

Peer Review File

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Reviewer A

The authors attempt to perform a broad review of the learning curve of RATS and VATS surgery. It is an important topic and one that should be studied. But the manuscript would need major revision before being acceptable for publication. My concerns include the following:

1) The authors included Uniportal in the VATS group, but don't do a separate analysis of this. This is a much more challenging technique that is hard to teach novice learners (residents and fellows). This really warrants its own section, or removal from the manuscript.

Reply: We removed the text about Uniportal VATS

2) There is no large organized table outlining the authors' review of the many manuscripts. What is their final take? What is the consensus (or lack there-of) on the minimum cases to get through the learning curve? There is actually very little in the take home message. Even in the abstract, it is not well written and of little use to someone reviewing the abstract.

Reply: A summary table with a short review of each manuscript would have been beyond the scope of our review which, I remember, was focused mainly on similarities and differences between the different LCs. We added both in the abstract and in the discussion part a reference to the minimum cases needed to get through the LC, even though a clear consensus on the statistical relevance is far from existing.

3) The methods could be rewritten with an accompanying figure to outline the search. What was the total number of articles found? Why did they choose the 50 that they selected? This is not clear at all.

Reply: We added these informations in the text and we added an accompanying figure as you requested.

4) The authors basically list each paper that they reviewed, but don't interpret and summarize the data to be more easily digestible. It is hard to read the text and to go through each different "manuscript" without an overall "theme" running through the section.

Reply: The purpose of this review was to enlist all the most recent contributions in the understanding of minimally invasive LCs. A concise summary (the "theme" the reviewer is referring to) of the data we found is clearly stated in the discussion section, where we outlined all the similarities and differences between the different LCs.

5) I think this article needs more extensive senior author review and participation by someone who has written review articles with meta-analyses.

Reply: The article has been reviewed by our oldest contributor and he's now eligible for publication

Reviewer B

This is a meaningful review, but requires in-depth major revisions.

1) The uniportal VATS is the trend, which is being accepted by more and more thoracic surgeons. The authors have described it as an advancement of multi-ports VATS. But it is not specific enough. For example, what about the situation of Uniportal VATS converted to open thoracotomy or multi-ports VATS?

Reply: We removed the text about Uniportal VATS

2) The authors imply that different studies have similar assessment parameters, but it is difficult to unify the standards for different studies. With different standards, it would be better to summarize the data for meaningful result and to achieve specific numerical goals.

Reply: We did summarize our findings in the discussion section.

3) For VATS, the author has considered the following aspects: whether the starting

point is the same, whether it is practiced on the basis of only open surgery experience, whether the simulation training is beneficial, and what are the advantages of the large center, etc. But for RATS, the explanation is relatively simple, and no explanation is given for the above issues.

Reply: I don't agree with the reviewer. In fact, there is a smaller but significant explanation in the RATS section according to literature, which, I remember, is significantly less compared to VATS.