



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 66236

Title: A validated tool for early prediction of intensive care unit admission in COVID-19 patients

Reviewer's code: 05975745

Position: Editorial Board

Academic degree: PhD

Professional title: Professor

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2021-04-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-13 16:37

Reviewer performed review: 2021-04-15 04:28

Review time: 1 Day and 11 Hours

Scientific quality	<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 Grade E: Do not publish
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 type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" 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



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SPECIFIC COMMENTS TO AUTHORS

1. List out the contributions and the organization of the paper below the introduction paper. 2. Add an architecture depicting the system model of the proposed work. 3. In the Introduction section, the drawbacks of each conventional technique should be described clearly. 4. You should emphasize the difference between other methods to clarify the position of this work further. 5. The Wide ranges of applications need to be addressed in the Introduction 6. Add the advantages of the proposed system in one quoted line for justifying the proposed approach in the Introduction section.



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 66236

Title: A validated tool for early prediction of intensive care unit admission in COVID-19 patients

Reviewer's code: 05872085

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: United States

Author's Country/Territory: China

Manuscript submission date: 2021-04-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-13 11:40

Reviewer performed review: 2021-04-18 01:14

Review time: 4 Days and 13 Hours

Scientific quality	<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
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 type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" 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



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SPECIFIC COMMENTS TO AUTHORS

The study by Huang et al developed and validated a risk prediction tool for ICU admission in COVID-19 patients. Overall, the manuscript is well-written, focuses on area of high priority in the current times, and is methodologically sound. However, I suggest the following changes or updates to further improve it. Abstract Methods: can shorten to include more information in the results section Results: suggest providing more details on the demographics of the included patients and the top predictors Core tip: the first sentence does not read well Manuscript Introduction • second paragraph, would suggest updating the first sentence as we now have a few approved vaccines and medications to treat COVID-19. • Fourth paragraph, first sentence should read “due to the rapidly.... And the limited resources in ICU...” • Fifth paragraph, first sentence does not read well. Methods Statistical analysis: Second to last sentence should read “...Kruskal-Wallis test for ... with skewed distribution. Feature selection: need to spell out the acronym LR at the first mention. Calibration: Hosmer-Leme show should be corrected to Hosmer-Lemeshow. Results Study population: suggest providing some key demographic and clinical characteristics from Table 1 in this section. Feature selection for the predictive model: Suggest providing more details on how the adjustment of the logistic regression model based on expert opinion was conducted. Details like which variables were used based on what rationale should be provided. Figure 3: suggest specifying if the feature importance is based on RF in the text as well as figure description (either title or footnote). Suggest providing more information on the RF models including but not limited to the no. of trees and the number of variables randomly selected at each node for split. Figure 8: suggest tweaking the footnotes to improve the interpretation of the figure for a layperson. Although the information provided is useful, it is not clear how the clinical benefit is derived. An example using a



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specific risk threshold could be helpful. Discussion • suggest checking grammar and spellings in this section. • I also recommend using an interpretable machine learning technique to understand how different values of the top predictors may affect the predicted probability of ICU admission.



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Name of journal: World Journal of Clinical Cases

Manuscript NO: 66236

Title: A validated tool for early prediction of intensive care unit admission in COVID-19 patients

Reviewer's code: 05532383

Position: Peer Reviewer

Academic degree: MBBS, MPhil

Professional title: Academic Research, Associate Professor

Reviewer's Country/Territory: Bangladesh

Author's Country/Territory: China

Manuscript submission date: 2021-04-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-14 03:25

Reviewer performed review: 2021-04-18 18:57

Review time: 4 Days and 15 Hours

Scientific quality	<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
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 type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input type="checkbox"/> Yes <input checked="" 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



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SPECIFIC COMMENTS TO AUTHORS

Dear author, I would like to thank you and your team for the scientific contribution to tackle COVID-19 pandemic. I have gone through the article based on development of a model that could predict early categorization of COVID-19 patients who may require ICU support during their treatment at hospital admission. This model compared with some pre existing established tools and other hospital findings and reference of based on the outcome of COVID-19 patients. Please check the manuscript where i have put comments for revision.



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 66236

Title: A validated tool for early prediction of intensive care unit admission in COVID-19 patients

Reviewer's code: 05466290

Position: Editorial Board

Academic degree: MSc, RN

Professional title: Director, Research Scientist, Senior Lecturer, Senior Researcher

Reviewer's Country/Territory: Qatar

Author's Country/Territory: China

Manuscript submission date: 2021-04-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-13 08:25

Reviewer performed review: 2021-04-21 08:33

Review time: 8 Days

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent [] Grade B: Very good [] Grade C: Good [] Grade D: Fair [] Grade E: Do not publish
Language quality	<input checked="" type="checkbox"/> Grade A: Priority publishing [] Grade B: Minor language polishing [] Grade C: A great deal of language polishing [] Grade D: Rejection
Conclusion	<input checked="" type="checkbox"/> Accept (High priority) [] Accept (General priority) [] Minor revision [] Major revision [] Rejection
Re-review	<input checked="" type="checkbox"/> Yes [] No
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SPECIFIC COMMENTS TO AUTHORS

This is a mixed-method study aims at developing and validating a risk stratification tool for the early prediction of ICU admission among COVID-19 patients at hospital admission. This study was well designed, executed and presented. It makes important points which are widely applicable. I enjoyed reviewing it.



PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 66236

Title: A validated tool for early prediction of intensive care unit admission in COVID-19 patients

Reviewer's code: 06045617

Position: Peer Reviewer

Academic degree: MBChB

Professional title: Doctor, Superintendent

Reviewer's Country/Territory: Uganda

Author's Country/Territory: China

Manuscript submission date: 2021-04-13

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-18 13:36

Reviewer performed review: 2021-04-26 04:32

Review time: 7 Days and 14 Hours

Scientific quality	<input checked="" type="checkbox"/> Grade A: Excellent [] Grade B: Very good [] Grade C: Good [] Grade D: Fair [] Grade E: Do not publish
Language quality	[] Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing [] Grade C: A great deal of language polishing [] Grade D: Rejection
Conclusion	[] Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) [] Minor revision [] Major revision [] Rejection
Re-review	<input checked="" type="checkbox"/> Yes [] No
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SPECIFIC COMMENTS TO AUTHORS

The manuscript is very good. Excellent work accomplished. Let the authors collaborate with the editor to iron out a few grammatical glitches. Add a few more papers about the available published papers about vaccines. let the authors insert the different tables and figures under their respective subheadings. it will make understanding and following the manuscript a little easier. Thank you.