

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Radiology

**Manuscript NO:** 40122

**Title:** Reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies

**Reviewer's code:** 00189260

**Reviewer's country:** Czech Republic

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-06-15

**Date reviewed:** 2018-06-19

**Review time:** 4 Days

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 checked="" type="checkbox"/> Grade B: Very good	<input type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input type="checkbox"/> Grade C: Good	polishing	<input checked="" 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 type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

The article is typical scientific article and therefore I fully agree with the conclusion, that semi-automated region growing algorithm for quantifying PE is a suitable method for image analysis in multicenter clinical trials. For everyday practice is however this



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algorithm useless. The statistical analysis is is complex and good.

#### 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:** 40122

**Title:** Reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies

**Reviewer's code:** 03366604

**Reviewer's country:** United States

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-06-30

**Date reviewed:** 2018-07-06

**Review time:** 6 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" 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 checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

This manuscript describes a study that evaluated the reproducibility of embolism volume quantification in multicenter CT pulmonary angiography exams. It includes the analysis of data obtained from 23 patients at 18 sites using different site-specific



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imaging protocols. A semi-automatic seed-growing algorithm was used for embolism volume measurement that was performed by two experienced image analysts. Scoring evaluation were also conducted. The study found excellent inter- and intra-observer reproducibility in the emboli volume measurement suggesting that the image analysis method may be suitable for multicenter use. I have the following specific comments.

1) This study looks at the reproducibility of the emboli volume measurement, which has the value of demonstrating the reliability of the measurement in a given protocol setting. However, it does not address the potential variation in the sensitivity and accuracy of emboli volume measurement due to different imaging protocols used in multicenter clinical trials. For example, a small embolus may be seen on images with thin slices and small pitch size but missed on images with thick slices and large pitch size. This may affect emboli quantification in multicenter studies of drugs aimed to reduce and eliminate clot size.

2) As mentioned in the paper, the selection of cases and images from a site qualification visit prior to the start of a multicenter clinical trial of a thrombolytic agent may lead to bias in the study. Besides, the small population size of 23 is also a limitation of the study. What is the basis/criterion for the data selection?

Minor comment: In the abstract, please state that the data were acquired from 18 sites (in addition to 23 scanners).

## INITIAL REVIEW OF THE MANUSCRIPT

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## PEER-REVIEW REPORT

**Name of journal:** World Journal of Radiology

**Manuscript NO:** 40122

**Title:** Reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies

**Reviewer's code:** 00225366

**Reviewer's country:** Canada

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-07-11

**Date reviewed:** 2018-07-11

**Review time:** 15 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 type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input checked="" type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

The authors wanted to prove that their method of thrombus volume quantification can be reproduced in multiple centers using CTPA. My concern of this work is that if there is a well-defined protocol and procedure for the CTPA, it is difficult to understand why



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the method cannot be implemented in another center even using different CT scanners. The authors have to clearly define what issues and reasons they wanted to conduct such study and why the results are important. Otherwise, it is just a routine evaluation of the method proving it is practical. The publication value is therefore low.

#### **INITIAL REVIEW OF THE MANUSCRIPT**

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##### ***BPG Search:***

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- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Radiology

**Manuscript NO:** 40122

**Title:** Reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies

**Reviewer's code:** 02577402

**Reviewer's country:** China

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-07-11

**Date reviewed:** 2018-07-14

**Review time:** 3 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input 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 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 checked="" 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 checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

### SPECIFIC COMMENTS TO AUTHORS

In this MS, the authors studied the reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies. Some problems existed. 1. The language needs to be improved because of some grammar and





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punctuation mistakes. 2. Use of tense: In the sections of Materials and Methods and Results, the tense of the sentences should be past tense because you did this study or these studies in the past. However, the authors used a lot of present tense. Please change the tense to the past tense. 3. Introduction: In this part, the authors said in the second paragraph that “the goal of this study is to evaluate the quantifiable metric of TTV in PE, especially as new drugs are being developed that aim to eliminate and reduce clot size.”. Then, in the third paragraph, the authors restated that “The purpose of this study to evaluate the reproducibility of in vivo PE data obtained in a multicenter setting where the CT scanners vary by site, as do acquisition and -----”. What are your purpose or your goals? Actually, when you gave the background information and pointed out the shortcomings and problems in the literature regarding this study in the introduction section, you should propose a hypothesis and then give your purpose in this study. Please rewrite this part. 4. Statistical analysis: In this section, you should give the P value. Is it less than 0.05? 5. In Fig.1, please indicate in the figure all the names of the part of the pulmonary vessels like MPA, RPA, TA, RILA etc. 6. The references seemed a little older with no citations in recent two years. 7. The authors did not say if they had obtained the ethics committee approval and if the patients had given the participation consent in written form.

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## PEER-REVIEW REPORT

**Name of journal:** World Journal of Radiology

**Manuscript NO:** 40122

**Title:** Reproducibility of thrombus volume quantification in multicenter computed tomography pulmonary angiography studies

**Reviewer's code:** 02669684

**Reviewer's country:** Egypt

**Science editor:** Fang-Fang Ji

**Date sent for review:** 2018-07-11

**Date reviewed:** 2018-07-15

**Review time:** 4 Days

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
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			<input type="checkbox"/> Yes
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### SPECIFIC COMMENTS TO AUTHORS

Interest g title Well designed study. Good work

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