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# 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 March 31, 2020**

☐ **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 001-36569**

# LANTHEUS HOLDINGS, INC.

**(Exact name of registrant as specified in its charter)**

| **Delaware** | **35-2318913** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(IRS Employer Identification No.)** |
| **331 Treble Cove Road<br>North Billerica, MA** | **01862** |
| **(Address of principal executive offices)** | **(Zip Code)** |

**(978) 671-8001**

**(Registrant's telephone number, including area code)**

**Not Applicable**

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

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| Common stock, par value $0.01 per share | LNTH | The Nasdaq Global Market |

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

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

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

| | | | |
|---|---|---|---|
| Large accelerated filer | ☑ | Accelerated filer | ☐ |
| Non-accelerated filer | ☐ | Smaller reporting company | ☐ |
| | | Emerging Growth Company | ☐ |

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

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

The registrant had 39,756,364 shares of common stock, $0.01 par value, outstanding as of April 24, 2020 .

**LANTHEUS HOLDINGS, INC.**
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## PART I. FINANCIAL INFORMATION

### Item 1. Financial Statements (Unaudited)

**Lantheus Holdings, Inc.**
**Condensed Consolidated Balance Sheets**
(Unaudited)
(in thousands, except par value)

| | March 31, 2020 | December 31, 2019 |
|---|---|---|
| **Assets** | | |
| **Current assets** | | |
| Cash and cash equivalents | $ 95,713 | $ 92,919 |
| Accounts receivable, net | 44,883 | 43,529 |
| Inventory | 30,814 | 29,180 |
| Other current assets | 8,967 | 7,283 |
| **Total current assets** | 180,377 | 172,911 |
| Property, plant and equipment, net | 108,613 | 116,497 |
| Intangibles, net | 6,930 | 7,336 |
| Goodwill | 15,714 | 15,714 |
| Deferred tax assets, net | 70,454 | 71,834 |
| Other long-term assets | 22,037 | 21,627 |
| **Total assets** | $ 404,125 | $ 405,919 |
| **Liabilities and stockholders' equity** | | |
| **Current liabilities** | | |
| Current portion of long-term debt and other borrowings | $ 10,143 | $ 10,143 |
| Accounts payable | 18,980 | 18,608 |
| Accrued expenses and other liabilities | 32,836 | 37,360 |
| **Total current liabilities** | 61,959 | 66,111 |
| Asset retirement obligations | 13,243 | 12,883 |
| Long-term debt, net and other borrowings | 181,488 | 183,927 |
| Other long-term liabilities | 29,037 | 28,397 |
| **Total liabilities** | 285,727 | 291,318 |
| **Commitments and contingencies (See Note 15)** | | |
| **Stockholders' equity** | | |
| Preferred stock ($0.01 par value, 25,000 shares authorized; no shares issued and outstanding) | — | — |
| Common stock ($0.01 par value, 250,000 shares authorized; 39,750 and 39,251 shares issued and outstanding, respectively) | 398 | 393 |
| Additional paid-in capital | 253,530 | 251,641 |
| Accumulated deficit | (133,136) | (136,473) |
| Accumulated other comprehensive loss | (2,394) | (960) |
| **Total stockholders' equity** | 118,398 | 114,601 |
| **Total liabilities and stockholders' equity** | $ 404,125 | $ 405,919 |

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

**Lantheus Holdings, Inc.**
**Condensed Consolidated Statements of Operations**
(Unaudited)
(in thousands, except per share data)

| | Three Months Ended March 31, | |
|---|---|---|
| | **2020** | **2019** |
| Revenues | $ 90,704 | $ 86,510 |
| Cost of goods sold | 52,702 | 42,426 |
| Gross profit | 38,002 | 44,084 |
| Operating expenses | | |
| Sales and marketing | 10,130 | 10,397 |
| General and administrative | 16,699 | 12,589 |
| Research and development | 4,048 | 4,929 |
| Total operating expenses | 30,877 | 27,915 |
| Operating income | 7,125 | 16,169 |
| Interest expense | 1,946 | 4,592 |
| Other income | (350) | (1,187) |
| Income before income taxes | 5,529 | 12,764 |
| Income tax expense | 2,192 | 2,815 |
| Net income | $ 3,337 | $ 9,949 |
| Net income per common share: | | |
| Basic | $ 0.08 | $ 0.26 |
| Diluted | $ 0.08 | $ 0.25 |
| Weighted-average common shares outstanding: | | |
| Basic | 39,433 | 38,603 |
| Diluted | 40,102 | 39,787 |

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

**Lantheus Holdings, Inc.**
**Condensed Consolidated Statements of Comprehensive Income**
(Unaudited)
(in thousands)

| | Three Months Ended March 31, | |
|---|---|---|
| | **2020** | **2019** |
| Net income | $ 3,337 | $ 9,949 |
| Other comprehensive (loss) income: | | |
| Foreign currency translation | (446) | 56 |
| Unrealized loss on cash flow hedges, net of tax | (988) | — |
| Total other comprehensive (loss) income | (1,434) | 56 |
| Comprehensive income | $ 1,903 | $ 10,005 |

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

**Lantheus Holdings, Inc.**
**Condensed Consolidated Statements of Changes in Stockholders' Equity**
(Unaudited)
(in thousands)

| | Three Months Ended March 31, 2020 | | | | | |
|---|---|---|---|---|---|---|
| | Common Stock | | Additional Paid-In Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Total Stockholders' Equity |
| | Shares | Amount | | | | |
| Balance, January 1, 2020 | 39,251 | $ 393 | $ 251,641 | $ (136,473) | $ (960) | $ 114,601 |
| Net income | — | — | — | 3,337 | — | 3,337 |
| Other comprehensive income | — | — | — | — | (1,434) | (1,434) |
| Stock option exercises and employee stock plan purchases | 33 | — | 366 | — | — | 366 |
| Vesting of restricted stock awards and units | 563 | 6 | (6) | — | — | — |
| Shares withheld to cover taxes | (97) | (1) | (1,546) | — | — | (1,547) |
| Stock-based compensation | — | — | 3,075 | — | — | 3,075 |
| Balance, March 31, 2020 | 39,750 | $ 398 | $ 253,530 | $ (133,136) | $ (2,394) | $ 118,398 |

| | Three Months Ended March 31, 2019 | | | | | |
|---|---|---|---|---|---|---|
| | Common Stock | | Additional Paid-In Capital | Accumulated Deficit | Accumulated Other Comprehensive Loss | Total Stockholders' Equity |
| | Shares | Amount | | | | |
| Balance, January 1, 2019 | 38,466 | $ 385 | $ 239,865 | $ (168,140) | $ (1,108) | $ 71,002 |
| Net income | — | — | — | 9,949 | — | 9,949 |
| Other comprehensive income | — | — | — | — | 56 | 56 |
| Stock option exercises and employee stock plan purchases | 37 | — | 606 | — | — | 606 |
| Vesting of restricted stock awards and units | 365 | 4 | (4) | — | — | — |
| Shares withheld to cover taxes | (50) | (1) | (1,119) | — | — | (1,120) |
| Stock-based compensation | — | — | 2,720 | — | — | 2,720 |
| Balance, March 31, 2019 | 38,818 | $ 388 | $ 242,068 | $ (158,191) | $ (1,052) | $ 83,213 |

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

**Lantheus Holdings, Inc.**
**Condensed Consolidated Statements of Cash Flows**
(Unaudited)
(in thousands)

| | Three Months Ended March 31, | |
|---|---|---|
| | **2020** | **2019** |
| **Operating activities** | | |
| Net income | $ 3,337 | $ 9,949 |
| Adjustments to reconcile net income to net cash flows from operating activities: | | |
| Depreciation, amortization and accretion | 3,732 | 3,323 |
| Impairment of long-lived assets | 7,275 | — |
| Amortization of debt related costs | 169 | 320 |
| Provision for bad debt | 202 | (190) |
| Provision for excess and obsolete inventory | 449 | 511 |
| Stock-based compensation | 3,075 | 2,720 |
| Deferred taxes | 1,467 | 1,741 |
| Long-term income tax receivable | (554) | (802) |
| Long-term income tax payable and other long-term liabilities | 705 | 1,018 |
| Other | 452 | (6) |
| Increases (decreases) in cash from operating assets and liabilities: | | |
| Accounts receivable | (1,750) | (1,040) |
| Inventory | (2,098) | 465 |
| Other current assets | 1,149 | (1,152) |
| Accounts payable | (913) | 1,458 |
| Accrued expenses and other liabilities | (7,289) | (7,847) |
| Net cash provided by operating activities | 9,408 | 10,468 |
| **Investing activities** | | |
| Capital expenditures | (2,698) | (10,550) |
| Net cash used in investing activities | (2,698) | (10,550) |
| **Financing activities** | | |
| Payments on long-term debt and other borrowings | (2,551) | (717) |
| Proceeds from stock option exercises | — | 324 |
| Proceeds from issuance of common stock | 366 | 282 |
| Payments for minimum statutory tax withholding related to net share settlement of equity awards | (1,547) | (1,120) |
| Net cash used in financing activities | (3,732) | (1,231) |
| Effect of foreign exchange rates on cash and cash equivalents | (184) | (27) |
| Net increase (decrease) in cash and cash equivalents | 2,794 | (1,340) |
| Cash and cash equivalents, beginning of period | 92,919 | 113,401 |
| Cash and cash equivalents, end of period | $ 95,713 | $ 112,061 |

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

**Lantheus Holdings, Inc.**
**Notes to Condensed Consolidated Financial Statements**
(Unaudited)

**Note Regarding Company References and Trademarks**

Unless the context otherwise requires, references to the "Company" and "Lantheus" refer to Lantheus Holdings, Inc. and its direct and indirect wholly-owned subsidiaries, references to "Holdings" refer to Lantheus Holdings, Inc. and not to any of its subsidiaries, and references to "LMI" refer to Lantheus Medical Imaging, Inc., the direct subsidiary of Holdings. Solely for convenience, the Company refers to trademarks, service marks and trade names without the TM, SM and ® symbols. Those references are not intended to indicate, in any way, that the Company will not assert, to the fullest extent permitted under applicable law, its rights to its trademarks, service marks and trade names.

**1 . Basis of Presentation**

The accompanying unaudited condensed consolidated financial statements include the accounts of Lantheus Holdings, Inc. and its direct and indirect wholly-owned subsidiaries and have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, these condensed consolidated financial statements do not include all of the information and notes required by generally accepted accounting principles in the United States of America ("U.S. GAAP") for complete financial statements. In the opinion of management, all adjustments (consisting of normal and recurring adjustments) considered necessary for a fair statement have been included. The results of operations for the three months ended March 31, 2020 are not necessarily indicative of the results that may be expected for the year ended December 31, 2020 or any future period.

The condensed consolidated balance sheet at December 31, 2019 has been derived from the audited consolidated financial statements at that date but does not include all of the information and notes required by U.S. GAAP for complete financial statements. These condensed consolidated financial statements and accompanying notes should be read in conjunction with the consolidated financial statements and notes thereto included in Item 8 of the Company's most recent Annual Report on Form 10-K for the year ended December 31, 2019 filed with the Securities Exchange Commission ("SEC") on February 25, 2020.

***Progenics Transaction***

On October 1, 2019, the Company entered into an Agreement and Plan of Merger (the "Initial Merger Agreement") to acquire Progenics Pharmaceuticals, Inc. (NASDAQ: PGNX) ("Progenics" and, such acquisition, the "Progenics Transaction"). The terms of the Initial Merger Agreement were amended and restated on February 20, 2020 (the "Amended Merger Agreement"). Progenics is an oncology company developing innovative medicines and artificial intelligence to find, fight and follow cancer. Under the terms of the Amended Merger Agreement, the Company will acquire all of the issued and outstanding shares of Progenics common stock by means of a merger of a wholly-owned subsidiary of the Company with and into Progenics in which Progenics stockholders will receive, for each share of Progenics stock held at the time of the closing of the Progenics Transaction, merger consideration consisting of 0.31 of a share of the Company's common stock and a non-tradeable contingent value right (a "CVR") tied to the financial performance of PyL $^{TM}$( $^{18}$F-DCFPyL), Progenics' prostate-specific membrane antigen targeted imaging agent designed to visualize prostate cancer currently in late stage clinical development ("PyL"). Each CVR will entitle its holder to receive a pro rata share of aggregate cash payments equal to 40% of U.S. net sales generated by PyL in 2022 and 2023 in excess of $100 million and $150 million , respectively. In no event will the Company's aggregate payments in respect of the CVRs, together with any other non-stock consideration treated as paid in connection with the Progenics Transaction, exceed 19.9% of the total consideration the Company pays in the Progenics Transaction. Following the closing of the Progenics Transaction, the aggregate ownership stake of the former Progenics stockholders will be approximately 40% of the combined company. Progenics' stockholders will also be entitled to appraisal rights as provided under Delaware law.

