

EUROPEAN HEART HOUSE

Coronary Physiology in the Catheterization Laboratory (8th Edition)

Thursday, April 24 – Saturday, April 26, 2014

Left main disease: three in one

Felipe Hernández

Interventional Cardiology

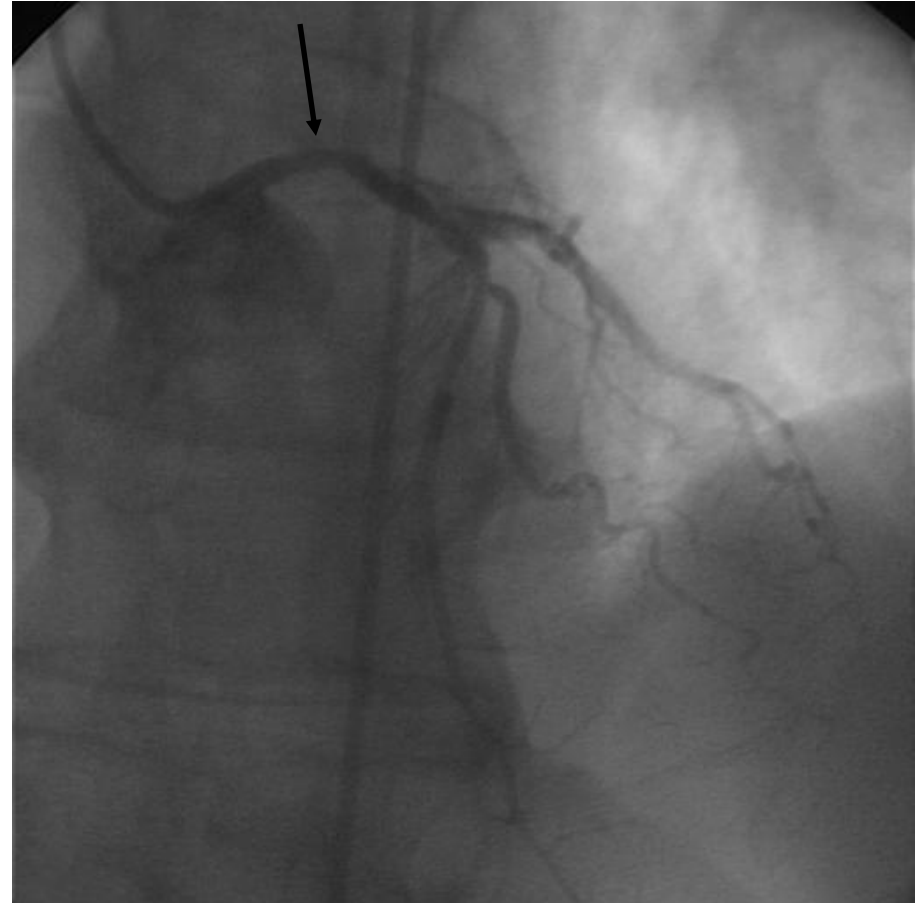
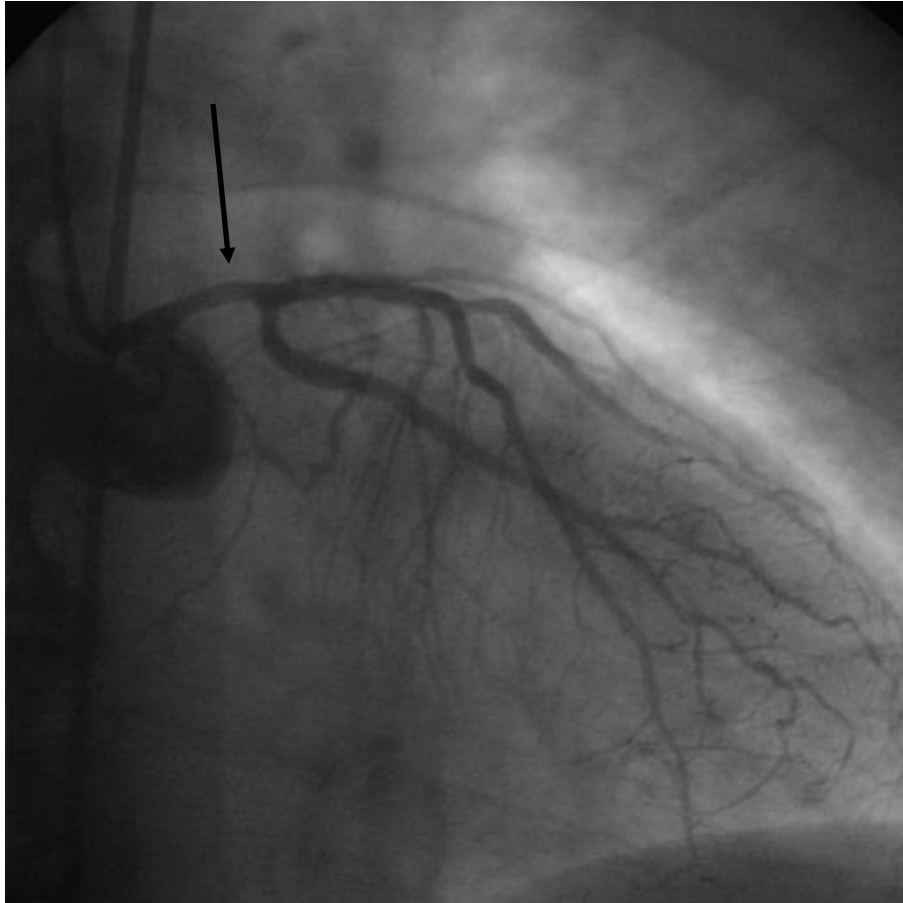
Hospital 12 de Octubre, Madrid



Background

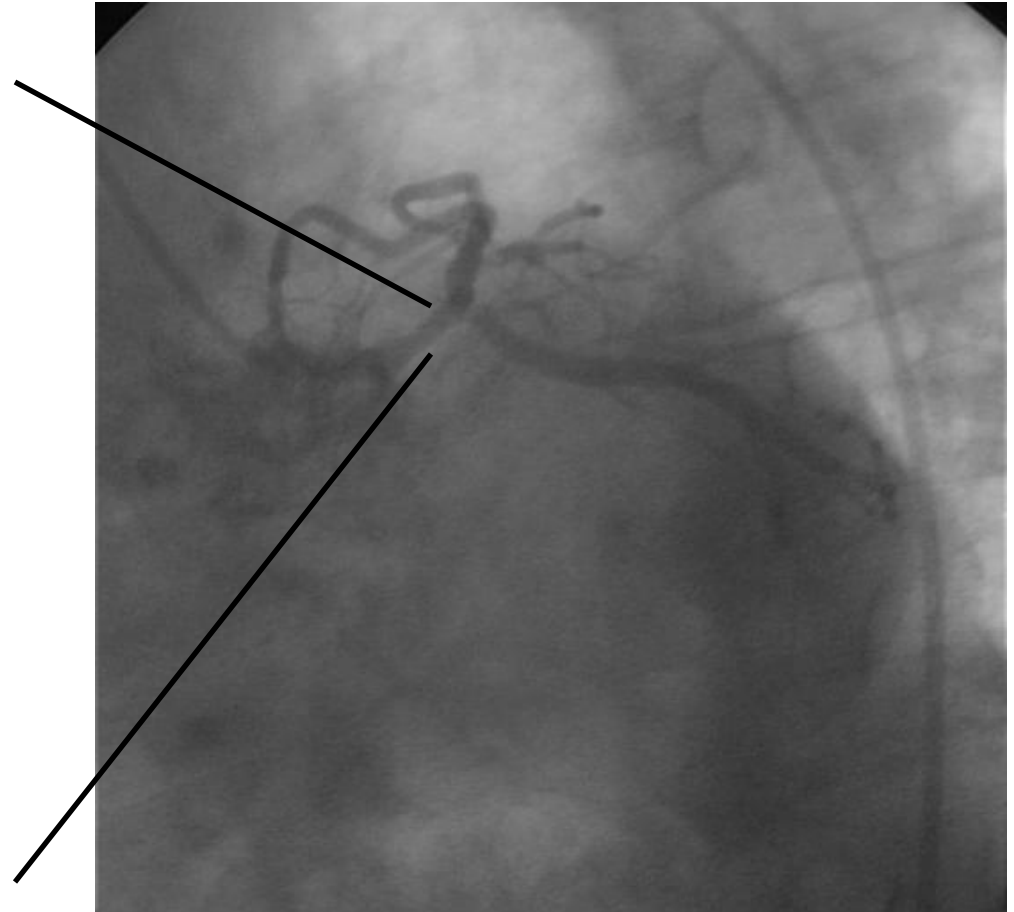
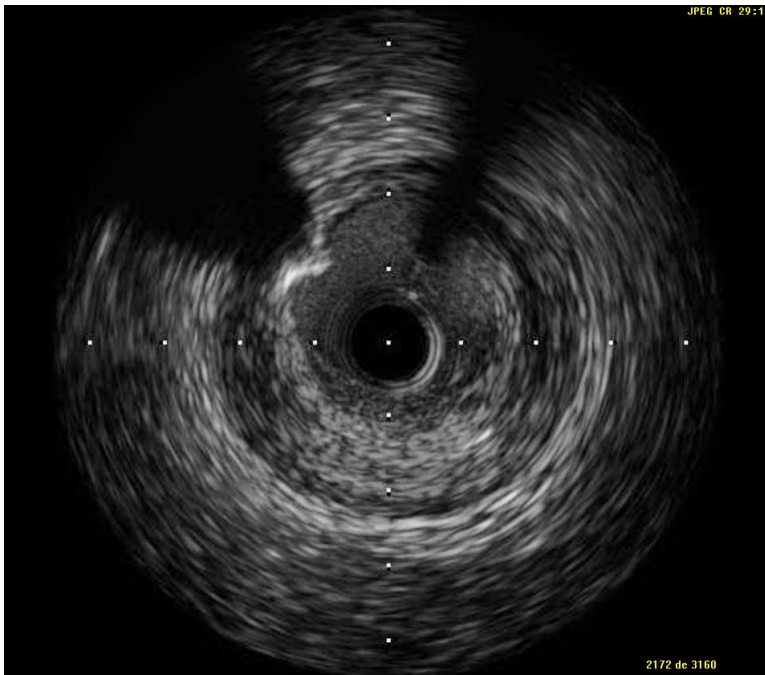
- 72 year-old male, hypertension and dyslipemia
- Progressive efforts angina with positive stress test (clinical and ECG) despite treatment (betablockers, nitrates, statins, aspirin)
- Coronary angiography is indicated

