

HKSTENT– DCB in bifurcation

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Disclosure

- I have nothing to disclose

Introduction

- Bifurcation stenosis represents about 20% of coronary lesions. It is associated with lower success rate and higher complication rates
- In complex bifurcation PCI, stent restenosis and stent thrombosis are of concern specifically with the 2-stent strategy
- EBC supports the use of PS in most cases
- DCBs have already shown to be effective in ISR and small coronary vessel disease
- It was also shown that DCB > POBA in SB of CBL in terms of late lumen loss
- DCBs are emerging as an attractive alternative treatment strategy for treating coronary bifurcations due to simplifying the approach and reducing rates of stent related complications

Introduction (II)

- True bifurcation diseases (medina 1,1,1 or 1,0,1 or 0,1,1)
- Current practice
 - For less complex lesions, go for 1-stent PS
 - More complex lesions, might consider 2 stents
- Key to good DCB results
 - Adequate lesion preparation
 - Size of balloon 0.8-1.0 RVD
 - 60s inflation
- In bifurcation diseases, imaging is informative
- DCB-only technique and DES in MB/ DCB in SB



Case

- 50 yo young man
- HT, OSA, CTEPH on warfarin
- Present with angina, CTA showed LAD/D1 bifurcation disease
- Proceeded to coronary angiogram, which confirmed LAD/D1 Medina 1,1,1 disease
- RRA approach
- 7Fr EBU 3.5
- OCT-guided procedure



Medina 1,1,1

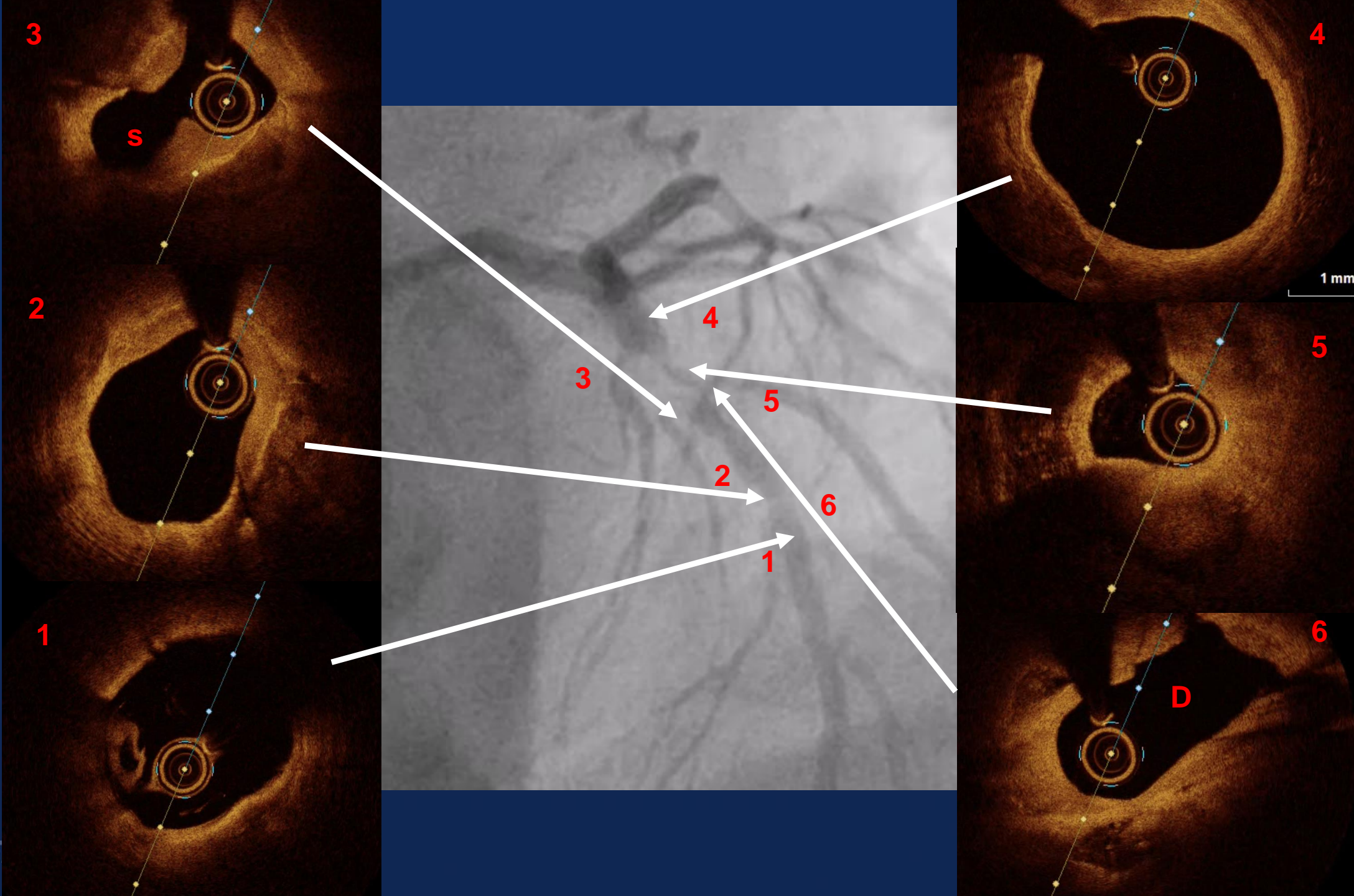
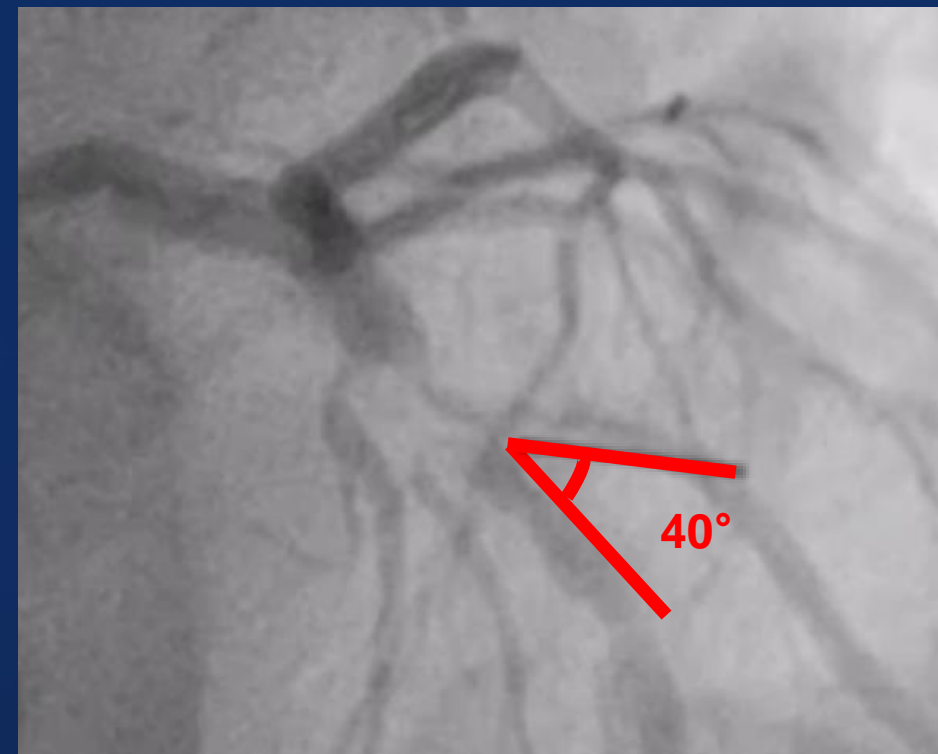


Table 1. Components of the DEFINITION criteria.

