



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

November 23, 2009

VIA U.S. MAIL AND FAX 603-886-3798

Ms. Darlene M. Deptula-Hicks
Executive Vice President of Finance and
Chief Financial Officer, Treasurer
iCAD, Inc.
98 Spitbrook Road, Suite 100
Nashua, New Hampshire 03062

Re: iCAD, Inc.
Form 10-K for the fiscal year ended December 31, 2008
Filed March 6, 2009
Schedule 14A filed May 4, 2009
File No. 001-09341

Dear Ms. Deptula-Hicks:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Schedule 14A filed May 4, 2009

Annual Incentive Bonus Compensation, page 19

1. We note that you have not disclosed the performance targets for the annual incentive bonus plan. Please confirm that you will disclose in future filings all performance targets that must be achieved in order for your executive officers to earn their incentive compensation. To the extent you believe that disclosure of the targets is not required because it would result in competitive harm such that the targets could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation for such conclusion. Please also note that to the extent that you have an appropriate basis for omitting the specific targets, you must discuss how difficult it would be for the named executive officers or how likely it will be for you to achieve the undisclosed target levels or other factors. General statements regarding the level of difficulty, or ease, associated with achieving performance goals either corporately or individually are not sufficient.

Form 10-K for the Fiscal Year Ended December 31, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 29

Critical Accounting Policies, page 30

Goodwill, page 32

2. We note that at December 31, 2008, the company's market capitalization fell below its carrying value. While we understand substantial value may arise from the ability to take advantage of synergies and other benefits that flow from control over entity, it is not clear to us how you estimated the fair value of your reporting unit. Please tell us and disclose in future filings the following:
 - Description of how the key assumptions were determined;
 - Discussion of the degree of uncertainty associated with the key assumptions. Please be as specific as possible; and
 - Description of potential events and/or changes in circumstances that could reasonably be expected to negatively affect the key assumptions.

Financial Statements, page 56

Note (6) Income Taxes, page 85

3. We note that during 2008 you performed a formal review of your company's net operating loss carryforwards available from prior years and tax credits previously calculated and available from prior years, and made adjustments to both net operating loss carryforwards and tax credits. Please explain to us what you mean by "formal" review and how this review was different from prior years. Please tell us and disclose in future filings the underlying causes of the adjustments. Tell us how you have treated these adjustments under U.S. GAAP and why. For example, discuss whether these adjustments represent the correction of errors. We note your disclosure that certain adjustments were required for net operating losses previously presented.
4. We note that in July 2007 you received a tax re-assessment of approximately \$6,800,000 from the Canada Revenue Agency ("CRA") resulting from CRA's audit of CADx Medical's Canadian federal tax return for the year ended December 31, 2002. Please tell us the current status of this matter, when the CRA received your correspondence and whether or not they scheduled a review of this matter. Please briefly explain the process for a review by the CRA and your rights to appeal the tax re-assessment. Please also tell us the nature of the re-assessment claim.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a 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

Ms. Darlene M. Deptula-Hicks
iCAD, Inc.
November 23, 2008
Page 4

- 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Andri Boerman at (202) 551-3645 or me at (202) 551-3604 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or Dan Morris at (202) 551-3314 if you have questions on other comments.

Sincerely,

Kate Tillan
Assistant Chief Accountant