

June 3, 2016

VIA EDGAR

Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549

Re: Xtant Medical Holdings, Inc. Registration Statement on Form S-1 (File No. 333- 208677)

Ladies and Gentlemen:

Xtant Medical Holdings, Inc. (the "Company") hereby requests, pursuant to Rule 461 under the Securities Act of 1933, as amended, that the effectiveness of the above-referenced Registration Statement be accelerated to 5:00 p.m., Washington, D.C. time, on June 7, 2016, or as soon thereafter as practicable.

The Company acknowledges that:

- should the Securities and Exchange Commission (the "Commission") or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the Company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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Very truly yours,

Xtant Medical Holdings, Inc.

By: /s/ John P. Gandolfo
Name: John P. Gandolfo
Title: Chief Financial Officer

cc: James R. Tanenbaum, Esq.
Morrison & Foerster LLP
