

CONGRESSO

ROMA, 25 - 27 Giugno 2026

Session: “How should I treat?”: Placca Vulnerabile

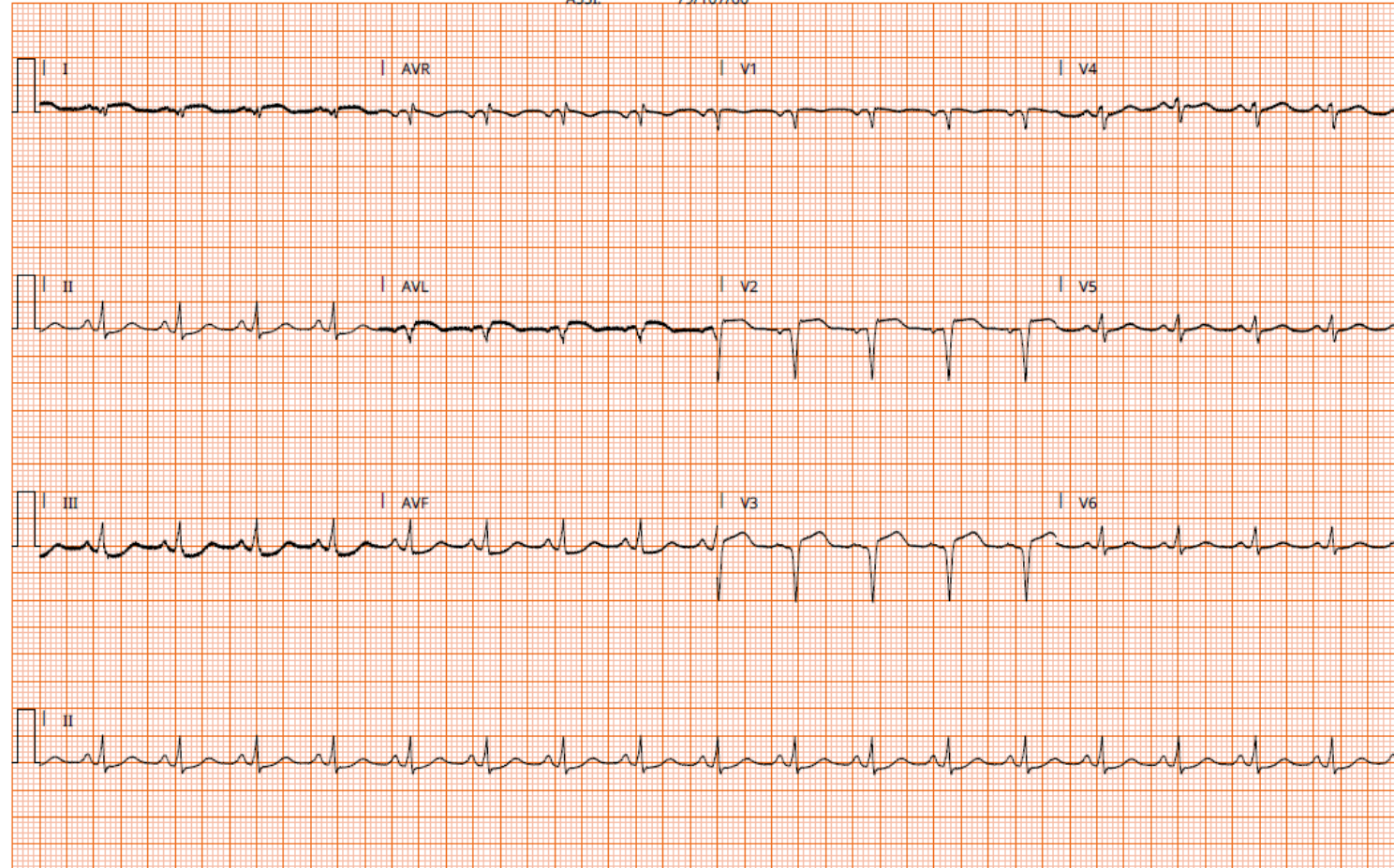
How did I treat

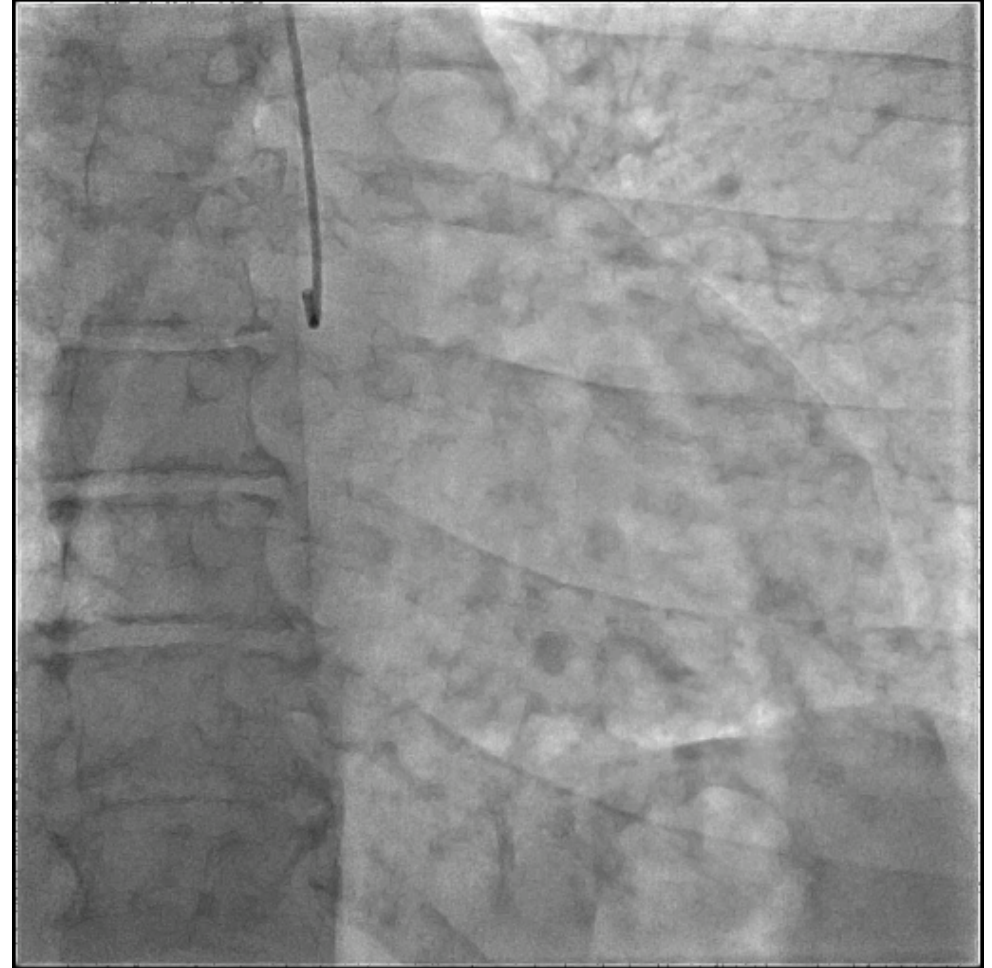
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Clinical case

- Woman, 52 y.o.
- Chest pain onset: approximately 4 hours earlier
- No known CV risk factors
- Acute pulmonary oedema
- PA 90/60 mmHg
- Echo fast: 40% LVEF with AW/apical abnormalities

