MLCTO ACADEMY
RESEARCH - EDUCATION

SIZE IT DOWN

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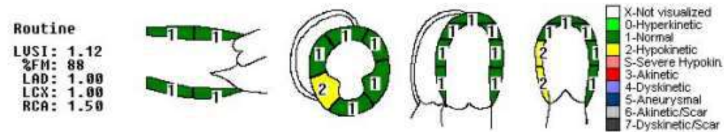
Background history

- 62 years old gentleman
- Co- morbids: Diabetes mellitus, hypertension
- Presentation: Non-STEMI
- Echocardiography revealed EF-56%
- Coronary Angiogram done reveals 3VD- surgical turndown due to no suitable targets. Multivessel PCI done



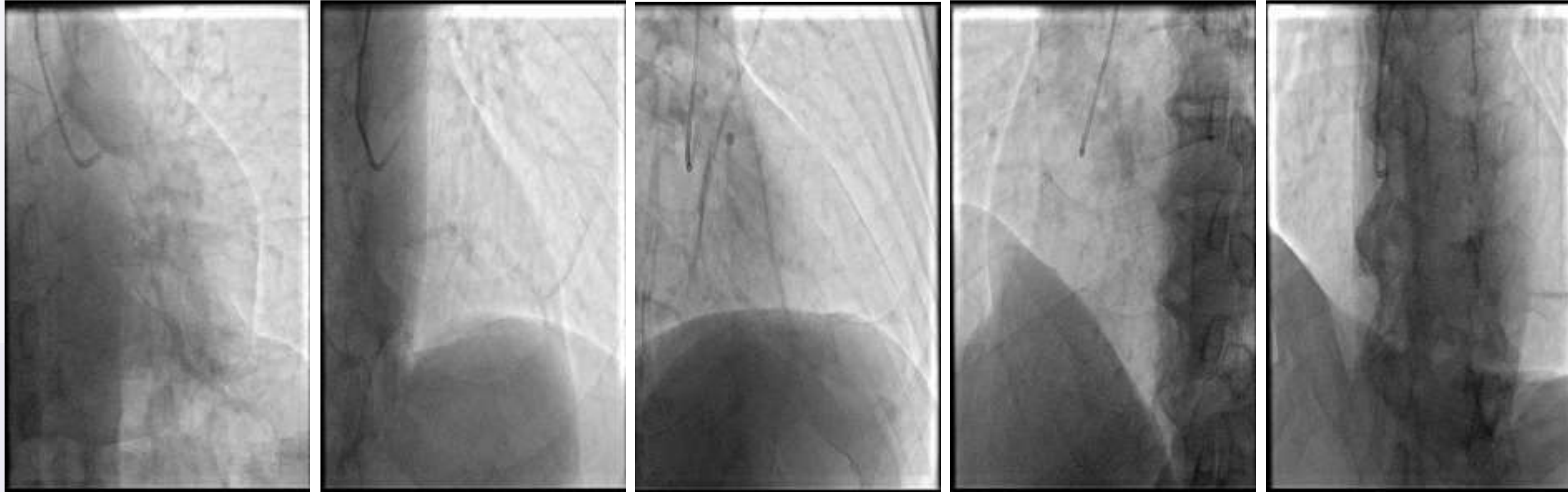
Critical Findings No

Left Ventricle

Normal left ventricular size (LVIDd = 4.3 cm), (LVIDs = 3 cm).
Biplane EF = 54%. Regional wall motion abnormalities seen.
Normal LV wall thickness (IVSd = 0.9 cm).
No LV thrombus.

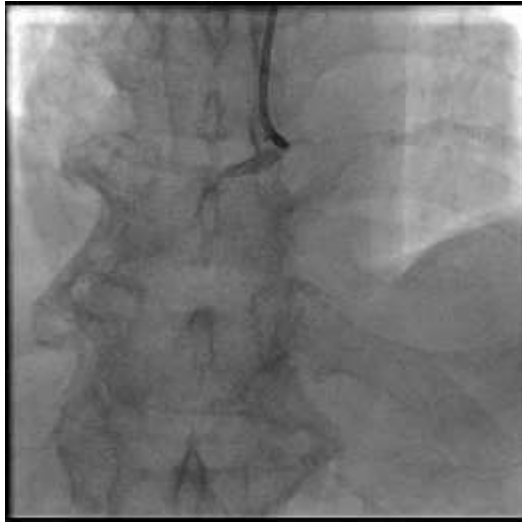
Normal diastolic function. E/e' Septum: 13. E/e' lateral: 8