In addition, pursuant to the Amended Merger Agreement, the holder of each in-the-money option to purchase shares of Progenics common stock under any equity based compensation plan of Progenics ("Progenics Stock Option") will be entitled to receive in exchange for each such in-the-money option (i) an option to purchase common stock of the Company (each, a "Company Stock Option") converted based on the 0.31 exchange ratio and (ii) a vested or unvested CVR depending on whether the underlying option is vested. Holders of out-of-the-money Progenics Stock Options will receive Company Stock Options converted on an exchange ratio adjusted based on actual trading prices of common stock of Progenics and the Company prior to the closing of the Progenics Transaction.

The Progenics Transaction was unanimously approved by the Boards of Directors of both companies and requires, among other things, the affirmative vote of a majority of the outstanding shares of common stock of Progenics and a majority of votes cast by the holders of the common stock of the Company. The Progenics Transaction is currently expected to close in June 2020, subject to the satisfaction or waiver of certain closing conditions. Following the closing of the Progenics Transaction, which the parties intend to

report as tax-deferred to Progenics' stockholders with respect to the stock component of the merger consideration for U.S. federal income tax purposes, the combined company will continue to be headquartered in North Billerica, Massachusetts and will trade on the NASDAQ under the ticker symbol LNTH.

On March 15, 2020, Progenics and LMI entered into a bridge loan agreement, pursuant to which LMI agreed to provide for a secured short-term loan to Progenics on or after May 1, 2020 in an aggregate principal amount of up to $10.0 million . The bridge loan matures on the earlier to occur of (a) September 30, 2020 and (b) the date on which Progenics enters into a debt financing or similar arrangements or any amendment to, or replacement of, its existing debt provided by one or more third parties following the termination date of the merger agreement, in either case, having aggregate net cash proceeds that exceed the amount then required to repay all obligations under the bridge loan agreement in full in cash. The bridge loan bears interest at a rate per annum of 9.5% and is secured through the pledge to LMI of all of the issued and outstanding shares of capital stock of Molecular Insight Pharmaceuticals, Inc., a subsidiary of Progenics ("MIPI"), and any debt of MIPI owed to Progenics.

***COVID-19***

On March 11, 2020, the World Health Organization declared the novel coronavirus ("COVID-19"), a respiratory illness first identified in Wuhan, China, a pandemic. The global spread of COVID-19 has created significant volatility, uncertainty and economic disruption. Governments in affected regions have implemented, and may continue to implement, safety precautions which include quarantines, travel restrictions, business closures, cancellations of public gatherings and other measures as they deem necessary. Many organizations and individuals, including the Company and its employees, are taking additional steps to avoid or reduce infection, including limiting travel and working from home. These measures are disrupting normal business operations both in and outside of affected areas and have had significant negative impacts on businesses and financial markets worldwide.

The Company experienced operational and financial impacts from the COVID-19 pandemic beginning late in the first quarter of 2020, including the impact of stay-at-home mandates and related safety measures such as the delay of elective medical procedures, resulting in a decline in the volume of procedures using the Company's products. As a result of the COVID-19 pandemic, the Company undertook a thorough analysis of all of its discretionary expenses. In the first quarter of 2020, the Company implemented certain cost reduction initiatives, including, among other things, reducing travel and promotional expenses and implementing a hiring freeze through the balance of 2020.

The severity of the material impact of the COVID-19 pandemic on the Company's business will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the Company's customers and suppliers, all of which are uncertain and cannot be predicted. While the impact of COVID-19 on the Company's results of operations and cash flows is expected to be material, at least in the short term, given the dynamic nature of this situation, the Company is currently unable to accurately predict the impact of COVID-19 on its overall 2020 operations and financial results or cash flows for the foreseeable future and whether the impact of COVID-19 could lead to potential impairments.

**2. Summary of Significant Accounting Policies**

***Derivative Instruments***

The Company uses interest rate swaps to reduce the variability in cash flows associated with a portion of the Company's forecasted interest payments on its variable rate debt. To qualify for hedge accounting, the hedging instrument must be highly effective at reducing the risk from the exposure being hedged. Further, the Company must formally document the hedging relationship at inception and, on at least a quarterly basis, continually reevaluate the relationship to ensure it remains highly effective throughout the life of the hedge. The Company does not enter into derivative financial instruments for speculative or trading purposes.

***Recent Accounting Pronouncements***

| Standard | Description | Effective Date for Company | Effect on the Condensed Consolidated Financial Statements |
|---|---|---|---|
| **Recently Issued Accounting Standards Not Yet Adopted** | | | |
| ASU 2020-04, "Reference Rate Reform (Topic 848)" | This ASU provides optional guidance for a limited period of time to ease the potential burden in accounting for (or recognizing the effects of) reference rate reform on financial reporting. | March 12, 2020 through December 31, 2022 | The Company does not expect that the adoption of this standard will have a material impact on the Company's condensed consolidated financial statements. |
| **Accounting Standards Adopted During the Three Months Ended March 31, 2020** | | | |
| ASU 2016-13, "Financial Instruments-Credit Losses (Topic 326)" | This ASU will require financial instruments measured at amortized cost and accounts receivable to be presented at the net amount expected to be collected. The new model requires an entity to estimate credit losses based on historical information, current information and reasonable and supportable forecasts that affect the collectability of the reported amount. | January 1, 2020 | The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements. |

**3. Revenue from Contracts with Customers**

The following table summarizes revenue by revenue source and reportable segment as follows:

| | Three Months Ended March 31, | |
|---|---|---|
| **Major Products/Service Lines by Segment (in thousands)** | **2020** | **2019** |
| U.S. | | |
| Product revenue, net [1] | $ 78,745 | $ 75,434 |
| Total U.S. revenues | 78,745 | 75,434 |
| International | | |
| Product revenue, net [1] | 11,468 | 10,549 |
| License and royalty revenues | 491 | 527 |
| Total International revenues | 11,959 | 11,076 |
| Total revenues | $ 90,704 | $ 86,510 |

(1) The Company's principal products include DEFINITY and TechneLite and are categorized within product revenue, net. The Company applies the same revenue recognition policies and judgments for all of its principal products.

The Company's performance obligations are typically part of contracts that have an original expected duration of one year or less. As such, the Company is not disclosing the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied (or partially satisfied) as of the end of the reporting period.

**4. Fair Value of Financial Instruments**

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In order to increase consistency and comparability of fair value measurements, financial instruments are categorized based on a hierarchy that prioritizes observable and unobservable inputs used to measure fair value into three broad levels, which are described below:

- *Level 1* — Inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.

- *Level 2* — Inputs include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (i.e., interest rates, yield curves, etc.) and inputs that are derived principally from or corroborated by observable market data by correlation or other means (market corroborated inputs).

- *Level 3* — Unobservable inputs that reflect a Company's estimates about the assumptions that market participants would use in pricing the asset or liability. The Company develops these inputs based on the best information available, including its own data.

The Company's financial assets measured at fair value on a recurring basis consist of money market funds and interest rate swaps. The Company invests excess cash from its operating cash accounts in overnight investments and reflects these amounts in cash and cash equivalents in the condensed consolidated balance sheets at fair value using quoted prices in active markets for identical assets. The fair value of the interest rate swaps are determined based on observable market-based inputs, including interest rate curves and reflects the contractual terms of these instruments, including the period to maturity. Please refer to Note 10, "Derivative Instruments", for further details on the interest rate swaps.

The tables below present information about the Company's assets and liabilities measured at fair value on a recurring basis:

| | March 31, 2020 | | | |
|---|---|---|---|---|
| (in thousands) | Total Fair Value | Level 1 | Level 2 | Level 3 |
| Money market | $ 42,051 | $ 42,051 | $ — | $ — |
| Interest rate swaps | 1,330 | — | 1,330 | — |
| Total | $ 43,381 | $ 42,051 | $ 1,330 | $ — |

| | December 31, 2019 | | | |
|---|---|---|---|---|
| (in thousands) | Total Fair Value | Level 1 | Level 2 | Level 3 |
| Money market | $ 39,530 | $ 39,530 | $ — | $ — |
| Total | $ 39,530 | $ 39,530 | $ — | $ — |

**5. Income Taxes**

The Company provides for income taxes at the end of each interim period based on the estimated effective tax rate for the full year, adjusted for any discrete events which are recorded in the period they occur. The Company's effective tax rate in fiscal 2020 differs from the U.S. federal statutory rate of 21% principally due to the impact of state taxes and the accrual of interest on uncertain tax positions. Cumulative adjustments to the tax provision are recorded in the interim period in which a change in the estimated annual effective tax rate is determined. The Company's income tax expense is presented below:

| | Three Months Ended March 31, | |
|---|---|---|
| (in thousands) | 2020 | 2019 |
| Income tax expense | $ 2,192 | $ 2,815 |

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realizability of deferred tax assets requires significant management judgment. In determining whether its deferred tax assets are more-likely-than-not realizable, the Company evaluated all available positive and negative evidence, and weighed the objective evidence and expected impact. The Company continues to record a valuation allowance of $1.2 million against the net deferred tax assets of its U.K. subsidiary.

In connection with the Company's acquisition of the medical imaging business from Bristol-Myers Squibb ("BMS") in 2008, the Company recorded a liability for uncertain tax positions related to the acquired business and simultaneously entered into a tax indemnification agreement with BMS under which BMS agreed to indemnify the Company for any payments made to settle those uncertain tax positions with the taxing authorities. Accordingly, a long-term receivable is recorded to account for the expected value to the Company of future indemnification payments, net of actual tax benefits received, to be paid on behalf of the Company by BMS. The tax indemnification receivable is recorded within other long-term assets.

In accordance with the Company's accounting policy, the change in the tax liability, penalties and interest associated with these obligations (net of any offsetting federal or state benefit) is recognized within income tax expense. As these reserves change, adjustments are included in income tax expense while the offsetting adjustment is included in other income. Assuming that the receivable from BMS continues to be considered recoverable by the Company, there will be no effect on net income and no net cash outflows related to these liabilities.

**6. Inventory**

Inventory consisted of the following:

| (in thousands) | March 31, 2020 | December 31, 2019 |
|---|---|---|
| Raw materials | $ 11,607 | $ 11,417 |
| Work in process | 12,445 | 9,450 |
| Finished goods | 6,762 | 8,313 |
| Total inventory | $ 30,814 | $ 29,180 |

**7. Property, Plant and Equipment, Net**

Property, plant and equipment, net, consisted of the following:

| (in thousands) | March 31, 2020 | December 31, 2019 |
|---|---|---|
| Land | $ 13,450 | $ 13,450 |
| Buildings | 69,622 | 75,654 |
| Machinery, equipment and fixtures | 76,251 | 87,763 |
| Computer software | 20,768 | 20,739 |
| Construction in progress | 11,165 | 10,546 |
| | 191,256 | 208,152 |
| Less: accumulated depreciation and amortization | (82,643) | (91,655) |
| Total property, plant and equipment, net | $ 108,613 | $ 116,497 |

Depreciation and amortization expense related to property, plant and equipment, net, was $3.0 million and $2.5 million for the three months ended March 31, 2020 and 2019 , respectively.

T he Company tests long-lived assets for recoverability whenever events or changes in circumstances suggest that the carrying value of an asset or group of assets may not be recoverable. As a result of a decline in expected future cash flows and the effect of COVID-19 related to certain other nuclear legacy manufacturing assets in the U.S. segment, the Company determined certain impairment triggers had occurred. Accordingly, the Company performed an undiscounted cash flow analysis as of March 31, 2020. Based on the undiscounted cash flow analysis, the Company determined that the manufacturing assets had net carrying values that exceeded their estimated undiscounted future cash flows. The Company then estimated the fair values of the asset group based on their discounted cash flows. The carrying value exceeded the fair value and as a result, the Company recorded a non-cash impairment of $7.3 million for the three months ended March 31, 2020 in cost of goods sold in the condensed consolidated statement of operations.

**8. Asset Retirement Obligations**

The Company considers its legal obligation to remediate its facilities upon a decommissioning of its radioactive-related operations as an asset retirement obligation. The Company has production facilities which manufacture and process radioactive materials at its North Billerica, Massachusetts and San Juan, Puerto Rico sites. As of March 31, 2020 , the liability is measured at the present value of the obligation expected to be incurred, of approximately $26.9 million .

The following table provides a summary of the changes in the Company’s asset retirement obligations:

| (in thousands) | Amount |
|---|---|
| Balance at January 1, 2020 | $ 12,883 |
| Accretion expense | 360 |
| Balance at March 31, 2020 | $ 13,243 |

The Company is required to provide the U.S. Nuclear Regulatory Commission and Massachusetts Department of Public Health financial assurance demonstrating the Company’s ability to fund the decommissioning of its North Billerica, Massachusetts production facility upon closure, although the Company does not intend to close the facility. The Company has provided this financial assurance in the form of a $28.2 million surety bond.