June 2012



Moderate diffuse LM disease, normal RCA

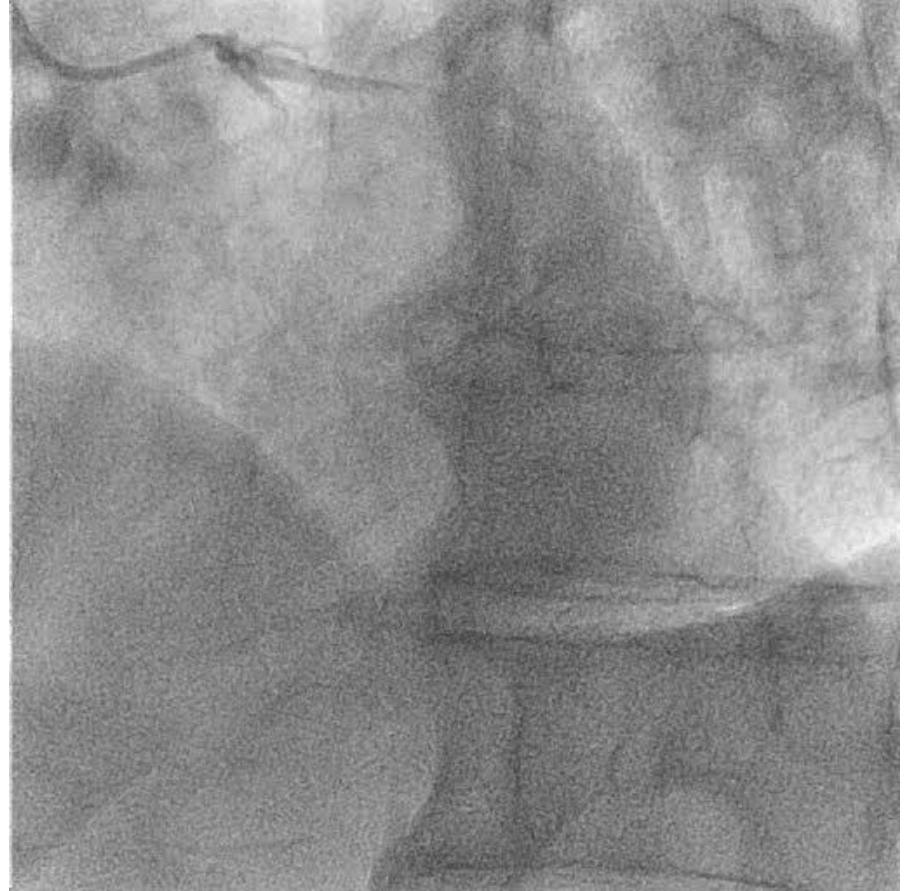
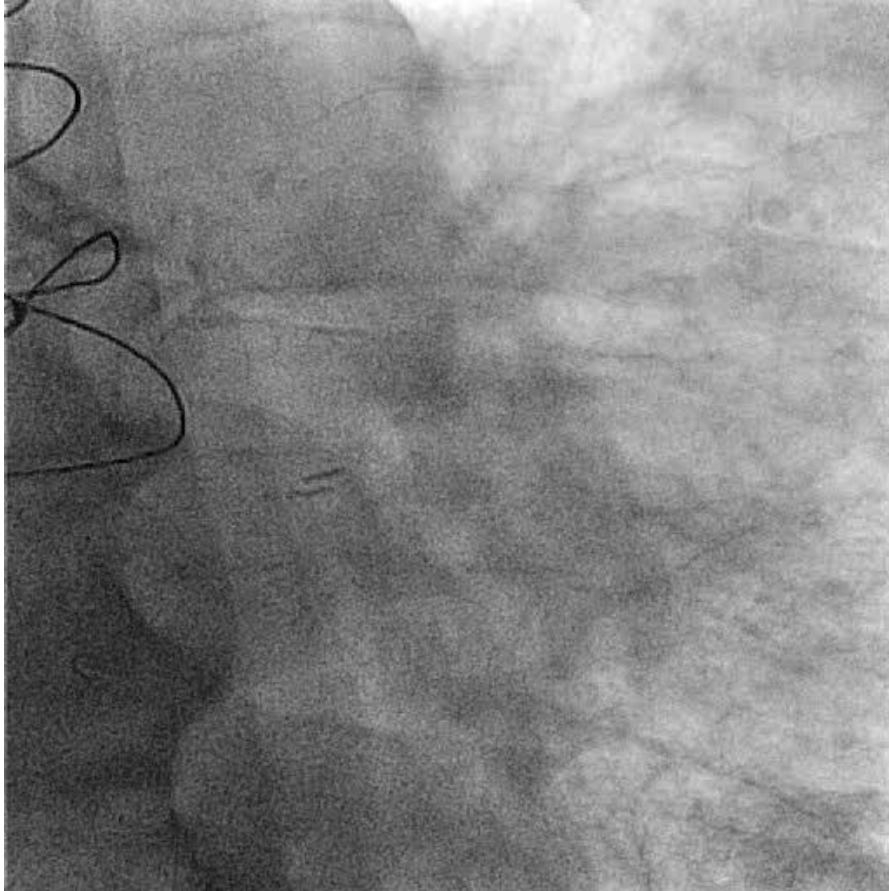
IVUS



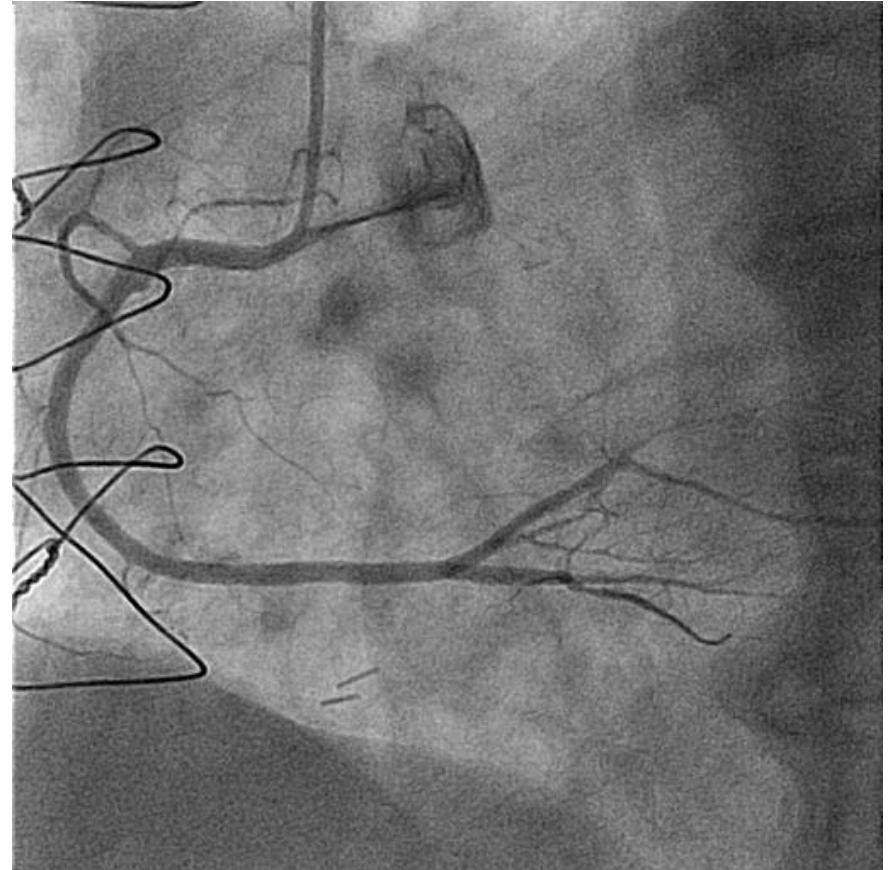
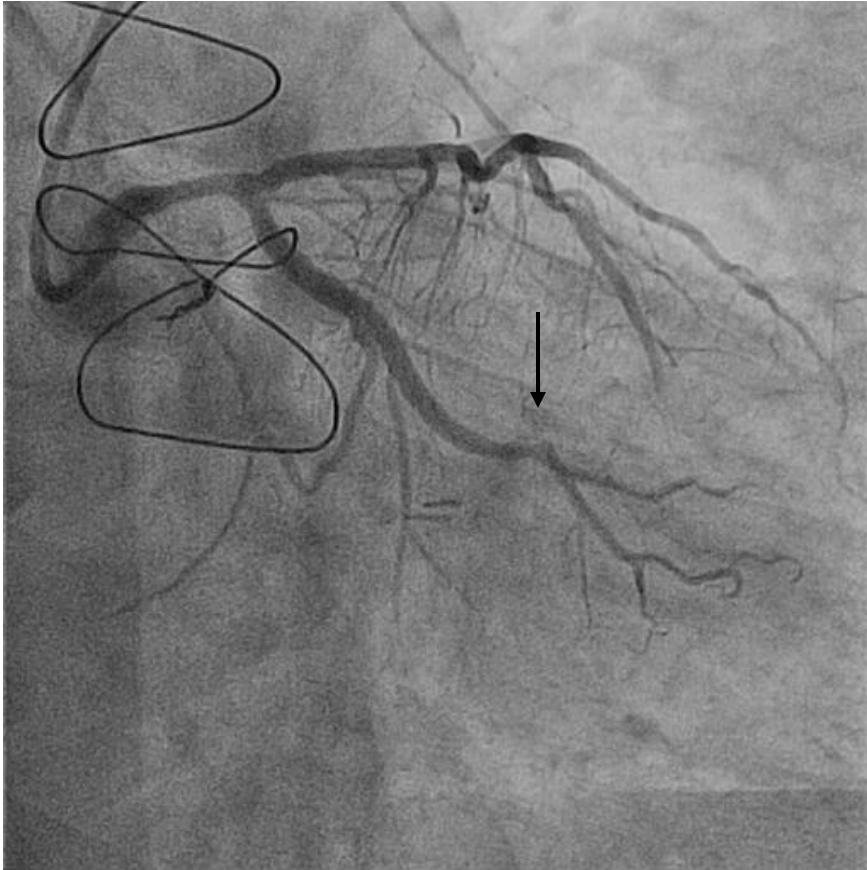
MLA 5.7 mm²
Plaque burden 71%

Decision

- Considered good candidate for CABG
- LIMA to LAD and saphenous vein graft to marginal obtuse with no complications
- Follow-up: angina does not improve after CABG, even with optimal medical therapy
- Coronary angiography is again indicated



