

Mail Stop 6010

October 16, 2008

Linda B. Grable  
Chief Executive Officer  
Imaging Diagnostic Systems, Inc.  
5307 NW 35<sup>th</sup> Terrace  
Fort Lauderdale, Florida 33039

**Re: Imaging Diagnostic Systems, Inc.  
Preliminary Proxy Statement on Schedule 14A  
Filed September 29, 2008  
File No. 0-26028**

Dear Ms. Grable:

We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Security Ownership of Certain Beneficial Owners and Management, page 7

1. If the initial \$400,000 debenture and warrants are currently convertible and exercisable, expand the table to include Whalehaven Capital Fund Limited as a beneficial owner.

Proposal 1 – Election of Directors, page 9

2. Please explain why it was a condition to financing of outside funding sources that your three remaining independent directors resign from your board of directors.

Proposal 2 - Increase in the Number of Authorized Shares of Common Stock, page 21

3. Expand the first paragraph to disclose, as of the most recent date practicable, the number of authorized shares of common stock reserved for issuance pursuant to other contractual commitments or arrangements. For example, we note that you registered 50 million shares for resale on behalf of Charlton related to your sixth private equity credit agreement, that you will issue warrants at the second closing that are exercisable into common stock, and that Whalehaven has an option to purchase an additional \$1.2 million debenture on substantially the same terms.
4. Tell us where you filed as an exhibit the agreement with Whalehaven of the option to purchase a \$1.2 million debenture on substantially the same terms.
5. Disclose in greater detail your prior relationship with Charlton, including the number of shares issued to Charlton over the years and the number that could be issued pursuant to the sixth private equity credit agreement with Charlton.

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

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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 Tom Jones at (202) 551-3602 or me at (202) 551-3800 if you have any questions.

Sincerely,

Peggy Fisher  
Assistant Director