UNDERSTANDING YOUR PROCEDURE

What is Intravascular Imaging?

A standard angiogram shows the outline of your arteries from the outside. **Intravascular imaging takes this further: a tiny probe passed inside the artery produces a detailed cross-sectional picture of the artery wall.**
This gives information that no external test can provide: the composition of a blockage, the exact dimensions of the vessel, and the precise condition of any stent.

Note: If you haven't already, please read our angiography/angioplasty guide first.

YOUR OPTIONS

The Two Types: IVUS and OCT

Both IVUS and OCT are performed as part of your angiogram or angioplasty. They add only a few minutes to the procedure and require no separate preparation on your part.

IVUS
Intravascular Ultrasound: uses sound waves

- Works through blood (no flush needed)
- Sees deeper into the artery (up to 6 mm)
- Best for large vessels, calcified plaques, and low-contrast cases

OCT
Optical Coherence Tomography: uses infrared light

- Requires a brief 1–2 second saline flush
- Much higher resolution for fine detail
- Best for stent assessment and precise plaque analysis

THE DIFFERENCES

How Do They Differ?

	IVUS	OCT
Detail vs Depth	Deeper Vessel Layers	Sharper Surface Detail
Blood/Contrast	Works through Blood	Needs a Brief Flush
Calcium & Plaque	Presence of Calcium and Calcium Arc	Depth and Thickness of Calcium. Calcium arc
Clot Detection	Larger Clots	Smaller, Finer Clots
Stent Assessment	Checks Expansion and Opposition/Stent Area	Detects Fine Issues, Stent Malopposition, Stent/Vessel Area, Stent Expansion, Edge Dissection

THE STAGES

Why We Use Them?

Intravascular imaging is used in three distinct situations:

Before treatment:
Defines the blockage type (calcified, fatty, or torn plaque), measures the artery precisely and defnes the morphology of the lesion.

During stenting:
Guides correct stent sizing (length and diameter) and placement, ensuring full expansion and proper apposition to the artery wall.

After stenting:
Evaluates existing stents for re-narrowing, clot formation, or stent separation from the vessel wall.

Contact Us

Timings: 3:30 - 6:30 PM (Mon, Tue, Wed & Fri)

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All reports must be shared in PDF format only

This guide is for information only and does not replace the advice of your own doctor or healthcare team. Always discuss your individual situation with the professionals caring for you.

Sources and further reading

- *NHS England Coronary Angiogram and Intravascular Imaging*
- *British Cardiovascular Society OCT in Clinical Practice*
- *Mayo Clinic Coronary Angiogram*
- *American College of Cardiology / CardioSmart Intravascular Imaging and Coronary Artery Disease*

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CARDIOLOGY

Intravascular Imaging Guide

IVUS AND OCT

A guide to intravascular imaging—IVUS and OCT: what they are, how they differ, and why they're used.