

## **Neutrophil Lymphocyte Ratio is Related to Coronary Artery Disease Extent and Clinical Outcome**

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Background: Neutrophils play an important part in the progression of Atherothrombosis. The Neutrophil/Lymphocyte (N/L) ratio has been shown to be effective predictor for future cardiovascular events. We evaluated the relationship between N/L ratio, Coronary Artery Disease (CAD) extent and cardiovascular outcomes in different clinical groups.

Methods: We enrolled 3005 consecutive patients referred for coronary angiography. Arterial blood was obtained from all participants via their arterial access puncture sites as a part of the coronary angiography procedure. N/L ratio was computed according to absolute values of Neutrophils and lymphocytes. We followed up the patients up to 3 years using telephone interviews periodically.

Results: Mean age was  $66.6 \pm 11.9$  (range: 18-97 years), 71% were males. By multivariable analysis adjusting for potential clinical, metabolic, and inflammatory confounders, N/L ratio was independently associated with Coronary Artery Disease (CAD) extent (HR=2.07, CI 95% 1.7-2.6,  $p<0.001$ ) for each point increase in N/L ratio and in different clinical subgroups (diabetes status, statin therapy, stable or unstable clinical presentation). Furthermore, N/L was a significant predictor of cardiovascular events (MI, stroke and death) in up to 3 years follow up, in the entire cohort and in different subpopulations (HR=1.44, CI 95% 1.19-1.75,  $p<0.001$ ) for each point increase in the N/L ratio.

Conclusion: N/L ratio is an independent predictor of CAD extent and adverse clinical events. These results give further evidence for the potential usage of this simple, cheap and readily available biomarker in different clinical scenarios.