When provisional is not enough

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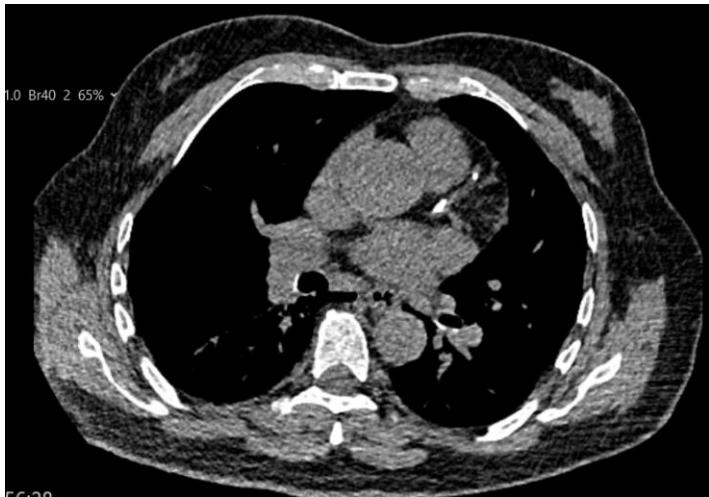
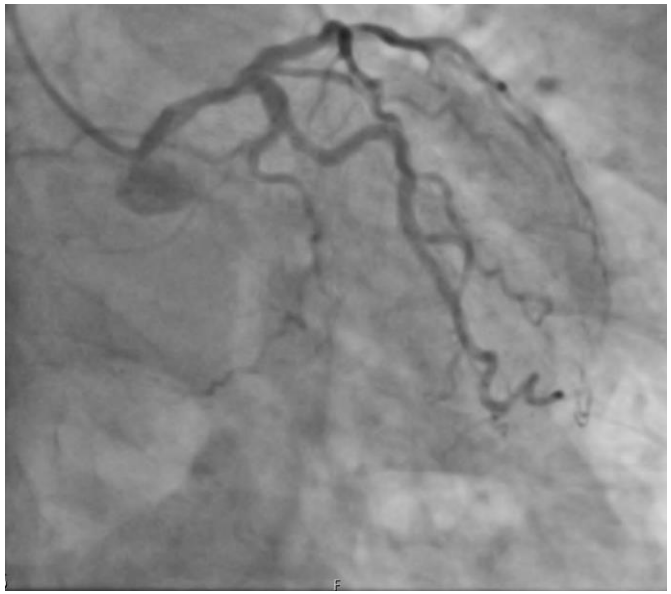
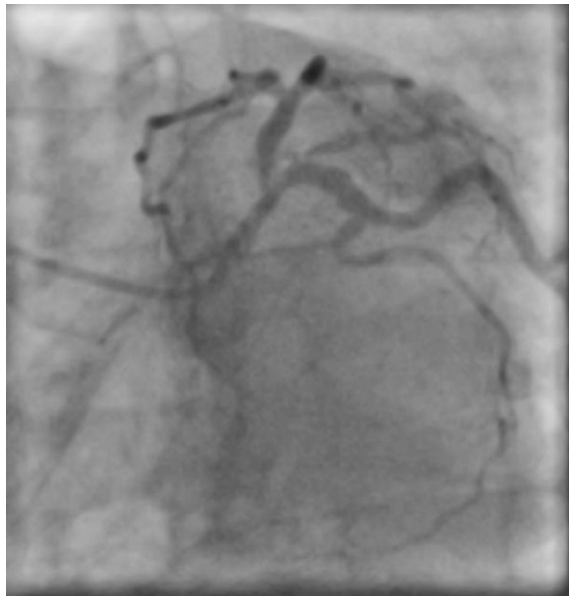
Clinical History

