

# PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 82781

Title: Fractional flow reserve and non-hyperemic indices: essential tools for

percutaneous coronary interventions

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06368927 Position: Peer Reviewer

Academic degree: Doctor, FACC, MD

Professional title: Assistant Professor, Senior Researcher, Senior Scientist

Reviewer's Country/Territory: India
Author's Country/Territory: Belgium

Manuscript submission date: 2022-12-27

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2023-01-30 02:50

Reviewer performed review: 2023-02-05 15:22

Review time: 6 Days and 12 Hours

	[ ] Grade A: Excellent [ ] Grade B: Very good [ ] Grade C:
Scientific quality	Good
	[ Y] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [ Y] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of	[ ] Grade A: Excellent [ ] Grade B: Good [ Y] Grade C: Fair
this manuscript	[ ] Grade D: No creativity or innovation



Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [ Y] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [ Y] Major revision [ ] Rejection
Re-review	[Y]Yes []No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous  Conflicts-of-Interest: [ ] Yes [Y] No

#### SPECIFIC COMMENTS TO AUTHORS

I congratulate the authors for an exhaustive review on FFR and NHPR. There has been an adequate literature review on the topic with updated references included in the bibliography. However, the major concern I have is regarding the novelty of this manuscript. The facts that have been included are already known. I would like to see an integrative approach to yield newer applications. I want you to use your thought process and generate newer hypothesis/ the future of this technology in clinical practice. Besides this I would like the inclusion of QFR, which has come a big way and is challenging to replace FFR in cath lab in a few years time thanks to the obvious advantage. Discuss how QFR fairs compared to FFR and NHPR. You can add these studies and include in references:- 1) Westra J, Andersen BK, Campo G, Matsuo H, Koltowski L, Eftekhari A, Liu T, Di Serafino L, Di Girolamo D, Escaned J, Nef H. Diagnostic performance of in - procedure angiography - derived quantitative flow reserve compared to pressure - derived fractional flow reserve: the FAVOR II Europe - Japan study. Journal of the American Heart Association. 2018 Jul 17;7(14):e009603. 2) Kasinadhuni G, Batta A, Gawalkar AA, Budakoty S, Gupta A, Vijayvergiya R. Validity



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and correlation of quantitative flow ratio with fractional flow reserve for assessment of intermediate coronary lesions. Acta Cardiologica. 2022 Apr 5:1-8. 3) Cortés C, Carrasco - Moraleja M, Aparisi A, Rodriguez - Gabella T, Campo A, Gutiérrez H, Julca F, Gómez I, San Román JA, Amat - Santos IJ. Quantitative flow ratio—Meta - analysis and systematic review. Catheterization and Cardiovascular Interventions. 2021 Apr 1;97(5):807-14.



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Reviewer's code: 05516772 Position: Peer Reviewer Academic degree: MD

**Professional title:** Doctor

Reviewer's Country/Territory: China Author's Country/Territory: Belgium

Manuscript submission date: 2022-12-27

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2023-01-30 03:04

Reviewer performed review: 2023-02-06 13:03

**Review time:** 7 Days and 9 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [ Y] Grade C: Good
	[ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [ Y] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [ Y] Grade C: Fair [ ] Grade D: No creativity or innovation



Scientific significance of the	[ ] Grade A: Excellent [ Y] Grade B: Good [ ] Grade C: Fair
conclusion in this manuscript	[ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language
	polishing [ ] Grade C: A great deal of language polishing [ ]
	Grade D: Rejection
Conclusion	[ ] Accept (High priority) [ ] Accept (General priority)
	[ ] Minor revision [ <mark>Y</mark> ] Major revision [ ] Rejection
Re-review	[Y]Yes [ ]No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [ Y] No

# SPECIFIC COMMENTS TO AUTHORS

The author introduced the mechanism, clinical use and significance of FFR and NHPR. The article is well organized. But it needs polish. 1. The author is suggested to discuss the difference or explain why IFR appears in the introduction part. Besides, NPHR and NHPR appear in the text, please correct. 2. The author introduce the definition of FFR, what about theoretical basis of iFR ? 3. The author said that" An hybrid approach to intermediate lesions (DFR 0.85 – 0.95) may be reasonable to maximize data available in clinical decision making and to facilitate appropriate revascularization strategies.' So, I suggested the author discuss the shortage of FFR and IFR, and discuss when to combine other assessment tools and the related clinical significance



# RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Academic degree: Doctor, FACC, MD

Professional title: Assistant Professor, Senior Researcher, Senior Scientist

Reviewer's Country/Territory: India
Author's Country/Territory: Belgium

Manuscript submission date: 2022-12-27

Reviewer chosen by: Ji-Hong Liu

Reviewer accepted review: 2023-02-24 13:15

Reviewer performed review: 2023-02-24 13:21

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	[ 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	Peer-Review: [ Y] Anonymous [ ] Onymous



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statements

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

# SPECIFIC COMMENTS TO AUTHORS

I am satisfied by the rebuttal of the authors and the changes they have incorporated in their manuscript. It now comprehensively covers the current concepts and evidence surrounding FFR and allied tools in clinical practice.