PEER-REVIEW REPORT

Name of journal: World Journal of Cardiology

Manuscript NO: 55527

Title: Sympathetic nervous system activation and heart failure: Current state of evidence and the pathophysiology in the light of novel biomarkers

Reviewer's code: 02630177

Position: Peer Reviewer

Academic degree: PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Thailand

Author's Country/Territory: Croatia

Manuscript submission date: 2020-03-21

Reviewer chosen by: AI Technique

Reviewer accepted review: 2020-03-23 08:13

Reviewer performed review: 2020-03-31 06:35

Review time: 7 Days and 22 Hours

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish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	[ ] Accept (High priority) [ ] Accept (General priority) [ ] Minor revision [Y] Major revision [ ] Rejection
Re-review	[ ] Yes [ ] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

To the editors/Authors, This review, focuses on the integrative and up-to-date overview of diagnostic modalities such as SNS imaging methods and novel laboratory biomarkers that could aid in the assessment of the degree of SNS activation and provide reliable prognostic information among patients with HF. Major comments 1. Pathophysiology and compensatory mechanisms of heart failure in the present version are relatively basic and overlaped. I would suggest combining the two subtopics, concising the text, and adding a basic diagram of causes, effects, and compensation. 2. Physiology of sympathetic nervous system, cardiovascular reflexes, and adrenergic mechanism are also very basic and overlaped. I would suggest combining and consising them. Cardiovascular reflexes may be listed as a table. 3. The mechanism of how the SNS changes in heart failure should be more clarified. 4. Figure 2 should be revised to indicate a step-by step from levels, effects, mecahnisms, and heart failure, respectively. 5. Could endothelin and galanin be added to the Figure 3? Otherwise, a new figure is recommended. 6. Heart rate variability has been widely used to indicate sympathetic and parasympathetic activity to the heart. Explanation of its basic, clincal application, limitation, and comparison to other techniques is recommended. Minor comment 1. English should be carefully rechecked. UK or USA style must be consistent. 2. Abbreviations in the Figures must be fully explained in the figure legends.