Reviewer's report

Title: Influence of the anterior notch in mobile-bearing UKA on patellofemoral radiotracer uptake and clinical outcome

Version: 0 Date: 26 Sep 2017

Reviewer: Lennart Scheys

Reviewer's report:

The paper has much improved over the previous version, for which I congratulate the authors. Nevertheless, some remaining issues - listed below - should be addressed before I would advise to accept the paper.

Prior Comments:

Comment No 11:

So if I understand correctly your sample size was empirically chosen. Please mention it as such in the methods section. Furthermore, and more importantly, I still miss a clear indication towards the readers of the confidence you have in your data in view of the small sample size. This should be overcome by reporting confidence intervals for your outcome parameters as those typically take into account the number of samples. Furthermore, I would strongly advice the authors to include the box plots table 1 as this will be way more informative than all those numbers. Finally, your correlation analysis suffers from quite a big multiple testing problem as a total of 18x2=36 correlation analyses were performed which should be corrected for.

Comment No 12:

Although I understand a more gold-standard approach was not readily available in the literature many of the questions I raised still remain and the explanation provided still lacks detail. As a bare minimum, the authors should at least acknowledge that their study suffers from the limitation that it did not include an analysis of the repeatability and reliability of the notch-size measurement.

Comment No 17:

Aren't full leg frontal and lateral X-rays part of the standard-of-care post-op evaluations at your institution? If so, this would allow an evaluation of the achieved alignment...
Comment No 18:

If it is the other way around, than the question still remains: to what extent is the variation in notch size related to implant alignment?

Comment No 24:

Your answer provides another argument that post-op alignment should have been included in the analysis. If really not possible, please add it to the limitations and/or suggestions for future research...

Further comments:

Abstract:

- Background: this section rather explains the goal of the study. I would advise to instead describe the clinical reasons for the study: why is it, from a clinical point of view, interesting to read your study?

- Conclusion: in your last sentence you still seem to imply causation by your choice of wording. I would suggest to replace "even contributed" by "was even associated with".

Manuscript:

Methods section:

Lines 91-94: this explanation is quite difficult to follow. I suggest to expand Figure 3 with a scheme like the one drawn in response to my comment No 13 as well as more clearly indicating the directions in which the measurements were performed on the figure on the right. To me the green indication seems very easy to miss.

Line 129: be more precise. How did you define what the medial facet was?

Line 132: the description here should be improved. Please check the literature how this common procedure is typically described.
Line 133: it is unclear to me as to why you chose to report the maximum tracer uptake instead of, for example, the average? This choice should be properly substantiated in the manuscript.

Results section:

Line 166: please write "maximal tracer uptake" is this is the variable you've analysed.

Discussion section: on line 189 you again seem to imply causation by your choice of wording. I would suggest to replace "do not lead to" by "are not associated with". Same remark on line 195 and line 259.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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