

## Peer Review File

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### Reviewer A

**Comment:** Line 33: we should de-identify the center for patient privacy protection, remove (Zuyderland Medical Center, Heerlen, the Netherlands)

**Answer:** Thank you for your comprehensive review of our manuscript and the comments raised. We agree that the manuscript should be de-identified for the sake of patient privacy. The manuscript was adapted accordingly.

**Changes:** See changes in line: 63

**Comment:** Line 40: specify more details about the PFT

**Answer:** Thank you for your comment. Additional details were added.

**Changes:** See changes in line: 7-72

**Comment:** Line 65: trunc should be trunk

**Answer:** Thank you for your correct comment. The typo was changed accordingly.

**Changes:** See changes in line: 91

**Comment:** The video is done very well. Did you use the same incision for the chest tube or a different one?

**Answer:** Thank you for your comment. As stated in the manuscript, the 28 French chest tube was left in place through the same incision.

**Changes:** No changes were made.

**Comment:** There needs to be a discussion section in the manuscript with some background about the techniques, previous reported experience, and how the author believes this approach will affect the patient outcomes in the future compared to standard segmentectomy. Will it provide less pain? Better cosmesis? Same oncological outcomes?

**Answer:** Thank you for your just comment. The discussion section was amended accordingly.

**Changes:** See changes in line: 114-155.

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### Reviewer B

**Comment:** There was no image demonstrated the vessels and bronchus of the apical segment. It's hard to say the resected A1 was the real A1 because in the video, the posterior recurrent artery seemed too large.

**Answer:** Thank you for your comprehensive review of our manuscript and the accompanied video. We agree that the posterior recurrent artery may seem large. However, the size of A2 may vary. In addition, demarcation confirmed that the real A1 was resected.

**Changes:** No changes were made.

**Comment:** According to the author, the demarcation of the intersegmental plane was identified by ICG infrared thoracoscopy. But the video did not show the picture. During separation of the intersegmental plane, there still had some retained expansion of S3. Was it possible that part of the B3 branch come from B1?

**Answer:** Thank you for your comment. The intersegmental plane was indeed identified by ICG infrared thoracoscopy. However, since a separate thoracoscope is used for visualization, the procedure was unfortunately not included in the recording. We fully agree that there was some minor expansion of S3. This This phenomenon, which occurs through the canals of Lambert, the pores of Kohn and the direct airway anastomosis is often observed, and is not due to anatomical variations in the bronchii.

**Changes:** See changes in line: 137-150.

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#### Reviewer C

I reviewed the manuscript entitled “Uniportal VATS right apical segmentectomy (S1): the surgical technique. VATS S1 segmentectomy: the surgical technique” This report was very interesting, but it has limitations that are addressed below.

#### Major comments

**Comment:** This manuscript only described the patient’s clinical course and the process of uniportal VATS S1 segmentectomy. Isn’t it necessary to describe the background, discussion, and references?

**Answer:** Thank you for your comprehensive review of our manuscript and the comments provided. We fully agree that a proper discussion section with applicable references should be added. The manuscript was amended accordingly.

**Changes:** See changes in line: 114-155.

**Comment:** In the surgical video, it was unclear how the intersegmental plane was identified. If the indocyanine green was used, the fluorescent view should not be omitted. And, how do you identify the intersegmental plane between S1 and S2? Especially, the intersegmental vein (V2a) between S1 and S2 could not be identified in this video.

**Answer:** Thank you for your just comment. Discussion has been added regarding the different methods to determine the intersegmental plane. Unfortunately, we use another thoracoscope to identify the intersegmental border using ICG which has not been recorded. We deliberately chose not to identify the intersegmental vein V2a since it is associated with a considerable risk of bleeding and parenchymal damage. We therefore used the method of hyperinflation which poses considerably less risk.

**Changes:** See changes in line: 97-98 and 137-150

#### Minor comments

**Comment:** It is thought that the nodal station 11 the author stated is the nodal station 13.

**Answer:** Thank you for your comment, following which we have thoroughly re-watched the recording. We agree that the specified nodal station does not concern station 11 but does concern

station 12 (as is also suggested by your colleague; reviewer E). The text and video have been adapted accordingly.

**Changes:** See changes in line: 98 and the video.

**Comment:** I think that it is necessary to add descriptions of the surgical time and the bleeding volume.

**Answer:** Thank you for your correct comment. The manuscript was amended accordingly.

**Changes:** See changes in line: 111-112

**Comment:** Although the bleeding from the bronchial artery occurred during the lymph node dissection of the subcarinal lymph node in the surgical video, could the bleeding be avoided if a multi-port VATS was applied? If the multi-portal was applied, an assistant could pull the posterior mediastinal pleura, and the bronchial artery could be divided without the bleeding. I doubt if the uniportal VATS is more useful than multiportal VATS in this regard.

**Answer:** thank you for your comment. We fully agree that resection of nodal station 7 is more challenging using an uniportal compared to a multiportal approach. However, after a learning curve, dissection is comparable between uVATS and mVATS. This is also demonstrated by the fact that there is no difference regarding oncological outcome between the two. An extensive elaboration has been added to the discussion section.

