Author’s response to reviews

Title: From digital world to real life: a robotic approach to the esophagogastric junction with a 3D printed model

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Author’s response to reviews:

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Dr Aslam Ejaz, MD, MPH
BMC Surgery
https://bmcsurg.biomedcentral.com/
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Subject: Revision and resubmission of manuscript BSUR-D-19-00382

Dear Dr Ejaz,

Thank you for your letter and the opportunity to revise our paper on ‘From digital world to real life: a robotic approach to the esophagogastric junction with a 3D printed model’. The suggestions offered by
the Editor and Reviewer have been immensely helpful, and we also appreciate your insightful comments on revising the paper.

I have included the reviewer comments immediately after this letter and responded to them individually, indicating exactly how we addressed each concern or problem and describing the changes we have made. The revisions have been approved by all authors and I have again been chosen as the corresponding author. The changes are marked in red in the paper as you requested.

We hope the revised manuscript will better suit the BMC Surgery but are happy to consider further revisions, and we thank you for your continued interest in our research.

Sincerely,

Luigi Marano
On behalf of all Authors

Editor Comments, Author Responses and Manuscript Changes

Editor

Comment 1: “Please thoroughly revise the manuscript for grammar and syntax”.
Response 1: Correction of grammatical errors and English improvement were carried done by a native English-speaking editor as suggested.

Comment 2: Please comment on the specific aspects of the operation that the 3D model helped with and why this was superior to imaging alone.
Response 2: Thank you for this observation. The discussion section has been implemented according to Editor suggestions.
Please see:
[…]
“The advantage of technological development to create 3D model and tool for surgical use from CT image elaboration is represented by the recognition, in a real size mode, of the interspatial relationship between anatomical structures of the target area [19]”. […]

[...] “In the reported case the 3D model improved the preoperative discussions with better evaluation of the target anatomy and helped to decide to proceed with robotic rather than laparoscopic, open transabdominal as well as transthoracic approach. During the operation, the visualization of the tortuous thoracic aorta and its proximity to the distal esophagus from the 3D model was fundamental to the safe outcome of the procedure, allowing the surgeons to precisely recognize the relative positions of critical structures. In this way, the absence of tactile feedback of the robotic technology and the limitations of 3D CT images manipulation on the screen were overcome by a real model in the surgeon's hands. The shortening of operative time represents another advantage to discuss [20]. To this address, it is of note that the preoperative team discussion and the preliminary intervention plan with
the evaluation of all possible solutions, the definition of dissection planes, and the simulation of critical maneuvers enable the surgeon to focus on other key points resulting in a safer as well as tailored surgery [20, 21]. Moreover, it is important to emphasize that the 3D printed model influenced the planning of the surgery. Specifically, in absence of preoperative recognition of critical structures as well as interspatial relationship between anatomical structures of the target area by means of 3D model, the operation would not have been conducted with robotic approach.”[…]

Reviewer Comments, Author Responses and Manuscript Changes

Comment 1: please make the introduction more concise.
Response 1: The introduction section has been rewritten in a more concise manner according to Reviewer suggestion.

Comment 2: English editing is required before publication
Response 2: Correction of grammatical errors and English improvement were carried done by a native English-speaking editor as suggested.

Comment 3: please mention what you did differently based on this technology, since it is not widely available.
Response 3: Thank you for this observation. The discussion section has been implemented according to Reviewer suggestions.
Please see:
“Moreover, it is important to emphasize that the 3D printed model influenced the planning of the surgery. Specifically, in absence of preoperative recognition of critical structures as well as interspatial relationship between anatomical structures of the target area by means of 3D model, the operation would not have been conducted with robotic approach.”