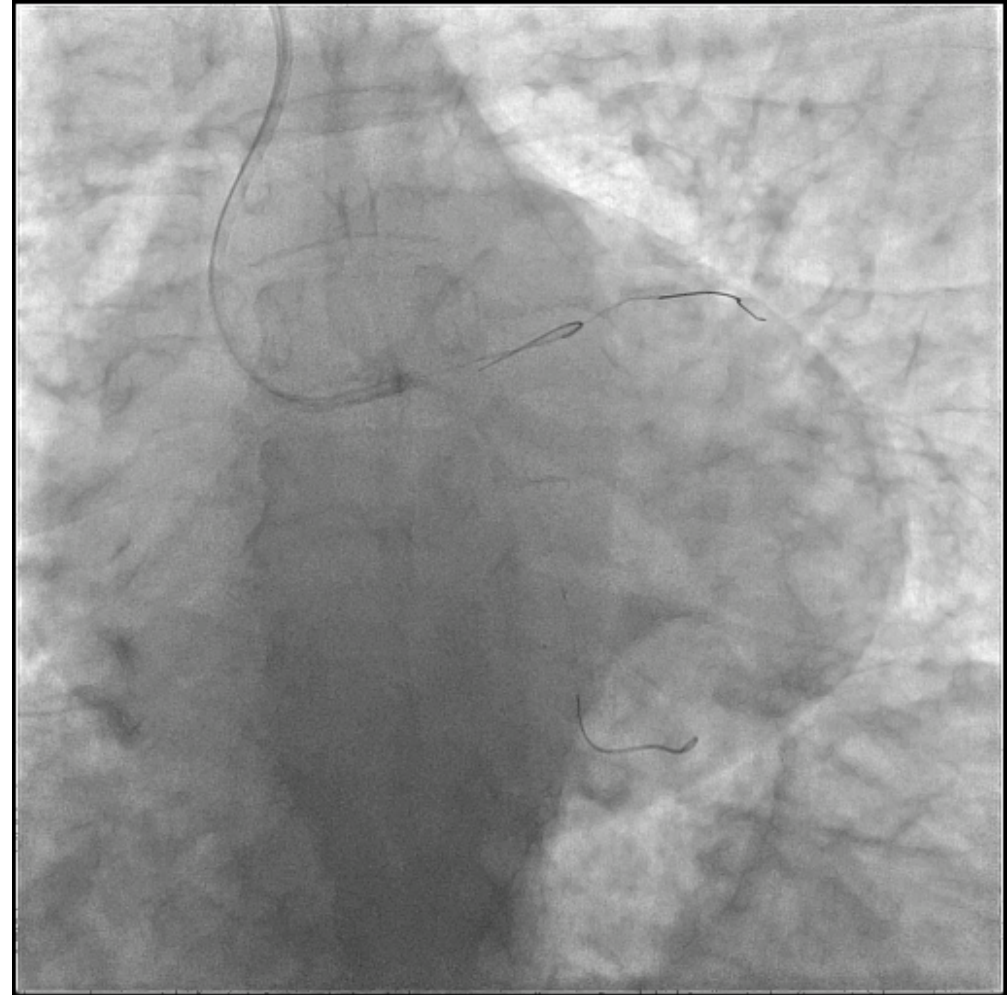




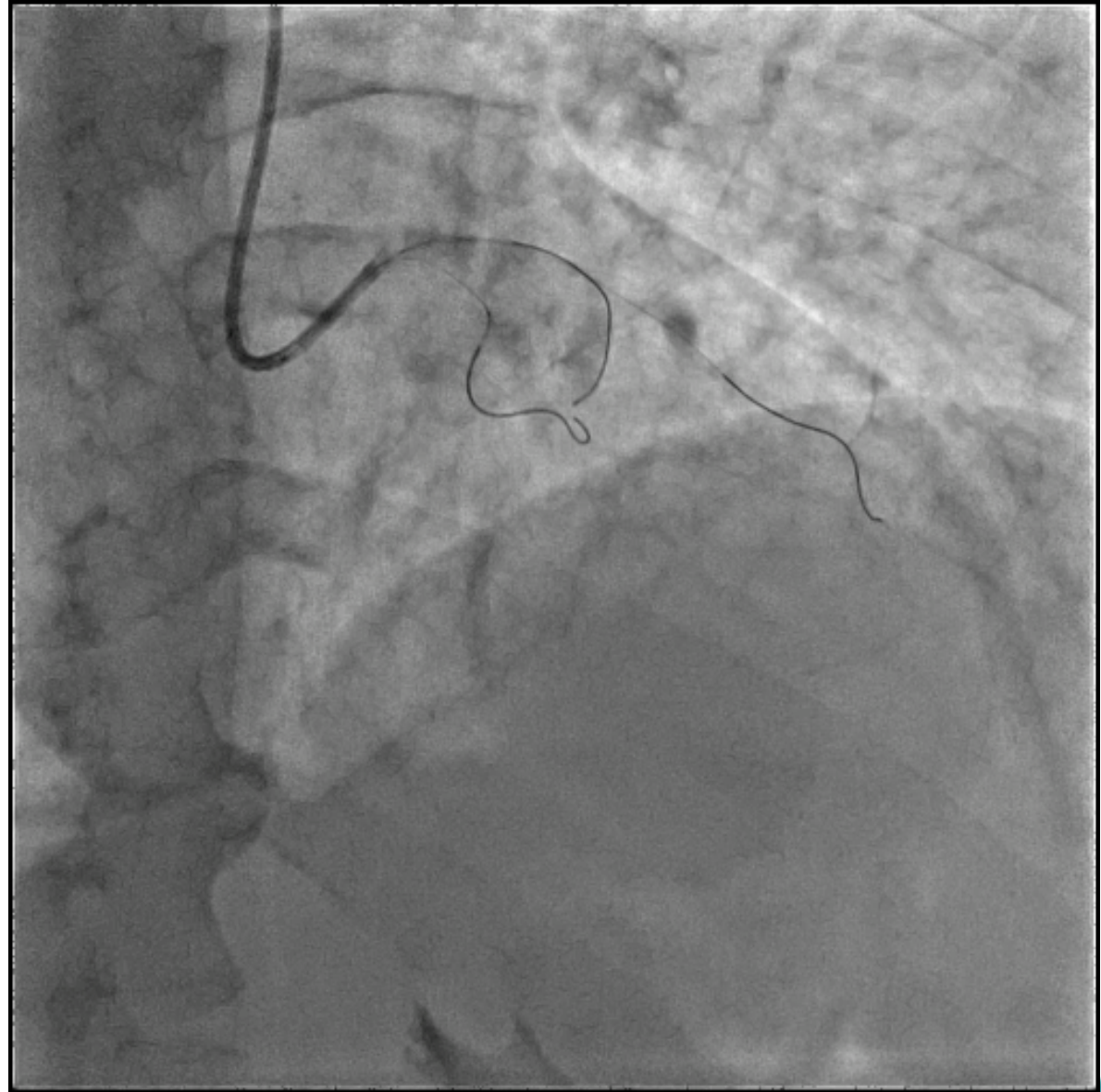
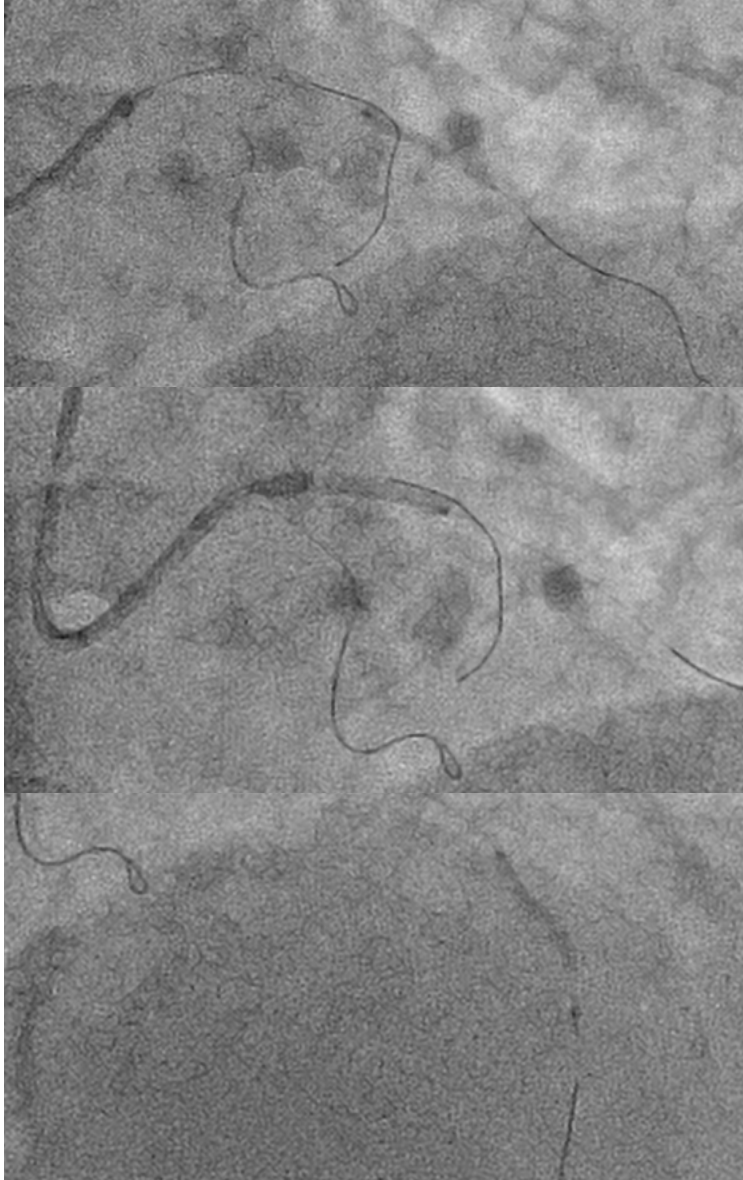
Left coronary system



