

Effect of Evolocumab on Progression of Coronary Atherosclerosis in Statin-Treated Patients: A Placebo-Controlled Intravascular Ultrasound Trial



Purpose: To study the effect of evolocumab, a PCSK9 inhibitor, on the regression of coronary atherosclerosis in patients on statins.

Trial Design: Phase-3, double-blinded, placebo-controlled, randomized; N= 968; 197 sites. Patients with coronary atherosclerosis treated with statins, randomized 1:1 to evolocumab 420 mg monthly (PCSK9 inhibitor), or placebo; treated for 18 months. F/u = 78 weeks. Intravascular ultrasound (IVUS) was done at baseline and at 78 weeks.

Primary Endpoint: change in percent atheroma volume (PAV) from baseline to 78 weeks by IVUS

Trial Results	% change in atheroma volume from baseline	
Statin alone	0.05 (47.3% regressed, 52.7 progressed)	p<0.0001
Statin + evolocumab	-0.95 (64.3% regressed, 35.7% progressed)	

Conclusions: In patients being treated with statins for cardiovascular disease, intravascular ultrasound documented that evolocumab, a PCSK9 inhibitor, decreased the percent of atheroma volume.

