

Peer Review File

Article information: <https://dx.doi.org/10.21037/asj-22-21>

Reviewer 1:

Comment 1:

It is very difficult to read and understand. The authors may need to address the readability issue.

Reply 1:

We thank you for the insightful comment.

The authors asked for reading and review regarding phrasing and grammatical errors to native and non-native English speakers, to a total of 4 persons.

The opinion was that, from linguistic point of view, the article was well constructed.

Therefore, the authors agree that, for this type of paper, the readability is acceptable and ask for a second read and ask more objective and constructive comments, if applicable.

Reviewer 2

Comment 1:

lines 73-77: Please add references (e.g. from existing literature references 11-13) concerning the "advantages...reported in the literature" (from line 68-81).

Reply 1:

The authors thank you for the insightful comment. The reference was added.

Comment 2:

lines 165-175: The use of simulation and advanced technical devices surely will play a greater role in the future training for surgeons of every subspeciality. To give a more precise outlook on this topic, I would recommend to take a closer look on contemporary emerging technologies like extended reality as following not only virtual reality, but as well augmented and mixed reality.

These will probably will change the way not only we plan surgery in the future but as well will be a great improvement for trainees and students in regards of visual assessment of anatomy and identification of structures as you pointed out in line 136. Exemplary literature references could be Triberti et al. Augmenting Surgery: Medical Students' Assessment and Ergonomics of 3D Holograms vs. CT Scans for Pre-Operative Planning. EAI Endorsed Transactions on Pervasive Health and Technology. 2021;7:e5.

or Ujiiie et al. Developing a virtual reality simulation system for preoperative planning of thoracoscopic thoracic surgery. Journal of thoracic disease. 2021;13(2):778-83 or Lee et al. Novel Thoracoscopic Navigation System With Augmented Real-Time Image Guidance for Chest Wall Tumors. The Annals of thoracic surgery. 2018;106(5):1468-75.

Therefore, you should define the term simulation more precisely in extended (or virtual) reality simulation and/or black box simulation. As well you might consider mentioning 3D-printing in the same context.

Reply 2:

Thank you for your insightful comment. The authors agree with the importance of the mentioned technologies and that they will play an important role in the future. The recommended papers were analyzed and a new paragraph (from line 217-224) was written mentioning these emerging technologies.

Comment 3:

line 299: As we perform open lobectomy through a muscle-sparing antero-lateral thoracotomy for many years with the surgeons position anterior for I would agree that this is substantial difference even though postero-lateral thoracotomy with a posterior position of the surgeon surely still plays a role for certain procedures and approaches.

Reply 3:

Thank you for your comment. The authors agree that postero-lateral thoracotomy with posterior position still plays a major role. We added a sentence making this clear for readers (from line 365-366).

Reviewer 3:

Comment 1:

I would suggest to take out from the abstract the following part: "The authors defend that the learning process is divided in five fundamental areas:...." because this is repeated in the background part.

Reply 1:

The authors thank you for the insightful comment. The abstract was rephrased as suggested.

Comment 2:

I am missing the reference to the following sentence: "Nowadays, we have a great number of thoracic surgery centers performing more than half of surgeries for lung cancer using thoracoscopic techniques, with the associated advantages many times reported in the literature".

Reply 2:

The authors thank you for the insightful comment. We cite the paper regarding comparison from the ESTS database. Reference was added (line 79).

Comment 3:

The manuscript is divided into "introduction" followed by "background" - I would suggest to rephrase the title or combine both parts.

Reply 3:

The authors thank you for the insightful comment. This section was rephrased as suggested.

Editorial comments:

1. Introduction - Please kindly cite the original data source for the sentence “The American Board of Thoracic Surgery established 25 Video-Assisted Thoracic Surgery (VATS) lobectomies as the minimum for eligibility in the general thoracic surgery career choice while the European Society of Thoracic Surgeons established 50 VATS lobectomies as the minimum for proficiency and 25 per year thereafter.”

Reply 1:

The authors thank you for the insightful comment.

The sentence was rephrased with specific citation to improve clarity (line 118-121).

2. Before the conclusion of the full paper, it is recommended to add a discussion of limitation. Although this is a review, we think adding a discussion of limitation will allow the reader to understand and view some of the findings and recommendations in this paper more objectively.

Reply 2:

We thank you for the insightful comment. The authors agreed and added a paragraph on limitations before the conclusion.

3. We have an emphatic suggestion that, before formally introducing the purpose, the authors compare this review to existing reviews addressing the same topic (the evolution from open versus vats teaching). On this basis, go over what this paper offers in terms of new content or lessons learned based on previous similar reviews. This will greatly increase the interests of reading at the beginning.

Reply 3:

We thank you for the insightful comment. The authors agreed and decided to proceed to a literature review and include a new paragraph on history of thoracic surgery and current state narrative reviews on minimally invasive thoracic surgery.

4. I would rather suggest the authors present the evolution covered in the article, in a visual representation, with the years involved. Also, in this visualization, add the core ideas suggested in this article. This may greatly improve the engagement of this article.

Reply 4:

We thank you for the insightful comment. According with the previous reply, the authors attached figure 1 as a timeline to summarize the paragraph.