

Michael P. Duffy
Lantheus MI Holdings, Inc.
May 7, 2014
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Via E-mail

Michael P. Duffy
Vice President, General Counsel and Secretary
331 Treble Cove Road, Building 600-2
North Billerica, Massachusetts 01862

**Re: Lantheus MI Holdings, Inc.
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted April 29, 2014
CIK No. 0001521036**

Dear Mr. Duffy:

We have reviewed your amended draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Summary Consolidated Financial and Other Data, page 14
Capitalization, page 51

1. We note that you have removed the pro forma columns and include only an as adjusted column. Please revise to reinstate the previous columns to give effect to the corporate reorganization and the sale of shares in the offering separately or explain to us the basis for your presentation.

Dilution, page 52

2. We acknowledge your revisions in response to prior comment 13. Since your net tangible book value gives effect to your corporate reorganization we believe those amounts should be labeled pro forma and the amounts after the offering should be labeled pro forma as adjusted. Please revise or explain to us the basis for your presentation.

Quantitative and Qualitative Disclosures About Market Risk, page 82

3. We note your revised disclosure in response to prior comment 16. It appears that you have described your foreign currency risk in general terms. Please expand your disclosure to discuss which foreign currencies present the primary risk of loss as required by Rule 305(b)(i) of Regulation S-K. Also, discuss any changes in either your primary market risk exposures in the current year or how you managed these exposures compared to the conditions existing in the prior year, and any known trends expected in the future. See Rule 305(b)(iii) of Regulation S-K.

Consolidated Financial Statements

Notes to Consolidated Financial Statements

2. Summary of Significant Accounting Policies

Revenue Recognition, page F-9

4. Based on your response to prior comment 24 it appears that the amendment to the Agreement contained specific pricing for the same product to be shipped in stages during the term of the Agreement. Also, your response and example journal entries show you recorded accounts receivable based on the specific unit price. It is not clear to us why revenue recorded upon shipment was based on the average selling price per unit and not the specific unit price. Please explain to us why the specific unit price was not recognized as revenue and your basis for deferring revenue using an average selling price.

General

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

You may contact Donald Abbott at (202) 551-3608 or Andrew Mew at (202) 551-3377 if you have questions regarding comments on the financial statements and related matters. Please contact Christina De Rosa at (202) 551-3577, John Krug at (202) 551-3862 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Heather Emmel
Weil, Gotshal & Manges LLP
767 Fifth Avenue
New York, NY 10153