ILUMIEN IV trial

OCT versus angiography

Conclusion



Optical coherence tomography (OCT)-guided percutaneous coronary intervention (PCI) leads to a larger minimum stent area but does not reduce the 2-year rate of target vessel failure compared with angiography-guided PCI.

Impact on clinical practice



OCT-guided PCI led to a larger minimum stent area, enhanced the safety of the PCI procedure and resulted in nearly a two-thirds reduction in stent thrombosis during 2-year follow-up. However, OCT guidance did not reduce the 2-year rate of target vessel failure compared with angiography-guided PCI.

Study objectives



The ILUMIEN IV trial investigated whether OCT-guided PCI is superior to angiography-guided PCI for minimum stent area and target vessel failure in complex patients and lesions.

Study population

Patients with medication-treated diabetes and/or complex lesions.

Where?

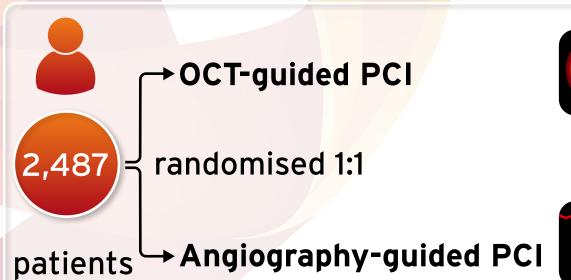


18 countries



80 sites

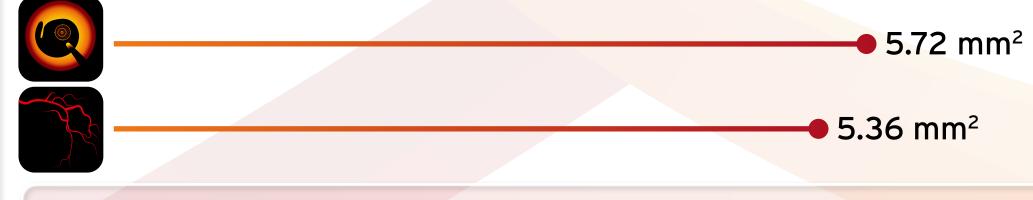
Who and what?





Co-primary endpoints

post-PCI minimum stent area assessed by OCT



difference 0.36 mm² 95% CI 0.21 to 0.51 p<0.001

2-year rate of target vessel failure (composite of cardiac death, target vessel myocardial infarction, or ischaemia-driven target vessel revascularisation)



Kaplan-Meier estimated rate 7.4%



hazard ratio 0.90 95% CI 0.67 to 1.19 p=0.45

Secondary endpoint

Stent thrombosis within 2 years



Rate 0.5%



hazard ratio 0.36 95% CI 0.14 to 0.91

