Section 9(c)(2) are convertible into or exchangeable for Common Stock, or (D) the maximum number of shares of Common Stock issuable in connection with any Options referred to in Section 9(c)(1) or any Convertible Securities referred to in Section 9(c)(2) (in each case, other than in connection with an Excluded Issuance), then (whether or not the original issuance or sale of such Options or Convertible Securities resulted in an adjustment to the Conversion Price pursuant to this Section 9) the Conversion Price in effect at the time of such change shall be adjusted or readjusted, as applicable, to the Conversion Price which would have been in effect at such time pursuant to the provisions of this Section 9 had such Options or Convertible Securities still outstanding provided for such changed consideration or conversion rate, as the case may be, at the time initially granted, issued or sold, but only if as a result of such adjustment or readjustment the Conversion Price then in effect is reduced.

(4) Treatment of Expired Options and Unexercised Convertible Securities. Upon the expiration of any Option or the termination of any right to convert or exchange any Convertible Security without the exercise of any such Option or right, the Conversion Price then in effect hereunder shall be adjusted immediately pursuant to the provisions of this Section 9 to the Conversion Price which would have been in effect at the time of such expiration or termination had such Option or Convertible Security, to the extent outstanding immediately prior to such expiration or termination, never been issued.

(5) Calculation of Consideration Received. If any Common Stock, Option or Convertible Security is, at any time or from time to time after the Date of Issuance, issued or sold or deemed to have been issued or sold in accordance with Section 9(c) (A) for cash, the consideration received therefor shall be deemed to be the net amount received by the Corporation therefor; (B) for consideration other than cash, the amount of the consideration other than cash received by the Corporation shall be the fair value of such consideration, except where such consideration consists of marketable securities, in which case the amount of consideration received by the Corporation shall be the market price (as reflected on any securities exchange, quotation system or association or similar pricing system covering such security) for such securities as of the end of business on the date of receipt of such securities; (C) for no specifically allocated consideration in connection with an issuance or sale of other securities of the Corporation, together comprising one integrated transaction, the amount of the consideration therefor shall be deemed to be the fair value of such portion of the aggregate consideration received by the Corporation in such transaction as is attributable to such shares of Common Stock, Options or Convertible Securities, as the case may be, issued in such transaction; or (D) to the owners of the non-surviving entity in connection with any merger in which the Corporation is the surviving corporation, the amount of consideration therefor shall be deemed to be the fair value of the portion of the net assets and business of the non-surviving entity that is attributable to such Common Stock, Options or Convertible Securities, as the case may be, issued to such owners. The fair value of any consideration or net assets other than cash and marketable securities shall be determined jointly by the Corporation and the Series A Preferred Majority Holders. If such parties are unable to reach agreement within a reasonable period of time, the fair value of such consideration shall be determined by an independent appraiser experienced in valuing such type of consideration jointly selected by the Corporation and the Series A Preferred Majority Holders. The determination of such appraiser shall be final and binding upon the parties, and the fees and expenses of such appraiser shall be borne by the Corporation.

(6) Integrated Transactions. In case any Option is issued in connection with the issue or sale of other securities of the Corporation, together comprising one integrated transaction in which no specific consideration is allocated to such Option by the parties thereto, the Option shall be deemed to have been issued for a consideration of \$.001.

(7) Treasury Series A Preferred Shares. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Corporation or any Subsidiary, and the disposition of any shares so owned or held shall be considered an issue or sale of Common Stock for the purpose of this Section 9.

(8) Record Date. For purposes of any adjustment to the Conversion Price in accordance with this Section 9, if the Corporation takes a record of the holders of Common Stock for the purpose of entitling them (a) to receive a dividend or other distribution payable in Common Stock, Options or Convertible Securities or (b) to subscribe for or purchase Common Stock, Options or Convertible Securities, then such record date shall be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

(d) Adjustment to Conversion Price Upon Dividend, Subdivision or Combination of Common Stock. If the Corporation, at any time or from time to time after the Date of Issuance, (i) pays a dividend or make any other distribution upon the Common Stock or any other capital stock of the Corporation payable in shares of Common Stock or in Options or Convertible Securities, or (ii) subdivides (by any stock split, recapitalization or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Conversion Price in effect immediately prior to such dividend, distribution or subdivision shall be proportionately reduced, and if the Corporation at any time combines (by reverse stock split or otherwise) its outstanding shares of Common Stock into a smaller number of shares, the Conversion Price in effect immediately prior to such combination shall be proportionately increased. Any adjustment under this Section 9(d) shall become effective at the close of business on the date the dividend, subdivision or combination becomes effective.

