

# **OCT Guided PCI in Complex Instent Restenosis**

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# Disclosure Statement

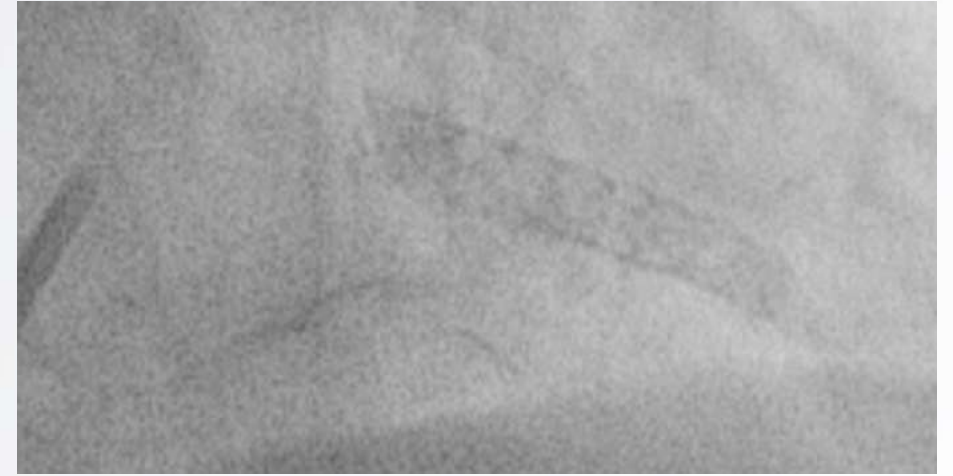
I, (A.Fauzi Yahya , MD), DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

# Clinical History

- 80 yo male, senior physician
- Clinical presentation :crescendo angina
- CVRF : HTN, DM, dyslipidemia
- Moderate renal dysfunction
- History of stroke
- Preserved LVEF

- PCI history
  - 2005 : 3.0x11 mm 1<sup>st</sup>G DES at pLAD
  - 2008 : 3.0x23 mm 1<sup>st</sup>G DES at pLAD
  - 2011 : Drug Coating Balloon ( Instant restenosis )
  - 2012 : 2.5x30 mm 2<sup>nd</sup> G DES at IM

