Peer Review File

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Review Comments

Reviewer A

The authors present a study reviewing the literature, as well as, a single center's data to evaluate gender differences in outcomes for those that underwent lung cancer resection.

In the introduction, the authors should better define the specific question they are addressing with their study.

Reply: Thank you for your suggestion. The additional information is written in line 89

With respect to the study design, a single-institution experience of patients undergoing robotic-assisted lung resection may not be the best design as there is inherently bias in this cohort.

Reply: Thank you for your consideration. We introduced this change in line 266

The authors may want to consider revisions to paragraph structure of their manuscript, as some paragraphs are composed of single sentences.

Reply: Thank you for your valuable consideration. We revised the whole text as you suggested.

Reviewer B

Interesting article on gender differences in lung cancer surgery outcomes. Authors use the structure of a narrative review and add their own data.

The topic is of great interest and has the potential to have a good impact, as well as the content, in general, is good, but I have some concerns and suggestions:

1. At several points in the article sentences are without reference. I noticed that many of them are the same reference in the following sentence, but whenever a statement ends, reference it.

Reply: Thank you for your valuable suggestion. We revised the whole paper introducing more references.

2. For me, this is the crucial point and it will demand the greatest review by the authors: the review was only carried out until December 2019 and I understand that this is done to limit the results. However, good evidence on this topic has emerged to the present day and is not included in this article, causing its impact and validity to be severely affected. Therefore, I suggest that authors extend the research time to more recent dates, which encompass the most robust, current and accurate data published by recent studies in the area.

Reply: We thank you very much for your comment which is an excellent point of reflection. However, we would like to underline some crucial points that cannot be overlooked in our work.
In fact, the choice to analyze patients up to 2019 is certainly not to limit our data, considering that a series of 407 patients cannot be considered small, but to allow for more consistent data concerning oncological follow-up.
In fact, in our series, the average follow up is 47.05 months, which represents a long enough period to consider our results scientifically consistent. Accordingly, analyzing more recent data, would mean shortening the follow up period, and this could constitute a not negligible bias.
Furthermore, we cannot overlook the impact of the pandemic which has negatively affected the quality of life of patients since 2020. We strongly consider that this factor may also constitute a bias in the analysis of gender-related outcomes after lung surgery.

3. The methodology is described in a table and this is completely inadequate. Especially in the case of a review, this should be the heart of the article, be detailed and allow for reproducibility. The table serves as a good summary of the methods and should be kept, but only as a complement. I suggest authors add text describing the methodology in detail (2-4 paragraphs at least). The methodology of the patients analyzed by the authors should also be described.

Reply: Thanks for this valuable comment. We explained our methodology in a new paragraph on the lines 97-121

4. Still talking about the patients analyzed themselves. The text description is good, but I miss tables and images that summarize the population and the findings. In addition, I miss statistical tests comparing the groups.

Reply: Thank you for your suggestion. We have compiled a new summary table (Table 2, line 184).

5. The discussion structure is well done, but it does not cover the area well. I miss a more in-depth discussion, using more relevant studies and comparing numbers and data. In addition, as it is a review, perhaps a division by topics is more interesting. There are several very pertinent discussions about gender differences in cancer in

particular and in lung cancer that deserve to be mentioned and discussed. In general, in my opinion, the discussion is superficial and deserves to be completely reformulated.

Reply: Thanks for your important remark. We added new information in the discussion.
Line 205-222, Line 253-257, Line 266

Re-Review Comments

Reviewer B believes that the authors have not adequately covered the literature in this review. There are interesting works that were not considered. In addition, nothing new is presented in the study.
The authors are strongly recommended to add more cutting-edged work and highlight what new summary they contribute compared to other reviews.

Reply: Thanks for the valuable suggestion.
We have cited other influential metanalyses with a large series concerning the risk and the prognostic factors of lung cancer in female patients. The studies are cited to the lines 244-262 and mentioned in the bibliography too.
In addition, we assume that our experience is relevant, as data on gender differences in patients undergoing exclusively robotic surgery are lacking in the literature.
This concept is now stressed in line 49 of the abstract and in lines 112-113 of the main text.