#### **Peer Review File**

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# Reviewer A

#### Comment 1

Recently, sublobar resection for small sized lung cancer has been a topic after the reports of the JCOG0802/WJOG4607L and CALGB140503. Therefore, it is thought that the interpretation of these reports will be discussed more by the thoracic surgeons in the future. This review introduced previous papers which evaluated the outcomes of sublobar resections and lobectomy. However, in the abstract section, although the authors described the theme of more than 2 cm lung cancer, this review didn't include the content of more than 2 cm lung cancer. It is recommended the authors also provide some comments about this type of lung cancer.

## **Answer 1**

Thank you for your comment. In the abstract we have made a mistake in P2L32 with the symbol of <. In this version we corrected the typo and so the major topic of the paper is segmentectomy in <2cm NSCLC.

# Change 1

P2L32 < instead of >

## Comment 2

I noticed that there were many repetitive sentences. I hope that the authors refine this article without the repetitive sentences.

#### Answer 2

Thank you for your comment and I'm fully agree with you. Following your advice, I deleted some repetitive sentences

## Change 2

P8L171 deleted

P13L316-318 deleted

P14L327-331 deleted

P14L335-338 deleted

P14L342-348 deleted

#### Comment 3

The authors described the following sentence "However, sublobar resection, especially anatomical segmentectomy, is still largely performed in open surgery (lateral or postero-lateral thoracotomy) because of the technical difficulties in handling the intersegmental planes and segmental hilum.". However, I wondered if this is true. I thought that some data or references would be required to prove this.

## **Answer 3**

Thank you for this suggestion and I'm completely agree with you because this statement needs an adequate literature base and so I added this sentence with references

# Change 3

P7L: "Effectively, of performed **RCT** the large part segmentectomy in the JCOG0802/WJOG4607L were conducted with a hybrid technique, whereas in the CALGB/Alliance 140503 RCT a more consistent rate of minimally invasive sublobar resection was reported (81%), but we need to consider the large adoption rate of wedge resection in this RCT. Furthermore, the multi-institutional analysis of the ESTS database confirmed that minimally invasive segmentectomy [] was performed in a third of patients (31.9%) in the period 2007-2018.

#### Comment 4

In line 45, there was a mistake in the "oncologica". Please check it well before the submission.

#### **Answer 4**

Thank you for your suggestion, I fix this typo

## Change 4

P2L45 oncological instead of oncologica

## Reviewer B

#### Comment 1

Congratulations for this review. However, I don't really like the classification between simple and complex because in my opinion all segmentectomies are "difficult"... I think the most important is to classify segmentectomies according to: respiratory function (intentional or compromised); the number of segments removed; the approach. Then, it is indeed mandatory to respect a strict "oncological check list" (margins > the tumor's diameter, at least the adjacent lymph node negative in frozen section, no STAS, no invasion of visceral pleura...) to ensure oncological results comparable to lobectomy. Indeed intentional segmentectomy is a surgery with obligation of results!

#### Answer 1

Thank you for your suggestion and comment. Following your advice I inserted a sentence and its reference about the ESTS consensus on lung segmentectomy and its suggested classification.

# Change 1

P8L175 "A recent expert consensus [] between European Society of Thoracic Surgeons (ESTS) members suggested to distinguish segmentectomy into single (removal of a single segment) and multiple (removal of more than one segment) almost because this classification have a functional implication.

# Reviewer C

This paper provides a comprehensive review of the outcomes of minimally invasive simple and complex segmentectomy, a surgical procedure used to treat lung cancer, based on a literature search from 1995 to 2023. The paper provides valuable insights into minimally invasive simple and complex segmentectomy outcomes. However, several issues need to be addressed to improve the clarity and presentation of the information. The paper could significantly contribute to lung cancer treatment by addressing these issues.

## Comment 1

Paper Structure: The current structure of the paper does not fully align with the study focus, title, tables/figures, subtitles, and conclusions. The subtitles (surgical approach, perioperative outcomes, oncological outcomes) do not correspond perfectly to the tables, the study focuses, and title. The structure of the paper must support the authors' study focus and title. Please consider revising the structure to ensure that all elements of the paper are cohesive and support the overall aim of the study. This may involve reorganizing sections, revising subtitles, or adjusting the content of tables and figures to better align with the study focus and title.

#### Answer 1

Thank you for your valuable comment and suggestions. After a whole and deep review, I'm completely agree with you and I modified the structure of the main text, starting from the adoption of minimally-invasive segmentectomy, surgical classification, post-operative outcomes, functional impact, next a paragraph about the prolonged air leak, the post-operative results of simple and complex segmentectomy and lastly the oncological outcomes of segmentectomy in coparison with lobectomy. I modified the subtitles accordingly.

# **Changes 1**

P6L132 inserted the subtitle: "Adoption of minimally-invasive segmentectomy"

P8L178 inserted the subtitle: "Surgical classification of segmentectomy" and also I inserted some sentences about this topic

P9L205 I inserted the paragraph entitled: "Post-operative outcomes of segmentectomy"

P9L224 I inserted the paragraph entitled: "Functional impact of segmentectomy"

P10L233 I inserted the paragraph entitled: "Is prolonged air leak a real issue after segmentectomy? P10L247 I inserted the paragraph: "Post-operative results of simple and complex segmentectomies"

## **Comment 2**

Study Aim: The aim of the study is currently located in the method section. It would be more appropriate to include this in the introduction to give readers a clear understanding of the paper's purpose from the outset.

#### Answer 2

Thank you for your comment, I moved the sentence about the aim of the paper at the endo of the paragraph Introduction.

# Changes 2

I inserted at P6L115 the sentence: "The aim of this narratire review is to summarize the current literature on sublobar resection and its role in lung cancer surgery evaluating postoperative outcomes and overall survival compared with lobectomy."

## **Comment 3**

References in Tables: The order of references in the tables must be organized. Please ensure that the references follow a consistent and logical order.

### Answer 3

Thanks for the valuable comment. In particular I modified the table 2

## Changes 3

I have revised table 3, the references were given in chronological order of publication of the scientific paper. Tables 3 and 4 have not been changed because the chronological order of publication of the paper has been followed.

#### Comment 4

Tables 3 and 4: Consider combining Tables 3 and 4, as they both compare simple and complex segmentectomies. This could streamline the information and make it easier for readers to understand.

# **Answer 4**

Thank you for your suggestion. However, it is not possible to combine the Table 3 and Table 4 in a single table. The studies in Table 3 and those in Table 4 cannot be compared because they consider different variables. In Table 3, we listed only studies comparing simple and complex segmentectomies performed with minimally invasive surgical techniques (RATS /VATS). In Table 4, we instead summarized postoperative outcomes after simple and complex segmentectomy, but the studies considered did not take into account the surgical approach used.

# **Changes 4**

No changes

### **Comment 5**

Table 4: This table would benefit from an additional summary column to show a summary of the results, similar to the conclusion column in Table 2.

## **Answer 5**

I agree with your suggestion, but we cannot add a column to the table summarizing the results because given the different typology of the different studies, it is difficult to summarize the results/conclusions (as in Table 2) in such a short table space.

# **Changes 5**

No changes

# **Comment 6**

Figure 1: Figure 1 may be a copy from another paper (Handa et al. Ann Thorac Surg 2019). If so, please ensure that appropriate permissions have been obtained and that the source is properly cited. If not, consider creating an original figure.

## Answer 6

Thank you for your valuable comment. I deleted the figure 1 because I think the readers could find themselves the figure in the cited paper

# Changes 6

I deleted the figure 1 from the paper