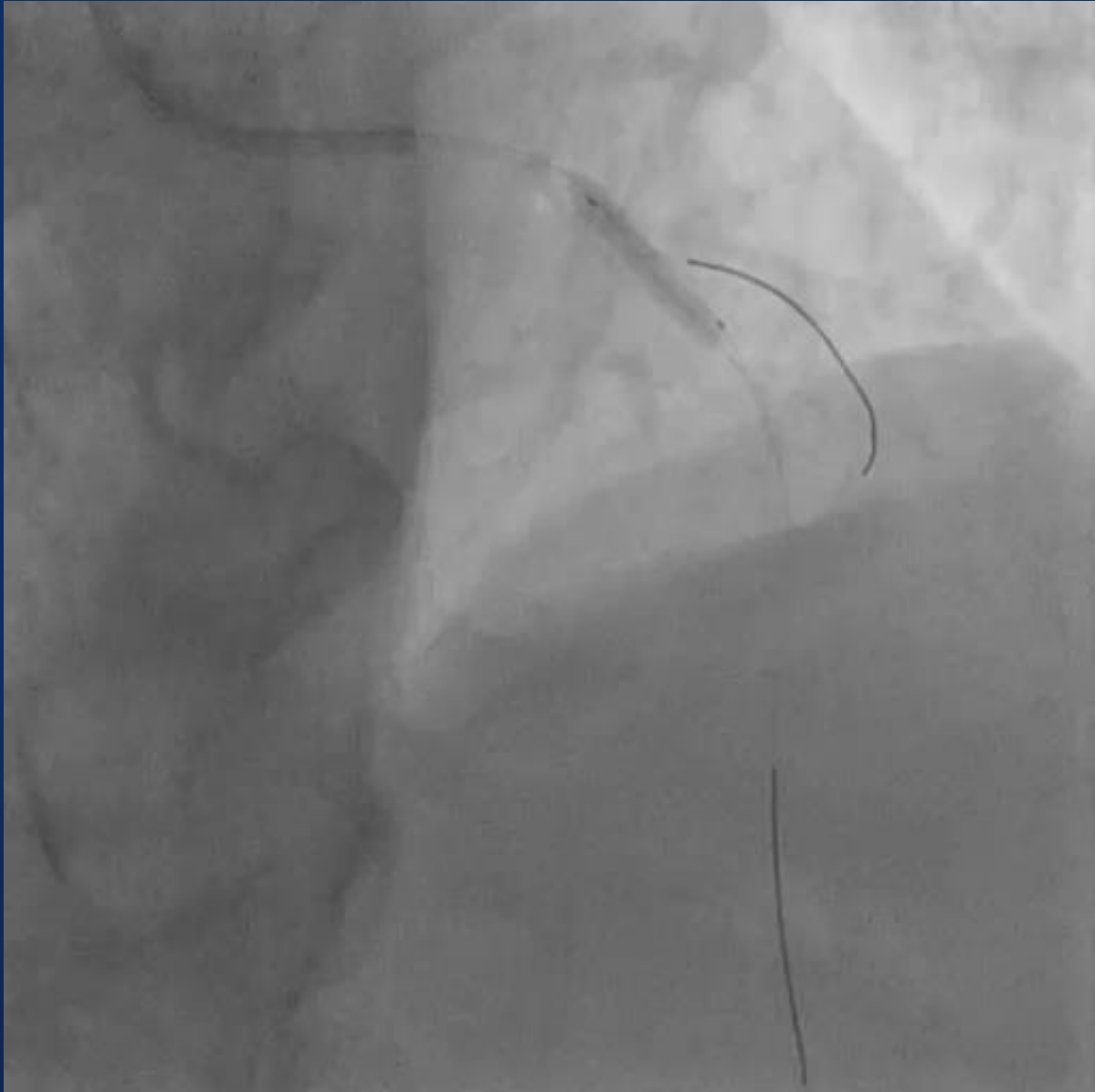
Major criteria	Minor criteria
For left main distal bifurcation lesions 1. SB lesion length ≥ 10 mm AND 2. SB diameter stenosis $> 70\%$	Moderate to severe calcification
	Multiple lesions
For non-left main distal bifurcation lesions 3. SB lesion length ≥ 10 mm AND 4. SB diameter stenosis $\geq 90\%$	Bifurcation angle $< 45^\circ$ or $> 70^\circ$
	Main vessel reference vessel diameter < 2.5 mm
	Thrombus-containing lesions
	Main vessel lesion length ≥ 25 mm
Complex coronary bifurcation lesions = 1 major criterion + any 2 minor criteria	
SB: side branch	

