

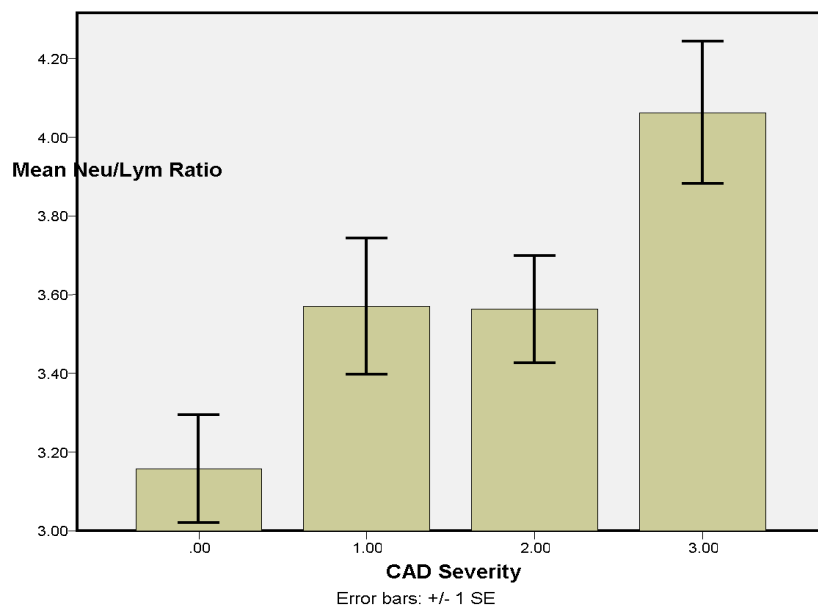
Neutrophil / Lymphocyte ratio and the Severity of Coronary Artery Disease

Yaron Arbel¹, Ariel Finkelstein², Amir Halkin², Noa Mashav¹, Tamar Chundadze¹, Genia Kipervasser¹, Shlomo Berliner¹, Itzhak Herz², Jacob George², Gad Keren², Shmuel Banai²
¹ Pnimid D and E, ² Cardiology Department, Tel Aviv Medical Center, Tel Aviv, Israel

Introduction: The white blood cell count (WBC) is an independent predictor of cardiovascular events and may identify high-risk individuals who are not currently identified by traditional risk factors. WBC also correlates with the severity of coronary artery disease (CAD). The Neutrophil/Lymphocyte ratio (N/L ratio) has recently emerged as a potential new biomarker to single out individuals at risk for future vascular events. However, the correlation between N/L ratio and CAD severity has not been evaluated.

Methods: The association between N/L ratio and CAD severity was prospectively tested in 2069 consecutive patients undergoing coronary angiography. In order to ascertain the importance of the different biomarkers, we conducted a linear regression with CAD severity as the dependant variable, and WBC, CRP, fibrinogen, C3, C4 as the independent variables.

Results: A significant ($p < 0.0001$) correlation ($r = 0.16$) was noted between the N/L ratio and CAD severity. This correlation was maintained in different clinical sub-groups: Diabetics and non- Diabetics, patients treated or not treated with statins, as well as in those with or without acute coronary syndrome. The N/L ratio was as good if not better than quantitative fibrinogen or CRP in these different subgroups. In a linear regression, N/L ratio was significant while CRP was not.



Conclusion: Higher N/L ratio correlates with more severe CAD. This association gives further evidence for the potential of use of this novel biomarker in ischemic heart disease.