

Extent of Subclinical Atherosclerosis on Coronary CT and impact of Statins in Stable Patients with Diabetes: Results from CONFIRM Registry.

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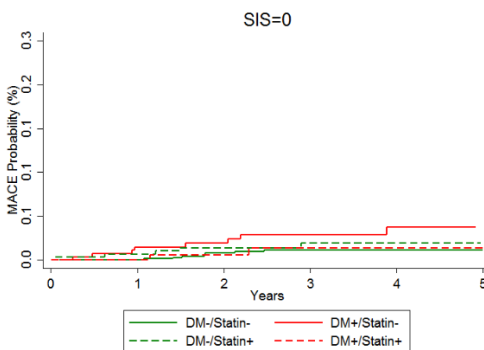
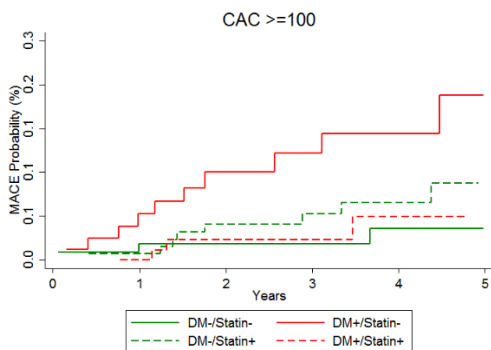
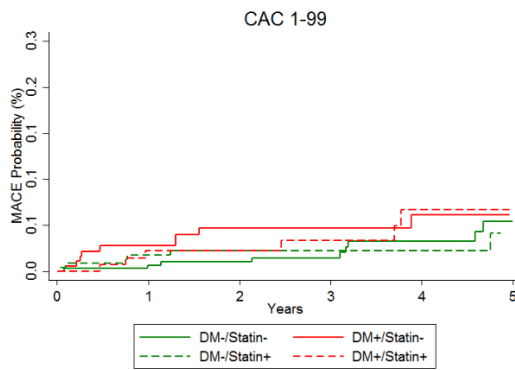
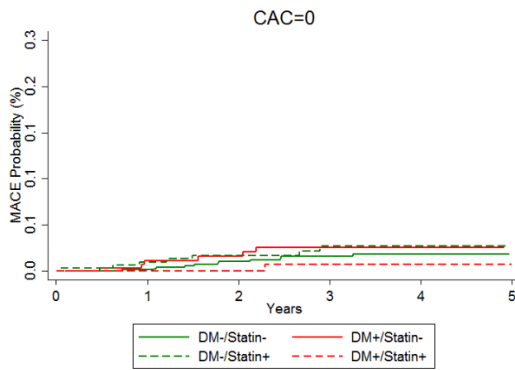
Background: Absence of subclinical atherosclerosis is considered safe to defer statin therapy in general population. However, impact of statins on atherosclerotic cardiovascular disease in patients with diabetes stratified by coronary artery calcium (CAC) scores and extent of non-obstructive CAD on coronary computed tomography angiography (CCTA) has not been evaluated.

Methods: CONFIRM (Coronary CT Angiography Evaluation For Clinical Outcomes: An International Multicenter Registry) study enrolled consecutive adults 18 years of age between 2005 and 2009 who underwent ≥ 64 -detector row CCTA for suspected CAD. The long-term registry includes data on 12 086 subjects who underwent CCTA at 17 centres in 9 countries (Austria, Canada, Germany, Israel, Italy, Portugal, South Korea, Switzerland, and USA). In this sub-study of CONFIRM registry, diabetic patients with normal or non-obstructive plaque ($<50\%$ diameter stenosis) for whom data on baseline statin use was available were included. CAC score was calculated using Agatston score. The magnitude of non-obstructive coronary artery disease on CCTA was quantified using segment involvement score(SIS). 1,145 patients with diabetes propensity matched for age, hypertension, hyperlipidemia and BMI to 2,290 patients without diabetes were followed for a median of 5 years with analysis of major cardiovascular events(MACE) including all-cause mortality, myocardial infarction, unstable angina, target vessel revascularization, and coronary artery disease related hospitalization.

Results: There was no difference in risk of MACE in patient with diabetes with CAC=0 on statins compared those not on statins (Hazard ratio [HR]-0.25, 0.03,2.05, p=0.19). Statin therapy did not lower MACE in diabetic patients with SIS=0 or SIS=1-2 (HR-1.39, 0.08,1.83, P=0.232) and (HR-1.16, 0.39,3.47, p=0.27) respectively. Diabetic patients with CAC >100 or SIS ≥ 3 on statins had significant decrease in MACE (HR-0.24, 0.07, 0.87, p=0.03), (HR-0.23, 0.06-0.83, p=0.024), respectively. Figure 1 shows Kaplan Meir curves, diabetic patients with CAC >100 and SIS >3 had

statistically significant reduction in MACE with statins($P<0.005$) over a median follow-up of 5 years.

Conclusion: There was significant reduction of MACE with statin in diabetics with $CAC>100$ and $SIS>3$. Statins conferred no benefit to patients with diabetes with $CAC=0$, $SIS=0$ or $SIS=1-2$ during a mean follow-up of 5 years.



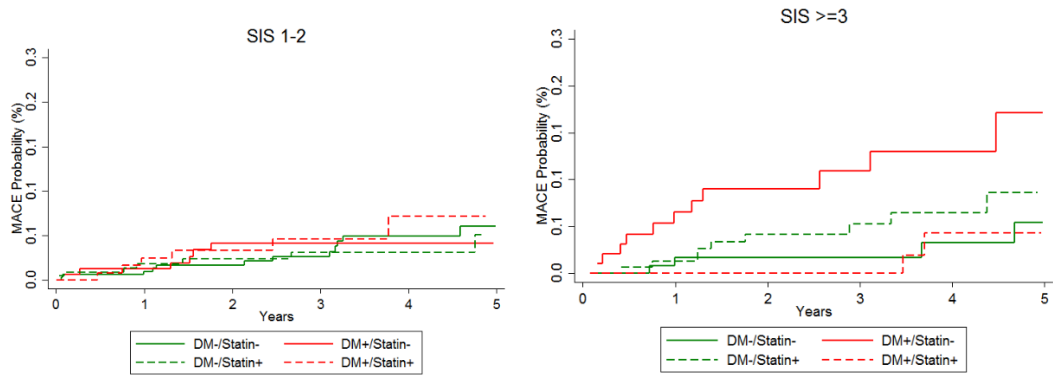


Figure-1 Kaplan-Meier survival curves for Major-cardiovascular events by coronary artery calcium and segment involvement categories.