Reviewer's report

Title: Effect of pathology type and severity on the distribution of MRI signal intensities within the degenerated nucleus pulposus.

Version: 1 Date: 18 May 2010

Reviewer: Nadir Alexander Ghanem

Reviewer's report:

Effect of pathology type and severity on the distribution of MRI signal intensities within the degenerated nucleus pulposus

Abstract: ok

Background: ok

Methods: The abbreviations should be taken into brackets.

Results: ANOVA means what ??

Conclusions: should be more precise and condensed

Keywords: ???

Background: the third paragraph, page 3, Line 17 “Bushell et al.... Tissue composition” Line 23. This section should be put in the discussion part
The second part of the background section is very good.
The last section Page 4 is misleading, should be part of a discussion.

Methods: This section has a good structure, however some information is missing and should be added.
Page 5, Line 9. It must be high-performance 1.5 T MR-system MR- Sonata, Siemens Healthcare, Erlangen, Germany, the MRI –data should be added, slew rate.
Page 5, line 15 Some patient data is missing , mean, median, female , male etc
How long does the postprocessing take ?
Page 6 Line 8 We need some information about the observers, experienced in MSK-radiology

Results:
8. Excellent and clear presentation of the data in the text and tables. Maybe a little bit to short.
Clear structure, easy to read
Discussion: ok, but a little bit too long, should be shortened.
Conclusion: Spine disease should be deleted, degenerative disc disease sound better

References: ok,

Figures:
Figure 1: patient data is missing, the figures should be magnified, subdivision of a and b should be done, left and right is misleading.
Figure 2: ok
Figure 3: ok
Figure 4 patient data is missing
Tables: ok

Statement:
Excellent and interesting paper, however the patient number is small.
Some clinical data is missing
This paper should be resubmitted after minor revisions. All suggestions are classified as Minor Essential Revisions

**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' ghanem