

## PEER-REVIEW REPORT

**Name of journal:** *World Journal of Gastrointestinal Surgery*

**Manuscript NO:** 86585

**Title:** Recent advances in computerized imaging and its vital roles in liver disease diagnosis, preoperative planning, and interventional liver surgery: A review

**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 02510721

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Full Professor

**Reviewer's Country/Territory:** Italy

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2023-06-26

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-07-13 08:09

**Reviewer performed review:** 2023-07-22 15:00

**Review time:** 9 Days and 6 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

The Title and the Abstract report in a concise but complete manner the contents of the study. The introduction identifies the epidemiological data of the neoplastic pathology of the liver. In particular, it presents the anatomo-pathological cognitive needs that can be satisfied by the most up-to-date imaging methods. Data Pre-processing and Fully Automatic Segmentation they are well developed and presented. Selected semi-automatic liver segmentation algorithms are certainly valid in the Semi-automatic Segmentation. In the construction of diagnostic images the synthesis of various radiological imaging techniques is useful applied to the anatomy of the hepatic artery, portal vein, hepatic veins, bile ducts.

The study then extends to the preoperative evaluation of liver tumors. Therefore, the possibility of preoperative planning and simulation opens up through the survey of Liver Volumetry and Future Liver Remnant, of Computerized Imaging for FLR of liver functions and of postoperative risk assessment. The evaluation of the role and therapeutic efficacy of surgical interventions for neoplastic liver diseases is developed below. The anatomical hepatic resection in the standard approach, in the minimally invasive approach, up to

Computer Assisted Surgery, therefore emerges in the therapeutic scenario. This last possibility opens the introduction of software as a medical device (SaMD). The Conclusion is appropriate to the contents of the literature review study. References are complete and up to date. The Figures and Tables are clear and useful for understanding the study. In my opinion this study is very well conducted and elaborated.

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**Peer-review model:** Single blind

**Reviewer's code:** 04627944

**Position:** Editorial Board

**Academic degree:** FICS, MD, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2023-06-26

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-08-13 13:41

**Reviewer performed review:** 2023-08-13 14:08

**Review time:** 1 Hour

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

<b>Scientific significance of the conclusion in this manuscript</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

Dear Editors, I have had the opportunity to review the manuscript entitled "Recent advances in computerized imaging and its vital roles in diagnostics, pre-operative liver surgery and intervention: a review" submitted to the World Journal of Gastrointestinal Surgery. Upon careful review, it is evident that the authors have conducted a comprehensive study and provided a detailed review of the latest advances in computerized imaging, especially its significance in diagnostics and liver surgery. The manuscript is well-structured, the arguments are cogent, and the references are up-to-date and relevant. The figures and tables included further complement the text, providing visual clarity and aiding understanding. From both a technical and clinical standpoint, the authors have successfully showcased the relevance and advancements in this area of research. They have also managed to bridge the gap between technology and clinical applications, offering the readers a holistic perspective on the subject matter. Considering the quality and depth of the content presented, I recommend the acceptance of this manuscript for publication in the World Journal of Gastrointestinal Surgery without further modifications. It will be a valuable addition to the journal and will serve



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to inform and educate its readership on this vital topic. Thank you for the opportunity to review this work.

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**Provenance and peer review:** Invited Manuscript; Externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 04015916

**Position:** Editorial Board

**Academic degree:** MD, PhD

**Professional title:** Professor

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2023-06-26

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-08-18 07:35

**Reviewer performed review:** 2023-08-21 01:52

**Review time:** 2 Days and 18 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input checked="" type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input checked="" type="checkbox"/> Grade D: No creativity or innovation

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<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

Computer 3D imaging technology has been widely used in clinical practice at present, but its limited function has restricted its clinical development. Most of this article is summarized from the perspective of algorithm, and rarely involves the focus of clinical work, which is little help to clinical work, and it seems that it is not suitable for publication in surgical journals. It is suggested to switch to relevant professional magazines.



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**Peer-review model:** Single blind

**Reviewer's code:** 02944288

**Position:** Editorial Board

**Academic degree:** MD

**Professional title:** Assistant Professor, Lecturer, Surgeon

**Reviewer's Country/Territory:** Russia

**Author's Country/Territory:** Thailand

**Manuscript submission date:** 2023-06-26

**Reviewer chosen by:** Geng-Long Liu

**Reviewer accepted review:** 2023-08-18 01:40

**Reviewer performed review:** 2023-08-22 08:13

**Review time:** 4 Days and 6 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
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	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

#### SPECIFIC COMMENTS TO AUTHORS

Dear author/ Your manuscript needs some language corrections