

PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 58427

Title: Application of intelligent algorithms in Down syndrome screening during the second trimester pregnancy

Reviewer's code: 03355427

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: Canada

Author's Country/Territory: China

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Reviewer chosen by: Li Ma

Reviewer accepted review: 2020-10-06 16:48

Reviewer performed review: 2020-10-19 13:59

Review time: 12 Days and 21 Hours

Scientific quality	<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 Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
https://www.wjgnet.com

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.