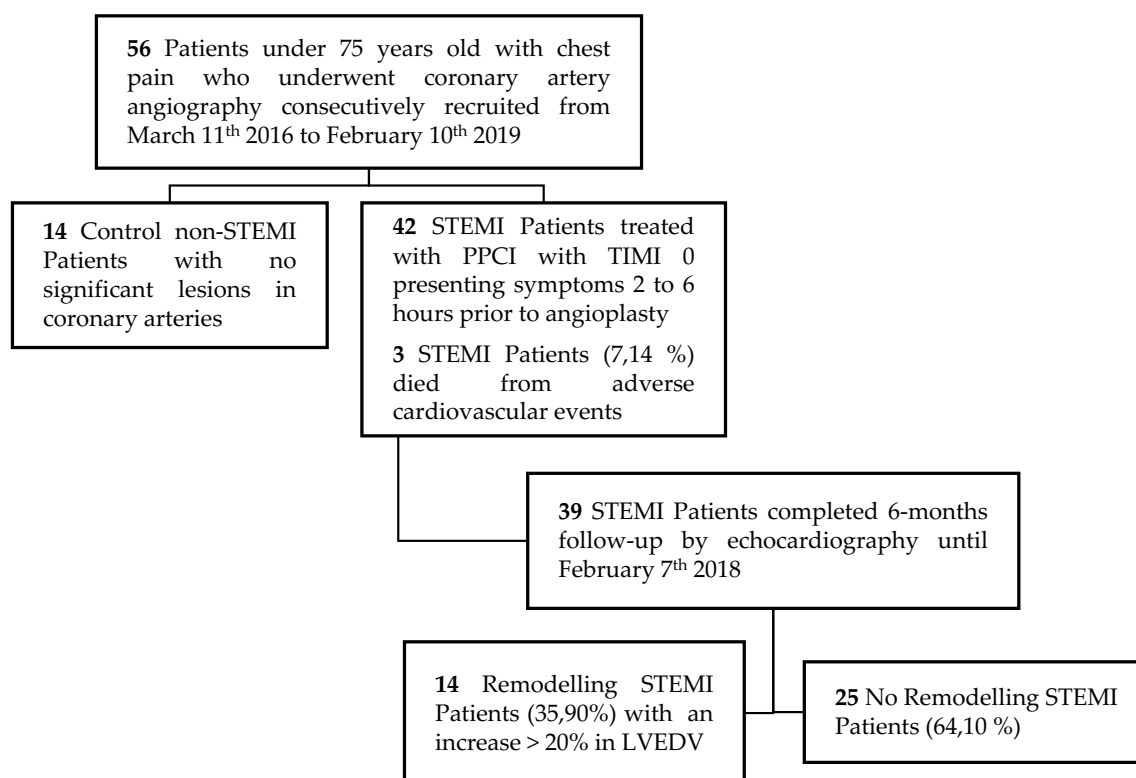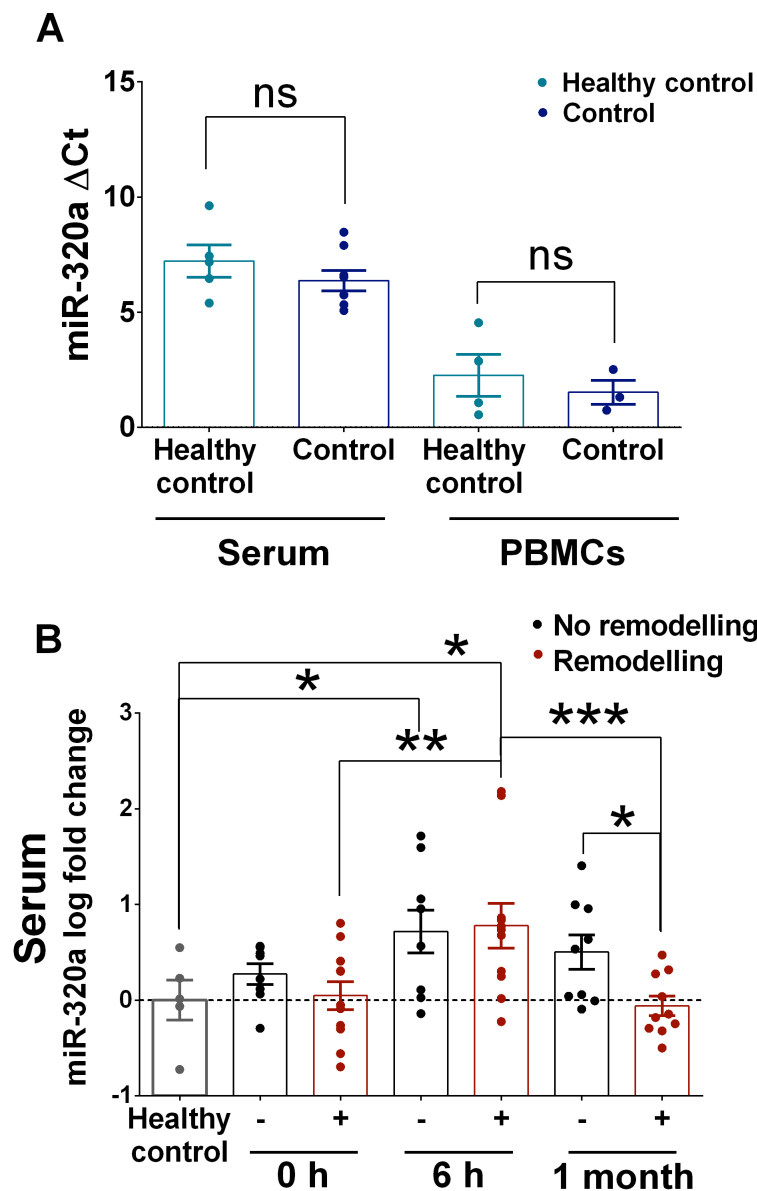# Circulating miR-320a as a Potential Biomarker for Left Ventricular Remodeling in STEMI Patients Undergoing Primary Percutaneous Coronary Intervention
