

# 3<sup>RD</sup> WORLD HEART CONGRESS

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## The role of the new ST2 biomarker in the evaluation of left ventricular myocardial remodeling in patients with chronic heart failure of ischemic origin

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**Objective:** The objective of the study was to evaluate the role of ST2 in the left ventricular (LV) remodeling in patients with coronary artery disease (CAD) with heart failure (HF).

**Methods:** The study included 55 patients (42 males) with CAD and NYHA classes I-III aged 65 years. All patients underwent revascularization. SST2 levels were determined by ELISA before revascularization.

**Results:** Depending on sST2 levels all patients were divided into 2 groups: group I (n=26) had ST2 level > 35 ng/ml (43.75 ng/ml), group II (n=29) had ST2 levels <35 ng/ml (25.8 ng/ml, p=0.000). In group I LV ejection fraction (LVEF) was 60.5% [49.0; 64, 0] and was less by 5.6% (p=0.035) in comparison with group II (LVEF 64 [62, 0, 65, 0] %). In group I myocardial stress in the systole by 7.1% (p=0.038, 166.18 [157.11, 187.54]) and the diastole by 8.1% (p=0.01, 156, 49 [142, 06, 164, 70]) was higher than in group II: 152.48 [147.29; 162.50] and 144.35 [133.31; 149.97] respectively. The correlation between sST2 and LVEF (r=-0.301, p<0.05), end-systolic stress (r=-0.347, p<0.05), end-systolic volume (r=0.453, p<0.05, end-diastolic volume (r=0.396, p<0.05), end-systolic dimension (r=0.373, p<0.05), end-diastolic dimension (r=0.288, p<0.05), cardiovascular resistance (r=0.286), and LV myocardial mass (r=0.346, p<0.05) were found.

**Conclusion:** Elevated sST2 levels correlate with the left ventricular structure and function, myocardial stress indicators in patients with CAD with HF. The identification of sST2 allows evaluating the risk of decompensation of HF and allocating patients at increased risk for more intensive following up and prescribing reasonable pathogenetic treatment.

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