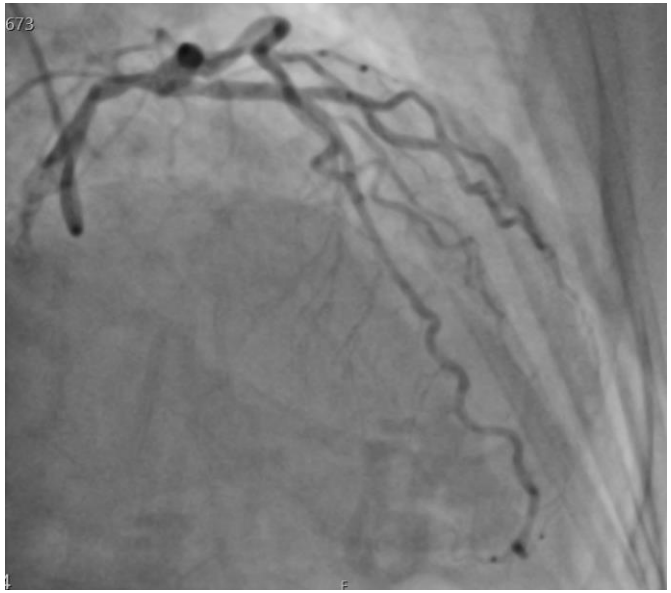
- 78M- elective PCI to left main
- Background: high cholesterol, FHx, prostate cancer
- Referred via RACPC with history of stable angina, CCS class II
- CTCA: moderate left main disease, proximal LAD disease and moderate LCx disease. CT FFR in LAD 0.79.
- Coronary angiography: moderate LM, sig ostial LAD disease and moderate ostial circumflex disease (Medina 1,1,0). RCA minor disease
- Good LV function on echo
- MDT: could be offered either CABG or PCI
- D/w with patient and PCI agreed
- PCI planned for 1/12/2020

