Reviewer's report

Title: Type 3 finger length pattern is associated with total knee replacements due to osteoarthritis but not with hip replacements or hand osteoarthritis in the elderly: The AGES-Reykjavik Study.

Version: 3 Date: 24 February 2013

Reviewer: Yuanyuan Wang

Reviewer's report:

The authors have addressed most of my previous comments. There are still some issues that need to be clarified.

Major Compulsory Revisions

1. Methods: Paragraph 3, it was stated that the assessment of finger length pattern was performed on both hands. Please clarify which data was used in analysis, the finger length pattern on the right hand or the left hand. What if one person had type 2 on one hand while type 3 on the other hand?

2. Methods – Statistics: Please specify which software was used.

3. Results: Paragraph 4 and 5, and Table 1 and 2, please provide p value for the comparison of the proportions of finger pattern between those with and without OA.

4. Results: Paragraph 7 and 8, please also present non-significant results. It would be better if the authors present these results in a table, with OR, 95% CI, and P value for all analyses.

5. Discussion: Paragraph 4, although knee OA may be associated with knee shape, there is increasing evidence suggesting that hip shape plays an important role in the pathogenesis of hip OA. This needs to be mentioned. The bone shape issue may not an explanation for the association seen for knee OA but not hip OA.

6. Discussion: Paragraph 7, the authors stated in the Results section (paragraph 2) that visual assessment of photographs had underestimated the prevalence of type 3 pattern, this may have resulted in misclassification of type 3 pattern and bias the results. Could the authors comment?

Minor Essential Revisions

1. Results: Paragraph 5, “There was also a higher prevalence of type 3 finger pattern in the population with TKR compared to the population without THR.” It should be “… without TKR”.

2. Results: please use decimal point “.” rather than “,” in decimals.
Level of interest: An article whose findings are important to those with closely related research interests

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.