



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

Mail Stop 3030

January 21, 2009

Via U.S. Mail

Ms. Elisha Finney  
Chief Financial Officer  
Varian Medical Systems, Inc.  
3100 Hansen Way  
Palo Alto, CA 94304

**Re: Varian Medical Systems, Inc.  
Form 10-K for the Year Ended September 26, 2008  
File No. 001-07598**

Dear Ms. Finney:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

Sincerely,

Kevin L. Vaughn  
Accounting Branch Chief