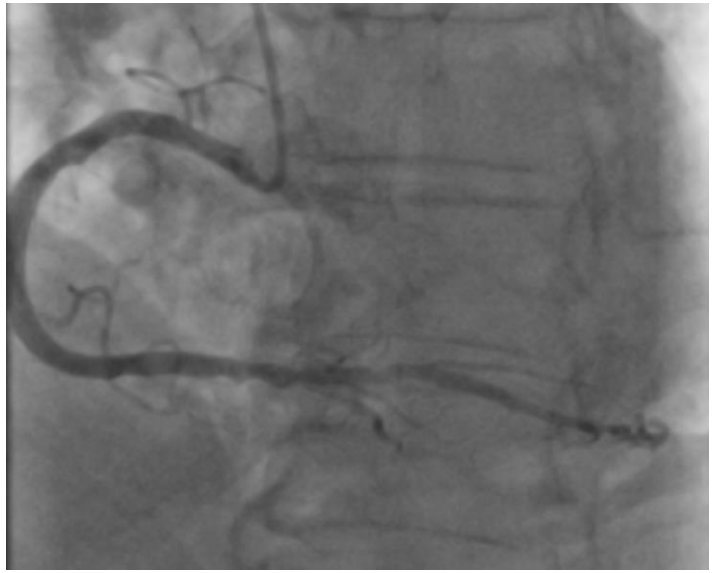


Diagnostic Coronary Angiogram

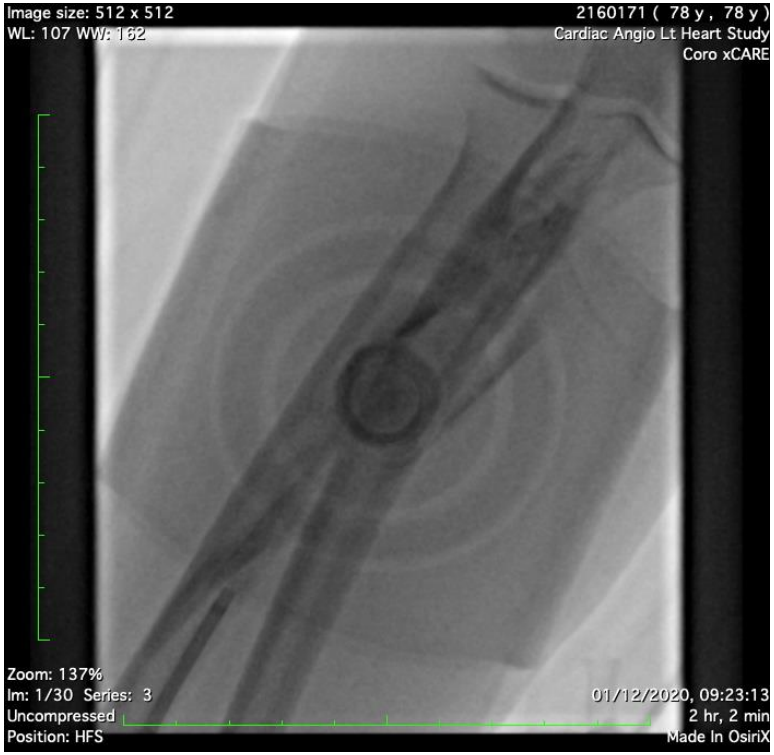


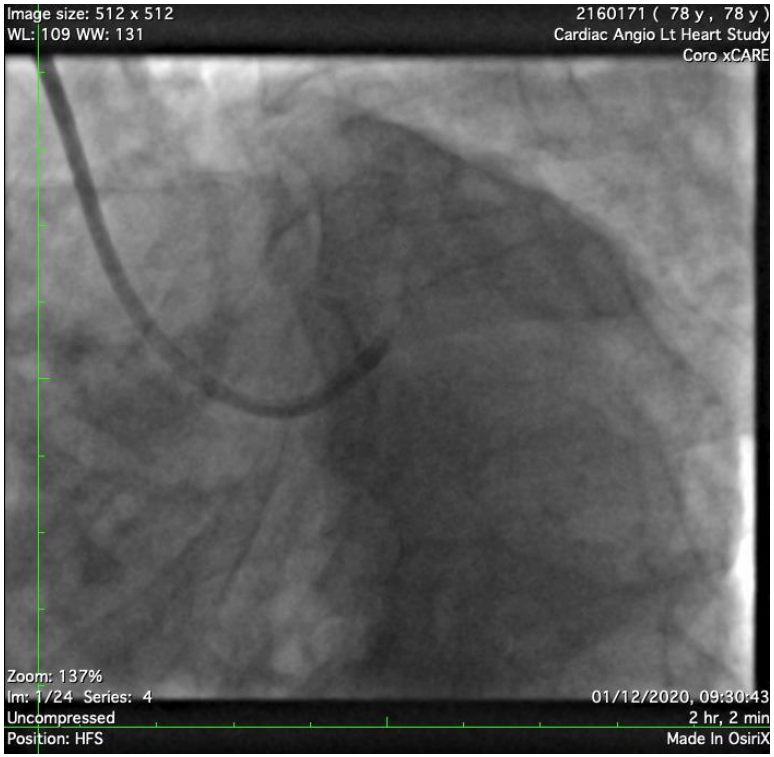






Case set up

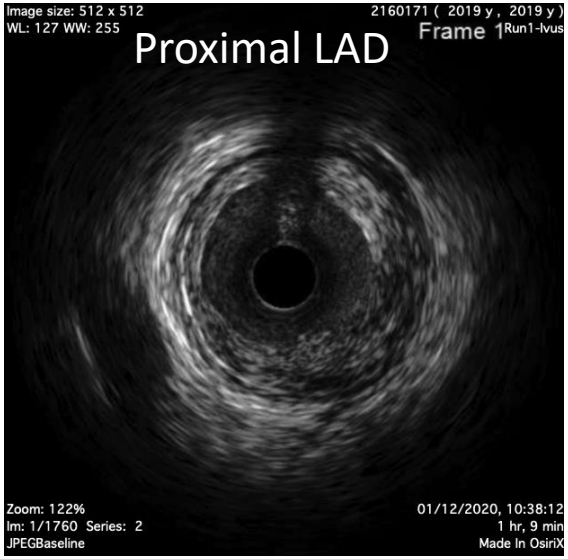




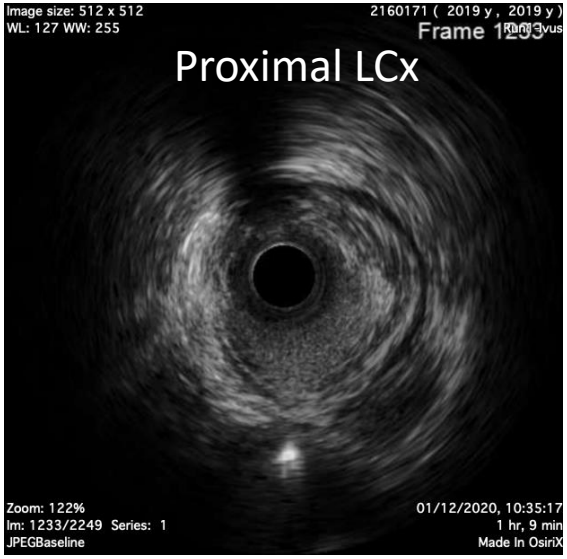
7Fr RRA sheath
7Fr EBU 3.5 guide would not pass into brachial artery
Extravasation of contrast and dissection- balloon assisted tracking with BMW/2.0x12mm