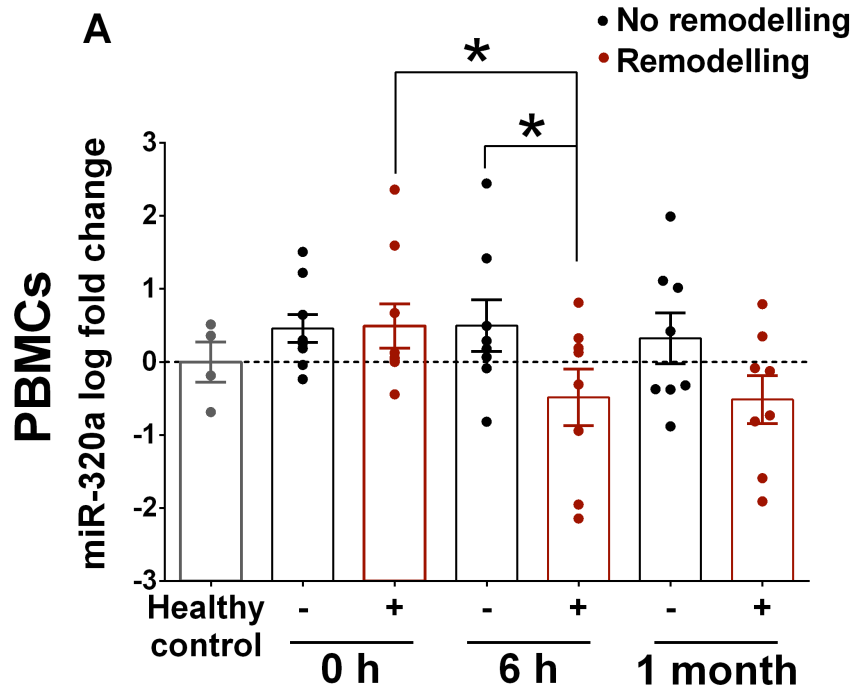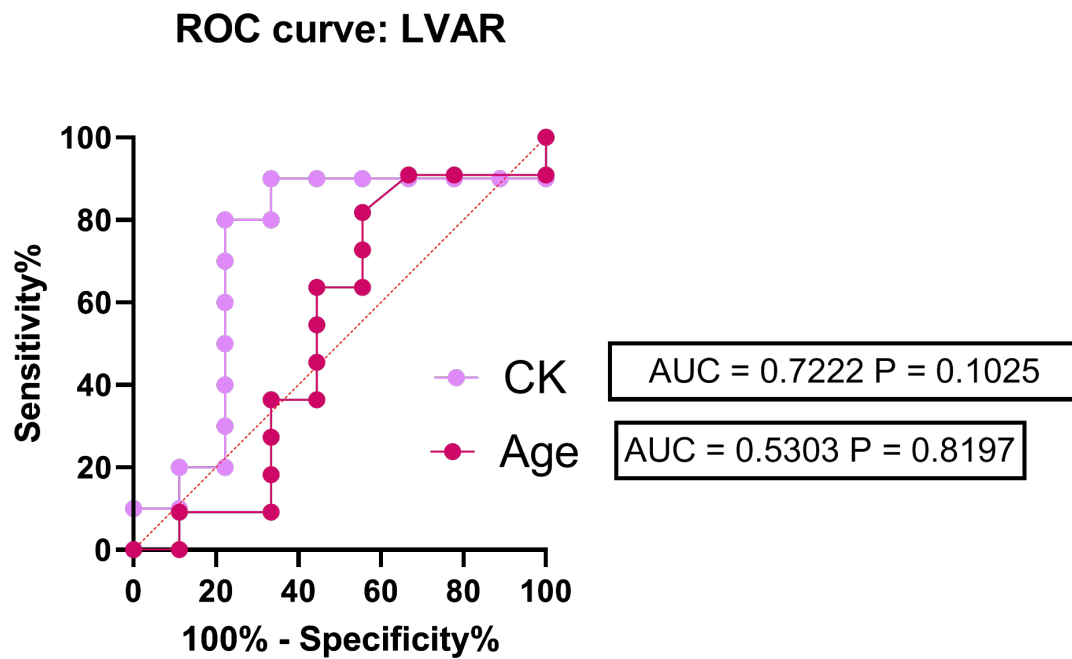
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56 Patients under 75 years old with chest pain who underwent coronary artery angiography consecutively recruited from March 11th 2016 to February 10th 2019

