

## Ten-year cardiovascular risk in diabetes patients without of coronary artery disease – a Danish cohort study

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**Background:** Patients with diabetes without obstructive coronary artery disease (CAD) by coronary angiography (CAG) have a risk of myocardial infarction (MI) similar to that of non-diabetes patients without CAD. Their cardiovascular risk compared to the general population is unknown.

**Purpose:** We examined the 10-year risks of myocardial infarction (MI), ischemic stroke, and death in diabetes patients without CAD after CAG compared to the general population.

**Methods:** We included all diabetes patients without obstructive CAD examined by CAG from 2003–2016 in Western Denmark and an age and sex matched comparison group, sampled from the general population in Western Denmark without previous history of coronary heart disease. Outcomes were MI, ischemic stroke, and death. The 10-year cumulative incidences were estimated. Adjusted hazard ratios (HRs) were estimated by stratified Cox regression using the general population as the reference group.

**Results:** We identified 5,760 diabetes patients without obstructive CAD and 29,139 individuals from the general population. Median follow-up was 7 years with 25% of participants followed for up to 10 years. Diabetes patients without obstructive CAD had an almost similar 10-year risk of MI (3.2% vs 2.9%, adjusted HR 0.91, 95% CI 0.70–1.17, Figure) compared to the general population cohort. Diabetes patients had an increased risk of ischemic stroke (5.2% vs 2.2%, adjusted HR 1.88, 95% CI 1.48–2.39), and death (29.7% vs 17.9%, adjusted HR 1.41, 95% CI 1.29–1.54). The duration of diabetes was associated with increased cardiovascular risk.

**Conclusions:** Absence of obstructive CAD by CAG in patients with diabetes ensures a low MI risk similar to the general population, but diabetes patients still have an increased risk of ischemic stroke and all-cause death despite absence of CAD.

