

### **Reviewer #1:**

Specific Comments to Authors:

This is a review article for AI research and application to medical physics and radiotherapy. The paper is informative and well-written. Meanwhile, there are some weak points identified. It is expected to prepare a major revision fully addressing the following issues.

Thank you for your comments. Please see our specific replies below.

1, In a review-type paper, it is needed to introduce your survey methodology, such as the procedure of literature research, the databases used, the criteria of screening, etc.

Thank you for your comments. We have rewritten the introduction as suggested.

2, The structure/organization of the content should be introduced at the end of the first section.

We have revised accordingly.

3, While you had a nice discussion, can you add more figures and tables to summarize your findings?

Thank you for your comments. We have added few more figures and tables as suggested.

4, You may link discussion with more recent works as Integrated learning approach based on fused segmentation information for skeletal fluorosis diagnosis and severity grading.

We apologise that we do not know what you are referring to here. The article did not discuss skeletal fluorosis and severity grading.

5, In the conclusion, some timeline is expected regarding the progress of research and application.

We have added a few comments on the progression of the research and application in the near future.

6, I am missing a bit of the take-home messages. What are the key findings based on the reviewing?

The take home message is added at the first paragraph of the conclusion. The key findings are the potential of using AI and how health care professionals should use the tool to improve health care.

7, Some future directions of scientific research and specific scientific problems should be proposed- What you listed in Figure 1 is not concrete enough. This will provide most value for some of the readers, maybe the PhD students who are looking for their research directions.

Future directions of applications are added in Section 7, with a diagram summarising the future progression.

### **Science editor:**

1 Scientific quality: The manuscript describes a minireview of the current landscape and potential future applications of artificial intelligence in medical physics and radiotherapy. The topic is within the scope of the AIMI. (1) Classification: Grade C; (2) Summary of the Peer-Review Report: This is a

review article for AI research and application to medical physics and radiotherapy. The paper is informative and well-written. The questions raised by the reviewers should be answered;

Thank you. We have addressed the comments as outlined above.

(3) Format: There is 1 figure;

We have added 4 more figures.

(4) References: A total of 82 references are cited, including 52 references published in the last 3 years; (5) Self-cited references: There is no self-cited reference; and (6) References recommendations: The authors have the right to refuse to cite improper references recommended by the peer reviewer(s), especially references published by the peer reviewer(s) him/herself (themselves). If the authors find the peer reviewer(s) request for the authors to cite improper references published by him/herself (themselves), please send the peer reviewer's ID number to editorialoffice@wjgnet.com. The Editorial Office will close and remove the peer reviewer from the F6Publishing system immediately.

There is no reference recommendation

2 Language evaluation: Classification: Grade B.

No specific comment.

3 Academic norms and rules: No academic misconduct was found in the Bing search.

No specific comment.

4 Supplementary comments: This is an invited manuscript. No financial support was obtained for the study. The topic has not previously been published in the AIMI.

No specific comment.

5 Issues raised:

(1) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor; and

Royalty-free photos are used, and diagrams are original. Please see original PowerPoint, Adobe illustrator and SVG files from the link:

[https://hkuhk-my.sharepoint.com/:f:/g/personal/varv\\_hku\\_hk/EhEwElavVUhCrMxJlqUr7JABsp-Z8J7aGoyMTvBaDO84pw?e=FLpDz](https://hkuhk-my.sharepoint.com/:f:/g/personal/varv_hku_hk/EhEwElavVUhCrMxJlqUr7JABsp-Z8J7aGoyMTvBaDO84pw?e=FLpDz)

(2) If an author of a submission is re-using a figure or figures published elsewhere, or that is copyrighted, the author must provide documentation that the previous publisher or copyright holder

has given permission for the figure to be re-published; and correctly indicating the reference source and copyrights. For example, “Figure 1 Histopathological examination by hematoxylin-eosin staining (200 ×). A: Control group; B: Model group; C: Pioglitazone hydrochloride group; D: Chinese herbal medicine group. Citation: Yang JM, Sun Y, Wang M, Zhang XL, Zhang SJ, Gao YS, Chen L, Wu MY, Zhou L, Zhou YM, Wang Y, Zheng FJ, Li YH. Regulatory effect of a Chinese herbal medicine formula on non-alcoholic fatty liver disease. World J Gastroenterol 2019; 25(34): 5105-5119. Copyright ©The Author(s) 2019. Published by Baishideng Publishing Group Inc[6]”. And please cite the reference source in the references list. If the author fails to properly cite the published or copyrighted picture(s) or table(s) as described above, he/she will be subject to withdrawal of the article from BPG publications and may even be held liable.

No figures are published elsewhere or copyrighted by previous publisher.

6 Recommendation: Conditional acceptance.

No specific comment.