sc balloon to axillary, then swapped to j wire to take to root.
Catheter tamponade of bleeding.

Sion blue in LAD, Choice PT floppy in LCx
IVUS of both LAD and LCx

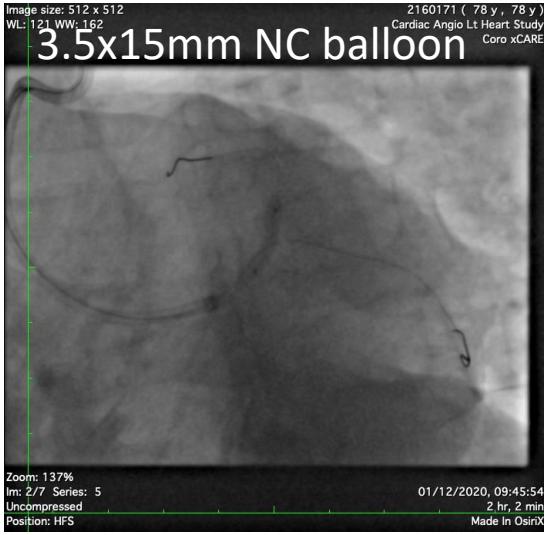
Initial strategy: upfront IVUS, provisional PCI LM into LAD

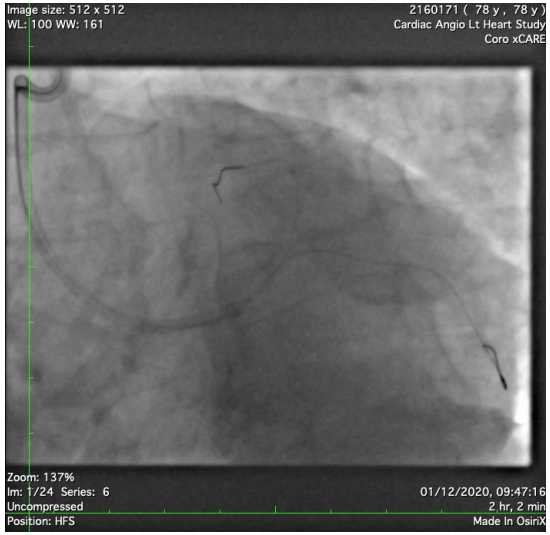


Significant atheroma in LAD with calcium, less than 180 degree arc, distal ref vessel size 3.5mm

