



DIVISION OF
CORPORATION FINANCE

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

March 25, 2011

Linda B. Grable
Chief Executive Officer
Imaging Diagnostic Systems, Inc.
5307 NW 35th Terrace
Fort Lauderdale, Florida 33309

**Re: Imaging Diagnostic Systems, Inc.
Proxy Statement on Schedule 14A
Filed March 8, 2011
File No. 000-26028**

Dear Ms. Grable:

We have limited our review of your filing to those issues we have addressed in our 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 amending your filing, 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 or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

1. With your response to this letter, please provide the acknowledgements requested at the end of this letter.
2. To the extent applicable, please revise your disclosure to comply with our comment letter dated March 25, 2011 regarding your registration statement on Form S-1, file no. 333-171327.
3. Please tell us why this revised preliminary proxy statement was filed using EDGAR tag "PRE 14A" instead of "PRER14A."

4. We note your response to prior comment 2.
- Please clarify what you mean by your disclosure that the “review process will resume.” Do you mean that the FDA must complete its review within the balance of the 90 day period remaining at the time it requested additional information?
 - Given that it appears that more than 90 days have lapsed since your 510(k) application, please clarify why you did not receive a response within the 90-day period that you cite.
 - Please revise to clarify the basis for your statement that your expectation that the FDA will finish its review process in 2011 is reasonable given that you may be required to submit additional information to the FDA to support your application, the scope of which would be unknown.

Proposal 2, Increase in the Number of Authorized Shares..., page 26

5. We note your response to prior comment 6. Please revise to describe with more specificity the purpose for which you will use the proceeds to be received from the issuances of shares that have been reserved. It remains unclear how you determined the amount of additional funding you require given that you have now submitted to the FDA an application for marketing clearance.
6. Please expand your disclosure in response to the second sentence of prior comment 7 regarding each related person’s interest in the shares for which you are seeking authorization to identify each related person with an interest in the proposal, the number of newly authorized shares that each such related person could receive based on outstanding commitments, and the terms under which the related person could receive those shares.
7. We reissue the last sentence of prior comment 7. For outstanding commitments pursuant to which you could be obligated to issue shares in excess of the number of shares currently authorized, including any notes that you may become obligated to repay by issuing shares, please provide all disclosure regarding such commitment as if shareholders were being asked to approve the commitment; see Note A to Schedule 14A. You should disclose the material terms of each commitment to issue shares and the purpose and effect of the commitment.

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.

Linda B. Grable
Imaging Diagnostic Systems, Inc.
March 25, 2011
Page 3

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 Mary Beth Breslin at (202) 551-3625 or me at (202) 551-3617 with any questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (by facsimile): Robert B. Macauley, Esq. — Carlton Fields, P.A.