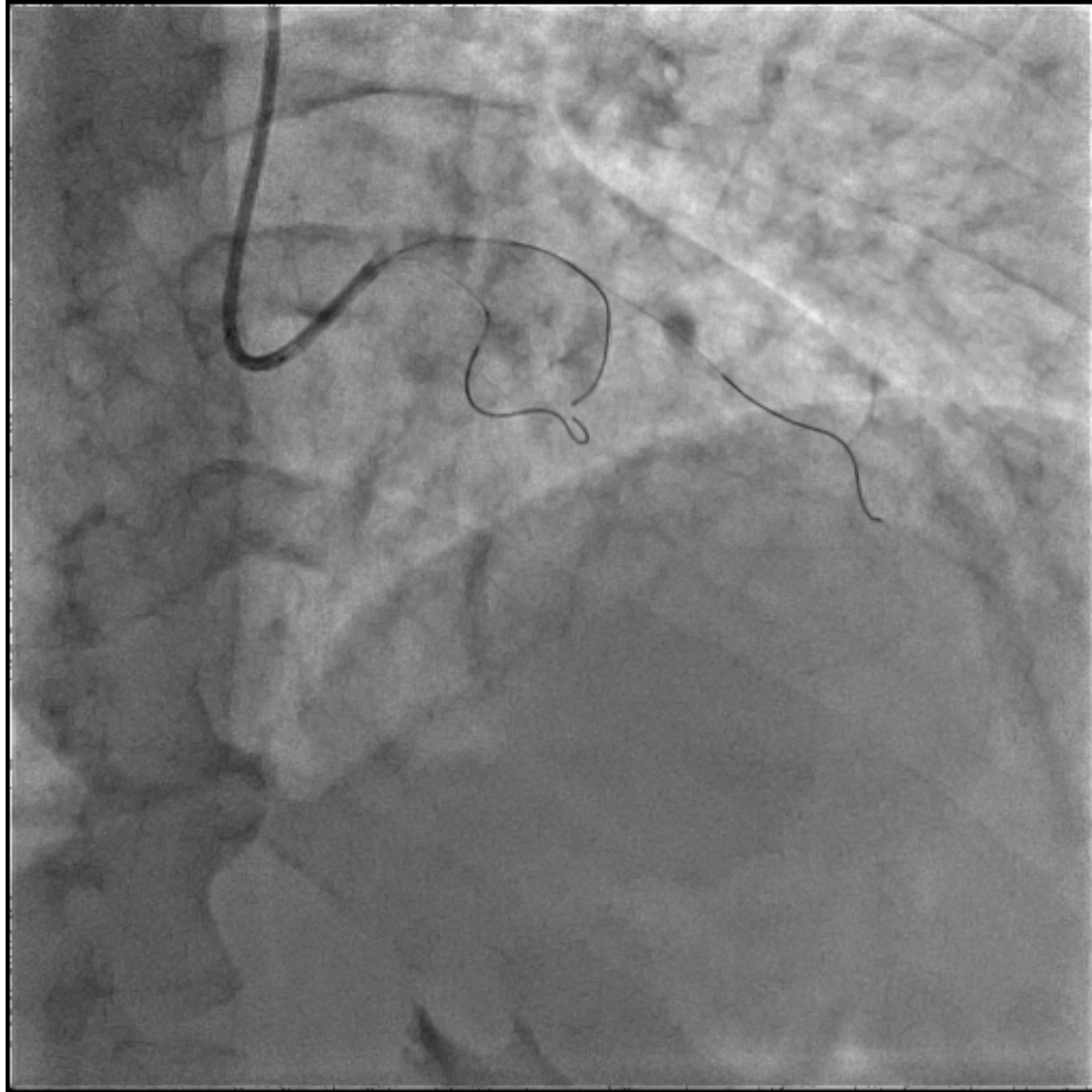
Left coronary system after predilatation



Multiple predilatation



What to do next?



PCI strategy



- ✓ Unclear proximal LAD (atherothrombotic vs dissection involving the D1), 90% stenosis in mid LAD, and poor distal LAD
 - ✓ Hemodynamically (un)stable patient (PA 90/60 mmHg on IV drugs, pulmonary edema)
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- A) Intracoronary imaging**
 - B) Potent iv anti-thrombotic therapy**
 - C) Direct stenting? Where? 2-stent technique?**
 - D) Continue multiple predilatation including D1**
 - E) Distal injection with microcatheter**
 - F) Cutting balloon**



NIRS-IVUS Prox to distal LAD

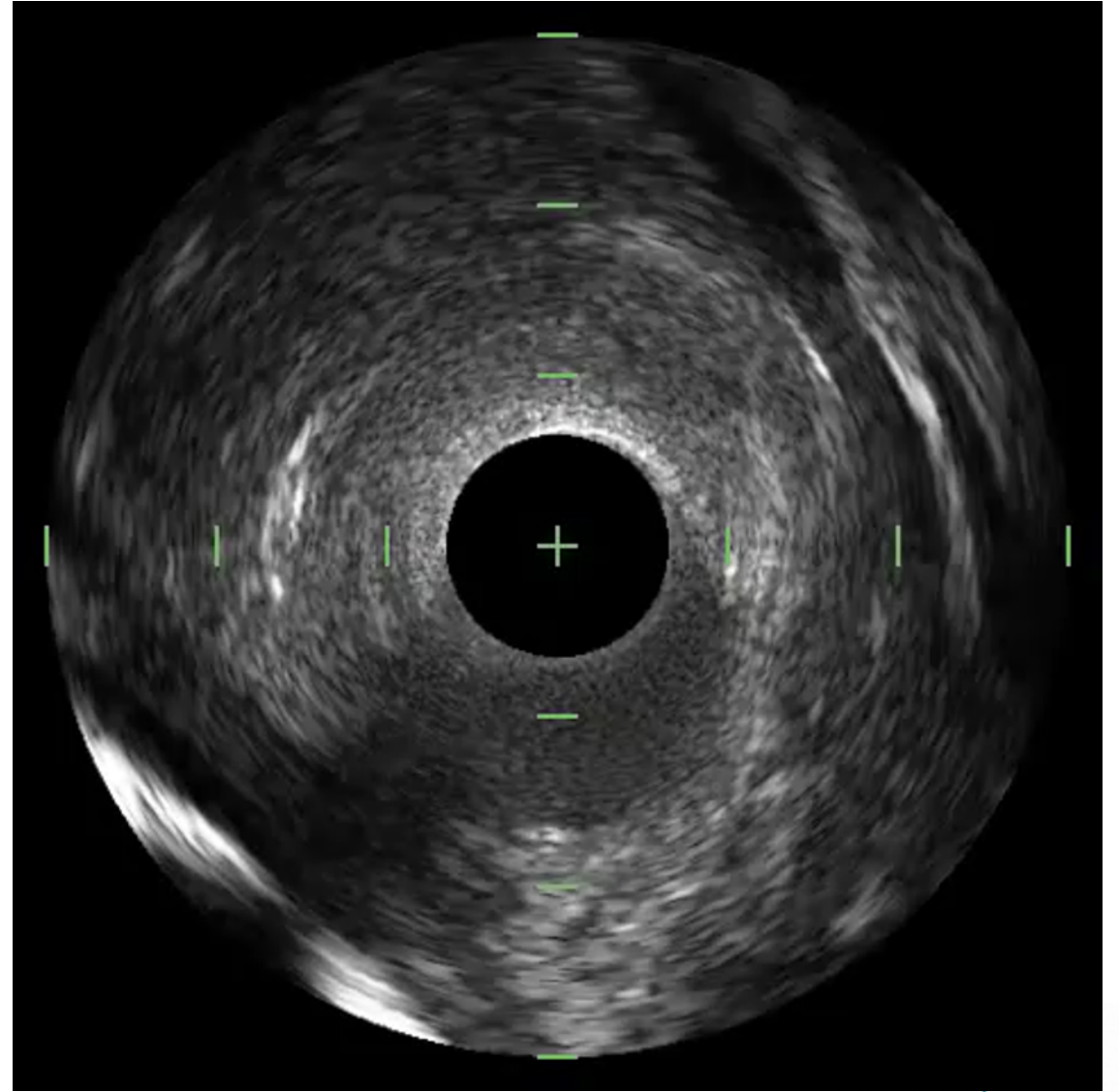
- ✓ Unclear proximal LAD (atherothrombotic vs dissection involving the D1), 90% stenosis in mid LAD, and poor distal LAD
- ✓ Hemodynamically (un)stable patient (PA 90/60 mmHg on IV drugs, pulmonary edema)

A) Intracoronary imaging (IVUS)