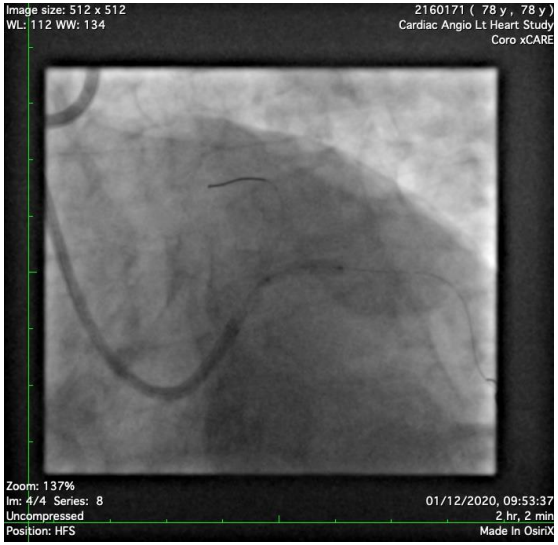


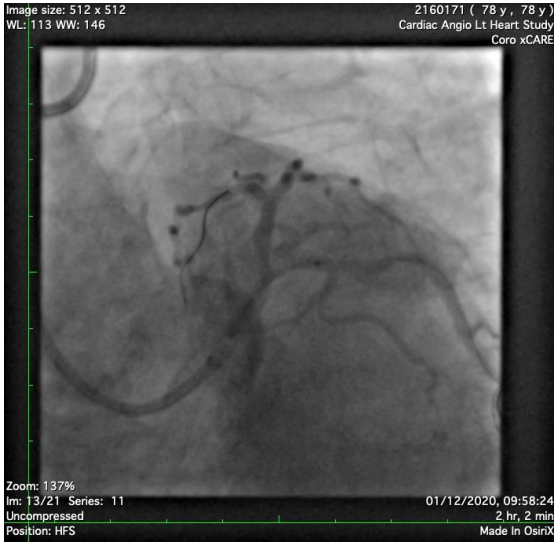
Minor atheroma in ostium of the LCx, distal ref vessel size 3.3mm

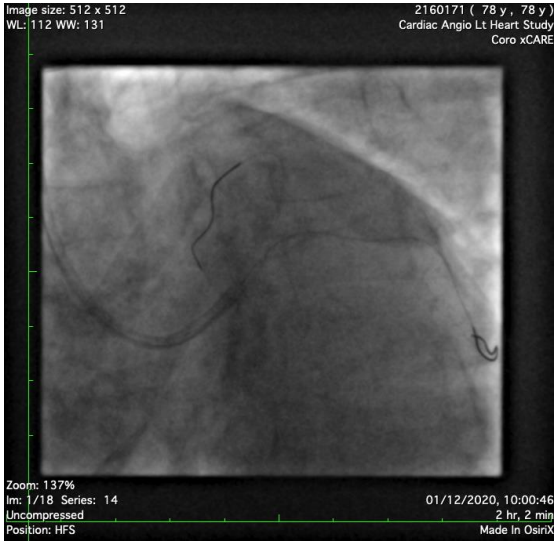


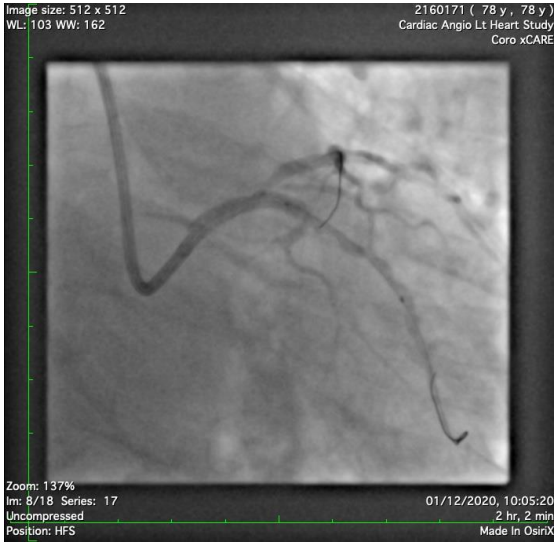


Significant disruption seen at ostium of the circumflex, switch to 2 stent strategy (culotte)

