# PEER-REVIEW REPORT

**Name of journal:** World Journal of Clinical Cases

**Manuscript NO:** 55609

**Title:** Progress of intravoxel incoherent motion diffusion-weighted imaging in liver diseases

**Reviewer's code:** 00504351

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Assistant Professor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-03-26

**Reviewer chosen by:** Jia-Ping Yan

**Reviewer accepted review:** 2020-05-11 00:36

**Reviewer performed review:** 2020-05-15 00:01

**Review time:** 3 Days and 23 Hours

| Scientific quality | [ ] Grade A: Excellent    [ ] Grade B: Very good    [ ] Grade C: Good<br>[ Y] Grade D: Fair    [ ] Grade E: Do not publish |
|---|---|
| **Language quality** | [ Y] Grade A: Priority publishing    [ ] Grade B: Minor language polishing<br>[ ] Grade C: A great deal of language polishing    [ ] Grade D: Rejection |
| **Conclusion** | [ ] Accept (High priority)    [ ] Accept (General priority)<br>[ ] Minor revision    [ Y] Major revision    [ ] Rejection |
| **Re-review** | [ Y] Yes    [ ] No |
| **Peer-reviewer** | Peer-Review: [ Y] Anonymous    [ ] Onymous |

| statements | Conflicts-of-Interest: [ ] Yes [ Y ] No |
|---|---|

## SPECIFIC COMMENTS TO AUTHORS

Manuscript NO: 55609 Comments to authors, This manuscript reviewed IVIM-DWI used in diagnosis of liver diseases and its progress. It is valuable for reading and help the readers to know the advantages and disadvantages when use this technics in clinical diagnosis and differential diagnosis. Major comments: 1. Figures could help the readers to understand at a glance what the authors' mean in this manuscript, why there were no any figures to explain the basic principles of IVIM-DWI, and in the diagnosis and/or differential diagnosis in liver diseases? It would be better if the authors give pictures to explain the principle of IVIM-DWI and in different diagnosis. 2. It is well known that when using same method to diagnose similar diseases, the results are similar or approximate to similar. If different results appeared, one should consider the reasons or what factors influenced the results. In this manuscript chapter 3 it wrote: Studies [12, 44, 45] have shown that the D, D* and f values of a hepatic fibrosis group were significantly lower than those of a normal control group. The IVIM - DWI parameters D, D* and f can be used to distinguish healthy people from patients with hepatic fibrosis, among which the f value has the best diagnostic value[38]. The study by Shiraga et al. [36] showed that IVIM - DWI also identified a pre-fibrotic state of the liver in Fontan patients. The study included five consecutive Fontan patients and four age-matched healthy volunteers. The results showed that in the five Fontan patients, laboratory tests and ultrasound showed almost normal liver conditions, and cardiac catheterization and MRI showed good Fontan circulation, but the D, D* and f values of Fontan patients were significantly lower than those of the control group. However, some studies[9, 41, 46] have shown that the D value was not significantly different between a normal liver and

hepatic fibrosis tissue. Dyvorne et al.[19] showed that D* values were not significantly different between normal volunteers and patients with hepatic fibrosis.　Why the D, D* values appeared differently in the same disease? The authors should provide their own analysis, opinions and suggestions how to judge these results and how to avoid miss diagnosis. This comment is also available for chapter 4, 5 and 6.　Minimum comments: The authors should give a list of abbreviations.

# PEER-REVIEW REPORT

**Name of journal:** World Journal of Clinical Cases

**Manuscript NO:** 55609

**Title:** Progress of intravoxel incoherent motion diffusion-weighted imaging in liver diseases

**Reviewer's code:** 03645171

**Position:** Editorial Board

**Academic degree:** MD, MSc

**Professional title:** Doctor, Research Scientist

**Reviewer's Country/Territory:** Italy

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-03-26

**Reviewer chosen by:** Jia-Ping Yan

**Reviewer accepted review:** 2020-05-10 05:52

**Reviewer performed review:** 2020-05-24 16:40

**Review time:** 14 Days and 10 Hours

| | |
|---|---|
| **Scientific quality** | [　] Grade A: Excellent　　[　] Grade B: Very good　　[ Y] Grade C: Good<br>[　] Grade D: Fair　　[　] Grade E: Do not publish |
| **Language quality** | [　] Grade A: Priority publishing　　[ Y] Grade B: Minor language polishing<br>[　] Grade C: A great deal of language polishing　　[　] Grade D: Rejection |
| **Conclusion** | [　] Accept (High priority)　　[　] Accept (General priority)<br>[　] Minor revision　　[ Y] Major revision　　[　] Rejection |
| **Re-review** | [ Y] Yes　　[　] No |
| **Peer-reviewer** | Peer-Review: [　] Anonymous　　[ Y] Onymous |

