

Would the Hemoglobin, Albumin, Lymphocyte, and Platelet Score Help Predict Atrial Fibrillation Recurrence After Cryoballoon Ablation?

Hemoglobin, Albümin, Lenfosit ve Trombosit Skoru Kriyoballon Ablasyon Sonrası Atriyal Fibrilasyon Tekrarını Tahmin Etmeye Yardımcı Olur mu?

To the Editor,

I read with great interest the recently published article by Kalenderoğlu et al.,¹ titled "Assessment of the Efficacy of the Hemoglobin, Albumin, Lymphocyte, and Platelet (HALP) Score in Predicting Recurrence of Atrial Fibrillation Following Cryo-Balloon Ablation".¹ The authors have presented a timely and clinically relevant study that investigates the predictive value of the hemoglobin, albumin, lymphocyte, and platelet (HALP) score for atrial fibrillation (AF) recurrence after cryoballoon ablation (CBA), addressing a key challenge in arrhythmia management. The identification of a low HALP score as an independent predictor of AF recurrence adds to the growing body of evidence linking systemic inflammation and nutritional status with adverse cardiac outcomes. Given the simplicity, availability, and cost-effectiveness of the HALP score, incorporating it into pre-procedural risk stratification protocols could significantly enhance patient selection and post-ablation monitoring strategies. The reported association between a lower HALP score, particularly in the first tertile, and a 2.1-fold increased risk of AF recurrence after CBA underscores the potential clinical utility of this score.

The HALP score is a recently introduced "immune-nutritional marker" that combines several routinely measured blood parameters reflecting immune function, such as platelet and lymphocyte counts, and nutritional status, as indicated by albumin and hemoglobin (a marker of anemia).² Initially, the score was defined as a negative prognostic marker rather than a diagnostic or therapeutic tool in oncology patients.^{3,4} Later, the HALP score was also studied for its ability to predict cardiovascular and all-cause mortality in specific patient groups, including those with diabetes,⁵ atherosclerotic cardiovascular disease,⁶ atrial fibrillation,⁷ and even in the general population.⁸ An analysis of data from the National Health and Nutrition Examination Survey (NHANES) between 2017 and 2020, involving 8,245 participants, revealed an association between the HALP score and various demographic, socioeconomic, and health-related factors in the adult population in the United States.⁹ The study showed that male participants had higher HALP scores than female participants, and that age was inversely correlated with the HALP score. In line with this, Kalenderoğlu et al.¹ also reported that older patients had lower HALP scores. *Therefore, the authors may consider further discussing their study findings regarding the association between age and HALP score, as well as the role of age in AF recurrence.*

Furthermore, the proportion of non-paroxysmal AF patients (particularly those with long-standing persistent AF) was higher in the lower HALP score group,¹ and this subtype is a well-known predictor of AF recurrence after CBA.^{10,11} The impact of "diagnosis-to-catheter ablation time" on AF recurrence, especially in non-paroxysmal AF, is well established.¹² *However, the study by Kalenderoğlu et al.¹ did not provide data on diagnosis-to-catheter ablation time or its association with the HALP score.*

Nevertheless, as the authors rightly noted, the retrospective and single-center design of the study, along with the use of single-timepoint laboratory values (rather than

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temporal trends), calls for cautious interpretation. Prospective, multicenter studies and external validation cohorts would be valuable for confirming these findings and establishing standardized HALP score thresholds for clinical use. In conclusion, this study represents a significant step toward integrating immune–nutritional biomarkers into the management of AF.

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References

1. Kalenderoğlu K, Hayiroğlu M, Çınar T. Assessment of the Efficacy of the Hemoglobin, Albumin, Lymphocyte, and Platelet Score in Predicting Recurrence of Atrial Fibrillation Following Cryo–Balloon Ablation. *Türk Kardiyol Dern Ars*. 2025;53(4):263–269. [\[CrossRef\]](#)
2. Farag CM, Antar R, Akosman S, Ng M, Whalen MJ. What is hemoglobin, albumin, lymphocyte, platelet (HALP) score? A comprehensive literature review of HALP's prognostic ability in different cancer types. *Oncotarget*. 2023;14:153–172. [\[CrossRef\]](#)
3. Chen XL, Xue L, Wang W, et al. Prognostic significance of the combination of preoperative hemoglobin, albumin, lymphocyte and platelet in patients with gastric carcinoma: a retrospective cohort study. *Oncotarget*. 2015;6(38):41370–41382. [\[CrossRef\]](#)
4. Xu H, Zheng X, Ai J, Yang L. Hemoglobin, albumin, lymphocyte, and platelet (HALP) score and cancer prognosis: A systematic review and meta-analysis of 13,110 patients. *Int Immunopharmacol*. 2023;114:109496. [\[CrossRef\]](#)
5. Zhao P, Zhang Z, Li M, Hao J, Wang Y. Association between Hemoglobin–albumin–lymphocyte–platelet score and all-cause or cardiovascular mortality in patients with diabetes or prediabetes: mediated effects of renal function. *BMC Cardiovasc Disord*. 2025;25(1):331. [\[CrossRef\]](#)
6. Zou Y, Cong J, Fu J, Yang X. Association between hemoglobin, albumin, lymphocyte, and platelet scores and all-cause and cardiovascular mortality among adults with atherosclerotic cardiovascular disease in the United States: An analysis of NHANES. *Medicine (Baltimore)*. 2025;104(19):e42386. [\[CrossRef\]](#)
7. Eyiol A. The relationship of pan-immune–inflammation value (PIV) and HALP score with prognosis in patients with atrial fibrillation. *Medicine (Baltimore)*. 2024;103(36):e39643. [\[CrossRef\]](#)
8. Pan H, Lin S. Association of hemoglobin, albumin, lymphocyte, and platelet score with risk of cerebrovascular, cardiovascular, and all-cause mortality in the general population: results from the NHANES 1999–2018. *Front Endocrinol (Lausanne)*. 2023;14:1173399. [\[CrossRef\]](#)
9. Antar R, Farag C, Xu V, Drouaud A, Gordon O, Whalen MJ. Evaluating the baseline hemoglobin, albumin, lymphocyte, and platelet (HALP) score in the United States adult population and comorbidities: an analysis of the NHANES. *Front Nutr*. 2023;10:1206958. [\[CrossRef\]](#)
10. Oto A, Aytemir K, Canpolat U, et al. Pulmonary vein isolation with the cryoballoon technique in atrial fibrillation treatment: Single centre experience. *Türk Kardiyol Dern Ars*. 2013;41(4):299–309. Turkish. [\[CrossRef\]](#)
11. Canpolat U, Kocyigit D, Yalcin MU, et al. Long-term outcomes of pulmonary vein isolation using second-generation cryoballoon during atrial fibrillation ablation. *Pacing Clin Electrophysiol*. 2019;42(7):910–921. [\[CrossRef\]](#)
12. Amin AM, Elbenawi H, Khan U, et al. Impact of Diagnosis to Ablation Time on Recurrence of Atrial Fibrillation and Clinical Outcomes After Catheter Ablation: A Systematic Review and Meta-Analysis With Reconstructed Time-to-Event Data. *Circ Arrhythm Electrophysiol*. 2025;18(2):e013261. [\[CrossRef\]](#)