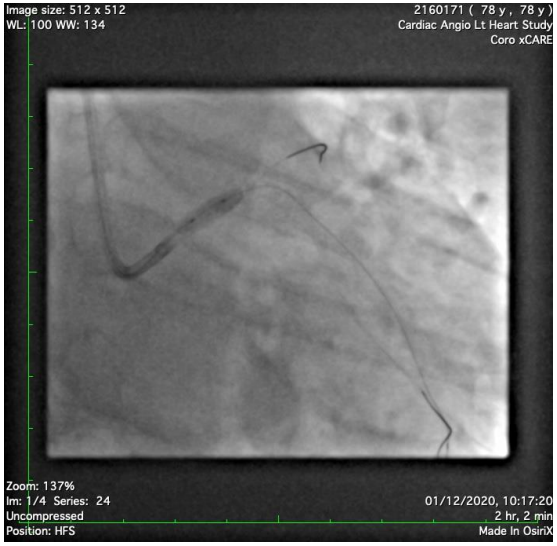


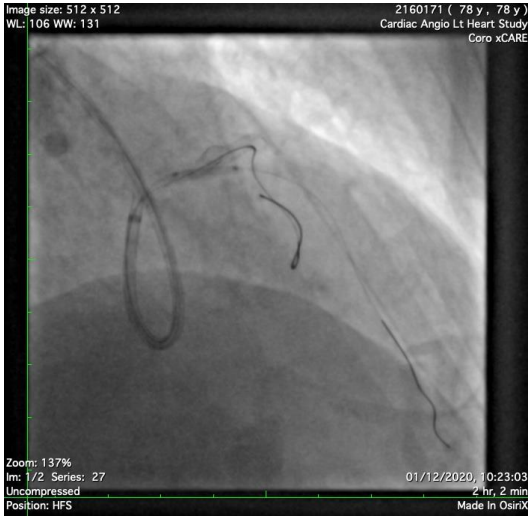


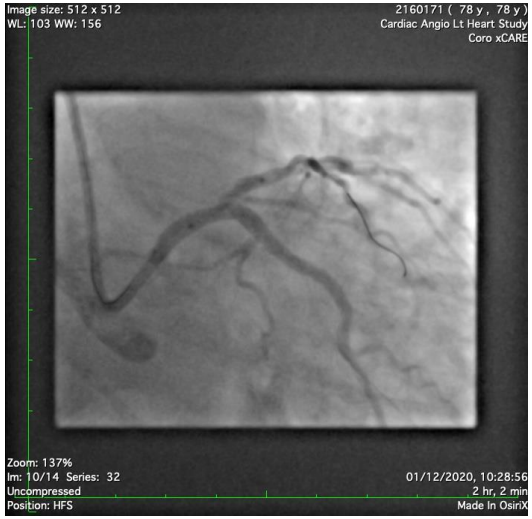


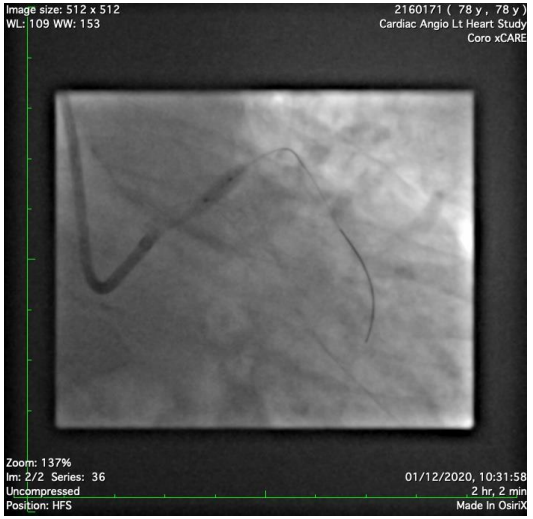


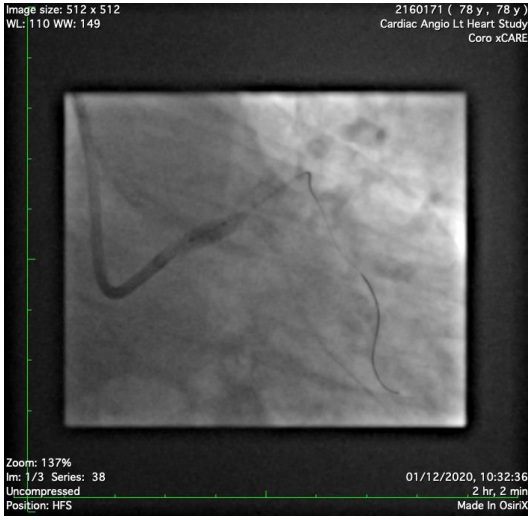
Pre dilated ostium of LCx with 3.0x15mm NC, followed by stent from left main into proximal LCx with a Xience 3.5x23mm DES. Significant atheroma in mid LCx, covered with Xience 2.75x28mm DES followed by post dil with a 3.0x15mm NC and 3.5x12mm NC in proximal LCx. POT in LM with a 4x8mm NC.



