

## Peer Review File

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### Reviewer A

Comment 1: I have read the response letter and watched the video.

The quality of the video is too poor to understand what the authors would like to explain in this manuscript. It should be changed into a high-quality version.

I also would like to point out one minor point. Line 154 “Conclusions” is better to be “Discussion”.

Reply 1: Thank you for your critical review of the manuscript. We have submitted a high-quality version of the video. We have also changed the word conclusion to discussion.

Changes in the manuscript 1: We changed the word conclusion to discussion in line 232.

### Reviewer B

Comment 1: I have reviewed the paper again and I believe that the authors' responses do not completely satisfy the objections of the reviewers, including my own.

First of all, the conclusions are not fully supported by the data because the manuscript is a pure description of a single group of patients treated with a self-assisted robotic lobectomy. The authors should have compared these results with those obtained in another cohort of patients treated with an assisted robotic lobectomy, even if it is an historical control.

Reply 1: Thank you for your critical review of the manuscript. The main purpose of the paper is to show that with robot technology pulmonary lobectomy can be performed without an assistant. This is not possible with VATS or open technique. Being able to safely complete a complex operation provides added benefit of the robot technology compared to VATS or open. Thus, we compared of self-assisted robot lobectomy to VATS lobectomy. We have found that self-assisted robot lobectomy had favorable outcomes compared to VATS lobectomy.

Changes in the manuscript #1:

We made changes in the methods, results, discussion and table 1-3

Comment 2: Second, I don't see a real difference with the standard technique performed with the help of an assistant, because even with an assistant port in place, the procedure is substantially self-assisting anyway. According to the author's explanation, the difference seems to be related to the precise dissection instead of blunt dissection, but this can also be done with the standard surgical procedure performed with an assistant.

Reply 2: Thank you for your critical review. We agree with the reviewer that the robot allows lobectomy to be performed without significant help from an assistant. We want to contrast this to performing VATS lobectomy which requires assistant to complete the case. We found that robot lobectomy without an assistant had improved outcomes compared to VATS lobectomy.

Changes in the manuscript:

We made changes in the methods, results, discussion and table 1-3

Comment 3: Moreover, as I said in my previous review, it is not clear what the real advantage of this approach is, also because an average duration of surgery of 4 hours means a non-negligible expense linked to the prolonged commitment of the operating room. In other words, the cost savings associated with not using an assistant could be offset by a longer operating room commitment.

Reply 3: Thank you for your critical review. We compared the operative time for the self-assisted robot lobectomy to the VATS lobectomy and the robot lobectomy series from the Premier database and found that there was no significant difference in time among all of these series.

Changes in the manuscript:

We made changes in the methods, results, discussion and table 1-3

Comment 4: Third, the number of lymph nodes retrieved and of nodal stations sampled is unexpectedly low making the lymphadenectomy inadequate and this is strange because the robotic approach is particularly useful for this purpose.

In conclusion, I remain very skeptical about the publication of this manuscript.

Reply 4: Thank you for your review. We compared the lymph node retrieved between the robot vs VATS and found that there were significantly more lymph nodes retrieved in the robot lobectomy group.

Changes in the manuscript:

We made changes in the methods, results and table 2

### **Reviewer C**

Comment 1: I feel that the major strength limitation in this paper is that there is not a true comparison group. In the retrospective review of 1 surgeon performing these cases the fact that there were any differences could be a learning curve effect as well. I'm not sure this paper adds much value as many surgeons do not use an assistant port or may just use 3 arms and an assistant port. furthermore, I do not feel that these results of port usage can be extrapolated to compare to the national databases such as premier.

Reply1: Thank you for your critical review. We compared the self-assisted robot lobectomy group to VATS lobectomy group. We found that pulmonary resection can be performed without an assistant using the robot technology which is not possible with VATS technique. We also found that there was favorable outcome with self-assisted robot lobectomy group compared to VATS lobectomy group.

Changes in the manuscript: #1:

We made changes in the methods, results, discussion and table 1-3