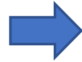
Coronary Angiogram

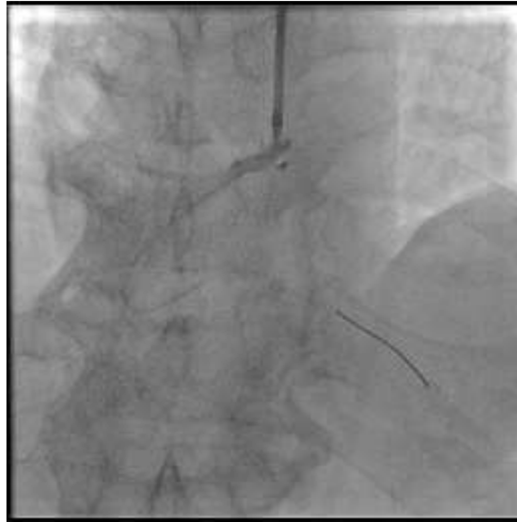


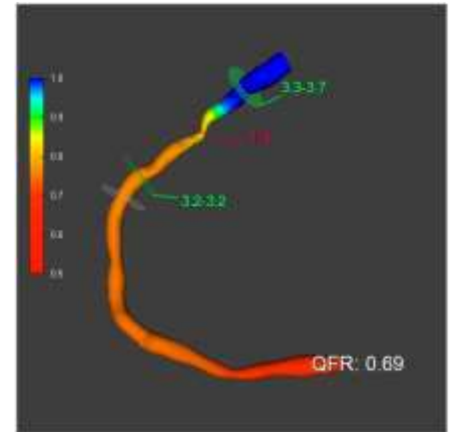
- Left Main Stem : Smooth
- Left Anterior Descending : Diffuse proximal disease 80% and Chronic Total Occlusion at mid with collaterals ipsilaterally and from RCA
- Left Circumflex Artery : Diffuse proximal to mid Left Circumflex Artery 80-90 % stenosis extending into OM
- Right Coronary Artery : Dominant, Diffuse disease 70% stenosis proximal RCA, subtotal (99% stenosis) at PLV and diffuse disease at rPDA

