



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4546

October 27, 2016

John Gandolfo  
Chief Financial Officer  
Xtant Medical Holdings, Inc.  
664 Cruiser Lane  
Belgrade, MT 59714

**Re: Xtant Medical Holdings, Inc.  
Amendment No. 4 to Registration Statement on Form S-1  
Filed October 21, 2016  
File No. 333-213350**

Dear Mr. Gandolfo:

We have reviewed your amended registration statement and have the following comment. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to the comment, we may have additional comments.

Prospectus Cover

1. We refer to your disclosure on page 3. Please revise the cover page to disclose the total number of subscription rights that you are distributing collectively to stockholders and noteholders in the offering.

John Gandolfo  
Xtant Medical Holdings, Inc.  
October 27, 2016  
Page 2

Please contact Dorrie Yale at 202-551-8776 or Joseph McCann at 202-551-6262 with any questions.

Sincerely,

/s/ Joseph McCann for

Suzanne Hayes  
Assistant Director  
Office of Insurance and Healthcare

cc: Travis J. Leach, Esq. — Ballard Spahr LLP