

Peer Review File

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Reviewer A

1- Under the Box titled “Key Points”

a. At the end of the first bullet, the phrase “report here about what does this manuscript adds” is a confusing statement with poor grammar. I would strike it from the manuscript.

Reply: Thanks a lot for your thoughtful recommendation. We have deleted “report here about what does this manuscript adds”.

Changes in the text: Line 59

b. At the end of the final bullet, you state “Patients experience a higher quality of life postoperatively”. However, no quality-of-life measures were reported. If you want to use the phrase, please provide metrics for the patient cohort proving that quality of life was improved. Otherwise, I recommend changing the phrase to “All patients reported subjective improvement of symptoms” or something to that effect

Reply: Thanks a lot for your thoughtful recommendation. We have deleted “Patients experience a higher quality of life postoperatively”.

Changes in the text: Line 59

2- Pg 4, Ln 94 please spell out the acronym “VAS” score

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 95

3- Pg 7, Ln 181- “This results in a better quality of life compared to traditional surgery” is not supported by presented data. To validate this statement, you must provide the reported quality of life (QoL) metrics in the literature from other techniques and report your own QoL measures to compare statistically. Otherwise, a more accurate statement would be “this compares favorably with other techniques” and cite specific measures in reported studies such as hospital length of stay, visual pain scores, etc. to compare your own metrics to.

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 181

4- You state “DaVinci” robot as the equipment used. I would introduce the system used including the manufacturer and location of manufacture in parentheses

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 158-159

5- In your conclusion, you state that this technique is feasible for resection of rib tumors, but I think it should be stated that this method may be employed in other indications for high rib resection such as thoracic outlet syndrome.

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as per your recommendation

Changes in the text: Line 196-198

6- Table 1 is lacking in information that I think is critical for the manuscript. I would consider adding the following:

a. Type of tumor (final pathology)

Reply: Thanks a lot for your thoughtful recommendation. We have added Type of tumor in table 1.

Changes in the text: Table 1

b. Position on the rib (posterior, posterolateral, lateral, anterolateral, anterior)

Reply: Thanks a lot for your thoughtful recommendation. We carefully reviewed the five cases and observed the tumor growth of the gross specimen. The tumor grew wrapped, and we could not judge the position on the rib. If necessary, we would add it at a later stage.

c. Size of the lesion and length of the rib resected (bony margins)

Reply: Thanks a lot for your thoughtful recommendation. We have added size of the lesion and the length of the rib in Table 1.

Changes in the text: Table 1

d. "Basic Illness," I think refers to Comorbidities, or other illness that the patient suffers from such as diabetes or hypertension. If that is correct, I suggest using "Comorbidities" as "Basic Illness" is not common parlance

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Table 1

Reviewer B

Abstract:

1. line 43: "high-position rib tumors": Please clarify this term also in the text for the whole manuscript. Which ribs are involved and had to be resected? (not only table 1)

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes per your recommendation

Changes in the text: Line 63-64

2. line 46: "long-term treatment effects" - do you mean clinically or in an oncological point of view. Oncologically, 12 months are not really long-term outcome. Please clarify.

Reply: Thanks a lot for your thoughtful recommendation. We appreciate your clarification request regarding the term 'long-term treatment effects' mentioned in line 46. We would like to clarify that in our context, the term refers to clinical outcomes rather than oncological perspectives. We understand that a 12-month timeframe may not be considered a true long-term outcome in oncology, and we have accordingly revised the text to ensure this distinction is clear. Thank you for bringing this to our attention.

Changes in the text: line 44

Highlight box / key findings:

3. First paragraph: The phrase "Report here about what does this manuscript adds." should be deleted.

Reply: Thanks a lot for your thoughtful recommendation. We have deleted "Report here about what this manuscript adds".

Changes in the text: Line 59

4. Third paragraph: the term "operative field of vision" is not unambiguous. In the manuscript, the expression "vision of the operative field" would better line out that robotic surgery has a big advantage in precise display of the site of dissection.

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 59

Introduction

5. line 79: "excellent curative outcomes": do you mean clinical or oncological outcome? please specify.

Reply: Thanks a lot for your thoughtful recommendation. Thank you for raising a question about the term 'excellent curative outcomes'. We would like to clarify that this term pertains to clinical outcomes rather than purely oncological outcomes. Our intention was to highlight the positive treatment results in terms of disease management and patient well-being. More on the oncological prognosis after resection of rib tumors will be added in a future study. We appreciate your attention to this matter and have made sure to specify the clinical context of the term in the manuscript.

Changes in the text: Line 80

6. line 81-83: the range of resection is not more comprehensive than in other (VATS) techniques but precise tissue handling is providing a better result with better protection of delicate structures.

Reply: Thanks a lot for your thoughtful recommendation. Thank you for your advice. For the range of resection, it becomes evident that the primary determinant is the pathologic nature of the lesion. Consequently, in achieving complete resection, robotic surgery does not entail greater extent than other surgical techniques. Nevertheless, the challenge posed by the different surgical technique for achieving complete resection

does vary, as reviewers have indicated. It is indeed accurate that the sentence in the original article lacked the necessary rigor, and we have rectified it accordingly.

Changes in the text: Line 82-84

7. line 84: STROBE = Strengthening... Delete "The"

Reply: Thanks a lot for your thoughtful recommendation. We have deleted "Report here about what this manuscript adds".

