



DIVISION OF  
CORPORATION FINANCE

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

May 31, 2012

Via E-mail

Mr. Robert S. Brown  
Senior Vice President and Chief Financial Officer  
NxStage Medical, Inc.  
439 S. Union Street, 5<sup>th</sup> Floor  
Lawrence, MA 01843

**Re: NxStage Medical, Inc.  
Form 10-K for the fiscal year ended December 31, 2011  
Filed February 29, 2012  
File No. 000-51567**

Dear Mr. Brown:

We have reviewed your filing 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 within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year ended December 31, 2011

Item 8. Financial Statements

Consolidated Statements of Operations, page 80

1. Please tell us how you considered Rule 5-03(1) of Regulation S-X with respect to separately stating revenues earned from the sale of your product from the revenues earned from the rental of your product.

Note 2. Summary of Significant Accounting Policies, Property and Equipment and Field Equipment, page 86

2. You disclose on page 64 that you changed the useful life of certain assets from five to seven years. Please tell us in more detail the nature of these assets and how you made the determination of their expected useful lives under ASC 360-10-35-3 through 35-4. Quantify the impact of the change in estimate and your consideration of the disclosures related to changes in estimates in ASC 250-10-50.

Note 4. Property and Equipment, Field Equipment and Deferred Cost of Revenues, page 90

3. Please tell us the significant terms of the Dialyzer Production Agreement. Explain how you considered those terms in determining how to account for the agreement, including how you will amortize and classify the amortization of the asset and liability related to the construction of a new manufacturing facility in Germany. Provide a sufficiently detailed explanation that cites the accounting literature applied and explains how you applied that literature to your facts and circumstances. Provide us with your estimate of the total costs for the facility as a basis for understanding the significance of the project.
4. In your response, please explain how Asahi is reimbursed under the terms of the agreement for the costs of the construction. For example, explain whether you are required to pay rent. Please also include a discussion of the conditions under which you would be required to either pay Asahi for all amounts expended for the new facility or purchase the new facility from them. Explain why the purchase price is based upon net book value.

Note 9. Business Segment and Geographic Information, page 93

5. Please tell us whether you include depreciation and amortization expense in the measure of your segment profit or loss and how you considered ASC 280-10-05-22 in determining whether to disclose depreciation and amortization expense for each reportable segment.
6. Please tell us why you have not separately reported revenues from external customers attributed to the U.S. and foreign countries under ASC 280-10-50-41.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

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In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have any questions regarding these comments. In this regard, do not hesitate to contact me at (202) 551-3671.

Sincerely,

/s/ Kate Tillan for

Martin James  
Senior Assistant Chief Accountant