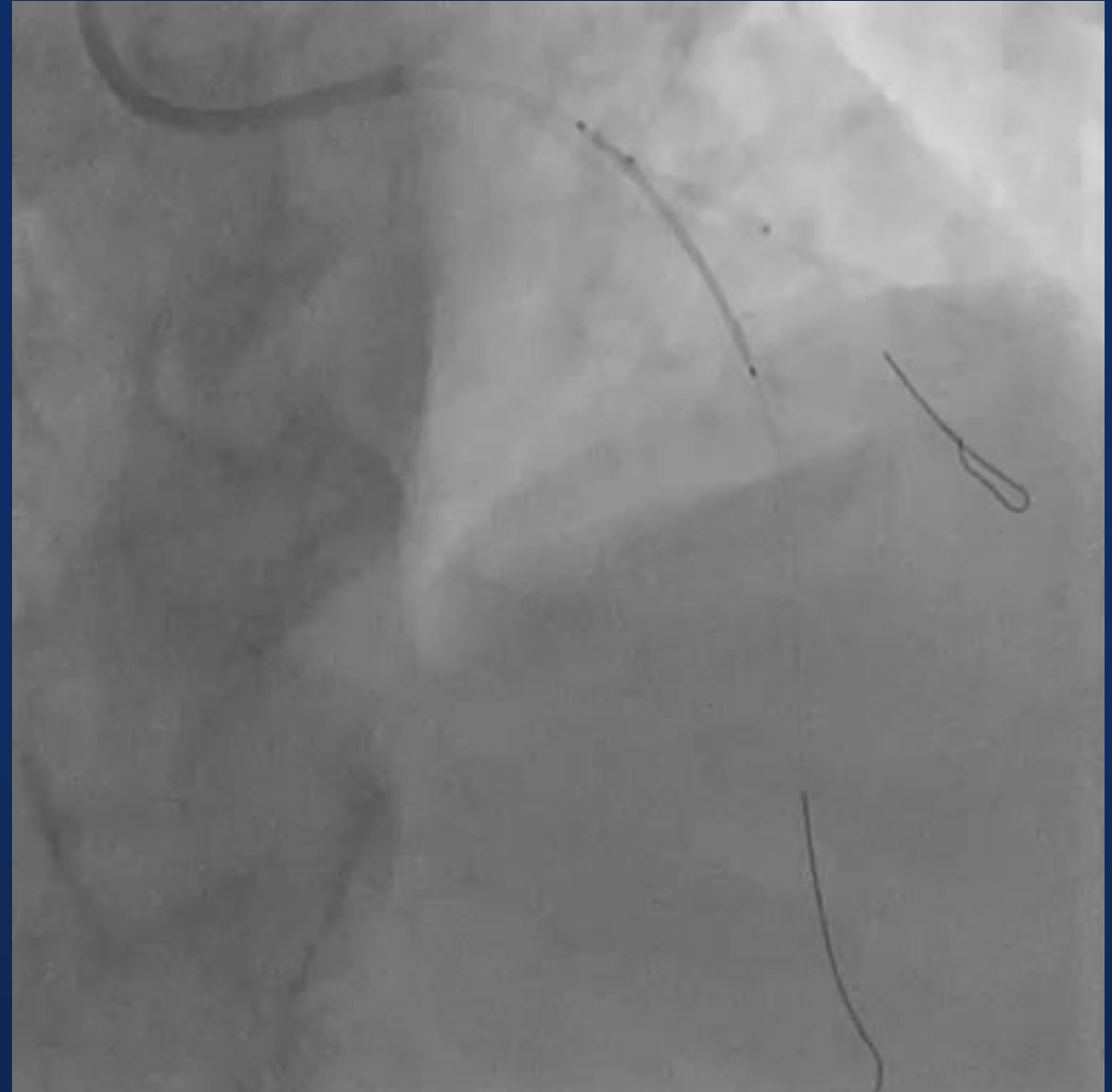
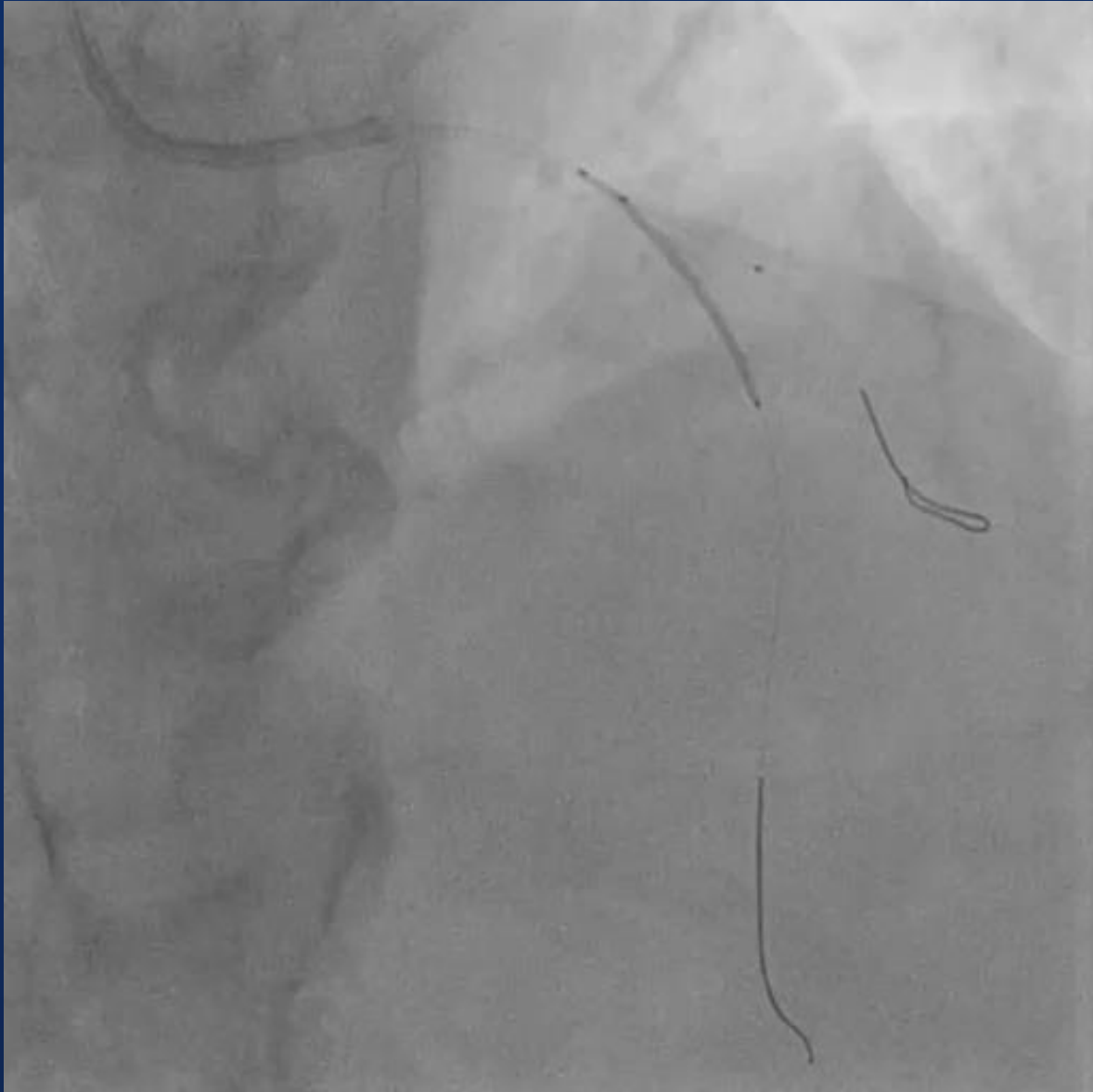


