Reviewer's report

Title: Empirical evaluation of the inter-relationship of articular elements in the pathogenesis of knee osteoarthritis using Magnetic Resonance Imaging

Version: 2 Date: 14 August 2009

Reviewer: Grace Lo

Reviewer's report:

The authors have been very responsive to the issues this reviewer has raised. However, there are a few points that merit further discussion.

Minor Essential Revisions:

With regard to my comment that the use of absolute scales is potentially problematic, it seems that the authors may not have understood the point I was making. The point is that a fixed size lesion may be more significant in a smaller sized person as compared to a larger sized person. Therefore a 3mm lesion in a 5 foot tall person may be significant while it may not be significant in a 6 foot tall person. The argument that no specific comparisons are made "across gender or heights" does not address this issue.

This is a small point that may be semantics, but the authors consistently use the term "pathogenesis" throughout this manuscript -- because this is just a cross-sectional study, it is not possible to assert "causation" of a disease. "Pathophysiology" may be a more precise and accurate term.

One final comment is that as mentioned by reviewer #2, the reliability should be reported for all the features -- not just for cartilage measures.

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.