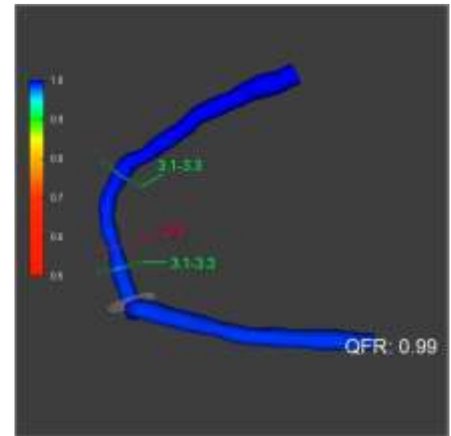
PCI to RCA- 1st procedure





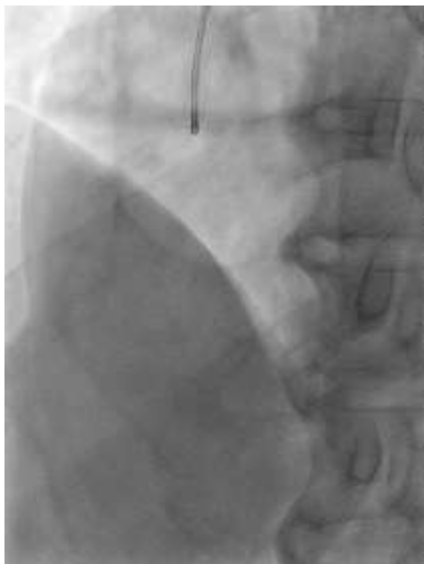




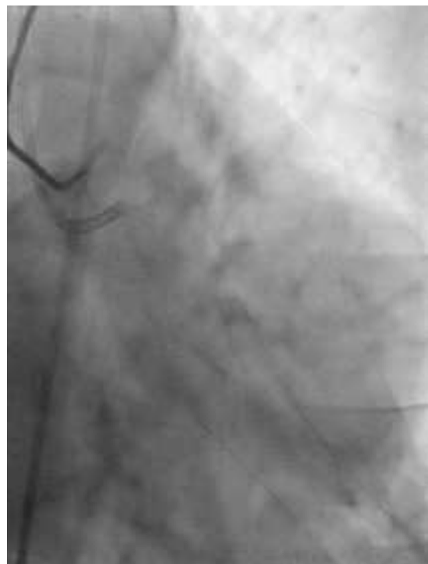


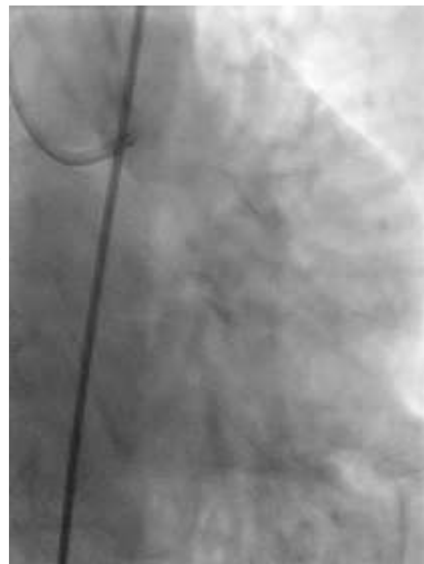
- DES: 3.0/12mm at proximal, postdilated with 3.25 NC to high pressure
- DES: 3.0/18mm at distal
- DCB: 2.0/30mm at distal RCA-> pLV
- DCB: 2.0/30mm at distal RCA-> rPDA

PCI to LCx (DCB) + POBA OM and restudy RCA- 2nd procedure- 6 weeks later

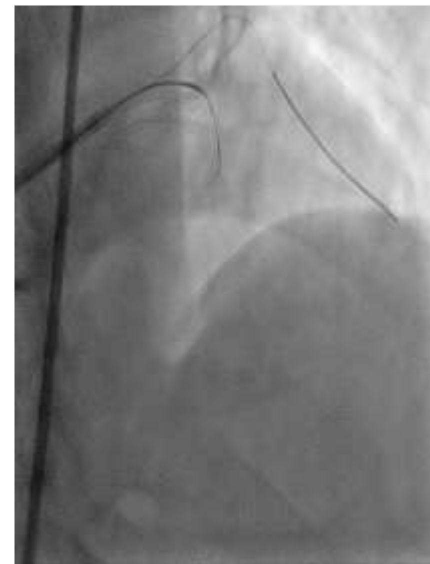


Positive remodelling at DCB site



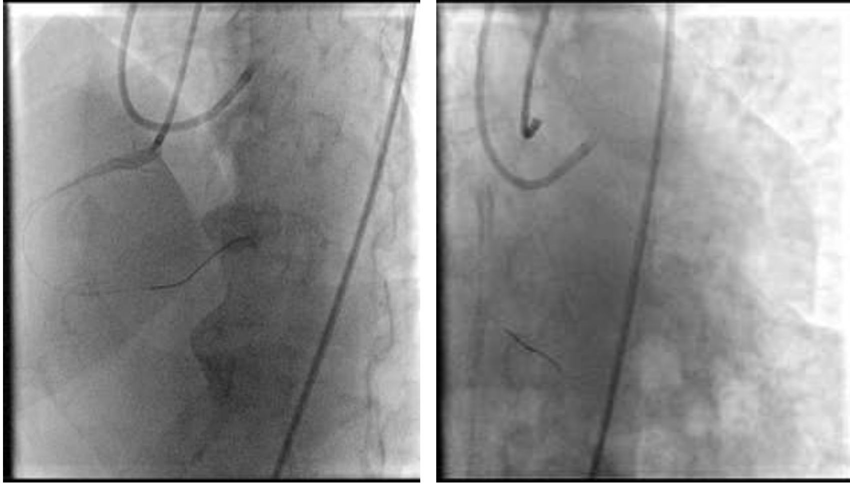


DCB 2.25/30mm across LCX for 60 seconds after adequate lesion preparation and POBA OM with 2.0mm SC Balloon

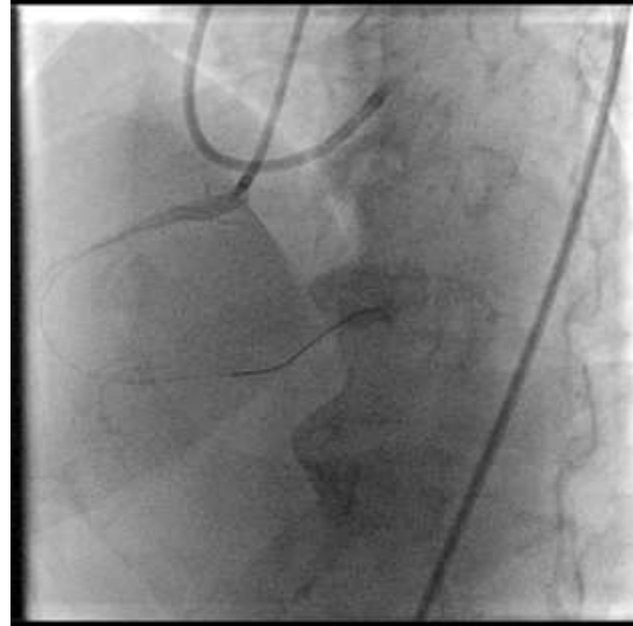


Unsuccessful attempt to cross CTO LAD

Reattempt PCI to CTO LAD and restudy RCA +LCX after 3 months



Further positive remodelling at DCB site



Lesion in diagonal progressed to be CTO
CTO LAD: ambiguous cap, long, J-CTO score-2