June 2013

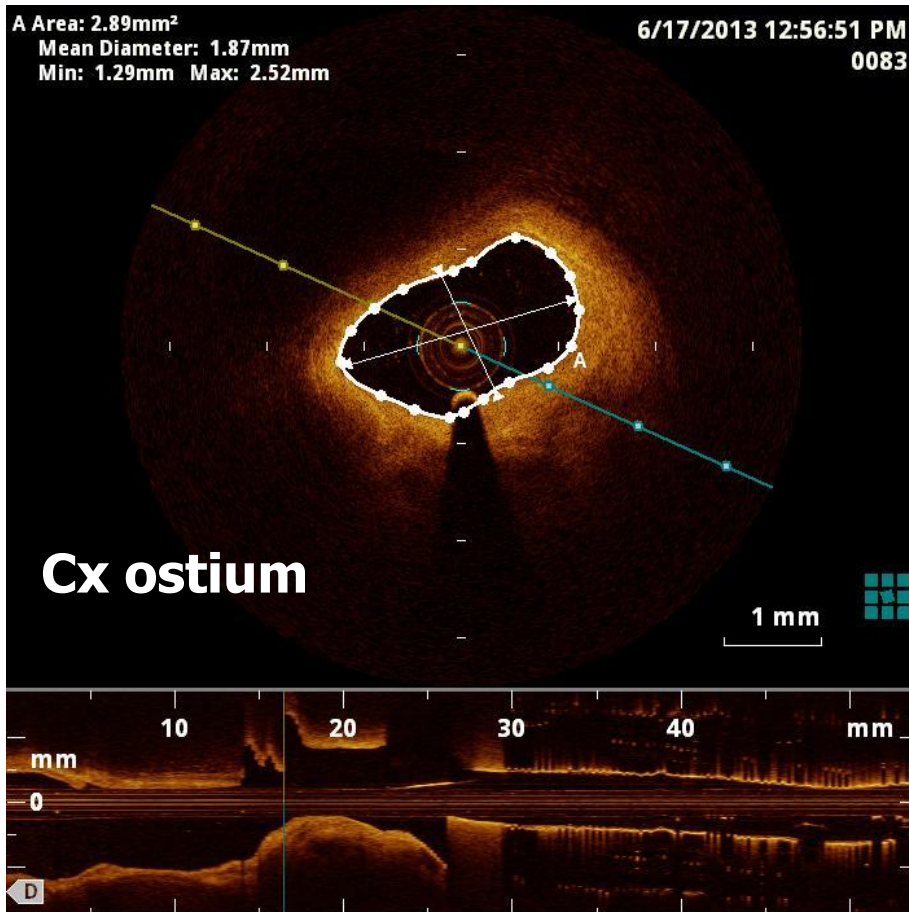


SVG occluded, filiform LIMA with slow antegrade flow

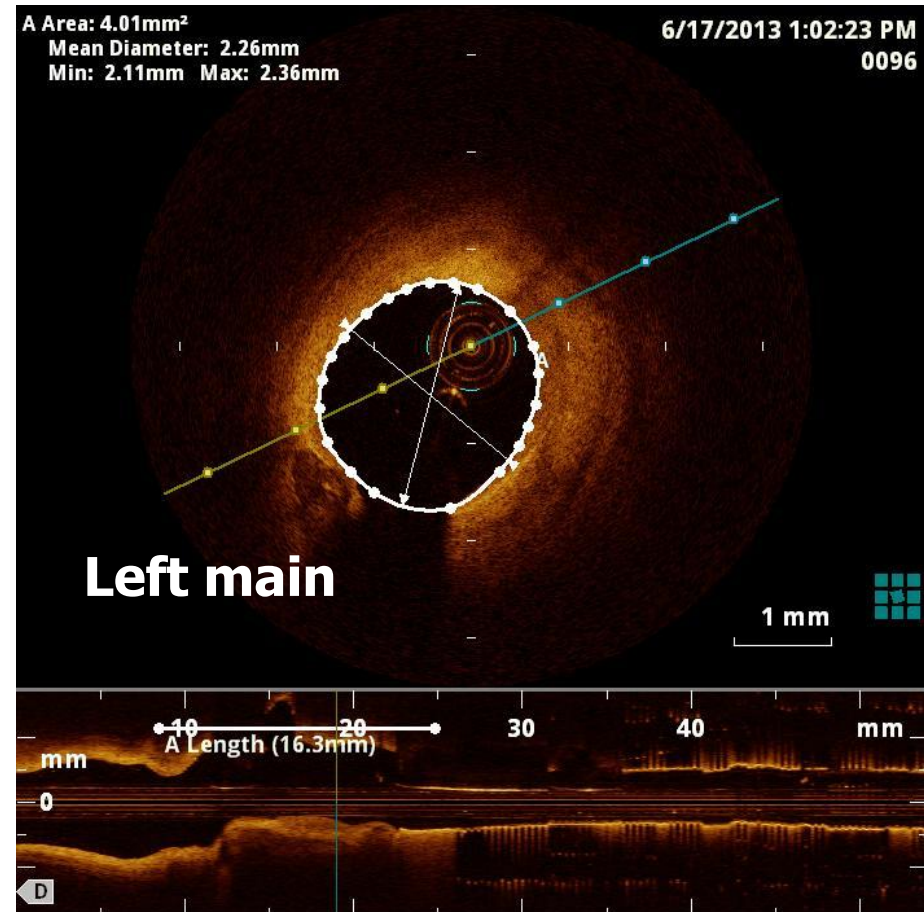
What to do next?

