

PEER-REVIEW REPORT

Name of journal: *World Journal of Cardiology*

Manuscript NO: 71148

Title: Joint Effect of Vitamin D Deficiency and Metabolic Syndrome on Risk of Cardiovascular Disease and All-cause Mortality among U.S. Adults: A Longitudinal Study and Machine Learning

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05301537

Position: Peer Reviewer

Academic degree: MSc

Professional title: Assistant Professor

Reviewer's Country/Territory: Ethiopia

Author's Country/Territory: United States

Manuscript submission date: 2021-08-30

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-03-04 07:26

Reviewer performed review: 2022-03-10 23:40

Review time: 6 Days and 16 Hours

Scientific quality	☐ Grade A: Excellent ☒ Grade B: Very good ☐ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Language quality	☐ 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) ☒ Minor revision ☐ Major revision ☐ Rejection



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Re-review	[☒] Yes [☐] No
Peer-reviewer statements	Peer-Review: [☒] Anonymous [☐] Onymous Conflicts-of-Interest: [☐] Yes [☒] No

SPECIFIC COMMENTS TO AUTHORS

N/A

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Peer-review model: Single blind

Reviewer's code: 05506752

Position: Peer Reviewer

Academic degree: MD

Professional title: Associate Chief Physician, Associate Professor

Reviewer's Country/Territory: China

Author's Country/Territory: United States

Manuscript submission date: 2021-08-30

Reviewer chosen by: Qi-Gu Yao

Reviewer accepted review: 2022-03-12 15:43

Reviewer performed review: 2022-03-20 13:18

Review time: 7 Days and 21 Hours

Scientific quality	☐ Grade A: Excellent ☒ Grade B: Very good ☐ Grade C: Good ☐ Grade D: Fair ☐ Grade E: Do not publish
Language quality	☐ Grade A: Priority publishing ☒ Grade B: Minor language polishing ☐ Grade C: A great deal of language polishing ☐ Grade D: Rejection
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Re-review	[☐] Yes [☒] No
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SPECIFIC COMMENTS TO AUTHORS

In this paper the Authors performed an original analysis of the association between vitamin D deficiency and MetSyn and increased risk of CVD and all-cause mortality. A significant joint effect of vitamin D deficiency and MetSyn on risk of mortality was highlighted by using Cox regression model and CART for machine learning. This article expanded our knowledge on the impact of vitamin D deficiency and MetSyn on risk of CVD and all-cause mortality. My only existing question about the methodological approach concerns the basis for classification of race/ethnicity (non-Hispanic white [NHW], non-Hispanic black [NHB], and the others), that requires a more specific or detailed elucidation.