

Guide Extension Catheters: A Strong Support from a Parent-Child Relationship

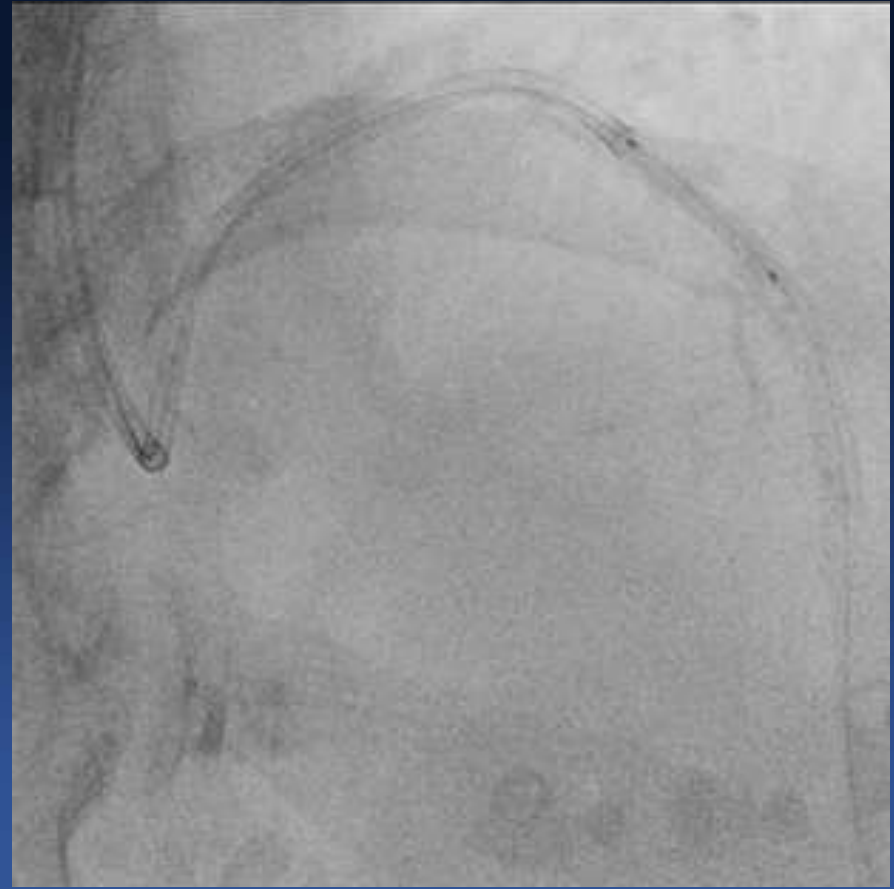
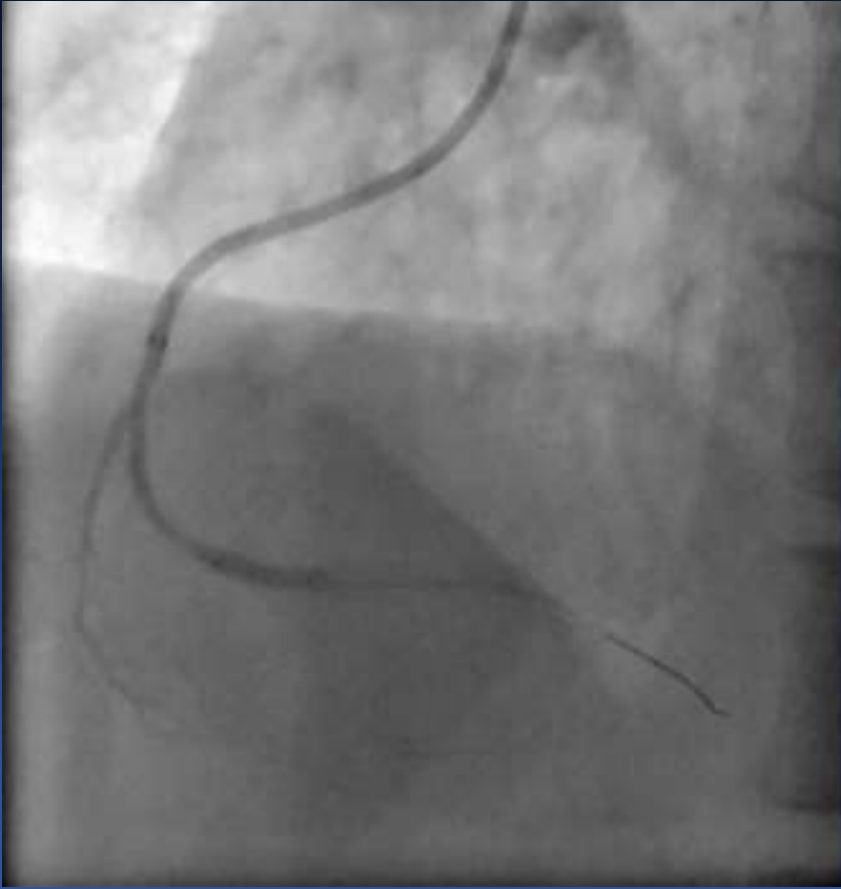
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Heart Institute, Asan Medical Center, Seoul, Korea***

Stent Delivery in Complex PCI

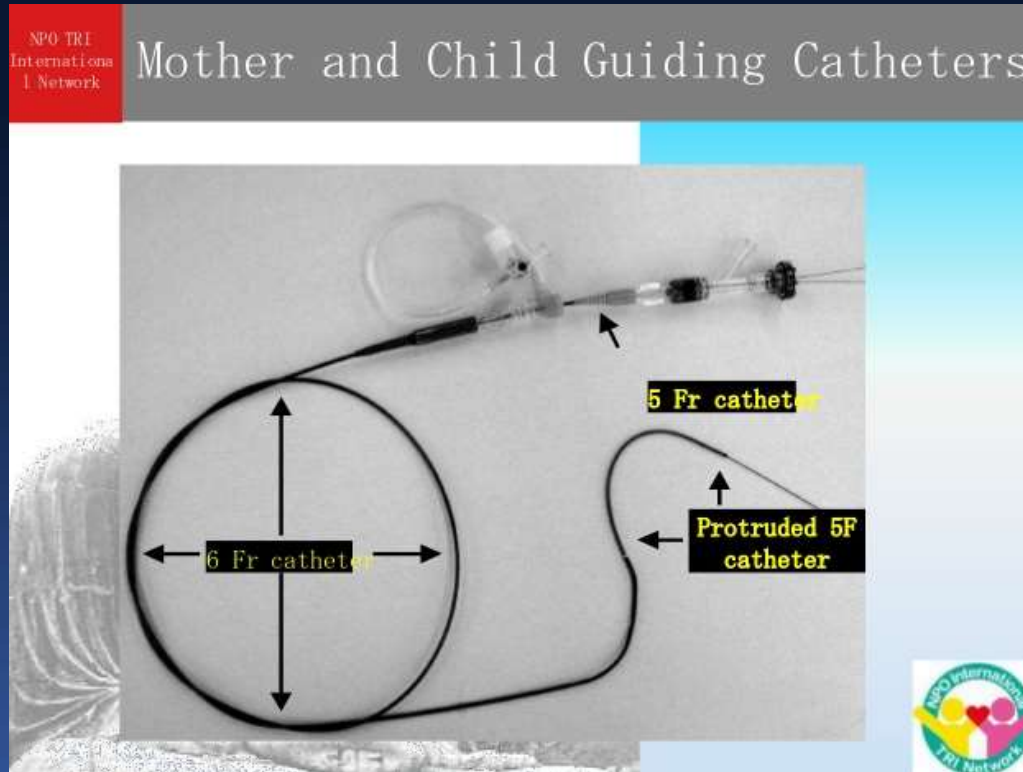
- Co-axial guide catheter
- Strong guide catheter: Amplatz, EBU, XB
- Aggressive lesion modification:
 - 1) high pressure with large balloon
 - 2) rotablator
- Larger size guiding catheter
- Anchoring technique: side or distal anchoring
- Deep intubation

Deep Intubation



1st Generation “Mother and Child”

Courtesy of Dr. Shigeru Saito

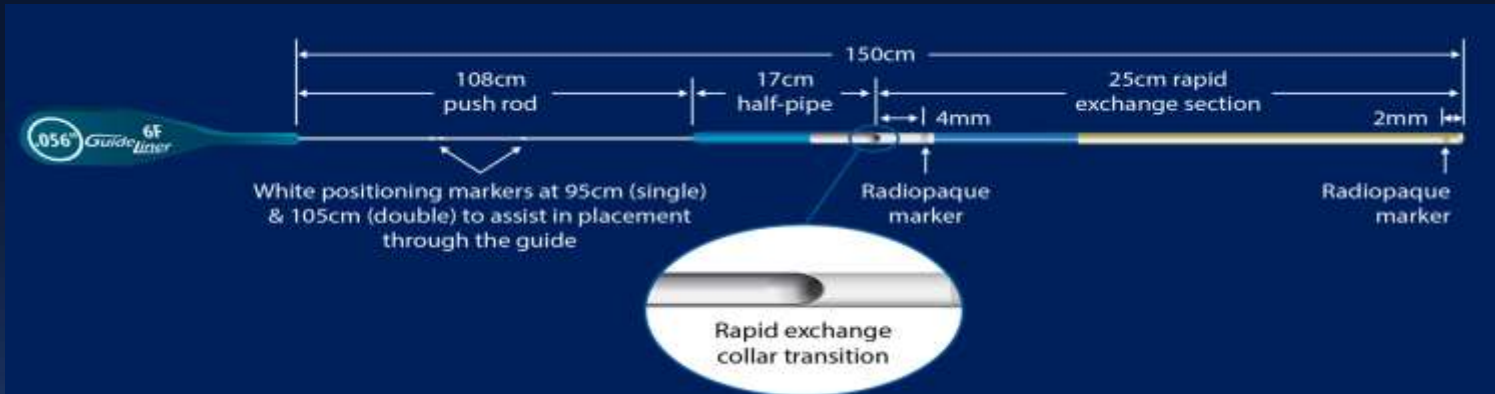


- Cumbersome
- Required removal and reconnect of hemostatic valve

2nd Generation “Mother and Child”

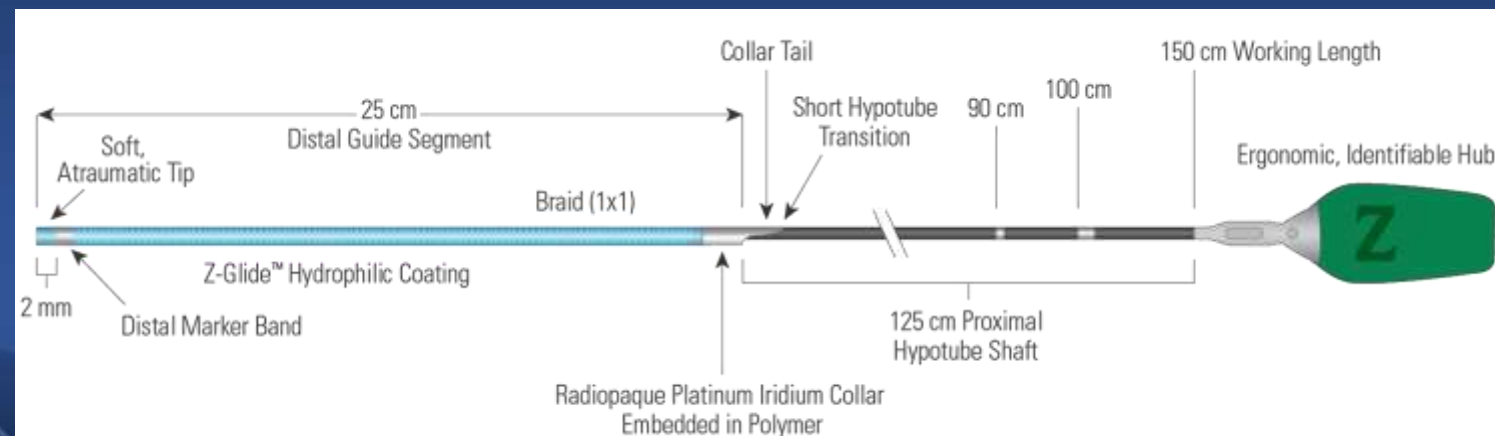
GuideLiner

More Flexible



GuideZilla II

More Pushible



Clinical Indications

- Presence of vessel angulation and tortuosity
- Presence of severe calcification
- Chronic total occlusion

Whenever You Need It !!

