



DIVISION OF  
CORPORATION FINANCE  
Mail Stop 3030

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

December 28, 2009

Mr. Michael R. Kramer  
Chief Financial Officer  
ATS Medical Inc.  
3905 Annapolis Lane North  
Minneapolis, MN 55447

**Re:   ATS Medical Inc.**  
**Form 10-K for the fiscal year ended December 31, 2008**  
**File No. 000-18602**

Dear. Mr. Kramer:

We have completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Brian Cascio  
Accounting Branch Chief