**9. Long-Term Debt, Net, and Other Borrowings**

As of March 31, 2020 , the Company's maturities of principal obligations under its long-term debt and other borrowings are as follows:

| (in thousands) | Amount |
|---|---|
| Remainder of 2020 | $ 7,500 |
| 2021 | 10,000 |
| 2022 | 11,250 |
| 2023 | 15,000 |
| 2024 | 148,750 |
| Total principal outstanding | 192,500 |
| Unamortized debt discount | (458) |
| Unamortized debt issuance costs | (730) |
| Finance lease liabilities | 319 |
| Total | 191,631 |
| Less: current portion | (10,143) |
| Total long-term debt, net and other borrowings | $ 181,488 |

At March 31, 2020 , the Company's interest rate under the 2019 Term Facility was 2.5% .

**10. Derivative Instruments**

The Company uses interest rate swaps to reduce the variability in cash flows associated with a portion of the Company's forecasted interest payments on its variable rate debt. In March 2020, the Company entered into interest rate swap contracts to fix the LIBOR rate on a notional amount of $100.0 million through May 31, 2024. This agreement involves the receipt of floating rate amounts in exchange for fixed rate interest payments over the life of the agreement without an exchange of the underlying principal amount. The interest rate swaps were designated as cash flow hedges. In accordance with hedge accounting, the interest rate swaps are recorded on the Company's condensed consolidated balance sheets at fair value, and changes in the fair value of the swap agreements are recorded to other comprehensive loss and reclassified to interest expense in the period during which the hedged transaction affected earnings or it will become probable that the forecasted transaction would not occur. At March 31, 2020, accumulated other comprehensive loss included $0.4 million of pre-tax deferred losses that are expected to be reclassified to earnings during the next 12 months.

The following table presents the location and fair value amounts of derivative instruments reported in the condensed consolidated balance sheet:

| (in thousands) | | March 31, 2020 | December 31, 2019 |
|---|---|---|---|
| **Derivatives type** | **Classification** | | |
| Liabilities: | | | |
| Interest rate swap | Accrued expenses and other liabilities | $ 1,330 | $ — |

**11. Accumulated Other Comprehensive Loss**

The components of Accumulated Other Comprehensive Loss, net of tax of $0.3 million and $0.0 million for the three months ended March 31, 2020 and March 31, 2019, respectively, consisted of the following:

| (in thousands) | Foreign currency translation | Unrealized loss on cash flow hedges | Accumulated other comprehensive loss |
|---|---|---|---|
| Balance at January 1, 2020 | $ (960) | $ — | $ (960) |
| Other comprehensive loss before reclassifications | (446) | (988) | (1,434) |
| Amounts reclassified to earnings | — | — | — |
| Balance at March 31, 2020 | $ (1,406) | $ (988) | $ (2,394) |
| | | | |
| Balance at January 1, 2019 | $ (1,108) | $ — | $ (1,108) |
| Other comprehensive income before reclassifications | 56 | — | 56 |
| Amounts reclassified to earnings | — | — | — |
| Balance at March 31, 2019 | $ (1,052) | $ — | $ (1,052) |

**12. Stock-Based Compensation**

The following table presents stock-based compensation expense recognized in the Company's accompanying condensed consolidated statements of operations:

| | Three Months Ended March 31, | |
|---|---|---|
| (in thousands) | 2020 | 2019 |
| Cost of goods sold | $ 618 | $ 440 |
| Sales and marketing | 253 | 451 |
| General and administrative | 1,815 | 1,574 |
| Research and development | 389 | 255 |
| Total stock-based compensation expense | $ 3,075 | $ 2,720 |

**13. Net Income Per Common Share**

A summary of net income per common share is presented below:

| | Three Months Ended March 31, | |
|---|---|---|
| (in thousands, except per share amounts) | 2020 | 2019 |
| Net income | $ 3,337 | $ 9,949 |
| | | |
| Basic weighted-average common shares outstanding | 39,433 | 38,603 |
| Effect of dilutive stock options | 28 | 58 |
| Effect of dilutive restricted stock | 641 | 1,126 |
| Diluted weighted-average common shares outstanding | 40,102 | 39,787 |
| | | |
| Basic income per common share | $ 0.08 | $ 0.26 |
| Diluted income per common share | $ 0.08 | $ 0.25 |
| | | |
| Antidilutive securities excluded from diluted net income per common share | 604 | 222 |

**14. Other Income**

Other income consisted of the following:

| (in thousands) | Three Months Ended March 31, 2020 | 2019 |
|---|---|---|
| Foreign currency (losses) gains | $ (314) | $ 42 |
| Tax indemnification income, net | 555 | 802 |
| Interest income | 109 | 283 |
| Other | — | 60 |
| Total other income | $ 350 | $ 1,187 |

**15. Commitments and Contingencies**

***Legal Proceedings***

From time to time, the Company is a party to various legal proceedings arising in the ordinary course of business. In addition, the Company has in the past been, and may in the future be, subject to investigations by governmental and regulatory authorities, which expose it to greater risks associated with litigation, regulatory or other proceedings, as a result of which the Company could be required to pay significant fines or penalties. The costs and outcome of litigation, regulatory or other proceedings cannot be predicted with certainty, and some lawsuits, claims, actions or proceedings may be disposed of unfavorably to the Company and could have a material adverse effect on the Company's results of operations or financial condition. In addition, intellectual property disputes often have a risk of injunctive relief which, if imposed against the Company, could materially and adversely affect its financial condition or results of operations.

As of March 31, 2020 , the Company had no material ongoing litigation in which the Company was a party. In addition, the Company had no material ongoing regulatory or other proceedings and no knowledge of any investigations by government or regulatory authorities in which the Company is a target, in either case, that the Company believes could have a material and adverse effect on its current business.

**16. Segment Information**

The Company reports two operating segments, U.S. and International, based on geographic customer base. The results of these operating segments are regularly reviewed by the Company's chief operating decision maker, the President and Chief Executive Officer. The Company's segments derive revenues through the manufacture, marketing, selling and distribution of medical imaging products, focused primarily on cardiovascular diagnostic imaging. All goodwill has been allocated to the U.S. operating segment. The Company does not identify or allocate assets to its segments.

Selected information regarding the Company's segments is provided as follows:

| | Three Months Ended March 31, | |
|---|---|---|
| **(in thousands)** | **2020** | **2019** |
| **Revenue by product from external customers** | | |
| U.S. | | |
| DEFINITY | $ 55,010 | $ 49,716 |
| TechneLite | 19,356 | 20,058 |
| Other nuclear | 9,062 | 9,524 |
| Rebates and allowances | (4,683) | (3,864) |
| Total U.S. Revenues | 78,745 | 75,434 |
| International | | |
| DEFINITY | 1,781 | 1,395 |
| TechneLite | 3,742 | 4,087 |
| Other nuclear | 6,438 | 5,596 |
| Rebates and allowances | (2) | (2) |
| Total International Revenues | 11,959 | 11,076 |
| Worldwide | | |
| DEFINITY | 56,791 | 51,111 |
| TechneLite | 23,098 | 24,145 |
| Other nuclear | 15,500 | 15,120 |
| Rebates and allowances | (4,685) | (3,866) |
| Total Revenues | $ 90,704 | $ 86,510 |

| | Three Months Ended March 31, | |
|---|---|---|
| **(in thousands)** | **2020** | **2019** |
| **Operating income** | | |
| U.S. | $ 4,988 | $ 14,584 |
| International | 2,137 | 1,585 |
| Total operating income | 7,125 | 16,169 |
| Interest expense | 1,946 | 4,592 |
| Other income | (350) | (1,187) |
| Income before income taxes | $ 5,529 | $ 12,764 |

**17. Subsequent Events**

On April 1, 2020, the Company drew down $100.0 million under its 2019 Revolving Facility, the proceeds of which the Company has currently invested in short-term, interest-bearing instruments.

On April 2, 2020, the Company and Progenics issued a joint press release announcing that they had decided to reschedule their respective special meetings of stockholders to vote on matters related to the Progenics Transaction from April 28, 2020 to June 16, 2020. The rescheduled special meetings will allow both companies the time necessary to respond to the COVID-19 pandemic and its effect on each company's business and on the combined entity and provide appropriate disclosure to their shareholders.

The Company is continuing to monitor the latest developments regarding the COVID-19 pandemic and its impact on the Company's business, financial condition, results of operations and prospects. On April 10, 2020, the Company announced several steps that it has taken to respond to the COVID-19 pandemic intended to maintain financial flexibility. These actions include transitioning to a four day work week to better align manufacturing, supply, distribution and other activities with reduced product demand, reducing non-essential discretionary expenses, and reducing executive and employee compensation effective April 13, 2020 for the balance of the second quarter of 2020. In addition, our Board of Directors has also reduced director and committee member compensation by 35% for the second half of the year and has elected to receive all remaining compensation payable in 2020 in the form of time-based restricted stock units that will vest on the first anniversary of the grant date, rather than in cash.

On April 14, 2020, the Company entered into a support agreement (the "Support Agreement") with Velan Capital, L.P., Altiva Management Inc., Velan Capital Partners LP, Velan Capital Holdings LLC, Velan Capital Investment Management LP, Velan Principals GP LLC, Velan Capital Management LLC, Balaji Venkataraman, Deepak Sarpangal and Kevin McNeill (collectively, the "Velan Stockholders"), pursuant to which, among other things and subject to the terms and conditions set forth in the Support Agreement, the Velan Stockholders agreed to vote (or cause to be voted) their respective shares of Company and Progenics common stock in favor of certain matters relating to the Progenics Transaction, and that the Velan Stockholders will abide by certain customary standstill provisions, in each case, subject to the terms and conditions set forth in the Support Agreement.

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

**Cautionary Note Regarding Forward-Looking Statements**

Some of the statements contained in this Quarterly Report on Form 10-Q are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These forward-looking statements, including, in particular, statements about our plans, strategies, prospects and industry estimates are subject to risks and uncertainties. These statements identify prospective information and include words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "should," "could," "predicts," "hopes" and similar expressions. Examples of forward-looking statements include statements we make relating to our outlook and expectations including, without limitation, in connection with: (i) the impact of the global COVID-19 pandemic on our business , financial conditions or prospects; (ii) continued market expansion and penetration for our commercial products, particularly DEFINITY, in the face of segment competition and potential generic competition as a result of patent and regulatory exclusivity expirations; (iii) the global Molybdenum-99 ("Mo-99") supply; (iv) our products manufactured at Jubilant HollisterStier ("JHS"); (v) our efforts in new product development and new clinical applications for our products; (vi) the Progenics Transaction; (vii) our capacity to use in-house manufacturing; and (viii) our ability to commercialize our products in new ex-U.S. markets . Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, such statements are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. These statements are neither statements of historical fact nor guarantees or assurances of future performance. The matters referred to in the forward-looking statements contained in this Quarterly Report on Form 10-Q may not in fact occur. We caution you, therefore, against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include regional, national or global political, economic, business, competitive, market and regulatory conditions and the following:

- The impact of the global COVID-19 pandemic on our business, financial condition or prospects, including a decline in the volume of procedures using our products, potential delays and disruptions to global supply chains, manufacturing activities, logistics, operations, employees and contractors, the business activities of our suppliers, distributors, customers and other business partners, as well as the effects on worldwide economies, financial markets, social institutions, labor markets and healthcare systems;