- Redo CABG
- PCI
- FFR

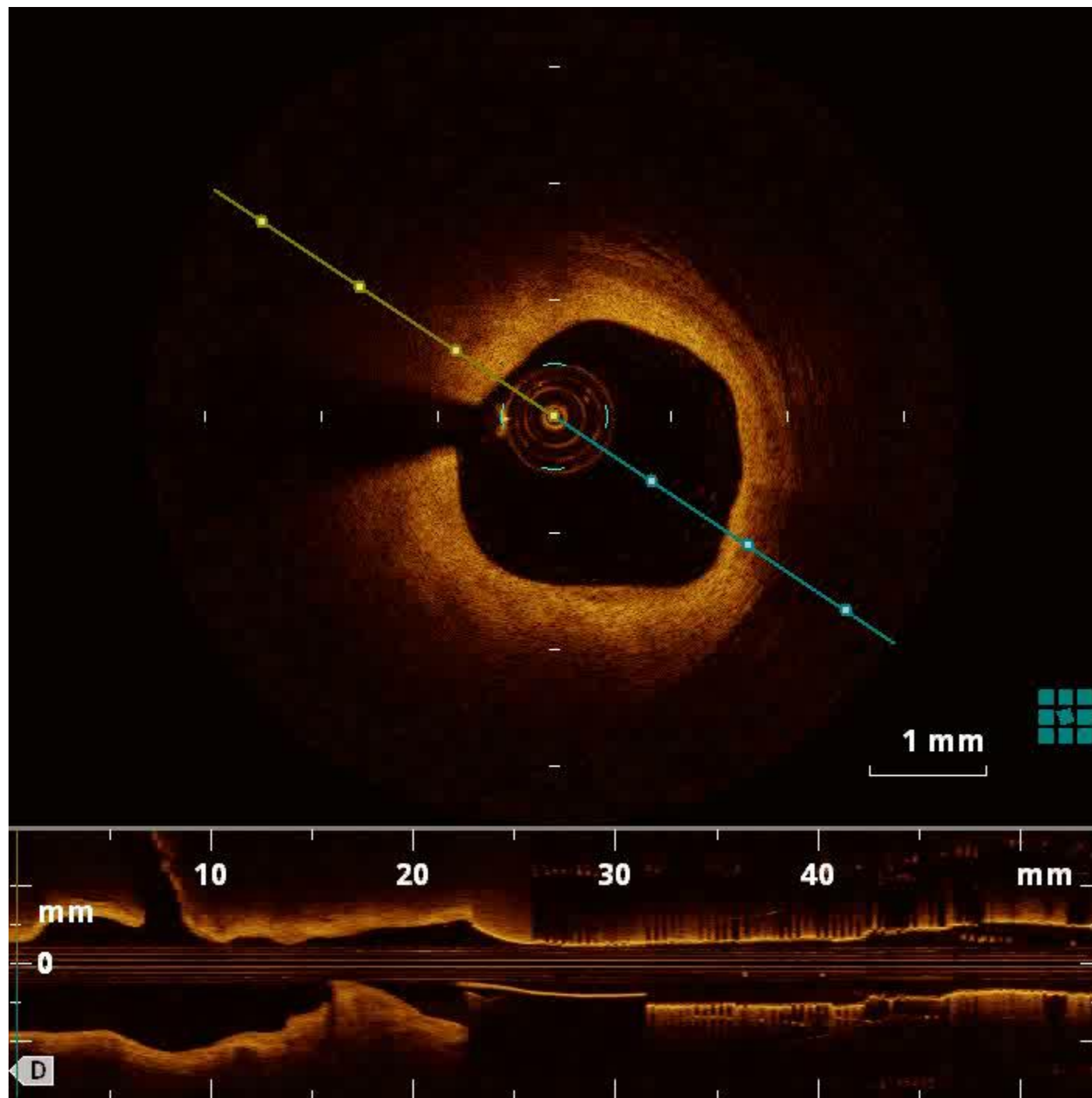
Decision: left main PCI guided with OCT



Pullback from Cx



Pullback from LAD

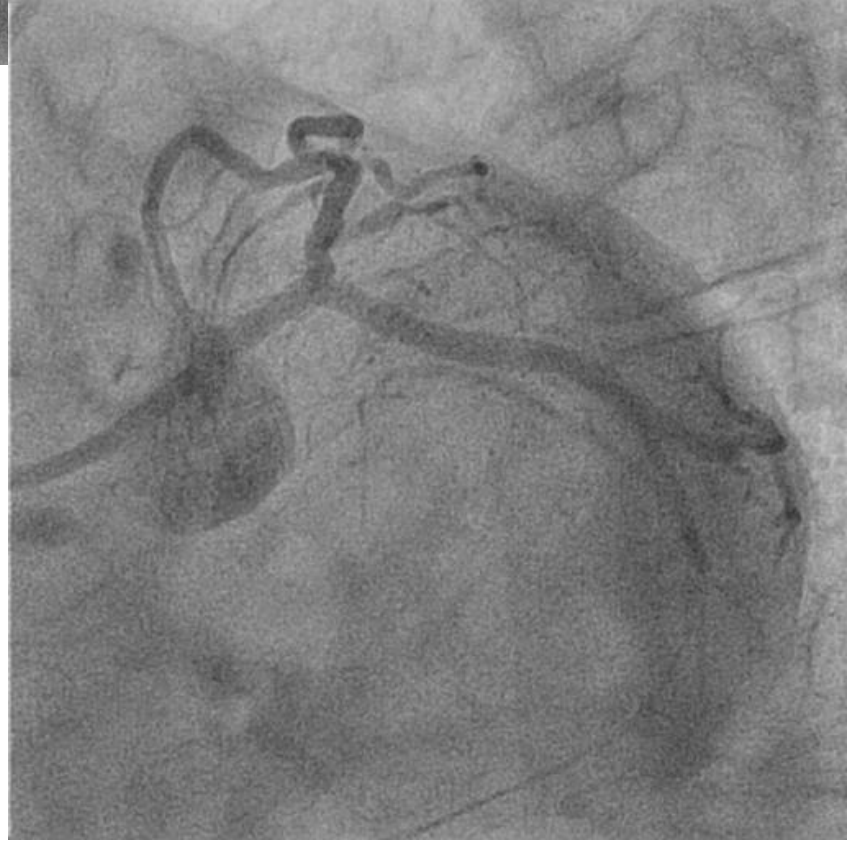
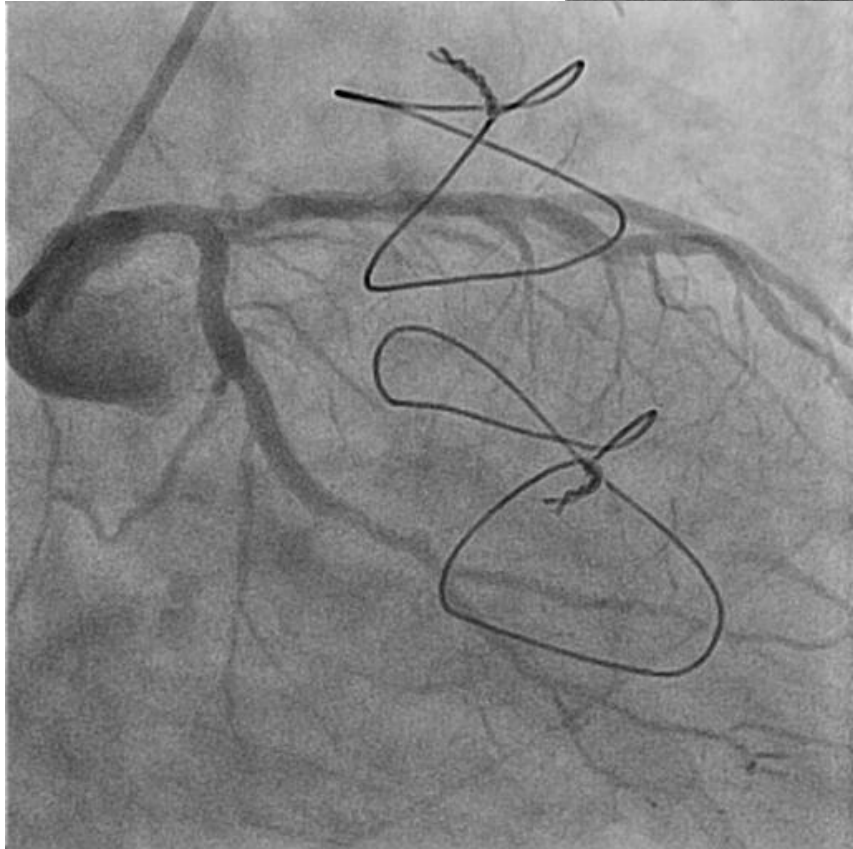


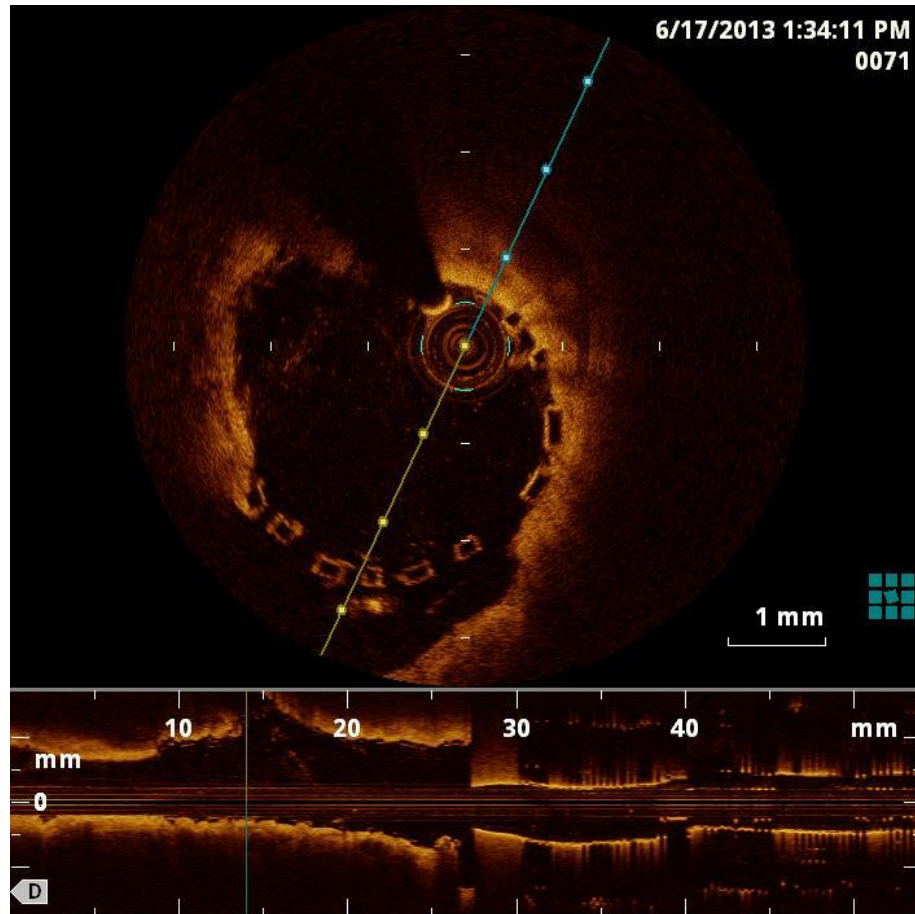
OCT findings

- Severe fibrolipidic plaque in Cx ostium with MLA 2.9 mm²
- Non-significant plaque in LAD ostium
- Diffuse concentric plaque in left main with MLA 4 mm² and not much calcium

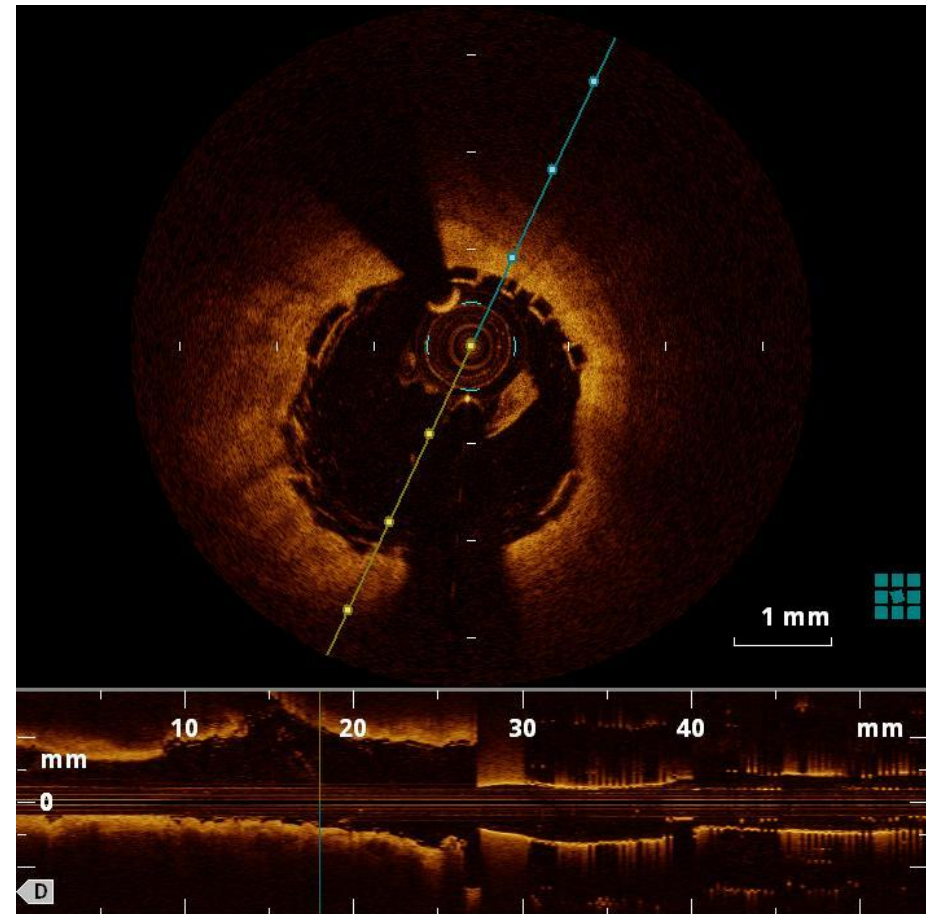
Procedure

- **Provisional stent left main-circumflex:** 3.5/18 mm BVS (Absorb) and NC 4/15 mm balloon to 16 atmospheres