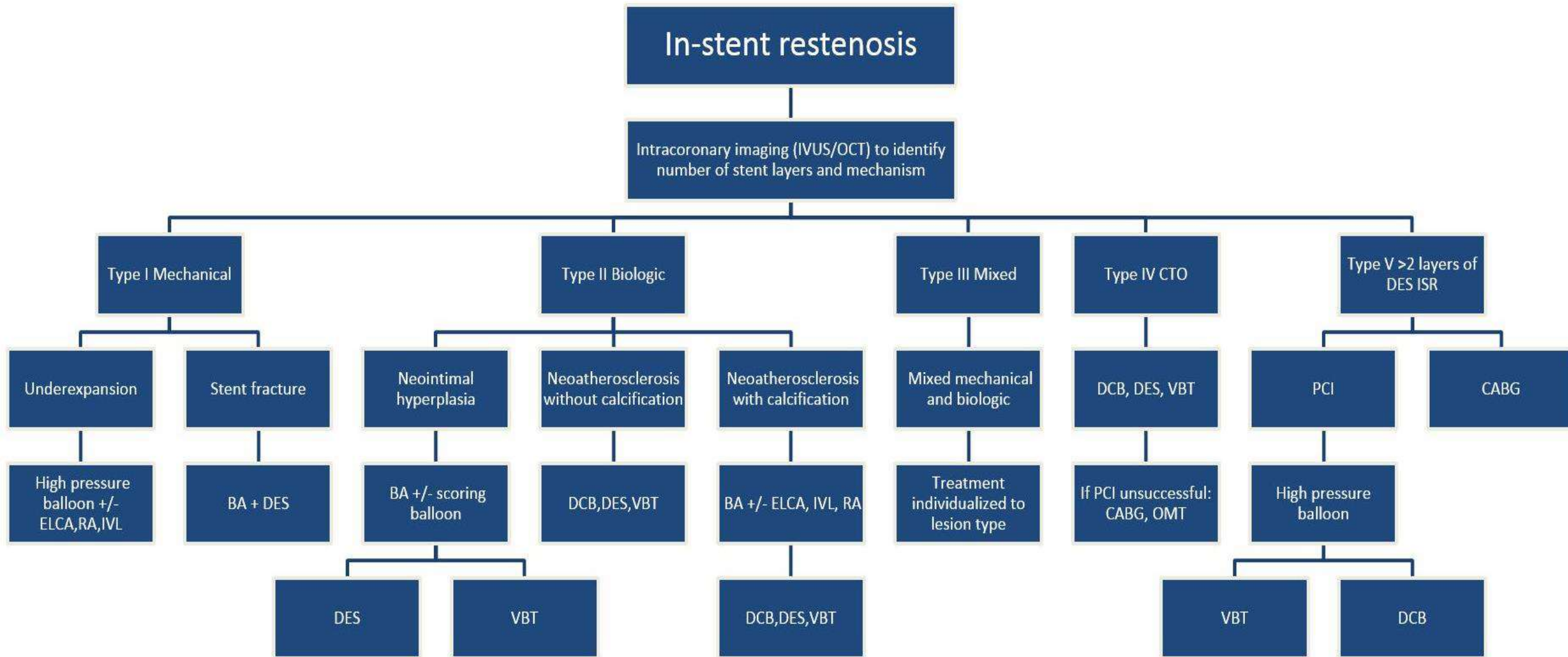
# Cor Angiography



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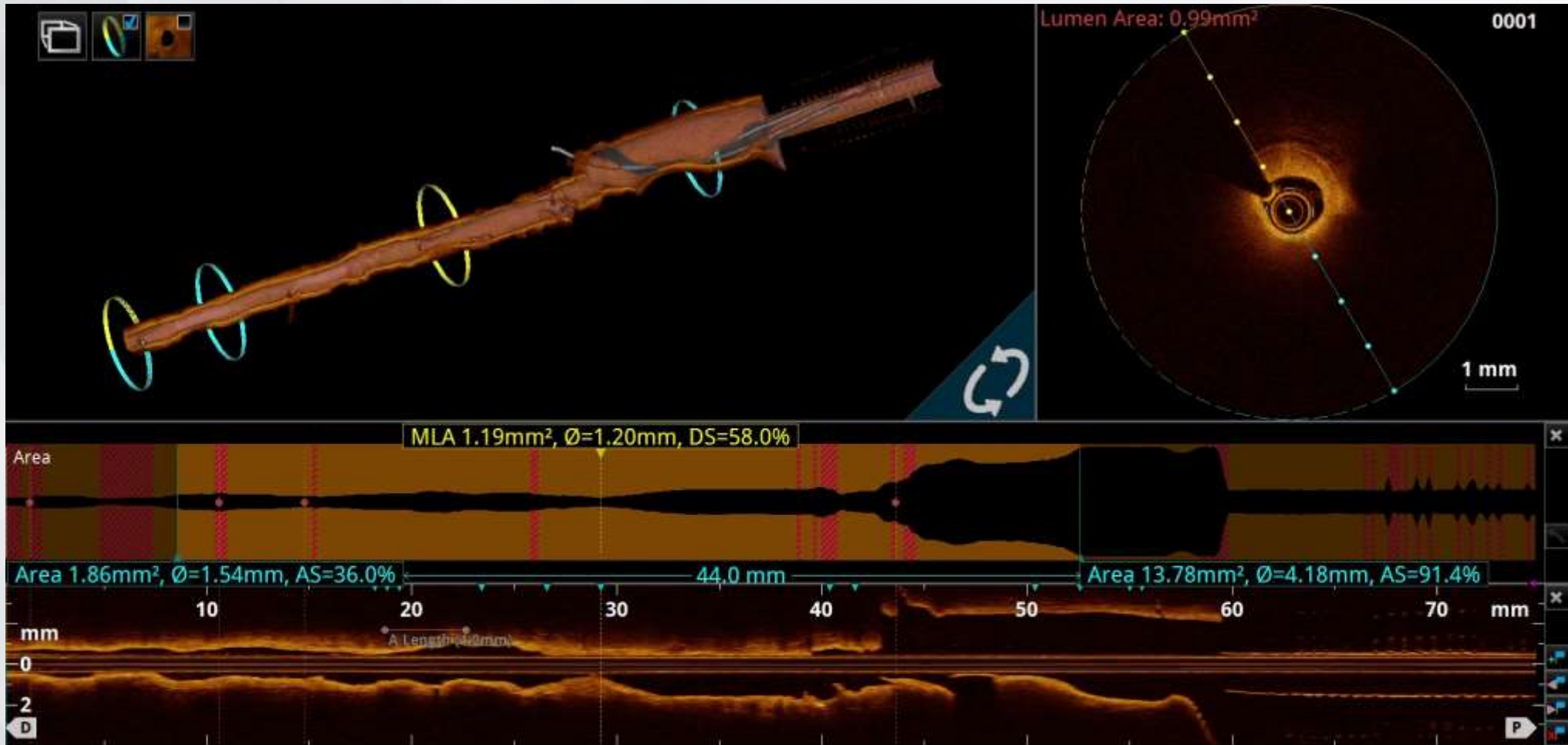


