



PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 65273

Title: Machine perfusion of the liver: putting the puzzle pieces together

Reviewer's code: 00522175

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Italy

Author's Country/Territory: Brazil

Manuscript submission date: 2021-03-02

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-03 06:56

Reviewer performed review: 2021-03-08 10:59

Review time: 5 Days and 4 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 Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

Boteon YL and coauthors in this frontiers article reported the last findings regarding the use of machine perfusion techniques in the field of liver transplantation. This is an important issue and new achievements on dynamic organ preservation will hopefully allow the use of discarded graft for human transplant, in the future. The article is interesting, concise and adequately written. These are my comments: 1) I appreciated the discussion on biliary damage and bile formation (paragraph "organ viability"). However I suggest expanding this section since it represents a critical point with regard to dynamic preservation and/or regeneration. In fact, bile duct cells seem more resistant to hypoxia in comparison with hepatocytes (at list when they are prepared for cell cultures) on the other hand several data underscore that a valid preservation of peri-biliary plexus and glands is likely the most important factor for the biliary tract injury repair, after ischemia (PMID: 30506902). In this perspective future studies on machine perfusion should have, among other targets, the aim to maintain a healthy peri-biliary environment rather than focusing on biliary cells viability, in order to favor graft recovery after transplant. Please include these points in the manuscript. 2) I suggest to include a table (with references) summarizing the suggested parameters to dynamically assess organ viability during different perfusion techniques. 3) Figure 1: I would suggest to remove the arrows from x and y axis. I would suggest also the following changes: title "organ preservation" instead of "dynamic organ preservation"; box titles: "adverse environment" change with "Past"; "favorable environment" change with "Present".



PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 65273

Title: Machine perfusion of the liver: putting the puzzle pieces together

Reviewer's code: 05821532

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Doctor, Senior Scientist

Reviewer's Country/Territory: China

Author's Country/Territory: Brazil

Manuscript submission date: 2021-03-02

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-03-03 02:34

Reviewer performed review: 2021-03-14 02:01

Review time: 10 Days and 23 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
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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SPECIFIC COMMENTS TO AUTHORS

see the attachment