Reviewer’s report

Title: At the moment of occurrence of a fragility hip fracture men have higher trabecular bone mechanical resistance than women

Version: 1 Date: 10 November 2012

Reviewer: Joop van den Bergh

Reviewer’s report:

Major Compulsory Revisions

1. It is confusing that the authors use different ways of describing their results in the title (bone mechanical resistance), while they did not test resistance. I would suggest to use the mechanical definitions like ultimate stress, energy to failure throughout the manuscript.

Additionally, since the cortical parameters and anatomy of the hip (such as Hip axis length etc) were not evaluated the authors cannot conclude that fractures in men occur at higher energy levels.

2. The authors could write a more concise paper by replacing table 3 and 4 by reporting ultimate stress, young’s modulus and energy to failure in a figure versus age for men and women separately. The statistical outcome could then be reported in the text.

3. Although very interesting, figure 1b needs correction, since the pattern of the lines do not correspond to the legends (thin versus bold).

4. The paper needs language corrections before being published

Minor Essential Revisions

1. The meaning of line 4 and 5 on page 7 are not clear to me

2. Legend figure 1: what do the authors mean by: “Each curve was selected as the one that was closer to the median value corresponding to each group”?

3. Table 1: age; is (77-86) and (78-84) the age range? If so, why are the lower and upper boundaries different from the age range in table 2 (min 66 and max 93) while then number of patients is the same (n=73)?

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests