

Answering Reviewers letter

Dear editor and reviewers,

Thank you for your letter and the reviews concerning our manuscript entitled **“Application of intelligent algorithms in Down syndrome screening during the second trimester pregnancy”** (Manuscript NO.: 58427). We examined the text carefully, editors and reviewers comments, which are important for us to improve the quality of our work. Based on the comments of reviewers, we have carefully revised our manuscript. The point-to-point responses to the reviewers’ comments are presented below:

Reviewer 1:

Specific Comments to Authors: The authors of the manuscript developed artificial intelligence algorithms, using patient chart information in addition to laboratory results, and reviewed its efficacy at Down syndrome screening performance (detection rate and false positive rate). Minor comments: 1) The authors should modify their terminology. The negative samples should be renamed DS non-affected samples, whereas the positive samples should be renamed DS affected samples. 2) The authors should also confirm that the dataset included some affected samples that were screen negative with the traditional laboratory markers (False negative) and the use of non-affected samples that were screen positive with the traditional laboratory markers (False positive). Provide numbers for these two categories. 3) It would be great for this manuscript or a subsequent to ensure that collaboration with other prenatal screening centers is confirmed to use other datasets as training and/or test sets.

Response: Thank you very much for your comments and suggestions.

- 1) We have checked all the manuscripts. The relevant terms have been revised.**
- 2) The dataset included 8 false negative cases and 4930 false positive cases. We have described numbers for these two categories in our manuscript.**
- 3) It is my great honor to be highly appraised by the reviewer of our manuscript.**

Science editor: 1 Scientific quality: The manuscript describes a retrospective study of the application of intelligent algorithms in Down syndrome screening during the second trimester pregnancy. The topic is within the scope of the WJCC. (1) Classification: Grade B; (2) Summary of the Peer-Review Report: The authors of the manuscript developed artificial intelligence algorithms, using patient chart information in addition to laboratory results, and reviewed its efficacy at Down syndrome screening performance. The questions raised by the reviewers should be answered; and (3) Format: There are 4 tables. A total of 27 references are cited, including 5 references published in the last 3 years. There are no self-citations. 2 Language evaluation: Classification: Grade B. A language editing certificate issued by Edanz was provided. 3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, the Institutional Review Board Approval Form. Written informed consent was waived. No academic misconduct was found in the CrossCheck detection and Bing search. 4 Supplementary comments: This is an unsolicited manuscript. The study was supported by Science and Technology Department of Jilin Province. The topic has not previously been published in the WJCC. 5 Issues raised: (1) The authors did not provide the approved grant application form(s). Please upload the approved grant application form(s) or funding agency copy of any approval document(s); (2) The "Article Highlights" section is missing. Please add the "Article Highlights" section at the end of the main text. 6 Re-Review: Required. 7 Recommendation: Conditional acceptance.

Response: Thank you very much for your comments and suggestions.

We have answered the questions raised by the reviewers

(1) We have provided a funding agency copy of approval document.

(2) We have added the "Article Highlights" section at the end of the main text.

Editorial office director: I have checked the comments written by the science editor.

Response: We have provided the funding agency copy of approval document, and added the "Article Highlights" section at the end of the main text.

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 Cases, 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.

Response: We have provided the funding agency copy of approval document, and added the “Article Highlights” section at the end of the main text.

On behalf of my co-authors, we would like to express our great appreciation to editor.

Thank you and best regards.

Yours sincerely,

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