

Lantheus Holdings, Inc.  
Form S-1MEF  
June 24, 2015

As filed with the Securities and Exchange Commission on June 24, 2015

Registration No. 333-

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

**FORM S-1**  
**REGISTRATION STATEMENT UNDER THE**  
**SECURITIES ACT OF 1933**

**Lantheus Holdings, Inc.**

(Exact name of registrant as specified in its charter)

<b>Delaware</b> (State or Other Jurisdiction of Incorporation or Organization)	<b>2835</b> (Primary Standard Industrial Classification Code Number) <b>331 Treble Cove Road</b>	<b>35-2318913</b> (IRS Employer Identification No.)
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**North Billerica, Massachusetts 01862**

**(978) 671-8001**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Michael P. Duffy**

**Vice President, General Counsel and Secretary**

**331 Treble Cove Road, Building 600-2**

North Billerica, Massachusetts 01862

(978) 671-8408

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

**Heather L. Emmel, Esq.**  
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**New York, New York 10153**  
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**New York, New York 10022**  
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, or the Securities Act, check the following box. "

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. x **File No. 333-196998**

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

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

Large accelerated filer "      Accelerated filer "      Non-accelerated filer x      Smaller reporting company "

(Do not check if a

smaller reporting company)

**CALCULATION OF REGISTRATION FEE**

<b>Title of Each Class of Securities to be Registered</b>	<b>Amount to be Registered</b>	<b>Proposed Maximum Offering Price Per Share</b>	<b>Proposed Maximum Aggregate Offering Price</b>	<b>Amount of Registration Fee</b>
Common Stock, par value \$0.01 per share	3,177,631(1)	\$6.00(2)	\$19,065,786	\$2,215.44

(1) This amount is in addition to the 9,078,946 shares of common stock registered under the Registrant's registration statement originally declared effective on June 24, 2015 (File No. 333-196998) and includes shares to be sold upon exercise of the underwriters' option to purchase additional shares.

(2) Based on the public offering price.

**This registration statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) under the Securities Act of 1933, as amended.**

**EXPLANATORY NOTE**

This registration statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This registration statement relates to the registrant's prior registration statement on Form S-1 (Registration No. 333-196998), originally filed on June 16, 2015, as amended (together with its exhibits the Prior Registration Statement ), which was declared effective on June 24, 2015. The Prior Registration Statement is incorporated by reference herein.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of North Billerica, Commonwealth of Massachusetts, on June 24, 2015.

**LANTHEUS HOLDINGS, INC.**

By: /s/ Michael P. Duffy

Name: Michael P. Duffy

Title: Vice President, General Counsel and Secretary

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on June 24, 2015.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
*	President, Chief Executive Officer and Director	June 24, 2015
Jeffrey Bailey	(Principal Executive Officer)	
*	Chief Financial Officer	June 24, 2015
John K. Bakewell	(Principal Financial Officer)	
*	Vice President, Finance	June 24, 2015
Jack Crowley	(Principal Accounting Officer)	
*	Chairman of the Board of Directors	June 24, 2015
Brian Markison		
*	Director	June 24, 2015
David Burgstahler		
*	Director	June 24, 2015
Samuel Leno		
*	Director	June 24, 2015
Patrick O Neill		

\*

Director

June 24, 2015

Sriram Venkataraman

\*By: /s/ Michael P. Duffy  
Michael P. Duffy

Attorney-in-Fact

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Description of Exhibits</b>
5.1	Opinion of Weil, Gotshal & Manges LLP.
23.1*	Consent of Independent Registered Public Accounting Firm, Deloitte & Touche LLP.
23.2	Consent of Weil, Gotshal & Manges LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page to the Prior Registration Statement and incorporated herein by reference).

\* Filed herewith