- Our ability to continue to grow the appropriate use of DEFINITY in suboptimal echocardiograms in the face of segment competition from other echocardiography contrast agents, including Optison from GE Healthcare Limited ("GE Healthcare") and Lumason from Bracco Diagnostics Inc. ("Bracco"), and potential generic competition as a result of patent and regulatory exclusivity expirations;
- The instability of the global Mo-99 supply, including (i) periodic outages at the NTP Radioisotopes ("NTP") processing facility in South Africa in 2017, 2018 and 2019, and (ii) a recently resolved production volume limitations at the Australian Nuclear Science and Technology Organisation's ("ANSTO") new Mo-99 processing facility in Australia, in each case resulting in our inability to fill some or all of the demand for our TechneLite generators on certain manufacturing days during the outage periods;
- Our dependence upon third parties for the manufacture and supply of a substantial portion of our products, raw materials and components, including DEFINITY at JHS;
- The extensive costs, time and uncertainty associated with new product development, including further product development relying on external development partners or developing internally;
- Our ability to identify and acquire or in-license additional products, businesses or technologies to drive our future growth;
- Our ability to protect our intellectual property and the risk of claims that we have infringed on the intellectual property of others;
- Risks associated with the technology transfer programs to secure production of our products at additional contract manufacturer sites, including a modified formulation of DEFINITY at Samsung BioLogics ("SBL") in South Korea;
- Risks associated with our investment in, and construction of, additional specialized manufacturing capabilities at our North Billerica, Massachusetts facility, including our ability to bring the new capabilities online by 2021;
- Our dependence on key customers for our medical imaging products, and our ability to maintain and profitably renew our contracts with those key customers, including GE Healthcare, Cardinal Health ("Cardinal"), United Pharmacy Partners ("UPPI"), Jubilant Radiopharma formerly known as Triad Isotopes, Inc. ("Jubilant Radiopharma") and PharmaLogic Holdings Corp ("PharmaLogic");
- Risks associated with our lead agent in development, flurpiridaz F 18, which in 2017 we out-licensed to GE Healthcare, including:
    - The ability to successfully complete the Phase 3 development program, including delays in enrollment that will result from the COVID-19 pandemic;
    - The ability to obtain Food and Drug Administration ("FDA") approval; and
    - The ability to gain post-approval market acceptance and adequate reimbursement;
- Risks associated with our development agent, LMI 1195, for patient populations that would benefit from molecular imaging of the norepinephrine pathway, including designing and timely completing two Phase 3 clinical trials for the diagnosis and management of neuroendocrine tumors in pediatric and adult populations, respectively;
- Risks associated with the manufacturing and distribution of our products and the regulatory requirements related thereto;
- The dependence of certain of our customers upon third-party healthcare payors and the uncertainty of third-party coverage and reimbursement rates;
- The existence and market success of competitor products;
- Uncertainties regarding the impact of U.S. and state healthcare reform measures and proposals on our business, including measures and proposals related to reimbursement for our current and potential future products, controls over drug pricing, drug pricing transparency and generic drug competition;
- Our being subject to extensive government regulation and oversight, our ability to comply with those regulations and the costs of compliance;
- Potential liability associated with our marketing and sales practices;
- The occurrence of any serious or unanticipated side effects with our products;
- Our exposure to potential product liability claims and environmental, health and safety liability;
- Our ability to introduce new products and adapt to an evolving technology and medical practice landscape;
- Risks associated with prevailing economic or political conditions and events and financial, business and other factors beyond our control;

- Risks associated with our international operations, including potential global disruptions in air transport due to COVID-19, which could adversely affect our international supply chains for radioisotopes and other critical materials as well as international distribution channels for our commercial products;
- Our ability to adequately qualify, operate, maintain and protect our facilities, equipment and technology infrastructure;
- Our ability to hire or retain skilled employees and key personnel;
- Our ability to utilize, or limitations in our ability to utilize, net operating loss carryforwards to reduce our future tax liability;
- Risks related to our outstanding indebtedness and our ability to satisfy those obligations;
- Costs and other risks associated with the Sarbanes-Oxley Act and the Dodd-Frank Act, including in connection with becoming a large accelerated filer as of December 31, 2019;
- Risks related to the ownership of our common stock;
- Risks related to the Progenics Transaction, including:
    - We or Progenics may be unable to obtain stockholder approval as required;
    - Conditions to the closing of the Progenics Transaction may not be satisfied;
    - The Progenics Transaction may involve unexpected costs, liabilities or delays;
    - The ability of our or Progenics' business to retain and hire key personnel and maintain relationships with customers, suppliers and others with whom we or Progenics do business, or on our or Progenics' operating results and business generally;
    - Our or Progenics' respective businesses may suffer as a result of uncertainty surrounding the Progenics Transaction and disruption of management's attention due to the Progenics Transaction;
    - The occurrence of any event, change or other circumstances that could give rise to the termination of our agreement with Progenics;
    - Unanticipated risks to our integration plan including in connection with timing, talent, and the potential need for additional resources;
    - New or previously unidentified manufacturing, regulatory, or research and development issues in the Progenics business;
    - Risks that the anticipated benefits of the Progenics Transaction or other commercial opportunities may otherwise not be fully realized or may take longer to realize than expected;
    - Risks relating to the COVID-19 pandemic and its effect on each company's business and on the combined entity;
    - Risks that contractual contingent value rights ("CVRs") we will issue as part of the Progenics Transaction may result in substantial future payments and could divert the attention of our management;
    - Risks that in connection with the Progenics Transaction, the exercise of appraisal rights by dissenting stockholders could increase the aggregate amount we have to pay for Progenics;
    - We or Progenics may be adversely affected by other economic, business, and/or competitive factors;
    - The impact of legislative, regulatory, competitive and technological changes;
    - Other risks to the consummation of the Progenics Transaction, including the risk that the Progenics Transaction will not be consummated within the expected time period or at all; and
- Other factors that are described in Part I, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019 and in Part II, Item 1A. "Risk Factors" in this Quarterly Report on Form 10-Q.

Factors that could cause or contribute to such differences include, but are not limited to, those that are discussed in other documents we file with the SEC. Any forward-looking statement made by us in this Quarterly Report on Form 10-Q speaks only as of the date on which it is made. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

**Available Information**

Our global Internet site is www.lantheus.com. We routinely make available important information, including copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after those reports are electronically filed with, or furnished to, the SEC, free of charge on our website at www.investor.lantheus.com. We recognize our website as a key channel of distribution to reach public investors and as a means of disclosing material non-public information to comply with our disclosure obligations under SEC Regulation FD. Information contained on our website shall not be deemed incorporated into, or to be part of this Quarterly Report on Form 10-Q, and any website references are not intended to be made through active hyperlinks.

Our reports filed with, or furnished to, the SEC are also available on the SEC's website at www.sec.gov, and for Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q, in an iXBRL (Inline Extensible Business Reporting Language) format. iXBRL is an electronic coding language used to create interactive financial statement data over the Internet. The information on our website is neither part of nor incorporated by reference in this Quarterly Report on Form 10-Q.

The following discussion and analysis of our financial condition and results of operations should be read together with the condensed consolidated financial statements and the related notes included in Item 1 of this Quarterly Report on Form 10-Q as well as the other factors described in Part I, Item 1A. "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2019.

**Overview**

***Our Business***

We are a global leader in the development, manufacture and commercialization of innovative diagnostic medical imaging agents and products that assist clinicians in the diagnosis and treatment of cardiovascular and other diseases. Clinicians use our imaging agents and products across a range of imaging modalities, including echocardiography and nuclear imaging. We believe that the resulting improved diagnostic information enables healthcare providers to better detect and characterize, or rule out, disease, potentially achieving improved patient outcomes, reducing patient risk and limiting overall costs for payers and the entire healthcare system.

Our commercial products are used by cardiologists, nuclear physicians, radiologists, internal medicine physicians, technologists and sonographers working in a variety of clinical settings. We sell our products to radiopharmacies, integrated delivery networks, hospitals, clinics and group practices.

We sell our products globally and operate our business in two reportable segments, which are further described below:

- *U.S. Segment* produces and markets our medical imaging agents and products throughout the U.S. In the U.S., we primarily sell our products to radiopharmacies, integrated delivery networks, hospitals, clinics and group practices.
- *International Segment* operations consist of production and distribution activities in Puerto Rico and some direct distribution activities in Canada. Additionally, within our International Segment, we have established and maintain third-party distribution relationships under which our products are marketed and sold in Europe, Canada, Australia, Asia-Pacific and Latin America.

***Our Product Portfolio***

Our product portfolio includes an ultrasound contrast agent, nuclear imaging products and a radiotherapeutic product. Our principal products include the following:

- *DEFINITY* is a microbubble contrast agent used in ultrasound exams of the heart, also known as echocardiography exams. DEFINITY contains perflutren-containing lipid microspheres and is indicated in the U.S. for use in patients with suboptimal echocardiograms to assist in imaging the left ventricular chamber and left endocardial border of the heart in ultrasound procedures.

- *TechneLite* is a Technetium ("Tc-99m") generator that provides the essential nuclear material used by radiopharmacies to radiolabel Cardiolite, Neurolite and other Tc-99m-based radiopharmaceuticals used in nuclear medicine procedures. TechneLite uses Mo-99 as its active ingredient.

Sales of our microbubble contrast agent, DEFINITY, are made in the U.S. and Canada through a DEFINITY direct sales team. In the U.S., our nuclear imaging products, including TechneLite, Xenon, Neurolite and Cardiolite, are primarily distributed through commercial radiopharmacies, the majority of which are controlled by or associated with GE Healthcare, Cardinal, UPPI, Jubilant

Radiopharma and PharmaLogic. A small portion of our nuclear imaging product sales in the U.S. are made through our direct sales force to hospitals and clinics that maintain their own in-house radiopharmaceutical preparation capabilities. We own one radiopharmacy in Puerto Rico where we sell our own products as well as products of third parties to end-users.

We also maintain our own direct sales force in Canada for certain of our products. In Europe, Australia, Asia-Pacific and Latin America, we generally rely on third-party distributors to market, sell and distribute our nuclear imaging and contrast agent products, either on a country-by-country basis or on a multi-country regional basis.

***Progenics Transaction***

On October 1, 2019, we entered into the Initial Merger Agreement to acquire all of the issued and outstanding shares of Progenics common stock by means of a merger of a wholly-owned subsidiary of the Company with and into Progenics in which Progenics stockholders would have received 0.2502 shares of our common stock for each share of Progenics common stock, representing an approximately 35% aggregate ownership stake in the combined company. The transaction contemplated by the Initial Merger Agreement was unanimously approved by the Boards of Directors of both companies and was subject to the terms and conditions set forth in the Initial Merger Agreement, including, among other things, the affirmative vote of a majority of the outstanding shares of common stock of Progenics and a majority of votes cast by the holders of the common stock of the Company.

On February 20, 2020, we entered into the Amended Merger Agreement with Progenics, which amends and restates the Initial Merger Agreement. Under the terms of the Amended Merger Agreement, the Company will acquire all of the issued and outstanding shares of Progenics common stock by means of a merger of a wholly-owned subsidiary of the Company with and into Progenics in which Progenics stockholders will receive, for each share of Progenics stock held at the time of the closing of the Progenics Transaction, merger consideration consisting of 0.31 of a share of our common stock and a non-tradeable CVR tied to the financial performance of PyL. Each CVR will entitle its holder to receive a pro rata share of aggregate cash payments equal to 40% of U.S. net sales generated by PyL in 2022 and 2023 in excess of $100 million and $150 million, respectively. In no event will our aggregate payments in respect of the CVRs, together with any other non-stock consideration treated as paid in connection with the Progenics Transaction, exceed 19.9% of the total consideration we pay in the Progenics Transaction. Following the closing of the Progenics Transaction, the aggregate ownership stake of the former Progenics stockholders will be approximately 40% of the combined company. Progenics' stockholders will also be entitled to appraisal rights as provided under Delaware law.

In addition, pursuant to the Amended Merger Agreement, the holder of each in-the-money Progenics Stock Option will be entitled to receive in exchange for each such in-the-money option (i) a Company Stock Option converted based on the 0.31 exchange ratio and (ii) a vested or unvested CVR depending on whether the underlying option is vested. Holders of out-of-the-money Progenics Stock Options will receive Company Stock Options converted on an exchange ratio adjusted based on actual trading prices of common stock of Progenics and the Company prior to the closing of the Progenics Transaction.

The Progenics Transaction was unanimously approved by the Boards of Directors of both companies and requires, among other things, the affirmative vote of a majority of the outstanding shares of common stock of Progenics and a majority of votes cast by the holders of the common stock of the Company. The Progenics Transaction is currently expected to close in June 2020, subject to the satisfaction or waiver of certain closing conditions. Following the closing of the Progenics Transaction, which the parties intend to report as tax-deferred to Progenics' stockholders with respect to the stock component of the merger consideration for U.S. federal income tax purposes, the combined company will continue to be headquartered in North Billerica, Massachusetts and will trade on the NASDAQ under the ticker symbol LNTH.

On March 15, 2020, Progenics and LMI entered into a bridge loan agreement, pursuant to which LMI agreed to provide for a secured short-term loan to Progenics on or after May 1, 2020 in an aggregate principal amount of up to $10.0 million. The bridge loan matures on the earlier to occur of (a) September 30, 2020 and (b) the date on which Progenics enters into a debt financing or similar arrangements or any amendment to, or replacement of, its existing debt provided by one or more third parties following the termination date of the merger agreement, in either case, having aggregate net cash proceeds that exceed the amount then required to repay all obligations under the bridge loan agreement in full in cash. The bridge loan bears interest at a rate per annum of 9.5% and is secured through the pledge to LMI of all of the issued and outstanding shares of capital stock of MIPI and any debt of MIPI owed to Progenics.