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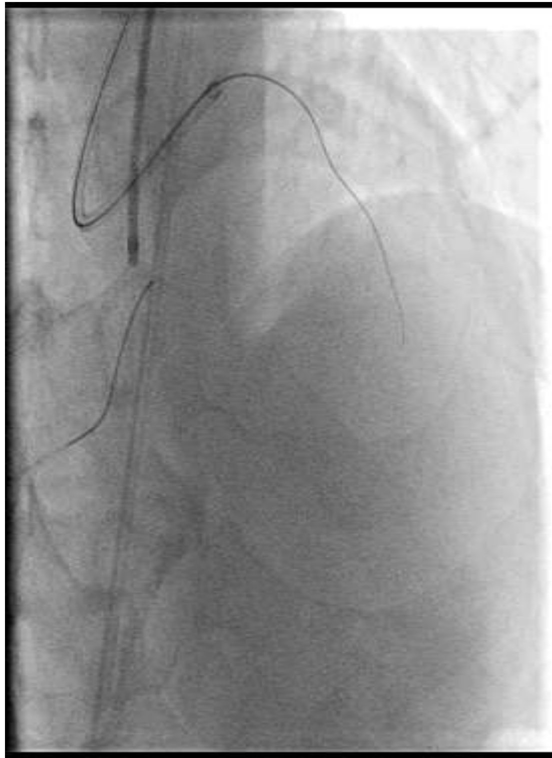

