

## Peer Review File

Article information: <https://dx.doi.org/10.21037/aoj-23-47>

### Reviewer Comments

#### Reviewer A

Many thanks to the authors for their contribution. The subject is hot and a literature review is of benefit. However, I have few concerns:

Comment 1: Line 77: introducing a substantial part of the results-discussion in the introduction is confusing. I would suggest rewriting.

*Reply 1: Thank you for your comment. We re-wrote this section according to your suggestion (see line 69 – 83).*

Comment 2: If there is no systematic approach, it is difficult to write that there is no article about CT scan-based classification. Probably a systematic review would be more appropriate, or, otherwise, you need rewriting.

*Reply 2: We agree with this comment, and we have changed it as you can find at line 87 – 90.*

Comment 3: line 172 comprehend: better encompass

*Reply 3: Done at line 174.*

Comment 4: Please evaluate to include other two relevant articles <https://doi.org/10.1007/s00264-018-4229-8> ; <https://doi.org/10.1016/j.artd.2021.04.012>

*Reply 4: As you suggested we included <https://doi.org/10.1016/j.artd.2021.04.012> as reference, NCS - Rodgers classification was already included in table 2.*

Comment 5: Please avoid contracted forms (didn't, there's)

*Reply 5: The manuscript was reviewed according to this comment.*

#### Reviewer B

Comment: This is a well written literature review of the currently most widely used femoral defect classifications which are based on plain x-rays and the topic fits very well into the profile of AOJ. The paper describes the rationale of these historical classifications, together with their respective strengths and weaknesses. The authors elegantly make a point and draw the attention for the need to update these historical classifications with a more accurate and clinically meaningful 3D-CT imaging. The paper is well structured, the literature review is up-to-date and relevant, and the tables and figures provide support for the main message of the paper.

*Reply: Thank you for the comments and for your appreciation of our work.*

#### Reviewer C

Comment 1: Line 2: Word Proximal femoral seems more appropriate here; use word "revision Total Hip Arthroplasty (THA)" unless you also want to include hemi arthroplasty cases which does not

seem the case here; A narrative review of X-ray based imaging systems along with the potential for an advanced CT scan/3D imaging-based system.

*Reply 1: We agree with the need of adding “proximal” and “total” in the title. We would like to stay with the abbreviated form of the title, otherwise it seems too long in our opinion. I hope you can agree with us. See the change in the title at line 2*

Comment 2: Line 31 and 36: remove their; remove these

*Reply 2: Done*

Comment 3: Line 36: “term items”, provide MeSH terms if possible/used

*Reply 3: We didn't use Mesh terms for the search of this narrative review*

Comment 4: Line 37: “there were” should be changed to “we included”, and “paper” changed to “articles”.

*Reply 4: “there were and papers” were changed in “we included” and “articles”*

Comment 5: Line 39: “7” should be changed to “seven different”

*Reply 5: “7” was changed in “seven”*

Comment 6: Line 40: “systems” not “system”, Line 45 “x-ray”, capital X

*Reply 6: We changed in “systems which have been attempted”, “X-ray”.*

Comment 7: Line 58: Provide full form for THA while using the short form first time in article

*Reply 7: See line 59*

Comment 8: Introduction: Too many paragraphs.combine and limit upto to 3-4 paragraphs

*Reply 8: We have deeply simplified the introduction sections according to reviewers' suggestions.*

Comment 9: Line 62: Simplify the sentence “and the altered anatomy aiming, on the other hand, to obtain proper stability of the 63 new implants”.

*Reply 9: We agree and the sentence was changed as you can find at line 63.*

Comment 10: Line 95: Correct discrepancy. Scopus is not mentioned in Abstract.

*Reply 10: Done, added in the abstract section*

Comment 11: Methods: provide an algorithm diagram with numbers and inclusion/exclusions.

*Reply 11: We thank you for the comment, but we believe it would not be appropriate since we didn't provide a systematic review*

Comment 12: Line 100: “There was no record” should be changed to “We did not find any”.

*Reply 12: “We did not find any” was preferred to “There was no record” as you suggested. See line 103*

Comment 13: Line 280: Restructure the sentence “Due to its simplicity have been demonstrated to be reproducible but lack to identify the variety of bone loss patterns.” in a simple manner.

*Reply 13: The sentence for restructured in “The system has been demonstrated to be reproducible, but it lacks to identify differences in bone loss patterns.”*

Comment 14: Conclusions: lots of repetition of same matter mentioned in introduction. Also add limitations of this study eg narrative, retrospective, lack standardization, your own assessment biases etc Describe how 3D would practically/clinically more useful. Also mention in brief how commonly used acetabular X ray and CT/3D classifications are different.

*Reply 14: Thank you for these suggestions. Please see conclusions section at page 9*

Comment 15: Table 2: Please also include who/how many validation studies performed and their results in this table.

*Reply 15: We understand your comment. However, we have already extensively described validation methods and results in the text, so it would be a repetition.*

Comment 16: Table 2: Yes in all. “Y” capital.

*Reply 16: Table2: “Yes” is now all in capital letters*

Comment 17: Figure legends: use \* superscript and mention other description at the end specifying what does \* mean.

*Reply 17: Done*

Comment 18: Figure 3: Use first letter capital correct spellings eg supra isthmic

*Reply 18: changes were made according to your suggestions*

## **Reviewer D**

Comment:

Dear Authors,

I have reviewed your paper with great interest. I will accept your paper after a minimal revision.

My revision is:

1. Title: Very Good
2. Abstract: Very Good
3. Introduction and AIM: The problem and the aim are well describing.
4. Materials, Patients and methods and statistics: All good.
5. Results: Focus on and well described.
6. Discussion and Thread: effectiveness Focus ON.
7. The assessment of outcomes in acetabular revision by tantalium, cite and discuss this paper:  
Falzarano G, Piscopo A, Rollo G, Medici A, Grubor P, Bisaccia M, Pipola V, Cioffi R, Nobile F, Meccariello L. Tantalum in type IV and V Paprosky periprosthetic acetabular fractures surgery in Paprosky type IV and V periprosthetic acetabular fractures surgery. *Musculoskelet Surg.* 2018 Apr;102(1):87-92. doi: 10.1007/s12306-017-0503-y. Epub 2017 Sep 30. PMID: 28965314.
8. The clinical outcomes in bone loss of hip infection , cite and discuss this paper:  
Rollo G, Logroscino G, Stomeo D, Cioffi R, Calvisi V, Meccariello L. Comparing the use of preformed vs hand-made antibiotic spacer cement in two stages revision of hip periprosthetic infection. *J Clin Orthop Trauma.* 2020 Oct;11(Suppl 5):S772-S778. doi: 10.1016/j.jcot.2020.08.003. Epub 2020 Aug 17. PMID: 32999554; PMCID: PMC7503155.

9. References: Well-chosen but to improve

10. Figures and Table: Very Good.

*Reply: Thank you for your comments and suggestions. We found this reference doi: 10.1016/j.jcot.2020.08.003 appropriate and it was added to our manuscript in the introduction section*