Reviewer's report

Title: Spondyloarthritis-related and degenerative MRI changes in the axial skeleton - an inter- and intra-observer agreement study

Version: 4 Date: 7 June 2013

Reviewer: Robert Lambert

Reviewer's report:

The authors have revised the manuscript as requested. It is written well and should be accepted subject to some revisions to the discussion:

Minor Essential Revisions

Page 13 – “The tendency of better reliability of the SpA-related findings in the SIJ compared to the spine could be explained by the historically increased focus on SpA-related MRI findings in the SIJ compared to the spine.”

This is neither logical nor true. The tendency of better reliability of the SpA-related findings in the SIJ compared to the spine - is almost certainly because SpA affects the SI joints in major ways which for the most part are easily distinguished from degeneration. Degenerative changes in the spine are extremely common and may be harder to distinguish from SpA in the spine on MRI. The higher SIJ reliability is not because ASAS has focused on the SIJ – ASAS has focused on the SI joint because of the higher reliability.

Page 13 – “It was only possible to identify studies that evaluated the agreement of sum scores for the whole spine [6, 15], which unfortunately makes direct comparison with the evaluation of changes at the endplate level impossible.”

This is not entirely true and is misleading. The Canada-Denmark working group has published a series of articles on MRI of the spine in SpA that define spinal lesions, both active inflammatory and structural damage, in a similar though not identical way to this manuscript. In these articles the authors publish the reliability of the observation of these lesions as observed at the individual vertebral level and not as summed scores. It is true that these publications were not based on observations at the individual endplate, but since they were based on the individual vertebral level, they are relevant to the discussion of reliability of observation of individual lesions and this prior work, which is of a similar nature, should be identified and discussed.

And page 14 – “In relation to the evaluation of signal changes located in the vertebral corner, no previous studies have to our knowledge evaluated agreement on this finding at vertebral endplate level.

While this statement is true, it is somewhat misleading as there have been
publications of observer agreement at the individual vertebral level – as discussed above.

For the authors assistance the citations are provided below:


**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