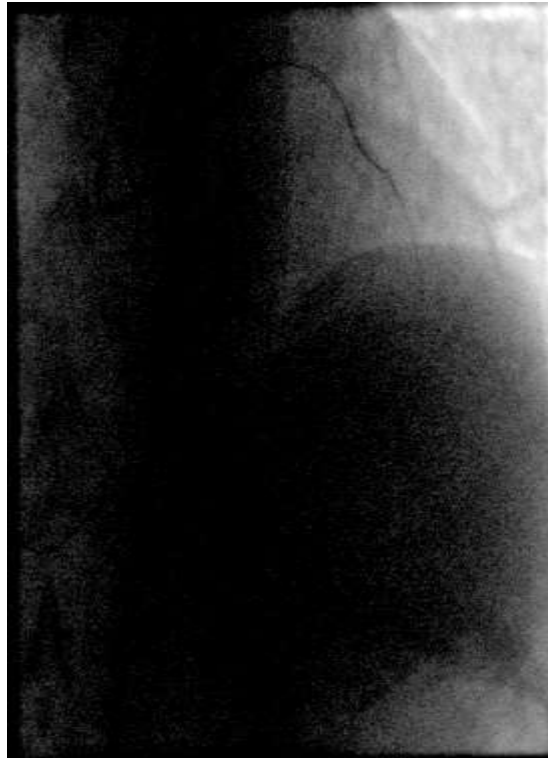

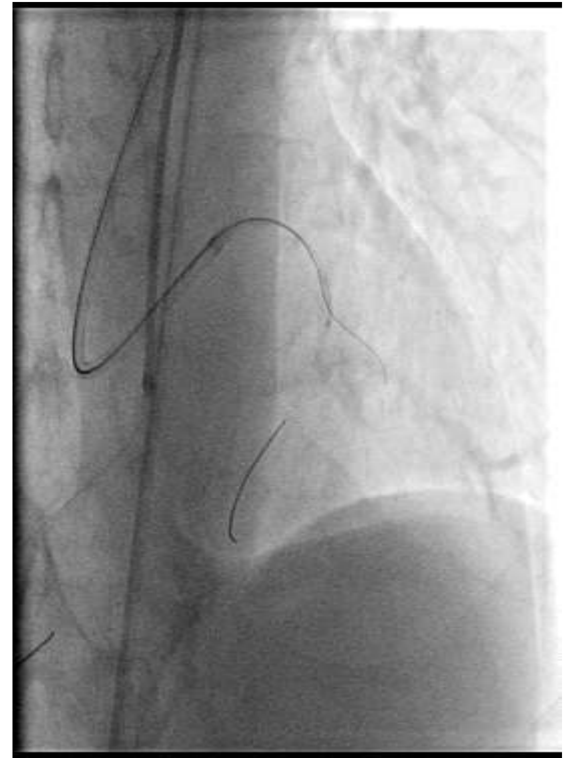

CTO diagonal crossed with Fielder XT

Wired septal with workhorse wire and predilated with Ryurei 1.5/10mm

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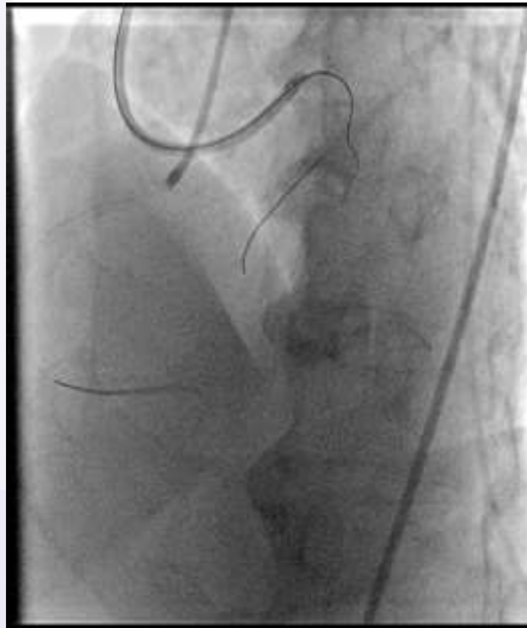
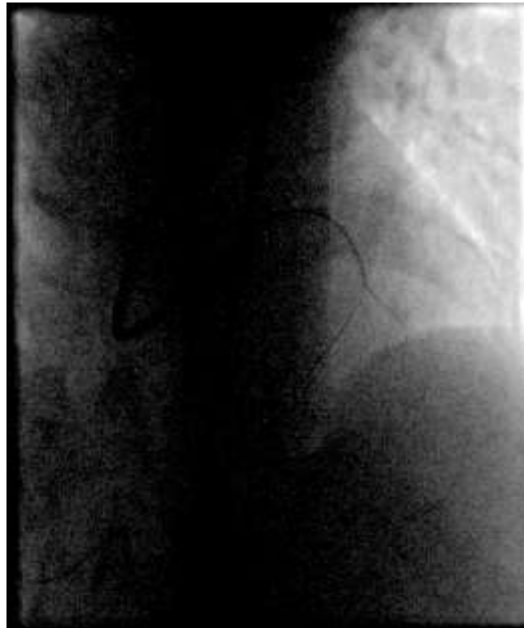
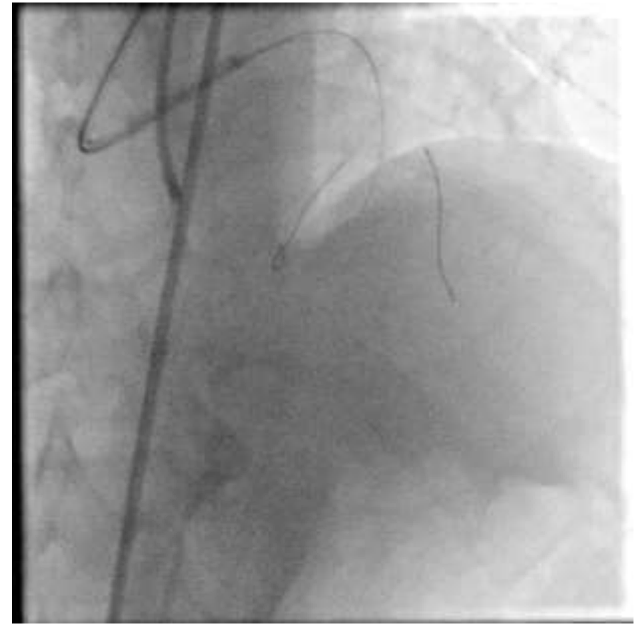



Wire in CTO diagonal was extraplaque, wired down using parallel wire and lesion preparation across septal and diagonal carefully avoiding flow limiting dissection



Multiple attempts to wire LAD failed with Fielder XT- kept tracking into extraplaque space