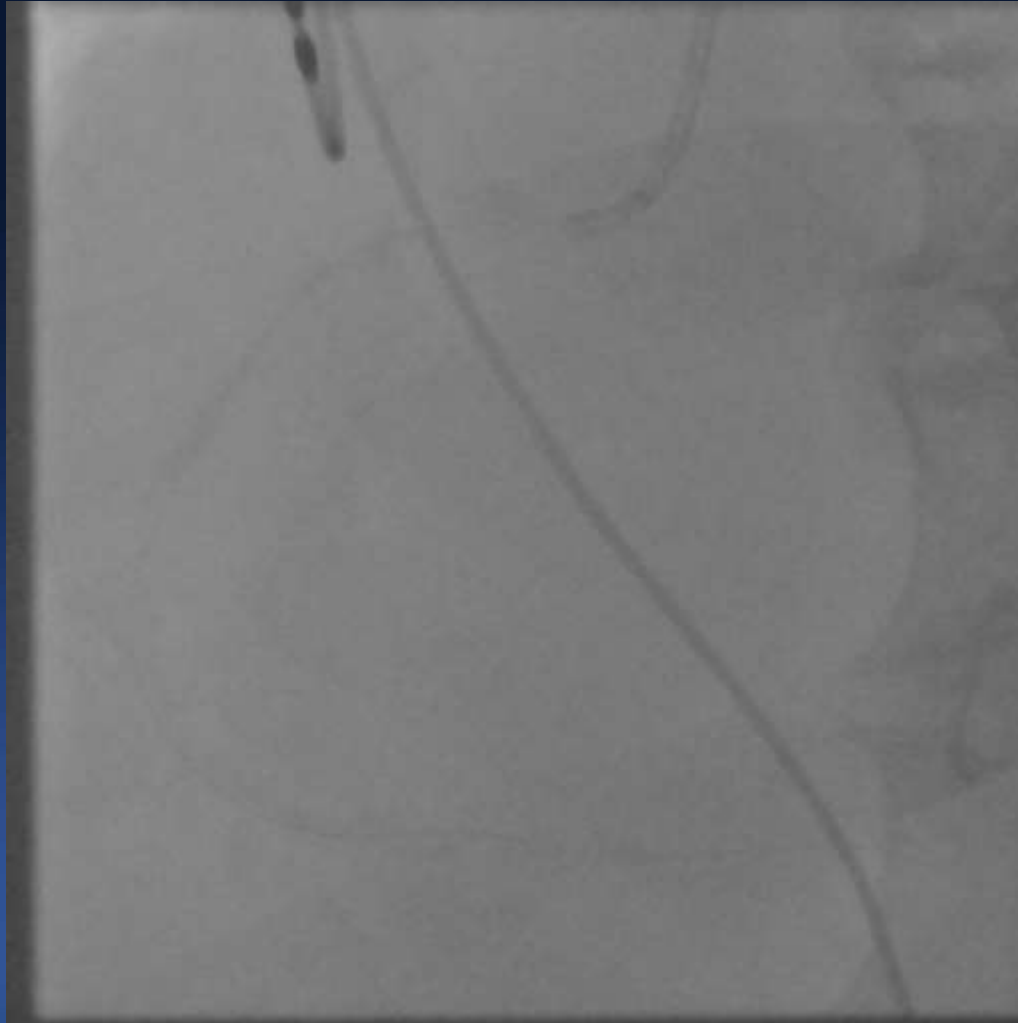
- Intracoronary imaging catheter delivery
- Delivery of the burr and enabling safe rotational atherectomy in tortuous calcific lesion