14 Control non-STEMI Patients with no significant lesions in coronary arteries

42 STEMI Patients treated with PPCI with TIMI 0 presenting symptoms 2 to 6 hours prior to angioplasty

3 STEMI Patients (7,14 %) died from adverse cardiovascular events

39 STEMI Patients completed 6-months follow-up by echocardiography until February 7th 2018

14 Remodelling STEMI Patients (35,90%) with an increase > 20% in LVEDV

25 No Remodelling STEMI Patients (64,10 %)

Online Figure S1. STROBE diagram of the subjects and the study design. STEMI: ST-segment-elevation myocardial infarction; LVEDV: left ventricular end-diastolic volume.

A

B

Online Figure S2. miR-320a expression in serum and PBMCs of STEMI patients compared to healthy controls. (A) Graph showing the expression of miR-320a in control groups (n = 8) and healthy volunteers (n = 5) in serum and PBMCs. The expression of miR-320a was assessed in serum (B) 0 hour, 6 hours and 1 month after PPCI in STEMI patients who developed LVAR (red bar, n = 11) or not (black bar, n = 9) compared to the miR-320a levels in healthy volunteers. The values in the graphs represent the fold change in logarithmic scale for each miRNA relative to the controls. Data are the means ± SEM. Significance is indicated by (*) for $p<0.05$, (**) for $p<0.01$, and (***) for $p<0.001$). Ordinary one-way Anova with multiples comparisons using T test without correct (Fisher's LSD test) was performed.

Online Figure S3. miR-320a expression in PBMCs of STEMI patients compared to healthy controls. Graph showing the expression of miR-320a in PBMCs 0 hour, 6 hours and 1 month after PPCI in STEMI patients who developed LVAR (red bar, n = 11) or not (black bar, n = 9) compared to the miR-320a levels in healthy volunteers. The values in the graphs represent the fold change in logarithmic scale for each miRNA relative to the controls. Data are the means ± SEM. Significance is indicated by (*) for $p<0.05$. Ordinary one-way Anova with multiples comparisons using T test without correct (Fisher's LSD test) was performed.

ROC curve: LVAR

Online Figure S4. Receiver-operating characteristic (ROC) curves comparing sensitivity and specificity of Creatine Kinase and Age in predicting left ventricular adverse remodelling (LVAR). Values are given in the graph. AUC is for "area under the curve".