Reviewer’s report

Title: Semiquantitative Assessment of Subchondral Bone Marrow Lesions of the Knee at 3T MRI: A Comparison between Intermediate-Weighted Fat-Suppressed Spin Echo and Double Echo Steady State Sequences

Version: 1 Date: 6 July 2011

Reviewer: John Fairclough

Reviewer’s report:

Bone Marrow Oedema is an area which is still in its infancy in terms of both its imaging and establishing the pathological histological processes to which it relates.

The paper has stated aim to compare two radiological image sequences.

The authors have also differentiated between two types of lesions cystic and non cystic and refer to the paper relating cysts to OA.

The difficulty for the reader is that the lack of clear definition of what the authors are defining 1) In their use of sub-regions and 2) in their grading system is unclear. The change is size of a cystic lesion between the methods needs to be explained and perhaps the use of the word "cystic" challenged.

The Figures used are incorrectly labelled and need clearer annotation.

One of the major findings of this study is that the Term Bone Marrow Oedema is in itself a catch all for a variety of changes which vary on different sequences and this is an area which should be highlighted in the discussion section.

There is also no comment on the state of the hyaline cartilage which would be helpful.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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