Guide Extension Catheter in AMC

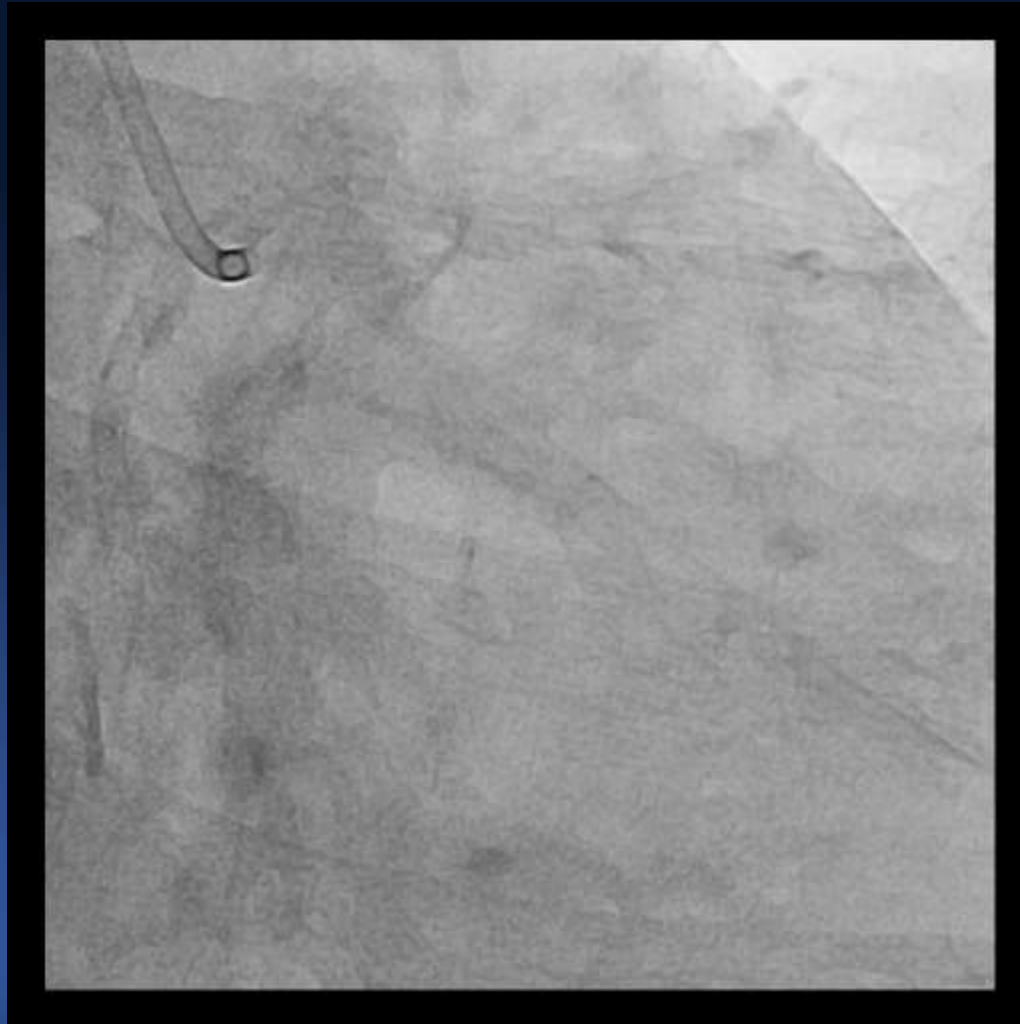
2016.11.28 – 2018.11.29

352 cases

How to Intubate Guide Extension Catheter



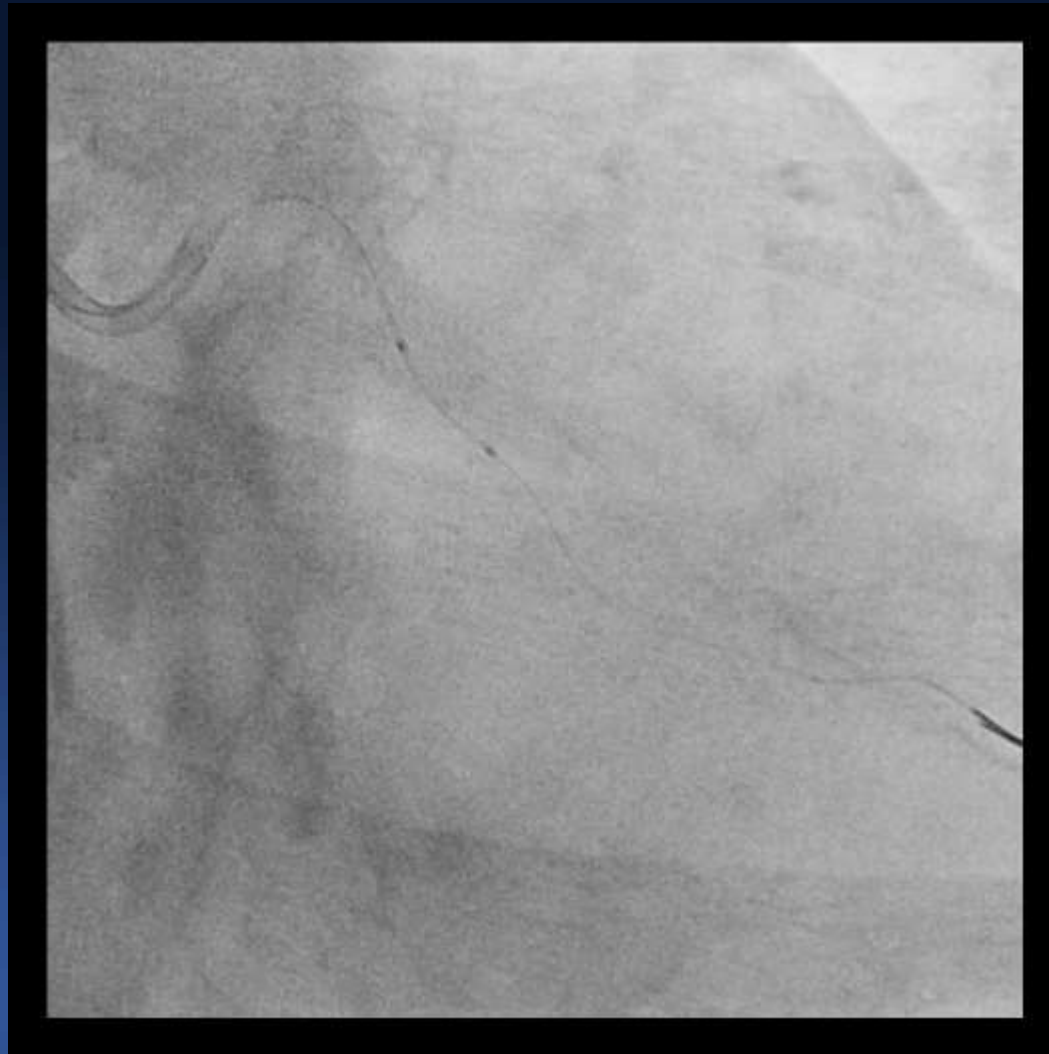
Very Tortuous and Calcified LCX



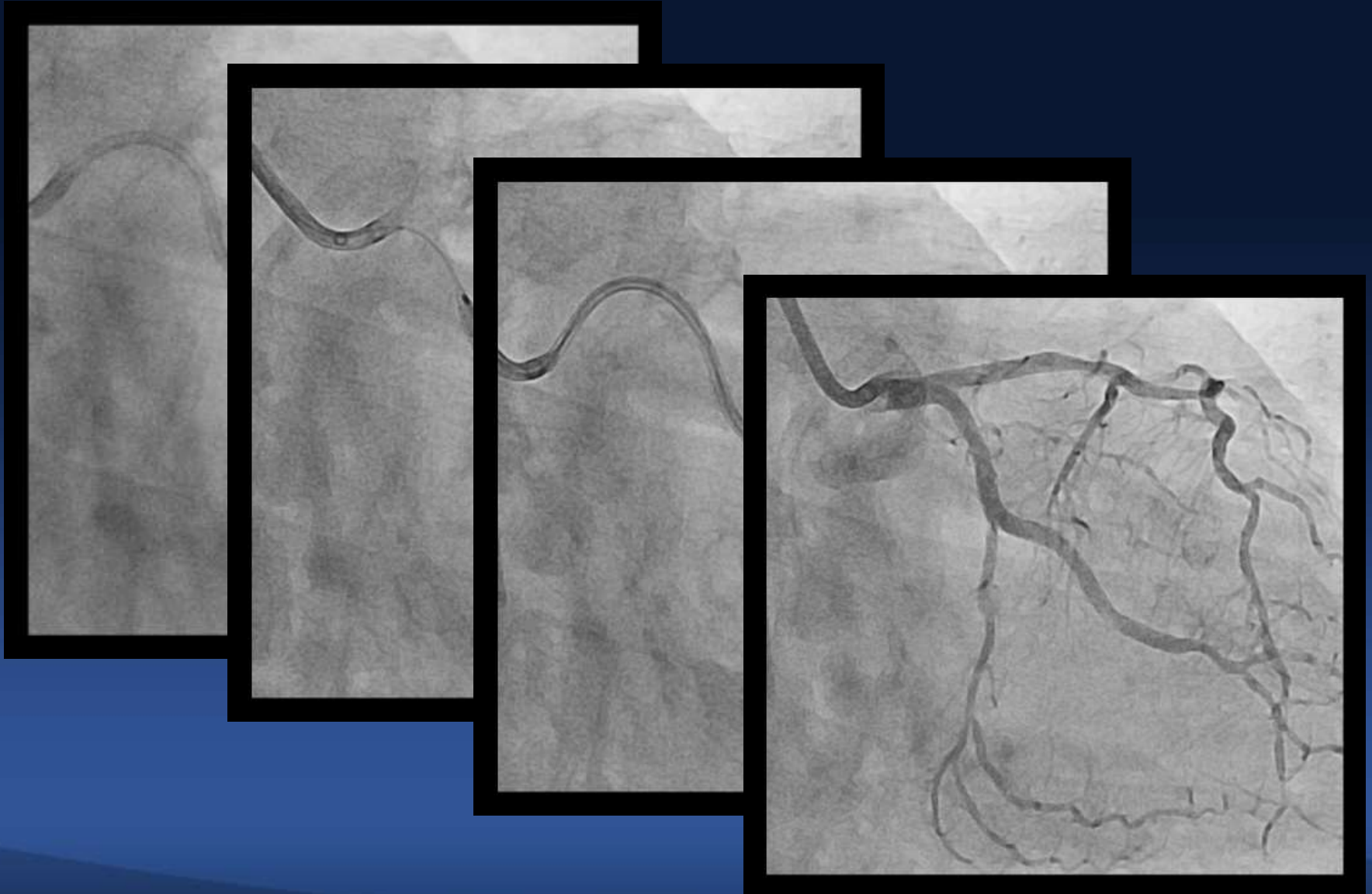
How-To-Insert



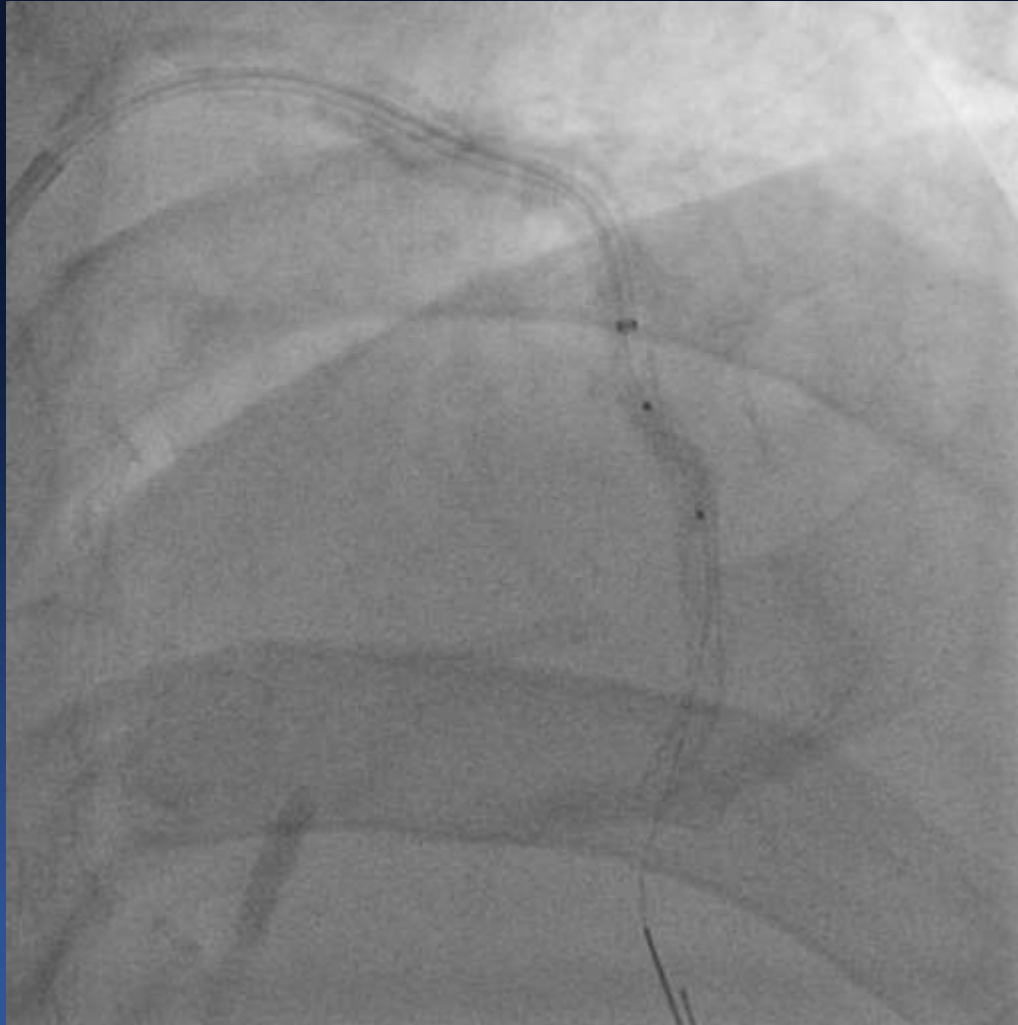
