



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

Mail Stop 3030

February 16, 2010

Via U.S. Mail

Mr. Elisha W. 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 Fiscal Year Ended October 2, 2009
Filed November 25, 2009
File No. 001-07598

Dear Mr. 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