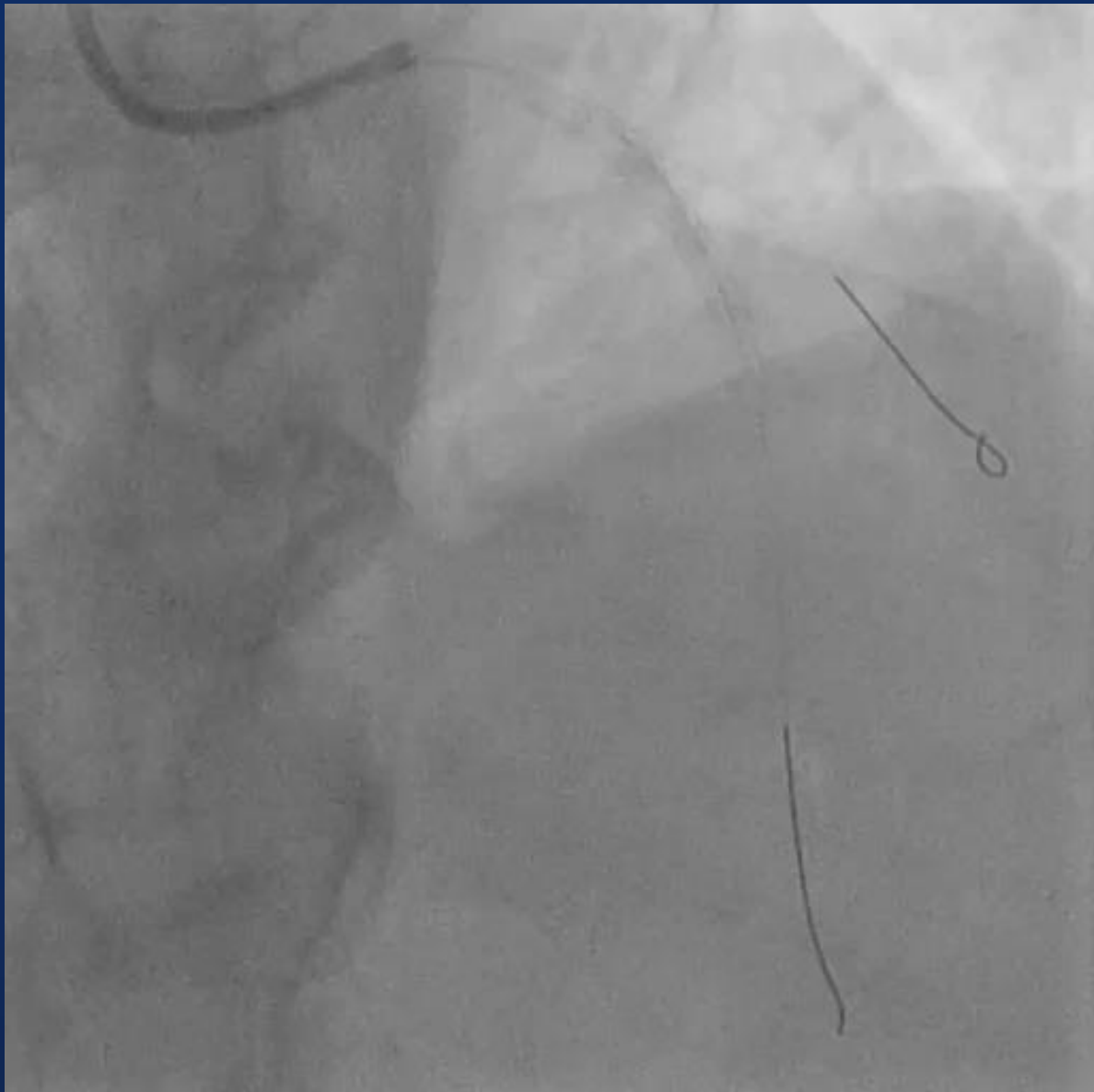
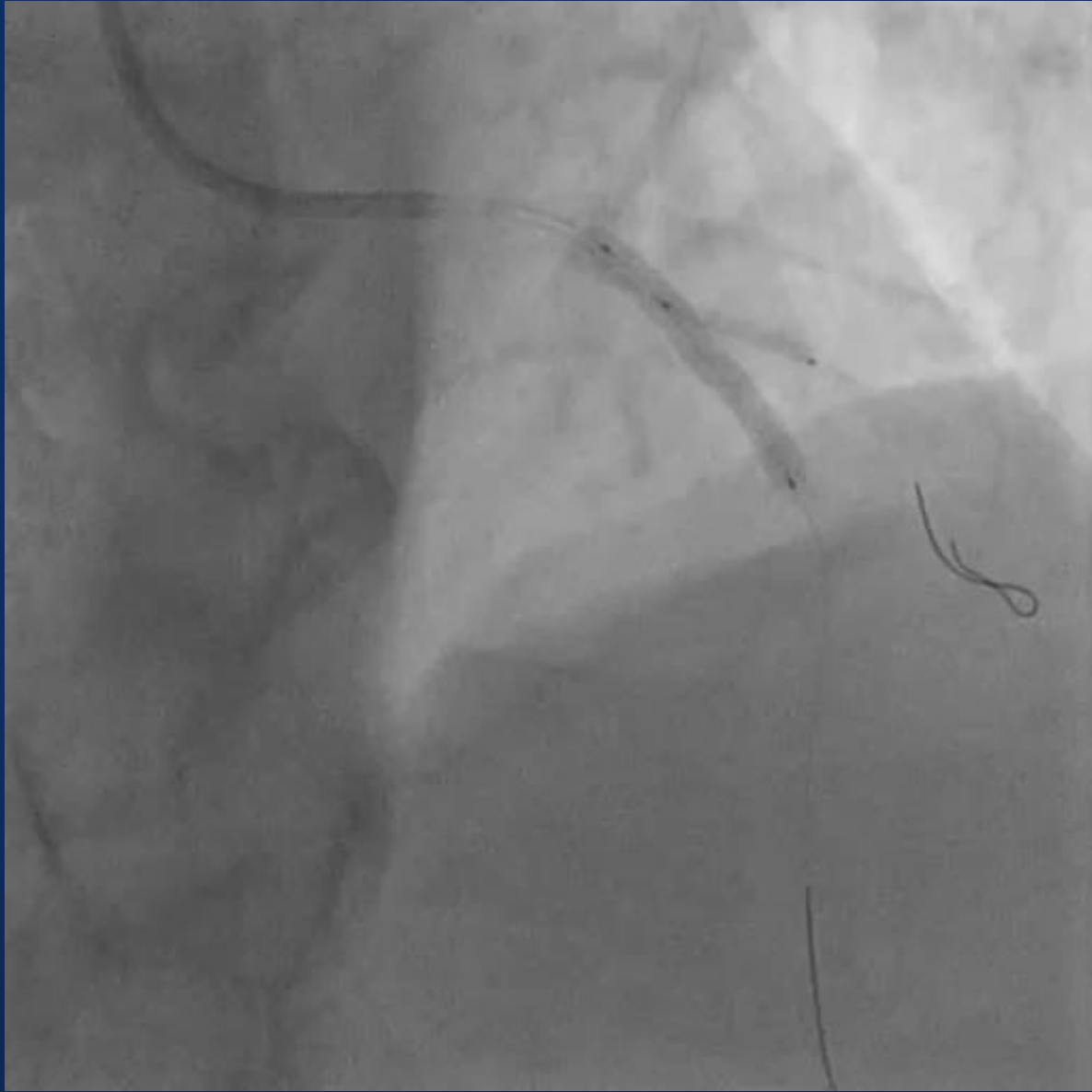
Provisional vs upfront 2 stent?

If PS, what would be your approach?

- A. Predilate SB, stent MB +/- post dilate SB (POT, rewire, post dilate)
- B. Stent MB +/- post dilate SB (POT, rewire, post dilate)
- C. Do FFR of the SB
- D. Jailed technique e.g., jailed/ modified jailed balloon technique
- E. DCB-only technique (DCB MB + DCB SB)
- F. DES in MB, DCB in SB. However, DCB first or DES first? Any KBI and DCB before/during/after KBI vs POT-sideDCB-POT?