How-To-Insert



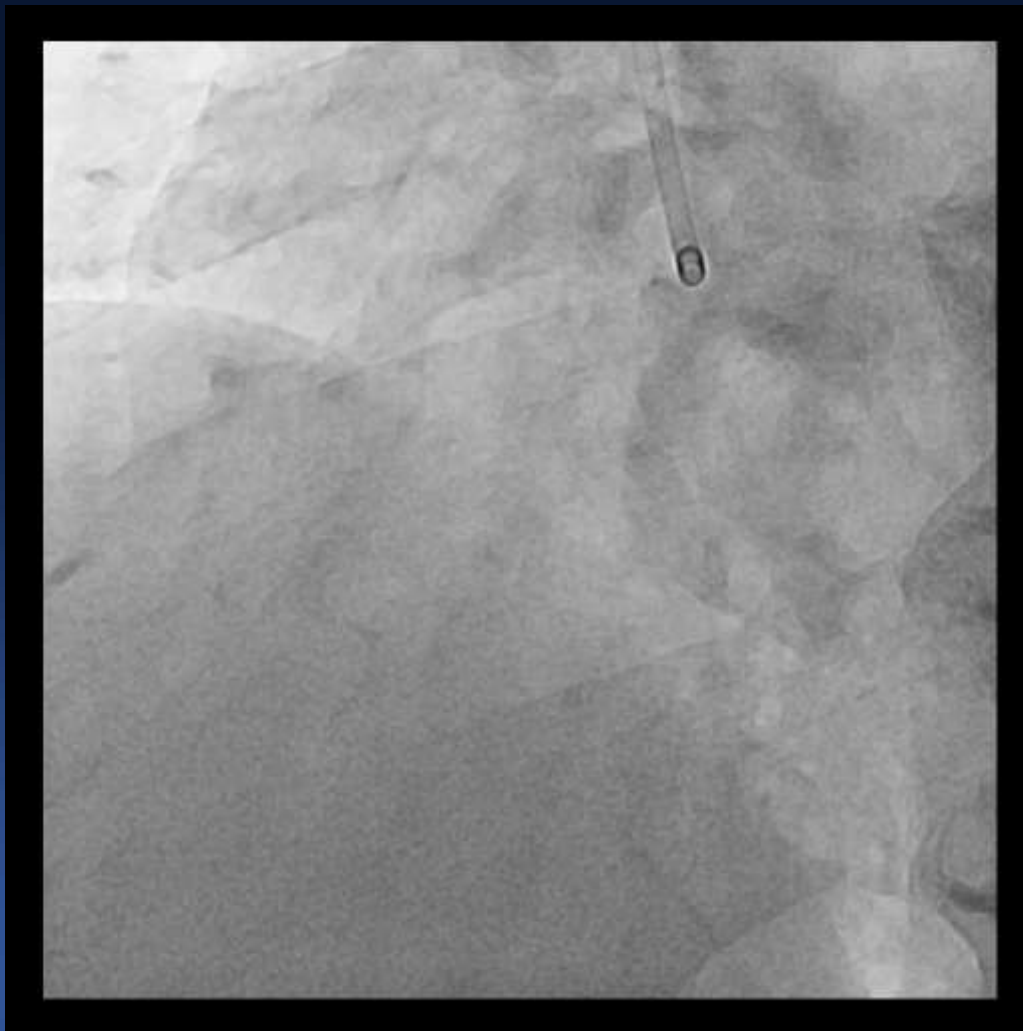
Results



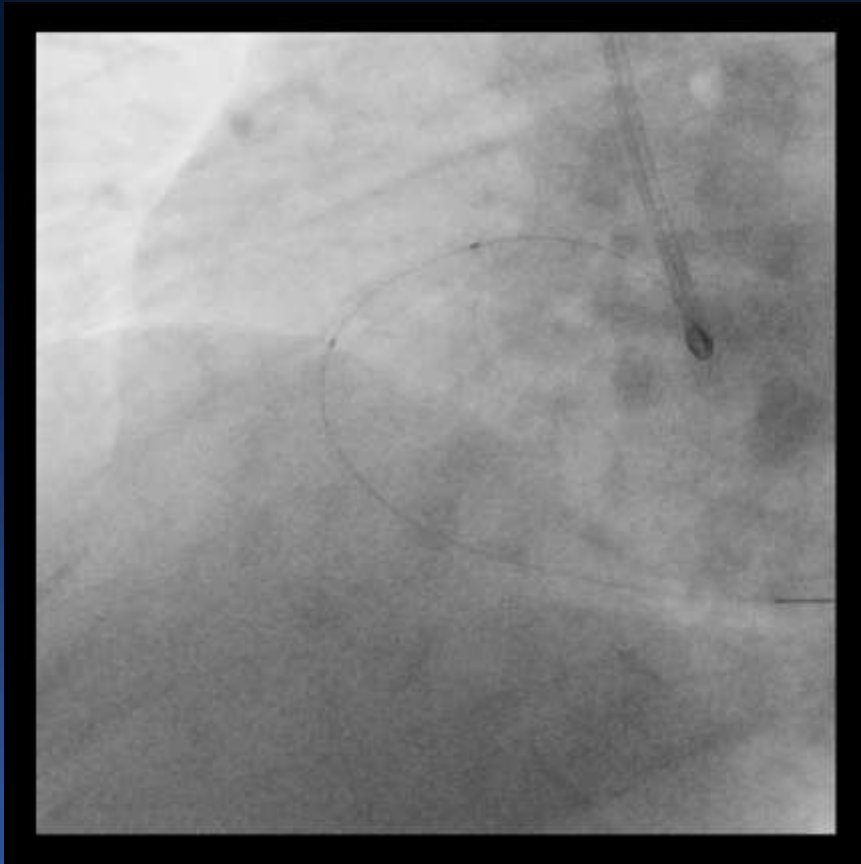
Severe Calcified Lesion



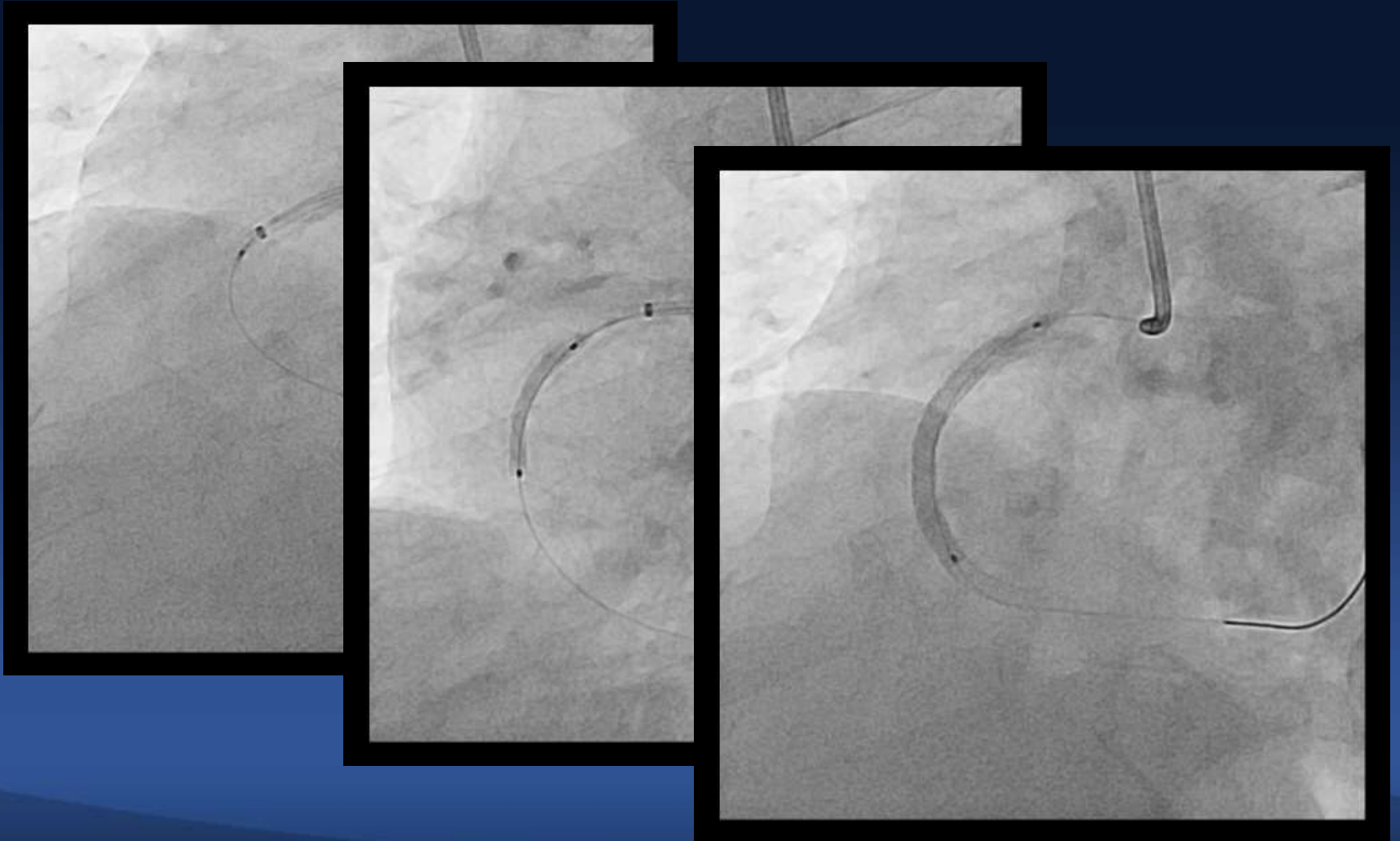
Guiding Back-up



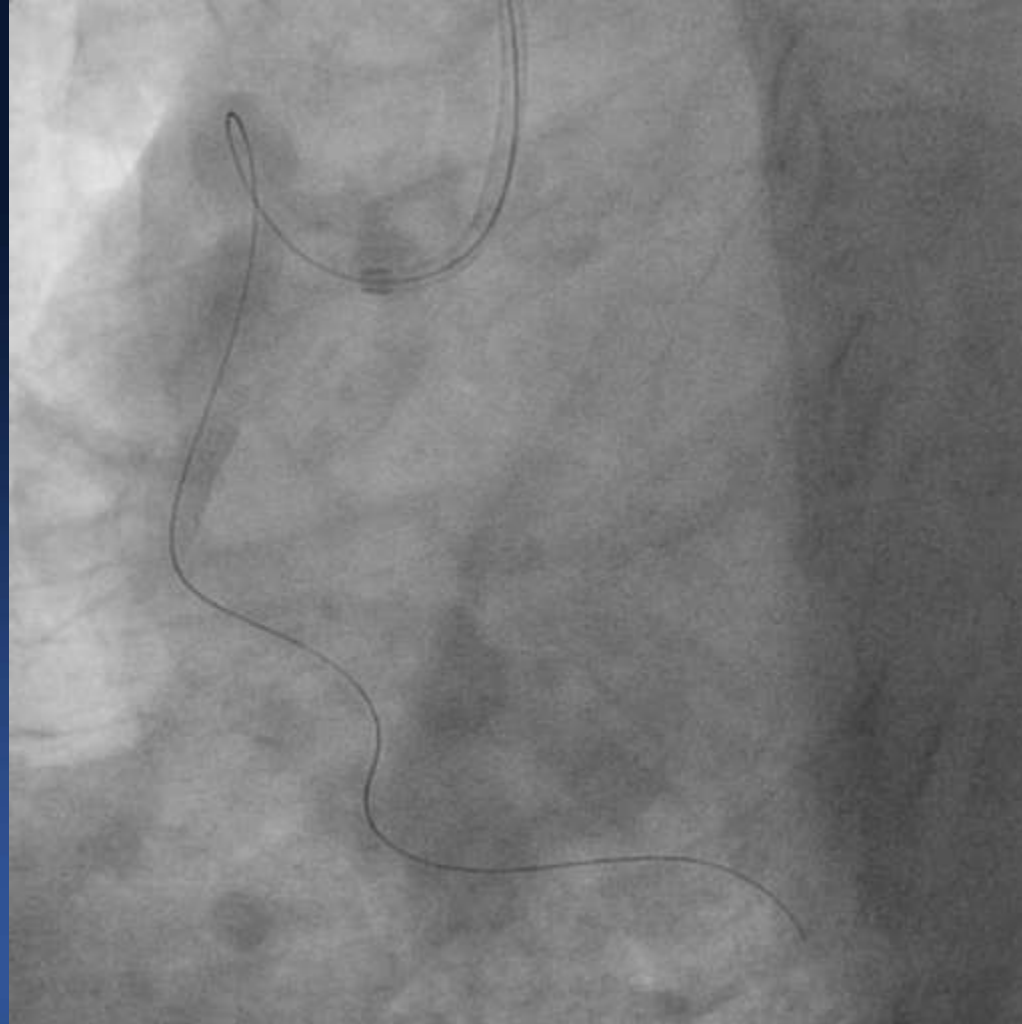
Guiding Back-up



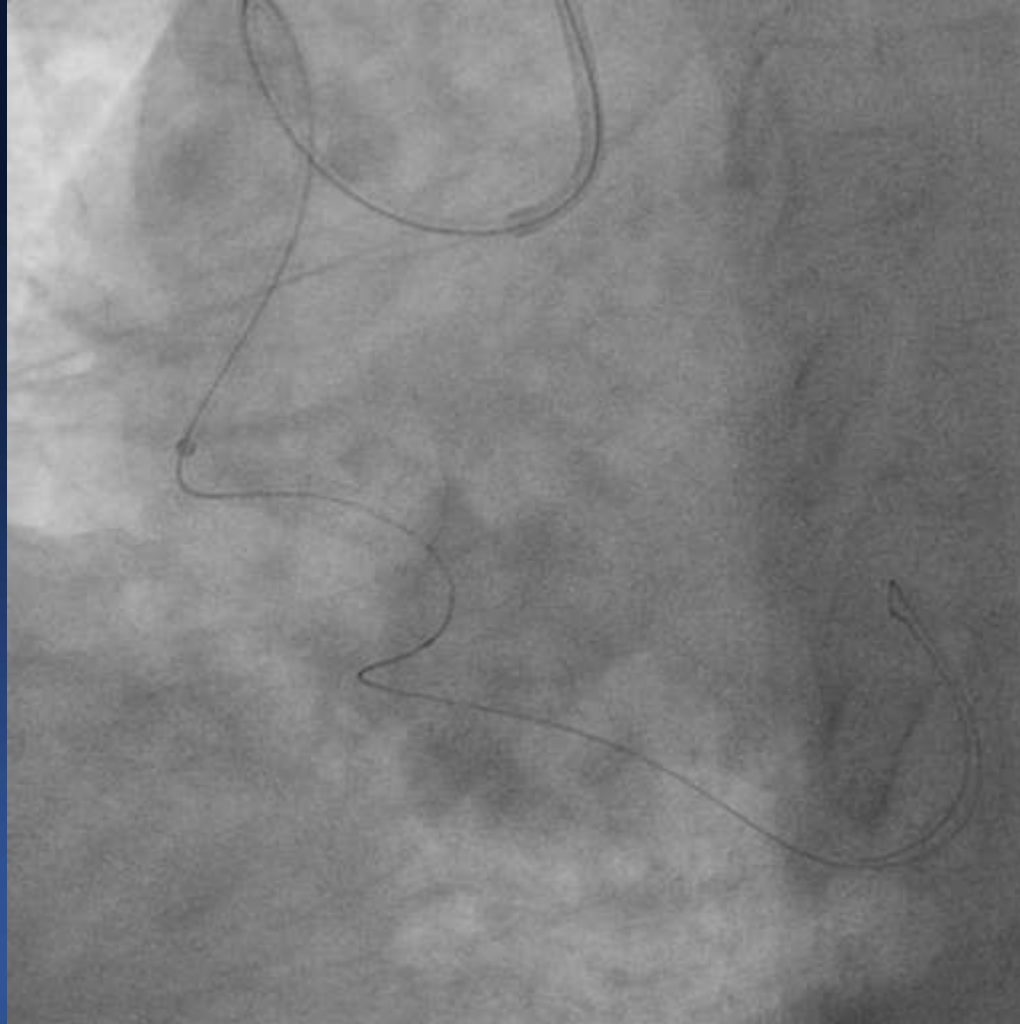
Guiding Back-up