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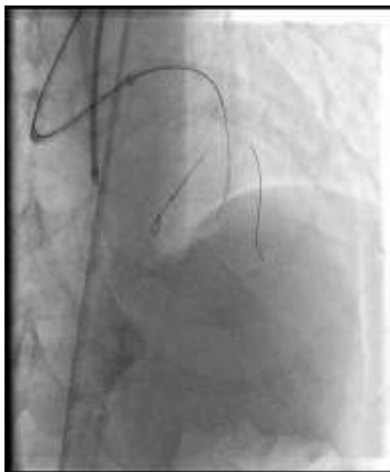
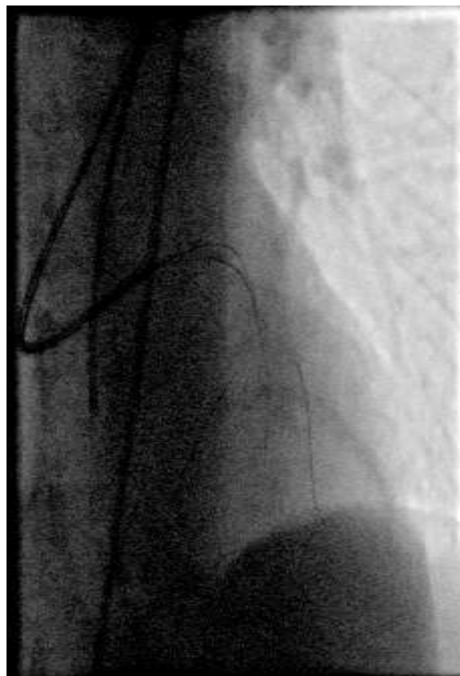
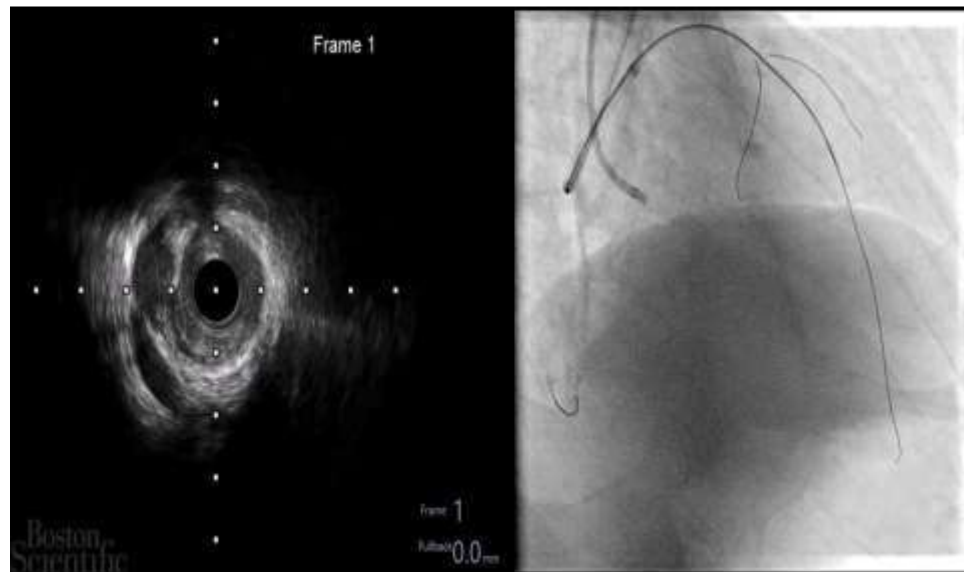
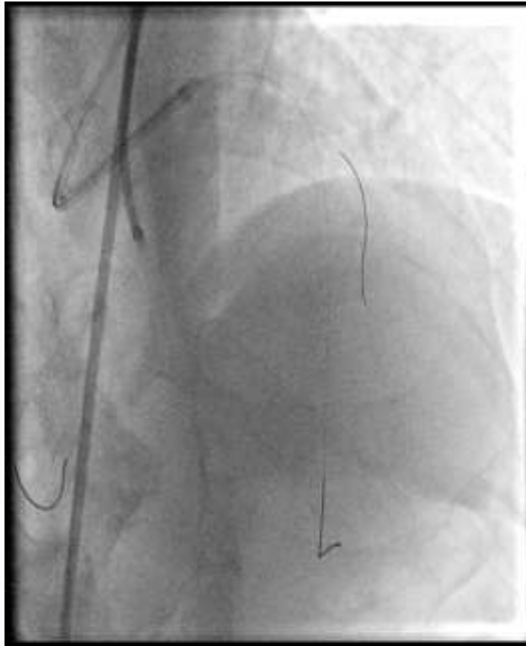


