

Peer Review File

Article information: <https://dx.doi.org/10.21037/jtd-24-444>

**Reviewer A**

**Comment:**No particular area that needs to be addressed.

**Reviewer B**

**Comment1:**Regarding sublobectomy, there is a difference in the dissection of intrapulmonary lymph nodes between wedge resection and segmentectomy, as well as a difference in local recurrence rate. Shouldn't the number of wedge resections and segmentectomies in this study be indicated? Your opinion would be appreciated.

**Reply1:**Wedge resection as well as segmental resection were not discussed in detail in this paper, and further studies are needed to analyse the differences between the two.

**Changes in the text:-**

**Comment2:**For STAS (+) lung adenocarcinoma less than 2 cm (p-stage IA), is it possible that lobectomy is superior to sublobectomy and SLND is superior to LLND because of the difference in upstaging from c-stage IA to non-p-stage IA? Shouldn't the study results for c-stage IA also be presented to address the above concerns? I would appreciate your opinion.

**Reply2:**We included patients with TNM staging based on postoperative pathological staging, and all patients had P stage IA and would not have been due for lymph node positivity leading to postoperative upstaging.

**Changes in the text:-**

**Comment3:**Please provide your Ethics Committee approval number for this study.

**Reply3:** Ethics Committee approval number: 2022-RE-178

**Changes in the text:-**

**Comment4:**Regarding the definition of lymph node dissection, am I correct in understanding that SLND at your institution is ND2b, and ND2a-2 has been determined not to be SLND? In other words, is ND2a-2 classified as an LLND? Please provide me with information on the above. Also, please add an additional note in the paper when necessary.

**Reply4:**ND2a-2 has been determined to be SLND.

**Changes in the text:-**

**Reviewer C**

**Comment1:**The Statistical analysis section should be a little more explicit regarding the type of variables considered, and their analysis. On the other hand, there is some disparity between the statistical analysis described in the summary (Methods) and in the Statistical Analysis section.

**Reply1:** We have modified our text as advised.

**Changes in the text:** See page5-6,line 165-167.

**Comment2:**Regarding preoperative co-morbidities, the authors do not indicate whether, to be considered present, patients had to have all the collections? Or only part of them?

**Reply2:** We consider the presence of preoperative comorbidity whenever one or more are present.

**Changes in the text:-**

**Comment3:**In the explanatory text of Table 1, the term preoperative comorbidity is more correct than preoperative complication.

**Reply3:** We have modified our text as advised.

**Changes in the text:** See page16,line 429.

**Comment4:**Regarding the list of comorbidities considered, it is notable that the authors include asthma, but not COPD.

**Reply4:**We have modified our text as advised.

**Changes in the text:** See page16,line 430.

**Comment5:**The list of figures does not appear correlatively in the text (figure 2 appears last).

**Reply5:** We have modified our text as advised.

**Changes in the text:** See page7,19

**Comment6:**Could the difference in survival depending on the type of lymphadenectomy be related to the type of lung resection? Probably, when performing a lobectomy, a systematic lymphadenectomy is more frequently performed, and when the resection is sublobar, a limited lymphadenectomy is more commonly performed. The authors themselves refer to this same thing in the discussion. Therefore, the role of lymphadenectomy would be questionable. With the data available to the authors, could the analysis be stratified by crossing the types of lung resection and lymphadenectomy performed?. In the recognition of limitations, a generic mention is made of this issue, although rather in relation to patients' backgrounds.

**Reply6:** It is difficult to stratify the types of pneumonectomy and lymphadenectomy based on the data available to us.

**Changes in the text: -**

**Comment7:**Authors should include the meaning of the acronym IASLC.

**Reply7:** We have modified our text as advised.

**Changes in the text:** See page 9, line 276-277.

**Comment8:**This statement is probably wrong: "In this study, STAS was found to be significantly associated with the lepidic (P<0.001) and papillary (P=0.001) histological subtypes".

The authors state in Results (L.163-165): "STAS was more common in visceral pleural invasion (VPI) (P=0.031), MP (P<0.001), and solid pattern (P=0.001) and less common in the papillary pattern (P=0.001); the lepidic pattern was more common in the STAS-negative patients than the STAS-positive patients (P<0.001)".