**Changes:** See changes in line: 114-150.

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#### Reviewer D

The authors present a case of a right upper apical segmentectomy with a uniportal technique along with accompanying video. Comments/questions below:

**Comment:** There are a few issues with grammar, syntax, and word choice that should be corrected. For instance, the third sentence of the manuscript is an incomplete sentence. “Accidental” is perhaps better termed “incidental” (line 64). “The patient denied re-bronchoscopy” is awkward and perhaps should just be omitted. “Trunc” should be “trunk (line 890) and I believe “cefazoline” (line 79) should be “cefazolin” although this may be British vs American English

**Answer:** Thank you for your comprehensive review of our manuscript. Changes were made, as proposed.

**Changes:** See changes in line: 64, 67, 81 and 91.

**Comment:** Please specify SUV max of lesion (as opposed to “metabolically active”).

**Answer:** Thank you for your just comment. The SUVmax was added.

**Changes:** See changes in line: 69.

**Comment:** Pulmonary function test results should just be stated in terms of percentage predicted numbers, rather than “a pneumonectomy as maximum”.

**Answer:** Thank you for your just comment. The percentage predicted numbers were added.

**Changes:** See changes in line: 70-72

**Comment:** In terms of the video, I think it would have been more helpful to have narration rather than music. In addition, I believe the video could be edited to be at least 2-3 minutes shorter, perhaps more. We do not need to necessarily see adhesiolysis and a couple of the parenchymal staple fires could be omitted, along with shortening (or even omitting) the lymph node dissection, irrigation, chest tube placement, and local anesthetic injection. Clip of the ICG being visualized could be helpful; I am familiar with this technique but some may not. I would like to compliment the investigators on the nice use of graphics in the video.

**Answer:** Thank you for your comment. We were requested by the editorial office to provide an instruction video from start to end for this special edition, being the reason to also include adhesiolysis et cetera. We agree that music may be distracting which has been removed accordingly. Regarding the use of narration, we will ask the editorial office whether this is desired, given that we got strict instructions which did not include narration. If desired we will add narration, as proposed by you. Regarding the clip of the ICG, unfortunately we use a different thoracoscope for its visualization which has not been recorded and could thus not be added. However, we have added discussion on the use of ICG.

**Changes:** See changes in line: 137-150

**Comment:** What is dose for the ICG? What camera system is used for near infrared imaging?

**Answer:** Thank you for your comment. 7.5mg of ICG was used. In addition, the Visera Elite camera system was used. The manuscript was amended accordingly.

**Changes:** See changes in line: 103-104

**Comment:** I think the type of staple load (blue, with staple height) should be specified in terms of transection of bronchus and parenchymal stapling. Interesting that the investigators used blue rather than green for parenchyma? Any particular reason why this is the case? Similarly, any tips/tricks suggestions that the investigators have would be welcome, as the surgical technique section reads in a fairly standard fashion and does not really provide much insight to the reader on how they would perform this operation successfully.

**Answer:** thank you for your comment. The use of different color staplers for different structures was added to the surgical technique sections. White (stapler height of 1.0 millimeters), blue (height: 1.5 millimeters) and green (height: 2.0 millimeters) stapler cartridges were respectively used for vascular structures, parenchyma and bronchus. In addition, the surgical technique section should be read while also viewing the video, providing a comprehensive overview of the technique and provide insight, where the latter is predominantly provided by the video, as it says more than words.

**Changes:** See changes in line: 94-96

**Comment:** Why was V1b not stapled also?

**Answer:** Thank you for your just comment. V1b is spared since it also facilitates venous return from S3. The manuscript was amended accordingly.

**Changes:** See changes in line: 97-98

**Comment:** Pathology information including tumor type, size, and margin status should be provided.

**Answer:** Thank you for your comment. Pathology information was provided accordingly.

**Changes:** See changes in line: 75-78

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**Reviewer E**

This manuscript addresses a technical issue about the single port approach for segmentectomy.

**Comment:** The author performed segmentectomy for a lesion with suspected lung cancer. However, it was solid nodule and FDG-PET indicated metabolically active. Therefore, I think that invasive carcinoma was suggested. Why did the authors select segmentectomy even though pneumonectomy was allowed by pulmonary function test.

**Answer:** Thank you for your comprehensive review of our manuscript and the comments provided. Despite the fact that a pneumonectomy was allowed, a segmentectomy was performed to spare the parenchyma. A meta-analysis dating from 2017 supports the idea that patients who underwent a segmentectomy have similar survival outcomes than those of patients who received lobectomy for early-stage non-small-cell lung carcinoma [2]. Though, this only counts for tumors which are 2 centimeters in size or smaller. For tumors larger than 2 centimeters, lobectomy is generally favored [3]. The discussion section was amended accordingly.

**Changes:** See changes in line: line 115-126.

**Comment:** I think that lymph node described as nodal station 11 in the video is station 12 or 13.

**Answer:** Thank you for your just comment. We fully agree that the nodal station of concern is station 12. The text and video were changed accordingly.

**Changes:** See changes in line: 98 and the video.

**Comment:** The author's video described mediastinal lymphadenectomy in poor operative field of view due to bleeding. It seems not a positive example for performing good systematic lymphadenectomy.

**Answer:** Thank you for your comment. Preferably a blood-less procedure is performed, however, unfortunately this is an example of daily practice, which is also resembled by the accompanied video. Sketching the ideal picture is also of no use if it cannot always be pursued.

**Changes:** no changes were made.