

## Peer review file

**Article information:** <http://dx.doi.org/10.21037/jtd-20-1170>

### Reviewer A

Comment 1: Firstly, it seems to me that the title is too long and complicated; I suggest shortening it, for example: “The length of the left superior pulmonary vein stump after lobectomy depends on its relation to the left atrial appendage”.

Reply 1: We have modified our text as advised (see Page 1, line 3).

Comment 2: In the “Introduction” section the authors clearly describe the rationale for the study. Citation supporting the statement in the line 38 (“longer... stump may increase the risk for postoperative cerebral infarction.”) should be included in this exact place of the manuscript, as this is a very important, clinical reason for conducting the study.

Reply 2: We have modified our text as advised (see Page 4, line 49).

Comment 3: I would suggest to make the aim of the study more clear and concise, for example: “The aim of the study was to investigate if the length of the LSPV stump is related to the anatomical position of the LSPV in relation to the LAA.”

Reply 3: We have modified our text as advised (see Page 4, line 58 to 59).

Comment 4: In general, the “Material and methods” section is written in a way that would allow any other researcher to repeat the study. Design is appropriate. Study period is stated. Inclusion and exclusion criteria are described. However, I have some question and suggestion for the authors.

(1) Was 91 a total number of LUL lobectomies performed in the Institution from January 2014 to March 2018? Or were there more patients not included in the study? If there were more patients, the authors should describe it in the inclusion/exclusion criteria.

Reply: Ninety one was a total number of LUL lobectomies performed in the Institution from January 2014 to March 2018.

(2) Did the authors obtain the approval from the Institutional Review Board or was it waived because of the retrospective character of the study? It is important to include it

in the manuscript.

Reply: We have modified our text as advised (see Page 5, line 66 to 67).

(3) How many observers analyzed the CT? Was it a surgeon or radiologist or both? It should be stated in the text.

Reply: Two surgeon analyzed the CT. We have modified our text as advised (see Page 5, line 68).

(4) What was the approach to lobectomy – VATS or thoracotomy?

Reply: VATS was performed in 62 patients, and thoracotomy was performed in 23 patients. We have modified our text as advised (see Page5, line 76 to 78 and Page 7, line 116 to Page 8, line 117).

(5) What kind of stapler was used? Was it a stapler dedicated to open or endoscopic surgery? Please describe the product by name, manufacturer, city and country.

Reply: We used automated suture devices (GIA Stapling System, Ethicon, Dublin, Ireland and Endo GIA, Covidien, Dublin, Ireland). We have modified our text as advised (see Page 5, line 79 to 80).

(6) Line 61,62: “The dissection line of the LSPV was made as short as possible” – do the Authors mean that the dissection length was short or that it was as proximal to the atrium as possible?

Reply 6: That meant the dissection line of the LSPV was as proximal to the atrium as possible. We have modified our text as advised (see Page 6, line 82).

(7) Statistical analysis should be described in greater detail.

Reply: We have modified our text as advised (see Page 7, line 105 to 109).

Comment 5: “Results” section is very short; however, the authors answer the question that was stated in the “Introduction”. More data on demographical factors, comorbidities, surgical approach, histology (benign or malignant, histological type and stage), postoperative complications, chest drainage type and hospital stay could be added.

Reply 5: We added some data as advised (see Page 7, line 113 to Page 8, line 126).

Comment 6: “Discussion” section includes short summary of findings and compares this findings to the most current literature. The authors state the limitations of the study (including the low number of CE-CT, which could be a reason to reject the study) and

point all of its most important implications.

“Table 1” is not necessary as it presents data already included in the text and should be removed.

Reply 6: We have removed “Table 1” in our text as advised.

Comment 7: Citation of figures in the text should be more clear (for example: Line 72 is: “CE-CT; 1-C, D”, should be “Figure 1C, 1D”).

Reply 7: We have modified our text as advised (see Page 6, line 88, 89, 92, 95, and 97 and Page 7, line 103).

Comment 8: I am not a native speaker, but I think that the paper is written with proper English. In summary, the paper helps to propagate the knowledge that the left upper lobectomy and longer stump could be the risk factors for CVA. Secondly, it identifies the radiological factor that is probably omitted by most of surgeons during preoperative CT assessment, namely relation of the left upper pulmonary vein to left atrial appendage, that could influence the length of the stump and hypothetically the risk of CVA.

I admit that my first thought when I received the paper was: “Why would anyone care for the length of the pulmonary vein stump and its relation to the left atrial appendage?”. In my center, the way to close the vein during VATS lobectomy is to do it as close to the lung as possible, because it facilitates the dissection of the A1+3 branch. Although the article is very niche, it adds two important information for my everyday practice: 1. I should analyze the relation of LAA and LPV; 2. I should change the way I close LPV. As the paper may influence the medical practice, I suggest the publication of the paper in the JTD after in-depth, major revision.

#### **Reviewer B**

I do not agree with the conclusion:

Comment 1: "The anatomical location of the LSPV relative to the LAA predicts the length of the LSPV stump after LUL" (lines 141-2) - it does not predict anything, yet 'is associated' with the length of the LSPV stump.

Reply 1: We have modified our text as advised (see Page 10, line 167 and Page 11, line 181).

Comment 2: Conclusion related to pre-operative management and anti-coagulation therapy (lines 142-6) must be deleted as it is irrelevant - that issue was neither mentioned beforehand nor constituted an aim of this study.

Reply 2: We have modified our text as advised (see Page 11, line 184 to 185).

Comment 3: Conclusions in the abstract differ from the main body's ones. Term 'significantly' (line 28) should be deleted.

Reply: We have modified our text as advised (see Page 3, line 39)

### Reviewer C

I think that this study presents some limitations:

Comment 1: It's a retrospective study.

Reply 1: We have modified our text as advised (see Page 10, line 170 to Page 11, line 171).

Comment 2: It is not a homogeneous study. The female group and the male group are not the same number and we know that anatomical dimensions and lengths in women are different than in men.

Reply 2: We added some data about male and female, respectively as advised (see Page 9, line 137 to 139, line 141 to 146, and figure 4).

Comment 3: I'm agree with all the limitations already exposed in this article

Comment 4: In this study, there's not a case that showed that a longer left superior vein is linked to the risk of cerebral infarction.

Reply 4: As Ohtaka K et al. reported in The annals of Thoracic Surgery in 2013, after lung lobectomy, a longer length of the left superior pulmonary vein (LSPV) stump might increase the risk for postoperative cerebral infarction. As Hattori A et al. reported in General Thoracic and Cardiovascular Surgery in 2019, the incidence of thrombus formation in pulmonary vein stump was significantly higher after left upper lobectomy (LUL) rather than after another part lobectomy. In our study, cerebral infarction occurred in one patient in the antero-superior group, whose length of the LSPV stump was 31mm, the case was the longest length of LSPV stump in female patient, with no

evidence of thrombus formation on contrast-enhanced CT. Although there is no statistically significant difference because of one case, the case of cerebral infarction in our study was a case of long LSPV stump. As you advised, more cases that occurred cerebral infarction after LUL could lead that a longer left superior vein was linked to the risk of cerebral infarction.