

Access this article online

Quick Response Code:



Website:
<https://eurasianj pulmonol.org>

DOI:
10.14744/ejp.2026.45124

Elevated neutrophil-to-lymphocyte ratio is associated with poor outcomes in patients with chronic thromboembolic pulmonary hypertension

Ayshan Mammadova

ORCID:

Ayshan Mammadova: 0000-0002-8838-7419

Dear Editor,

We read with great interest the article by Acet Öztürk et al.,^[1] entitled “Elevated neutrophil-to-lymphocyte ratio is associated with poor outcomes in patients with chronic thromboembolic pulmonary hypertension.” The article provides valuable insights into prognostic determinants in chronic thromboembolic pulmonary hypertension (CTEPH) based on a long-term, real-world cohort. The authors are to be congratulated for their comprehensive evaluation of inflammatory markers alongside hemodynamic, imaging, and treatment-related variables within a multidisciplinary management framework.

A major strength of this study is the demonstration that the neutrophil-to-lymphocyte ratio (NLR), a simple and widely available inflammatory biomarker, is independently associated with

mortality in patients with CTEPH. This finding is particularly important given that current risk stratification in CTEPH largely relies on invasive hemodynamic measurements and advanced imaging modalities.^[2] The identification of NLR as an independent prognostic factor therefore provides a cost-effective and easily applicable tool that may enhance routine clinical risk assessment.

Another important contribution is the evaluation of baseline and longitudinal B-type natriuretic peptide (BNP) levels.^[1,2] The observed association of both initial BNP values and BNP trajectories during follow-up with mortality highlights the clinical importance of serial biomarker monitoring rather than relying solely on a single baseline measurement. This dynamic approach to risk assessment is consistent with the evolving understanding of pulmonary hypertension as a progressive and heterogeneous disease.

Department of Chest
Diseases, Lokman Hekim
University Faculty of
Medicine, Ankara, Türkiye

Address for
correspondence:

Dr. Ayshan Mammadova,
Department of Chest
Diseases, Lokman Hekim
University Faculty of
Medicine, Ankara, Türkiye.
E-mail:
aysenmammadova665@gmail.com

Received: 26-06-2026

Accepted: 26-06-2026

Published: 21-09-2026

How to cite this article: Mammadova A. Elevated neutrophil-to-lymphocyte ratio is associated with poor outcomes in patients with chronic thromboembolic pulmonary hypertension. *Eurasian J Pulmonol* 2026;28:225-226.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: kare@karepb.com



The study also reinforces the well-established survival benefit of pulmonary endarterectomy (PEA). Patients treated with medical therapy alone exhibited a markedly higher risk of mortality than those who underwent surgical intervention. These findings are consistent with large registry data and previous multicenter studies, confirming that PEA remains the cornerstone of therapy in appropriately selected patients with CTEPH.^[3]

Importantly, the lack of significant differences in baseline echocardiographic and hemodynamic parameters between survivors and nonsurvivors suggests that resting measurements of pulmonary arterial pressure and vascular resistance may have limited prognostic value when considered in isolation.^[1,4] This observation further supports the integration of systemic inflammatory markers, such as NLR, into multidimensional risk stratification models. Although the retrospective, single-center design and limited sample size may restrict generalizability, these limitations are expected in rare disease research and do not diminish the clinical relevance of the findings. On the contrary, the study provides meaningful hypothesis-generating evidence that may guide future prospective, multicenter investigations. Overall, this well-conducted study adds significant value to the current literature by highlighting the prognostic role of NLR, emphasizing the importance of BNP dynamics, and reaffirming the survival benefit of surgical intervention in CTEPH. It also supports the potential integration of simple inflammatory biomarkers into future risk stratification strategies.

Conflicts of Interest

The authors have no conflicts of interest to declare.

Funding

The authors declared that this study received no financial support.

Use of AI for Writing Assistance

No use of AI-assisted technologies was declared by the authors.

Author Contributions

Design – A.M.; Analysis and/or Interpretation – A.M.; Literature Review – A.M.; Writing – A.M.; Critical Review – A.M.

Peer-review

Externally peer-reviewed.

References

1. Acet Öztürk NA, Günay Polatkan Ş, Aydın Güçlü Ö, Terzi OE, Özpehlivan A, Biçer M, et al. Elevated neutrophil-to-lymphocyte ratio is associated with poor outcomes in patients with chronic thromboembolic pulmonary hypertension. *Eurasian J Pulmonol* 2025;27(1):43–49. [\[CrossRef\]](#)
2. Rosenkranz S, Delcroix M, Giannakoulas G, Hoeper MM, Kovacs G, Humbert M. The 'Ten Commandments' of the 2022 ESC/ERS Guidelines for the diagnosis and treatment of pulmonary hypertension. *Eur Heart J* 2023;44(10):792–3. [\[CrossRef\]](#)
3. Jenkins D, Madani M, Fadel E, D'Armini AM, Mayer E. Pulmonary endarterectomy in the management of chronic thromboembolic pulmonary hypertension. *Eur Respir Rev* 2017;26(143):160111. [\[CrossRef\]](#)
4. Çolak A, Kumral Z, Kış M, Şentürk B, Sezgin D, Ömeroğlu Şimşek G, et al. The Usefulness of the TAPSE/sPAP Ratio for Predicting Survival in Medically Treated Chronic Thromboembolic Pulmonary Hypertension. *Turk Kardiyol Dern Ars* 2023;51(7):470–7. [\[CrossRef\]](#)