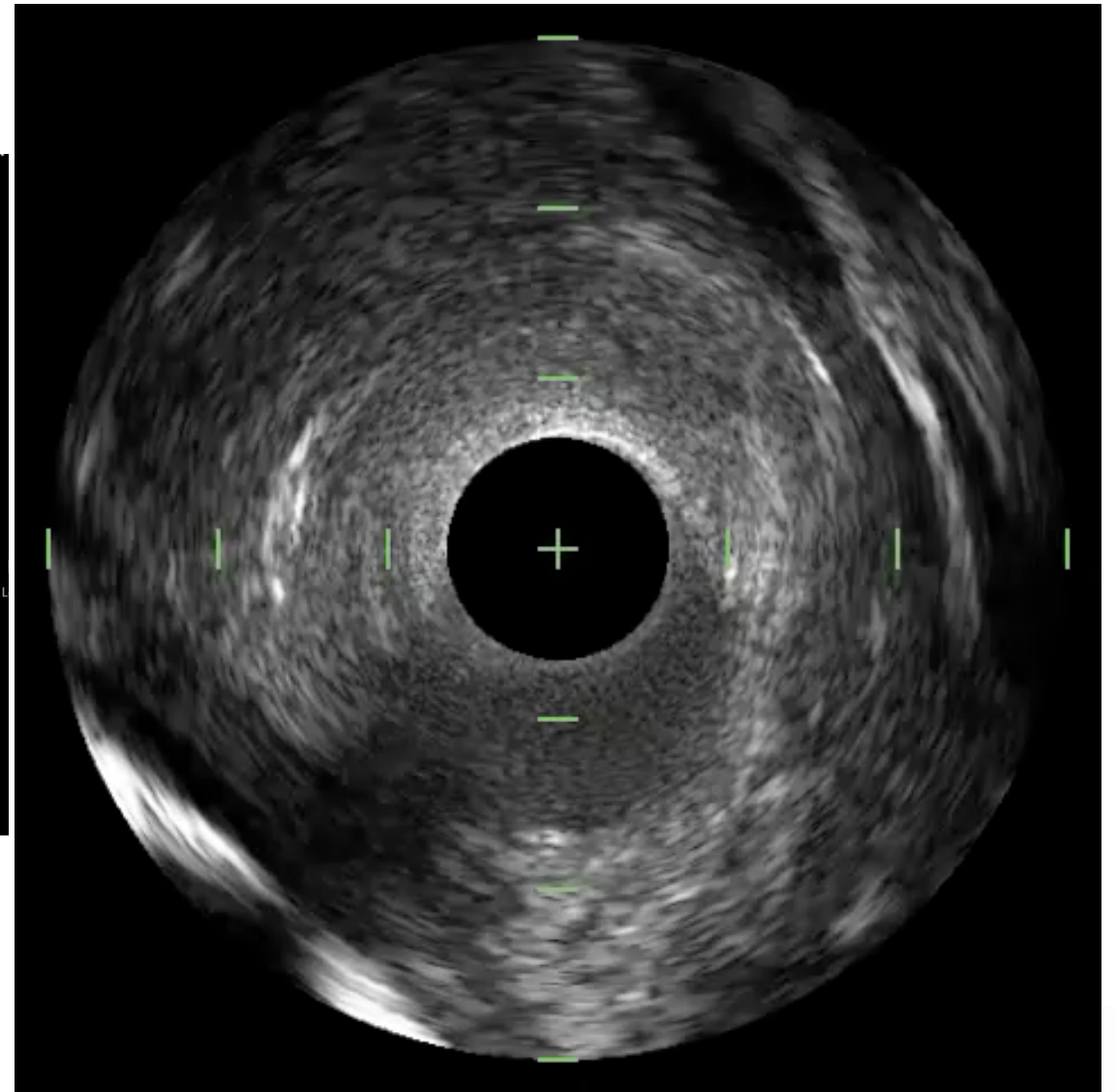
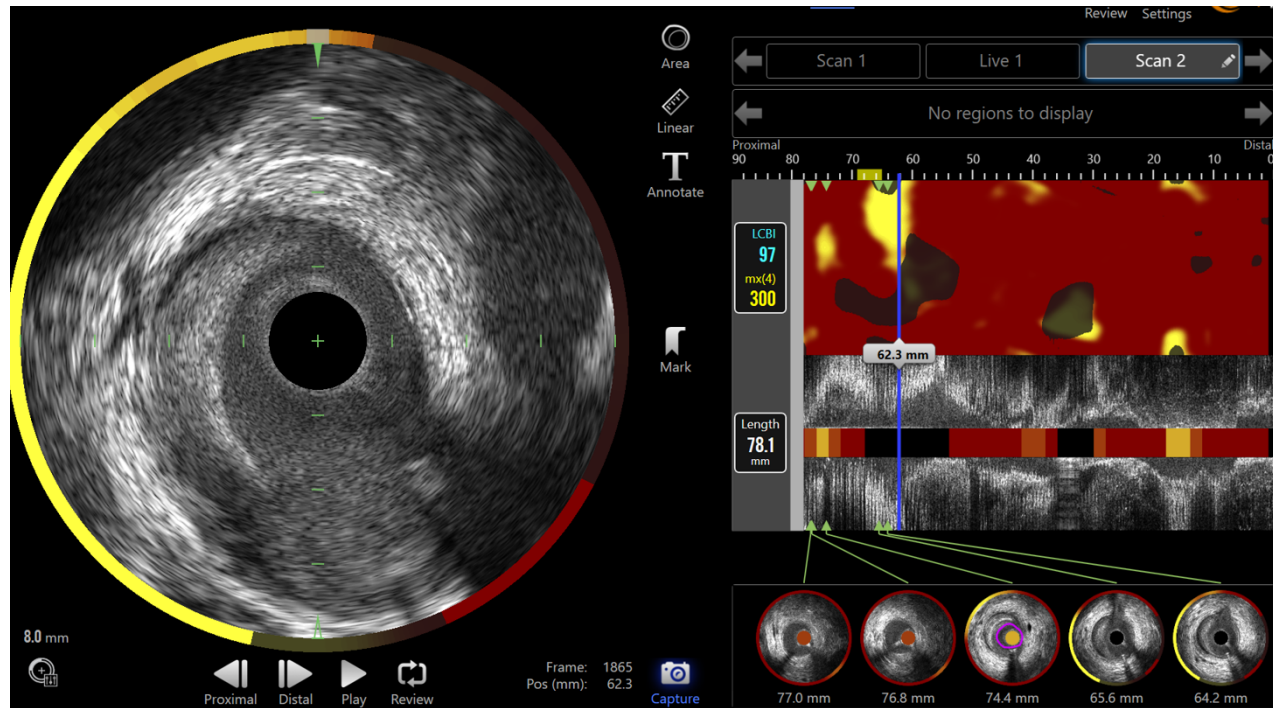
- B) Potent anti-thrombotic therapy (ev + oral)
- C) Direct stenting (where)?
- D) Continue multiple predilatation including D1
- E) Distal injection with microcatheter
- F) Cutting balloon



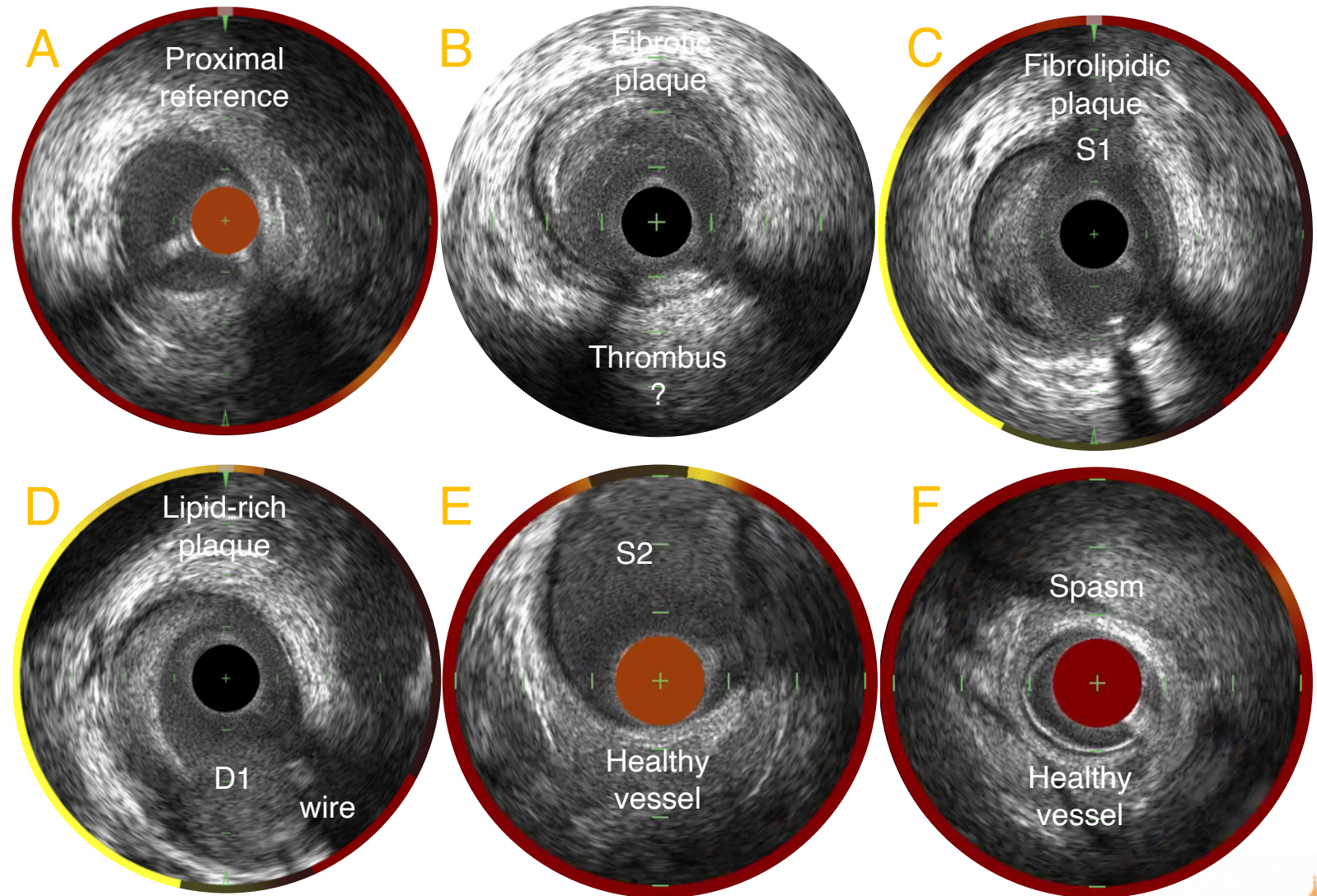
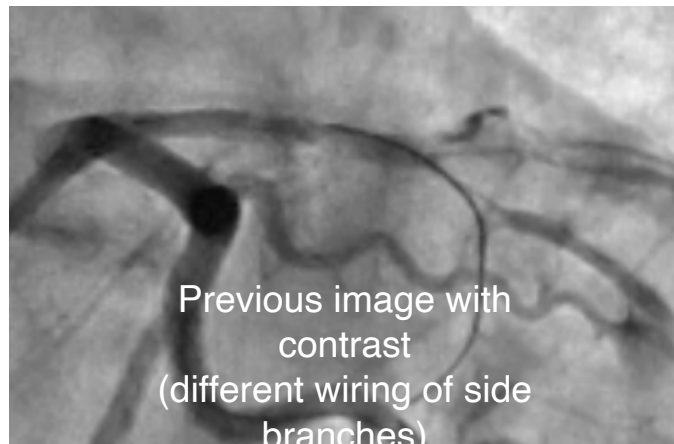
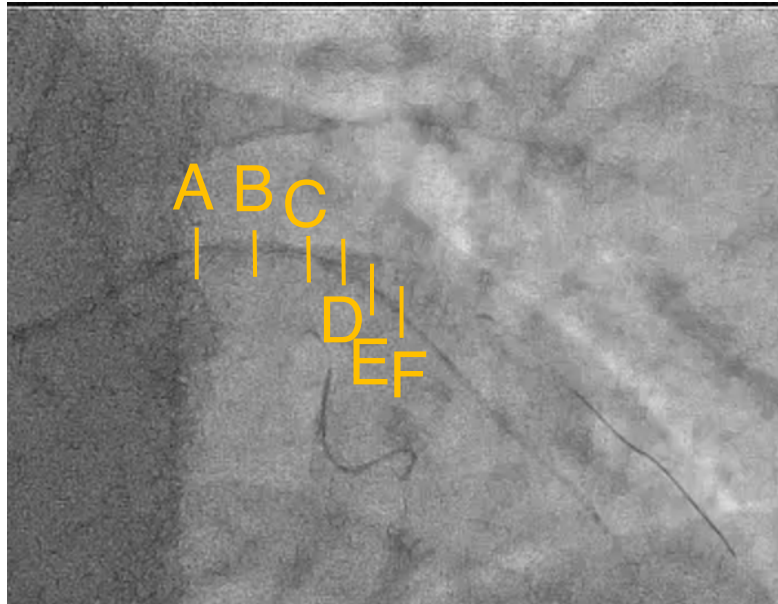
IVUS-NIRS

