



September 19, 2014

Via Edgarlink and Facsimile

Mr. Martin James
Senior Assistant Chief Accountant
Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, DC 20549

RE: Cytori Therapeutics, Inc. ("Cytori")
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. James:

This letter responds to the comments contained in your letter dated August 27, 2014, regarding our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the period ended June 30, 2014.

For your convenience, we have repeated each of your comments and set forth our response immediately after each comment. None of our responses below should be interpreted as an admission of any deficiency with respect to our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the period ended June 30, 2014.

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.

Cytori response: In future filings, we will include an analysis of factors used in arriving at our critical estimates, as well as factors causing a significant change in an estimate to the extent possible and to the extent that such factors are material in nature. We will also address material changes in critical estimates period over period, and the likelihood of future changes in such estimates.

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.

Cytori response: The increase in reserves is due to aging of multiple accounts throughout 2013 for which an allowance was deemed necessary following our accounting policy. For each sale, in addition to application of the other relevant revenue recognition criteria, we performed a collectability assessment in order to conclude whether or not collectability was reasonably assured at the time of sale. This assessment consists of a combination, as available, of credit reporting agency data, third party queries, analysis of financial statements, and an understanding of the nature and business history of the customer (for example, is the customer a large research hospital or a small clinic). For each of the sales below, we determined that collectability was reasonably assured in accordance with U.S. generally accepted accounting principles at the time of the transaction.

Our policies for determining the allowances for doubtful accounts have not changed and have been applied consistently. More specifically, we reserved against the material accounts discussed below, which reflect our ongoing process of communication with the customers subsequent to the sale and the incorporation of changes to our estimates as new information became available throughout 2013.

Specifically, we identified three material customers which we had determined collectability was reasonable assured at the outset of the transaction and based on subsequent information received throughout 2013, we determined an allowance on their receivables was warranted. One customer was in Europe, and the other two were in Japan:

- A. The European customer purchased a StemSource Cell Bank in the fourth quarter of 2012. We recorded revenue in 2012 in accordance with our revenue recognition policy. During 2013, the customer indicated to us that they were changing their “fiscal domiciliation” from Switzerland to Portugal. During this process the Swiss authorities invoked a “Right of Retention” on the customer’s cash funds while they reviewed their tax and legal standing. During 2013, we received periodic updates, but in each case there was a delay in the expected payment. The increasing age of the receivable and the recurring “theme” of delay caused us to evaluate the likelihood of collection each quarter and to record an appropriate reserve. At December 31, 2013, we had recorded approximately \$335,000 of reserve against the receivable of \$551,000.
- B. A Japanese customer purchased a Celution device and related consumable products and we recorded revenue in 2012 in accordance with our revenue recognition policy. Later in 2013, this customer, a hospital, encountered multiple obstacles that effectively put payment to Cytori in jeopardy. This included a change in ownership at the hospital, and with that change came a reassessment of existing vendors and budgets. In addition, the plastic surgeon that was to manage the use of the Celution technology at the facility left the hospital. The hospital eventually entered into a restructuring event with the City of Kyoto. As a result of these events, which occurred subsequent to the date of sale, and the age of the receivable, we recorded approximately \$259,000 of reserve against the receivable of \$394,000 at December 31, 2013.
- C. A second Japanese customer (a distributor) purchased Celution devices and we recognized revenue in the 1st quarter of 2013 in accordance with our revenue recognition policy. The distribution agreement with the customer included terms and conditions such that rights, title, and interest in purchased products passed on delivery to the distributor. In addition, no rights of return or payment contingencies were contemplated in the agreement. As such, payment was due 60 days after delivery of the product to the distributor. Continuing dialogue with customer subsequent to the sale, the evolution of the Japanese regenerative medicine law further discussed in #6 below, and the aging of the receivable caused us to evaluate the likelihood of collection each quarter. Accordingly, at December 31, 2013, we had recorded approximately \$319,000 of reserve against the receivable of \$499,000.

