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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 44701

Title: Artificial Intelligence in Medical Imaging of Liver

Reviewer's code: 00503601

Reviewer's country: Singapore

Science editor: Xue-Jiao Wang

Date sent for review: 2018-11-26

Date reviewed: 2018-11-26

Review time: 13 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[ ] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[ ] Grade B: Very good	[Y] Grade B: Minor language polishing	[ ] Accept (General priority)	[Y] Anonymous
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Minor revision	[ ] Onymous
[Y] Grade D: Fair	[ ] Grade D: Rejection	[Y] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[ ] Advanced
			[Y] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

This is a review article looking at the sphere of AI in medical imaging of the liver and its potential applications. Overall, the manuscript is difficult to read and follow as the authors have primarily taken findings from various studies and published works and aggregated these. The technical aspects tend to be fairly complex and may make little

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sense to the general reader. It will be useful for the authors to make mention of how AI compares to the current practiced model of clinician interpretation fo the images but there is no data nor description of this comparison. The various clinical uses tend to be fairly generic and there is no specific detailing of where AI really has superiority over conventional clinical reporting. The conclusion also is somewhat bold in stating that AI is rapidly becoming state of the art without having any evidence eo back this up as the published works reviewed tend to be in the experimental context still, except perhaps for liver segmentation which is currently often automated or semi-automated. The tables presented have no contextual relevance as there is no comparison to current conventional methods.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 44701

Title: Artificial Intelligence in Medical Imaging of Liver

Reviewer's code: 00039518

Reviewer's country: Italy

Science editor: Xue-Jiao Wang

Date sent for review: 2018-11-26

Date reviewed: 2018-12-02

Review time: 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[Y] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[Y] Grade B: Very good	[ ] Grade B: Minor language polishing	[Y] Accept (General priority)	[Y] Anonymous
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[ ] Minor revision	[ ] Onymous
[ ] Grade D: Fair	[ ] Grade D: Rejection	[ ] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[ ] Advanced
			[Y] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

The paper "Artificial intelligence in medical imaging of liver" is well written and provides an exhaustive review of the present state, ways of development, gray areas and limits of the application of artificial intelligence and convolutional neural networks in the field of liver imaging. Only minor points need to be clarified: Input data and

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teaching data paragraph: explain the meaning of the acronym RGB Input data and teaching data paragraph: write as follows: … the risk of the overfitting problem, because the slight differences in position may lead to the inconsistency between examinations. Focal liver lesion evaluation paragraph: this paragraph concerns not only focal liver lesions evaluation but also the application of CNN in the staging of diffuse liver disease. Please clarify and change the title of the paragraph

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PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 44701

Title: Artificial Intelligence in Medical Imaging of Liver

Reviewer's code: 00646357

Reviewer's country: Egypt

Science editor: Xue-Jiao Wang

Date sent for review: 2018-12-03

Date reviewed: 2018-12-04

Review time: 1 Day

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[Y] Grade A: Excellent	[ ] Grade A: Priority publishing	[Y] Accept (High priority)	Peer-Review:
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[ ] Grade D: Fair	[ ] Grade D: Rejection	[ ] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
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			[ ] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

-Discus other types of deep learning other than CNN -Discus role of deep learning in diffuse liver disease -Discus role of deep learning in quantitavie assessment of DWI parameters using these ref -Razek AAKA, Abdalla A, Barakat T, El-Taher H, Ali K. Assessment of the liver and spleen in children with Gaucher disease type I with

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diffusion-weighted MR imaging. Blood Cells Mol Dis 2018;68:139-142. Razek AA, Massoud SM, Azziz MR, El-Bendary MM, Zalata K, Motawea EM. Prediction of esophageal varices in cirrhotic patients with apparent diffusion coefficient of the spleen. Abdom Imaging 2015;40:1465-9. Razek AA, Khashaba M, Abdalla A, Bayomy M, Barakat T. Apparent diffusion coefficient value of hepatic fibrosis and inflammation in children with chronic hepatitis. Radiol Med 2014;119:903-9. Razek AA, Abdalla A, Omran E, Fathy A, Zalata K. Diagnosis and quantification of hepatic fibrosis in children with diffusion weighted MR imaging. Eur J Radiol 2011;78:129-34.

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