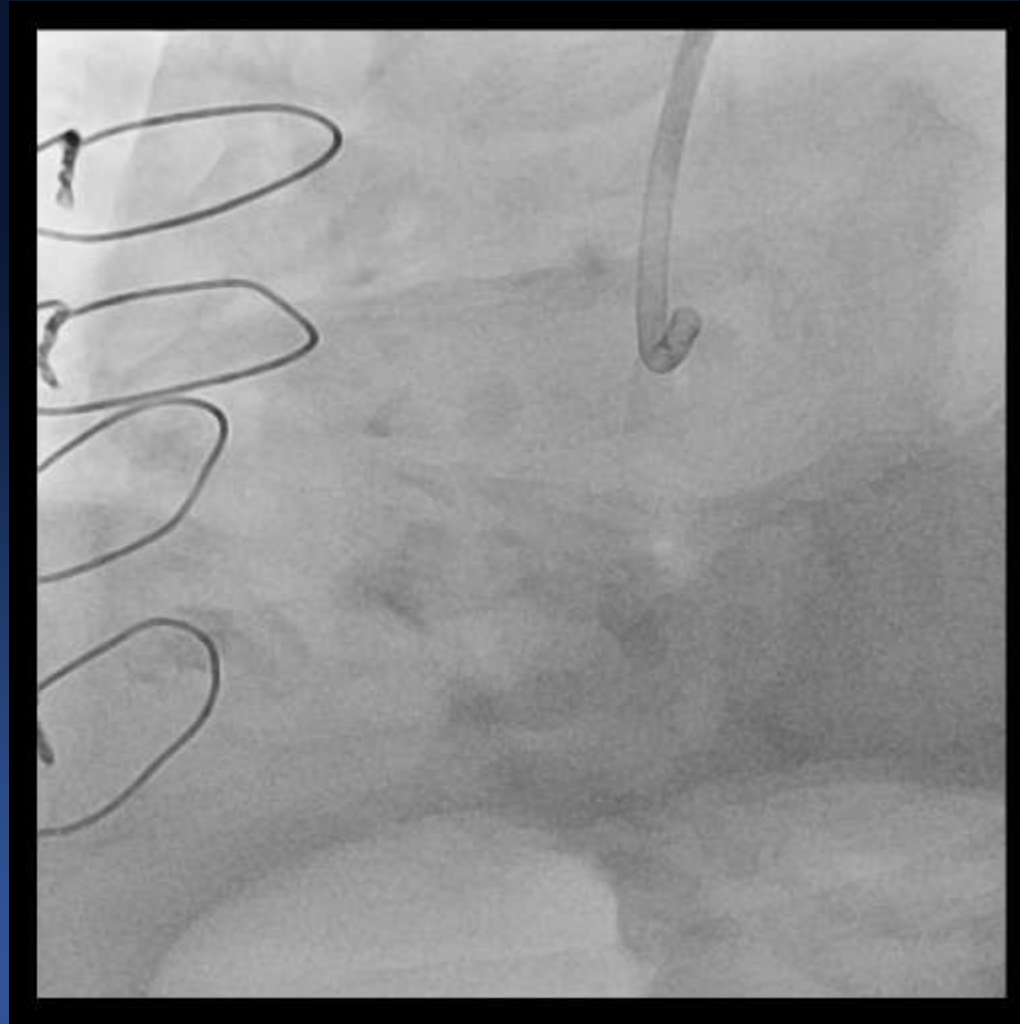
Very Tortuous Artery



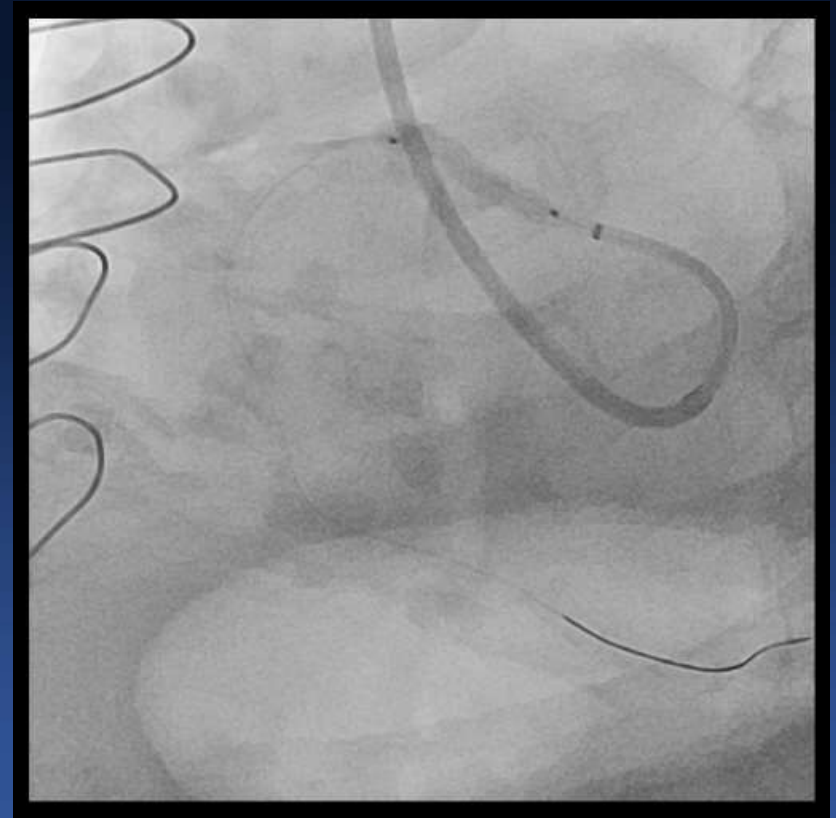
Very Tortuous Artery



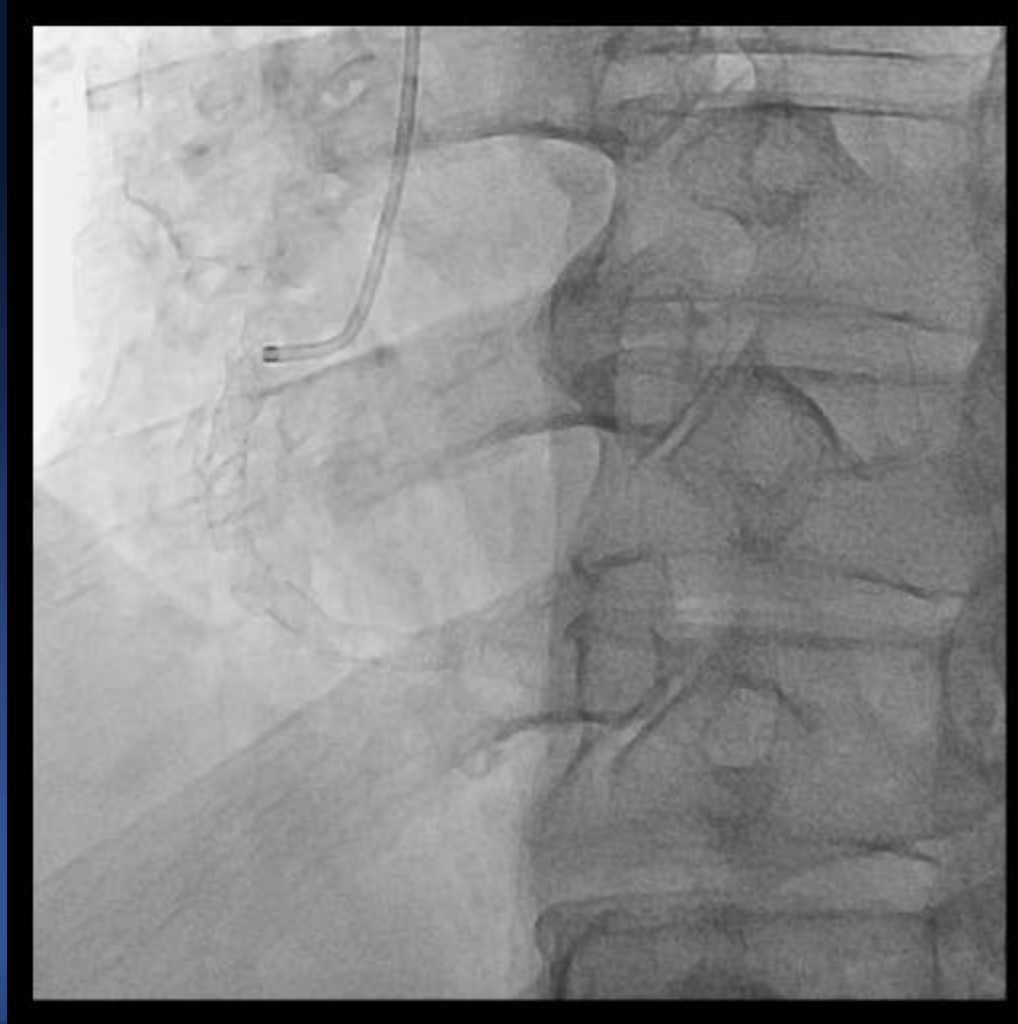
Ostial Stenting: Hard to Engage



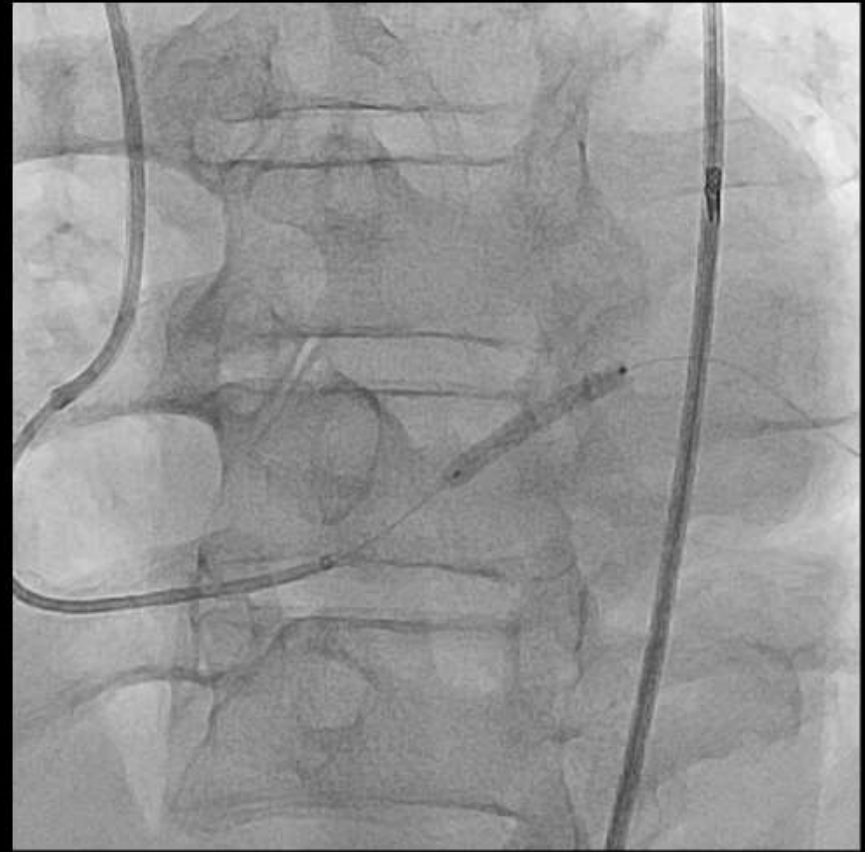
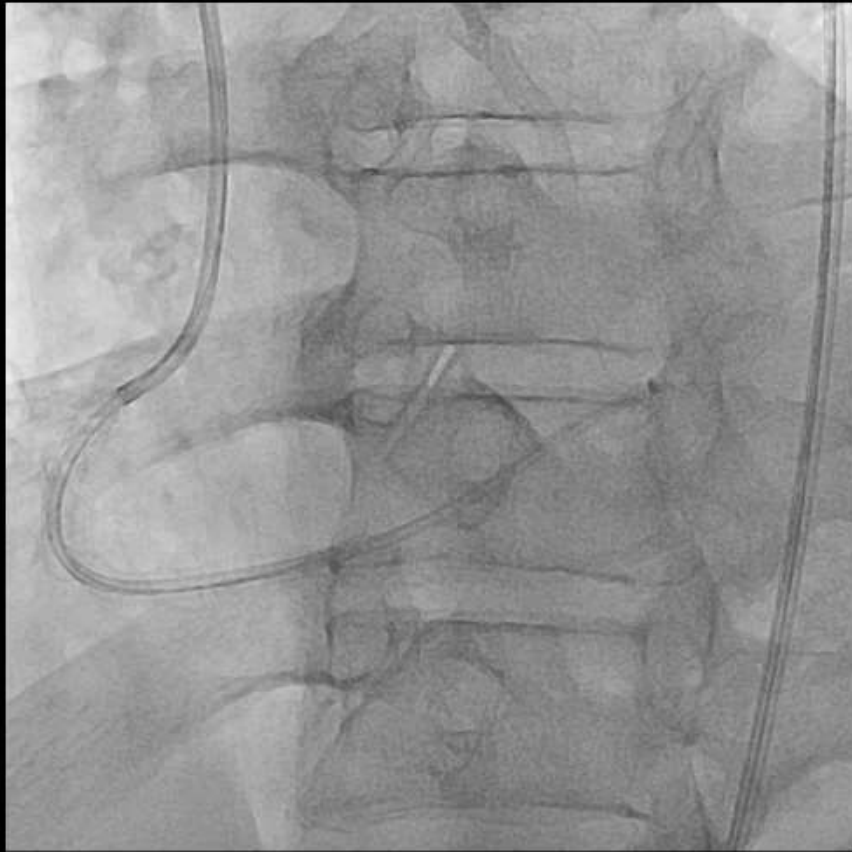
Ostial Stenting: Hard to Engage