| **statements** | Conflicts-of-Interest: [   ] Yes   [ Y] No |
|---|---|

## SPECIFIC COMMENTS TO AUTHORS

This paper reviews the basic principles of IVIM - DWI and its research progress in the diagnosis and treatment of hepatic diseases. As it is presented the paper is not easy-to-read for clinicians: It lacks of summary tables and figures. At present status it is not acceptable.

# RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Clinical Cases

**Manuscript NO:** 55609

**Title:** Progress of intravoxel incoherent motion diffusion-weighted imaging in liver diseases

**Reviewer's code:** 00504351

**Position:** Peer Reviewer

**Academic degree:** MD, PhD

**Professional title:** Assistant Professor

**Reviewer's Country/Territory:** Japan

**Author's Country/Territory:** China

**Manuscript submission date:** 2020-03-26

**Reviewer chosen by:** Ze-Mao Gong

**Reviewer accepted review:** 2020-06-30 09:31

**Reviewer performed review:** 2020-06-30 10:21

**Review time:** 1 Hour

| Scientific quality | [  ] Grade A: Excellent    [ Y] Grade B: Very good    [  ] Grade C: Good |
| | [  ] Grade D: Fair    [  ] Grade E: Do not publish |
| Language quality | [  ] Grade A: Priority publishing    [ Y] Grade B: Minor language polishing |
| | [  ] Grade C: A great deal of language polishing    [  ] Grade D: Rejection |
| Conclusion | [ Y] Accept (High priority)    [  ] Accept (General priority) |
| | [  ] Minor revision    [  ] Major revision    [  ] Rejection |
| Peer-reviewer statements | Peer-Review: [ Y] Anonymous    [  ] Onymous |
| | Conflicts-of-Interest: [  ] Yes    [ Y] No |

**SPECIFIC COMMENTS TO AUTHORS**

Specific comments to authors (for 55609-revised MS)   It is very good after adding the figures and table. Now the readers can understand easily about what were shown by the authors.    The authors should pay attention for English edition carefully (55609-Supplementary-Material revision). Such as: Page 10, in the paragraph EVALUATION OF HCC TREATMENT RRESPONSE   Line 6: for recurrence.The D value of….should be for recurrence. The D value of… Line 8: recurrence.Studies have…..should be recurrence. Studies have…. Some sentences like that mentioned above.

# RE-REVIEW REPORT OF REVISED MANUSCRIPT

| Scientific quality | [  ] Grade A: Excellent   [  ] Grade B: Very good   [ Y] Grade C: Good [  ] Grade D: Fair   [  ] Grade E: Do not publish |
|---|---|
| Language quality | [ Y] Grade A: Priority publishing   [  ] Grade B: Minor language polishing [  ] Grade C: A great deal of language polishing   [  ] Grade D: Rejection |
| Conclusion | [  ] Accept (High priority)   [ Y] Accept (General priority) [  ] Minor revision   [  ] Major revision   [  ] Rejection |
| Peer-reviewer statements | Peer-Review: [ Y] Anonymous   [  ] Onymous Conflicts-of-Interest: [  ] Yes   [ Y] No |

**SPECIFIC COMMENTS TO AUTHORS**

The authors responded adequately to my suggestions and added figures and tables as requested. I think the paper is easy to read and well written, so I suggest publication. In the conclusions I would be more cautious in the statement "In summary, IVIM - DWI can accurately reflect information related to the diffusion of simple water molecules and microcirculatory perfusion in tissues and has important application value in the diagnosis of hepatic fibrosis, the differentiation of benign and malignant hepatic lesions, the histological classification of HCC, the evaluation of local and targeted therapeutic response and the prediction of therapeutic efficacy". It could be could rewritten as "In conclusion, IVIM - DWI seems to reflect accurately information related to the diffusion of simple water molecules and microcirculatory perfusion in tissues and it could have important application value in the diagnosis of hepatic fibrosis, the differentiation of benign and malignant hepatic lesions, the histological classification of HCC, the evaluation of local and targeted therapeutic response and the prediction of therapeutic efficacy"