Conclusion

Intravascular imaging (IVI)-guided percutaneous coronary intervention (PCI) is associated with a lower rate of target lesion failure compared with angiography-guided PCI.

Impact on clinical practice

These results emphasise the importance of physicians using IVI with either optical coherence tomography (OCT) or intravascular ultrasound (IVUS) to optimise stent outcomes and improve the long-term prognosis of their patients.

Study objectives

This real-time updated network meta-analysis, integrating data from the ILUMIEN IV and OCTOBER trials with prior studies, examined the effects of IVI-guided PCI versus angiography-guided PCI.

Who and what?

20 trials 12,428 patients randomised

IVI-guided PCI including: angiography-guided PCI

OCT or IVUS

follow-up

between 6 months and 5 years

Primary endpoint

Target lesion failure, defined as a composite of cardiac death, target vessel myocardial infarction, or target lesion revascularisation.

Reduced by 31% with OCT

Secondary endpoints

Cardiac death reduced by 46% with OCT

Target vessel myocardial infarction reduced by 20% with OCT

Target lesion revascularisation reduced by 29% with OCT

Stent thrombosis reduced by 52% with OCT

vs.

ESC