



## PEER-REVIEW REPORT

**Name of journal:** *Artificial Intelligence in Cancer*

**Manuscript NO:** 73056

**Title:** The Potential and Role of Artificial Intelligence in Current Medical Healthcare

**Provenance and peer review:** Invited manuscript; externally peer reviewed

**Peer-review model:** Single blind

**Reviewer's code:** 05758135

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

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

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

**Manuscript submission date:** 2021-11-09

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-11-18 03:15

**Reviewer performed review:** 2021-11-24 00:07

**Review time:** 5 Days and 20 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<br><input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish            |
| <b>Language quality</b>   | <input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing<br><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 checked="" type="checkbox"/> Accept (General priority)<br><input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection             |
| <b>Re-review</b>          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |
| <b>Peer-reviewer</b>      | Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous   |



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statements

Conflicts-of-Interest: [ ] Yes [Y] No

#### **SPECIFIC COMMENTS TO AUTHORS**

There are improvements made by the authors in response to all of the reviewers' suggestions. The chapter "Results" has not been changed, but a section has been added to make it easier to understand.



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**Reviewer's code:** 05740520

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

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

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

**Manuscript submission date:** 2021-11-09

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-11-18 04:04

**Reviewer performed review:** 2021-11-26 04:20

**Review time:** 8 Days

|                           |   |
|---------------------------|---|
| <b>Scientific quality</b> | <input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good<br><input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish            |
| <b>Language quality</b>   | <input type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing<br><input checked="" 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)<br><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   |
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### **SPECIFIC COMMENTS TO AUTHORS**

1. The more extensive literature review is suggested 2. I suggest the authors provide necessary detail for readers to fully understand and previous authors' analysis and experiments. 3. I suggest the authors present obsolete study and interpret the exact reasons of the research outcome



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**Peer-review model:** Single blind

**Reviewer's code:** 05758354

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Academic Research, Doctor

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

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

**Manuscript submission date:** 2021-11-09

**Reviewer chosen by:** Jin-Lei Wang

**Reviewer accepted review:** 2021-11-18 02:15

**Reviewer performed review:** 2021-11-26 13:16

**Review time:** 8 Days and 11 Hours

|                           |   |
|---------------------------|---|
| <b>Scientific quality</b> | <input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good<br><input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish            |
| <b>Language quality</b>   | <input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing<br><input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection |
| <b>Conclusion</b>         | <input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority)<br><input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection             |
| <b>Re-review</b>          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   |
| <b>Peer-reviewer</b>      | Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous   |



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Conflicts-of-Interest: [ ] Yes [Y] No

## SPECIFIC COMMENTS TO AUTHORS

This is a review article. The authors present the classification of AI technology and their application in the field of medical healthcare. Also, the limitations of AI and the advantages of clinicians compared to AI are discussed. I recommend accepting the paper after moderate revisions.

1. Abstract The last sentence "This article reviews the potential and limitations of AI, current medical application trends, and future possibilities for further clinical and scientific practice." : AI application trends are recommended to specify, that is, six types of application trends are recommended to be written here
2. Introduction
  - 1) The development trend and importance of AI are introduced. But it seems not intuitive enough. Number of related articles published in the last 10 years is recommended to be presented as a figure.
  - 2) Adding a paragraph at the end of the introduction section to illustrate the framework of the review article are recommended.
  - 3) What are the advantages and differences of your paper compared to similar published review articles?
  - 4) To enhance the potential influence of the article, I recommend adding related introductions about the background of COVID-19 in this section to illustrate the urgency and importance of AI in medical applications
3. Relevant potentials of AI It seems that the amount of literature is not enough, it is recommended to add 2-3 citations of related literatures in each subsection.
4. Practical fields of AI application in healthcare Given that there are many specific cases of AI applications, a table to show the specific applications of AI technology in this field need to be listed,
5. Advantages of clinicians over AI in patient care Graphs similar to figure 1, 2 or 3 to overview of the advantages of clinicians over AI are recommended to make.
6. Others To increase the impact of the article, it seems that the author should add some additional section to detailly discuss the application of AI in COVID-19. Please pay attention to



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adding the related literature. Moreover, it is recommended to add 'COVID-19' in the keyword.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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**Peer-review model:** Single blind

**Reviewer's code:** 05740520

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

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

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

**Manuscript submission date:** 2021-11-09

**Reviewer chosen by:** Ji-Hong Liu

**Reviewer accepted review:** 2022-01-09 07:16

**Reviewer performed review:** 2022-01-10 11:25

**Review time:** 1 Day and 4 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<br><input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish            |
| <b>Language quality</b>         | <input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing<br><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 checked="" type="checkbox"/> Accept (General priority)<br><input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection             |
| <b>Peer-reviewer statements</b> | Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous<br>Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |



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#### **SPECIFIC COMMENTS TO AUTHORS**

The manuscript has been revised according to the suggestions and comments.