

## Peer Review File

**Article information:** <http://dx.doi.org/10.21037/jtd-19-3465>

### Reviewer A

This a single center retrospective study of perioperative outcomes of different kind of VATS used for the treatment of clinical stage I lung cancer.

The indications for 3D single VATS, single VATS, conventional multiport VATS should be stated, why some of them choose 3D VATS?

**Reply:** Thank you very much for this important comment. The different surgical approaches were chosen according to different surgeons' specialization. Dr. Yao and some other fellows were specialized in 3D VATS, so that was why 3D VATS was chosen.

The reason why more lymph node was dissected during 3D VATS should be discussed, technical superiority would be one reason, but conventional multiport VATS should be enough to dissect all the lymph node, is there any other reason?

**Reply:** Thanks for this kind suggestion. In fact, 3D VATS did not show statistical difference against c-VATS among subgroup analysis of lymph node dissection (3D VATS vs c-VATS,  $p=0.617$ ), which not mentioned in the research, and it was revised in the revised manuscript.

In the method section, authors said trocars was used in 3D single port VATS, is it right?

**Reply:** Thanks for this significant comment. Trocars were not used in the 3D single port VATS, and it was revised in the revised manuscript.

**Changes in the text:** **Surgical operation of 3D single-port VATS of the Materials and Methods.**

In the lobectomy subgroup analysis, chest tube drainage duration was shorter for 3D group, since more lymph nodes were harvested during 3D VATS, as we concerned, the volume of chest drainage would be higher for patients underwent 3D VATS, are there any difference for the management of chest tube after operation, like the criteria for chest tube removal, and the position for placement of chest tube and size of chest tube.

**Reply:** Thank you very much for this important comment. In the subgroup analysis, 3D VATS did not show statistical difference against c-VATS among chest tube drainage which not mentioned in the manuscript (3D VATS vs c-VATS,  $p=0.192$ ).

**Changes in the text: Results resection.**

SPSS is a software for statistical analysis, what kind of method used for analyzing the data should be stated, like t-test, or chi-square test.

**Reply:** Thanks a lot for this important suggestion. The statistical methods have been added in the revised manuscript.

**Changes in the text: Statistical analysis of the Materials and Methods.**

**Reviewer B**

Overall, I think this article needs improvement in many aspects.

1. The language of this article has many grammatical errors and needs to be polished.

**Reply:** Thank you for this significant suggestion. The grammatical errors have been revised and the writing has been polished by the native English speaker.

**Changes in the text:** the whole article has been well-revised and polished.

2. The title does not reflect the main content of this study.

**Reply:** Thank you for this kind suggestion. The title has been rewritten in the revised manuscript.

**Changes in the text:** the title has been changed.

3. Arabic numerals should not be used at the beginning of a sentence.

**Reply:** Thanks for this kind suggestion. The sentence has been rewritten in the revised manuscript.

**Changes in the text:** the first sentence of **Method** in the **Abstract**.

4. Page 4 line 75, where is the middle lobectomy?

**Reply:** Thanks for this kind question. The right middle lobectomy was included in the analysis.

5. Page 5 lines 92-93, are there too many follow-up examinations? Brain MRI or CT is not a routine for early-stage lung cancer in China and worldwide.

**Reply:** Thanks for this important comment. The sentence has been rewritten in the revised manuscript.

**Changes in the text:** the sentence of the section of **Follow-up strategy and study endpoint** in the **Materials and Methods**.

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6. Page 5 lines 99-100, the definition of postoperative complications was all the abnormal phenomenon observed during perioperative time. This is ambiguous.

**Reply:** Thank you for this crucial comment. The writing has been recomposed in the revised manuscript.

**Changes in the text:** the sentence of the section of **Follow-up strategy and study endpoint** in the **Materials and Methods**.

7. The statistical analysis section is too simple.

**Reply:** Thank you for this important suggestion. The statistical analysis has been revised in the revised manuscript.

**Changes in the text:** **Statistical analysis** in the **Materials and Methods**.

8. What is the definition of perioperative period? From admission to discharge or intraoperative plus postoperative period?

**Reply:** Thank you for this significant question. The definition of perioperative period is the interval including intraoperative plus postoperative period.

9. The Results section only needs to describe the most important results, and do not repeat the content of the table.

**Reply:** Thank you very much for this crucial suggestion. The result section has been rewritten in the revised manuscript.

**Changes in the text:** **Results section**.

10. Discussions should focus more on the findings of this article.

**Reply:** Thank you very much for this significant suggestion. The discussion section has been rewritten in the revised manuscript.

**Changes in the text:** **Discussions section**.

11. The format of References has a lot of mistakes.

**Reply:** Thanks for your kind suggestion. The references have been rewritten in the revised manuscript.

**Changes in the text:** **References section**.

12. It is not clear which number in the tables is mean  $\pm$  standard deviation, and which is median (range). This should be clearly marked in the tables.

**Reply:** Thank you for this kind suggestion. The tables have been rewritten in the revised manuscript.

**Changes in the text:** **Table**.

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13. In Table 1, how is the tumor size measured? Max. diameter on chest CT or pathologic tumor?

**Reply:** Thank you for your meaningful suggestion. The size was measured by the maximum diameter of the chest CT.

14. Table 1 indicates that some baseline clinical characteristics are not comparable. Therefore, the conclusions should not be absolute.

**Reply:** Thanks for this significant comment. This was a retrospective analysis, along with three experienced surgeons who specialized in 3D single-port VATS, single-port VATS as well as c-VATS, respectively. Therefore, it would be not comparable among some kind of those baseline clinical characteristics. Besides, this was our initial experience of 3D single-port VATS for the treatment of early-stage lung cancer, the conclusions of which we made was exploratory and probable, but not absolute. The conclusions should be of verification after much more clinical practice in future.

## Reviewer C

The article is interesting because it reports on three-dimension (3D) single-port video-assisted thoracoscopic surgery (VATS). It showed that 3D single-port VATS, integrating the advantages of single-port VATS and 3D vision, is a safe and feasible technique. This approach may be promising for next-generation thoracoscopic surgery. I only have some minor comments:

1. Whether all the VATS were performed by one surgeon? If not, each surgeon volume should be considered as a potential confounder, because the surgeon experience of VATS has effect on perioperative outcomes.

**Reply:** Thank you very much for this significant comment. All the VATS operations were performed by three experienced surgeons who specialized in 3D single-port VATS, single-port VATS as well as c-VATS, respectively. All surgeons were experienced and skillful with more than 200 thoracic surgeries per year of each surgeon.

2. Which company produced the 3D thoracoscope?

**Reply:** KARL STORZ company

3. In all tables, what is the meaning of these figures in the brackets? If they are standard deviations, which do not match the definitions. For example, the figure in bracket in the age factor stands for years, but the figure in the three groups is 10.6, 12.4, and 10.7, respectively.

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**Reply:** Thanks for this important question. The tables have been rewritten in the revised manuscript.

**Changes in the text:** Table section.

4. The format of references should be abided by the author instruction (<http://cdn.amegroups.cn/journals/pbpc/public/system/jtd/jtd-instruction-for-authors.pdf>).

**Reply:** Thanks for your kind suggestion. The references have been rewritten in the revised manuscript.

**Changes in the text:** References section.

5. There were some syntax errors, which should be re-edited by native English speaker.

**Reply:** Thank you very much for this important comment. The manuscript has been re-edited by the native English speaker.

**Changes in the text:** the whole manuscript.