

PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 55140

Title: Multiphase convolutional dense network for the classification of focal liver lesions on dynamic contrast-enhanced computed tomography

Reviewer's code: 02708249

Position: Editorial Board

Academic degree: PhD

Professional title: Full Professor

Reviewer's Country/Territory: France

Author's Country/Territory: China

Manuscript submission date: 2020-03-17

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-03-18 12:59

Reviewer performed review: 2020-03-25 18:00

Review time: 7 Days and 5 Hours

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|---------------------------------|---|
| 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 Grade E: Do not publish |
| Language quality | <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 |
| Conclusion | <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 |
| Re-review | <input type="checkbox"/> Yes <input 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

1 Title. Good 2 Abstract. Good 3 Key words. Good 4 Background. Good 5 Methods. See comments below: - How could the classification of the lesion by the home-developed lesion annotation module in 3D Slicer trusted? - - Section: Input Data: CT Imaging Annotation o How did the authors define the 3D bounding box surrounding the lesion's boundary used to crop the four-phase lesion volumes? Manually, etc.? Please discuss. - Section: Input Data: CT Imaging Processing Pipeline o Authors doesn't explain how the cropping was achieved. Is it manually? o The following text should be in Section: Deep Convolutional Network Architecture "The deep convolutional network was a 2.5D MP-CDN with the four phases of resized multichannel images as the input (slice was used as the channel dimension in this network). The classification tasks consisted of training and testing, where the training task was executed with a batch size of 100, and the test task was executed once for each lesion." - Section: Deep Convolutional Network Architecture o Did the authors evaluate the effect of data augmentation on the training. I mean, does data augmentation improve the results or not? 6 Results. Good 7 Discussion. Good 8 Illustrations and tables. Good 9 Biostatistics. Good 10 Units. Good 11 References. Good 12 Quality of manuscript organization and presentation. Good 13 Research methods and reporting. Good 14 Ethics statements. OK