

Peer review file

Article information: <http://dx.doi.org/10.21037/jtd-20-1466>

Comment 1: What does a common trunk of the left PV in this study refer to: extrapericardial common PV trunk or extra- and intra-pericardial common PV trunk?

Reply 1: The authors are thankful to the reviewer for this quite important question. A common trunk of the left PV in this study means the extra-pericardial left common PV, which is important clinically.

Changes in the text: We changed the sentence of Introduction page 2, lines 62-64.

“The purpose of the present study is to identify characteristic findings that indicate the presence of extra-pericardial common trunk of the left PV extra-pericardial in the axial view of CT and to establish the preoperative diagnostic method.”

Comment 2: The distance must be affected by physique, gender, LA dilatation etc., and correction with these factors should be done, especially physique. Furthermore, I think that determination of cut-off value make the index more precise and useful.

Reply 2: The authors are thankful to the reviewer for this comment. As shown in Fig.5, the distance varies in each case. There was no correlation between the distance and the

physique or gender. Regarding the cut-off value, we added the analyze and described in the manuscript.

Changes in the text: We added the sentence. Please see Statistical analysis page 5, line 122-123, and Results page 6 line 139-140.

“A cut-off value of the distance in the objective criteria was evaluated and determined using a receiver operating characteristic (ROC) curve in each evaluator.”

“The cut-off value of the distance measured by each evaluator was 4.3cm (Y.O.) and 3.3cm (K.Y.) respectively.”

Comment 3: In Discussion, the authors described that 444 patients underwent contrast-enhanced scanning. These data should be described in Materials and Methods. Did the enhancement affect the precision to determine the superior and inferior junction?

Reply 3: The authors are thankful to the reviewer for this indication and question. We moved the pointed data in Materials and Methods. Regarding the enhancement, as described in the second limitation of Discussion, the contrast-enhanced image is described more clearly than the plain CT image, but even the plain CT image may be evaluable because both of the two patients who underwent plain CT study were coincident in the evaluation.

Changes in the text: We moved the pointed sentence to Materials and Methods and modified it. Please see Material and methods page 3, line 91-92.

“In the present study, the contrast-enhanced images were obtained in 414 patients among the 416 patients who were able to be evaluated.”

Comment 4: On line 106, the sentence “the distance between the mediastinal side of the left lower bronchus and the middle point of the confluences where each left PV joins with the left atrium” should be changed to “the distance between the mediastinal side of the left lower bronchus and the site where the left lower PV joins with the left atrium”, because the evaluators did not measure the upper PV side distance.

Reply 4: The authors are thankful to the reviewer for this indication. We changed the pointed sentence.

Changes in the text: We modified the sentence as advised. Please see Materials and methods page 4, line 106-107.

“the distance between the mediastinal side of the left lower bronchus and the site where the left lower PV joins with the left atrium”

Comment 5: Will there be any patients without common PVs even when we detect the

junction?

Reply 5: The authors are thankful to the reviewer for this question. The answer is yes.

Only one case which both of the two evaluators diagnosed as the left common PV, was without common PV. We cannot find the reason of misdiagnosis. This result is described in the end of Results. Please see Results page 6, line 152-153).

“Among those 16, a common trunk was confirmed in 15 (94%).”

Comment 6: Can a surgeon detect the intrapericardial common PV trunk without pericardiectomy?

Reply 6: The authors are thankful to the reviewer for this question. The answer is no.

Comment 7: In which cases did the distances not match between the two evaluators?

Reply 7: The authors are thankful to the reviewer for this question. As described in Discussion, there were three patients who have a discrepancy between two evaluators regarding diagnosis of a common trunk of the left PV in the subjective criteria. Regarding the objective criteria in the three patients, the distance measured by Y.O. was 4.3cm, 5.3cm, and 6.4cm respectively, whereas that by K.Y. was 5.2cm, 3.3cm, and 2.9cm respectively. We tried to confirm the characteristics of the patients whose evaluations

were mis matched, but there is no characteristic, including physique, gender, tumor size and location, and lymph node swelling. Careful consideration of the anatomy during surgery is important for these patients whose measured value is on the borderline.

Comment 8: The cases of the common trunk of PVs were 26 people from 4 facilities.

Why did you not analyze the results shown in Figure 4 using a total of 416 patients?

Reply 8: The authors are thankful to the reviewer for this question. As the reviewer pointed out, it would be better if we could review the surgical videos in a total of 416 patients. Unfortunately, there were many cases whose surgical videos were not available. Therefore, we focused on the patients who were diagnosed as the left common PV.

Comment 9: The authors should evaluate and determine the distance cutoff value of the common PV trunk observed in Materials and Methods, and Results.

Reply 9: The authors are thankful to the reviewer for this indication. As the reviewer pointed out, we evaluated the distance cut-off value of the left common PV and described in the manuscript.

Changes in the text: We added the sentence. Please see Materials and method page 5 line 122-123, and Results page 6, line 139-140.

“A cut-off value of the distance in the objective criteria was evaluated and determined using a receiver operating characteristic (ROC) curve in each evaluator.”

“The cut-off value of the distance measured by each evaluator was 4.3cm (Y.O.) and 3.3cm (K.Y.) respectively.”

Comment 10: There are 113 patients in p3, line 95, but 109 patients in p5, line 146, which is inconsistent.

Reply 10: The authors are thankful to the reviewer for this indication. In the present study, 12 of 428 patients were excluded. In the patients of Nagoya City University Hospital, 4 patients were excluded. So, there were 109 patients who were able to be evaluated.

Comment 11: There is not enough information on the tumor location and size in the manuscript. Whether or not there are metastases to the #7 lymph nodes and their size should be noted as well.

Reply 11: The authors are thankful to the reviewer for this indication. The information that the reviewer pointed out would be better if it is possible to describe in the manuscript. However, we didn't obtain the data such as the tumor location or subcarinal lymph node metastasis because these factors were thought to have less correlation with congenital

anomaly.

Comment 12: Do the distances differ between types L1a and L1b of the left common PV as shown by Marom? The authors should show the numbers of each type in Results and the relation of the types and the distance in Discussion if possible.

Reply 12: The authors are thankful to the reviewer for this indication. In this study, we don't have the posterior colonal-oblique shaded-surface CT images in the most cases. Therefore, it is difficult to evaluate the difference in the distance between types L1a and L1b of the left common PV in our cases. This indication is a very interesting suggestion, so we would like to check this in the next study.

Comment 13: In Discussion, the outcome data, which should correctly be in Results, are described. They should be moved to Results or removed.

Reply 13: The authors are thankful to the reviewer for this indication. We removed the outcome data in Discussion.

Changes in the text: The words of “(correlation coefficient: 0.84)” and “(K statistic: 0.94)” were removed (Discussion page 8, line 182 and 183).

Comment 14: In Figure 3, the authors should show the junction with an arrowhead, not

a half-arch line.

Reply 14: The authors are thankful to the reviewer for this indication. Figure 3 has been modified.

Changes in the text: Figure 3 has been modified as advised.