



DIVISION OF
CORPORATION FINANCE

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

August 27, 2014

Via E-mail

Marc Hedrick
President & Chief Executive Officer
Cytori Therapeutics, Inc.
3020 Callan Road
San Diego, CA 92121

**Re: Cytori Therapeutics, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2013
Filed March 14, 2014
Form 10-Q for the Quarterly Period Ended June 30, 2014
Filed August 11, 2014
File No. 001-34375**

Dear Mr. Hedrick:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In 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, 2013

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Critical Accounting Policies and Significant Estimates, page 37

1. We see that you reference the consolidated financial statements for a discussion of your critical accounting policies and significant estimates. Please note that the accounting policy notes in the financial statements should generally describe the method you use to apply an accounting principle; whereas the discussion in

MD&A should present your analysis of the uncertainties involved in applying a principle at a given time or the variability that is reasonably likely to result from its application over time. In future filings please include an analysis, to the extent material, of factors such as how you arrived at critical estimates, how accurate the estimate/assumption has been in the past, how much the estimate/assumption has changed in the past, and whether the estimate/assumption is reasonably likely to change in the future. Refer to FR-72.

2. As a related matter, we note that accounts receivable “reserves” increased from \$278,000 at December 31, 2012 to \$1,445,000 at December 31, 2013. Please tell us the underlying reasons for material changes in allowances for doubtful accounts. Please also discuss whether there was any change in policy or estimate for determining delinquent accounts. Tell us how you considered the disclosures required by Item 303(a) of Regulation S-K.

Item 8. Financial Statements

Note 4. Transactions with Olympus Corporation, page 54

3. Please explain to us why you have not recognized any revenue or earnings from the joint venture subsequent to the date of the acquisition.

Note 11. Long-term Obligations, page 61

4. Please explain to us how you analyzed FASB ASC 470-50-40 in determining that the amendment of the loans with continuing lenders qualified as a debt modification.

Form 10-Q for the Quarterly Period Ended June 30, 2014

Item 1. Financial Statements

Note 5. Partnership Agreement with Lorem Vascular, page 8

5. Please explain to us how you are accounting for the partnership with Lorem Vascular. In addition, please explain the revenue recognition policy for the \$500 million in license fees in the form of revenue milestones and the gross profit percentages.

Note 7. Revenue Recognition, page 9

6. We note that you revised your revenue recognition policy to add the following:

We recognize revenue for sales to new customers as cash is received as the risk of non-payment results in the conclusion that collection is not reasonably assured.

On page 18, you disclose that revenues decreased due to several factors, including your new revenue recognition policy in 2014 for new customers. Please respond to the following:

- Tell us why you changed your revenue recognition policy. Explain in sufficient detail both your old and new revenue recognition policies.
- Explain why the policy only applies to new customers. In this regard, discuss the extent to which your sales agreements with the new customers are different than your prior agreements.
- Discuss your basis under U.S. GAAP for both your old and new revenue recognition policies.
- Explain how you considered this change in accounting policy under FASB ASC 250-10 and the related required disclosures, as well as the need to provide Exhibit 18. Refer to Item 601(b)(18) of Regulation S-K.
- As we note that deferred revenues have not changed since December 31, 2013, please tell us how the new policy resulted in decreased revenues. Explain how you record sales under your new policies.

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

Results of Operations, page 18

7. We see that you attribute the decline in product revenues to the “product mix,” “anticipated timing associated with larger system related sales” and the “new revenue recognition policy in 2014 for new customers.” In future filings please quantify the impact of each significant item that impacts the comparability of revenues. In addition, to the extent that you reference product mix, please provide an indication of the composition of revenue for each period so that investors can understand how product mix shifted and contributed to the fluctuation in revenues.

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.

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;

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- 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 Kristin Lochhead, Senior Accountant, at (202) 551-3664 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. Please contact me at (202) 551-3671 with any other questions.

Sincerely,

/s/ Kate Tillan for

Martin James
Senior Assistant Chief Accountant