(e) Adjustment to Conversion Price Upon Reorganizations, Mergers, Consolidation, Merger or Sale. Any recapitalization, reorganization, reclassification, consolidation, merger, sale of all or substantially all of the Corporation's assets to another Person or other similar transaction (other than any such transaction covered by Section 9(d)), in each case which entitles the holders of Common Stock to receive (either directly or upon subsequent Liquidation) stock, securities or assets with respect to or in exchange for Common Stock, is referred to herein as an "Organic Change". Prior to the consummation of any Organic Change, the Corporation shall make appropriate provisions (in form and substance satisfactory to the Series A Preferred Majority Holders) to insure that each of the holders of the Series A Preferred shall thereafter have the right to acquire and receive, in lieu of or in addition to (as the case may be) the shares of Common Stock immediately theretofore acquirable and receivable upon the conversion of such holder's Series A Preferred Shares, such shares of stock, securities or assets as such holder would have received in connection with such Organic Change if such holder had converted its Series A Preferred Shares immediately prior to such Organic Change. In each such case, the Corporation shall also make appropriate provisions (in form and substance satisfactory to the Series A Preferred Majority Holders) to insure that the provisions of this Section 9 shall thereafter be applicable to the Series A Preferred Shares (including, in the case of any such consolidation, merger or sale in which the successor or purchasing Person is other than the Corporation, an immediate adjustment of the Conversion Price to the value per share for the Common Stock reflected by the terms of such consolidation, merger or, sale or similar transaction, and a corresponding immediate adjustment in the number of shares of Conversion Stock acquirable upon conversion of Series A Preferred Shares, if the value so reflected is less than the Conversion Price in effect immediately prior to such consolidation, merger or, sale or similar transaction). The Corporation shall not effect any such consolidation, merger or sale, unless prior to the consummation thereof, the successor Person (if other than the Corporation) resulting from consolidation or merger or the Person purchasing such assets assumes by written instrument (in form and substance satisfactory to the Series A Preferred Majority Holders), the obligation to deliver to each such holder such shares of stock, securities or assets as, in accordance with the foregoing provisions, such holder may be entitled to acquire.

(f) Certain Events. If any event occurs of the type contemplated by the provisions of this Section 9 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Board shall make an appropriate adjustment in the Conversion Price so as to protect the rights of the holders of Series A Preferred Shares in a manner consistent with the provisions of this Section 9; provided that no such adjustment pursuant to this Section 9 shall increase the Conversion Price or decrease the number of shares of Conversion Stock issuable as otherwise determined pursuant to this Section 9.

(g) Notices. Immediately upon any adjustment of the Conversion Price, the Corporation shall give written notice thereof to all holders of Series A Preferred Shares, setting forth in reasonable detail and certifying the calculation of such adjustment. The Corporation shall give written notice to all holders of Series A Preferred Shares at least 20 days prior to the date on which the Corporation closes its books or takes a record (i) with respect to any dividend or distribution upon Common Stock, (ii) with respect to any pro rata subscription offer to holders of Common Stock or (iii) for determining rights to vote with respect to any Organic Change or Liquidation. The Corporation shall also give written notice to the holders of Series A Preferred Shares at least 20 days prior to the date on which any Organic Change shall take place.

