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## Prognostic impact of newly echocardiographic methods in acute coronary syndrome

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With increasing emphasis on early reperfusion in acute coronary syndrome (ACS), standard echocardiography and the new non-invasive relatively cheap echocardiographic methods as well as have the prominent role in this area. The quantification of global and regional function of left ventricle is the cornerstone of cardiac imaging and the recommendations have been published recently by the American Society of Echocardiography (ASE) and the European Association of Echocardiography (renamed the European Association of Cardiovascular Imaging [EACVI]). Over a decade ago, speckle-tracking echocardiography (STE) was proposed and validated as an alternative tool for measuring myocardial function. In the general population, lower global longitudinal strain (GLS) was shown to be a powerful and independent predictor for the new vascular events such as stroke and myocardial infarction and for new onset of atrial fibrillation. GLS also demonstrated prognostic value for adverse outcomes in patients with heart failure and coronary artery disease (CAD). Furthermore, GLS proved to be a superior predictor of all-cause mortality when compared with LV EF and myocardial wall motion in patients with CAD. Beside GLS, mechanical dispersion (MD) as measure of myocardial deformation were significantly and independently related to sudden cardiac death (SCD) or malignant ventricular arrhythmias (VA) in patients with acute myocardial infarction. Circumferential and three-layer analysis of longitudinal and circumferential strain may become the important methods for the assessment of realtime, quantitative global and regional LV function in acute coronary syndrome. Those relatively new tools could be important in prediction of significant stenosis in suspected ACS and non ST myocardial infarction.