

## Response to the Letter to the Editor: “Neutrophil-lymphocyte ratio: Can clinicians really trust it as an inflammatory indicator?”

We thank Balta et al. [1] for their comments. As stated in our article, neutrophil to lymphocyte ratio (NLR) was found to be an independent predictor for both short (30-day) and long-term (2-year) mortality after adjusting for biomarkers and hematological markers [2]. Additionally, a cut-off value of  $NLR \geq 7.4 \times 10^9/L$  significantly improved the predictive power in combination with standardized Thrombolysis in Myocardial Infarction (TIMI) risk score for ST elevation myocardial infarction (STEMI) [3]. Also  $NLR \geq 7.4 \times 10^9/L$  was found to be associated with higher TIMI [3], Global Registry of Acute Coronary Events (GRACE) [4] and Mayo Clinic Risk Score (MCRS) [5] suggestive of overall poor prognosis. This highlights the clinical value of NLR as a risk predictor, which can easily be obtained at point of care in the emergency room even prior to revascularization. Thus, NLR can help guide health care providers to make appropriate patient care and management decisions. Subsequent to our publication, other researchers have also confirmed NLR to be an excellent predictor of coronary blood flow and mortality after STEMI [6].

As described in our article, NLR represents both the innate neutrophil mediated reactive response and subsequent lymphocyte mediated adaptive immune responses. Since the pathophysiology of atherosclerosis is primarily mediated by inflammation, biomarkers like C-reactive protein have been studied and shown to be associated with mortality after STEMI as well [7]. However, these biomarkers are not routinely obtained and may require longer processing time which may preclude their use as risk predictors during STEMI with

limited door-to-balloon time. In contrast, NLR is routinely obtained and can be serially monitored during hospitalization. Certainly, future studies are needed evaluating the role of NLR as a risk-predictor in patients with inflammatory diseases presenting with STEMI.

**Conflict of interest:** None declared

### References

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