

BCIS ICI (intracoronary imaging) accreditation curriculum

This exam is principally image based and will test your ability to correctly identify any of the following ICI features and pathologies.

Not all of these pathologies will be featured in an individual exam.

The following apply to both IVUS and OCT unless otherwise specified.

Common Artefacts

Wire

Stitch/seam (vs intimal disruption)

Blood swirl (vs thrombus)

Tangential attenuation (vs TCFA - OCT)

Fold-over (OCT)

Catheter micro-bubbles (transient black screen)

NURD

Blood in OCT catheter

Plaque Morphology

Normal arterial and perivascular structures

Concentric

Eccentric

Negative remodelling

Side branch (vs intimal cavity)

Calcium

 Nodule

 Arcs

Lipid

Fibrous

Cholesterol crystals

Attenuated Plaque

Banded Plaque

Pathology

Thrombus

White (OCT)

Red (OCT)

Haematoma / SCAD

Dissection – Assessment of intimal/medial/adventitial

Plaque rupture

Plaque erosion (/”thrombus without evidence of underlying plaque rupture”)

Eruptive calcified nodule

Neo-vascularisation (inflamed plaque)

Thin capped fibro-atheroma - TCFA (OCT)

Myocardial bridge

True vs false lumen (position of wire / probe)

Assessment of LMS (technical challenges and literature e.g. Litro study and revasc deferral)

Predictors of in-stent restenosis

Predictors of edge restenosis

Negative remodelling

Stents

Malapposition

Under expansion

Longitudinal Stent Deformation

Deformation / Accidental crush

Edge dissection

Plaque and thrombus prolapse

Stent thrombosis

Abluminal rewiring

Neointima – Fibrous

Neoatheroma

Case Planning

Selection of proximal and distal stent landing zones (re risk of edge restenosis)

Assessment of calcium modification requirement

Segmentation and sizing of vessel for stent sizing and post – dilation strategy

Plaque morphology predictors of no/slow reflow post PCI

Helpful background reading

1. Clinical use of intracoronary imaging. Part 1: guidance and optimization of coronary interventions. An expert consensus document of the European Association of Percutaneous Cardiovascular Interventions. *Eur Heart J.* 2018;39:3281-3300
2. Clinical use of intracoronary imaging. Part 2: acute coronary syndromes, ambiguous coronary angiography findings, and guiding interventional decision-making: an expert consensus document of the European Association of Percutaneous Cardiovascular Interventions. *Eur Heart J.* 2019 Aug 14;40(31):2566-2584.
3. Consensus Standards for Acquisition, Measurement, and Reporting of Intravascular Optical Coherence Tomography Studies. A Report From the International Working Group for Intravascular Optical Coherence Tomography Standardization and Validation. *J. Am. Coll. Cardiol.* 2012;59:1058-1072