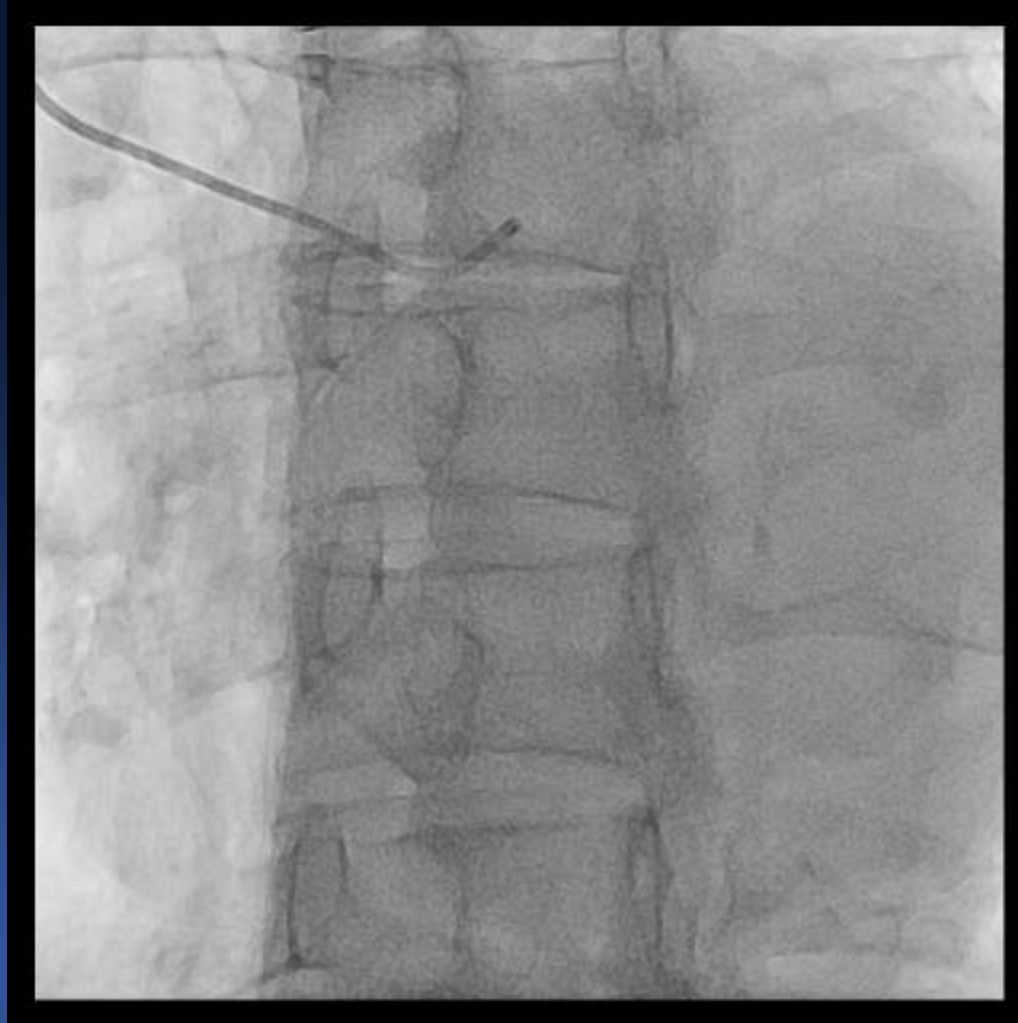
Far-Far Away Distal RCA Through Stent



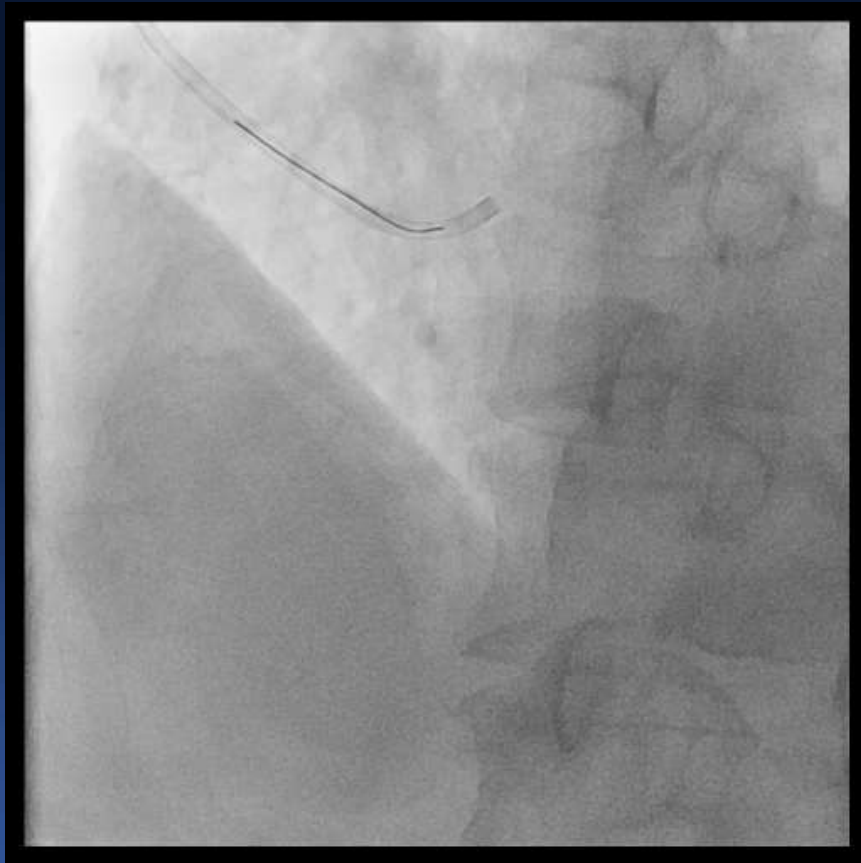
Far-Far Away Distal RCA Through Stent



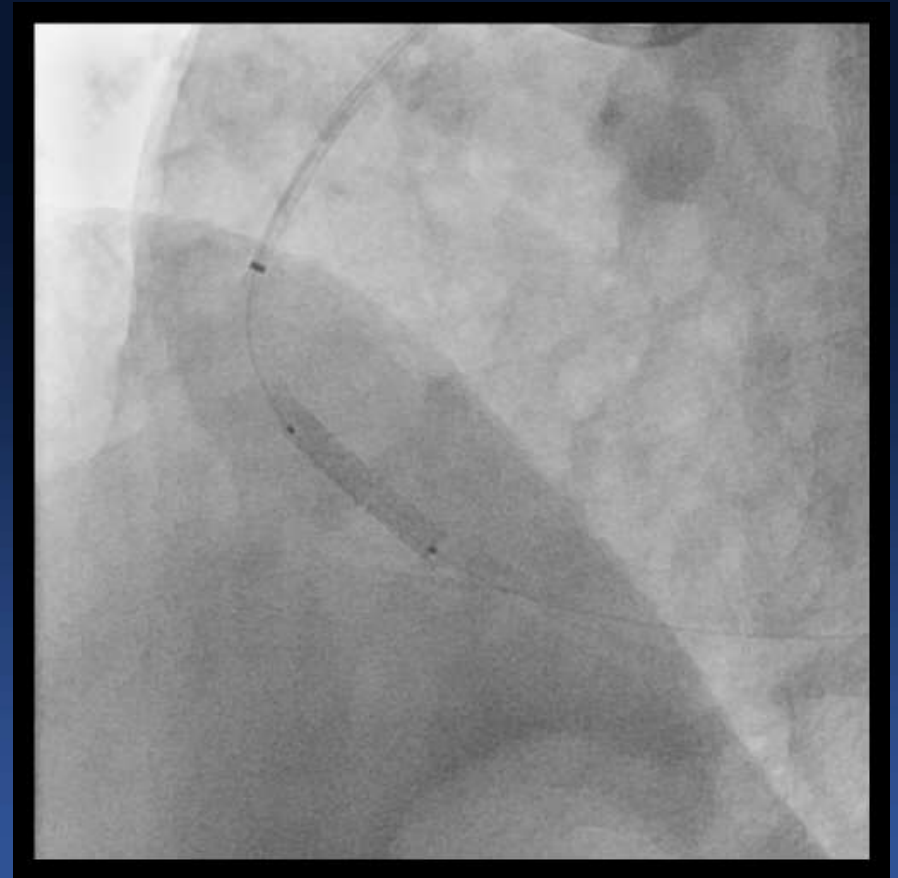
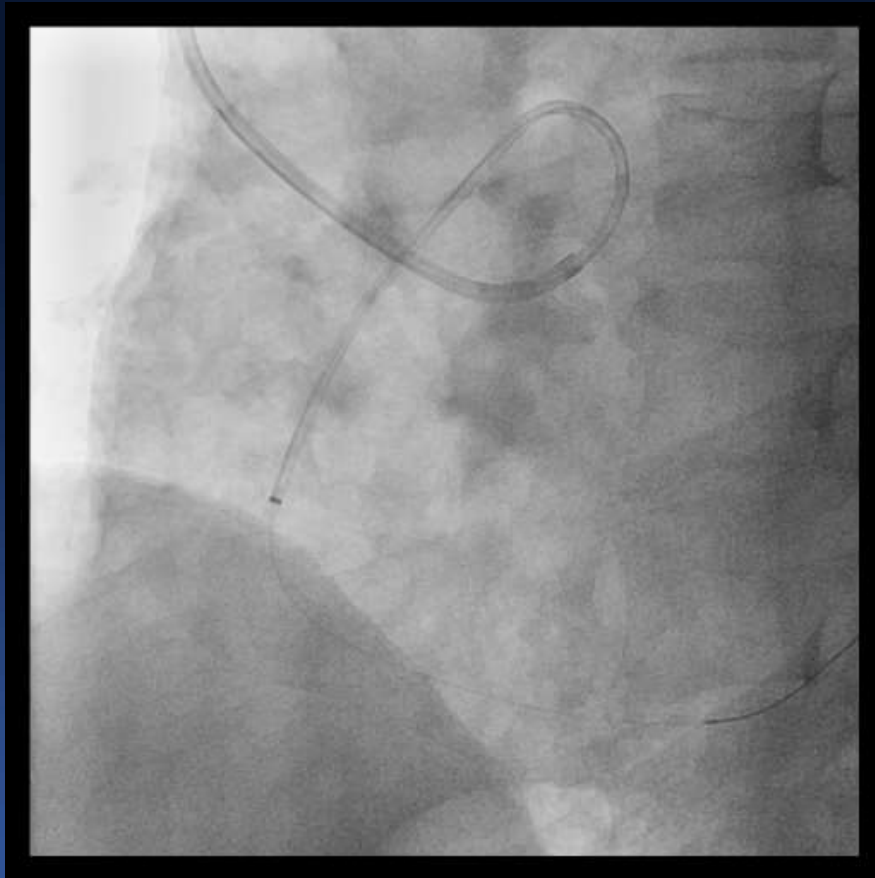
Abnormal Coronary Ostium



Abnormal Coronary Ostium



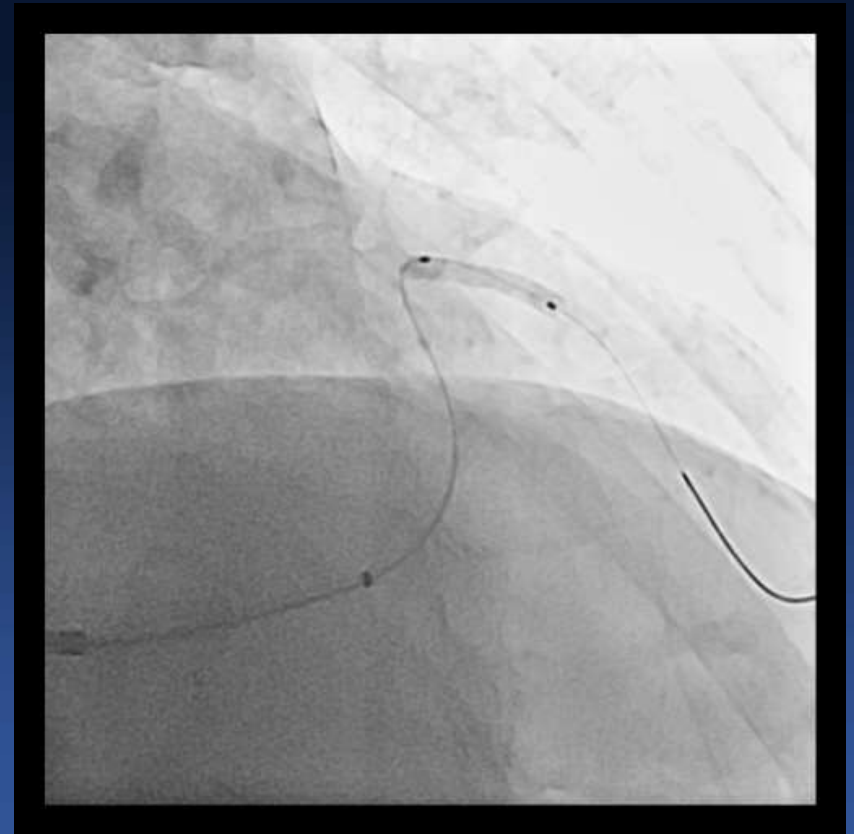
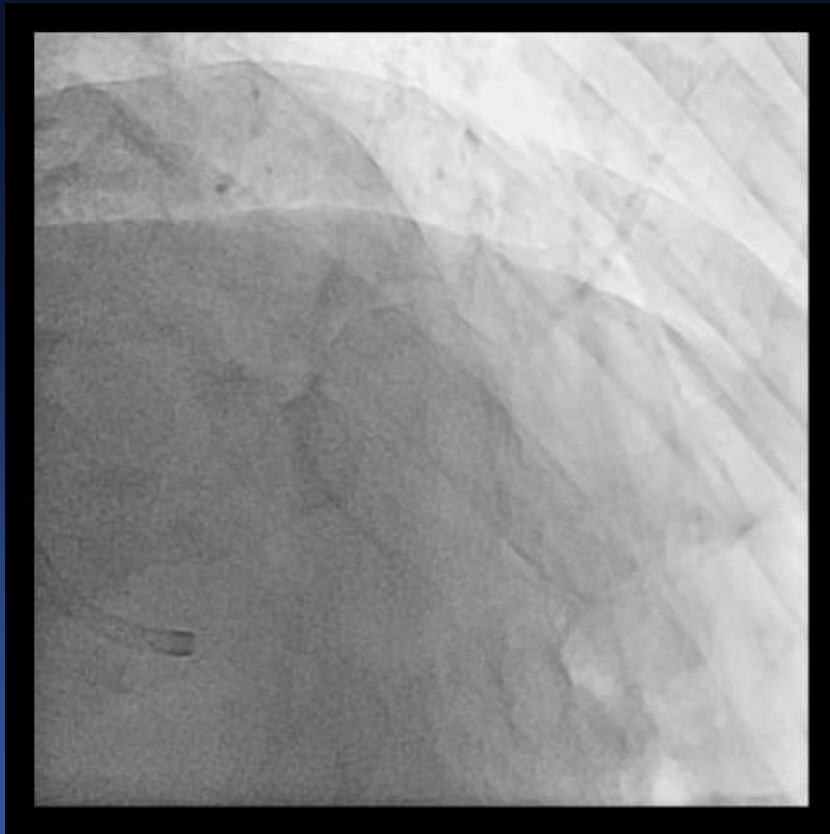
Abnormal Coronary Ostium



