LETTERS TO THE EDITOR

Response to Letter to the Editor: "First Admission Neutrophil-Lymphocyte Ratio May Indicate Acute Prognosis of Ischemic Stroke"

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TO THE EDITOR

We have carefully read and evaluated the letter written by Drs Mungmunpuntipantip and Wiwanitkit regarding our article published in the July issue of *Rambam Maimonides Medical Journal*.¹

Neutrophil/lymphocyte ratio (NLR) is an indicator that is calculated using the neutrophil and lymphocyte values in the whole-blood test, and its popularity is increasing day by day. The NLR values are calculated by proportioning the neutrophil count to the lymphocyte count from the whole-blood test re-

sults. Furthermore, NLR is generally accepted as an indicator of inflammation.²

We found that the authors were concerned about the sensitivity of the NLR assays. However, neutrophil count and lymphocyte count were analyzed using the same device in each case. In this respect, we think that there was no problem in terms of the sensitivity of the analyses, since NLR is calculated by dividing the relative percentage of neutrophils by the relative percentage of lymphocytes.

Key Words: Ischemic stroke, lymphocyte, neutrophil **Abbreviations:** NLR, neutrophil/lymphocyte ratio.

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In addition, many clinical studies have shown that NLR can be used as a biomarker in many diseases.^{3–6} Of course, many factors can affect the NLR. These factors should also be taken into account when making a prognostic evaluation.

REFERENCES

- Alpua M, Say B, Yardimci I, et al. First admission neutrophil-lymphocyte ratio may indicate acute prognosis of ischemic stroke. Rambam Maimonides Med J 2021;12:e0021. Crossref
- Zahorec R. Ratio of neutrophil to lymphocyte counts--rapid and simple parameter of systemic inflammation and stress in critically ill. Bratisl Lek Listy 2001;102:5-14. PMID: 11723675
- Karataş MB, İpek G, Onuk T, et al. Assessment of prognostic value of neutrophil to lymphocyte ratio

- and platelet to lymphocyte ratio in patients with pulmonary embolism. Acta Cardiol Sin 2016;32:313–20. Crossref
- 4. Kayrak M, Erdoğan H, Solak Y, et al. Prognostic value of neutrophil to lymphocyte ratio in patients with acute pulmonary embolism: a restrospective study. Heart Lung Circ 2014;23:56–62. Crossref
- Jeon TJ, Park JY. Clinical significance of the neutrophil-lymphocyte ratio as an early predictive marker for adverse outcomes in patients with acute pancreatitis. World J Gastroenterol 2017;23:3883-9.
 Crossref
- Zhang Y, Wu W, Dong L, Yang C, Fan P, Wu H. Neutrophil to lymphocyte ratio predicts persistent organ failure and in-hospital mortality in an Asian Chinese population of acute pancreatitis. Medicine (Baltimore) 2016;95:e4746. <u>Crossref</u>