THE PROGNOSTIC SIGNIFICANCE OF THE INFLAMMATORY BIOMARKER YKL-40 IN RELATION TO MORTALITY IN ALL-COMERS. A FOLLOW-UP STUDY AFTER 11 YEARS

ACC Moderated Poster Contributions
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Background: YKL-40 is an inflammatory biomarker associated with disease activity for several disease categories, and with mortality in patients with coronary artery disease, cancer and heart failure. This study aimed to describe the prognostic and predictive value of YKL-40 in an unselected general patient population admitted for acute hospitalization.

Methods: patients > 40 years admitted consecutively acutely to a district hospital in a period of 1 year were included. Blood was drawn at admission and stored at -80°C. Information regarding final diagnosis and mortality data was collected. Serum YKL-40 was measured in 1407 patients. Median follow-up time was 11.4 years.

Results: Median serum YKL-40 (157 μg/L, range 13-7704 μg/L) was significantly higher compared to a non-hospitalised healthy population (40 μg/L) (p<0.001). Patients with YKL-40 in the highest quartile had a hazard ratio (HR) of 7.1 (95% CI 4.2-12.0) for all-cause mortality the first year, and 3.4 (95% CI 2.8-4.2) in the total study period, compared to the lowest quartile (HR=1). Multivariate analysis with known risk factors revealed that YKL-40 was an independent marker of mortality for all patients, most significant the first year. YKL-40 was prognostic in all disease categories, and HR was higher for patients with YKL-40 above the median, independent of disease category (p<0.001).

Conclusions: YKL-40 is a strong predictor for mortality, independent of diagnosis and could be an important parameter in the acute evaluation of all-comers. A high YKL-40 level equals poor short-term prognosis and indicates close follow-up and intensified treatment.