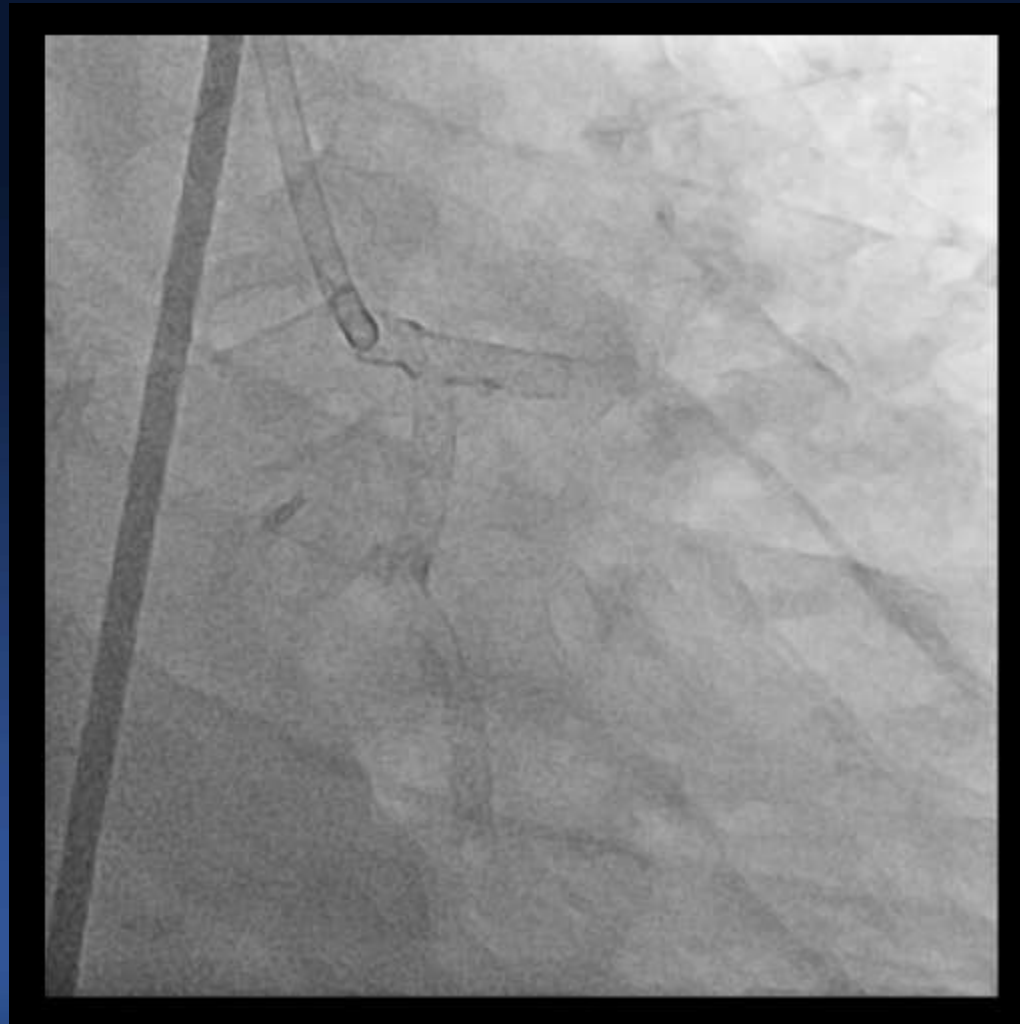
Abnormal LAD from RCA



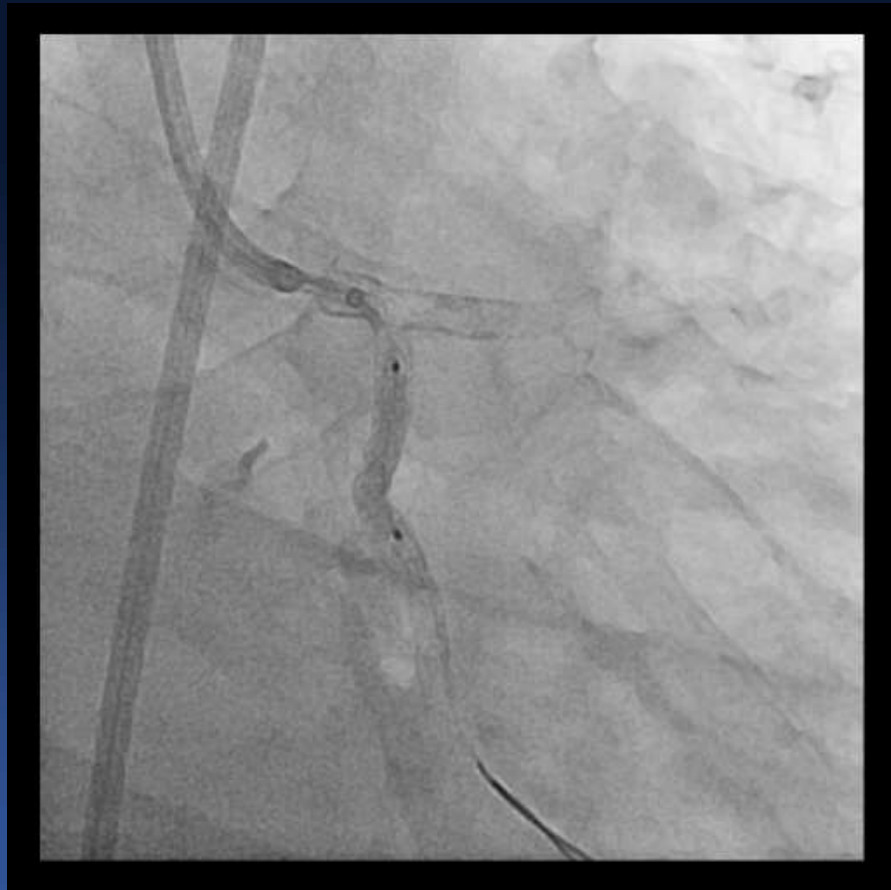
Abnormal LAD from RCA



Stent Delivery Through Stent



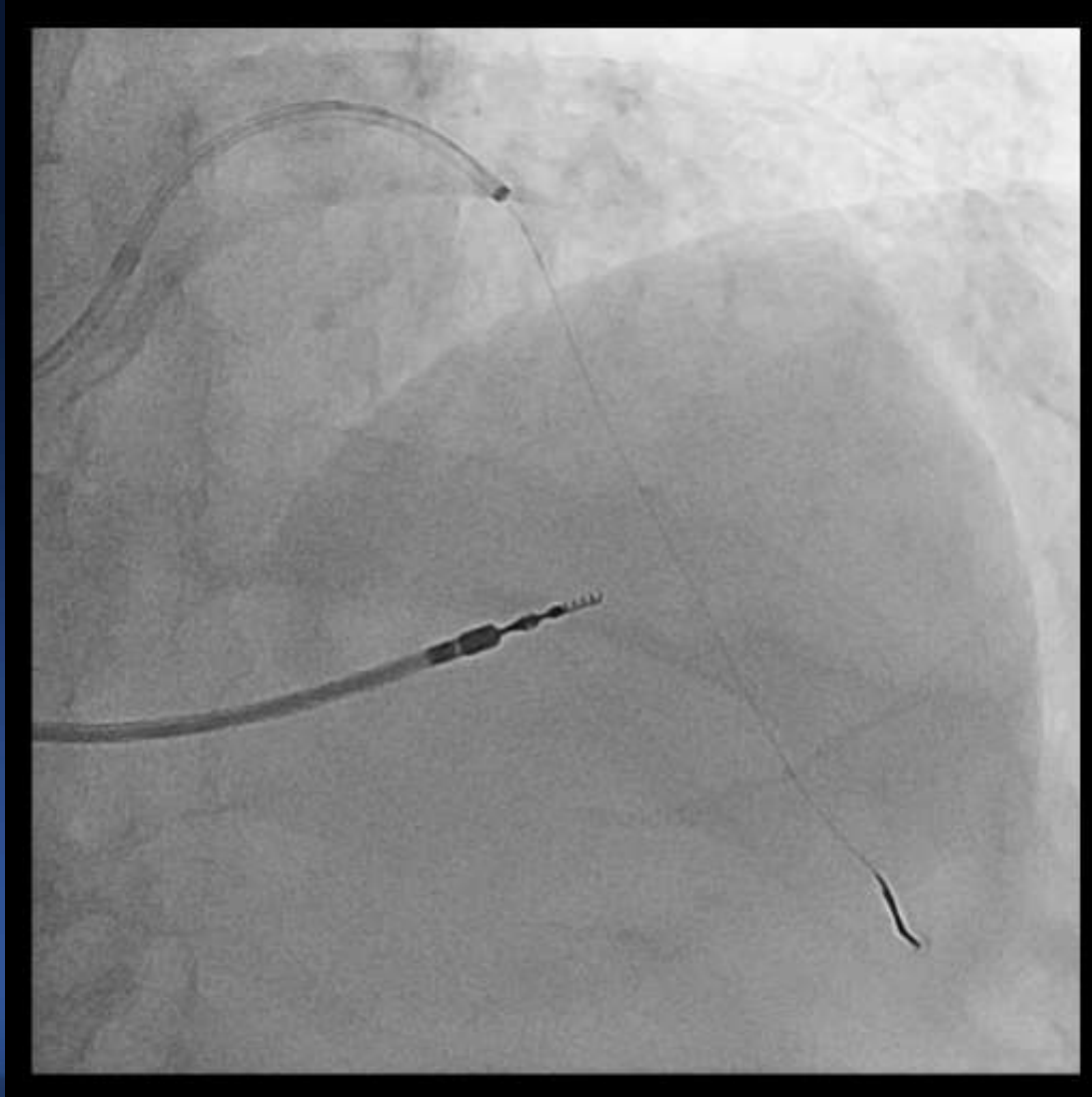
Stent Delivery Through Stent



Stent Delivery Through Stent

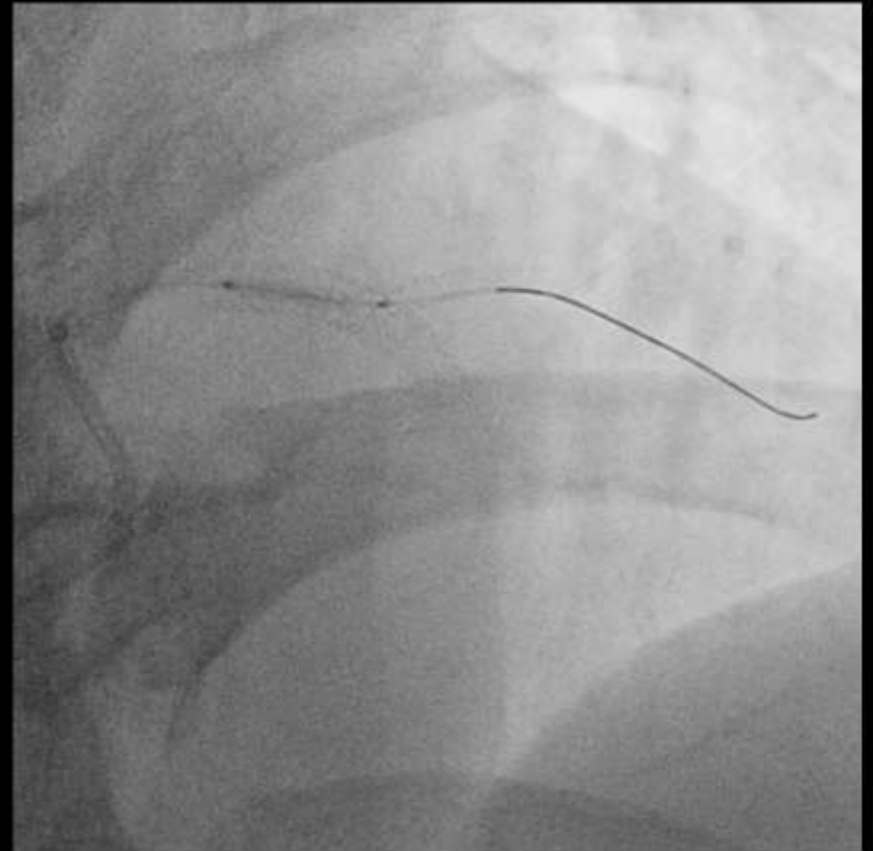
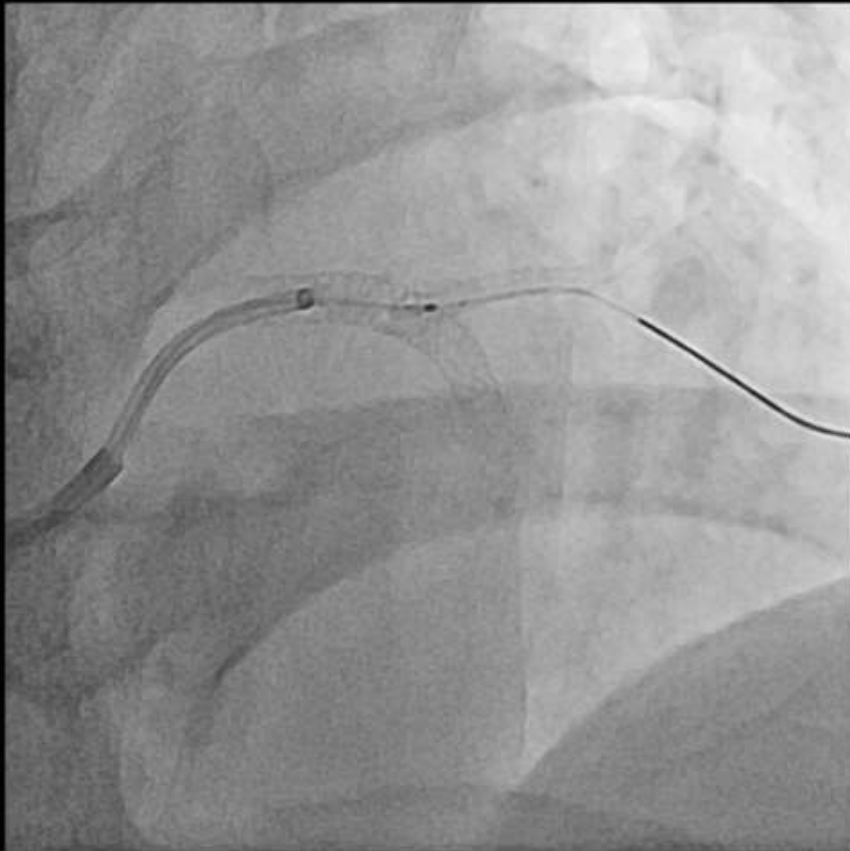


