

## PEER-REVIEW REPORT

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

**Manuscript NO:** 55848

**Title:** Identification of a Nine-Gene Prognostic Signature for Gastric Carcinoma Using Integrated Bioinformatics Analyses

**Reviewer's code:** 02534686

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Academic Research, Professor

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

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

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**Reviewer chosen by:** Jie Wang (Quit in 2020)

**Reviewer accepted review:** 2020-04-17 11:03

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**Review time:** 18 Days and 19 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" 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 Grade E: Do not publish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 type="checkbox"/> Minor revision <input checked="" 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

- Retrospective observational cohort study using data from public databases. - Including separate training and testing cohort. - Validation of a nine-gene prognostic signature for GC and identification of new small molecule drugs for potential treatment. - Study is interesting and could potentially have some clinical relevance. - however, there are several points the authors need to address:

- o The current state of the art literature on gene expression risk models in GC must be included in the introduction. So far only references from other tumor entities have been mentioned (add e.g. Cho JY et al., Clin Cancer Res 2011; Kim HK et al., Pharmacogenomics J 2012; Bauer et al., Ann. Oncol., 2017). There is an error on page 5: .....For example, Yin et al constructed a five-gene signature based on data from TCGA and GEO databases that accurately predicted GC prognosis[6]..... Yin et al report about glioblastoma and not about GC!
- o Hence, the added value of the present work in comparison to the previous works (mentioned above) in GC must be addressed in the discussion.
- o The number of patients in the test collective should be mentioned in the M&M section, not only in the corresponding chart.
- o In figure 4A the AUC curves of testing and training should be swapped, because the AUC curve of the training collective is mentioned first in the text.
- o Fig6: The images are not convincing. The tissue is even for an experienced pathologist difficult to identify /analyze. In 6D and H the dots show the same tissue. There is probably no cancerous tissue included. Others seem swapped (C and G).
- o Fig8: This is a nice-looking figure. However, in the context of this paper it provides no further information. I recommend the omitting of this figure.
- o Further limitations that have to be mentioned in the discussion: The efficiency of the nine-gene signature should be confirmed in a larger number of GC patients. Only a very limited amount of normal samples was included in the differential expression analyses. In multivariate Cox regression, one variable

per minimal five events should be included.  
factors; other multi-gene assays?

Comparison: Conventional prognostic