

PEER-REVIEW REPORT

Name of journal: *World Journal of Experimental Medicine*

Manuscript NO: 87256

Title: Effects of unilateral superimposed high-frequency jet ventilation on porcine hemodynamics and gas exchange during one-lung flooding

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03093768

Position: Editorial Board

Academic degree: MD

Professional title: Associate Professor, Chief Doctor, Doctor, Surgeon, Surgical Oncologist

Reviewer's Country/Territory: China

Author's Country/Territory: Germany

Manuscript submission date: 2023-09-13

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-11-02 14:48

Reviewer performed review: 2023-11-13 14:31

Review time: 10 Days and 23 Hours

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Novelty of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No novelty

Creativity or innovation of this manuscript	☐ Grade A: Excellent ☒ Grade B: Good ☐ Grade C: Fair ☐ Grade D: No creativity or innovation
Scientific significance of the conclusion in this manuscript	☐ Grade A: Excellent ☐ Grade B: Good ☒ Grade C: Fair ☐ Grade D: No scientific significance
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☐ Accept (General priority) ☐ Minor revision ☒ Major revision ☐ Rejection
Re-review	☒ Yes ☐ No
Peer-reviewer statements	Peer-Review: ☒ Anonymous ☐ Onymous
	Conflicts-of-Interest: ☐ Yes ☒ No

SPECIFIC COMMENTS TO AUTHORS

The authors presented an interesting animal experiment with reliable results. They used an animal model of pigs by flooding the left lung for ultrasound examination or tumor localization, while the right lung was ventilated using PCV or SHFJV mode. After comparison, it was found that the SHFJV mode can provide sufficient oxygenation while reducing the flooded lung movement. In the experimental method section, the authors provided a detailed description. The results section was also interpreted and discussed. Although lung tumor localization and ablation by ultrasonic have not been widely implemented in clinical practice like radio-frequency ablation or stereotactic radiotherapy, studying the feasibility is not inappropriate. There are still some issues raised up in this manuscript that need to be answered by the author. 1. In the animal model, 12 animals with OLF were randomly divided into two groups, namely PCV followed by SHFJV and SHFJV followed by PCV mode for mechanical ventilation. The



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final experimental data of these two groups of animals seems to have been merged and processed. Is there a difference between the two groups? How to calculate and compare the data between the two groups does not seem to be readable. 2. In clinic, the affected side (requiring treatment) should be more likely to be in the upper side of the lateral position, which is the third position in the experiment. At this point, there is clearly a risk of severe fluid flowing into the healthy lung, leading to the patient's aspiration or suffocation. What is the clinical application value of studying this position? 3. In the data in Tables 1, 2, and Figures 4 and 5, it is not possible to distinguish which time point the data of the two experimental groups are collected. Each position adopts two ventilation modes, only the order is different. It should be explained in detail. 4. X-RAY images of the animal model should be provided.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Reviewer's Country/Territory: China

Author's Country/Territory: Germany

Manuscript submission date: 2023-09-13

Reviewer chosen by: Xin-Liang Qu

Reviewer accepted review: 2023-12-02 10:10

Reviewer performed review: 2023-12-03 08:48

Review time: 22 Hours

Scientific quality	☐ Grade A: Excellent ☐ Grade B: Very good ☒ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
Conclusion	☐ Accept (High priority) ☒ Accept (General priority) ☐ Minor revision ☐ Major revision ☐ Rejection

Peer-reviewer statements	Peer-Review: [☒] Anonymous [☐] Onymous Conflicts-of-Interest: [☐] Yes [☒] No
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SPECIFIC COMMENTS TO AUTHORS

thanks for your reply. To be honest, I am looking forward to the clinical application of this technology. At present, there are many types of technologies that can perform lung tumor ablation, and the application of ultrasound ablation technology in lung tumors needs to break through the barrier of lung inflation. After using one lung flooding, it seems that this barrier can be ignored. It is worth looking forward to whether ultrasound ablation can achieve better results than radiofrequency ablation in this field.