

PEER-REVIEW REPORT

Name of journal: World Journal of Radiology

Manuscript NO: 50045

Title: Segmentation of carotid arterial walls using neural networks

Reviewer's code: 03475479

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Lecturer

Reviewer's country: Japan

Author's country: United States

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2019-09-12 09:50

Reviewer performed review: 2019-09-14 01:55

Review time: 1 Day and 16 Hours

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

SPECIFIC COMMENTS TO AUTHORS

Authors applied CNN technique to the task of segmenting carotid arteries with MRI



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imagings. This technique was superior and might be useful. The results by CNN technique was well correlated with those with expert radiologists. However the association with pathology was unclear from the data shown in this manuscript. In Fig.2 and 3, the difference between CNN and wall area was found than others. Authors should explain or discuss it. Clinical significance should be discussed more detail (e.g. cost, time, difference with other modalities such as US or CT)

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Radiology

Manuscript NO: 50045

Title: Segmentation of carotid arterial walls using neural networks

Reviewer's code: 02904354

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Postdoc

Reviewer's country: China

Author's country: United States

Reviewer chosen by: Jia-Ping Yan

Reviewer accepted review: 2019-09-12 13:52

Reviewer performed review: 2019-09-14 08:32

Review time: 1 Day and 18 Hours

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

SPECIFIC COMMENTS TO AUTHORS

This paper is well written and organized. It has a novelty. I recommend its publication in



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this journal. However, this paper is too specialized. I have to acknowledge that I am not skilled at computer science nor familiar with imaging diagnosis of carotid diseases and CNN techniques. More skilled experts should be necessary to evaluate its scientific value. From general comments, the golden diagnostic criteria should be clearly proposed. As for an expert readers, is there any possibility of missing or wrong diagnosis? Additionally, the patients' characteristics should be briefly introduced.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☒ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☒ No