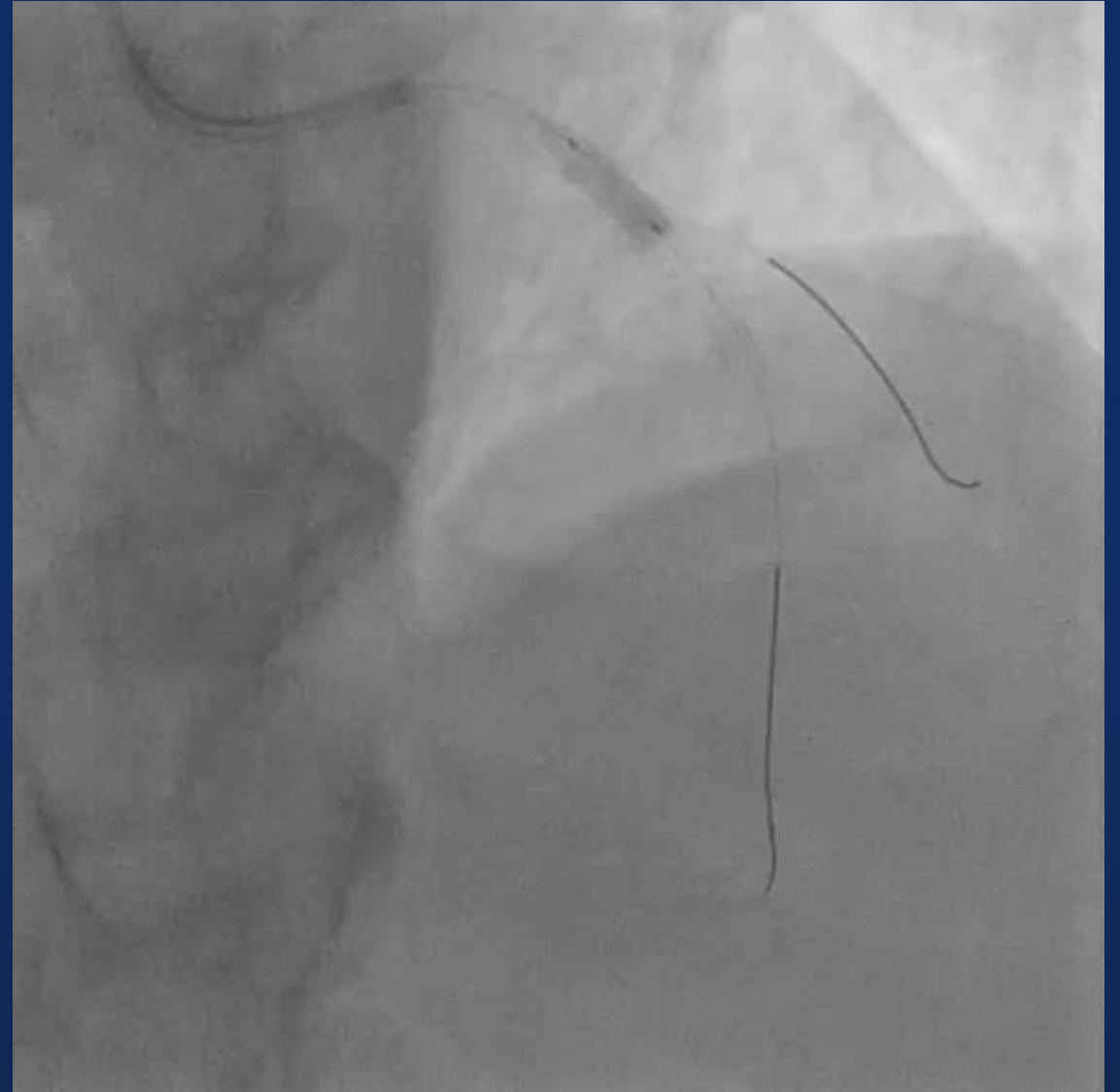




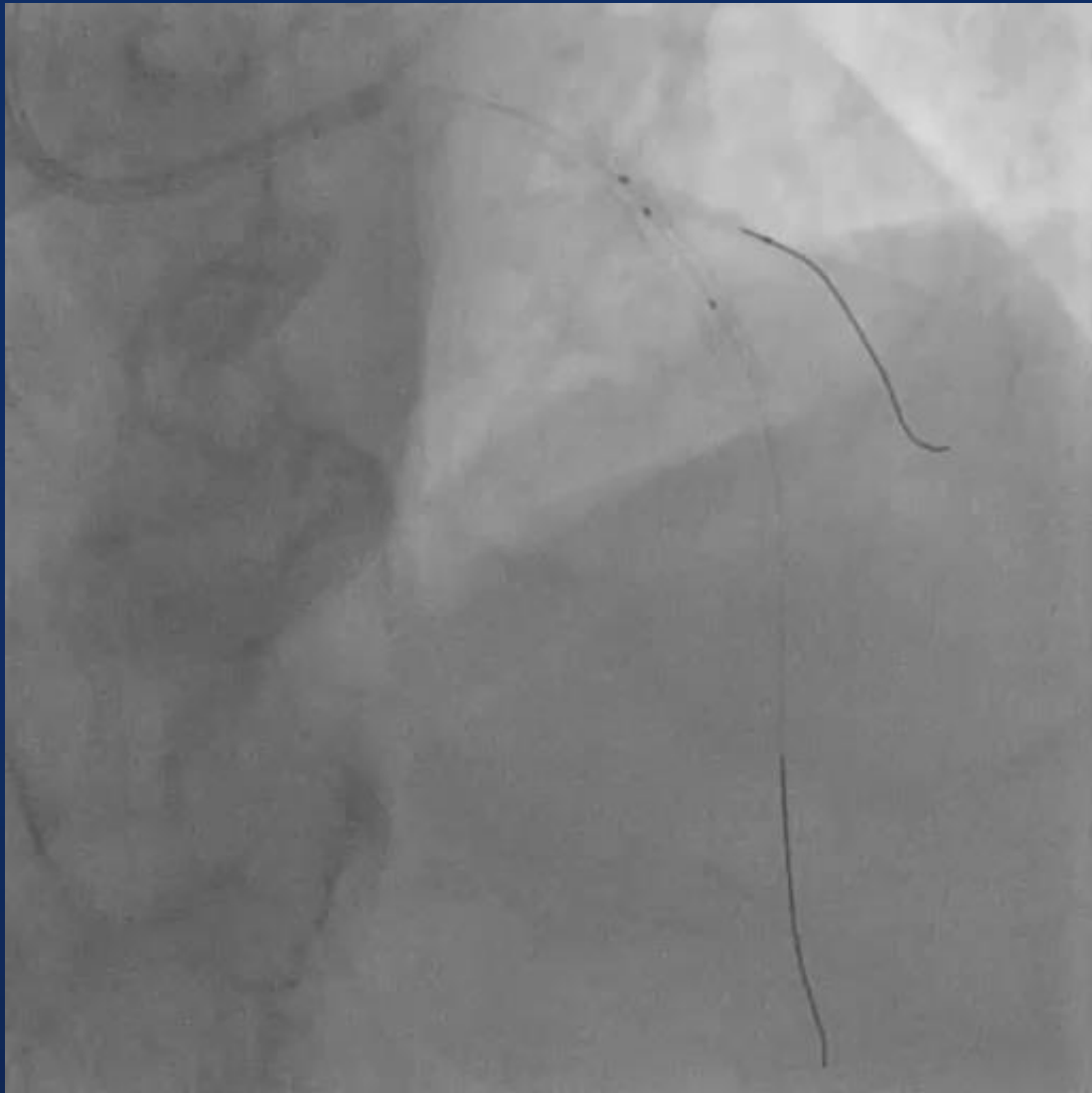




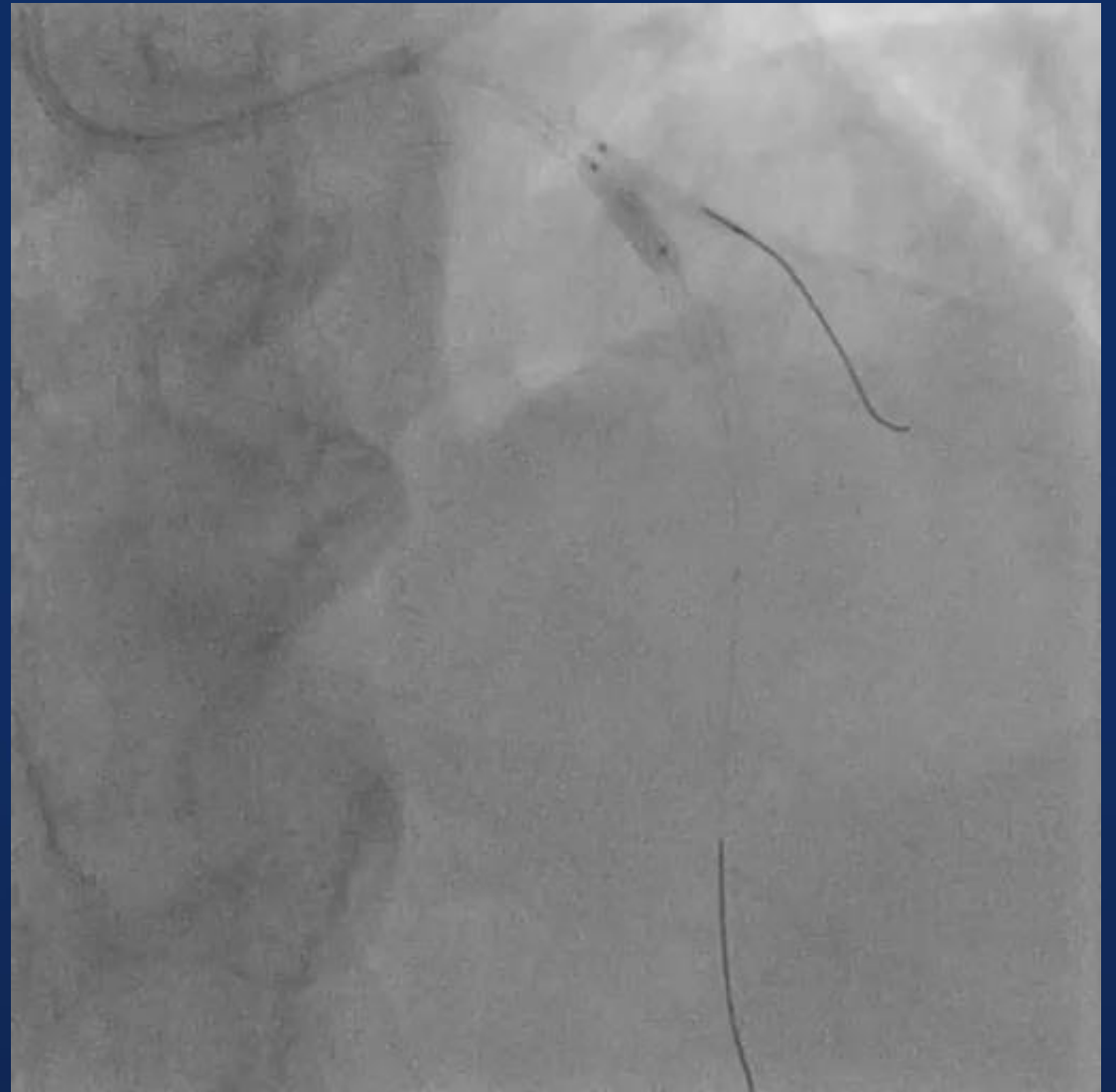
