Reviewer's report

Title: Custom design of orthopedic implants based on patient specific Computed Tomography data evaluated using Finite Element Analysis - Case of Femoral Component

Version: 2 Date: 11 June 2007

Reviewer: Jia Hua

Reviewer's report:

I am satisfied with most of the replies from the authors except the answer to my previous comment (point 4) regarding the value of Young's modulus used for cancellous bone. I have read the paper (Jae et al, J Bioemchanics, 1993) which was referenced by the authors. In the paper, the Young modulus value of 10.4 GPa actually refers to trabecular bone material rather than apparent modulus. Since in this study the block FEA model was built based on patient's CT data rather than micro CT which refers more to actual trabecular material, the apparent Young modulus value of 0.4 GPa should be used.

I agree that this paper is focused more on the uniform stress distribution; however the information of actual stress level is also important to avoid readers being misled.

I suggest to use the results analysed using 0.4 GPa as the authors have already performed the FEA simulations.

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

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Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests