

Reentry Technique

A reentry **technique** is an **endovascular** maneuver used to restore access to the true **lumen** of a **vessel** after unintended subintimal passage of a guidewire or catheter during angioplasty or stenting.

□ Context of Use

Most commonly used in chronic total occlusions (CTOs) of peripheral, coronary, or cerebrovascular arteries.

In carotid or vertebral arteries, subintimal entry is sometimes unavoidable in near-occlusion or heavily calcified lesions.

A reentry device or angled catheter is used to penetrate the intimal layer and redirect the guidewire into the true lumen distally.

□ Types of Reentry Techniques

Device-Assisted (Dedicated Tools):

Outback™, Pioneer Plus™, OffRoad™, etc.

Often with needle-based targeting or IVUS guidance.

Wire-Based Manual Techniques:

Looping the wire in the subintimal space and probing for reentry

“Knuckle wire” technique

“Reentry with support catheter”

□ Indications

Subintimal dissection during angioplasty of:

Common/Internal Carotid Artery (CCA/ICA)

Superficial femoral artery (SFA)

Coronary arteries (CTO PCI)

Salvage of misdirected guidewire path

Crossing flush occlusions without a proximal stump

⚠ Risks & Considerations

Perforation

Distal embolization

Dissection propagation

Need for embolic protection in cerebral circulation

“Reentry techniques are the vascular equivalent of re-entering orbit after drifting off-course — high-stakes, high-skill, and best done with the right tools.”

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