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Titel des Beitrags:
Left ventricular function and volume with coronary CT angiography improves risk stratification and identification of patients at risk for incident mortality: results from 7758 patients in the prospective multinational CONFIRM observational cohort study.

Abstract:
To assess whether gradations of left ventricular (LV) ejection fraction (LVEF) and volumes measured with coronary computed tomography (CT) would augment risk stratification and discrimination for incident mortality. This study was approved by the institutional review board, and informed consent was obtained when required. Subjects without known coronary artery disease (CAD) who underwent cardiac CT angiography with quantitative LV measurements were categorized according to LVEF (>= 55%, 45%-54.9%, 35%-44.9%, or= 90 mL) or abnormal (>= 200 mL). CAD extent and severity was categorized as none, nonobstructive, obstructive (>= 50%), one-vessel, two-vessel, and three-vessel or left main disease. LVEF and volumes were assessed for risk prediction and
discrimination of future mortality by using Cox hazards model and receiver operating characteristic curve analysis, respectively. During a follow-up of 2.0 years ± 0.9, 7758 patients (mean age, 58.5 years ± 13.0; 4220 male patients [54.4%]) were studied. At multivariable analysis, worsening LVEF was independently associated with mortality for moderately (hazard ratio = 3.14, \( P<.001 \)) and severely (hazard ratio = 5.19, \( P<.001 \)) abnormal ejection fraction. LVEF demonstrated improved discrimination for mortality (Az = 0.816) when compared with CAD risk factors alone (Az = 0.781) or CAD risk factors plus extent and severity. At multivariable analysis of a subgroup of 3706 individuals, abnormal LVEDV (hazard ratio = 4.02) and LVESV (hazard ratio = 6.46) helped predict mortality (\( P<.001 \)). Similarly, LVESV and LVEDV demonstrated improved discrimination when compared with CAD risk factors or CAD extent and severity (\( P<.05 \)). LV dysfunction and volumes measured with cardiac CT angiography augment risk prediction and discrimination for future mortality.