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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Dr Aslam Ejaz, MD, MPH
BMC Surgery
https://bmcsurg.biomedcentral.com/
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Subject: Revision and resubmission of manuscript BSUR-D-19-00382R1

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 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

Reviewer Comments, Author Responses and Manuscript Changes

Comment 1: Please highlight how the 3D changed the conduct of the operation.
In methods, please elaborate more on how the 3D model was studied preoperatively by the surgical team and what critical decisions were made based on the model available.
Response 1: We added in methods section a paragraph according to reviewer suggestion:
Using the 3D model of the esophago-gastric junction allowed surgeon to preoperatively locate the general position and proximity of tortuous thoracic aorta with the esophagus as well as surrounding tissues. Particularly, the surgical team measured the thoracic aorta positioning and esophago-gastric structures on the 3D model before operating then applied the patient-tailored surgical anatomy in the surgical field. This model enabled surgeons to verify the position of critical structures and to discuss all possible approaches and strategies to operate as well as plan all possible critical maneuvers. This provides proof that the operation can be performed safely through less invasive techniques, without using conventional approach to dominate such complex case.

Comment 2: Please mention the cost of the 3D model created in the text
Response 2: We really thank the reviewer for this relevant consideration. We provided a sentence about the cost in the methods section.
Please see:
“The cost associated with 3D printed esophageal model production was 230,00 Euros.”

Comment 3: It would be good to label the critical structures in figure 1
Response 3: We properly indicated the critical structures in figure 1 as suggested.

Comment 4: Although the text is nicely written, the benefits of the 3D model have not been visually conveyed to the reader. The figures are insufficient and unattractive in their current format. They need to be labeled and the quality enhanced. They should also show the axial conventional imaging used in
the figures. They should especially show the coronal images and place it side by side with the 3D model. They should very sincerely highlight what additional information the 3D model provided compared to conventional imaging.
Response 4: We appreciate this suggestion. A unique figure with multiple images of CT scans and final 3D product has been added.

Comment 5: Although the language of the text is good, it could be enhanced by having it reviewed by a native speaker. There are some sections where the tense has been used incorrectly as listed below.
Line 64, replace "even if" with "even though"
Line 91, replace "remains" with "remained"
Line 95, replace "has been" with "was"
Line 110, replace "can" with "could"
Response 5: Corrections of grammatical errors and English improvement were carried done by a native English-speaking editor as suggested throughout the entire text.