Section 10. Voting Rights; Election of Directors

(a) Voting Generally. Without limiting any rights provided to the holders of shares of Series A Preferred under the DGCL, the holders of shares of Series A Preferred shall be entitled to vote as a single class with the holders of the Common Stock on all matters submitted to a vote of stockholders of the Corporation, except with respect to the Shareholder Approval; provided that, prior to the first vote of the shareholders of the Corporation with respect to the Shareholder Approval, the Series A Preferred shall have no voting rights, except as otherwise required by applicable law. Each holder of shares of the Series A Preferred shall be entitled to the number of votes equal to the largest number of full shares of Common Stock into which all shares of Preferred Stock held of record by such holder could then be converted (taking into account, for the avoidance of doubt, all Unpaid Series A Dividends thereon convertible into shares of Common Stock, any Conversion Price adjustments made pursuant to Section 9 and the Conversion Cap and without regard to (i.e., ignoring) the Conversion Standstill Period) as of the record date for the determination of the stockholders entitled to vote on such matters or, if no such record date is established, at the date such vote is taken or any written consent of stockholders is first executed; provided, however, that no holder of Series A Preferred shall be entitled to cast votes for the number of shares of Common Stock issuable upon conversion of such Series A Preferred Shares held by such holder that exceeds (subject to a proportionate adjustment for any stock split, stock dividend, combination, recapitalization or other proportionate reduction or increase in the Common Stock) the quotient of (x) the aggregate purchase price paid by such holder of Series A Preferred for its Series A Preferred Shares, divided by (y) the lesser of (i) \$4.40, and (ii) the Closing Price of the Common Stock on the Trading Day immediately prior to the Date of Issuance of such holder's Series A Preferred. The holders of Series A Preferred Shares shall be entitled to notice of any meeting of stockholders in accordance with the Bylaws of the Corporation.

(b) Election of Directors. In the election of directors of the Board, for so long as any Series A Preferred Shares are outstanding and the Preferred Percentage equals or exceeds 5%, the holders of the Series A Preferred Shares, in addition to the other voting rights set forth herein, shall be entitled to elect that number of directors to the Board (each, a "Preferred Director") equal to the product of: (i) the Preferred Percentage, and (ii) the total number of directors on the Board, including the number of Preferred Directors appointed or appointable to the Board; provided, that if such product is not a whole number, then the number of Preferred Directors shall be the next whole number larger than such product (e.g., if such product is 1.11 or 1.51, then the number of Preferred Directors shall be two); provided, further that the number of Preferred Directors shall not exceed two at any time.

(c) Term. Each Preferred Director appointed pursuant to Section 10(b) shall continue to hold office until the earliest to occur of (i) the first annual meeting of the stockholders of the Corporation following such time that the holders of the Series A Preferred Shares do not have the requisite Preferred Percentage to appoint such Preferred Director pursuant to Section 10(b), (ii) such Preferred Director is removed from office by the affirmative vote of the Series A Preferred Majority Holders, and (iii) such time as such Preferred Director's death, resignation, retirement or disqualification. Any vacancy created by the removal, death, resignation, retirement or disqualification of a Preferred Director shall be filled by the affirmative vote of the Series A Preferred Majority Holders. If the holders of the Series A Preferred Shares for any reason fail to elect anyone to fill any such directorship or vacancy, such position shall remain vacant until such time as such holders elect a director to fill such position and shall not be filled by resolution or vote of the Board or the Corporation's other stockholders. The Corporation shall take all such action as may be reasonably requested by such holders to effect Section 10(b) and this Section 10(c) (including nominating and recommending the designees of the holders of the Series A Preferred Shares for election).

Section 11. Consent Rights. In addition to any rights that the holders of Series A Preferred Shares may have pursuant to the DGCL, for so long as (x) any Series A Preferred Shares are outstanding and (y) the Preferred Percentage is at least ten percent (10%), the Corporation will not, without first obtaining the written consent or affirmative vote of the Series A Preferred Majority Holders, voting separately as a class, take any of the following actions: (i) liquidate, dissolve or wind-up the Corporation (whether voluntary or involuntary), (ii) amend, modify, supplement or repeal any provision of the Certificate of Incorporation or Bylaws that would have a material adverse effect on any right, preference, privilege or voting power of the Series A Preferred Shares or the holders thereof (it being understood that, for the avoidance of doubt, any amendment, modification or supplement to the Certificate of Incorporation (including as a result of new certificate of designation) to create, authorize, designate or issue any equity securities of the Corporation senior to or *pari passu* with the Series A Preferred Shares would have a material adverse effect on the rights, preferences, privileges and/or voting power of the Series A Preferred Shares or the holders thereof), (iii) change the size of the Board; (iv) enter into, amend, modify or supplement any agreement, transaction, commitment or arrangement with any Related Party, except for customary employment arrangements and benefit programs; or (v) agree to take any of the foregoing actions.

