

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Clinical Oncology

**Manuscript NO:** 63343

**Title:** Oncogenic driver mutations in NSCLC: past, present and future.

**Reviewer's code:** 03853364

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** United States

**Author's Country/Territory:** Switzerland

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**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2021-01-27 23:48

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<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

In this review, the authors summarized all driver mutations identified in patients with advanced NSCLC and provided the update about current targeted therapies for NSCLC patients with different mutations. The authors suggest that it is very important to perform oncogene mutation detection before offering therapy for patients with NSCLC. This paper is well written and provides very comprehensive, helpful information to both research and clinical community. However, I have several comments.

1. In this manuscript, the authors mentioned acquired secondary mutation such as EGFR T790M that can lead to resistance to targeted therapy. It is unclear whether the second mutation is pre-exist before targeted therapy or drug treatment generates this secondary mutation.
2. It would be much better for readers to understand if the authors can create a table to summarize current targeted therapies for NSCLC patients based on driver mutation status.
3. Fig.1 is not well presented. For example, KRAS G12C is shown under KRAS section. It is unclear what percentage for KRAS G12C. Additionally, other genes do not show specific point mutations. It should be consistent for all genes. Furthermore, unknown/no mutation is 27%. The word "No mutation" should be removed because we do not know the real answer.
4. Under "RET" section, "RErranged" is one spelling error.
5. How is ALK activated? Please explain.