

Mail Stop 6010

September 11, 2006

W. Bruce Comer, Chief Executive Officer  
Diametrics Medical, Inc.  
6245 Bristol Parkway #263  
Culver City, California

Via U S Mail and FAX [( 310 ) 670-4107 ]

**Re: Diametrics Medical, Inc.**  
**Form 10-KSB for the fiscal year ended December 31, 2005**  
**Forms 10-QSB for the quarter ended March 31 and June 30, 2006**  
**File No. 0-21982**

Dear Mr. Comer:

We have reviewed the information and proposed disclosures filed on August 18, 2006, and have the following additional comments. We have limited our review to only your financial statements and related disclosures and will make no further review of your documents. Where indicated, we think you should revise your documents in response to these comments in all future filings with the Commission. 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.

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**Form 10-KSB for fiscal year ended December 31, 2006**

Financial Statements

General

1. We note your response to our prior comment number 2. Please tell us how you comply with the requirements of Item 10(a)(2)(v) of Regulation S-B, which indicates that an issuer may not change from one category to another with respect to its reports under the Exchange Act for a single fiscal year.

**Form 10-QSB for June 30, 2006**

Note 5. Shareholders' Equity, page 11

2. We note that you refer to an independent, third party opinion on page 11. While you are not required to make reference to an independent valuation, when you do so, you must name the expert and file their written consent as an exhibit to any registration statement. See Item 601(b) of Regulation S-K.

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 response letter that keys your responses to our comments and provides the requested information. Confirm that you will comply with these comments in all future filings with the Commission. Detailed response letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments and the requested information.

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.

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You may contact Jeanne Bennett at (202) 551-3606, or me at (202) 551-3676, if you have questions regarding our comments. In our absence you may contact Martin F. James, Senior Assistant Chief Accountant at (202) 551-3671.

Sincerely,

Brian R. Cascio  
Accounting Branch Chief