Herz 2016 · 41:534
 DOI 10.1007/s00059-016-4447-z
 Received: 13 May 2016
 Accepted: 15 May 2016
 Published online: 22 June 2016
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Novel inflammatory biomarkers for predicting high SYNTAX score

To the Editor,

We read the recent article entitled “Association of monocyte/HDL-C ratio with SYNTAX scores in patients with stable coronary artery disease” by Kundi et al. [1] with great interest. The authors demonstrated that the monocyte/HDL-C ratio (MHR) as a newly introduced marker of inflammation significantly correlated with the severity and complexity of coronary artery disease (CAD) assessed by SYNTAX scores. On account of this, they suggested MHR can be used as a prognostic marker in patients with stable CAD, since it is an easily available and inexpensive test [1].

The SYNTAX score is an angiographic scoring system that was developed during the SYNTAX trial and used to quantify the properties of lesions including complexity, morphology, and location in the coronary tree [2]. The usefulness of the SYNTAX score while making revascularization decisions and in predicting adverse events in patients with coronary artery disease has been appreciated in a previous large-scale study [3]. It is known that endothelial dysfunction, oxidative stress, and many inflammatory biomarkers play a crucial role in the formation and progression of atherosclerosis [4–6]. Recently, the platelet-to-lymphocyte ratio (PLR), neutrophil-to-lymphocyte ratio (NLR), and lymphocyte-to-monocyte ratio (LMR) have been used as inflammatory biomarkers, and have been shown to be independent risk factors for atherosclerosis and cardiovascular events. Moreover, it is also known that elevations in PLR, NLR, and LMR values are associated with the extent, severity, and complexity of CAD [6–8].

In this well-presented article by Kundi and colleagues, MHR was significantly higher in patients in the high SYNTAX score group compared with the low SYNTAX score group (29.3 ± 12.7 vs. 20.3 ± 10.3 , $p < 0.001$). Moreover, other direct and indirect indicators of inflammation including white blood cell count, neutrophil count, and monocyte count were higher, whereas the lymphocyte count was lower in patients with a higher SYNTAX score. For this reason, it was clear from the Kundi et al. [1] study that patients with higher SYNTAX score had higher PLR and NLR, and lower LMR. However, the study did not mention the combinations of these inflammatory biomarkers (PLR, NLR, and LMR). Also, the multivariate logistic regression analysis lacks these parameters, and thus the findings regarding independent predictors of a high SYNTAX score may be misleading. In conclusion, we believe that the combined information of multiple inflammatory biomarkers could be more useful and more accurate for predicting high SYNTAX score.

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Interessenkonflikt. M. K. Akboga, O. Kirbas and C. Yayla declare that they have no competing interests.

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