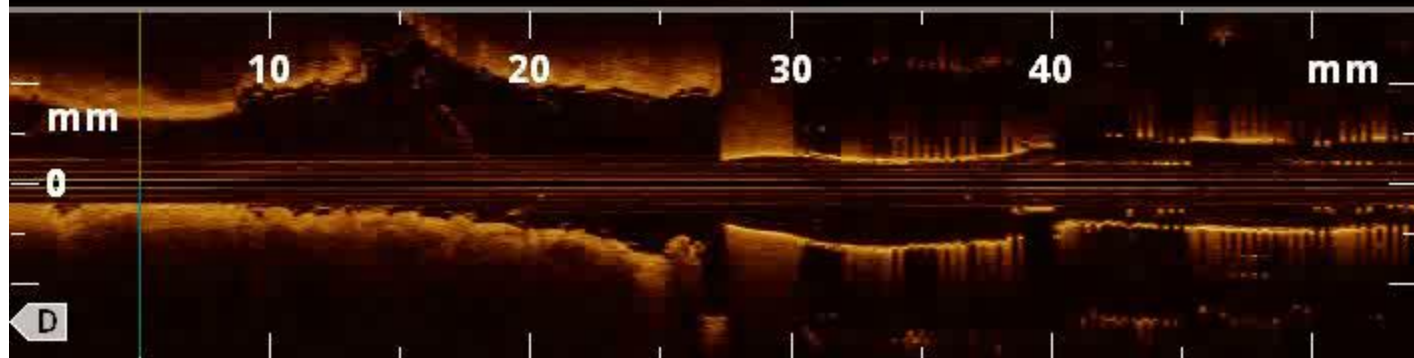
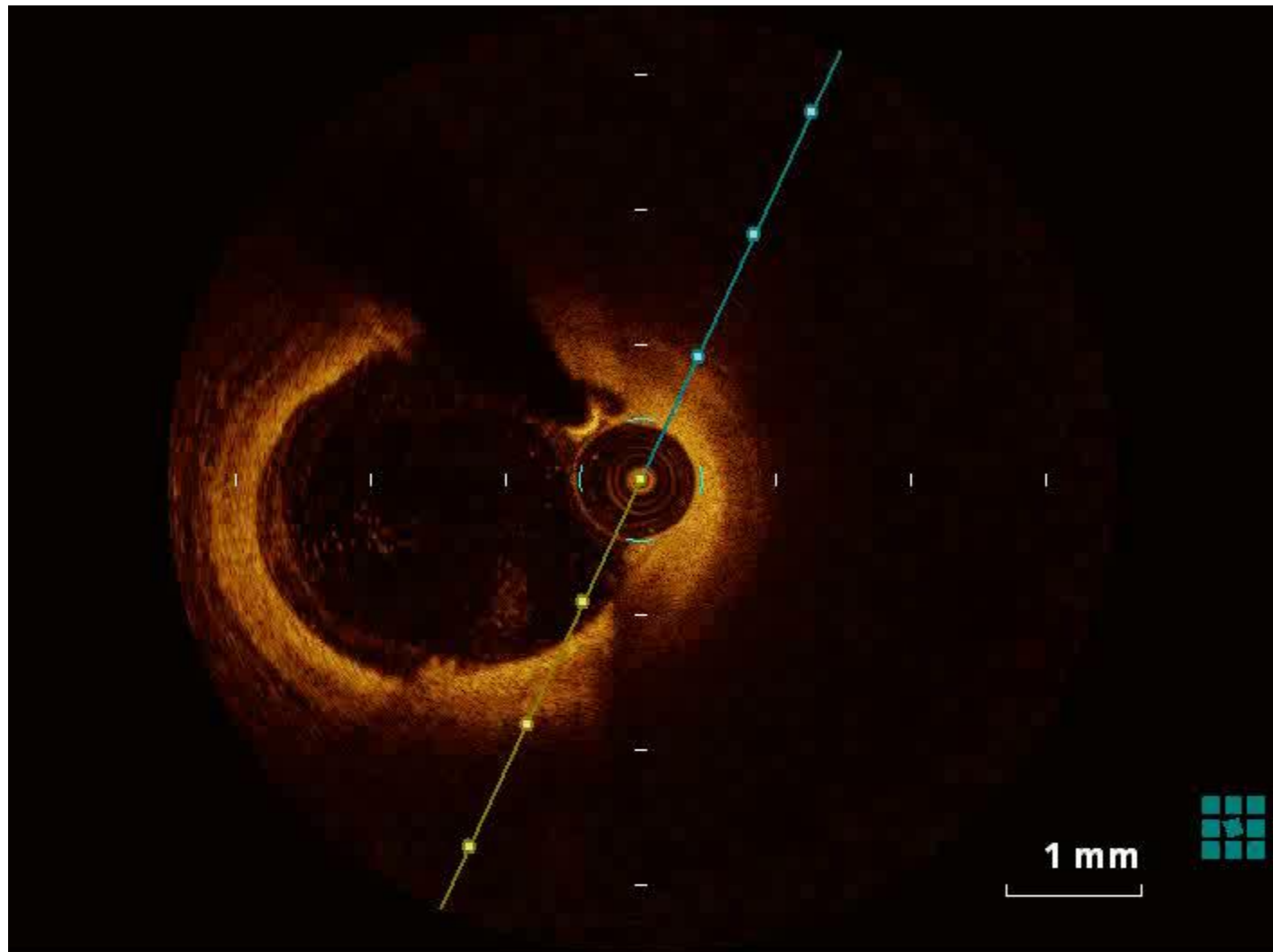




Cx ostium and LAD



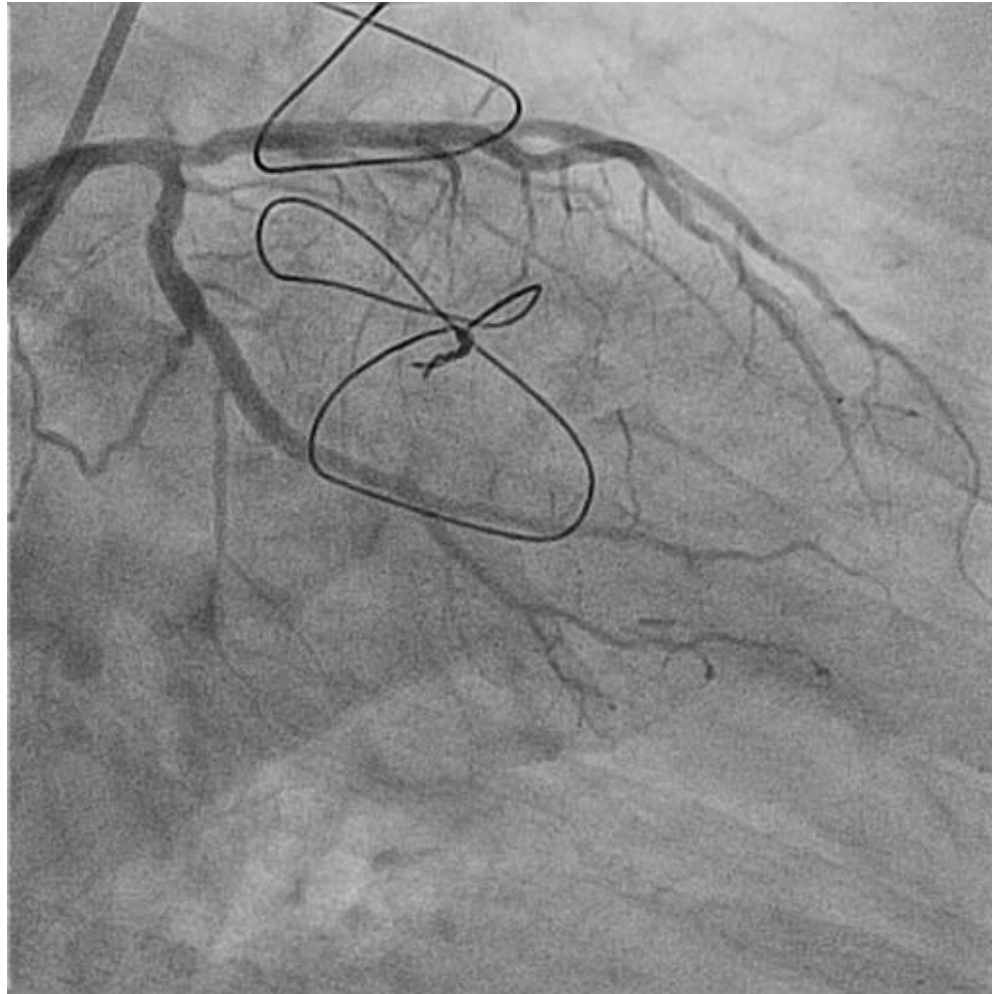
Left main MLA 7.5 mm²



Follow-up

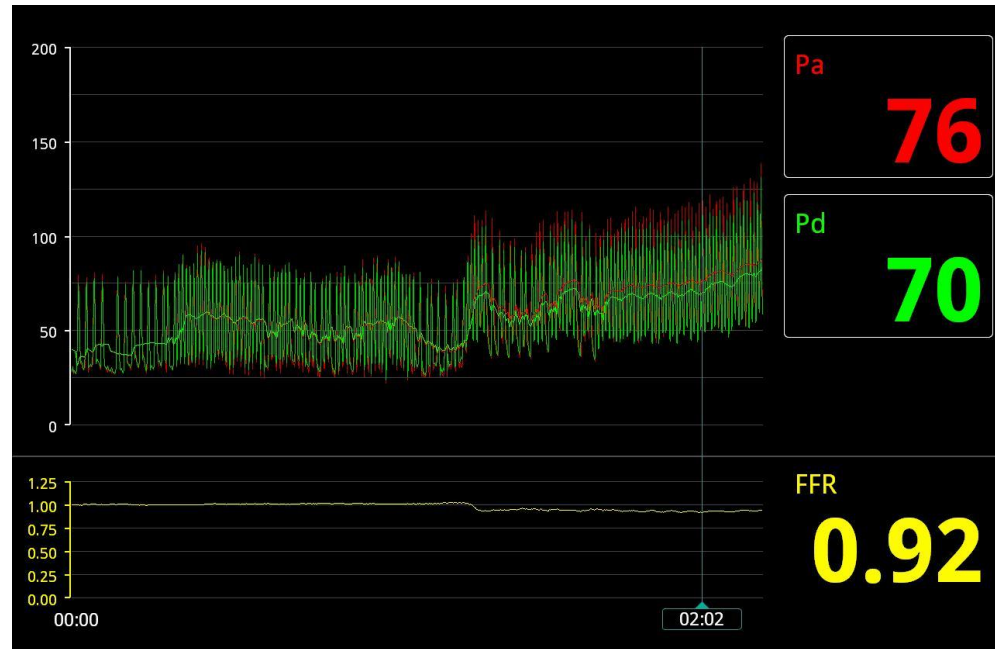
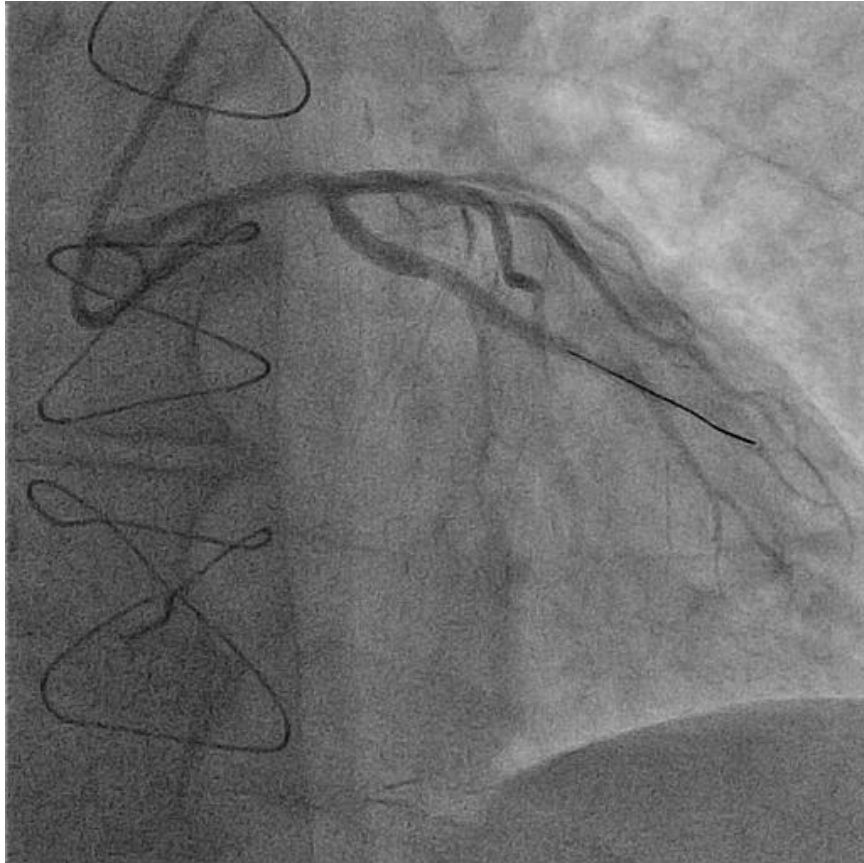
- Patient is discharged uneventfully
- Returns to hospital 2 months later with persistent angina despite intensive OMT (betablockers, ivabradin, nitrates)
- No ECG changes, no troponin rise
- Negative stress test
- Gastroesophageal study without abnormal findings
- A new coronary angiography is indicated