**Reply8:** We have modified our text.

**Changes in the text:** See page 9, line 291-292.

### Reviewer D

**Comment1:**The most critical issue was that this study is a retrospective analysis. The authors' inclusion criteria were "p-T1-2N0" disease; hence, the pN-positive patients were eliminated. The nodal evaluation was more completed for the SLND group, and the LLND group might have N-positive cases. So, it is natural that the SLND group showed better survival than the LLND group. The utility of SLND cannot be discussed based on the authors' data.

**Reply1:** The majority of patients in the LLND group underwent sublobar resection, and the probability of lymph node transfer in this group was relatively lower, with a very small impact on the article results.

**Changes in the text:** -

**Comment2:** It can be said that the same issue applies to the surgical procedure. It is well known that STAS-positive LUAD showed a higher prevalence of nodal metastasis. If the patients underwent sublobar resection for STAS-positive LUAD, there was a higher risk of false negative surgical pathology results than in STAS-negative cases

**Reply2:** The presence of STAS is independent of the surgical approach; STAS is an aggressive form of lung adenocarcinoma. The surgical approach does not affect the detection of STAS.

**Changes in the text:-**

**Comment3:** There was no detailed information about nodal dissection. At least, the authors focused on the importance of LN; hence, the number of LNs and stations dissected during surgery should be mentioned.

**Reply3:** We add some data.

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Pvodgt " qh" n{or j" pqf g'	UNPF	37026 `` 40448	360: : `` 402: 2	2069:	20856
f kuugevkqp" uvcvkqpu	NPF	6036 `` 307; 5	5085 `` 30585	30426"	20457

**Changes in the text: -**

**Comment4:**This manuscript's second critical issue is also related to the retrospective nature of this study. The reason for the selection of SLND or LLND was unclear. Generally, diagnosing the histological subtype of adenocarcinoma and STAS by frozen section is complex. How many cases were selected nodal dissection type by intraoperative pathology?

**Reply4:** The choice of surgical procedure is mainly based on the clinical experience of different surgeons, and we favour lobectomy and SLND when some high-risk factors are present. It is relatively difficult to diagnose intraoperative STAS and it is not possible to rely on intraoperative freezing to determine the surgical procedure.

**Changes in the text: -**

**Comment5:** As for the discussion section, again, the benefit of SLND cannot be discussed by the results of this study. At least, the authors should show the comparison results between clinical stage I-II STAS positive LUAD with SLND vs LLND.

**Reply5:** we add some data in comment3 which we think could answer the question.

**Changes in the text: -**

**Reviewer E**

**Comment 1:Abstract**

Please extend the content of the Background. Usually, this paragraph should contain 'study background' and 'study objective'.

Reply: We have extended the content of the Background.

**Comment 2:**Please check all abbreviations in the abstract, highlight box, and the main text, such as **STAS, SLND, LUAD** in **Highlight box**. Abbreviated terms should be full when they first appear.

Reply: Abbreviated terms are full when they first appear.

**Comment 3: Checklist**

1) Item 12, 13, 14, 16: the author only filled "page", please supplement. In the checklist, please indicate the detailed Page Number, Line Number

		(d) <b>Cohort study</b> —If applicable, explain how loss to follow-up was addressed <b>Case-control study</b> —If applicable, explain how matching of cases and controls was addressed <b>Cross-sectional study</b> —If applicable, describe analytical methods taking account of sampling strategy	page	Statistical methods/paragraph
		(e) Describe any sensitivity analyses	page	Statistical
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	page3/line100-113	Participants/paragraph 4
		(b) Give reasons for non-participation at each stage	page	Participants/paragraph
		(c) Consider use of a flow diagram	page	Participants/paragraph

2) Item 15

Please confirm if your article is a Cohort study. If yes, NA should be filled in the

Case-control study and Cross-sectional study in item 15 in the reporting checklist (as shown below); If not, please confirm the study type and revise the checklist attached.