On April 14, 2020, the Company entered into the Support Agreement with the Velan Stockholders pursuant to which, among other things and subject to the terms and conditions set forth in the Support Agreement, the Velan Stockholders agreed to vote (or cause to be voted) their respective shares of Company and Progenics common stock in favor of certain matters relating to the Progenics Transaction, and that the Velan Stockholders will abide by certain customary standstill provisions, in each case, subject to the terms and conditions set forth in the Support Agreement.

The transaction is now expected to close in June 2020, subject to certain closing conditions. Upon completion of the acquisition, which the parties intend to report as tax-deferred to Progenics' stockholders with respect to the stock component of the merger consideration for U.S. federal income tax purposes, the combined company will continue to be headquartered in North Billerica, Massachusetts and will trade on the NASDAQ under the ticker symbol LNTH.

See Part I, Item 1A. "Risk Factors" in our Annual Report on form 10-K for the year ended December 31, 2019, for information regarding certain risks associated with our proposed acquisition of Progenics.

**Key Factors Affecting Our Results**

Our business and financial performance have been, and continue to be, affected by the following:

***COVID-19 Pandemic***

The global COVID-19 pandemic will have a material impact on our business. Towards the end of the first quarter of 2020 we began to experience, and through the date of this filing we are continuing to experience, impacts to our business and operations related to the COVID-19 pandemic, including the impact of stay-at-home mandates and related safety measures such as the delay of elective medical procedures, resulting in a decline in the volume of procedures using our products. We cannot predict the magnitude or duration of the pandemic's impact on our business.

As a result of the COVID-19 pandemic, we undertook a thorough analysis of all of our discretionary expenses. In the first quarter of 2020 we implemented certain cost reduction initiatives, including, among other things, reducing travel and promotional expenses and implementing a hiring freeze through the balance of 2020. In addition, effective April 13, 2020 for the balance of the second quarter of 2020, we reduced our work week from five days to four days in order to better align manufacturing, supply, distribution and other activities with reduced product demand. We also reduced pay for our personnel, including a 75% reduction for Mary Anne Heino, our President and Chief Executive Officer, a 35% reduction for members of our executive team, a 25% reduction for our vice presidents, and across-the-board reductions of 20% of salaries for our other salaried employees and 20% of hours for our hourly employees for that same time period. In addition, our Board of Directors has also reduced director and committee member compensation by 35% for the second half of the year and has elected to receive all remaining compensation payable in 2020 in the form of time-based restricted stock units that will vest on the first anniversary of the grant date, rather than in cash. These pay reduction measures may impact our ability to maintain employee morale and motivate and retain management personnel and other key employees. We intend to reevaluate the executive and employee pay reduction measures at the end of the second quarter. We can give no assurances that we will not have to take additional cost reduction measures if the pandemic continues to adversely affect the volume of procedures using our products.

While we are currently unable to estimate the impact of COVID-19 on our overall 2020 operations and financial results, we ended the first quarter of 2020 with $95.7 million of cash and cash equivalents. In addition, as a precaution, in early April 2020 we drew $100 million on our existing $200 million revolving line of credit, which draw we intend to repay upon consummation of the Progenics Transaction in order to remain in compliance with the applicable financial covenants in our 2019 Facility. With our available liquidity and prudent expense management, we believe we will be able to maintain a state of preparedness to resume full business activities to support our customers as external conditions allow, although we can give no assurances that we will have sufficient liquidity if the pandemic continues to adversely affect the volume of procedures using our products for an extended period of time.

***Anticipated Continued Growth of DEFINITY and Expansion of Our Ultrasound Microbubble Franchise***

We believe the market opportunity for our ultrasound microbubble contrast agent, DEFINITY, continues to be significant. DEFINITY is our fastest growing and highest margin commercial product. We anticipate DEFINITY sales will continue to grow over the longer term. As we continue to educate the physician and healthcare provider community about the benefits and risks of DEFINITY, we believe we will be able to continue to grow the appropriate use of DEFINITY in suboptimal echocardiograms. In a U.S. market with three echocardiography contrast agents approved by the FDA, we estimate that DEFINITY had over 80% of the market as of December 31, 2019.

As we continue to pursue expanding our microbubble franchise, our activities include:

- *Patents* - We continue to actively pursue additional patents in connection with DEFINITY, both in the U.S. and internationally. In the U.S., three of our recently issued method of use patents covering DEFINITY were listed in the Orange Book. We now have a total of four Orange Book-listed method of use patents, one of which expires in 2035 and three of which expire in 2037, as well as additional manufacturing patents that are not Orange Book-listed expiring in 2021, 2023 and 2037. Outside of the U.S., while our DEFINITY patent protection and regulatory exclusivity have generally expired, we are currently prosecuting additional patents to try to obtain similar method of use and manufacturing patent protection as granted in the U.S.

*Hatch-Waxman Act* - Even though our longest duration Orange Book-listed DEFINITY patent extends until March 2037, because our Orange Book-listed composition of matter patent expired in June 2019, we may face generic DEFINITY challengers in the near to intermediate term. Under the Hatch-Waxman Act, the FDA can approve Abbreviated New Drug Applications ("ANDAs") for generic versions of drugs if the ANDA applicant demonstrates, among other things, that (i) its generic candidate is the same as the innovator product by establishing bioequivalence and providing relevant chemistry, manufacturing and product data, and (ii) the marketing of that generic candidate does not infringe an Orange Book-listed patent. With respect to any Orange Book-listed patent covering the innovator product, the ANDA applicant must give a notice to the innovator (a "Notice") that the ANDA applicant certifies that its generic candidate will not infringe the innovator's Orange Book-listed patent or that the Orange Book-listed patent is invalid. The innovator can then challenge the ANDA applicant in court within 45 days of receiving that Notice, and FDA approval to commercialize the generic candidate will be stayed (that is, delayed) for up to 30 months (measured from the date on which a Notice is received) while the patent dispute between the innovator and the ANDA applicant is resolved in court. The 30 month stay could potentially expire sooner if the courts determine that no infringement had occurred or that the challenged Orange Book-listed patent is invalid or if the parties otherwise settle their dispute.

As of the date of filing of this Quarterly Report on Form 10-Q, we have not received any Notice from an ANDA applicant. If we were to (i) receive any such Notice in the future, (ii) bring a patent infringement suit against the ANDA applicant within 45 days of receiving that Notice, and (iii) successfully obtain the full 30 month stay, then the ANDA applicant would be precluded from commercializing a generic version of DEFINITY prior to the expiration of that 30 month stay period and, potentially, thereafter, depending on how the patent dispute is resolved. Solely by way of example and not based on any knowledge we currently have, if we received a Notice from an ANDA applicant in May 2020 and the full 30 month stay was obtained, then the ANDA applicant would be precluded from commercialization until at least November 2022. If we received a Notice some number of months in the future and the full 30 month stay was obtained, the commercialization date would roll forward in the future by the same calculation.

- *Modified Formulation* - We are developing at SBL a modified formulation of DEFINITY. We believe this modified formulation will provide an enhanced product profile enabling storage as well as shipment at room temperature (DEFINITY's current formulation requires refrigerated storage), will give clinicians additional choice, and will allow for greater utility of this formulation in broader clinical settings. We were recently granted a composition of matter patent on the modified formulation which runs through 2035. If the modified formulation is approved by the FDA, then this patent would be eligible to be listed in the Orange Book. We currently believe that, if approved by the FDA, the modified formulation could become commercially available in early 2021, although that timing cannot be assured. Given its physical characteristics, the modified formulation may also be well suited for inclusion in kits requiring microbubbles for other indications and applications (including in kits developed by third parties of the type described in the next paragraph).
- *New Clinical Applications* - As we continue to look for other opportunities to expand our microbubble franchise, we are evaluating new indications and clinical applications beyond echocardiography and contrast imaging generally. For example, in April 2019, we announced a strategic development and commercial collaboration with Cerevast Medical, Inc. ("Cerevast") in which our microbubble will be used in connection with Cerevast's ocular ultrasound device to target improving blood flow in occluded retinal veins in the eye. Retinal vein occlusion is one of the most common causes of vision loss worldwide. In December 2019, we announced a strategic commercial supply agreement with CarThera for the use of our microbubbles in combination with SonoCloud, a proprietary implantable device in development for the treatment of recurrent glioblastoma. Glioblastoma is a lethal and devastating form of brain cancer with median survival of 15 months after diagnosis.
- *In-House Manufacturing* - We are currently building specialized in-house manufacturing capabilities at our North Billerica, Massachusetts facility for DEFINITY and, potentially, other sterile vial products. We believe the investment in these efforts will allow us to better control DEFINITY manufacturing and inventory, reduce our costs in a potentially more price competitive environment, and provide us with supply chain redundancy. We currently expect to be in a position to use this in-house manufacturing capability by early 2021, although that timing cannot be assured.
- *DEFINITY in China* - On March 19, 2020 in connection with our Chinese development and distribution arrangement with Double Crane Pharmaceutical Company, we filed an Import Drug License application with the NMPA, or National Medical Products Administration, for the use of DEFINITY for the echocardiography indication. Our application is now undergoing initial review by the NMPA. We believe this is an important milestone in our efforts to commercialize DEFINITY in China. Double Crane is also in the process of analyzing the clinical results relating to the liver and kidney indications and will also work with us to prepare an Import Drug License application for those indications.

***Global Mo-99 Supply***

We currently have Mo-99 supply agreements with Institute for Radioelements ("IRE"), running through December 31, 2022, and renewable by us on a year-to-year basis thereafter, and with NTP and ANTSO, running through December 31, 2021. We also have a Xenon supply agreement with IRE which runs through June 30, 2022, and which is subject to further extension.

Although we have a globally diverse Mo-99 supply with IRE in Belgium, NTP in South Africa and ANSTO in Australia, we still face supplier and logistical challenges in our Mo-99 supply chain. The NTP processing facility has had periodic outages in 2017, 2018 and 2019. When NTP was not producing, we relied on Mo-99 supply from both IRE and ANSTO to limit the impact of the NTP outages. In the second quarter of 2019, ANSTO experienced technical issues in its existing Mo-99 processing facility which resulted in a decrease in Mo-99 available to us. In addition, as ANSTO transitioned from its existing Mo-99 processing facility to its new Mo-99 processing facility in the second quarter of 2019, ANSTO experienced start-up and transition challenges, which also resulted in a decrease in Mo-99 available to us. Further, starting in late June 2019 until April 2020, ANSTO's new Mo-99 processing facility had production volume limitations imposed on it by the Australian Radiation Protection and Nuclear Safety Agency which limited our ability to receive Mo-99 from ANSTO. During that time we relied on IRE and NTP to limit the impact of those ANSTO outages and volume limitations. As ANSTO increases its production volume over the course of 2020, we expect to receive increasing supply from ANSTO. Because of the COVID-19 pandemic, we have recently experienced challenges receiving regularly scheduled orders of Mo-99 from our global suppliers due to the partial or complete delay or cancellation of international flights by our airfreight carriers. Because of these various supply chain constraints, depending on reactor and processor schedules and operations, we have not been able to fill some or all of the demand for our TechneLite generators on certain manufacturing days.

ANSTO's new Mo-99 processing facility could eventually increase ANSTO's Mo-99 production capacity from approximately 2,000 curies per week to 3,500 curies per week with additional committed financial and operational resources. At full ramp-up capacity, ANSTO's new facility could provide incremental supply to our globally diversified Mo-99 supply chain and therefore mitigate some risk among our Mo-99 suppliers, although we can give no assurances to that effect. In addition, we also have a strategic arrangement with SHINE Medical Technologies, Inc. ("SHINE"), a Wisconsin-based company, for the future supply of Mo-99. Under the terms of that agreement, SHINE will provide us Mo-99 once SHINE's facility becomes operational and receives all necessary approvals, which SHINE now estimates will occur in 2022.

***Inventory Supply***

We obtain a substantial portion of our imaging agents from a third-party supplier. JHS is currently our sole source manufacturer of DEFINITY, Neurolite, Cardiolite and evacuation vials, the latter being an ancillary component for our TechneLite generators. We are currently seeking approval from certain foreign regulatory authorities for JHS to manufacture certain of our products. Until we receive these approvals, we will face continued limitations on where we can sell those products outside of the U.S.

In addition to JHS, we are also currently working to secure additional alternative suppliers for our key products as part of our ongoing supply chain diversification strategy. We have ongoing development and technology transfer activities for a modified formulation of DEFINITY with SBL, which is located in South Korea. We currently believe that if approved by the FDA, the modified formulation could be commercially available in 2021, although that timing cannot be assured. We are also building in-house specialized manufacturing capabilities at our North Billerica, Massachusetts facility, as part of a larger strategy to create a competitive advantage in specialized manufacturing, which will also allow us to optimize our costs and reduce our supply chain risk. We can give no assurance as to when or if we will be successful in these efforts or that we will be able to successfully manufacture any additional commercial products at our North Billerica, Massachusetts facility.