September 2013



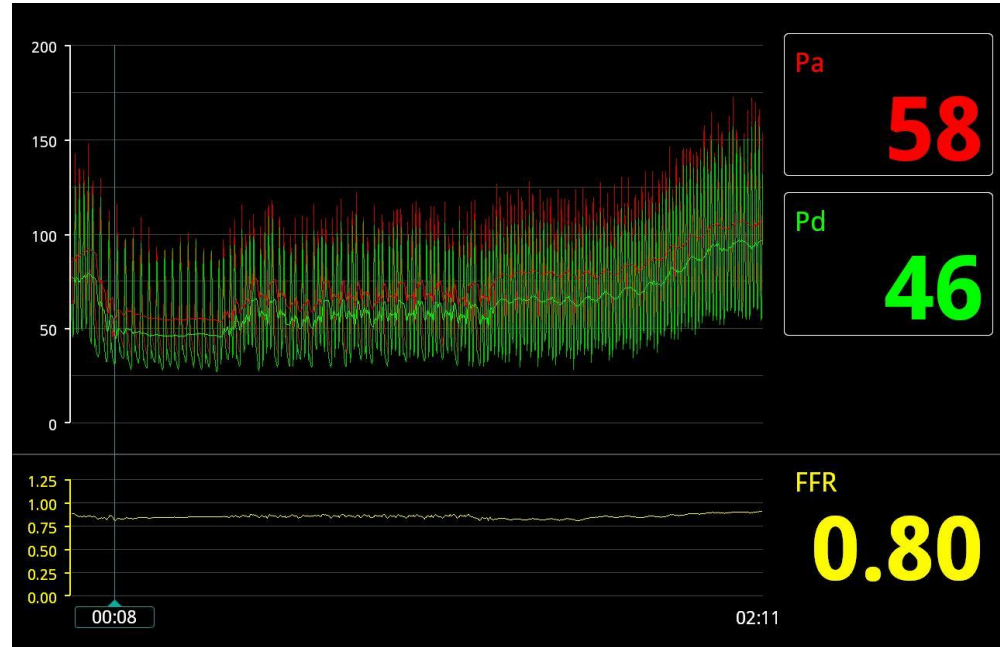
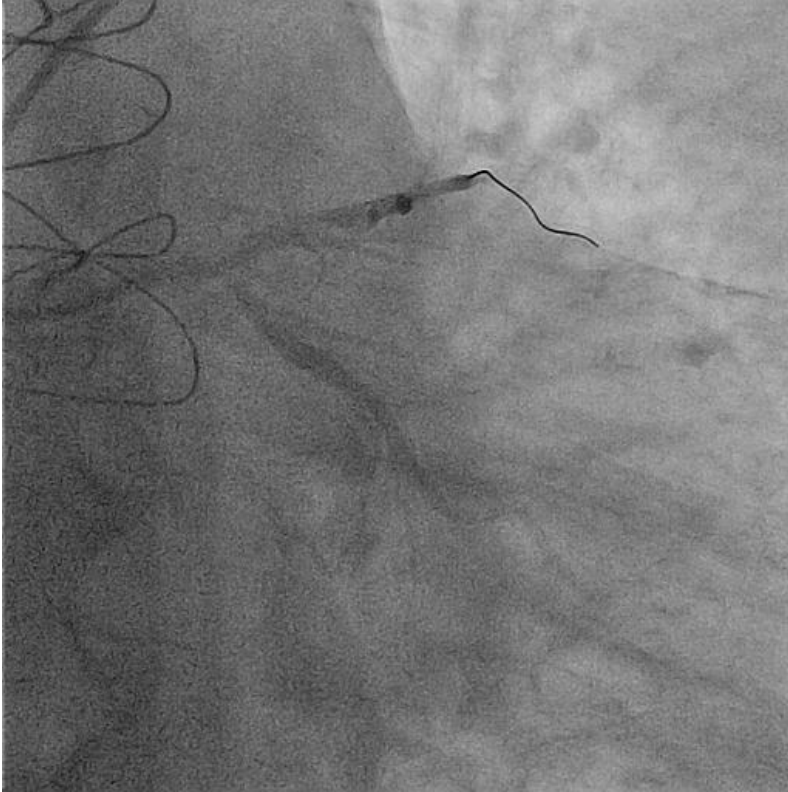
Angiographically similar appearance

FFR



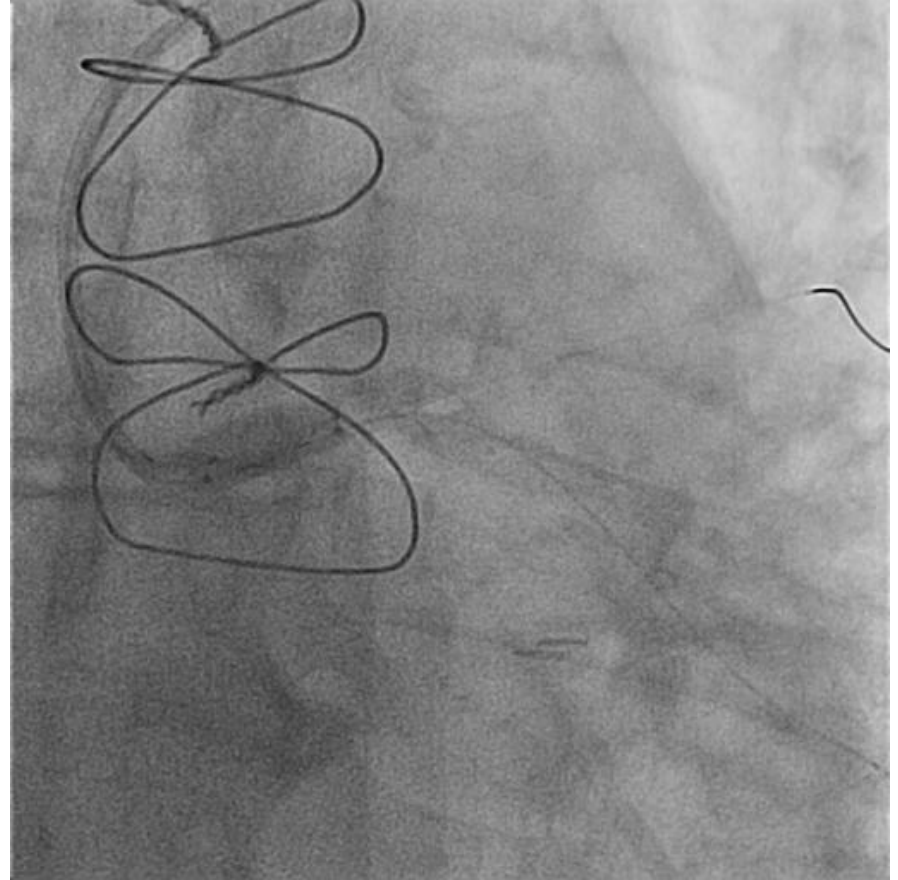
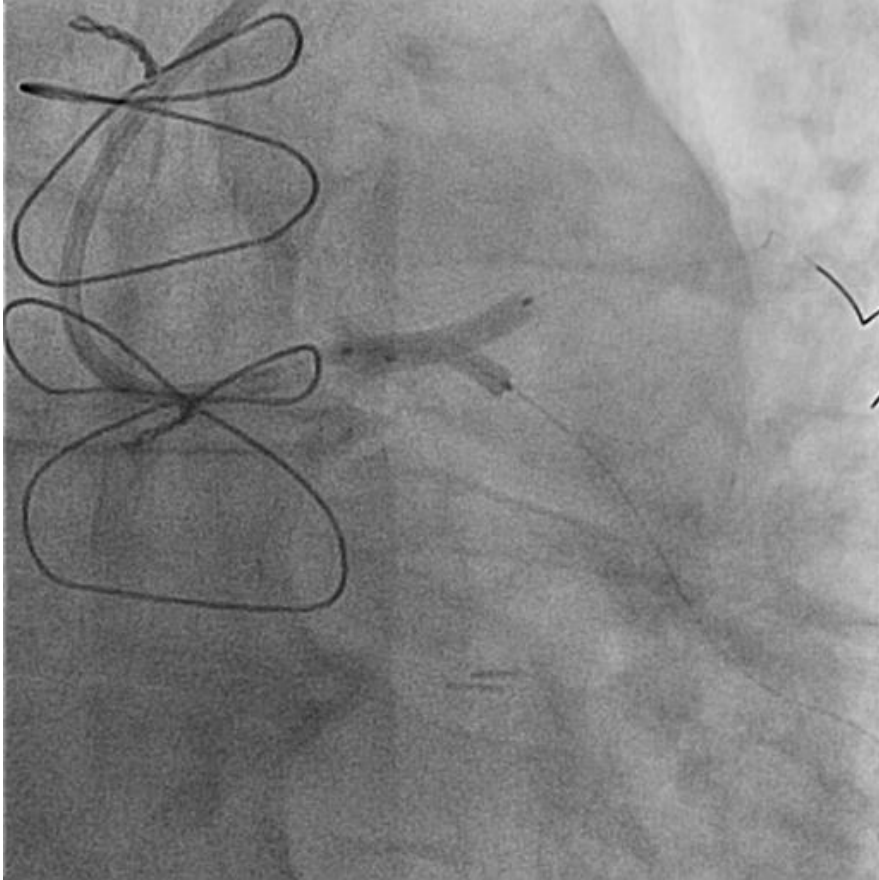
Cx with adenosine i.v.

