

Dear Editorial Board,

Thank you for the opportunity to revise our manuscript. Please see below by detailed fashion our answers to the reviewer's comments. We have highlighted with yellow in the main text the made modifications.

On the behalf of all writers,

Jatta Saarenheimo

*Reviewer #1:*

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Minor revision

Specific Comments to Authors: The manuscript entitled "Current challenges in applying gene-driven therapies in clinical oncology practice" by Jatta Saarenheimo discussed the problem of gene-targeted therapies in lung cancer and it would be helpful for clinical practice. I think the title may be to general, it would be better to focus on lung cancer. Current challenges in applying gene-driven therapies in lung cancer of clinical practice may be better. Besides, could the authors discuss the different strategies of non-small cell lung cancer(NSCLC) and small cell lung cancer (SCLC) in gene driven therapy? Since gene mutation in NSCLC and SCLC varied.

- Thank for the reviewer for making article more to the point, we agree on both comments.
- The title has been changed to: "Current challenges in applying gene-driven therapies in clinical lung cancer practice"
- As there is no gene driven therapies in SCLC available at the moment and the genetic panels and driver genes are more heterogenic in SCLC we have focused on the gene driven therapies in NSCLC. We have added this information in the text: "Small-cell lung cancer (SCLC) was not included due to high molecular heterogeneity and lack of current target genes with available treatment (Kim et al. 2019, Experimental & Molecular medicine)."

*Reviewer #2:*

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: This review is mainly focus on the status of lung cancer target therapy. The title should narrow to "lung cancer". The progression and "challenges" of target therapy in lung cancer should be focused. The developing targeting drugs and new therapeutical targets in lung cancer should be addressed.

- Thank you for your comment, based on your and the reviewer#1, we changed the title to: "Current challenges in applying gene-driven therapies in clinical lung cancer practice"
- We wanted to include the historical point of view with glivec as it open up the gene driven therapies. Rest of the text is focused on lung cancer.
- As the development of new drugs is extremely rapid for lung cancer and knowing which one will get the clinical practice is a question. Thus we did not want to start to speculate this as it is out of the scope of this manuscript.

#### *EDITORIAL OFFICE'S COMMENTS*

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) Science editor: The questions raised by the reviewers should be answered;

- the questions are answered above and the text is modified.

(2) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor;

- figures are provided as PowerPoint files

(3) Company editor-in-chief: I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Oncology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors.

- we thank the editorial board and have made all the required changes.