Section 12. Events of Noncompliance.

(a) Definition. An Event of Noncompliance shall have occurred if:

(1) the Corporation fails to make any redemption payment with respect to the Series A Preferred which it is required to make hereunder, whether or not such payment is legally permissible or is prohibited by any agreement to which the Corporation is subject;

(2) the Corporation breaches or otherwise fails to perform or observe (i) any other covenant or agreement set forth herein or in the Investor Rights Agreement or (ii) any covenant or agreement set forth in the Investment Agreement required to be performed or observed by the Corporation after the closing of the transactions contemplated by the Investment Agreement;

(3) the Corporation or any material Subsidiary makes an assignment for the benefit of creditors or admits in writing its inability to pay its debts generally as they become due; or an order, judgment or decree is entered adjudicating the Corporation or any material Subsidiary bankrupt or insolvent; or any order for relief with respect to the Corporation or any material Subsidiary is entered under the Federal Bankruptcy Code; or the Corporation or any material Subsidiary petitions or applies to any tribunal for the appointment of a custodian, trustee, receiver or liquidator of the Corporation or any material Subsidiary or of any substantial part of the assets of the Corporation or any material Subsidiary, or commences any proceeding (other than a proceeding for the voluntary liquidation and dissolution of a Subsidiary) relating to the Corporation or any material Subsidiary under any bankruptcy, reorganization, arrangement, insolvency, readjustment of debt, dissolution or liquidation law of any jurisdiction; or any such petition or application is filed, or any such proceeding is commenced, against the Corporation or any material Subsidiary and either (a) the Corporation or any such Subsidiary by any act indicates its approval thereof, consent thereto or acquiescence therein or (b) such petition, application or proceeding is not dismissed within 60 days.

(b) If an Event of Noncompliance occurs, then, from and after the occurrence of the Event of Noncompliance and until such time as no Event of Noncompliance exists (such period, the “Noncompliance Period”), the Series A Preferred Shares shall accrue dividends at the dividend rate described in Section 4(a) (as if the entire Noncompliance Period were after the Date of Issuance and prior to the fifth anniversary of the Date of Issuance) plus an increment of one (1) percentage point. Thereafter, until such time as no Event of Noncompliance exists, the dividend rate shall increase automatically at the end of each succeeding 90-day period by an additional increment of 1 percentage point (but in no event shall the dividend rate exceed fifteen percent (15%)). Any increase of the dividend rate resulting from the operation of this paragraph shall terminate as of the close of business on the date on which no Event of Noncompliance exists, subject to subsequent increases pursuant to this paragraph.

Section 13. Other Rights. If any Event of Noncompliance exists, each holder of Series A Preferred shall also have any other rights which such holder is entitled to under any contract or agreement at any time and any other rights which such holder may have pursuant to applicable law.

Section 14. Corporate Opportunities. To the fullest extent permitted by DGCL Section 122, the Corporation renounces any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, business opportunities that are presented to any Preferred Director.

Section 15. Registration of Transfer. The Corporation shall keep at its principal office a register for the registration of Series A Preferred Shares. Upon the surrender of any certificate representing Series A Preferred Shares at such place, the Corporation shall, at the request of the record holder of such certificate, execute and deliver (at the Corporation’s expense) a new certificate or certificates in exchange therefor representing in the aggregate the number of Series A Preferred Shares represented by the surrendered certificate. Each such new certificate shall be registered in such name and shall represent such number of Series A Preferred Shares as is requested by the holder of the surrendered certificate and shall be substantially identical in form to the surrendered certificate, and dividends shall accrue on the Series A Preferred Shares represented by such new certificate from the date to which dividends have been fully paid on such Series A Preferred Shares represented by the surrendered certificate.

