

## Author's response to editors and reviewers

**Name of Journal:** *World Journal of Orthopedics*

**ESPS Manuscript NO:** 64759

**Manuscript Type:** Case Report

**Three-dimensional printing technology for patient-matched instrument in treatment of cubitus varus deformity: Case report and technical note**

## Point-by-point response to reviewer comments

Reviewer #1:

**Scientific Quality:** Grade C (Good)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Major revision

**Specific Comments to Authors:** The manuscript deals with case report of cubitus varus deformity treated by 3D printing technology. The authors used medical grade Ti-6Al-4V alloy powder as printing materials for fabrication of patient-matched osteotomy guide and instrumentation. The study is scientifically sound and well conducted and the results are interesting. However, in my opinion, the following points should be considered before publication:

(a) Major revision is needed for section of introduction as the presented information is insufficient. I suggest author to add more information on 3D printing technology in medical industries, discuss and compare more previous works which is related to current study. Apart from that, more updated references should be added to improve the quality of introduction. It is important to add some recent work (2018-2021) to the introduction.

**Answer:** Thank you very much for your comments. The information on 3D printing technology in orthopaedic surgery, especially on cubitus varus deformity with recent references were now added in the section of introduction (Pg 5).

(b) The methodology of 3D printing process is unambiguous. For example, printing speed, extrusion temperature, raster layer and layer thickness to produce the printed part are not discussed by authors.

**Answer:** The information related to the 3D printing process as "The processing parameters set for the SLM machine (Mlab 200R, Concept Laser GmbH, Germany) were 180 W of laser power and 1,250 mm/s of scanning rate. This process was operated under 99.999% Ar atmosphere." was now added (Pg 7).

(c) I would suggest the authors to present the details dimension of printed part (customized osteotomy guide) for the benefit of the reader.

**Answer:** The information related to the dimensions of customized osteotomy guide and patient-specific plate was now given in Supplementary Material. 1 and 2 (Pg 8).

(d) For the section of discussion, it is suggested to compare the results of the present study with previous studies and analyze their results completely. In my opinion, much more explanations and interpretations must be added for the result, which are not enough at all for current manuscript.

**Answer:** The discussion was now rewritten and added with the results of previous studies and the comparison with our study (Pg 10).

(e) Authors used Ti-6Al-4V as printing materials. Although Ti-6Al-4V has high reputation for biocompatibility and corrosion resistance, it can release ions such as aluminium (Al) and vanadium (V) which are toxic and can cause long term health problems such as Alzheimer's disease, neuropathy, and osteomalacia. These problems affect the long-term use of Ti-6Al-4V for implant applications. Authors should clarify why Ti-6Al-4V was used instead of commercially pure titanium although Ti-6Al-4V has long term side effects. Authors should also tell the readers the possible long term effects of Ti-6Al-4V as implant in this manuscript.

**Answer:** The information related to the use of Ti-6Al-4V alloy and its side effect was now added into the section of discussion (Pg 11).

(f) The conclusion is very weak. Please rewrite it to reflect the content of current study. Consequently it is recommended that the manuscript is returned to the authors for major revision before being accepted in World Journal of Orthopedics

Answer: The conclusion was now rewritten (Pg 11).

**Point-by-point response to Editorial Office's comments:**

***Science editor:***

1 Scientific quality: The manuscript describes a Case Report of the Cubitus varus correction with 3D-printing technology. The topic is within the scope of the WJO. (1) Classification: Grade C; (2) Summary of the Peer-Review Report: The study is well conducted and the results are interesting. Author need to add more information on 3D printing technology, discuss and compare more previous works. The questions raised by the reviewers should be answered; (3) Format: There are 3 figures; (4) References: A total of 10 references are cited, including 2 references published in the last 3 years; (5) Self-cited references: There is no self-cited reference; and (6) References recommendations (kindly remind): The authors have the right to refuse to cite improper references recommended by the peer reviewer(s), especially references published by the peer reviewer(s) him/herself (themselves). If the authors find the peer reviewer(s) request for the authors to cite improper references published by him/herself (themselves), please send the peer reviewer's ID number to [editorialoffice@wjgnet.com](mailto:editorialoffice@wjgnet.com). The Editorial Office will close and remove the peer reviewer from the F6Publishing system immediately.

2 Language evaluation: Classification: Grade B. A language editing certificate issued by filipodia was provided.

3 Academic norms and rules: The authors provided the Written informed consent and CARE Checklist (2016). No academic misconduct was found in the Bing search.

4 Supplementary comments: No financial support was obtained for the study. The topic has not previously been published in the WJO.

5 Issues raised: (1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and (2) PMID and DOI numbers are missing in the reference list. Please provide the PubMed numbers and DOI citation numbers to the reference list and list all authors of the references. For PMID and DOI numbers of references from English-language journals, please ensure there is a space between the PMID and DOI numbers in the square brackets. Please revise throughout. 6 Recommendation: Conditional acceptance.

Answer: The original figure documents in ppt were prepared as requested and the PMID and DOI numbers in the reference were already filled.