



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 22, 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 letter dated December 10, 2009 and have the following comment. Where indicated, we think you should revise your future documents 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 our comment, 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 your response to our prior comment 1. However, your reason for not disclosing your performance targets remains unclear. If you believe disclosure of the targets is not required because it would result in competitive harm, please provide us with your analysis for your conclusion at this time, rather than in future filings.

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

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