ARCHIVES OF THE TURKISH SOCIETY OF CARDIOLOGY

Official journal of the TURKISH SOCIETY OF CARDIOLOGY

Reply to the Letter to the Editor: ''Lipoprotein(a): The Silent Actor That Hardens the Arteries and Weakens the Bone''

Editöre Mektup Yanıtı: ''Lipoprotein(a): Arterleri Sertleştiren ve Kemikleri Zayıflatan Sessiz Aktör''

LETTER TO THE EDITOR REPLY
EDİTÖRE MEKTUP YANITI

To the Editor,

We would like to thank the authors[1] for their thoughtful comments and interest in our study,[2] which examined the association between lipoprotein(a) [Lp(a)], coronary artery calcification (CAC), and bone mineral density (BMD) in elderly, statin-naive individuals. Their contribution is valuable.

The authors note that the use of visual CAC assessment may limit comparability across studies. We are aware of this limitation and have acknowledged it in the manuscript. However, while quantitative Agatston scoring is the reference standard, visual CAC scoring has been demonstrated to be a reliable and clinically meaningful approach, particularly in retrospective cohorts where dedicated calcium scoring protocols are not uniformly performed.[3] Additionally, the scans in our study were independently evaluated by both a cardiologist and a radiologist who were blinded to clinical data, which strengthened reproducibility.

Regarding menopausal status, estrogen levels, and vitamin D, we agree that these factors influence bone metabolism. In our study population (≥ 55 years), the majority of women were postmenopausal, and individuals receiving hormone replacement therapy or those with significant inflammatory or metabolic conditions were excluded to minimize confounding. Nonetheless, we concur that future prospective studies incorporating hormonal parameters and bone turnover markers will help further clarify the underlying mechanisms.

The point raised regarding shared mechanistic pathways is also highly relevant. As noted in the letter, Lp(a) carries oxidized phospholipids that promote osteogenic signaling in vascular smooth muscle cells, while also potentially influencing osteoclastic activity through plasminogen-like structural domains.[4,5] Our findings align with this concept, demonstrating a stepwise increase in both CAC and low BMD prevalence across ascending Lp(a) categories.

In summary, we appreciate the authors' insightful comments, which support the broader implication of our study: Lp(a) may serve as a shared molecular mediator linking atherosclerosis, vascular calcification, and osteoporosis. Further longitudinal and translational research will be essential to determine whether therapeutic targeting of Lp(a) may provide dual benefits for cardiovascular and bone health.

References

1. Astan R, Erkiz E, Tekin K, Gülsüm A. Lipoprotein(a): The Silent Actor That Hardens the Arteries and Weakens the Bone. *Turk Kardiyol Dern Ars*. 2026;54(1):79–80.
2. Yurtseven E, Timoçin Yığman G, et al. Association of Lipoprotein(a) with Coronary Artery Calcification and Bone Mineral Density in Elderly Individuals. *Turk Kardiyol Dern Ars*. 2025;53(7):477-482. [CrossRef]
3. Foraker R, Sperling L, Bratzke L, et al.; on behalf of the American Heart Association Prevention Science Committee of the Council on Epidemiology and Prevention and Council on Cardiovascular and Stroke Nursing; Council on Clinical Cardiology; and Council on Cardiovascular Radiology and Intervention. Opportunistic Detection of Coronary Artery

Ece Yurtseven[1]
Gizem Timoçin Yığman[2]
Gizem Yaşa[3]
Nigar Bakhshaliyeva[3]
Kayhan Çetin Atasoy[2]
Erol Gürsoy[1]
Kemal Baysal[1]
Saide Aytekin[1]
Vedat Aytekin[1]

[1]*Department of Cardiology, Koç University Faculty of Medicine, İstanbul, Türkiye*
[2]*Department of Radiology, Koç University Faculty of Medicine, İstanbul, Türkiye*
[3]*Koc University Faculty of Medicine, İstanbul, Türkiye*

Corresponding author:
Ece Yurtseven
✉ eyurtseven@kuh.ku.edu.tr

Cite this article as: Yurtseven E, Timoçin Yığman G, Yaşa G, et al. Reply to the Letter to the Editor: ''Lipoprotein(a): The Silent Actor That Hardens the Arteries and Weakens the Bone''. *Turk Kardiyol Dern Ars.* 2026;54(1):81–82.

DOI: 10.5543/tkda.2025.72585

Copyright@Author(s)
Available online at archivestsc.com. Content of this journal is licensed under a Creative Commons Attribution – NonCommercial-NoDerivatives 4.0 International License.

Calcium on Noncardiac Chest Computed Tomography: An Emerging Tool for Cardiovascular Disease Prevention: A Scientific Statement from the American Heart Association. *Circulation*. 2025;152(19):e391–e401. [CrossRef]
4. Rogers MA, Atkins SK, Zheng KH, et al. Lipoprotein(a) Induces Vesicular Cardiovascular Calcification Revealed with Single-Extracellular Vesicle Analysis. *Front Cardiovasc Med*. 2022;9:778919. [CrossRef]
5. Kanno Y, Ishisaki A, Kawashita E, et al. Plasminogen/plasmin modulates bone metabolism by regulating the osteoblast and osteoclast function. *J Biol Chem*. 2011;286(11):8952–8960. Erratum in: *J Biol Chem*. 2014;289(22):15154. [CrossRef]