# Treatment Algorithm for ISR

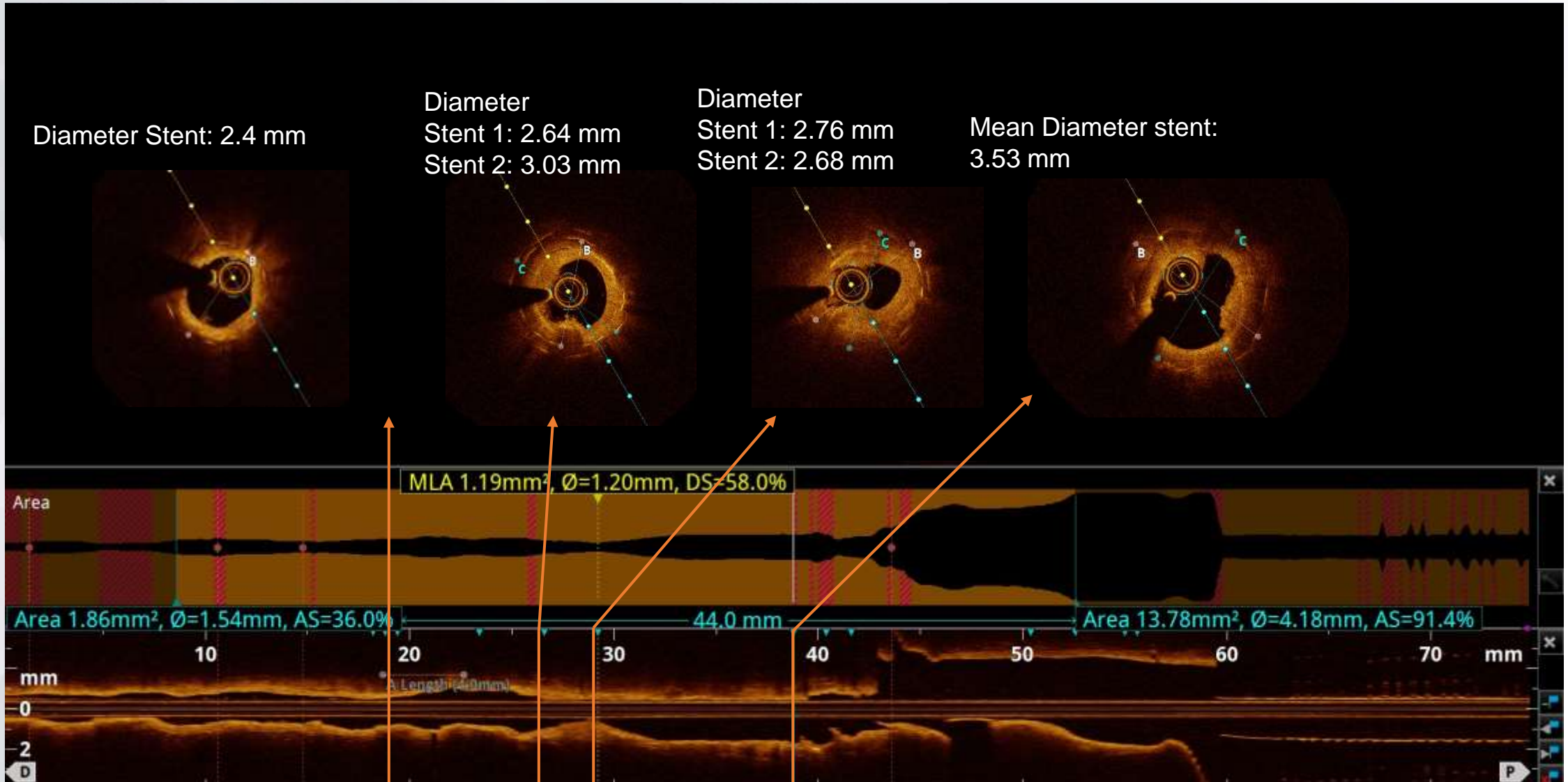


Schlofmitz E et al, *Circ Cardiovasc Interv.* 2019;12:e007023.