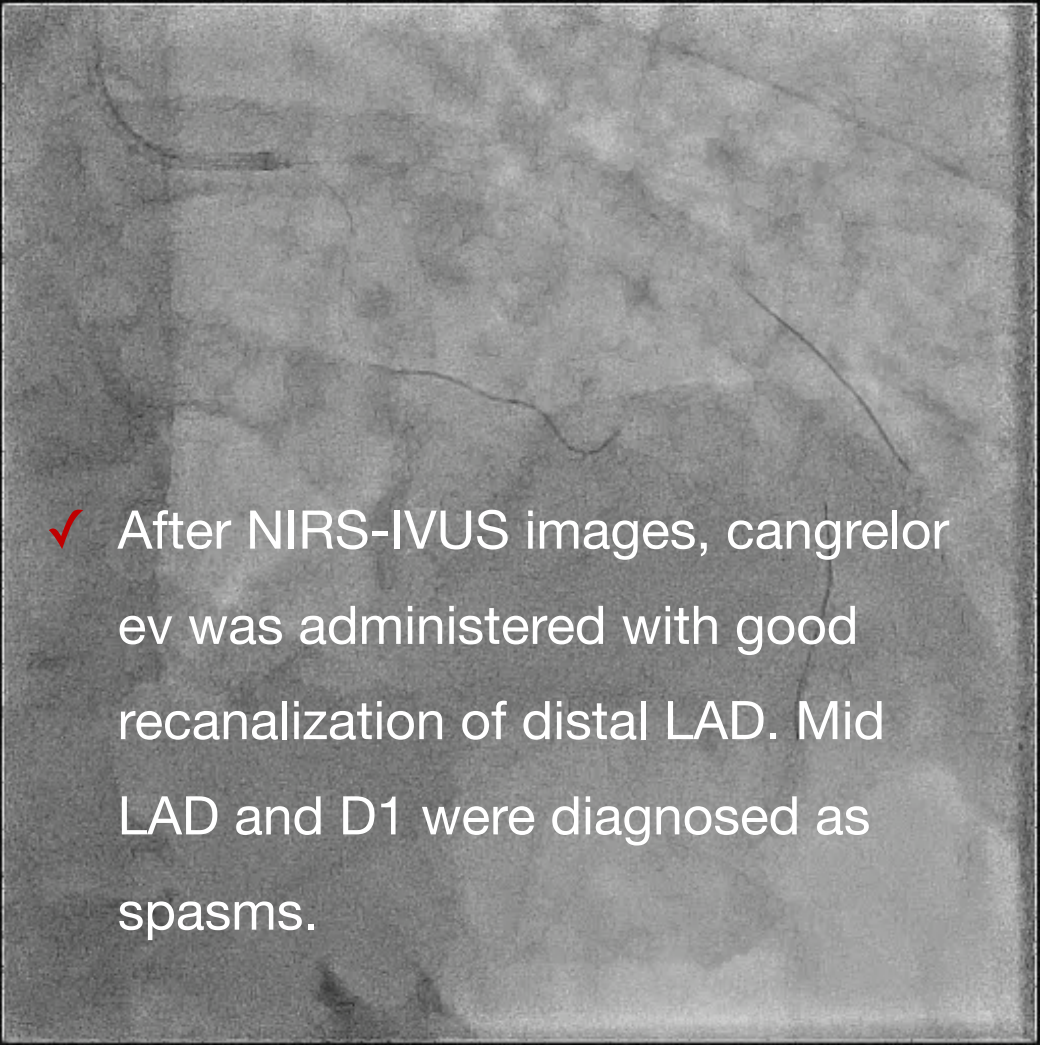


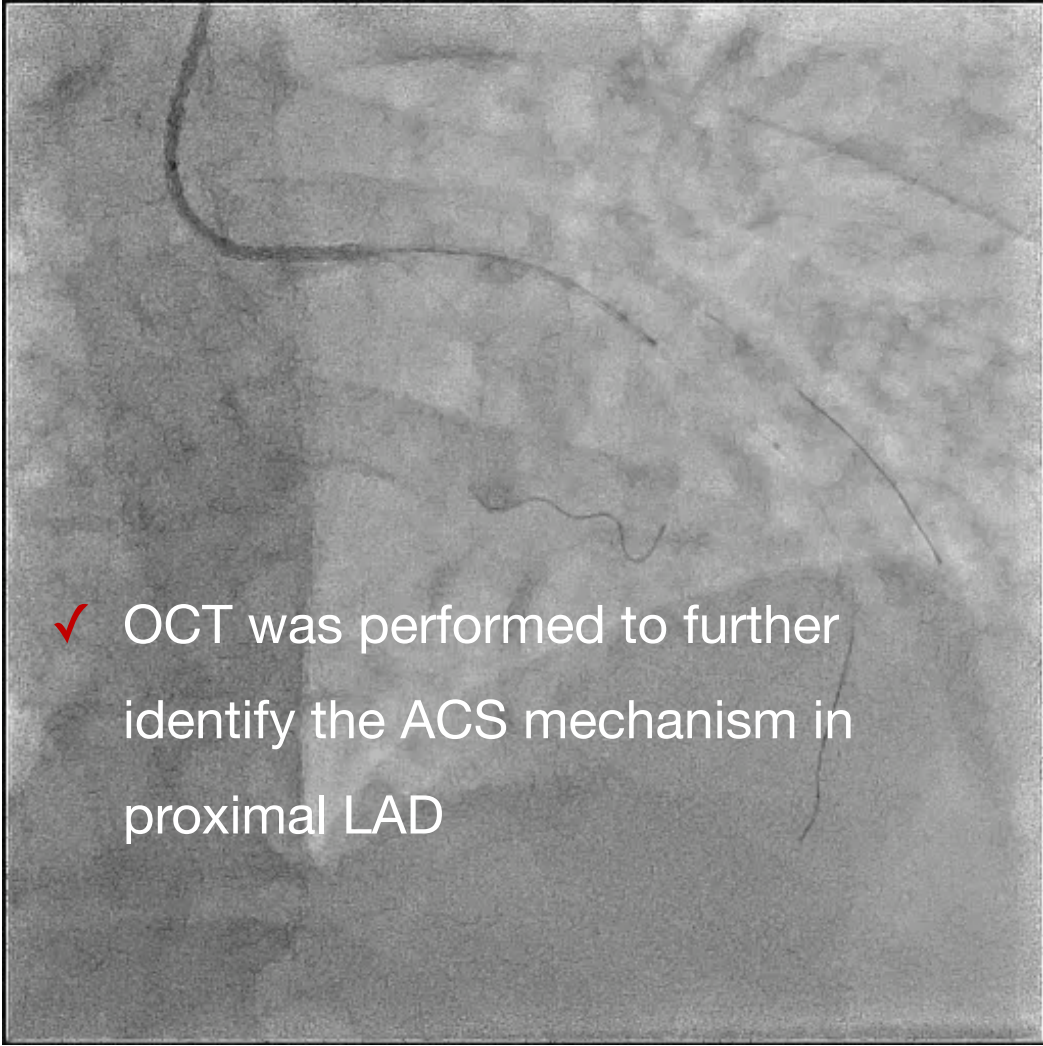
IVUS-NIRS



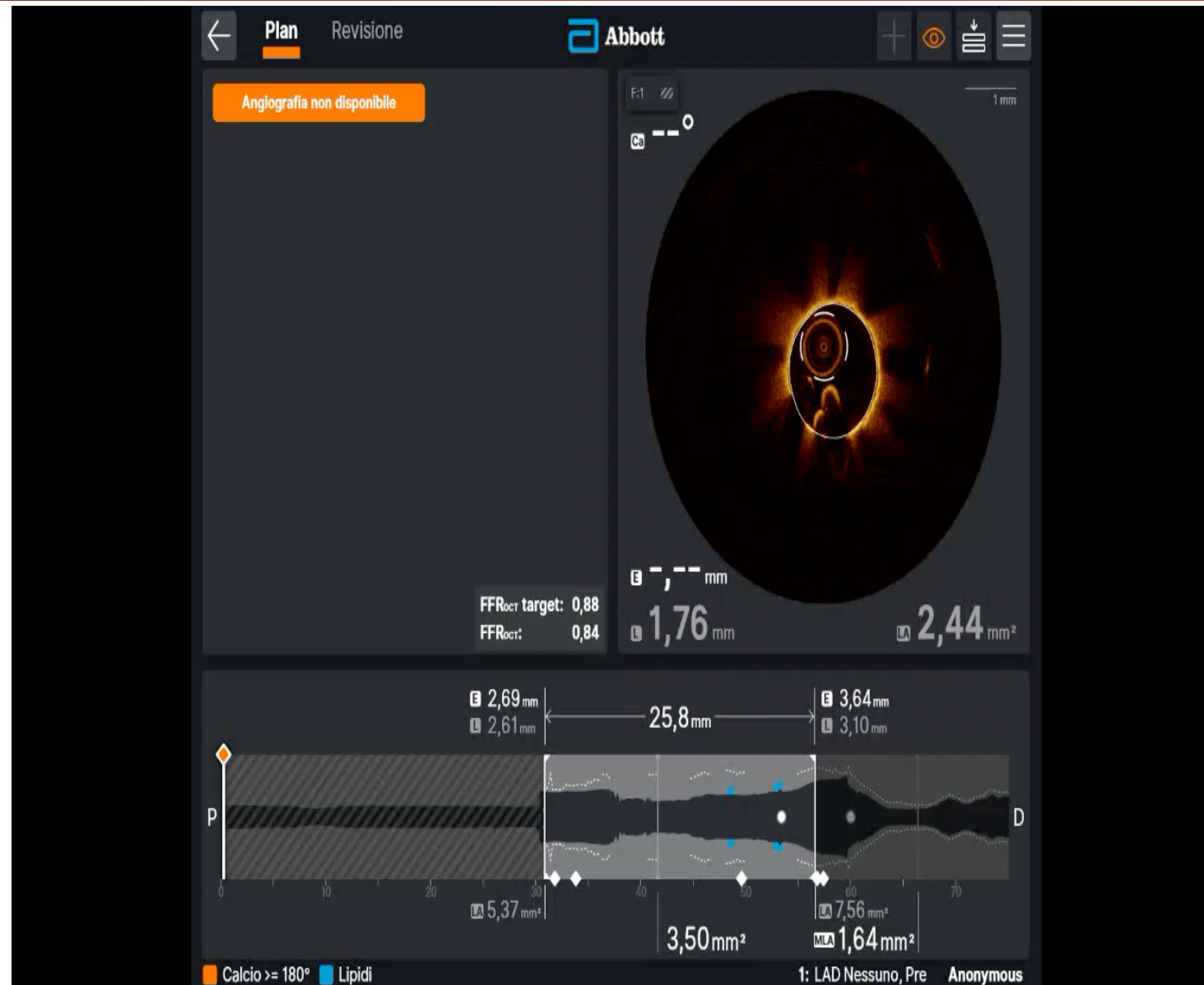
IVUS-NIRS



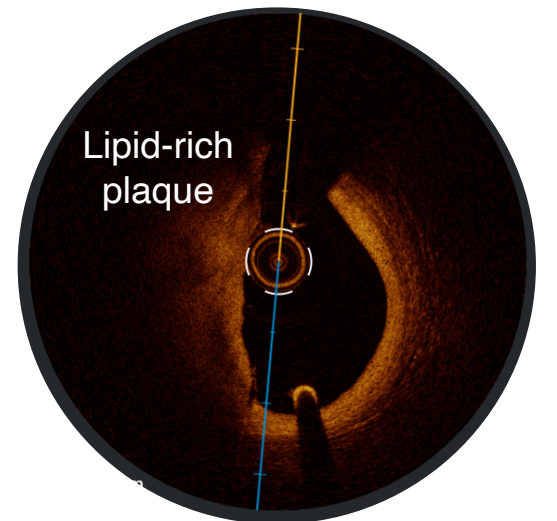
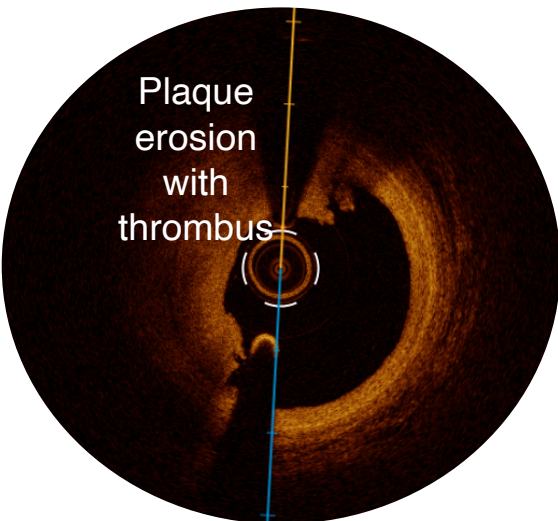
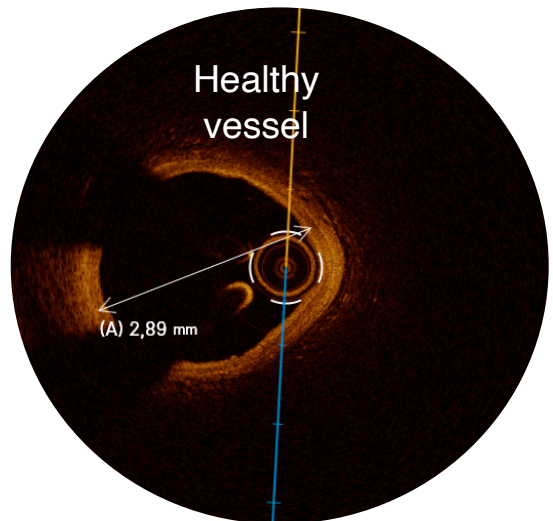
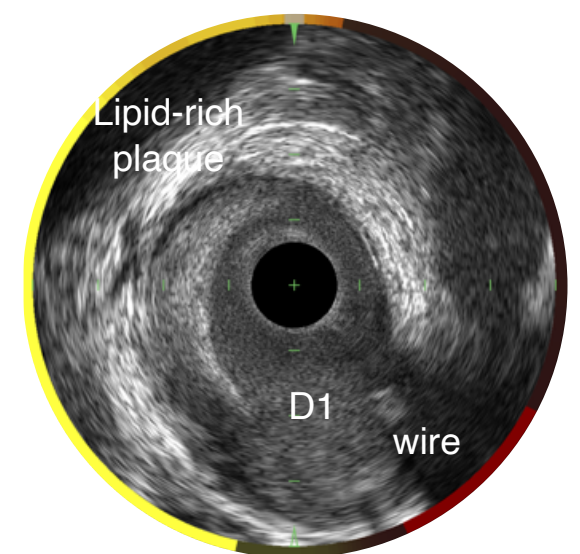