Changes in the text: Line 86

Methods:

8. line 91: basic illness = comorbidities

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 92

Surgical Technique:

9. line 99: chest computed tomography, 3D scan etc. are not "procedures" but "examinations" or "imaging"

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 101

10. line 103: better use "included"/"affected" than "implicated"

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 104

11. line 109: "combined" in front of "intravenous-inhalation"

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 111

12. line 110: "pneumothorax was applied to the lung on the operative side to ensure complete collapse". This is no need to describe, it is general practice.

Reply: Thanks a lot for your thoughtful recommendation. We have made delete "and an artificial pneumothorax was applied to the lung on the operative side to ensure complete collapse."

Changes in the text: Line 111

13. line 115: what do you use the assistant port for? Usually, there is no need for this. 3-ports are enough.

Reply: Thanks a lot for your thoughtful recommendation. For cases involving the resection of only a single rib, indeed, three ports are sufficient. However, for cases involving two or more ribs, the assistant port is required to perform retraction to expose

a clear surgical field. In addition, for tumors with abundant blood supply, hemostasis can be achieved and emergent situations managed through the placement of gauze by the assistant through a separate port.

14. line 117/118: "high-position": you should add everywhere an "-" or use it never in the text.

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 119

15. line 124: the wire saw you show in your nice video is a Gigli saw - or what is the exact difference to it?

Reply: Thanks a lot for your thoughtful recommendation. We appreciate your interest in the wire saw shown in the video. The wire saw utilized in our technique is indeed a Gigli saw. The only difference is that we only use the wire to cut inside the chest cavity; the handle will not be used. Thank you for highlighting this point, and we have provided the necessary clarification in the relevant section of the manuscript.

Changes in the text: Line 79

Results

16. line 133: please add "thoroscopic" to the term "robot-assisted" since this is the minimally-invasive aspect of the procedure. The robot is just an instrument.

Reply: Thanks a lot for your thoughtful recommendation. We have made some changes as your recommendation

Changes in the text: Line 134-135

17. line 140: "swelling or paraesthesia" Can you line out the etiology for these findings (eg vascular or neurological impairment due to compression caused by the rib? thoracic outlet syndrome? etc)?

Reply: Thanks a lot for your thoughtful recommendation. We appreciate your question, and these symptoms have emerged due to vascular or neurological dysfunction resulting from the compression exerted by the rib tumor. These symptoms were relieved after the operation.

18. line 146: blood loss has been already reported before!! delete this phrase.

Reply: Thanks a lot for your thoughtful recommendation. We have made delete "and intraoperative blood loss was 185 ml (range: 85-410 ml)."

Changes in the text: Line 145

Discussion

19. line 156-59: "Compared to traditional open surgery, the Da Vinci robot offers the advantages of being minimally invasive, highly flexible, and providing a high-definition three-dimensional field of vision, thereby overcoming potential shortcomings of conventional thoracoscopic approaches." In this phrase, you compare

RATS to open surgery as well as VATS. It remains unclear which aspects are related to what. It is no new finding that minimally-invasive procedures are superior to open surgery. Maybe endowrist movement of the robotic instruments is a good point as well, helping to overcome certain constraints.

Reply: Thanks a lot for your thoughtful recommendation. We appreciate your insightful comment, and you are correct in pointing out the need for a more distinct separation of the advantages of RATS in contrast to both open surgery and VATS. We have revised this section to provide a more concise and clear comparison, emphasizing the unique aspects that RATS brings to the table. Furthermore, we agree that highlighting the endowrist movement of the robotic instruments as a point of advantage is essential, as it contributes to overcoming certain constraints. This addition has been incorporated into the manuscript, specifically addressing the advantages of RATS over other techniques.

Changes in the text: Line 158-161

20. line 161: I do not know the "beak costal ligament". are you sure of this term?? where does it run from?

Reply: Thanks for checking out this translation error. We apologize for any confusion this term may have caused. It appears there might have been a miscommunication, and we acknowledge that the term should be clarified for accuracy. After further review, we have corrected the term to 'costal perichondrium,' which accurately describes the tissue involved.

Changes in the text: Line 162

21. line 169: "conventional"??

Reply: Thanks a lot for your thoughtful recommendation. This must have been a case of line numbers getting into the text when the formatting was adjusted. We have revised it. I'm sorry for the trouble.

Changes in the text: Line 170

22. line 175/76: You mention durations for the operative procedure from reference no13. As I could read there it is not correct. (and reference no 13 is already reference no 1!!)

Reply: Thanks a lot for your thoughtful recommendation. We searched the corresponding literature again, and there was indeed an error in the citation process. The operation time and the number of the references has been revised.

Changes in the text: Line 175-177

23. line 180/81: This results in a better postoperative quality of life compared to traditional surgery. how did you measure this? And blood loss, drainage volume and chest drain duration has no correlation with postoperative quality of life... you might rephrase this passage.

Reply: Thanks a lot for your thoughtful recommendation. We appreciate your inquiries regarding the measurement of postoperative quality of life and the correlation with surgical parameters mentioned in lines 180-181. Our assertion about a better

postoperative quality of life stems from patient-reported subjective improvements in symptoms, rather than quantifiable metrics. We acknowledge that this could be clearer in the text and we have rephrased the passage to reflect this distinction. Furthermore, we agree that blood loss, drainage volume, and chest drain duration might not directly correlate with postoperative quality of life. Therefore, we have revised the text to avoid any potential confusion and ensure the distinction between these surgical parameters and quality-of-life outcomes

Changes in the text: Line 188