

Prospective, investigator-initiated, randomized trial



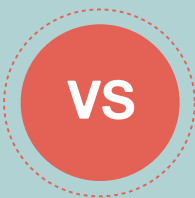
**Objective:** To evaluate the difference in target vessel failure (TVF) 3 years after intravascular ultrasound (IVUS) versus angiography guided second-generation drug-eluting stent (DES) implantation.

**1448**  
patients

**Inclusion criteria:** Patients with silent ischemia, stable or unstable angina, or myocardial infarction (MI) with more than 24 hours between chest pain and admission, and a de novo coronary lesion requiring DES implantation.



**IVUS**  
guidance  
(n = 724)



**Angiographic**  
guidance  
(n = 724)

## PRIMARY OUTCOME

**6.6**

**Target vessel failure %**  
**HR 0.60; 95% CI 0.42-0.87; P=0.01**

**10.7**

## SECONDARY OUTCOME

**4.3**

**All-cause death %**  
**HR 0.99; 95% CI 0.60-1.63; P=0.98**

**4.4**

**5.9**

**Target lesion failure %**  
**HR 0.57; 95% CI 0.39-0.83; P=0.003**

**10.2**

**Conclusion:** IVUS-guided DES implantation was associated with significantly lower rates of TVF during a 3-year follow-up in all-comers, particularly for patients who had an IVUS-defined optimal procedure, compared with those with angiography guidance.