# Pre PCI OCT run (After predilation using 2.0 mm balloon)

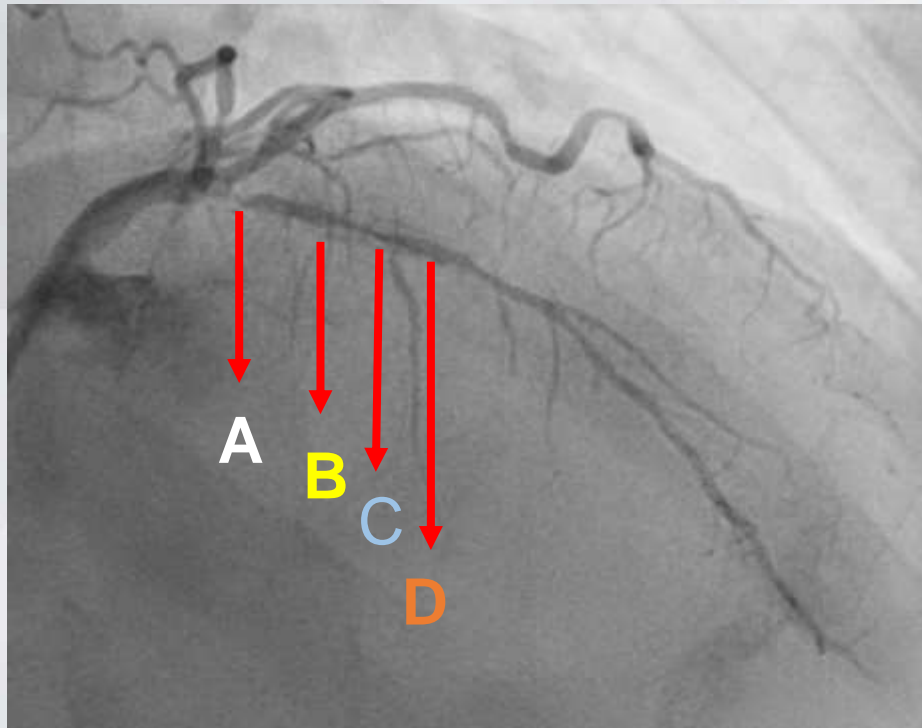


# Pre PCI OCT – Preexisting stent expansion

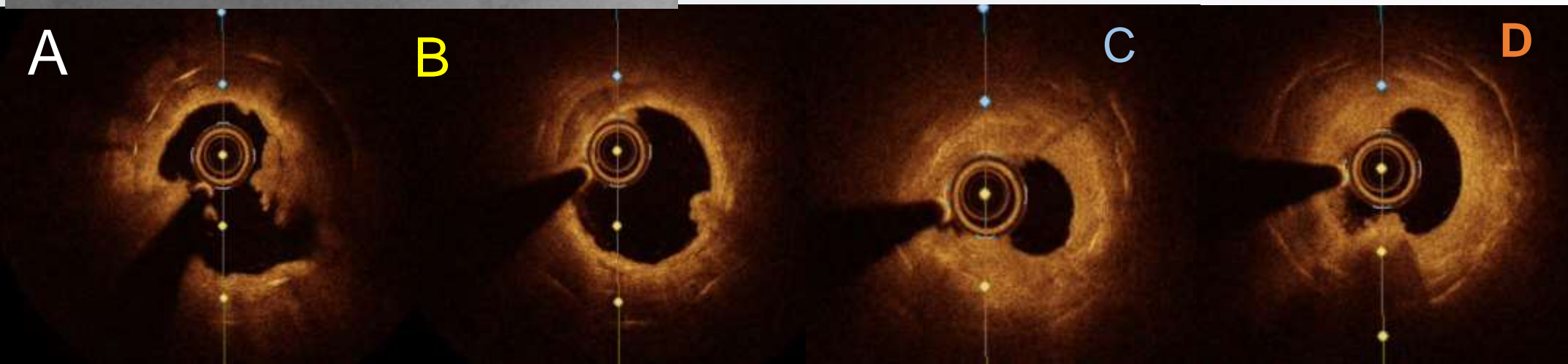




# Instant Neo-atherosclerosis



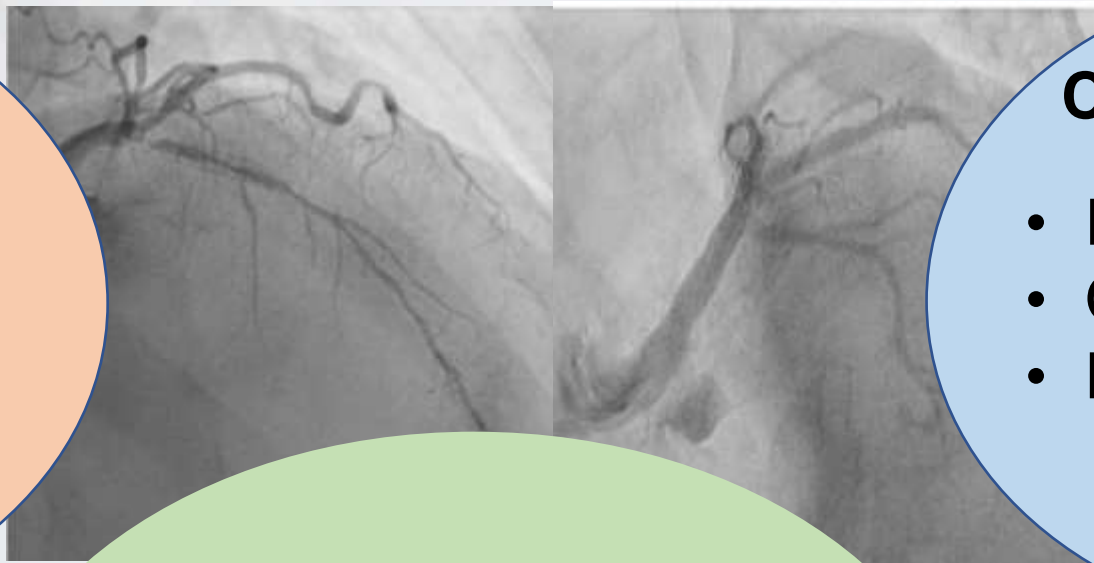
Diffuse in-stent restenosis with evidence of neoatherosclerosis



# Complexity

## Complex Patient

- Octogenarian
- Diabetic
- Stroke
- Renal dysfunction



## Complex Anatomy

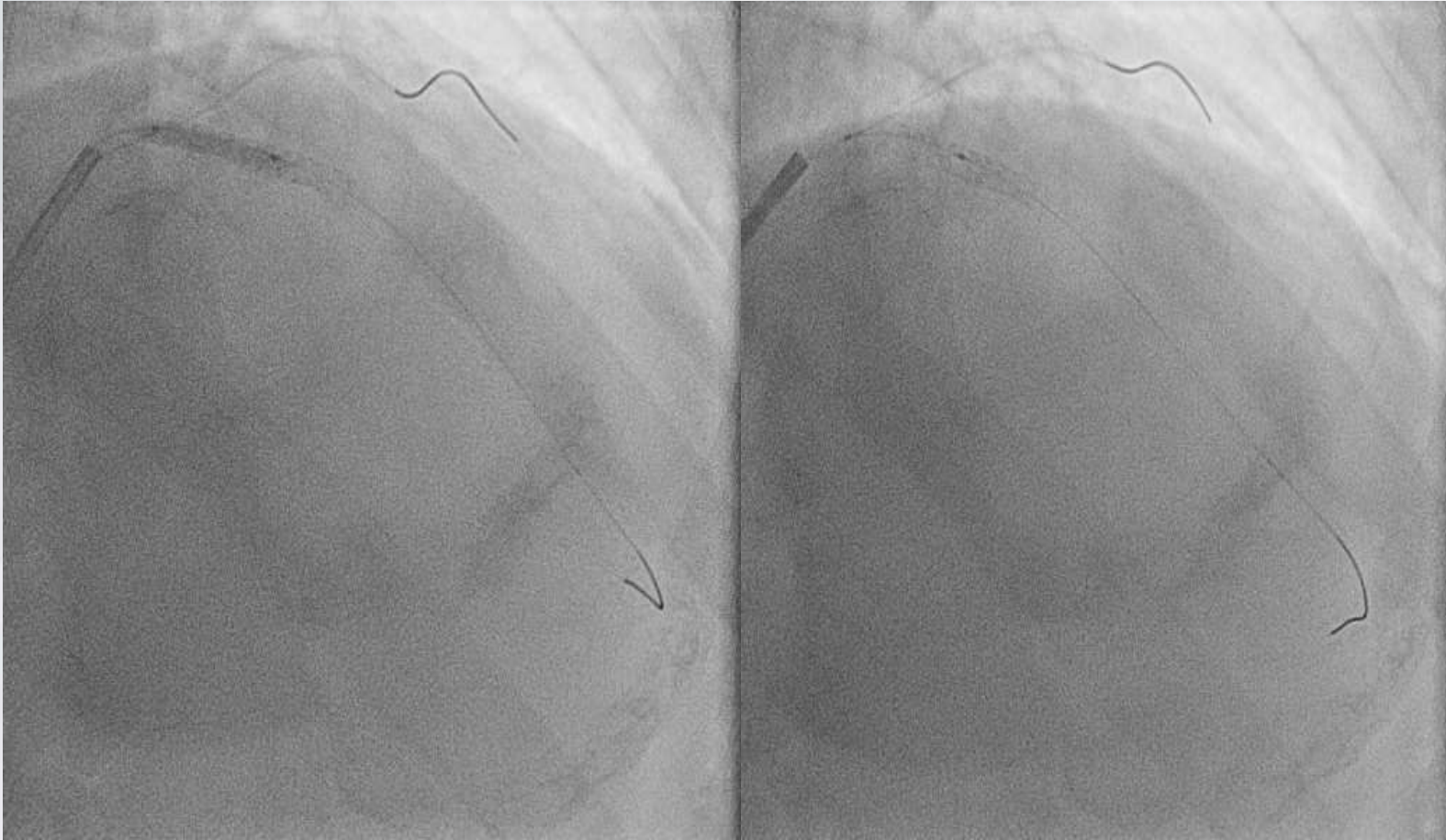
- Diffuse LAD disease
- Ostial LAD
- Narrow angle SB

