# PEER-REVIEW REPORT

**Name of journal:** World Journal of Cardiology

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**Title:** Artificial Intelligence and Machine Learning in Cardiovascular Computed Tomography

**Reviewer's code:** 05914645

**Position:** Peer Reviewer

**Academic degree:** MD

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

**Author's Country/Territory:** United States

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**Reviewer chosen by:** AI Technique

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| [ Y] Grade A: Excellent   [   ] Grade B: Very good   [   ] Grade C: Good   [   ] Grade D: Fair   [   ] Grade E: Do not publish |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

**SPECIFIC COMMENTS TO AUTHORS**

The authors present a review of artificial intelligence and machine learning in in CT imaging in cardiovascular disease. The author introduce and explain the concept of artificial learning and explain the types of machine learning. The authors then use studies and publications in literature to explain the role of machine learning in coronary calcium scoring, prediction of coronary artery disease, computed tomography fractional flow reserve, the identification of left ventricular hypertrophy phenotypes in conjunction with coronary artery disease, to compare, evaluation of epicardial adipose tissue, plaque characteristics and also to detect culprit coronary artery, acute ischemic stroke, the use of machine learning of perivascular fat to predict cardiac risk. The comparison of some of these with other modalities were investigated and authors discussed the limitations of the application of these modalities in the clinical setting. This is a very important topic that provides a detailed comprehensive review on the subject. This is an important topic which is likely to influence the management of clinical practice in the near future. The limitation of the machine learning and difficulties of its implementation in clinical practice were described by the authors. The need for all stake holders to be involved the need to acquire large amount of data from different institutions and the possibility of unintentional bias are a few of the limitations Title- work was limited to CT in cardiovascular disease and not CT in general Abstract- summarizes the work Keywords- these reflect the work Background- very good background presented Tables and figures correctly represent the discussion Sound scientific conclusion Reference- please see comments undder suggestion Suggestions I would the cardiovascular is added to the title to more correctly reflect the review The refence contain up to date but please be careful of the formatting such as 1 and 3 where the issue and page numbers did not appear or in others where the volume did not appear.