Reviewer’s report

Title: Prediction of fracture load and stiffness of the proximal femur by CT-based specimen specific finite element analysis: cadaveric validation study

Version: 0 Date: 29 Aug 2017

Reviewer: Herbert Cooper

Reviewer's report:

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This is a very well-designed study, the results of which have been summarized well in this article. The scope of the article is somewhat specific and will appeal to a limited audience but lays important groundwork for future work to build in hip fracture research. While this kind of FEA has been done in the past, the authors have provided a better model that incorporates the use of modern technology to more accurately simulate loading in an osteoporotic proximal femur. This model should, upon publication, replace prior modeling efforts for this purpose.

The authors have done a fine job in designing the study and describing their results in a logical, thoughtful manner. I believe this should be accepted for publication and will be of value to the field of orthopedics and musculoskeletal medicine.

Discretionary suggestions for improvement:

(1) Line 69 - authors suggest a large number of studies but provide only four references

(2) Line 71 - change "will" to "may"

(3) Paragraph beginning on line 215 - authors could better characterize the correlations found in their study with those found in other studies in the peer-reviewed literature

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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