## Complex Lesion

- Very late recurrent ISR
- Neo-atherosclerosis

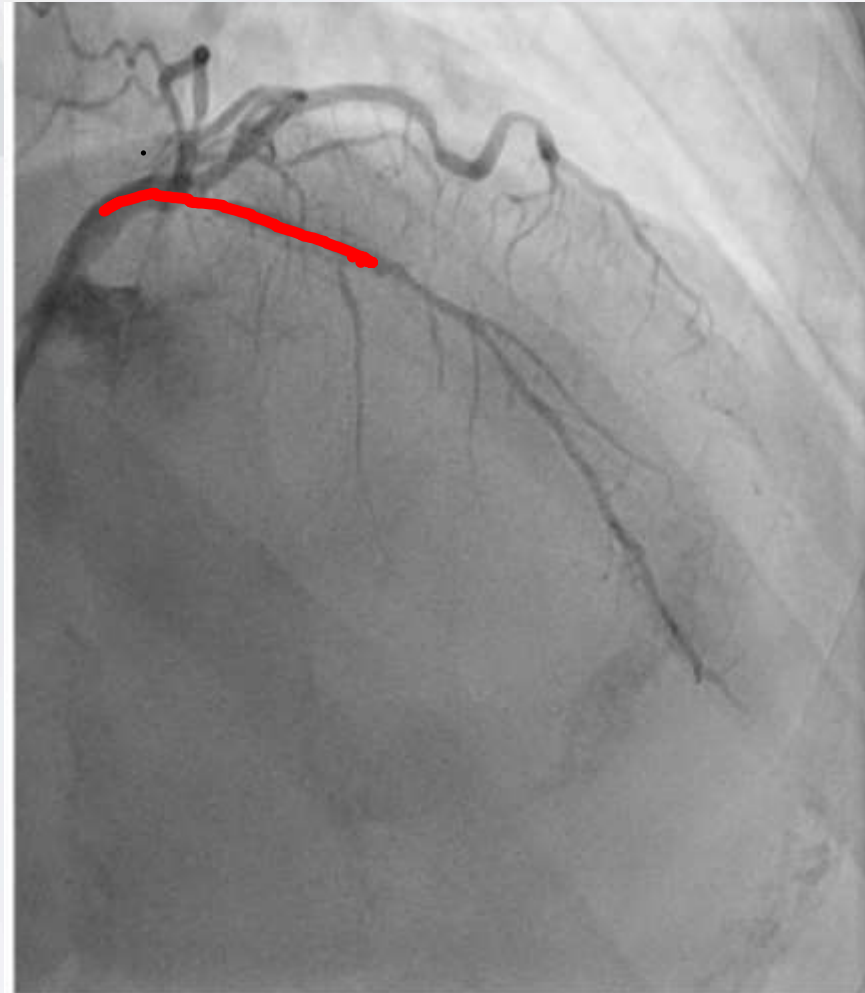
# Lesion preparation

## 3.0x 15 mm Wolverine cutting balloon



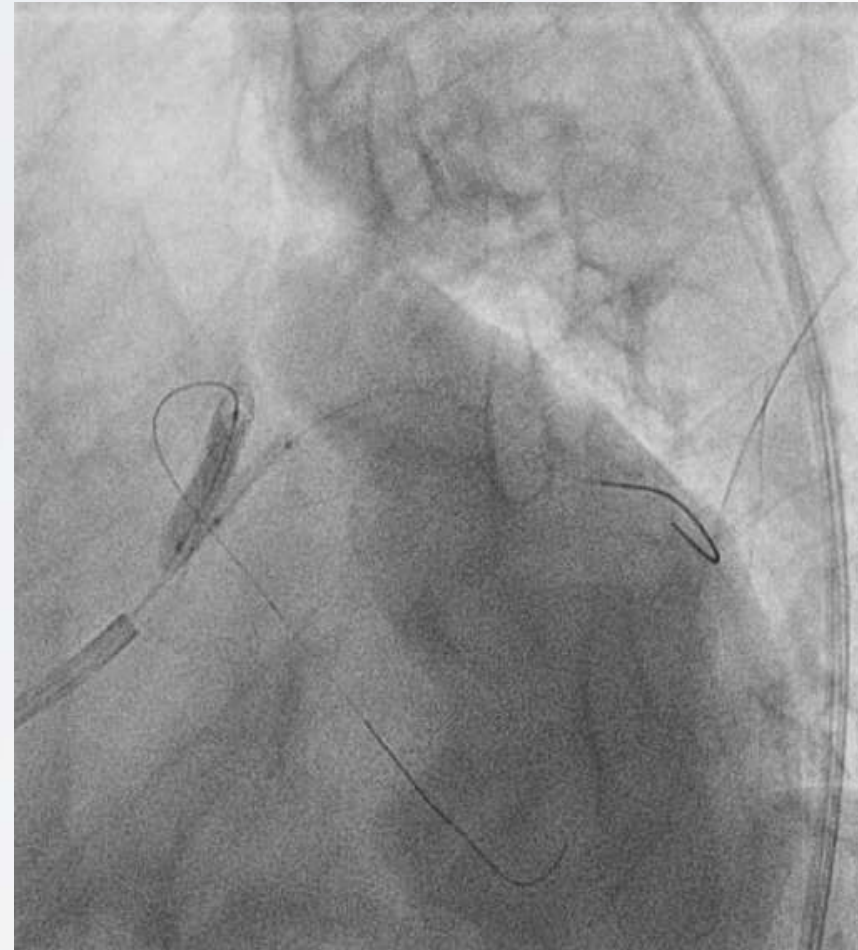
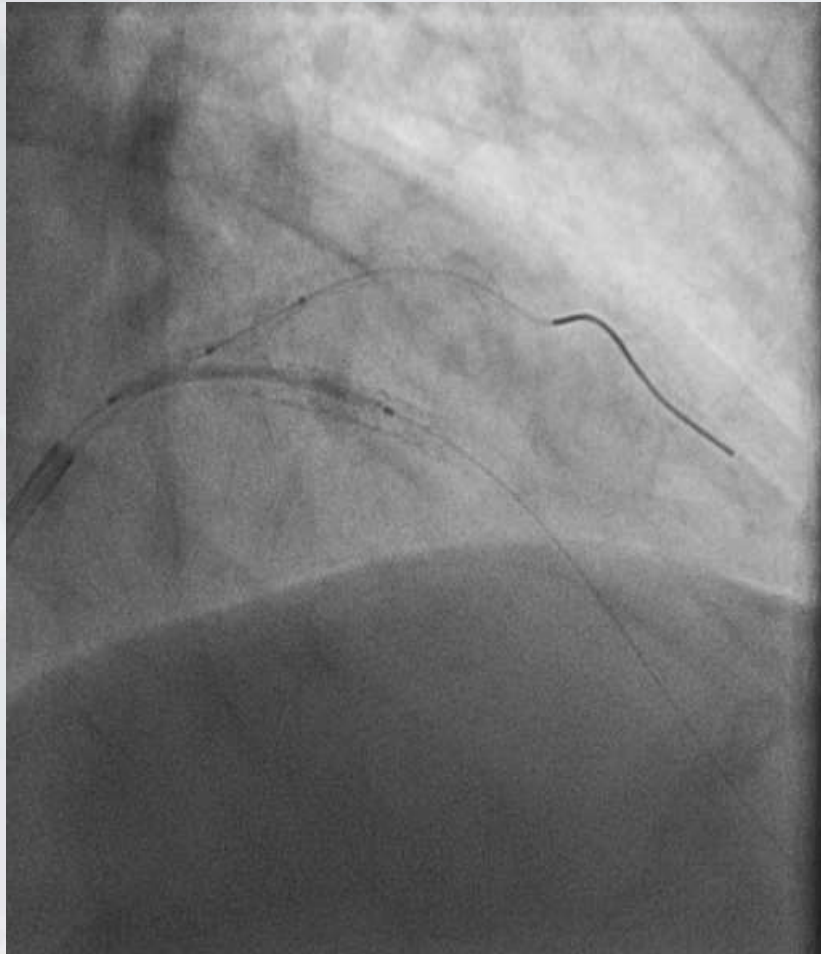
Distal vessel  
predilation  
2.0x15 mm SC Balloon