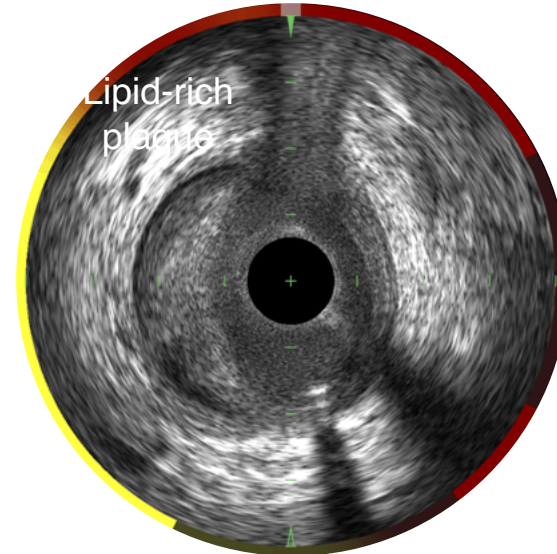
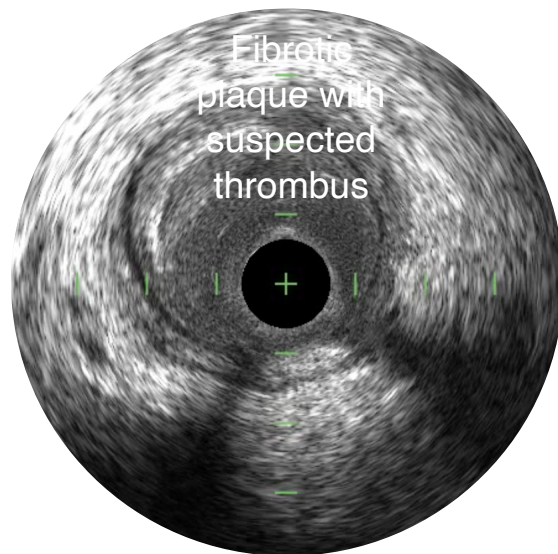
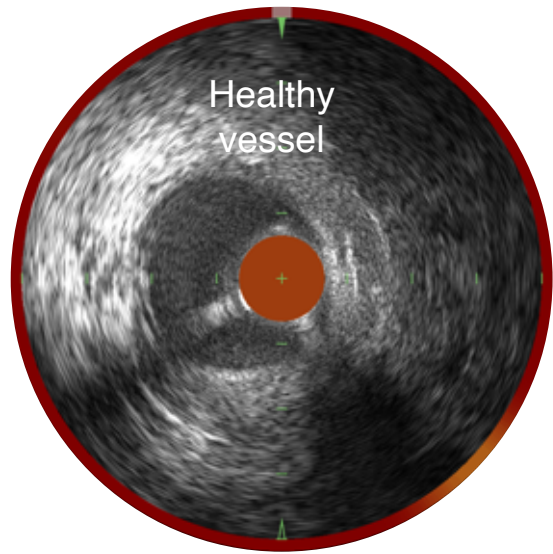
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- ✓ After NIRS-IVUS images, cangrelor ev was administered with good recanalization of distal LAD. Mid LAD and D1 were diagnosed as spasms.