D1 rewired through distal strut



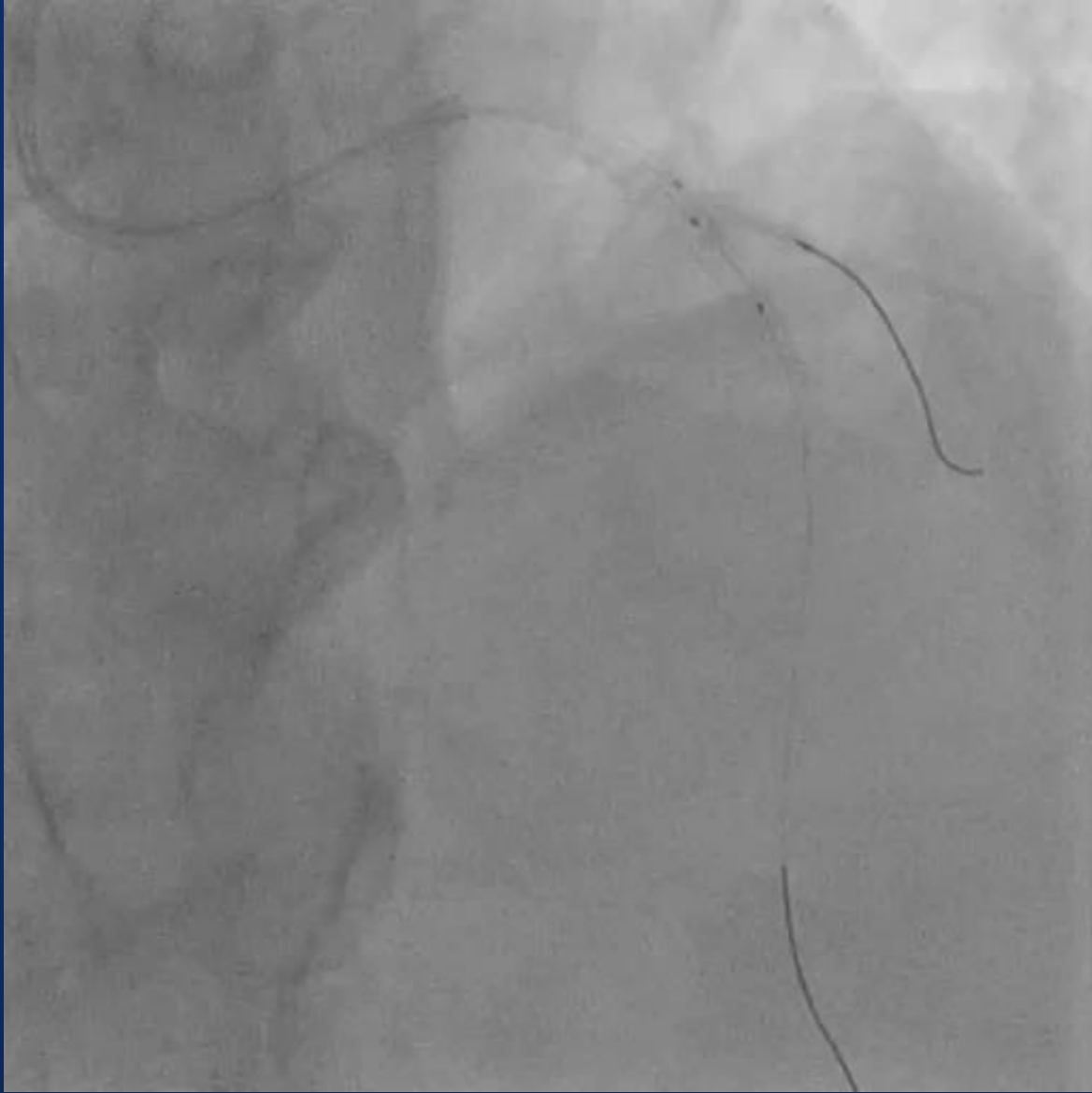
LAD POT NC 3.75