FFR

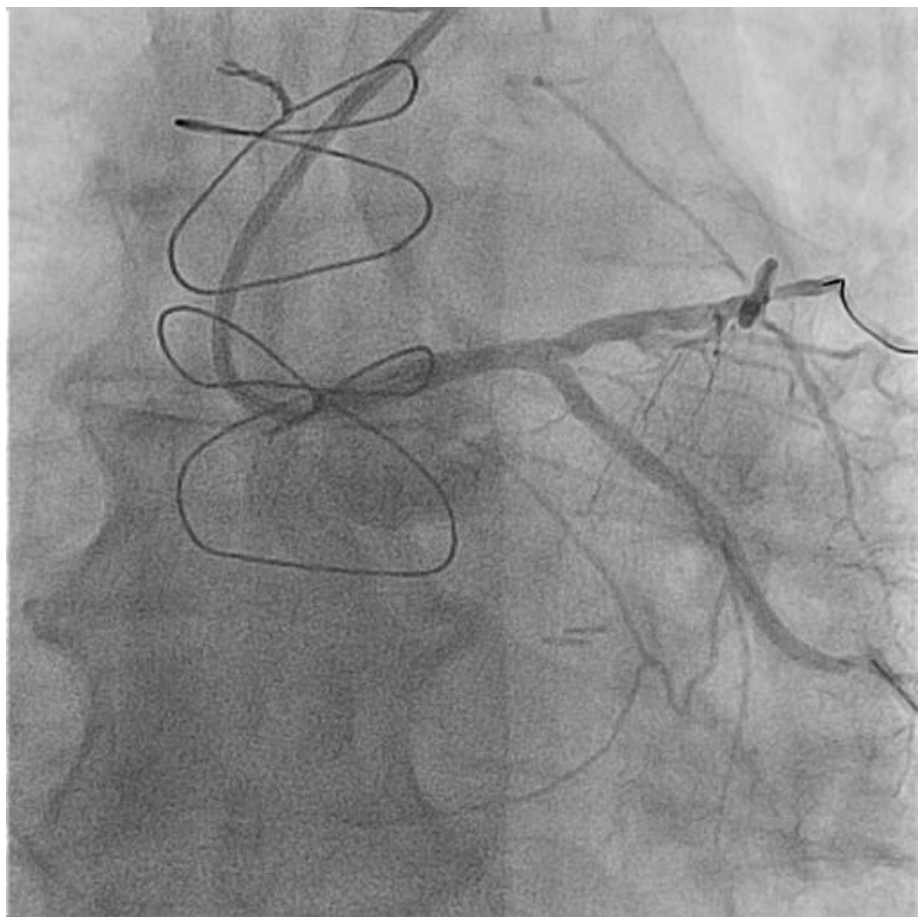
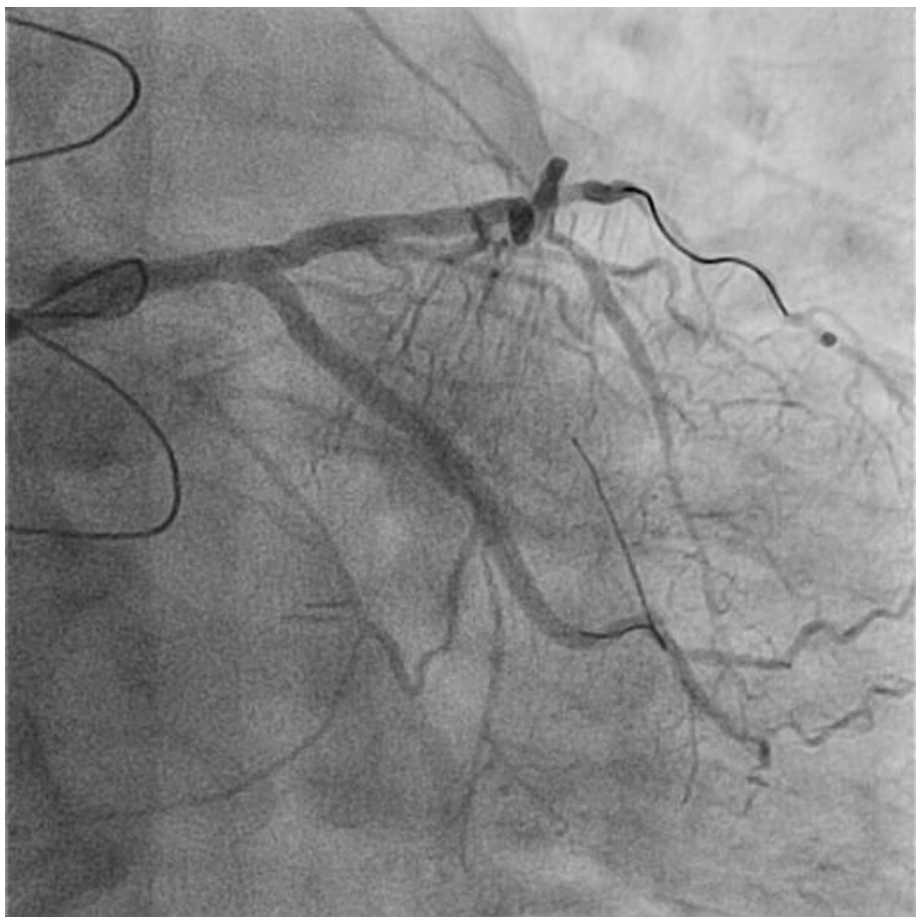


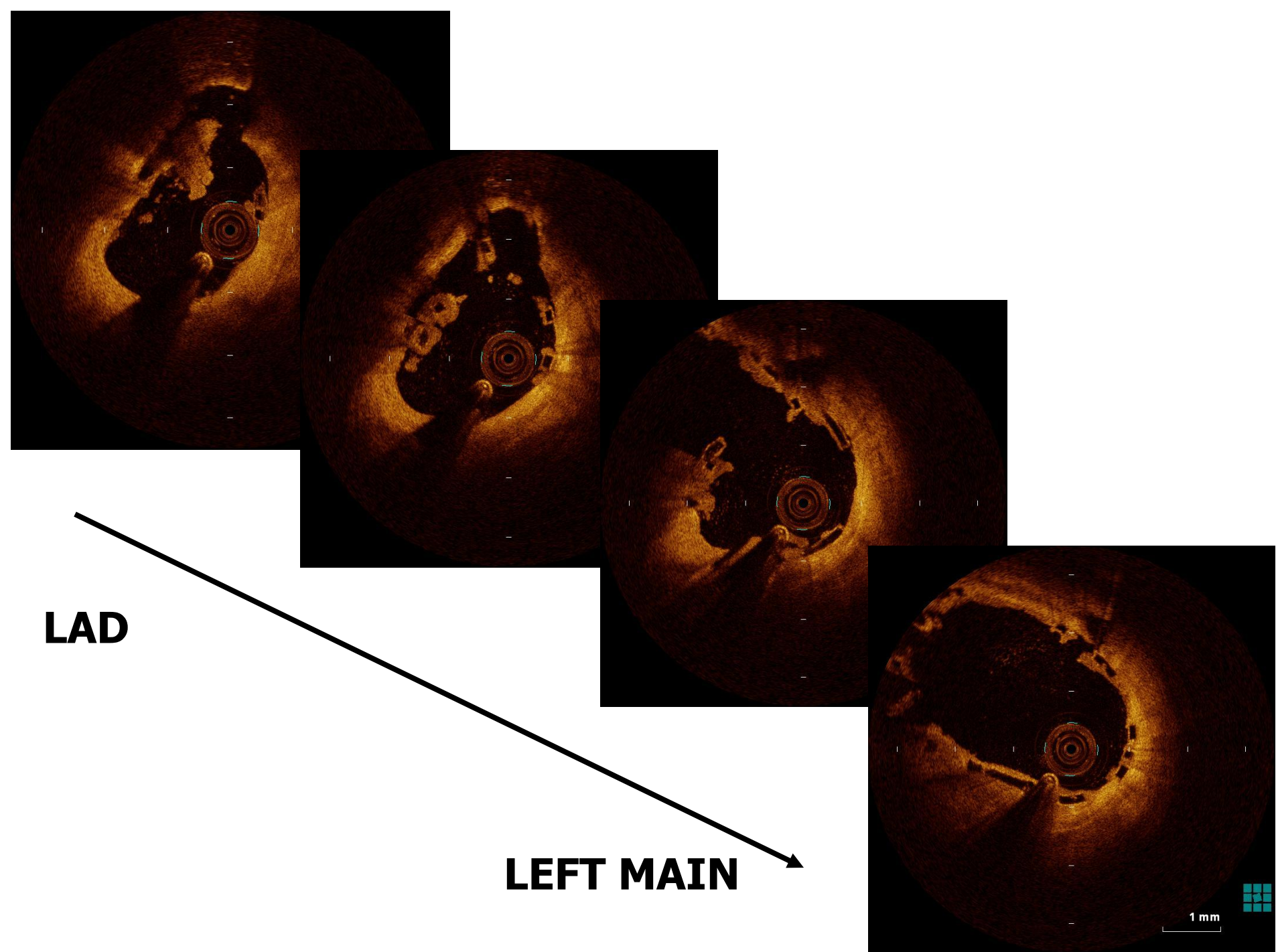
LAD with adenosine i.v.