Selective Angiogram



Bifurcation Side Branch Device Delivery

Deflation and Push

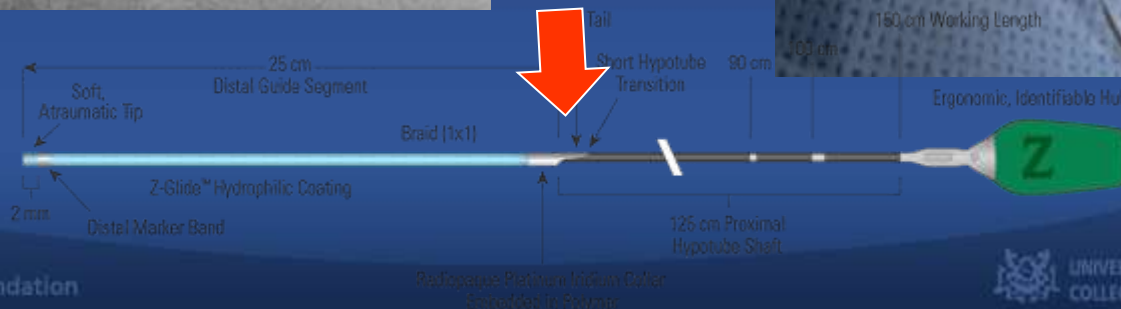
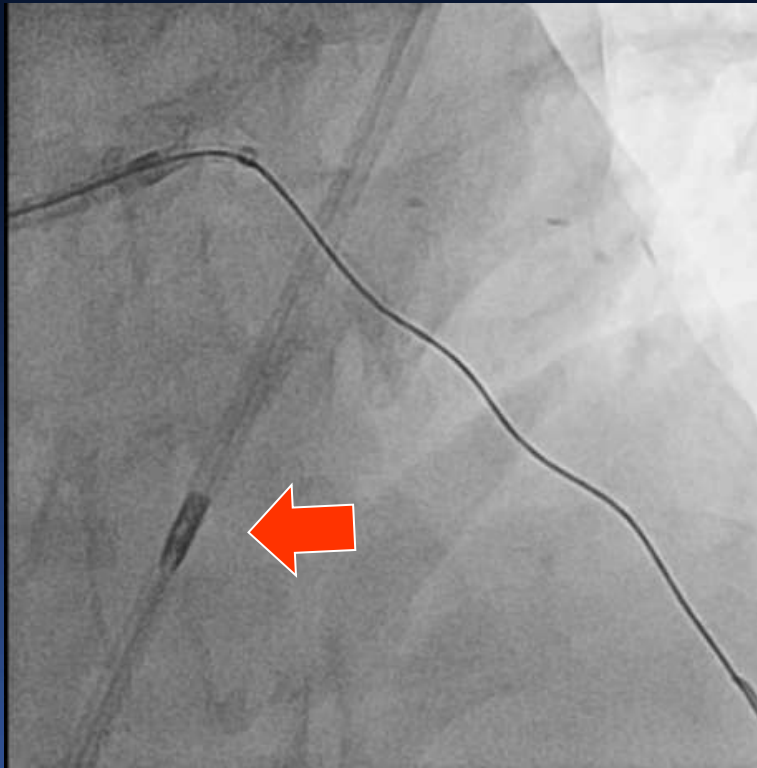


Complications

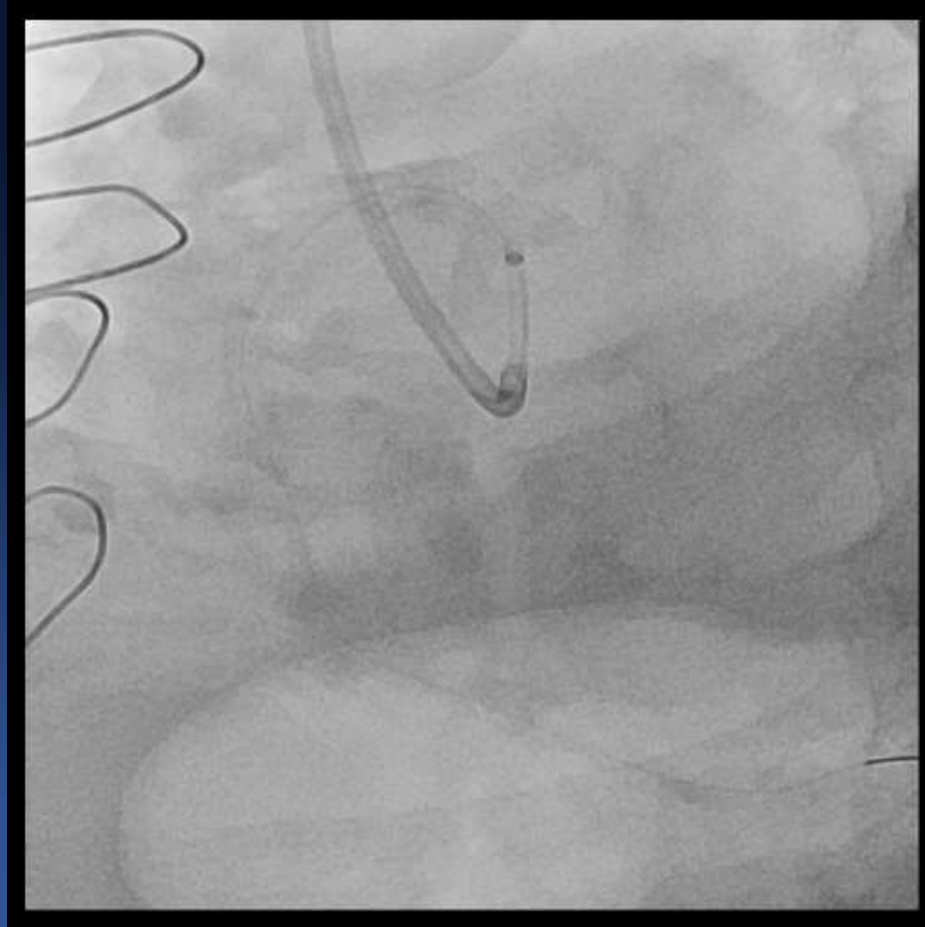
- Stent deformation
- Disruption of the stent catheter
- Coronary dissection
- Pressure damping
- Air embolism
- Dislodgement of the distal marker

Stent Deformity

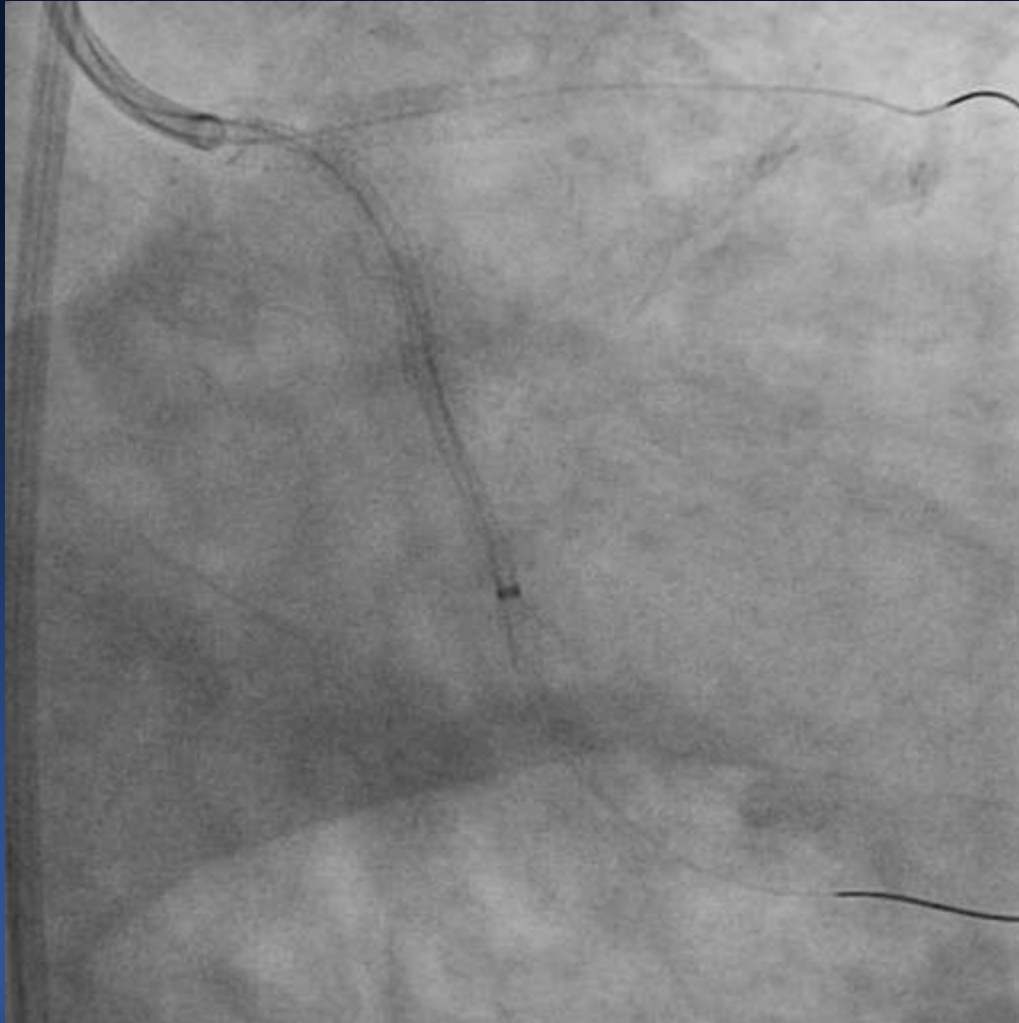
When you feel resistance, Do **Not** Push !!



Forceful injection



Forceful injection: Coronary Dissection



Pressure Monitoring

Deep Intubation



Pressure Damping



Complications

- Stent deformation
- Disruption of the stent catheter
- Coronary dissection
- Pressure damping
- Air embolism
- Dislodgement of the distal marker

Summary

- For device delivery, vessel or lesion resistance should be overcome.
- Strong support guides and deep intubation is often useful.
- Guide extension catheter is very useful, overcomes limitations of poor guide support and enable to do procedures otherwise not possible.
- For the complex PCI, guide extension catheter would be a game changer. Interventional cardiologist should be familiar with this vital tool.



Thank You !!

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