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- ✓ OCT was performed to further identify the ACS mechanism in proximal LAD





IVUS-NIRS vs OCT





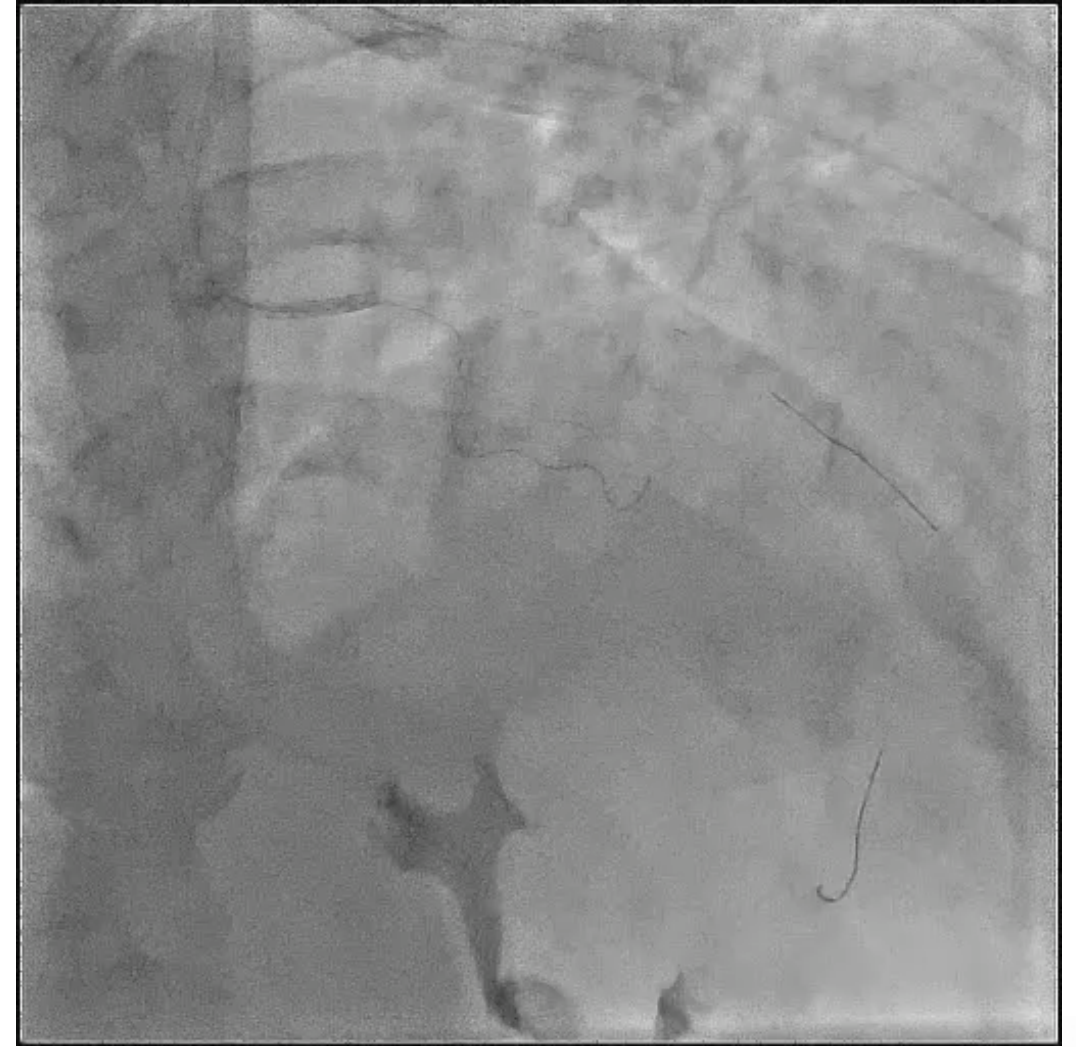
A) DCB

B) Stent → 1xDES 3.00x26 mm in prox/mid

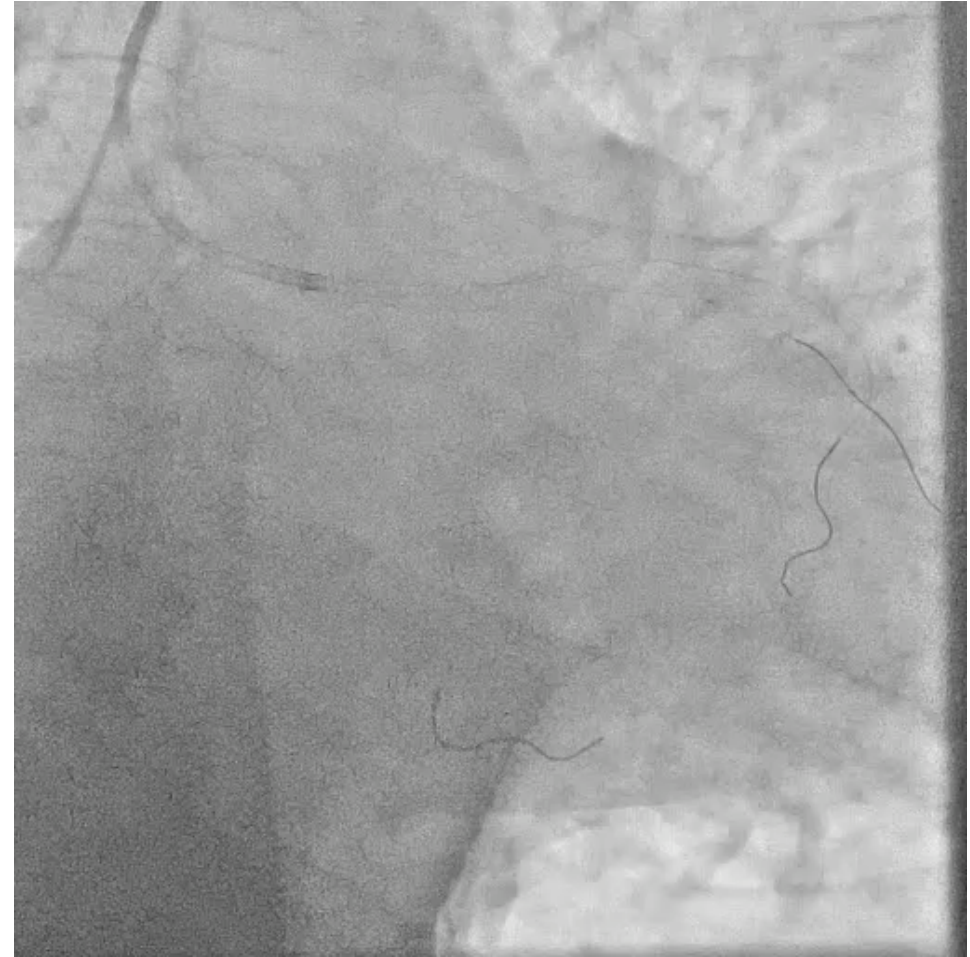
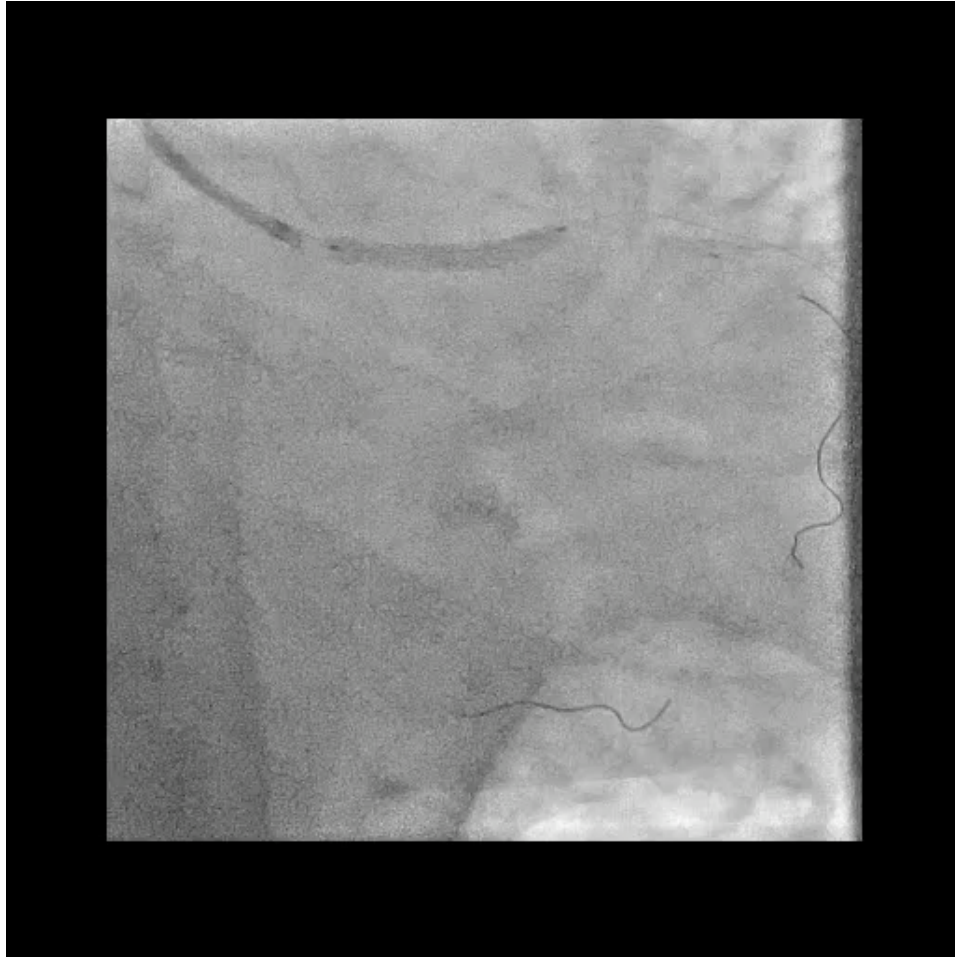
C) Other LAD



Stenting



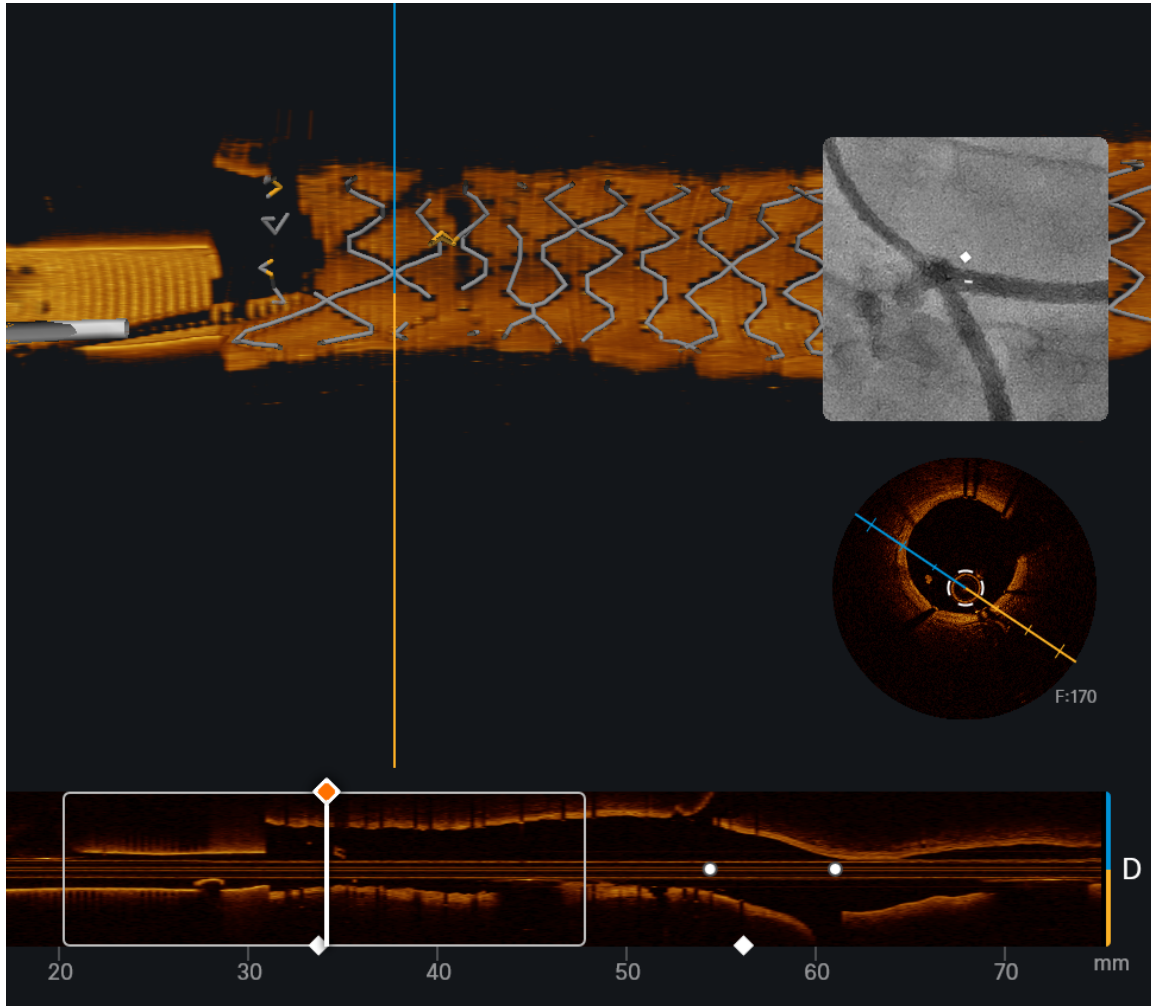
Stenting



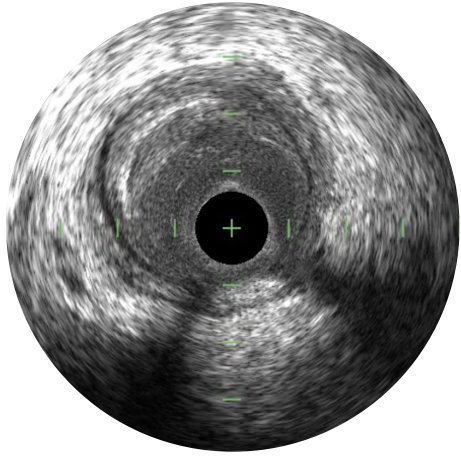
Post-PCI OCT pullback



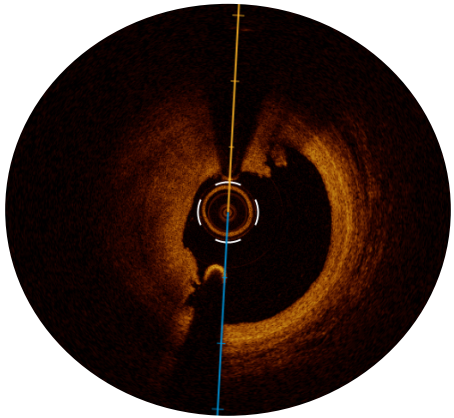
3D reconstruction of ostial LAD & final angio



Conclusions



✓ Intracoronary imaging enabled accurate assessment of vessel integrity and identification of disease-free coronary segments in the mid-distal LAD and D1 by IVUS, while providing detailed characterization of the proximal arterial segments responsible for the acute event by NIRS/OCT



✓ The culprit lesion was a “high-risk plaque” (i.e., plaque erosion) but in a fibro-lipidic plaque (average PB 50%; maxLCBI_{4mm} of 300) that would have never been stented in ongoing vulnerability trials

✓ Future studies are warranted to investigate dedicated, imaging-guided revascularization strategies in ACS patients presenting with plaque erosion