Radiopharmaceuticals are decaying radioisotopes with half-lives ranging from a few hours to several days. These products cannot be kept in inventory because of their limited shelf lives and are subject to just-in-time manufacturing, processing and distribution, which takes place at our North Billerica, Massachusetts facility.

***Research and Development Expenses***

To remain a leader in the marketplace, we have historically made substantial investments in new product development. For flurpiridaz F 18, our positron emission tomography ("PET")-based myocardial perfusion imaging agent, on April 25, 2017, we announced entering into a definitive, exclusive Collaboration and License Agreement with GE Healthcare for the agent's continued Phase 3 development and worldwide commercialization. Because of the COVID-19 pandemic, GE Healthcare believes enrollment in that global clinical development program will be delayed. For LMI 1195, our PET-based molecular imaging agent for the norepinephrine pathway, we are currently designing two Phase 3 clinical trials for the use of LMI 1195 for the diagnosis and management of neuroendocrine tumors in pediatric and adult populations, respectively. The FDA has granted an Orphan Drug designation for the use of LMI 1195 in the management indication. We have also received notice of eligibility for a rare pediatric disease priority review voucher for a subsequent human drug application so long as LMI 1195 is approved by the FDA for its rare pediatric disease indication prior to September 30, 2022. Our investments in these additional clinical activities will increase our operating expenses and impact our results of operations and cash flow and we can give no assurances as to whether or when LMI 1195 would be approved.

As part of our microbubble franchise strategy, we also conducted two Phase 3, open-label, multicenter studies (which we refer to as BENEFIT 1 and BENEFIT 2) to evaluate LVEF measurement accuracy and reproducibility of DEFINITY contrast-enhanced and unenhanced echocardiography as compared to non-contrast cardiac magnetic resonance imaging ("CMRI"), used as the truth standard. In February 2020, we announced the results of BENEFIT 1. After reviewing the BENEFIT 1 study results, we concluded that there was no statistically significant improvement in the accuracy of LVEF values for contrast-enhanced echocardiography versus unenhanced echocardiography as compared to CMRI. In addition, analyses of the secondary endpoints revealed no improvement in inter-reader variability between the contrast-enhanced and unenhanced echocardiograms for LVEF assessments. We have recently completed our review of the BENEFIT 2 study results, and those results are similar to the previously reported BENEFIT 1 results, namely that the BENEFIT 2 study results also did not meet its primary endpoint. Among the secondary endpoints in BENEFIT 2, inter-reader variability for left ventricular volume measurements improved when using DEFINITY versus unenhanced ultrasound, while there was no improvement in the LVEF inter-reader variability. In both studies, a post-hoc analysis did show statistically significant improvements in left ventricular diastolic and systolic volume measurements with contrast-enhanced versus unenhanced echocardiography when compared to CMRI. Although we very much see the continued value of the use of contrast in suboptimal echocardiograms to opacify the left ventricular chamber and improve the delineation of the left ventricular endocardial border, at this point, we do not foresee spending additional time or effort pursuing an LVEF indication for DEFINITY.

***New Initiatives***

We continue to seek ways to expand our product portfolio, evaluating a number of different opportunities to acquire or in-license additional products, businesses and technologies to drive our future growth. We are particularly interested in expanding our presence in oncology, in radiotherapeutics as well as diagnostics. In addition to the Progenics Transaction described above, in May 2019 we entered into a strategic collaboration and license agreement with NanoMab Technology Limited, a privately-held biopharmaceutical company focusing on the development of next generation radiopharmaceuticals for cancer precision medicine. We believe this collaboration will provide the first broadly-available imaging biomarker research tool to pharmaceutical companies and academic centers conducting research and development on PD-L1 immuno-oncology treatments, including combination therapies. We can give no assurance as to when or if this collaboration will be successful or accretive to earnings.

**Results of Operations**

The following is a summary of our consolidated results of operations:

| | Three Months Ended March 31, | |
|---|---|---|
| **(in thousands)** | **2020** | **2019** |
| Revenues | $ 90,704 | $ 86,510 |
| Cost of goods sold | 52,702 | 42,426 |
| Gross profit | 38,002 | 44,084 |
| Operating expenses | | |
| Sales and marketing | 10,130 | 10,397 |
| General and administrative | 16,699 | 12,589 |
| Research and development | 4,048 | 4,929 |
| Total operating expenses | 30,877 | 27,915 |
| Operating income | 7,125 | 16,169 |
| Interest expense | 1,946 | 4,592 |
| Other income | (350) | (1,187) |
| Income before income taxes | 5,529 | 12,764 |
| Income tax expense | 2,192 | 2,815 |
| Net income | $ 3,337 | $ 9,949 |

**Comparison of the Periods Ended March 31, 2020 and 2019**

***Revenues***

Segment revenues are summarized by product as follows:

| (in thousands) | Three Months Ended March 31, 2020 | 2019 | Change $ | Change % |
|---|---|---|---|---|
| U.S. | | | | |
| DEFINITY | $ 55,010 | $ 49,716 | $ 5,294 | 10.6 % |
| TechneLite | 19,356 | 20,058 | (702) | (3.5)% |
| Other nuclear | 9,062 | 9,524 | (462) | (4.9)% |
| Rebates and allowances | (4,683) | (3,864) | (819) | 21.2 % |
| Total U.S. revenues | 78,745 | 75,434 | 3,311 | 4.4 % |
| International | | | | |
| DEFINITY | 1,781 | 1,395 | 386 | 27.7 % |
| TechneLite | 3,742 | 4,087 | (345) | (8.4)% |
| Other nuclear | 6,438 | 5,596 | 842 | 15.0 % |
| Rebates and allowances | (2) | (2) | — | — % |
| Total International revenues | 11,959 | 11,076 | 883 | 8.0 % |
| Worldwide | | | | |
| DEFINITY | 56,791 | 51,111 | 5,680 | 11.1 % |
| TechneLite | 23,098 | 24,145 | (1,047) | (4.3)% |
| Other nuclear | 15,500 | 15,120 | 380 | 2.5 % |
| Rebates and allowances | (4,685) | (3,866) | (819) | 21.2 % |
| Total revenues | $ 90,704 | $ 86,510 | $ 4,194 | 4.8 % |

The increase in the U.S. segment revenues for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to a $5.3 million increase in DEFINITY revenue as a result of higher unit volumes. This increase was offset, in part, by an increase in rebate and allowance provisions of $0.8 million, lower TechneLite revenue driven by supplier disruptions and COVID-19 impact on international logistics and a decrease in Other Nuclear revenue primarily associated with lower Xenon volume as a result of COVID-19.

The increase in the International segment revenues for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to a $0.8 million increase in Other Nuclear revenue driven by an increase in Neurolite volume and $0.4 million increase in DEFINITY revenue driven by increased volume. This increase was offset, in part, by TechneLite revenue due primarily to opportunistic incremental demand in the prior year period.

*Rebates and Allowances*

Estimates for rebates and allowances represent our estimated obligations under contractual arrangements with third parties. Rebate accruals and allowances are recorded in the same period the related revenue is recognized, resulting in a reduction to revenue and the establishment of a liability which is included in accrued expenses. These rebates and allowances result from performance-based offers that are primarily based on attaining contractually specified sales volumes and growth, Medicaid rebate programs for our products, administrative fees of group purchasing organizations and certain distributor related commissions. The calculation of the accrual for these rebates and allowances is based on an estimate of the third-party's buying patterns and the resulting applicable contractual rebate to be earned over a contractual period.

An analysis of the amount of, and change in, reserves is summarized as follows:

| (in thousands) | Rebates and Allowances |
|---|---|
| Balance, January 1, 2020 | $ 6,985 |
| Provision related to current period revenues | 4,650 |
| Adjustments relating to prior period revenues | 35 |
| Payments or credits made during the period | (6,070) |
| Balance, March 31, 2020 | $ 5,600 |

***Gross Profit***

Gross profit is summarized by segment as follows:

| | Three Months Ended March 31, | | | |
|---|---|---|---|---|
| (in thousands) | 2020 | 2019 | Change $ | Change % |
| U.S. | $ 35,063 | $ 41,551 | $ (6,488) | (15.6)% |
| International | 2,939 | 2,533 | 406 | 16.0 % |
| Total gross profit | $ 38,002 | $ 44,084 | $ (6,082) | (13.8)% |

The decrease in the U.S. segment gross profit for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to an asset impairment loss on other nuclear products, and lower TechneLite unit volumes, as well as an increase in rebate and allowance provisions. This was offset by higher DEFINITY volume.

The increase in the International segment gross profit for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to higher DEFINITY gross profit driven by increased volume.

***Sales and Marketing***

Sales and marketing expenses consist primarily of salaries and other related costs for personnel in field sales, marketing and customer service functions. Other costs in sales and marketing expenses include the development and printing of advertising and promotional material, professional services, market research and sales meetings.

Sales and marketing expense is summarized by segment as follows:

| | Three Months Ended March 31, | | | |
|---|---|---|---|---|
| (in thousands) | 2020 | 2019 | Change $ | Change % |
| U.S. | $ 9,607 | $ 9,969 | $ (362) | (3.6)% |
| International | 523 | 428 | 95 | 22.2 % |
| Total sales and marketing | $ 10,130 | $ 10,397 | $ (267) | (2.6)% |

The decrease in the U.S. segment sales and marketing expenses for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to reduced marketing promotional programs and travel due to COVID-19 impact, as well as lower employee-related costs.

The increase in the International segment sales and marketing expenses for the three months ended March 31, 2020 , as compared to the prior year period is primarily due to higher employee-related costs.

***General and Administrative***

General and administrative expenses consist of salaries and other related costs for personnel in executive, finance, legal, information technology and human resource functions. Other costs included in general and administrative expenses are professional fees for information technology services, external legal fees, consulting and accounting services as well as bad debt expense, certain facility and insurance costs, including director and officer liability insurance.

General and administrative expense is summarized by segment as follows:

| | Three Months Ended March 31, | | | |
|---|---|---|---|---|
| (in thousands) | 2020 | 2019 | Change $ | Change % |
| U.S. | $ 16,555 | $ 12,348 | $ 4,207 | 34.1 % |
| International | 144 | 241 | (97) | (40.2)% |
| Total general and administrative | $ 16,699 | $ 12,589 | $ 4,110 | 32.6 % |

The U.S. segment general and administrative expenses for the three months ended March 31, 2020 increased as compared to the prior year period. The primary driver was an increase in acquisition-related costs associated with the pending acquisition of Progenics and higher employee-related costs.

The International segment general and administrative expenses for the three months ended March 31, 2020 decreased as compared to the prior year period driven primarily by favorable employee-related costs.

***Research and Development***

Research and development expenses relate primarily to the development of new products to add to our portfolio and costs related to our medical affairs, medical information and regulatory functions. We do not allocate research and development expenses incurred in the U.S. to our International segment.

Research and development expense is summarized by segment as follows:

| | Three Months Ended March 31, | | | |
|---|---|---|---|---|
| (in thousands) | 2020 | 2019 | Change $ | Change % |
| U.S. | $ 3,913 | $ 4,650 | $ (737) | (15.8)% |
| International | 135 | 279 | (144) | (51.6)% |
| Total research and development | $ 4,048 | $ 4,929 | $ (881) | (17.9)% |

The decrease in the U.S. segment research and development expenses for the three months ended March 31, 2020 , as compared to the prior year is primarily related to clinical research expenses related to DEFINITY studies phasing.

The decrease in the International segment research and development expenses for the three months ended March 31, 2020 , as compared to the prior year period is primarily driven by regulatory costs relating to Brexit matters.

***Interest Expense***

Interest expense decreased by approximately $2.6 million for the three months ended March 31, 2020 as compared to the prior year period due to the refinancing of our existing indebtedness in the second quarter of 2019 which reduced our underlying principal amount and decreased interest rates on our long-term debt.

***Income Tax Expense***

Income tax expense is summarized as follows:

| | Three Months Ended March 31, | | | |
|---|---|---|---|---|
| (in thousands) | 2020 | 2019 | Change $ | Change % |
| Income tax expense | $ 2,192 | $ 2,815 | $ (623) | (22.1)% |

The income tax expense for the three months ended March 31, 2020 was primarily due to the income generated in the period and the accrual of interest associated with uncertain tax positions.

The income tax expense for the three months ended March 31, 2019 was primarily due to the income generated in the period and the accrual of interest associated with uncertain tax positions offset by tax benefits arising from stock compensation deductions.

We regularly assess our ability to realize our deferred tax assets. Assessing the realizability of deferred tax assets requires significant management judgment. In determining whether our deferred tax assets are more-likely-than-not realizable, we evaluate all available positive and negative evidence, and weigh the objective evidence and expected impact. We continue to record a valuation allowance against certain of our foreign net deferred tax assets.