# Landing zone decision 3.5 x26 mm DES



# Modified jailed balloon technique

3.5 x26 mm DES in LM-LAD and 2.0x15 mm SC balloon in IM

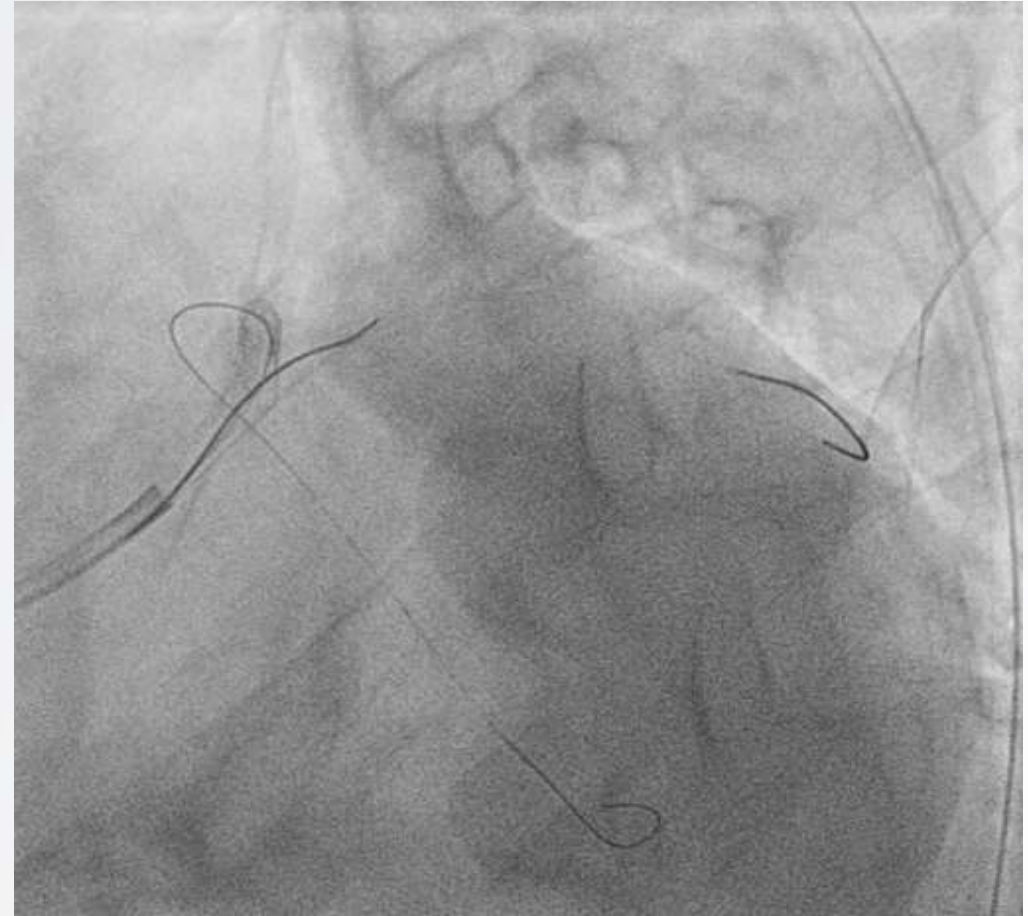


Stent and balloon deployed simultant 12 atm

# POT and distal rewiring to IM

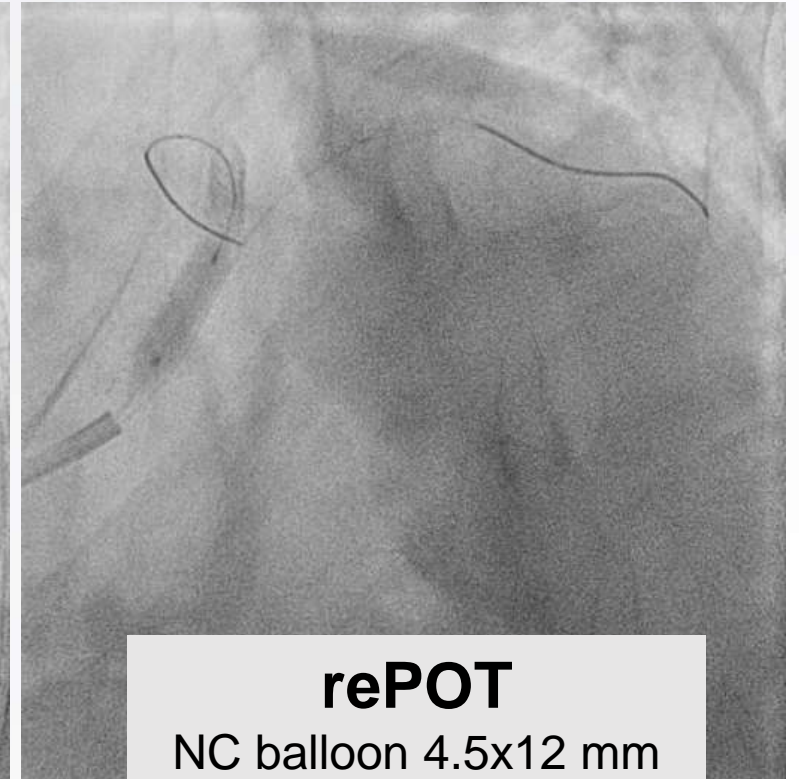
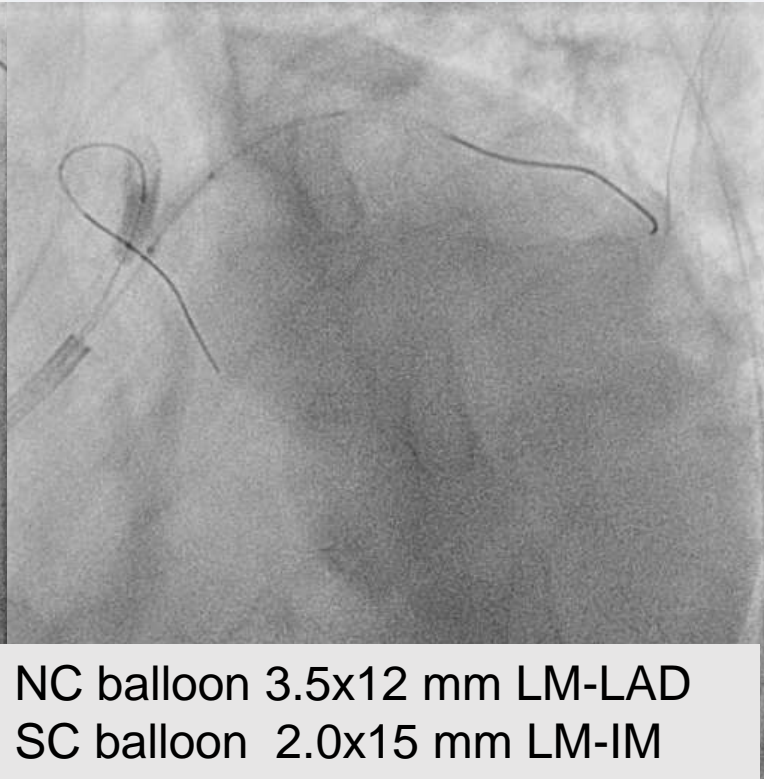
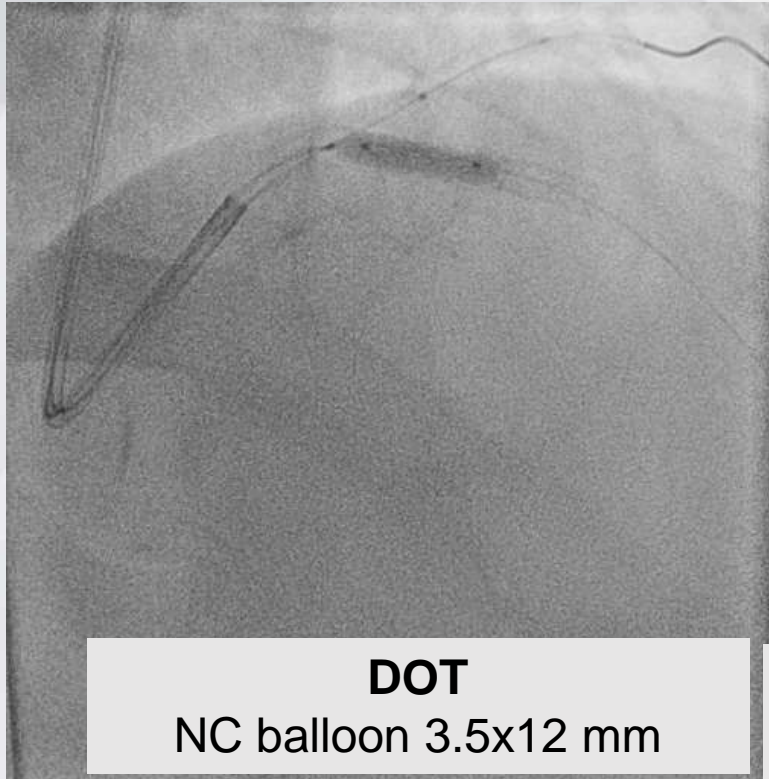