PCI

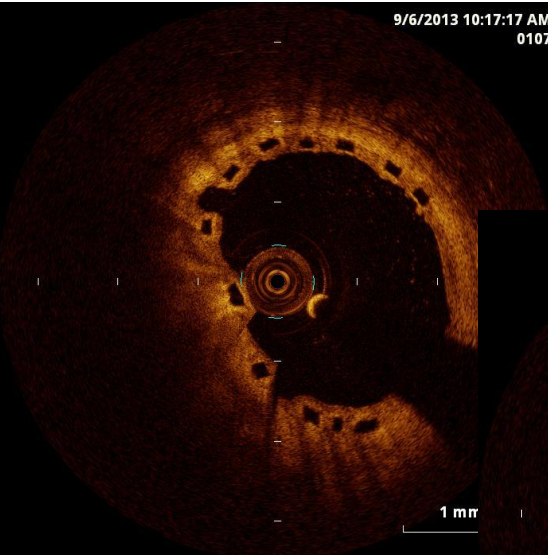


Kissing balloon in bifurcation and in left main

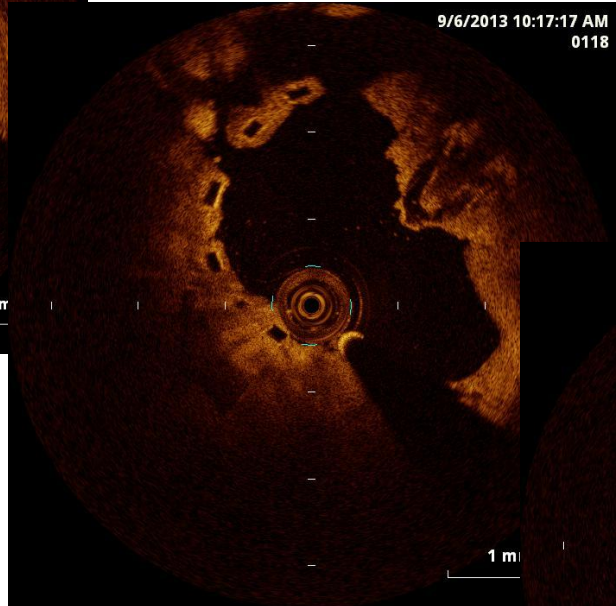




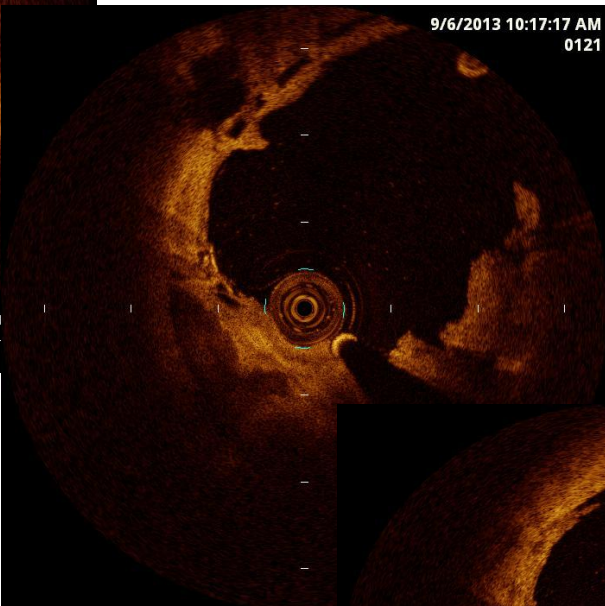
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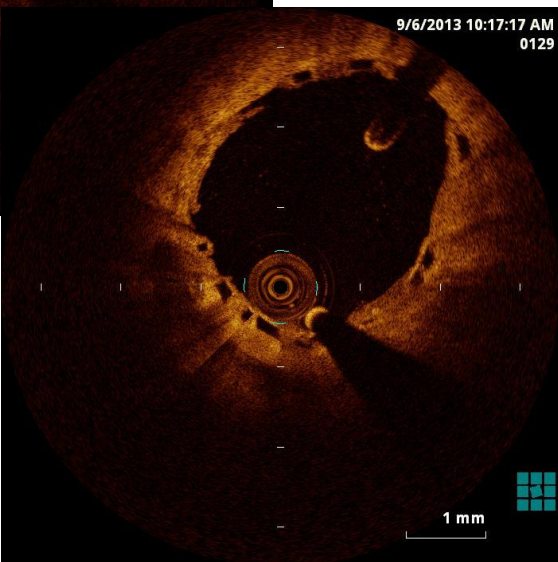
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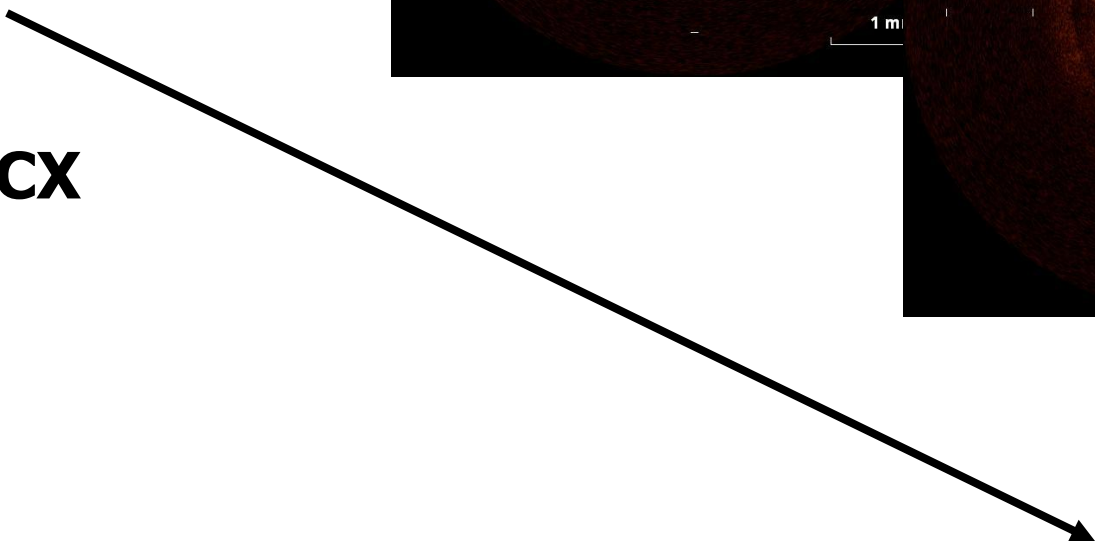
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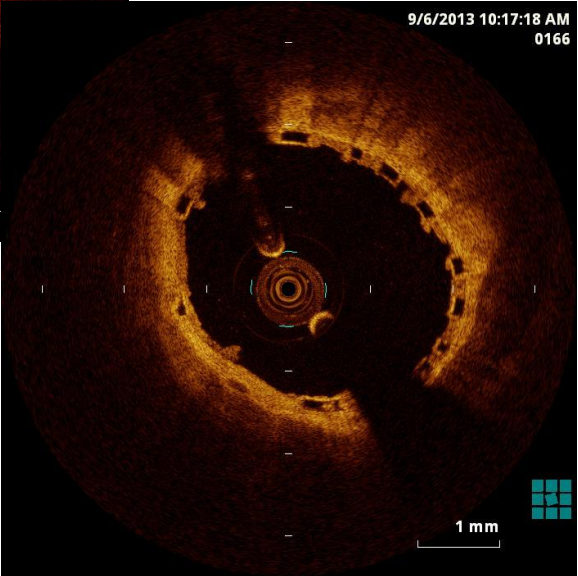
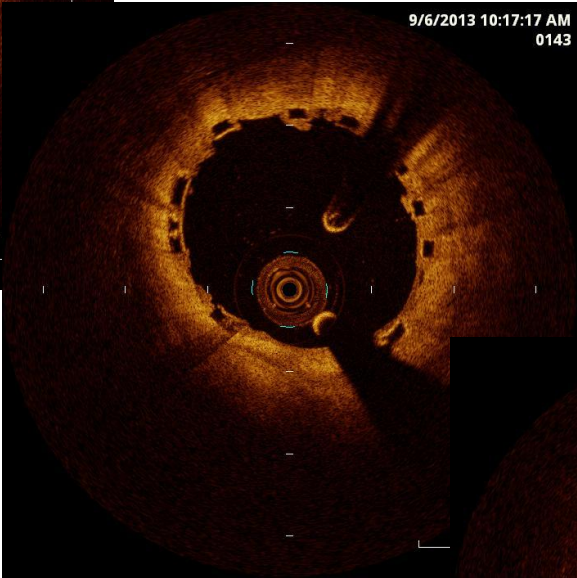
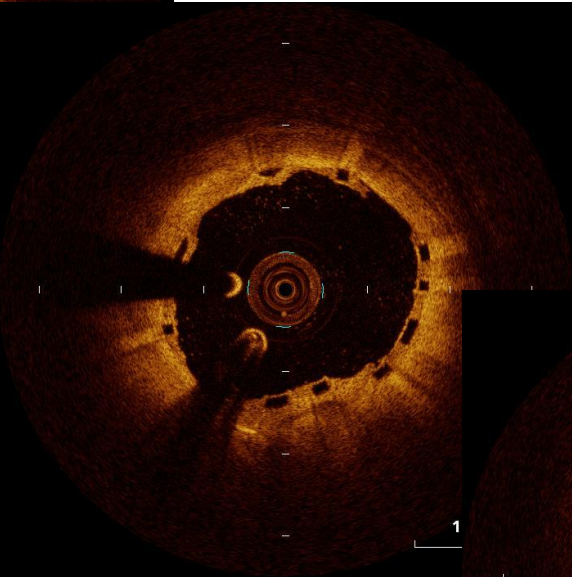
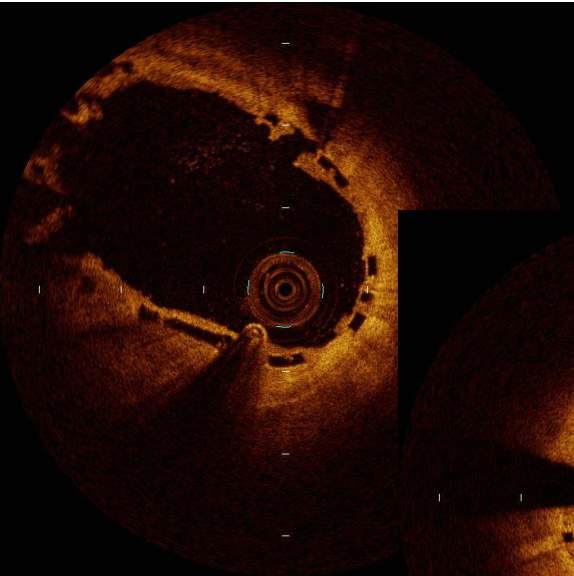
CX



LEFT MAIN



LEFT MAIN



Follow-up

- Patient was discharged asymptomatic
- Treatment with betablockers, aspirin + clopidogrel, statins, nitrates
- Last visit (April 2014): patient is doing well, with no angina

Questions

- Did we do things right from the beginning?
- What is the value of FFR in bypassed vessels?
- What is the value of FFR in jailed side branches?