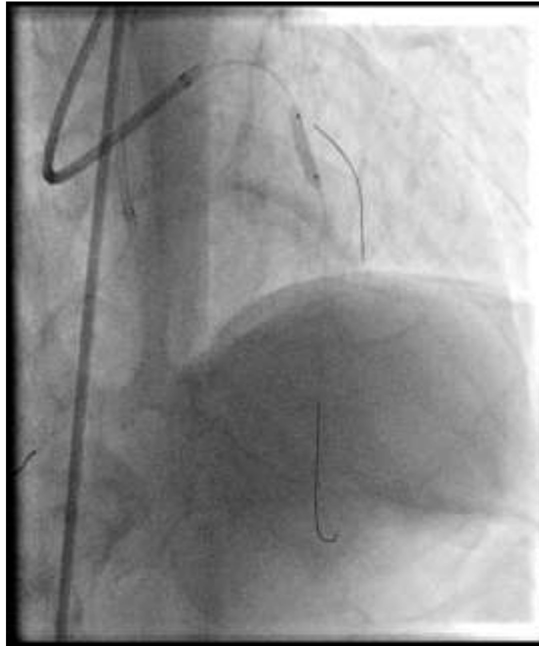
IVUS across septal confirms wire entry at extraplaque space



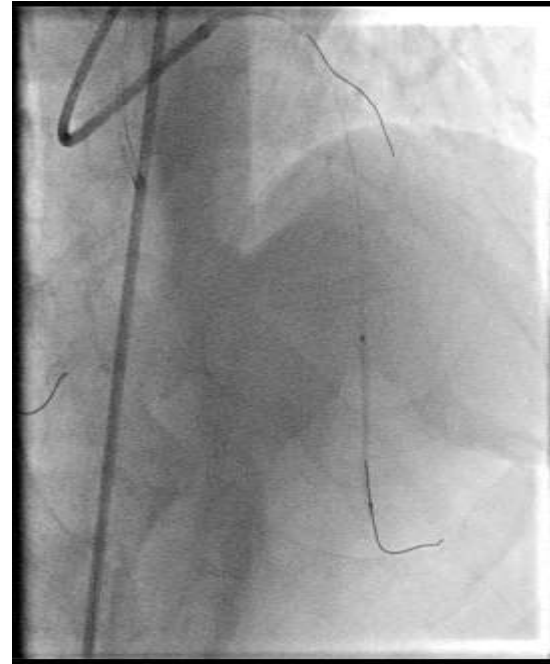


IVUS guided puncture with Gaia 2 wire and confirmation from orthogonal planes

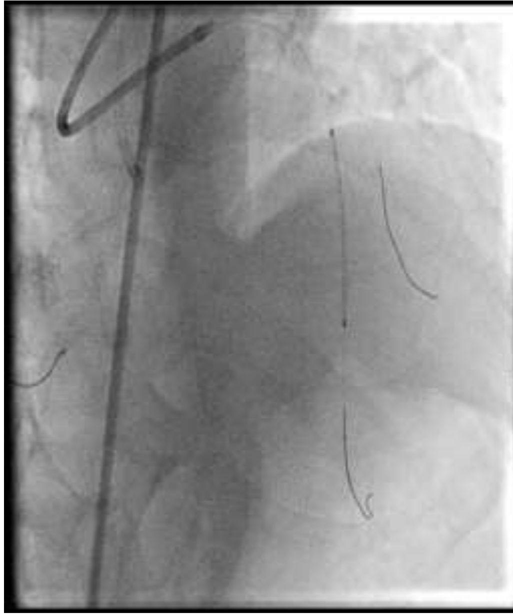




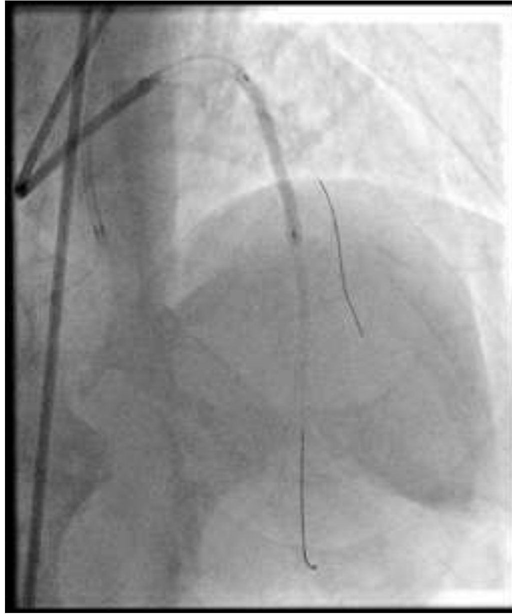
Sequential predilatation with 2.0 SC and 3.0 Scoring balloon to high pressure



