

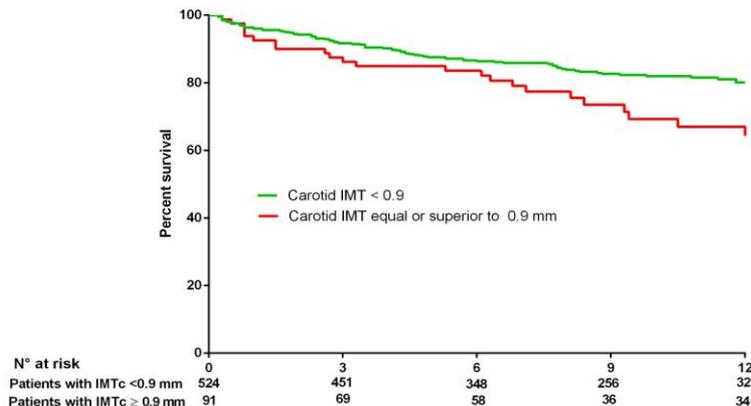
Background: Carotid and Femoral intima-media thickness (IMT) are established markers of subclinical atherosclerosis. Whether it can provide additional information for risk stratification is not well established.

Purpose: To assess whether baseline carotid and/or femoral IMT are associated with recurrent MACE in patients with premature CAD.

Methods: The multicenter prospective AFIJI (Appraisal of risk Factors in young Ischemic patients Justifying aggressive Intervention) registry was started in January 1996 enrolling all consecutive patients presenting with angiographically proven CAD before the age 45. The last follow-up was obtained in January 2017. Femoral and carotid IMT were measured at inclusion using B-mode ultrasound. The primary endpoint was the rate of recurrent major adverse cardiovascular events (MACE) defined as death, MI, ischemic stroke and revascularization.

Results: Baseline femoral and carotid IMT were obtained in 483 and 611 patients in whom median time follow-up was 10.2 and 9.9 years, respectively. Mean femoral and carotid IMT were 1.0 ± 0.04 mm and 0.7 ± 0.02 mm, respectively. Femoral and carotid IMT were higher in patients with recurrent MACE than in event-free patients (0.95 ± 0.04 mm vs 0.82 ± 0.02 mm [$p < 0.05$] for femoral IMT and 0.74 ± 0.02 mm vs 0.68 ± 0.01 mm [$p < 0.01$] for carotid IMT, respectively). After adjustment for clinical risk factors, the higher quartile of femoral IMT was associated with a higher rate of MACE (adjHR 1.49; 95% CI [1.03-2.89], $p = 0.05$). A carotid IMT > 0.9 mm, the established ESC threshold, was associated with a higher rate of MACE after adjustment for other risk factors (adjHR = 1.86 95% CI [1.16 – 2.98], $p < 0.001$).

Figure 1 : Survival without MACE according to carotid IMT

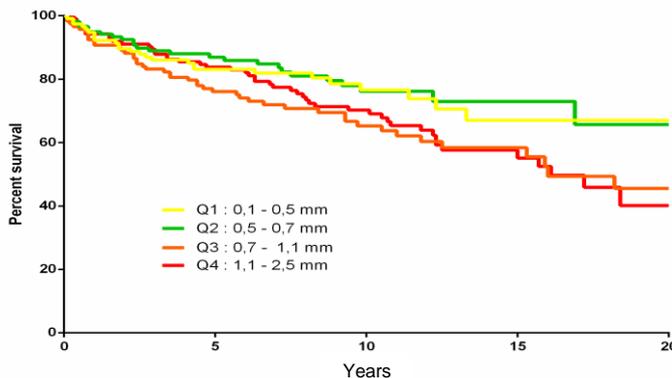


Mean carotid IMT (n=610) : 0.7 ± 0.02 mm

Patients with MACEs : 0.74 ± 0.02 mm
Patients without MACEs : 0.68 ± 0.01 mm
P < 0.01

Adj HR (IMT > 0.9 vs IMT < 0.9)
= 1.86; 95%CI (1.16 – 2.98), $p < 0.001$

Figure 2 : Survival without MACE according to femoral IMT



Mean femoral IMT (n=483) :
 1.0 ± 0.04 mm

Patients with MACEs : 0.95 ± 0.04 mm
Patients without MACEs : 0.82 ± 0.02 mm
P < 0.01

Adj HR (Q1 versus Q4)
= 1.49; 95%CI (1.03 – 2.89), $p = 0.05$