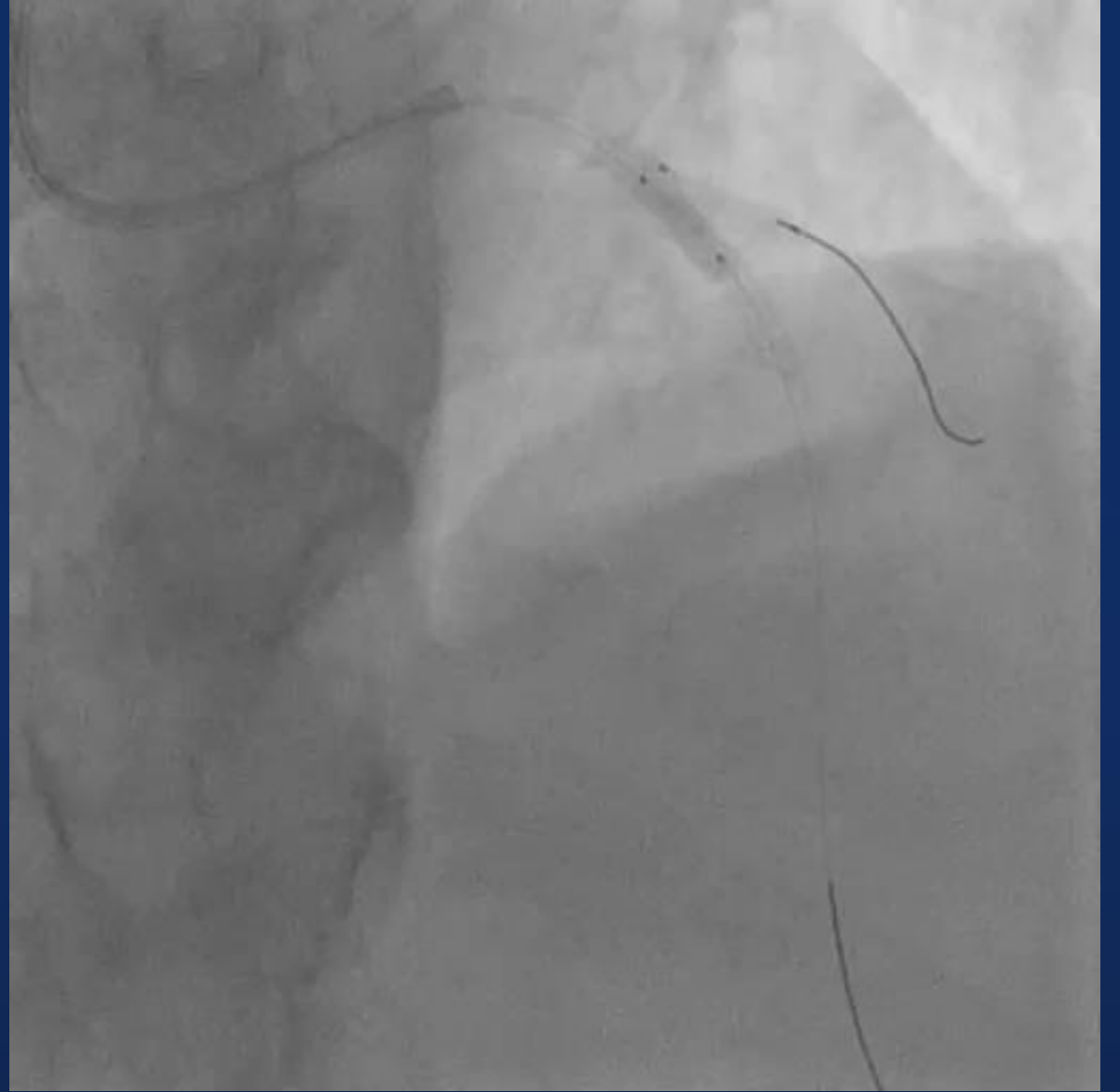
D1 predilatation



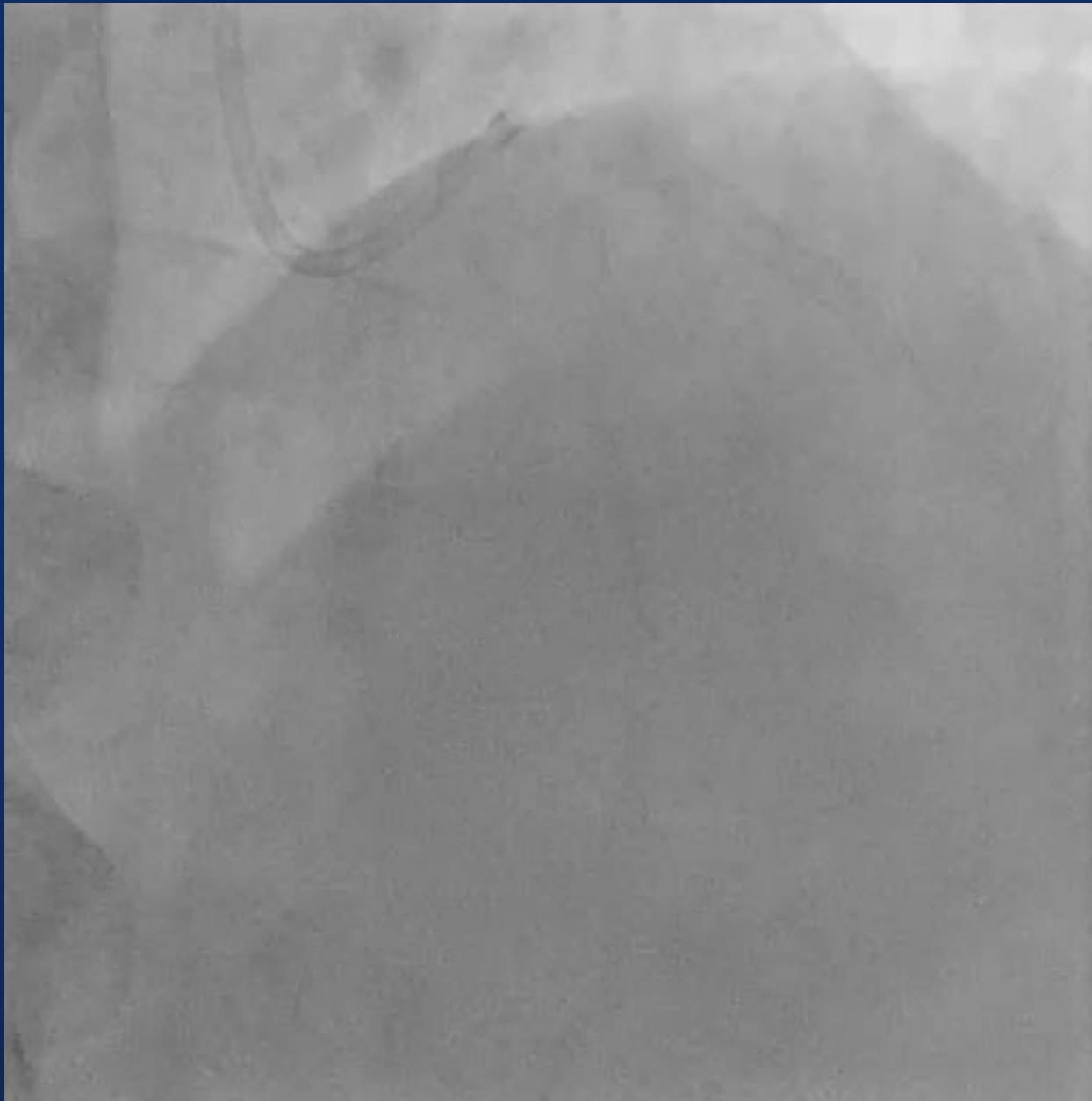
Repeat KBI (NC 3.5/ NC 2.25)

