

Peer Review File

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Reviewer A

Here's an interesting article; this study provides researchers with the focus of lung cancer research supported by NSFC and NIH in recent years, facilitating researchers to apply for scientific research funding in combination with their scientific research conditions.

My comments are as follows.

1. It would be better if the authors can analyze the immunotherapy related funding situation combining with immunotherapy related research literature on lung cancer in recent years.

Reply: Thank you for your advice. We have supplemented some immunotherapy related funding situations and added some literature about immunotherapy research in the introduction section.

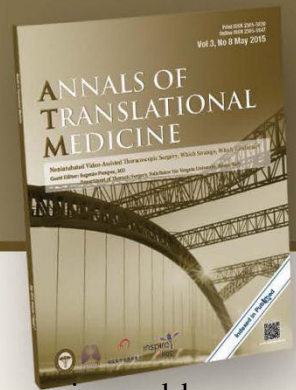
Changes in the text Line 59~64: *In recent years, cancer immunotherapy has made significant progress under the support of a large number of funds[4-8]. Luis Paz-Ares et al. suggested first-line durvalumab plus platinum-etoposide significantly improved overall survival in patients with ES-SCLC versus a clinically relevant control group[9]. One funding supported by AstraZeneca reported that the clinical activity of durvalumab in patients with EGFR+ NSCLC with $\geq 25\%$ of tumor cells expressing PD-L1 was encouraging[10].*

2. In the abstract section, the authors say, 'There are some differences in the funding of lung cancer research between China and the United States.' It is ambiguous and not a reasonable conclusion for this article. Please provide a specific conclusion.

Reply: Thank you for your suggestion. We have perfected the abstract section and provided a revised conclusion.

Changes in the text Line 44~47: **Conclusion:** *The funding of NIH in the United States is decreasing year by year, which is the opposite of NSFC in China. There are some differences in research focus on the funding of lung cancer research between China and the United States.*

3. The authors say, 'The 5-year survival of lung cancer patients varies between 4% to 17% according to the cancer stage and region differences.' However, as far as I am concerned, it is not exact. Please refer to other literature to address this problem.



Reply: Thank you for your comments. We were sorry for the wrong expression and have corrected it. The 5-year survival of lung cancer patients varies between 5% to 57% as some studies reported.

Changes in the text line 55~56: *The 5-year survival of lung cancer patients varies between 5% to 57% according to the cancer stage and region differences [2-5].*

4. On page 4, line 98, the authors say ‘NIH funding for lung cancer was significantly higher in even years than in odd years between 2008 to 2018.’ It is interesting. It would be better if it can be furtherly discussed in the discussion section.

Reply: Thank you for your advice. We have discussed the potential reason why NIH funding was significantly higher in the discussion section.

Changes in text line 190~192: *We find NIH funding for lung cancer was significantly higher in even years but we have no powerful explanation. We speculated it could be due to the adjustment of balance in different subject or a feedback regulation to the last year.*

5. It appears that you have an unnecessary comma in a compound object in page 7, line 170. Consider removing it.

Reply: Thanks for your valuable comments. We have deleted the unnecessary comma.

Changes in text line 184-185: *With the understanding of the pathogenic genomic changes of NSCLC and the development of new drugs, the progress of NSCLC treatment has been promoted.*

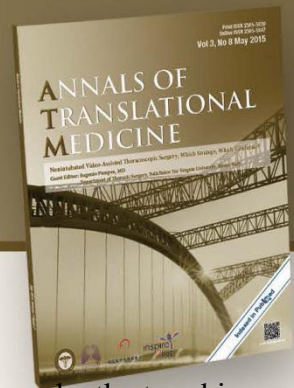
6. Needs wording/phrasing/typo polishing.

Reply: Thank you for your careful comments. We have polished our article in revised manuscript.

Reviewer B

In this manuscript, the authors investigated the funding sponsored by the National Natural Science Foundation of China (NSFC) and the National Institutes of Health (NIH). They searched the funding projects which focused on lung cancer research between 2008 and 2020, then extracted the keywords of projects and analyzed them. Finally, they found that apoptosis, proliferation, invasion, metabolism, and so on were funded most frequently by NSFC, while biomarkers, targeted therapy, signal pathway, were funded most frequently by NIH. They also investigated the total money of the funding in each year and each institution.

There are several concerns as follows.



(1) The abstract doesn't cover the primary contents of this manuscript. For example, the trend in different years, and the most funding institutions were not included in the abstract.

Reply: Thank you for your comment. We have added some primary results in the abstract including the trend in different years, and the most funding institutions.

Changes in text: The amount of NSFC funding projects in the field of lung cancer increased steadily from 2008 to 2012, while the NIH funding for lung cancer was significantly higher in even years than in odd years between 2008 to 2018. The Shanghai Jiaotong University, Sun Yat-sen University, and Guangzhou Medical University are the top three research institutions in the field of lung cancer research (Please see page 2, line 33-38).

(2) The authors should exclude several unrelated keywords, such as “analysis”, “novel”, “program”, “effect”, and “study”. I think these irrelevant keywords make no sense in the analysis.

Reply: Thank you for your careful review. As you suggested, we reanalyzed the frequency of keywords after we excluded some irrelevant words that not associated with the research topics.

Changes in text: We provide a new Figure 2 to replace the old one.

(3) The authors should better also analyze the percentages of the number and the money of projects on lung cancer in all projects each year.

Reply: Thank you for your valuable review. We have added the specific analyses for percentages of the number and the money of projects on lung cancer in all projects each year. However, we could not acquire the total number of medical science projects of NIH in each year. Therefore, we could only provide the specific percentage trend on the NSFC.

Changes in text: The percentages of the number of projects funded in lung cancer among all medical science projects between 2008 to 2019 are 1.72%, 1.49%, 1.03%, 1.81%, 2.09%, 1.89%, 1.92%, 2.17%, 1.86%, 1.47%, 1.94%, 2.01%, respectively (Please see page 4, line 109-111).

(4) I think the authors should also further analyze the keywords according to sub-groups, such as gene mutations, signaling pathways, and immune Reply. Therefore, we can get the changing trend of each subgroup.

Reply: Thank you for your advice for improvement. After we checked our raw data, we think that it is difficult to extract accurate information about the gene mutation, signaling pathways, and immune response, because there was different expression on these keywords so that we could not easily classified the keywords into the same category which will cause data offset. Thus, although we think it is of great significance to further analyze the subgroup situation, it is difficult to realize it.