Item 303(a) of Regulation S-K covers the discussion of financial condition and results of operations. Item 303(a)(1) and Item 303(a)(3) are most relevant to our analysis of doubtful accounts. We believe the liquidity of the company is not affected in a material way based on our revenue recognition policies or our expectations for timing of cash receipts from sales, as we are still a biotech company in the early phases of commercialization. As further described in Footnote 1, “Capital Availability,” our commercial activities are not yet profitable, and our liquidity is driven primarily by equity, debt, and licensing opportunities. Item 303(a)(3) refers to disclosures surrounding results of operations and we do not believe that the collectability issues we faced in 2013 represent a negative trend or significant unusual event relative to our operating loss of \$30.7 million.

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.

Cytori response: The joint venture between Olympus Corporation and the Company was formed to develop and manufacture future generation devices (based on the Company's existing Celution® System) that would process and purify adult stem and regenerative cells residing in adipose (fat) tissue. The alliance was intended to create synergies between two companies that share the same vision for regenerative medicine. Revenues and earnings from the joint venture were limited to royalties from sales of certain Cytori products, therefore, subsequent to the date of acquisition of the remaining 50% equity interest in the joint venture by Cytori, there were no revenues and earnings generated by the joint venture.

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.

Cytori response: The Company utilized the accounting framework under FASB ASC 470-50-40, *Debt Modification or Extinguishment*, to determine the accounting for the loan agreement (the "2013 Loan Agreement") entered with Oxford Finance LLC and Silicon Valley Bank (the "Lenders"). The Company considered whether the 2013 Loan Agreement should be accounted for as an extinguishment or a modification of a prior loan agreement between the Company and Oxford Finance LLC, Silicon Valley Bank and General Electric Capital Corporation (the "2011 Loan Agreement").

In order to determine whether the 2013 Loan Agreement should be accounted for as an extinguishment or a modification, the Company evaluated whether there had been a substantial change to the present value of the cash flows in accordance with ASC 470-50-40-12, using the terms of the 2011 Loan Agreement and the terms of the 2013 Loan Agreement. Following the authoritative guidance, we analyzed each creditor under the syndicate individually, and determined that as General Electric Capital Corporation did not participate in the 2013 Loan Agreement, the payoff of their portion of the 2011 Loan Agreement should be accounted for as debt extinguishment.

For the continuing lenders, and in accordance with ASC 470-50-40-12, we calculated the change in the present value of cash flows under the 2013 Loan Agreement and the 2011 Loan Agreement. This analysis considered the Company's prepayment option, the prepayment fees, and other fees paid in connection with the refinancing. Additionally, the majority of the terms and conditions under the 2013 Loan Agreement and 2011 Loan Agreement remained consistent. As a result of this analysis, the change on a lender by lender basis in the present value of cash flows of the 2011 Loan Agreement as a result of the 2013 Loan Agreement was less than 10% for the continuing lenders. Therefore, the Company concluded that the amendment to the 2011 Loan Agreement for the continuing lenders did not result in a substantial change to the cash flows and should be accounted for as a 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.

Cytori response: For clarification purposes, we have not formed a legal entity where Cytori and Lorem Vascular share common interest. We refer to a partnership with Lorem Vascular, in their capacity as Licensee and customer under the License and Supply Agreement. Under the terms of the License and Supply Agreement, we expect to recognize product revenue to the extent all revenue recognition criteria are met in line with our revenue recognition accounting policy. In addition, we expect to record revenues on the license fees at the time specific revenue milestones are met. Lastly, we expect to record revenue on the 30% of gross profit of specified territories, at the time such gross profits are realized by Lorem Vascular. Through June 30, 2014, none of the revenue milestones or gross profit amounts in the specified territories have been achieved, and so we have not recorded any revenues related to these components.

