

## PEER-REVIEW REPORT

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

**Manuscript NO:** 62066

**Title:** Why MUC16 mutations lead to a better prognosis: A study based on The Cancer Genome Atlas gastric cancer cohort

**Reviewer's code:** 04559366

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Academic Research, Attending Doctor, Doctor, Medical Assistant, Surgeon, Surgical Oncologist

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

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

**Manuscript submission date:** 2020-12-28

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-12-29 01:04

**Reviewer performed review:** 2021-01-07 20:21

**Review time:** 9 Days and 19 Hours

<b>Scientific quality</b>	<input checked="" type="checkbox"/> Grade A: Excellent <input 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 Grade E: Do not publish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 checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [ ] Yes [Y] No

#### **SPECIFIC COMMENTS TO AUTHORS**

The manuscript entitled “Why MUC16 mutations lead to a better prognosis: a study based on the TCGA gastric cancer cohort” is interesting because it finds that MUC16 mutations can activate the p53 pathway and the DNA repair pathway, in addition to also finding a potential target drug: NPY1R, and a potential drug: Roscovitine. thus, the work is interesting and deserves immediate publication.

## PEER-REVIEW REPORT

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

**Manuscript NO:** 62066

**Title:** Why MUC16 mutations lead to a better prognosis: A study based on The Cancer Genome Atlas gastric cancer cohort

**Reviewer's code:** 05450248

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** China

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

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**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-12-30 13:25

**Reviewer performed review:** 2021-01-11 10:32

**Review time:** 11 Days and 21 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input checked="" type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input checked="" 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 type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" 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**

Huang YJ et al. used multi-omics data to study why MUC16 mutations lead to a better prognosis in gastric cancer, this is interesting study. However, in terms of results, the authors have a large number of analysis similar to the published articles, and there is no innovation in the analysis methods. Therefore, in terms of innovation, it is difficult to make people interested in continuing to read (1). Secondly, the authors seem to be too focused on analyzing the results with differences, and ignore the internal logical explanation of the article. Many results are forcibly pieced together, appearing blunt and superficial. There is no constructive or meaningful view on why MUC16 mutations lead to a better prognosis in gastric cancer. (1) First, the part Introduction in the article is similar to the research of Li et al (1). Secondly, since MUC16 encodes cancer antigen125 (CA-125), CA-125 also has a very important application in clinical work. However, they did not explore whether the MUC16 mutation would affect the expression of CA-125 at the protein level. there are protein data corresponding to gastric cancer in the TCGA database., which is regrettable that authors did not explore further. (2) The authors screened out NPY1R by using the wild type and mutant type of MUC16 as comparision, and then launched a subsequent analysis on NPY1R. What puzzles me is, does NPY1R have any important regulatory relationship with MUC16? Does this help explain why MUC16 mutations lead to a better prognosis in gastric cancer? It's just a collection of data. (3) For the GSEA result of wild-type and mutant of MUC16, the authors took p53 pathway and DNA repair pathway as the explanation of why MUC16 mutations lead to a better prognosis in gastric cancer, which is reasonable. However, this is basically close to the research results of Li and Zhao (1, 2), so it is difficult to highlight its own novelty. (4) There is basically no difference between the wild type and the mutant type of MUC16 in the immune score, and most of the 28 types of immune cells are negative results, and

the regulatory mechanism of how MUC16 mutations affect immune cells is also unclear, which is difficult to make me convinced. (5) The paper is poorly written, need a clearer description of the analysis and discussion. Additional editing would help make the paper easier to read and interpret.

1. Li X, Pasche B, Zhang W, Chen K. Association of MUC16 Mutation With Tumor Mutation Load and Outcomes in Patients With Gastric Cancer. *JAMA Oncol.* 2018;4(12):1691-8. 2. Zhao H, Zhang L. MUC16 mutation predicts a favorable clinical outcome and correlates decreased Warburg effect in gastric cancer. *Biochem Biophys Res Commun.* 2018;506(4):780-6.