Peer Review File

Article information: http://dx.doi.org/10.21037/tlcr-20-755

Reviewer A:

Comments:

The authors reviewed several large-scale lung cancer screening programs using low-dose CT and summarized lung cancer screening protocols focusing on proposed cut-offs for negative, intermediate, and positive screen. As lung cancer screening by low-dose spiral CT will reduce lung cancer mortality, this manuscript is helpful for studying the treatment for pulmonary lesions. In general, this manuscript is logical and interesting. However, the following points should be addressed.

Major points:

Whereas the authors reviewed previous large-scale important lung cancer screening programs, the style of the writing is similar to a journalistic report. It is difficult for readers to underastand.

Reply: Since the main point of this review is a summary of the most important radiological lung cancer screening protocols, it is important to provide detailed information about main points like cut-offs and exam intervals. To improve the style of the paper we asked the professional native speaker to correct the text.

Pulmonary nodule diagnostic algorithm is the most important, thus the authors should show how to manage the detected pulmonary nodules in Tables.

Reply: We included detailed descriptions of the protocols in the text. Although the tables would be very informative, we believe that we have reached the maximum number of words and the tables would duplicate provided information.

As the recruitment of population for each study is different from each other, the authors should show those data in Tables, and discuss the target problem of lung cancer screening using low-dose CT. several risk assessments for lung cancer has been proposed by several researchers.

Reply: The subject of our review is a summary of the most important radiological lung cancer screening protocols. The topic of recruitment is discussed in a separate paper. We also included descriptions of lung cancer risk models: $PLCO_{M2012}$, Brock and UKL nodule risk models.

False positive data as well as patient outcomes of each study should be summarize in Tables.
Reply: In the original manuscript, we intentionally did not include false positive rate data because of very different definitions of FPRs among different trials, so they are directly incomparable. Based on the Reviewer's recommendations, we included these values in table

1 for respective screening programs. We also provided more explanations on this important topic in the main text of the article.
The description of the outcomes of the screening programs are not the topic of this review. We underline the results of the most important programs: NLST and NELSON in the context of radiological evaluations.

Data on quality of life and cost-effectiveness are also important. Please discuss these issues.

Reply: As the above, this important subject falls out of the scope of this review.

At last, please summarize better or the best pulmonary nodule diagnostic algorithm from the point of view of authors.

Reply: There are different approaches which we commented on widely in this review. According to the Reviewer's comments, we included our suggestions for pulmonary nodule management in the conclusions paragraph.

Minor points:

Classification or categories of pulmonary nodules were difficult to understand by the text. Please summarize them. Is NODCAT an abbreviation?

Reply: We corrected this point and we added an explanation.

VDT (abbreviation) is described in line 165 as well as 330.

Reply: We corrected this point.

Reviewer B:
Comments:
This is an excellent summary of inclusion criteria, decision of the different trials on lung screening. However, you have just successively compiled the different trials. You explained very well the different protocol and some results. But at the end, there no clear algorithm and what we should do. I thought that when reading your title of the article, you would have proposed an algorithm based on your conclusion on different trial. I am a little bit disappointed. Of course, the summary of the different trial is complete and the article well written, but there is nothing very original.

You should adapt the discussion and make a proposal of algorithm based on your conclusion.

Reply: According to the Reviewer's comments in conclusions, we included our suggestions for pulmonary nodule management.

You have not discussed about the inclusion criterai of population. What should be the ideal age, how many years of tabacco abuse?

Reply: This is not the topic of this review, the main point of this review is a summary of the most important radiological lung cancer screening protocols. However, we included information about risk factors when describing lung cancer risk prediction models: $PLCO_{M2012}$ Brock and UKL nodule risk models.

What about interval of CT-scan during screening?

Reply: We presented intervals for described protocols including those currently applied by Lung-RADS and BTS, we also presented European Union position statement discussing this issue and according to the Reviewer's comments, we commented on that in the conclusions paragraph.