

October 18, 2007

VIA U.S. MAIL AND FAX 972-3-608-6050

Shimon Yitzhaki  
President  
Elbit Medical Imaging Ltd.  
2 Weizman St.  
Tel-Aviv 64239  
ISRAEL

Re: Elbit Medical Imaging Ltd.  
File No. 000-28996  
Form 20-F for Fiscal Year Ended  
December 31, 2006

Dear Mr. Yitzhaki:

We have reviewed your response letter dated September 25, 2007 and have the following additional comments. If you disagree with our comments, we will consider your explanation as to why our comments are not applicable. Please be as detailed as necessary in your explanation.

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.

Form 20-F for the year ended December 31, 2006

Consolidated Financial Statements

Note 14 – Long-Term Liabilities

1. We have considered your response to our prior comment one. We are unclear how you have applied the guidance in paragraph 6(c) and paragraph 9 of SFAS 133 in arriving at the conclusion that the conversion feature embedded in your debt agreement does not meet the definition of a derivative. It appears that the delivery of Company stock to settle the conversion feature would provide the holder with an asset that can readily be settled net by a means outside the contract, or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement. Accordingly, as you have represented that the debt does not meet the definition “conventional convertible debt”, it would appear that you would be required to apply the guidance in paragraphs 12-32 of EITF 00-19 in determining whether you qualify for the scope exception under paragraph 11(a) of SFAS 133. Please provide us with your analysis of paragraphs 12-32 of EITF 00-19. In particular, tell us how you have applied the guidance in paragraph 20 of EITF 00-19 in determining that the conversion feature does not need to be bifurcated from the host instrument.

Note 25 – Material Differences Between Israeli GAAP and U.S. GAAP and their Effect of the Consolidated Financial Statements

B. The effect of the material differences between Israeli GAAP and U.S. GAAP on the Financial Statements

1. Statements of operations

2. We have considered your response to our prior comment 2. Explain to us your basis in U.S. GAAP for classifying and accounting for certain real estate assets as inventory. As it does not appear that you applied this accounting in prior years, tell us how you determined that the change in accounting policy did not represent a change in accounting principal or correction of an error in accordance with SFAS 154.

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Please respond to the comment included in this letter within ten business days. Please submit your response on EDGAR. If you have any questions, you may contact Robert Telewicz, Staff Accountant at (202) 551-3438, or the undersigned at (202)551-3629.

Sincerely,

Kevin Woody  
Accounting Branch Chief