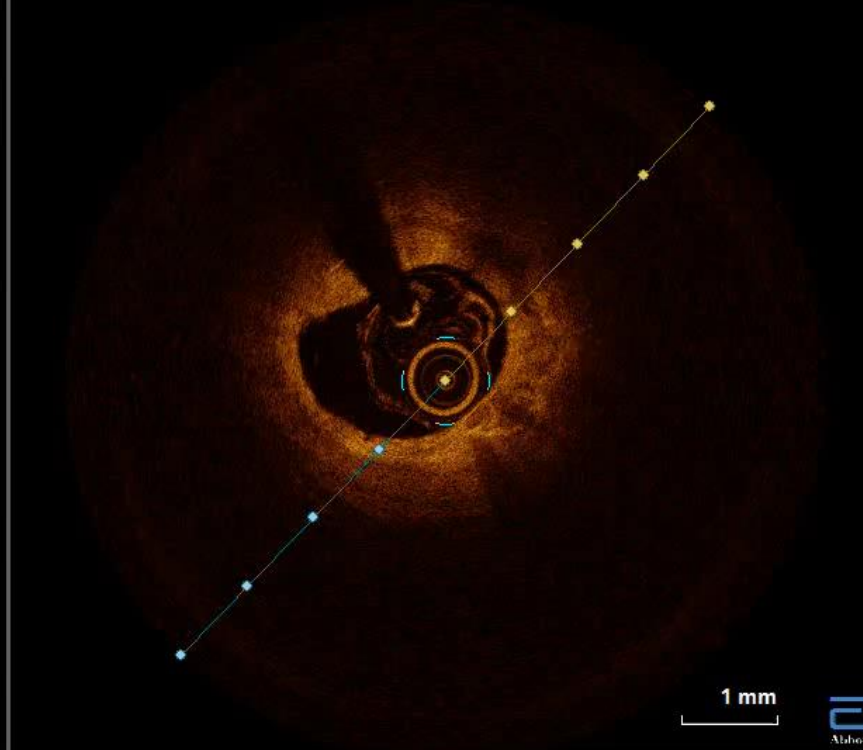
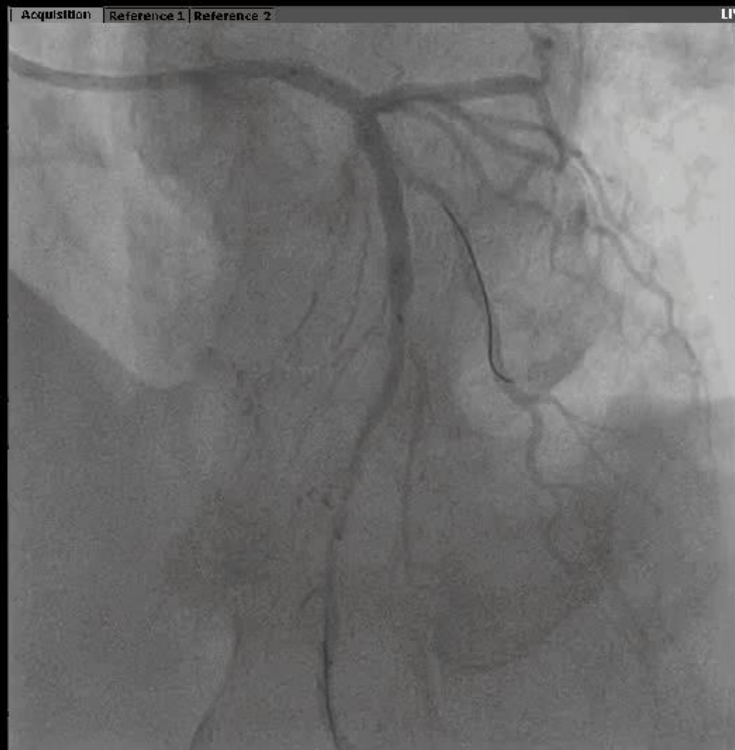


DCB 2.5/15 to SB

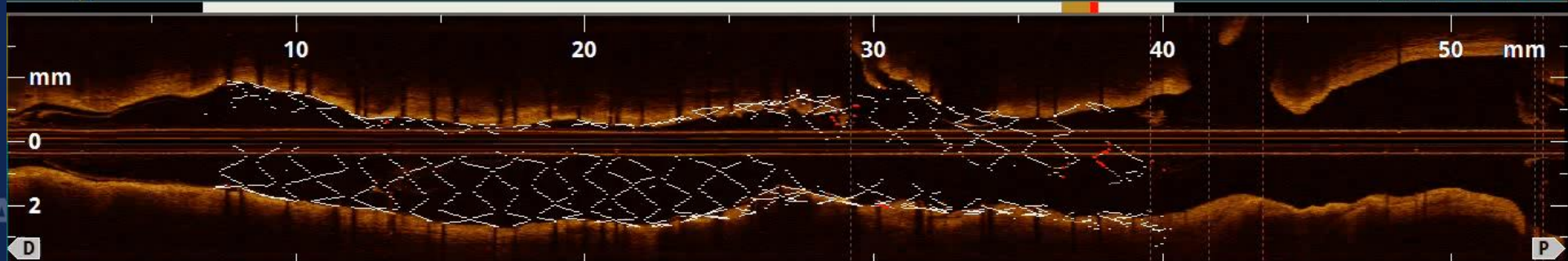


KBI (NC 3.5/DCB 2.5)





Final OCT of LAD



Conclusion

- DCB is an excellent treatment option for the SB lesion in CBL
- DCB use in CBL may reduce use of 2 stents which drive adverse outcomes
- DCB should go hand in hand with DES, important role of stent in cases of recoil/ residual stenosis, >type B dissections and reduced TIMI flow (bail-out)
- Optimizations of DCB itself is key, but no consensus on optimizing the techniques/ steps in CBL, especially in cases of DCB-only approach
- Larger RCTs are required to enable worldwide translation of this idea to clinical practice
- Even more data is needed regarding LM bifurcations
- Furthermore, remember there is no “class effect” of DCBs. Pharmacokinetics/ type of drugs may differ