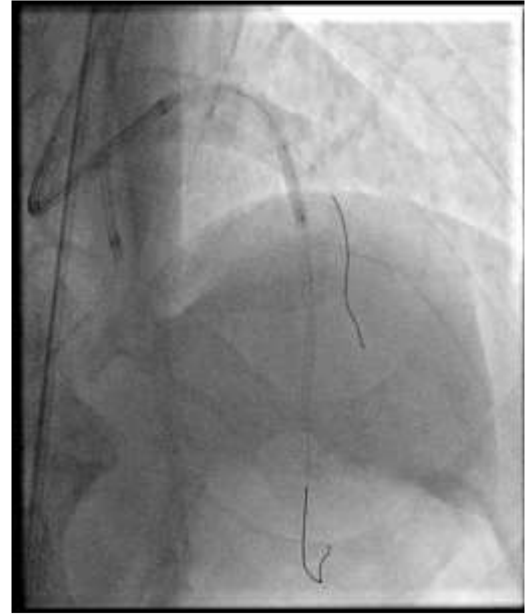
DCB distally- 2.25/30mm for 60 seconds- patient complained of chest pain after DCB, BP- 110/64, HR-110, no ecg changes



Noted Ellis II coronary perforation while placing 1st DES- 2.5/38mm but patient hemodynamically stable

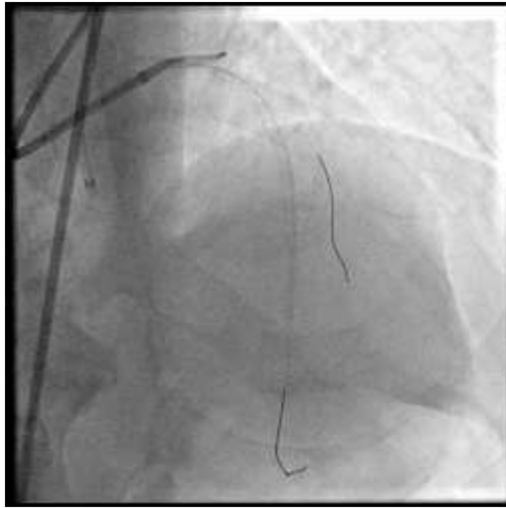


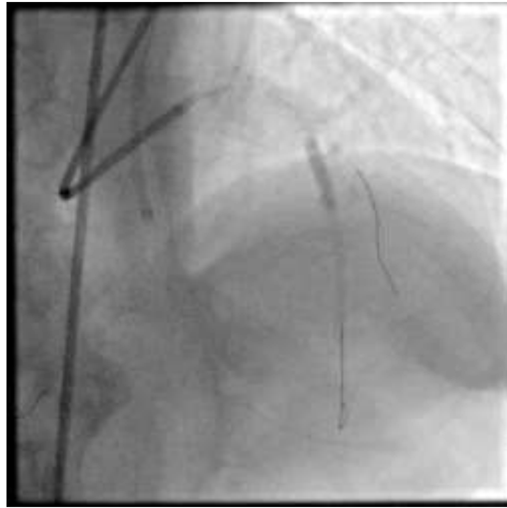
2nd DES with 3.0/38mm upto ostial LAD overlapping with 1st DES



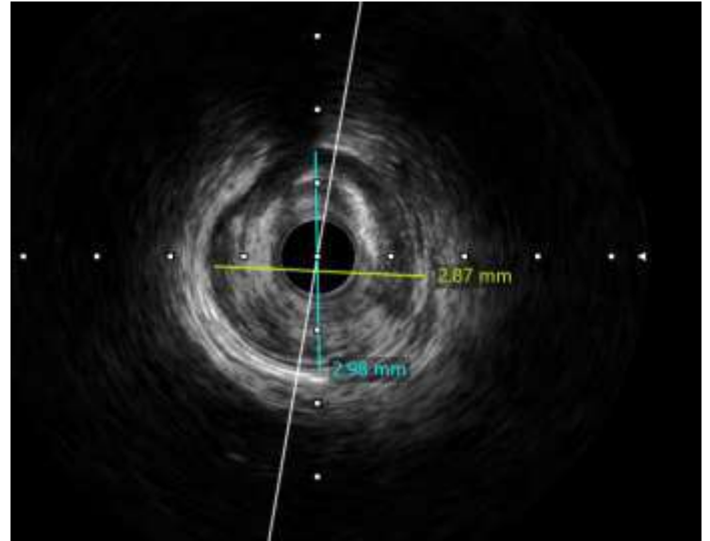
Postdilated stent with NC 3.5/15mm and balloon tamponade done

MLCIO





Coronary perforation still not sealed and patient still having angina, decided to deploy Papyrus 3.0/15 and postdilated with 3.0 NC balloon



Analyzed back IVUS while troubleshooting- noted CTO segment has undergone Negative Remodelling!

Final results- patient well 1 year post procedure