PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 58047

Title: A signature based on molecular subtypes of DNA methylation predicts overall survival in gastric cancer

Reviewer's code: 02992691

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Professor

Reviewer's Country/Territory: Greece

Author's Country/Territory: China

Manuscript submission date: 2020-07-20

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-07-21 11:27

Reviewer performed review: 2020-07-27 11:53

Review time: 6 Days

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

GC ranks as the third leading cause of cancer-related death worldwide. Epigenetic alterations contribute to tumor heterogeneity in early stages. In this study, to address the epigenetic heterogeneity of gastric cancer, three subgroups based on DNA methylation were identified and each subtype was associated with distinct survival and clinical features. A signature based on molecular subtypes of DNA methylation was built to predict the survival of gastric cancer patients and showed good performance. The manuscript is well researched and well written, and may improve our understanding of the epigenetic landscape of gastric cancer and facilitate precision medicine for these patients. I have only a minor point to discuss. I would suggest authors add a flow chart to show the process of case inclusion and exclusion more clearly. Moreover, please check the paragraph 2 in Page 5, the word in the fourth line " imputed" should be corrected with "impute". I recommend that the manuscript can be published after a minor editing. Sincerely

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 58047

Title: A signature based on molecular subtypes of DNA methylation predicts overall survival in gastric cancer

Reviewer's code: 02992693

Position: Peer Reviewer

Academic degree: MD

Professional title: Assistant Professor

Reviewer's Country/Territory: South Korea

Author's Country/Territory: China

Manuscript submission date: 2020-07-20

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-07-20 12:01

Reviewer performed review: 2020-07-28 09:11

Review time: 7 Days and 21 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[Y] Grade A: Priority publishing [ ] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

I have read with great interest the manuscript entitled "A signature based on molecular subtypes of DNA methylation predicts overall survival in gastric cancer". The article is well written, and the findings are well detailed. Research is well conducted, and statistics is appropriate. The message of the manuscript supported by the results – The high-risk group showed a markedly poor prognosis compared to the low-risk group in both the training and test datasets – is of great impact for the readers. This work may improve Clinicians' understanding of the epigenetic landscape of gastric cancer and facilitate precision medicine for these patients. Specific comments: Please shorten the introduction. Please be consistent with the second paragraph of the introduction. Please contextualize recently study results with those already available, in the discussion. Please check some of the references.

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 58047

Title: A signature based on molecular subtypes of DNA methylation predicts overall survival in gastric cancer

Reviewer's code: 03013758

Position: Peer Reviewer

Academic degree: FEBG, MBS-HCA, PhD

Professional title: Associate Chief Physician, Associate Professor, Professor

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2020-07-20

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-07-20 12:01

Reviewer performed review: 2020-07-28 09:20

Review time: 7 Days and 21 Hours

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [Y] Minor revision [ ] Major revision [ ] Rejection
Re-review	[Y] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Thank you very much for asking me to review this manuscript by Bian et al. This is the observational study to identify the specific DNA methylation sites that influence the prognosis of GC patients and explore the prognostic value of a model based on subtypes of DNA methylation. The result of the study is of interest and may help improve outcome prediction, and facilitate precision therapy for patients with GC. Overall, this study was well conducted with good methodology and intelligible English. The number of participants in the study is large enough. Furthermore, minor comment that I would to proposed: 1. Title: Proper and cover all the core result from the study. 2. Abstract: Address all of the important component from the study. However, please provide a brief introduction to the background section. 3. Key words: could cover this study. 4. Introduction: Describe the overall basic knowledge for this study. Moreover, the aim of the study is clear. 5. Method: The present study is methodologically well conducted. 6. Results: The result of this study is of interest. 7. Discussion: The manuscript clearly interprets the finding adequately and appropriately. In addition, the manuscript could highlight the key points clearly. The previous significant paper involved were included in the discussion, I suggest discussing more in this aspect in the discussion part. 8. Illustrations and tables: I congratulate the authors for the captions to the figures very explicative and complete.

Scientific quality	[Y] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[Y] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

This is an excellent study of the epigenetic heterogeneity of gastric cancer. The study is well designed and the results are interesting. I have no specific comments.