Our effective tax rate for each reporting period is presented as follows:

| | Three Months Ended March 31, | |
|---|---|---|
| | 2020 | 2019 |
| Effective tax rate | 39.6% | 22.1% |

Our effective tax rate in fiscal 2020 differs from the U.S. statutory rate of 21% principally due to the impact of U.S. state taxes and the accrual of interest on uncertain tax positions.

The increase in the effective income tax rate for the three months ended March 31, 2020 as compared to the prior year period is primarily due to the increased tax rate impact from the accrual of interest on uncertain tax positions in the current period and the benefit from stock compensation which was recorded in the comparative period.

**Liquidity and Capital Resources**

***Cash Flows***

The following table provides information regarding our cash flows:

| | Three Months Ended March 31, | |
|---|---|---|
| **(in thousands)** | **2020** | **2019** |
| Net cash provided by operating activities | $ 9,408 | $ 10,468 |
| Net cash used in investing activities | $ (2,698) | $ (10,550) |
| Net cash used in financing activities | $ (3,732) | $ (1,231) |

*Net Cash Provided by Operating Activities*

Net cash provided by operating activities of $9.4 million in the three months ended March 31, 2020 was driven primarily by net income of $3.3 million plus $3.7 million of depreciation, amortization and accretion expense, impairment of long-lived assets of $7.3 million, stock-based compensation expense of $3.1 million, and changes in deferred taxes of $1.5 million. These net sources of cash were offset by a net decrease of $10.9 million related to movements in our working capital accounts during the period. The overall decreases in cash from our working capital accounts were primarily driven by the payment of prior year annual bonuses.

Net cash provided by operating activities of $10.5 million in the three months ended March 31, 2019 was driven primarily by net income of $9.9 million plus $3.3 million of depreciation, amortization and accretion expense, stock-based compensation expense of $2.7 million and changes in deferred taxes of $1.7 million. These net sources of cash were offset by a net decrease of $8.1 million related to movements in our working capital accounts during the period. The overall decreases in cash from our working capital accounts were primarily driven by the payment of prior year annual bonuses.

*Net Cash Used in Investing Activities*

Net cash used in investing activities during the three months ended March 31, 2020 reflected $2.7 million in capital expenditures.

Net cash used in investing activities during the three months ended March 31, 2019 reflected $10.6 million in capital expenditures.

*Net Cash Used in Financing Activities*

Net cash used in financing activities during the three months ended March 31, 2020 is primarily attributable to the payments on long-term debt and other borrowings of $2.5 million related to the 2019 Term Facility and payments for minimum statutory tax withholding related to net share settlement of equity awards of $1.5 million, offset by proceeds of $0.4 million from the issuance of common stock.

Net cash used in financing activities during the three months ended March 31, 2019 reflected payments for minimum statutory tax withholding related to net share settlement of equity awards of $1.1 million, payments on long-term debt and other borrowings of $0.7 million, offset by proceeds of $0.6 million from the exercise of stock options and the issuance of common stock. Starting in 2019, we require certain senior executives to cover tax liabilities resulting from the vesting of their equity awards pursuant to sell-to-cover transactions under Rule 10b5-1 programs.

***External Sources of Liquidity***

In June 2019, we refinanced our 2017 $275 million five-year term loan facility with the 2019 Term Facility. In addition, we replaced our $75 million revolving facility with the 2019 Revolving Facility. The terms of the 2019 Facility are set forth in the Credit Agreement, dated as of June 27, 2019, by and among us, the lenders from time to time party thereto and Wells Fargo Bank, N.A., as administrative agent and collateral agent. We have the right to request an increase to the 2019 Term Facility or request the establishment of one or more new incremental term loan facilities, in an aggregate principal amount of up to $100 million, plus additional amounts, in certain circumstances.

We are permitted to voluntarily prepay the 2019 Term Loans, in whole or in part, without premium or penalty. The 2019 Term Facility requires us to make mandatory prepayments of the outstanding 2019 Term Loans in certain circumstances. The 2019 Term Facility amortizes at 5.00% per year through September 30, 2022 and 7.5% thereafter, until its June 27, 2024 maturity date.

Under the terms of the 2019 Revolving Facility, the lenders thereunder agreed to extend credit to us from time to time until June 27, 2024 consisting of revolving loans in an aggregate principal amount not to exceed $200 million at any time outstanding. The 2019 Revolving Facility includes a $20 million sub-facility for the issuance of Letters of Credit. The 2019 Revolving Facility includes a $10 million sub-facility for Swingline Loans. The Letters of Credit, Swingline Loans and the borrowings under the 2019 Revolving Facility are expected to be used for working capital and other general corporate purposes.

Please refer to our Form 10-K for fiscal year ended December 31, 2019 for further details on the 2019 Facility.

Our ability to fund our future capital needs will be affected by our ability to continue to generate cash from operations and may be affected by our ability to access the capital markets, money markets or other sources of funding, as well as the capacity and terms of our financing arrangements.

We may from time to time repurchase or otherwise retire our debt and take other steps to reduce our debt or otherwise improve our balance sheet. These actions may include prepayments of our term loans or other retirements or refinancing of outstanding debt, privately negotiated transactions or otherwise. The amount of debt that may be retired, if any, could be material and would be decided at the sole discretion of our Board of Directors and will depend on market conditions, our cash position and other considerations.

***Funding Requirements***

Our future capital requirements will depend on many factors, including:

- The level of product sales and the pricing environment of our currently marketed products, particularly DEFINITY and any additional products that we may market in the future, including decreased product sales resulting from the COVID-19 pandemic;
- Revenue mix shifts and associated volume and selling price changes that could result from contractual status changes with key customers and additional competition;
- The costs of acquiring or in-licensing, developing, obtaining regulatory approval for, and commercializing, new products, businesses or technologies, together with the costs of pursuing opportunities that are not eventually consummated;
- Our investment in the further clinical development and commercialization of existing products and development candidates;
- The costs of investing in our facilities, equipment and technology infrastructure;
- The costs and timing of establishing manufacturing and supply arrangements for commercial supplies of our products and raw materials and components;

- Our ability to have product manufactured and released from JHS and other manufacturing sites in a timely manner in the future;
- The costs of further commercialization of our existing products, particularly in international markets, including product marketing, sales and distribution and whether we obtain local partners to help share such commercialization costs;
- The extent to which we choose to establish collaboration, co-promotion, distribution or other similar arrangements for our marketed products;
- The legal costs relating to maintaining, expanding and enforcing our intellectual property portfolio, pursuing insurance or other claims and defending against product liability, regulatory compliance or other claims; and
- The cost of interest on any additional borrowings which we may incur under our financing arrangements.

Until we successfully become dual sourced for our principal products, we are vulnerable to future supply shortages. Disruption in our financial performance could also occur if we experience significant adverse changes in product or customer mix, broad economic downturns, adverse industry or company conditions or catastrophic external events, including pandemics such as COVID-19, natural disasters and political or military conflict. If we experience one or more of these events in the future, we may be required to implement further expense reductions, such as a delay or elimination of discretionary spending in all functional areas, as well as scaling back select operating and strategic initiatives.

If our capital resources become insufficient to meet our future capital requirements, we would need to finance our cash needs through public or private equity offerings, debt financings, assets securitizations, sale-leasebacks or other financing or strategic alternatives, to the extent such transactions are permissible under the covenants of our Credit Agreement. Additional equity or debt financing, or other transactions, may not be available on acceptable terms, if at all. If any of these transactions require an amendment or waiver under the covenants in our Credit Agreement, which could result in additional expenses associated with obtaining the amendment or waiver, we will seek to obtain such a waiver to remain in compliance with those covenants. However, we cannot be assured that such an amendment or waiver would be granted, or that additional capital will be available on acceptable terms, if at all.

At March 31, 2020 , our only current committed external source of funds is our borrowing availability under our 2019 Revolving Facility. We had $95.7 million of cash and cash equivalents at March 31, 2020 . Our 2019 Facility contains a number of affirmative, negative, reporting and financial covenants, in each case subject to certain exceptions and materiality thresholds. Incremental borrowings under the 2019 Revolving Facility may affect our ability to comply with the covenants in the 2019 Facility, including the financial covenants restricting consolidated net leverage and interest coverage. Accordingly, we may be limited in utilizing the full amount of our 2019 Revolving Facility as a source of liquidity.

On April 1, 2020, we drew down $100 million under our 2019 Revolving Facility, the proceeds of which we have currently invested in short-term, interest bearing instruments.

In addition, in connection with the Progenics Transaction, which we now expect to close in June 2020, although the merger is structured as a stock-for-stock exchange, we will incur legal, accounting, financial advisory, consulting and printing fees, and transition, integration and other costs which we intend to fund from our available cash and the available cash of Progenics. The CVRs we will issue in the Progenics Transaction will entitle holders thereof to future cash payments of 40% of PyL net sales over $100 million in 2022 and $150 million in 2023, which, if payable, we currently intend to fund from our then-available cash. In no event will our aggregate payments under the CVRs, together with any other non-stock consideration treated as paid in connection with the Progenics Transaction, exceed 19.9% of the total consideration we pay in the Progenics Transaction.

Based on our current operating plans, including our prudent expense management in response to the COVID-19 pandemic, we believe that our existing cash and cash equivalents, results of operations and availability under our 2019 Revolving Facility will be sufficient to continue to fund our liquidity requirements for the foreseeable future.

**Critical Accounting Policies and Estimates**

The discussion and analysis of our financial condition and results of operations are based on our condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these condensed consolidated financial statements require us to make estimates and judgments that affect our reported assets and liabilities, revenues and expenses, and other financial information. Actual results may differ materially from these estimates under different assumptions and conditions. In addition, our reported financial condition and results of operations could vary due to a change in the application of a particular accounting standard.

There have been no other significant changes to our critical accounting policies or in the underlying accounting assumptions and estimates used in such policies in the three months ended March 31, 2020 . For further information, refer to our summary of significant accounting policies and estimates in our Annual Report on Form 10-K filed for the year ended December 31, 2019.

**Off-Balance Sheet Arrangements**

We are required to provide the U.S. Nuclear Regulatory Commission and Massachusetts Department of Public Health financial assurance demonstrating our ability to fund the decommissioning of our North Billerica, Massachusetts production facility upon closure, though we do not intend to close the facility. We have provided this financial assurance in the form of a $28.2 million surety bond.

Since inception, we have not engaged in any other off-balance sheet arrangements, including structured finance, special purpose entities or variable interest entities.

**Item 3. Quantitative and Qualitative Disclosures About Market Risk**

For quantitative and qualitative disclosures about market risk, except as set forth below, see Part II, Item 7A, “Quantitative and Qualitative Disclosures About Market Risk,” of our Annual Report on Form 10-K for the year ended December 31, 2019. Our exposures to market risk have not changed materially since December 31, 2019.

***Interest Rate Risk***

The Company uses interest rate swaps to reduce the variability in cash flows associated with a portion of the Company’s forecasted interest payments on its variable rate debt. As of March 31, 2020, the Company has entered into interest rate swap contracts to fix the LIBOR rate on a notional amount of $100.0 million through May 31, 2024. The average fixed LIBOR rate on the interest rate swaps as of March 31, 2020 was approximately 0.82%. This agreement involves the receipt of floating rate amounts in exchange for fixed rate interest payments over the life of the agreement without an exchange of the underlying principal amount. Please refer to Note 10, “Derivative Instruments”, for further details on the interest rate swaps.

**Item 4. Controls and Procedures**

**Disclosure Controls and Procedures**

The Company’s management, with the participation of the Company’s Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), its principal executive officer and principal financial officer, respectively, has evaluated the effectiveness of the Company’s disclosure controls and procedures as defined in Rule 13a-15(e) and 15d-15(e) of the Exchange Act. Based on that evaluation, the Company’s CEO and CFO concluded that the Company’s disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) were effective as of the period covered by this report.

**Changes in Internal Controls Over Financial Reporting**

There were no changes in our internal control over financial reporting during the quarter ended March 31, 2020 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. As a result of the COVID-19 pandemic, certain employees began working remotely in March. Notwithstanding these changes to the working environment, we have not identified any material changes in our internal control over financial reporting. We are continually monitoring and assessing the COVID-19 situation to determine any potential impact on the design and operating effectiveness of our internal controls over financial reporting.

## PART II. OTHER INFORMATION

### Item 1. Legal Proceedings

From time to time, we are a party to various legal proceedings arising in the ordinary course of business. In addition, we have in the past been, and may in the future be, subject to investigations by governmental and regulatory authorities which expose us to greater risks associated with litigation, regulatory or other proceedings, as a result of which we could be required to pay significant fines or penalties. The costs and outcome of litigation, regulatory or other proceedings cannot be predicted with certainty, and some lawsuits, claims, actions or proceedings may be disposed of unfavorably to us and could have a material adverse effect on our results of operations or financial condition. In addition, intellectual property disputes often have a risk of injunctive relief which, if imposed against us, could materially and adversely affect our financial condition or results of operations.

