

Dear Editor,

Thank you very much for your letter about the revisions of our manuscript (Manuscript NO.: 72101, Retrospective Cohort Study). And we also gratefully thank the reviewers for their kindly comments on our manuscript. There is no doubt that these comments are valuable and very helpful for revising and improving our manuscript. We have made a careful revision to meet the publishing requirements of the *World Journal of Gastrointestinal Surgery*.

The responds to the reviewers' comments are as following (the replies are highlighted in blue).

Reviewer #1:

Specific Comments to Authors: The authors analyze retrospectively the use of mixed reality (MR) tool to improve liver surgery. They distinguish this from augmented and virtual reality and deliver arguments for the advantage of MR over the other two. The approach of MR is known, but the usage in liver surgery is new. The outcome of liver resections are improved by usage of MR, which is a promising result in an early phase of implementation. The limitations of this study are well recognized and mentioned in the manuscript.

Author response: Thank you very much for your kind comments.

Nevertheless I suggest to use the term preoperative "outcome" instead of "prognosis" as the latter is also depending on cancer / HCC characteristics. Therefore the overall prognosis is guided by much more than the usage of MR or a conventional surgical approach.

Author response: We quite agree with your suggestion about using preoperative "outcome" instead of "prognosis". And we have revised the relevant expressions in the manuscript according to your suggestion.

Also the term of personalize medicine includes more than a new technic of image guided surgery. Both are smaller criticisms and can easily be rephrased in the manuscript.

Author response: Thank you very much for your kind comments. We also agree with your comment about "personalize medicine" and we have deleted the term of personalize medicine.

Thank you again for your positive and constructive comments and suggestions on our manuscript. We hope you will find our revised manuscript acceptable for publication on *World Journal of Gastrointestinal Surgery*.

Reviewer #2:

Specific Comments to Authors: This is a well-organized paper, but I have some suggestions. In the laparoscopic era, a lot of laparoscopic surgery is being performed. How about suggesting the rate of laparoscopic surgery?

Can the same be applied to laparoscopic surgery?

Author response: Thank you very much for this very important comment. As we all know, laparoscopy has been widely used in liver surgery. MR may also have a certain application potential for laparoscopic hepatectomy. However, we have not yet applied the MR to laparoscopic surgery. We will explore the application value of MR in laparoscopic and robotic hepatectomy in the next study.

Since the demarcation line can be recognized easily in anatomical resection, the op time does not seem to be much different.

Author response: MR could be applied to anatomical hepatectomy and non-anatomical hepatectomy, and the application of MR technology is helpful to achieve anatomical hepatectomy. We retrospectively analyzed the perioperative indicators of patients with HCC in our center. It was found that the operation time of MR group was shorter because MR-HMD could help us to accurately locate the location of tumors and important blood vessels.

How about dividing it into anatomical resection and non-anatomical resection?

Author response: It is also a good idea to divide the samples into anatomical and non-anatomical groups, which we will apply in the next step of the study.

If it is corrected according to the reviewer's opinion, it is likely that the paper will be improved. It is expected that this paper will be helpful in applying large volume-multicenter studies in the near future.

Author response: Thank you again for your comments. We added an explanation of the opinions of the reviewers to the discussion.

We greatly appreciate the efficient and professional processing of our manuscript by editors. If there is anything else we should do, please do not hesitate to let us know.

Thank you and best regards.

Yours sincerely,

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