



## PEER-REVIEW REPORT

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

**Manuscript NO:** 57192

**Title:** Application of Artificial Intelligence in Hepatology- Mini-review

**Reviewer's code:** 03889126

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** N/A

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

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

**Manuscript submission date:** 2020-05-28

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-05-29 08:47

**Reviewer performed review:** 2020-06-06 03:16

**Review time:** 7 Days and 18 Hours

<b>Scientific quality</b>	<input 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 checked="" 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 Grade E: Do not publish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 <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 type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	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**

This is a mini review on the applications of artificial intelligence (AI) to the study of liver diseases. AI represents a rapidly developing field and has been proved to be a helpful tool in assisting image interpretation and clinical decision-making. The topic is of significant clinical relevance. However, there are several problems remain for the authors to address. Major comments: 1. The logic flow and presentation of the results could be optimized if different AI methods (deep learning vs. conventional machine learning) and disease types (diffuse liver diseases vs. focal liver diseases) were organized in separate sections. Explicit subheadings might be helpful as well. 2. Another major concern is about the strong conclusion and general impression given by the authors throughout the manuscript on the usefulness and accuracy of AI, without mentioning potential limitations of the current AI techniques. In my opinion the general message should be milder, these algorithms are promising but we need multi-center studies with a standardized workflow and strong external validation to test and improve generalizability and reproducibility. Thus, a paragraph discussing the limitations of AI in liver diseases is suggested. 3. The manuscript also lacks an important section which briefly describes the methodologies of current AI methods. Minor comments: 1. Introduction, third paragraph: the authors gave a very detailed and comprehensive description of NAFLD. However, NAFLD could not account for most diffuse liver diseases. It might be reasonable to shorten contents on NAFLD and give a line or two describing liver fibrosis. 2. The authors are suggested to mention the specific imaging modalities used in all cited studies. 3. Page 8, second paragraph: the study conducted by Sato et al. might better fit in the “diagnosis” (part 2) instead of the “risk assessment” (part 3) section.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 57192

**Title:** Application of artificial intelligence in hepatology: Minireview

**Reviewer's code:** 03727233

**Position:** Editorial Board

**Academic degree:** MD, MHSc, PhD

**Professional title:** Chief Physician, MHSc, Statistician

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

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

**Manuscript submission date:** 2020-05-28

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

**Reviewer accepted review:** 2020-06-30 00:44

**Reviewer performed review:** 2020-06-30 01:18

**Review time:** 1 Hour

<b>Scientific quality</b>	<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
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <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) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer statements</b>	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

If possible, I would very much like to read a section dedicated to successful applications



**Baishideng  
Publishing  
Group**

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

of AI technologies in other specialties and how hepatologists can learn from them.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 57192

**Title:** Application of artificial intelligence in hepatology: Minireview

**Reviewer's code:** 03648840

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Associate Professor

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

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

**Manuscript submission date:** 2020-05-28

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

**Reviewer accepted review:** 2020-06-30 16:35

**Reviewer performed review:** 2020-06-30 16:55

**Review time:** 1 Hour

<b>Scientific quality</b>	<input 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 checked="" 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 <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 type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" type="checkbox"/> Rejection
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

I had a look through the manuscript. While the subject is very interesting, I could not



**Baishideng  
Publishing  
Group**

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

find any specific methodology for conducting this minireview. As the methods section is quite important for any type of study, I suggest the authors to revise the whole manuscript by considering an appropriate methodology for writing a review paper and reporting the findings.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

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

**Manuscript NO:** 57192

**Title:** Application of artificial intelligence in hepatology: Minireview

**Reviewer's code:** 03009411

**Position:** Editorial Board

**Academic degree:** MD

**Professional title:** Associate Professor, Chief Physician, Doctor

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

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

**Manuscript submission date:** 2020-05-28

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

**Reviewer accepted review:** 2020-06-30 08:46

**Reviewer performed review:** 2020-07-03 01:52

**Review time:** 2 Days and 17 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 <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <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) <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 Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

The application of artificial intelligence in medical imaging has a good prospect and



**Baishideng  
Publishing  
Group**

7041 Koll Center Parkway, Suite  
160, Pleasanton, CA 94566, USA

**Telephone:** +1-925-399-1568

**E-mail:** [bpgoffice@wjgnet.com](mailto:bpgoffice@wjgnet.com)

**https://**[www.wjgnet.com](http://www.wjgnet.com)

value. The authors summarize recent developments of AI concerning hepatology while focusing on the diagnosis and risk assessment of liver disease in this review. After modification, the article comprehensively expounds the application value and limitations of AI technology in the diagnosis of liver diseases.