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.***

Cytori response: We revised the timing of revenue recognition for certain customers due to our growing commercial experience internationally, which impacted our collectability assessment at the time of sale. In late 2012, we received a commercial operational license for our Japan subsidiary as well as a Class 1 Medical Device approval for our Celution technology. This approval allowed us to sell into a larger market in Japan. Also, during 2013, a new regenerative medicine law was enacted in Japan and although such law is not expected to become effective until later in 2014, it created significant uncertainty in the medical research and surgeon societies and provided downward pressure as the use and promotion of all regenerative cell therapies and technologies, including ours, and indirectly and negatively impacted the collectability of our Japanese receivables. The evolution of our customer base combined with the collection issues we were experiencing (refer to discussion in # 2 above) caused us to reevaluate the timing of revenue recognition for certain customers as a result of our collectability assessment. Accordingly, we determined that for customers that had not developed sufficient payment history with us and a letter of credit was not in place at the time of the transaction, considering all other revenue recognition criteria had been met, we would defer revenues until collectability was reasonably assured (e.g. cash was received).

- ***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.***

Cytori response: The reevaluation of the collectability criterion was a reaction to new information indicating heightened collection risk related to new customers. Our experience has indicated that existing customers with a history of payment according to agreed upon terms generally pose less collection risk. Our sales agreements have not changed materially from agreements we have used in the past.

- ***Discuss your basis under U.S. GAAP for both your old and new revenue recognition policies.***

Cytori response: We have not changed the core principles in which we recognize revenue. As indicated in footnote 7 to the June 30, 2014 Form 10-Q, "We recognize revenue when the following fundamental criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred, (iii) the price to the customer is fixed or determinable and (iv) collection of the resulting accounts receivable is reasonably assured." In response to the collectability issues we encountered related to new customers, the revised timing of revenue recognition reflects what we believe to be an appropriate collectability assessment under U.S. generally accepted accounting principles. The underlying principle as noted in FASB ASC 605 is that collectability must be reasonably assured. The criteria used to apply that criteria is subject to judgment and changes as facts, circumstances, and experiences change. Our decision to change the timing of revenue recognition for these customers represents application of judgment based on new information obtained.

- ***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.***

Cytori response: We do not believe that the revision of the timing of revenue recognition for certain customers constitutes a change in accounting principle, but merely a change in our assessment of collectability under FASB ASC 605 based on evolving facts and circumstances.

The underlying principle as noted in FASB ASC 605 is that collectability must be reasonably assured. The specific toolset, parameters and thresholds applied to determine that conclusion is subject to judgment and to changes in estimates as facts, circumstances, and experiences change. Our decision to delay the recognition of revenue for these customers is not a new principle; it is simply the application of judgment based on new information.

For the avoidance of doubt, in future filings, we will refer to this change as a change in the timing for revenue recognition and not a change in our revenue recognition policy.

- ***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.***

Cytori response: The deferred revenue of \$212,000 on our balance sheet is related primarily to prior cell bank transactions for which we have future obligations to perform. This balance is not affected by our revised revenue policy. Our revised policy may affect the timing of revenue for some customers. Based on the revised policy, we did not record approximately \$300,000 in shipments that occurred in the in the first quarter of 2014, and collection in the second quarter resulted in revenue recognition for these sales.

For sales to new customers or to those without a timely payment history, we record a contra-receivable amount equal to the revenue, so there is no net financial statement impact on either accounts receivable or revenue.

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.

Cytori response: In future filings, we will separately quantify the impact of factors causing a significant change in revenues to the extent that such factors are material in nature.

As requested in your comment letter dated August 27, 2014, Cytori hereby acknowledges that:

- Cytori 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
- Cytori 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.

If I can facilitate the Staff's review, or if the Staff has any questions on the information set forth herein, please telephone me at (858) 875-5203 or Tiago Girao at (858) 875-5211. Thank you for your time and consideration.

Sincerely,

/s/ Marc H. Hedrick

Marc H. Hedrick
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