Section 16. Replacement. Upon receipt of evidence reasonably satisfactory to the Corporation (it being understood that an affidavit of the registered holder shall be satisfactory) of the ownership and the loss, theft, destruction or mutilation of any certificate evidencing Series A Preferred Shares, and in the case of any such loss, theft or destruction, upon receipt of indemnity reasonably satisfactory to the Corporation (provided that if the holder is a financial institution or other institutional investor its own agreement shall be satisfactory), or, in the case of any such mutilation upon surrender of such certificate, the Corporation shall (at its expense) execute and deliver in lieu of such certificate a new certificate of like kind representing the number of Series A Preferred Shares of such class represented by such lost, stolen, destroyed or mutilated certificate and dated the date of such lost, stolen, destroyed or mutilated certificate, and dividends shall accrue on the Series A Preferred Shares represented by such new certificate from the date to which dividends have been fully paid on such lost, stolen, destroyed or mutilated certificate.

Section 17. Amendment and Waiver. No amendment, modification, alteration, repeal or waiver of any provision of this Certificate of Designation shall be binding or effective without the prior written consent of the Board and the Series A Preferred Majority Holders, voting separately as a class; provided that no amendment, modification, alteration, repeal or waiver of the terms or relative priorities of the Series A Preferred may be accomplished by the merger, consolidation or other transaction of the Corporation with another Person unless the Corporation has obtained the prior written consent of the Series A Preferred Majority Holders.

Section 18. Notices. Except as otherwise expressly provided hereunder, all notices referred to herein shall be given in writing and shall be deemed effectively given (a) if given by personal delivery, upon actual delivery, (b) if given by facsimile, upon receipt of confirmation of a completed transmittal, (c) if given by mail, upon the earlier of (i) actual receipt of such notice by the intended recipient or (ii) five (5) Business Days after such notice is deposited in first class mail, postage prepaid, and (d) if by an internationally recognized overnight courier for overnight delivery, one (1) Business Day after delivery to such courier for overnight delivery, in each case, (i) to the Corporation, at its principal executive offices and (ii) to any stockholder, at such holder's address as it appears in the stock records of the Corporation (unless otherwise indicated by any such holder).

IN WITNESS WHEREOF, the Corporation has caused this Amended and Restated Certificate of Designation to be duly executed and acknowledged by its undersigned duly authorized officer this 1st day of August, 2018.

RTI SURGICAL, INC.

By: /s/ Jonathon M. Singer

Name: Jonathon M. Singer

Title: Chief Financial and Administrative Officer

Signature Page to Certificate of Designation

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO
EXCHANGE ACT RULES 13a-14(a)/15d-14(a) AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Camille I. Farhat, certify that:

- (1) I have reviewed this quarterly report on Form 10-Q of RTI Surgical, 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(s) 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 controls over financial reporting.

/s/ Camille I. Farhat

Camille I. Farhat

President and Chief Executive Officer

Dated: November 2, 2018

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO
EXCHANGE ACT RULES 13a-14(a)/15d-14(a) AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Jonathon M. Singer, certify that:

- (1) I have reviewed this quarterly report on Form 10-Q of RTI Surgical, 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(s) 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 controls over financial reporting.

/s/ Jonathon M. Singer

Jonathon M. Singer

Chief Financial and Administrative Officer

Dated: November 2, 2018

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER 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 RTI Surgical, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Camille I. Farhat, President and Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §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.

/s/ Camille I. Farhat

Camille I. Farhat
President and Chief Executive Officer

Dated: November 2, 2018

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and is not being filed as part of this Report or as a separate disclosure document. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER 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 RTI Surgical, Inc. (the "Company") on Form 10-Q for the quarter ended September 30, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Jonathon M. Singer, Chief Financial and Administrative Officer of the Company, hereby certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §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.

/s/ Jonathon M. Singer

Jonathon M. Singer
Chief Financial and Administrative Officer

Dated: November 2, 2018

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 and is not being filed as part of this Report or as a separate disclosure document. A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.