		(c) <b>Cohort study</b> – Summarise follow-up time (eg, average and total amount)	page	Description of data/parag
Outcome data	15*	<b>Cohort study</b> – Report numbers of outcome events or summary measures over time	page	paragraph
		<b>Case-control study</b> – Report numbers in each exposure category, or summary measures of exposure	page6/line 75-195	2-3
		<b>Cross-sectional study</b> – Report numbers of outcome events or summary measures	page	paragraph

Reply: We've refined the Checklist.

**Comment 4:** The citation of Ref. 20 in the main text was missing. Please indicate where you would like to cite Ref. 20 in the main text, which should be cited between Ref. 19 and Ref. 21.

Reply: we have cited Ref. 20 in the main text of line-287.

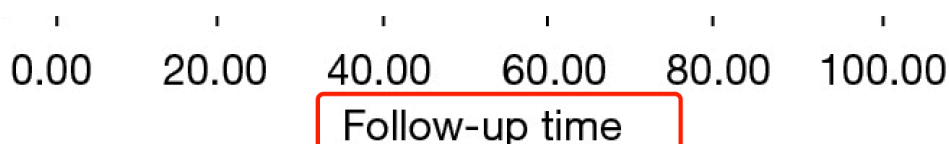
**Comment 5:** The authors mentioned “studies...”, while only one reference was cited. Change “Studies” to “A study” or add more citations. Please revise. Please number references consecutively in the order in which they are first mentioned in the text.

*Prognostic studies of early stage LUAD have identified a number of high-risk factors that can have a significant impact on the long-term prognosis of patients (12).*

Reply: Revision has been made.

**Comment 6:** Fig 1-Fig 6

Please provide the unit for the x-axis.



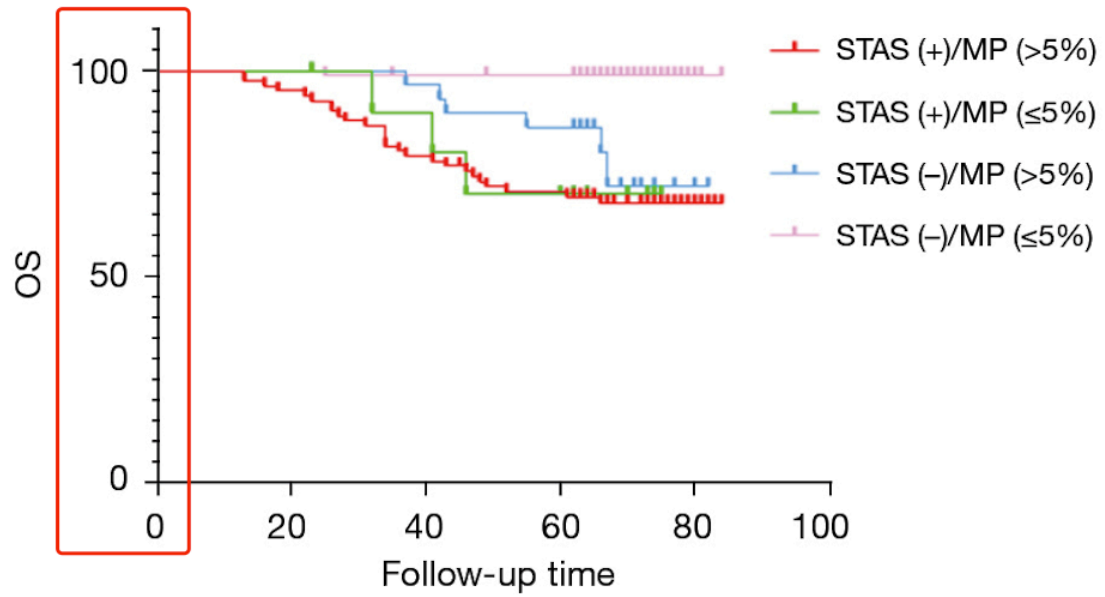
Reply: Revision has been made.

**Comment 7:** Figure 6

The correct format for the y-axis should be one of the following, please revise.

a) If the description is “OS, %”, the numbers should be 0-100.

b) If the description is “OS”, the numbers should be 0-1.0.



Reply: Revision has been made.