

ELBIT MEDICAL IMAGING LTD  
Form 6-K  
September 21, 2007

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SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13A-16 OR 15D-16 OF  
THE SECURITIES EXCHANGE ACT OF 1934**

For the month of September, 2007

Commission File Number 000-28996

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**ELBIT MEDICAL IMAGING LTD.**  
(Translation of Registrant's Name into English)

**2 WEITZMAN STREET, TEL AVIV 64239, ISRAEL**  
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.  
Form 20-F  Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1):

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7):

Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.  
Yes  No

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-\_\_\_\_\_.

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EXPLANATORY NOTE

Attached are the following exhibits:

99.1 Press release, dated September 21, 2007.

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ELBIT MEDICAL IMAGING LTD.

(Registrant)

Date: September 21, 2007

By: /s/ Shimon Yitzhaki

Name: Shimon Yitzhaki

Title: President

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EXHIBIT INDEX

EXHIBIT NO.    DESCRIPTION

99.1            Press release, dated September 21, 2007.