

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastroenterology*

Manuscript NO: 87137

Title: Challenges involved in the application of artificial intelligence in gastroenterology:
The race is on!

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05775860

Position: Editorial Board

Academic degree: PhD

Professional title: Assistant Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Greece

Manuscript submission date: 2023-07-25

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-07-28 22:25

Reviewer performed review: 2023-08-06 22:17

Review time: 8 Days and 23 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
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 type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input checked="" 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

SPECIFIC COMMENTS TO AUTHORS

The manuscript entitled “Challenges involved in the application of artificial intelligence in gastroenterology: the race is on!” reports an opinion review regarding the development of artificial intelligence (AI) and machine learning (ML) techniques in clinical gastroenterology field. The authors summarized several points in disease diagnostics where the AI and ML techniques can be applied. In-depth discussions will help improve the quality of the manuscript. The manuscript is more suitable to be published in a specialized journal.

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Title: Challenges involved in the application of artificial intelligence in gastroenterology:
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Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05327699

Position: Editorial Board

Academic degree: MBBS, MNAMS, MS

Professional title: Additional Professor

Reviewer's Country/Territory: India

Author's Country/Territory: Greece

Manuscript submission date: 2023-07-25

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-09-15 17:52

Reviewer performed review: 2023-09-16 05:43

Review time: 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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Peer-reviewer statements	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

Dear Authors, Good Article but requires following changes to be accepted : 1. The authors need to correct few typo and grammatical errors or you can take help of English editor services provided by BPG. 2. The authors must add tables depicting sensitivity and specificity of different AI/ML based Models in Gastroenterology. 3. How the predictability and cost-effectiveness can be improved? The authors shall add one para on this. 4. The authors need to mention few flow - charts and algorithms of few AI/ML based Softwares commonly used in Gastroenterology. 5. The authors need to mention - what new this study adds to the existing literature? Thanks

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Title: Challenges involved in the application of artificial intelligence in gastroenterology:
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Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 03720781

Position: Editorial Board

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Greece

Manuscript submission date: 2023-07-25

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-10-01 00:40

Reviewer performed review: 2023-10-04 05:05

Review time: 3 Days and 4 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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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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

SPECIFIC COMMENTS TO AUTHORS

In this viewpoint review, the authors first introduce the current application status of artificial intelligence in the field of gastrointestinal diseases and healthcare. Then, they highlighted a series of challenges faced by these applications, such as accuracy, cost-effectiveness, network security, interpretability, supervision, and accountability. And explored methods to overcome these challenges. As mentioned in the article, what we should pay attention to is: who should be responsible for following the decisions of artificial intelligence models that cause patient harm? The decision-making of the AI/ML model is based on quantifiable parameters. However, clinical doctors' decisions rely on unquantifiable parameters. Artificial intelligence is unlikely to replace doctors. However, it is unlikely that the skills required by future doctors will be similar to those of today. Therefore, doctors should participate in artificial intelligence to avoid becoming outdated. This is a good article with breadth and depth, worth reading for physicians and healthcare workers.

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Peer-review model: Single blind

Reviewer's code: 03032964

Position: Peer Reviewer

Academic degree: FACS

Professional title: Chief Physician, Doctor, Postdoc, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: Greece

Manuscript submission date: 2023-07-25

Reviewer chosen by: Yu-Lu Chen

Reviewer accepted review: 2023-09-26 13:19

Reviewer performed review: 2023-10-04 09:22

Review time: 7 Days and 20 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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

1.The accuracy of the developed AI/ML tool is of great importance in the application of AI in the medical field, and in your review, you also spent a lot of time describing the current accuracy status of AI tools and ways to deal with it, so I think accuracy is very necessary to add keywords 2.Emphasis on the importance of physicians: More emphasis on the role of physicians in ML model development and how they can help solve data and model challenges. Provide clear advice on how to involve physicians in the model development process, including advice on the timing of their involvement, how information is delivered, and ensuring sample representation. This can make the article more practical. 3.In INTERPRETABILITY, while some of the interpretive methods are mentioned, more detailed information can be provided, including how these methods work and how they can help explain the decisions of the black box model. This helps readers better understand how to address interpretative challenges.