## TRANSLATIONAL LUNG CANCER RESEARCH

## **Peer Review File**

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**Reviewer Comments** 

Lung infection is a common complication after thoracic surgery and can carry severe consequences. In the manuscript "Interactions between the enhanced recovery after surgery pathway and risk factors for lung infections after pulmonary malignancy operation", authors explored the risk factors for postoperative lung infections (POLI) following pulmonary malignancy operation and assessed the protective effect of enhanced recovery after surgery (ERAS) and their potential interactive relationships.

Couple questions are required to be answered before accepted.

- In the introduction, please enrich the progress of the treatment for lung cancer. Comments 1: Thank you for your suggestion. We have enriched the regular care in the text. (see Introduction, Paragraph, Line)
- (2) There were several grammar errors in the text. Such as "carry severe consequences" in the background of the abstract, should be changed to "lead to severe consequences".Comments 2: Thank you for your suggestion. We have revised and rectified some grammar errors in the text.
- (3) How many cases enrolled in the paper? What are the criteria of exclusion for enrolled patients? Please elucidate clearly in the methods.

Comments 3: Thank you for your questions. We have supplemented the total number of cases and the criteria of exclusion in the text. (see Materials and Methods, Paragraph, Line)

- (4) Why to name the figure 1 as figure 1a-b? And, the same to figure 2.Comments 4: Thank you for your question. We have rectified the error.
- (5) Whether or not, are there other risk factors except included factors in the paper, for lung infection after pulmonary malignancy operation?

Comments 5: Thank you for your questions. Others had reported that age, lung function, smoking status, and respiratory and cardiovascular comorbidities were risk factors (as we mentioned in introduction, see Introduction, Paragraph, Line). We found that that smoking, heart disease were independent risk factors for POLI while age, BMI, FEV1/FVC and surgical approach were non-significant.

- (6) How to treat for lung infection after pulmonary malignancy operation?Comments 6: Thank you for your question. We encourage the patients to expectorate and apply antibiotics to treat POLI and we enrich this part in Discussion. (see Discussion, Paragraph, Line)
- (7) What are the protective factors? How to overcome the limitation in the paper? What is your suggestion to reduce lung infection after pulmonary malignancy operation? Please supplement in the discussion.



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Comments 7: Thank you for your questions. The only protective factor we have found is to apply ERAS pathways. As we found that smoking, heart disease, massive blood loss during surgery were independent risk factors for POLI, to quit smoking, to control heart diseases before surgery and for surgeons to control the intraoperative blood loss are theoretically effective to reduce lung infection after pulmonary malignancy operation.

The main limitation is that the research is a retrospective study and due to the lack of randomization, many influencing factors could not be controlled. Further randomized clinical trials are needed to eliminate bias and confirm the interaction between ERAS and specific risk factors.