As of March 31, 2020 , we had no material ongoing litigation in which we were a party. In addition, we had no material ongoing regulatory or other proceedings and no knowledge of any investigations by government or regulatory authorities in which we are a target, in either case that we believe could have a material and adverse effect on our current business.

### Item 1A. Risk Factors

There have been no material changes to the risk factors set forth in our Annual Report on Form 10-K for the year ended December 31, 2019, except as set forth below:

***The COVID-19 pandemic could have a material impact on our business, results of operation and financial condition, operating results, cash flows and prospects.***

In December 2019, a novel strain of coronavirus (COVID-19) emerged in Wuhan China. Less than four months later, in March 2020, the World Health Organization declared COVID-19 a pandemic. While the outbreak initially was largely concentrated in China and caused significant disruptions in its economy, the virus has now spread to many other countries and regions, and every state within the United States, including Massachusetts, where our primary offices and manufacturing facility are located.

Towards the end of the first quarter of 2020 we began to experience, and through the date of this filing we are continuing to experience, impacts to our business and operations related to the COVID-19 pandemic, including the impact of stay-at-home mandates and related safety measures such as the delay of elective medical procedures, resulting in a decline in the volume of procedures using our products. In response to the pandemic, healthcare providers have, and may need to further, reallocate resources, such as physicians, staff and facilities, as they prioritize limited resources and personnel capacity to focus on the treatment of patients with COVID-19 and implement limitations on access to hospitals and other medical institutions due to concerns about the potential spread of COVID-19 in such settings. These actions have significantly delayed the provision of other medical care including elective and diagnostic procedures involving our products, having an adverse effect on our revenue. These measures and challenges may continue for the duration of the COVID-19 pandemic, and such duration is uncertain, and may significantly reduce our revenue and cash flows while the pandemic continues and thereafter until we and our customers are able to resume normal business operations. We anticipate that in the second quarter of 2020, the impact of the COVID-19 pandemic on our business will be more significant than we experienced in the first quarter as pandemic precautions continue to limit demand for our products. We cannot predict the magnitude or duration of the pandemic’s impact on our business.

In connection with the COVID-19 pandemic, the following risks could have a material effect on our business, financial condition, results of operations and prospects:

- The delay or cancellation by hospitals and clinics of the elective procedures in which our products are used as a result of their COVID-19 response efforts and the duration of such effects, thereby reducing sales of our products for an unknown period of time;
- The inability or unwillingness of some patients to visit hospitals or clinics in order to undergo elective procedures in which our products are used, thereby reducing sales of our products for an unknown period of time;
- The inability of some patients to pay for elective procedures and/or the co-pay associated with those procedures in which our products are used due to job loss or lack of insurance, thereby reducing sales of our products for an unknown period of time;
- The inability of our distributors, radiopharmacy customers, hospitals, clinics and other customers to conduct their normal operations, including supplying or conducting procedures in which our products are used, because of their COVID-19 response efforts, or the reduced capacity or productivity of their employees and contractors as a result of possible illness, quarantine or other inability to work, thereby reducing sales of our products for an unknown period of time;

- The reduction in pulmonary ventilation studies in which our Xenon-133 gas is used because of institutional concerns about a hospital's ability to adequately decontaminate equipment used to administer those studies during the COVID-19 pandemic, thereby reducing Xenon-133 sales for an unknown period of time;

- The inability of global suppliers of raw materials or components used in the manufacture of our products, or contract manufacturers of our products, to supply and/or transport those raw materials, components and products to us in a timely and cost effective manner due to shutdowns, interruptions or delays, limiting and precluding the production of our finished products, impacting our ability to supply customers, reducing our sales, increasing our costs of goods sold, and reducing our absorption of overhead;

- The partial or complete delay or cancellation of international or domestic flights by our airfreight carriers, resulting in our inability to receive raw materials, components and products from our global suppliers or to ship and deliver our finished products to our domestic and international customers in a timely or cost effective manner, thereby potentially increasing our freight costs as we seek alternate, potentially more expensive, methods to ship raw materials, components or products, and negatively impacting our sales;

- The reduced capacity or productivity of our complex, on-campus operations as a result of possible illness, quarantine or other inability of our employees and contractors to work, despite all of the preventative measures we continue to undertake to protect the health and safety of our workforce;

- The illiquidity or insolvency of our suppliers, contract manufacturers and freight carriers whose business activities could be shut down, interrupted or delayed;

- The illiquidity or insolvency of our distributors and customers, or their inability to pay our invoices in full or in a timely manner, due to the reduction in their revenues caused by the cancellation or delay of procedures and other factors, which could potentially reduce our cash flow, reduce our liquidity and increase our bad debt reserves;

- A portion of our raw materials or finished product inventory may expire due to reduced demand for our drugs;

- Delays in our ability, and the ability of our development partners to conduct, enroll and complete clinical development programs such as the flurpiridaz F 18 Phase 3 clinical development program currently being conducted by GE Healthcare;

- Delays of regulatory reviews and approvals, including with respect to our product candidates, by the FDA or other health or regulatory authorities;

- Decreased sales of those of our products that are promotionally sensitive, like DEFINITY, due to the reduction of in-person sales and marketing activities and training caused by travel restrictions, quarantines, other similar social distancing measures and more restrictive hospital access policies;

- Our ability to maintain employee morale and motivate and retain management personnel and other key employees as a result of our recent work week and salary reductions;

- A disruption or delay in regulatory approval for, and operation of, our new, on-campus manufacturing facility, which would delay implementation of our supply diversification strategy for certain of our key products and impact our ability to benefit from a lower cost of goods for those products;

- A reduction in revenue with continued incurrence of high fixed costs relating to our already-existing, complex and expensive nuclear manufacturing facility could adversely affect our cash flows, liquidity and ability to comply with the financial covenants in our 2019 Facility, and there can be no assurance that any required waiver or consent related to any such failure to comply would be granted by our current lenders;

- A delay in the stockholder approval and consummation of our acquisition of Progenics and the delay in achieving, or inability to achieve, successful integration of the two companies, or the synergies, cost savings, innovation and other anticipated benefits of the acquisition due to impact of the COVID-19 pandemic on the operations, financial condition and prospects of our Company and Progenics;

- The instability to worldwide economies, financial markets, social institutions, labor markets and the healthcare systems as a result of the COVID-19 pandemic, which could result in an economic downturn that could adversely impact our

business, results of operations and financial condition, as well as that of our suppliers, distributors, customers or other business partners, including Progenics; and

- A recurrence of the COVID-19 pandemic after social distancing and other similar measures have been relaxed.

The extent to which the COVID-19 pandemic impacts our business and our results of operations and financial condition will depend on future developments that are highly uncertain and cannot be predicted, including new information that may emerge in connection with the severity of the virus, the ability to treat and ultimately prevent it, its potential recurrence, and actions that may be taken to contain its impact.

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

**Repurchases**

The following table presents information with respect to purchases of common stock we made during the quarter ended March 31, 2020 . The Company does not currently have a share repurchase program in effect. The 2015 Equity Incentive Plan, adopted by the Company on June 24, 2015, as amended on April 26, 2016 and as further amended on April 27, 2017 and April 24, 2019 (the "2015 Plan"), provides for the withholding of shares to satisfy minimum statutory tax withholding obligations. It does not specify a maximum number of shares that can be withheld for this purpose. The shares of common stock withheld to satisfy minimum tax withholding obligations may be deemed to be "issuer purchases" of shares that are required to be disclosed pursuant to this Item 2. These shares are then sold in compliance with Rule 10b5-1 into the market to allow the Company to satisfy the tax withholding requirements in cash.

| Period | Total Number of Shares Purchased | Average Price Paid per Share | Total Number of Shares Purchased as Part of Publicly Announced Programs | Approximate Dollar Value of Shares that May Yet Be Purchased Under the Program |
|---|---|---|---|---|
| January 2020** | — | $ — | * | * |
| February 2020** | 72,520 | $ 16.16 | * | * |
| March 2020** | 24,914 | $ 15.04 | * | * |
| Total | 97,434 | | * | |

* These amounts are not applicable as the Company does not have a share repurchase program in effect.

** Reflects shares withheld to satisfy minimum statutory tax withholding amounts due from employees related to the receipt of stock which resulted from the exercise or vesting of equity awards.

**Dividend Policy**

We did not declare or pay any dividends, and we do not currently intend to pay dividends in the foreseeable future. We currently expect to retain future earnings, if any, for the foreseeable future, to finance the growth and development of our business and to repay indebtedness. Our ability to pay dividends is restricted by our financing arrangements. See Part I, Item 2. "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-External Sources of Liquidity" for further information.

**Item 3. Defaults Upon Senior Securities**

None.

**Item 4. Mine Safety Disclosures**

Not applicable.

**Item 5. Other Information**

None.

**Item 6. Exhibits**

| EXHIBIT NUMBER | DESCRIPTION OF EXHIBITS | INCORPORATED BY REFERENCE | | | |
|---|---|---|---|---|---|
| | | FORM | FILE NUMBER | EXHIBIT | FILING DATE |
| 2.1 | Amended and Restated Agreement and Plan of Merger, dated as of February 20, 2020, among Lantheus Holdings, Inc., Plato Merger Sub, Inc. and Progenics Pharmaceuticals, Inc. | 8-K | 001-36569 | 2.1 | 2/20/2020 |
| 10.1 | Form of Contingent Value Rights Agreement | 8-K | 001-36569 | 10.1 | 2/20/2020 |
| 10.2 | Bridge Loan Agreement, dated as of March 15, 2020, among Lantheus Medical Imaging, Inc. and Progenics Pharmaceuticals, Inc. | S-4/A | 333-234627 | 10.2 | 3/16/2020 |
| 31.1* | Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a). | | | | |
| 31.2* | Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a). | | | | |
| 32.1** | Certification pursuant to 18 U.S.C. Section 1350. | | | | |
| 101.INS* | Inline XBRL Instance Document | | | | |
| 101.SCH* | Inline XBRL Taxonomy Extension Schema Document | | | | |
| 101.CAL* | Inline XBRL Taxonomy Extension Calculation Linkbase Document | | | | |
| 101.DEF* | Inline XBRL Taxonomy Extension Definition Linkbase Document | | | | |
| 101.LAB* | Inline XBRL Taxonomy Extension Label Linkbase Document | | | | |
| 101.PRE* | Inline XBRL Taxonomy Extension Presentation Linkbase Document | | | | |
| 104* | Cover Page Interactive Data File (embedded within the Inline XBRL document) | | | | |

* Filed herewith.
** Furnished herewith.
\+ Indicates management contract or compensatory plan or arrangement.

## SIGNATURES

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

LANTHEUS HOLDINGS, INC.

| | |
|---|---|
| By: | /s/ MARY ANNE HEINO |
| Name: | Mary Anne Heino |
| Title: | *President and Chief Executive Officer (Principal Executive Officer)* |
| Date: | April 30, 2020 |

LANTHEUS HOLDINGS, INC.

| | |
|---|---|
| By: | /s/ ROBERT J. MARSHALL, JR. |
| Name: | Robert J. Marshall, Jr. |
| Title: | *Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)* |
| Date: | April 30, 2020 |

**Exhibit 31.1**

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Mary Anne Heino, certify that:

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

Date: April 30, 2020

/s/ MARY ANNE HEINO

Name: Mary Anne Heino

Title: *President and Chief Executive Officer*

*(Principal Executive Officer)*

**Exhibit 31.2**

**CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Robert J. Marshall, Jr., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lantheus Holdings, Inc.;

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

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

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

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

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

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

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

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

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

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

Date: April 30, 2020

/s/ ROBERT J. MARSHALL, JR.

Name: Robert J. Marshall, Jr.

Title: *Chief Financial Officer and Treasurer*

*(Principal Financial Officer and Principal Accounting Officer)*

**Exhibit 32.1**

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

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, Mary Anne Heino, the Chief Executive Officer, and Robert J. Marshall, Jr., the Chief Financial Officer, of Lantheus Holdings, Inc. (the "Company"), hereby certify, that, to their knowledge:

1. The Quarterly Report on Form 10-Q for the period ended March 31, 2020 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

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

Date: April 30, 2020

/s/ MARY ANNE HEINO

Name: Mary Anne Heino
Title: *President and Chief Executive Officer*
*(Principal Executive Officer)*

Date: April 30, 2020

/s/ ROBERT J. MARSHALL, JR.

Name: Robert J. Marshall, Jr.
Title: *Chief Financial Officer and Treasurer*
*(Principal Financial Officer and Principal Accounting Officer)*

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.