NC balloon 4.5x 12 mm LM

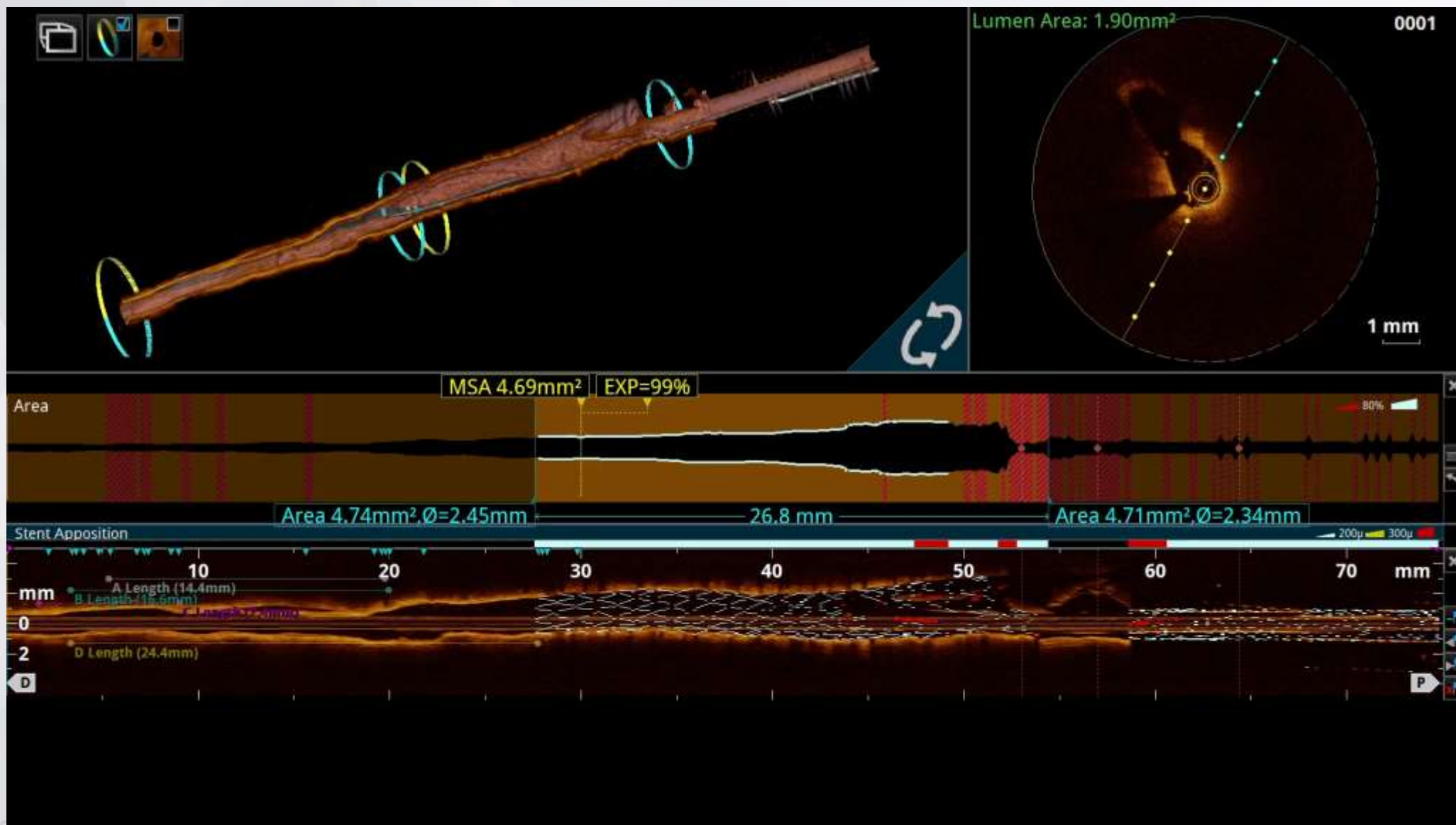


Jailed wire as a mark of proximal strut

# Stent optimizing : DOT, FKB and rePOT

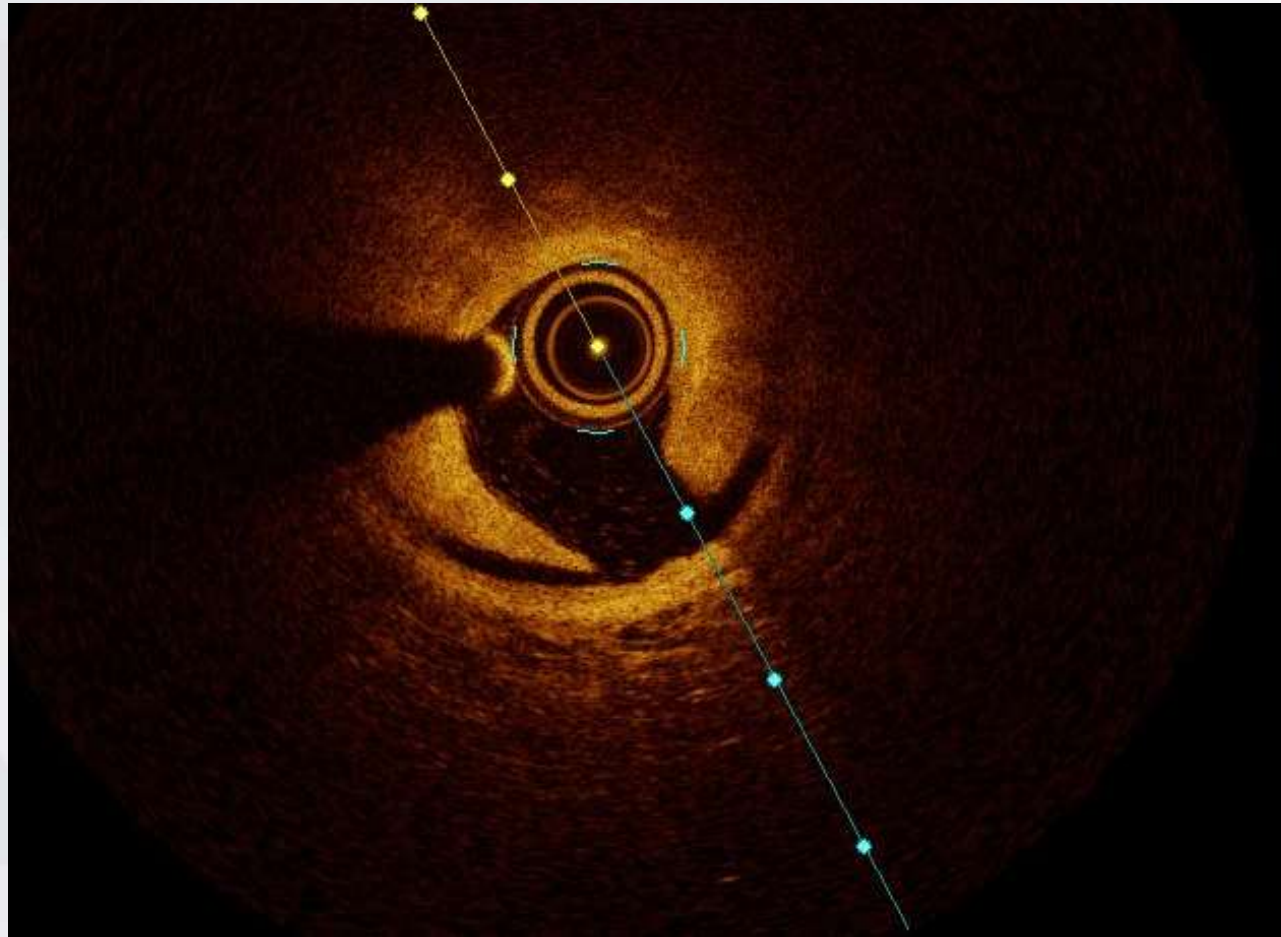


# Post PCI OCT

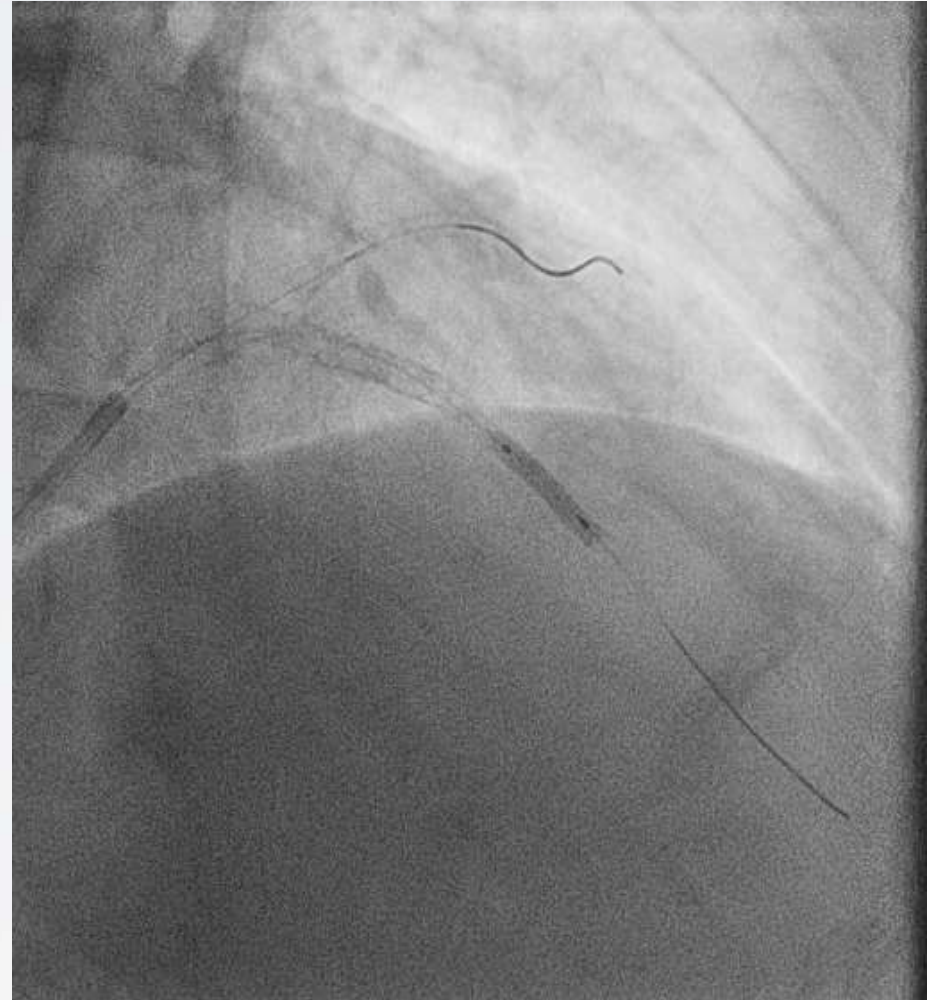
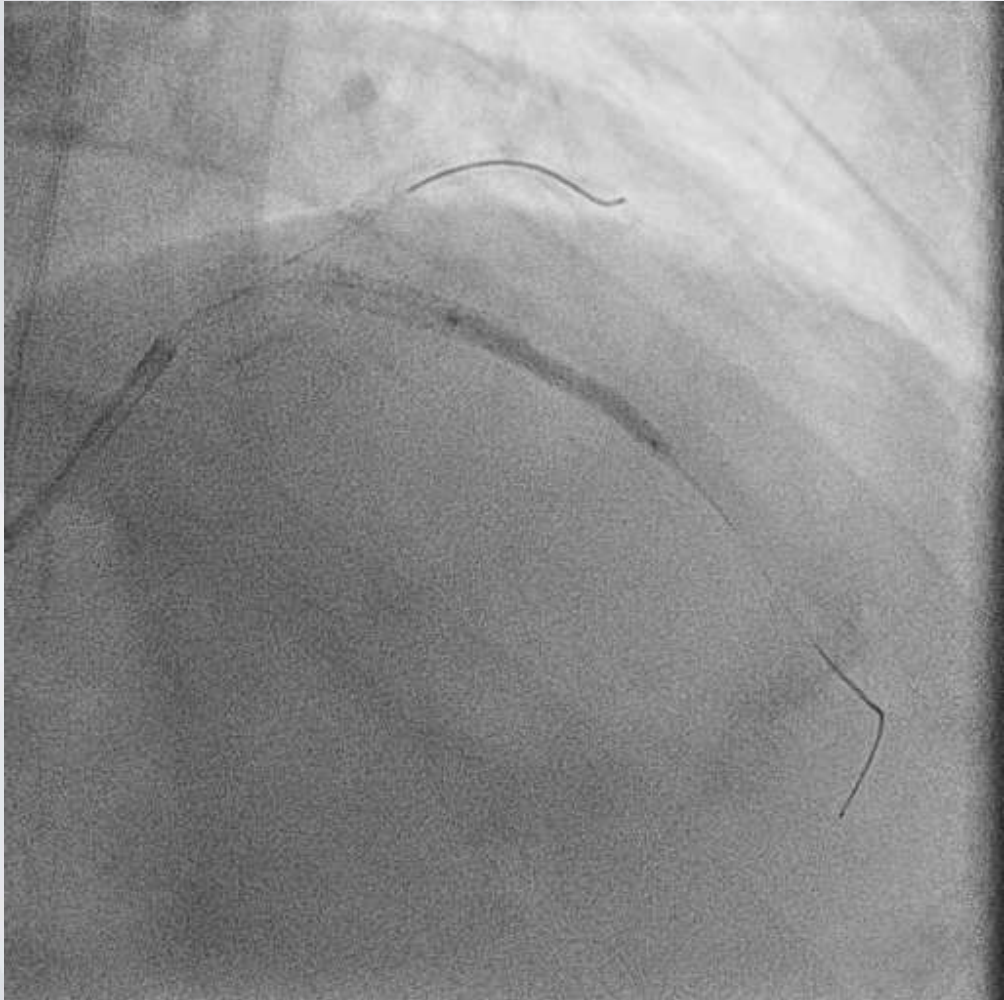




# Medial dissection at the distal part (Greater than 1 quadrant arc)

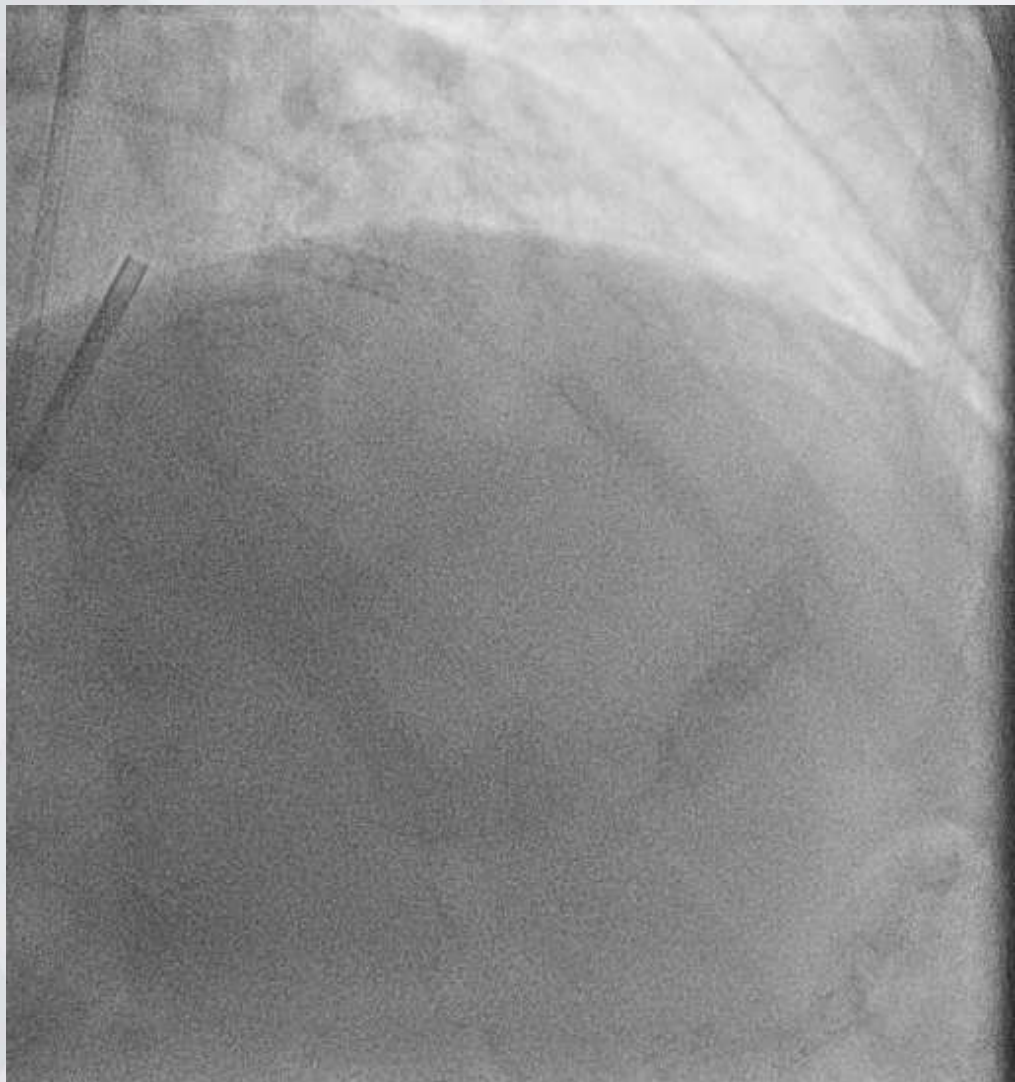


# Distal LAD stent



**DES 2.25x 22 mm and post dilation NC Sprinter 3.0x 12 mm**

# Final Result



# Conclusion

- Neoatherosclerosis likely plays an important role in late ISR
- Appropriate tools and strategy should be selected in dealing with challenging lesions associated with ISR.
- OCT is useful to identify mechanism of ISR , to inform appropriate treatment and to confirm effective treatment post PCI.

**Thank You**