

## **Response to reviewer #1**

**Question 1:** Introduction • Why have you focused on perioperative RMT Interventions? What makes them different from pre-habilitation interventions? clarify this issue

**Answer 1:** Actually, we focused on perioperative RMT instead of preoperative RMT because in most relevant studies the combination of pre- and postoperative RMT was applied and it was too hard to only explore the clinical role of preoperative RMT in patients receiving lung surgery. The clinical role of preoperative RMT in pulmonary surgery may be further identified based on enough data in the future.

**Question 2:** What are the potential benefits of perioperative RMT in patients receiving lung surgery?

**Answer 2:** In the introduction, we described the potential application value of IMT and EMT in patients receiving lung surgery.

**Question 3:** Can it be applied to different types of lung surgery? • Are there any contraindications? What are they?

**Answer 3:** Thanks for these valuable questions. We have added these information in the introduction.

**Question 4:** Materials and Methods • Inclusion criteria and exclusion criteria: any exclusion criteria? If not, consider to revise the subchapter title

**Answer 4:** Actually, the exclusion criteria were described in the manuscript. We have broken out the exclusion criteria into a separate paragraph.

**Question 5:** Results • Consider including information on the origin of the studies

**Answer 5:** Actually, all the data presented in this meta-analysis were directly extracted or calculated from included studies.

**Question 6:** Discussion • Although there is an excellent description of the studies and description of the results, possible mechanisms related to the results described in the manuscript could be

added. In addition, a brief comparative discussion of the differences between studies could be added •

**Answer 6:** Thanks for these valuable questions. Actually, the possible mechanisms and differences between studies have been dispersedly described in the discussion part.

**Question 7:** What is new about perioperative RMT in patients after lung surgery in this manuscript?

**Answer 7:** Actually, this is the first to comprehensively identify the clinical role of perioperative RMT in patients receiving lung surgery in the form of a meta-analysis after reviewing several relevant studies. To some extent, this is the highest-quality study to assess the clinical value of RMT in patients undergoing pulmonary resection, which has been described in the first paragraph of the discussion.

**Question 8:** Could a general perioperative RMT protocol be established to achieve the positive results it shows?

**Answer 8:** As mentioned in the discussion, parameters of RMT in each included study are different and it is too hard to establish a general perioperative RMT protocol for patients receiving lung surgery in this meta-analysis, which has been described in the “limitation” part.

**Question 9:** What impacts did covid-19 have on this area? Consider adding a short discussion on this topic,

**Answer 9:** To be honest, we deem that COVID-19 and surgical lung cancer are two completely different diseases. A discussion about the clinical role of RMT in patients with COVID-19 is not related to the topic of this meta-analysis.

**Question 10:** In addition, is it possible to use the telehealth or digital health (mHealth) approach in perioperative interventions in patients after lung surgery? adding a future perspective on this content (if any) could be very interesting for readers

**Answer 10:** Actually, a study about the comparison about the home-based rehabilitation by using the telehealth or digital health approach and in-hospital rehabilitation is conducting by our team.

However, the RMT requires the machine and it is a little hard for patients to receive the RMT at home.

**Response to Reviewer #2:**

**Question 1:** Authors should add to the limitations section the fact that they included only articles published in English.

**Answer 1:** This has been added in the limitation part.

**Question 2.** Please provide grading of evidence (GRADE).

**Answer 2:** In the first paragraph of discussion, we provided the grading of evidence (GRADE A).

**Question 3.** Did the authors assess any "hard" outcomes, such as in-hospital death or post-operative respiratory tract infections? Were such outcomes reported across the selected trials. Please elucidate.

**Answer 3:** Actually, almost all outcomes reported in included studies were analyzed in our meta-analysis. However, the in-hospital death or post-operative respiratory tract infections with enough data were not reported in the included studies.

***Response to Company editor-in-chief:***

**Question 1:** I have reviewed the Peer-Review Report, the full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Cases, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. The title of the manuscript is too long and must be shortened to meet the requirement of the journal (Title: The title should be no more than 18 words).

**Answer 1:** The title has been changed to "Perioperative respiratory muscle training improves respiratory muscle strength and physical activity of patients receiving lung surgery: a meta-analysis

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**Question 2:** Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, “Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...”. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor.

**Answer 2:** The figures have been provided as request.