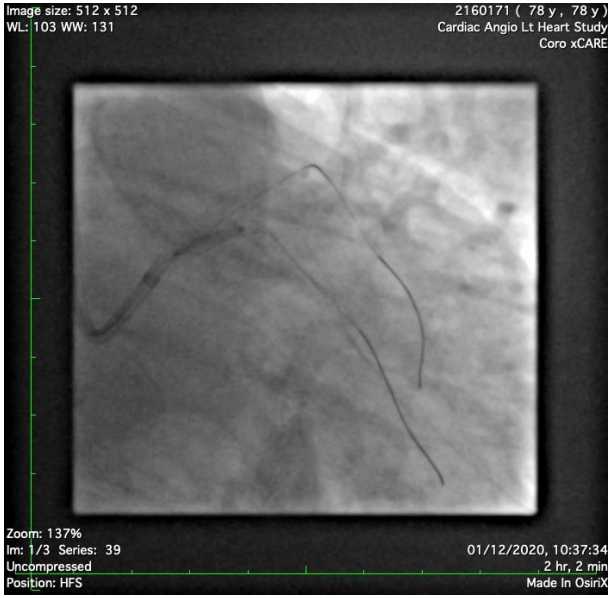


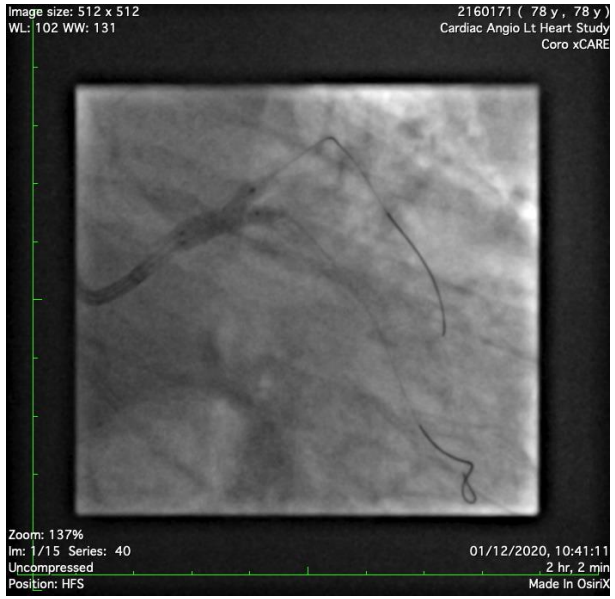


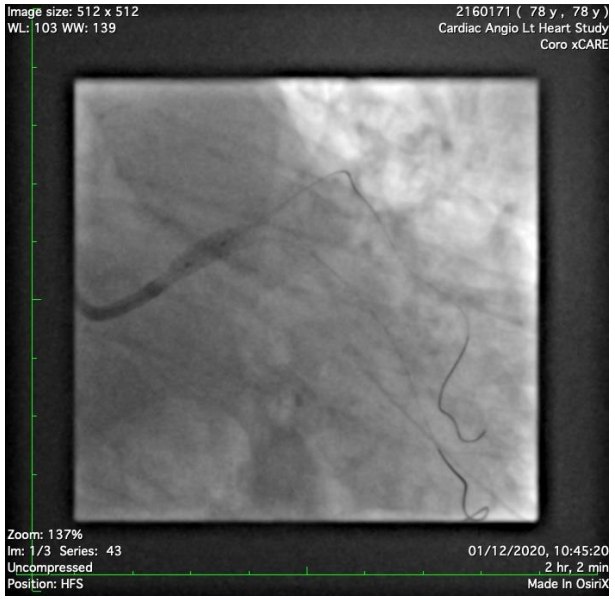




Re-wired LAD with sion blue and removed jailed LAD wire. Dilated stent struts with 2.0x12mm NC. Removal of circumflex wire then stented LM into LAD with a Xience 3.5x18mm DES. Post dilated ostium of LAD into LM with a 4.0x8mm NC.

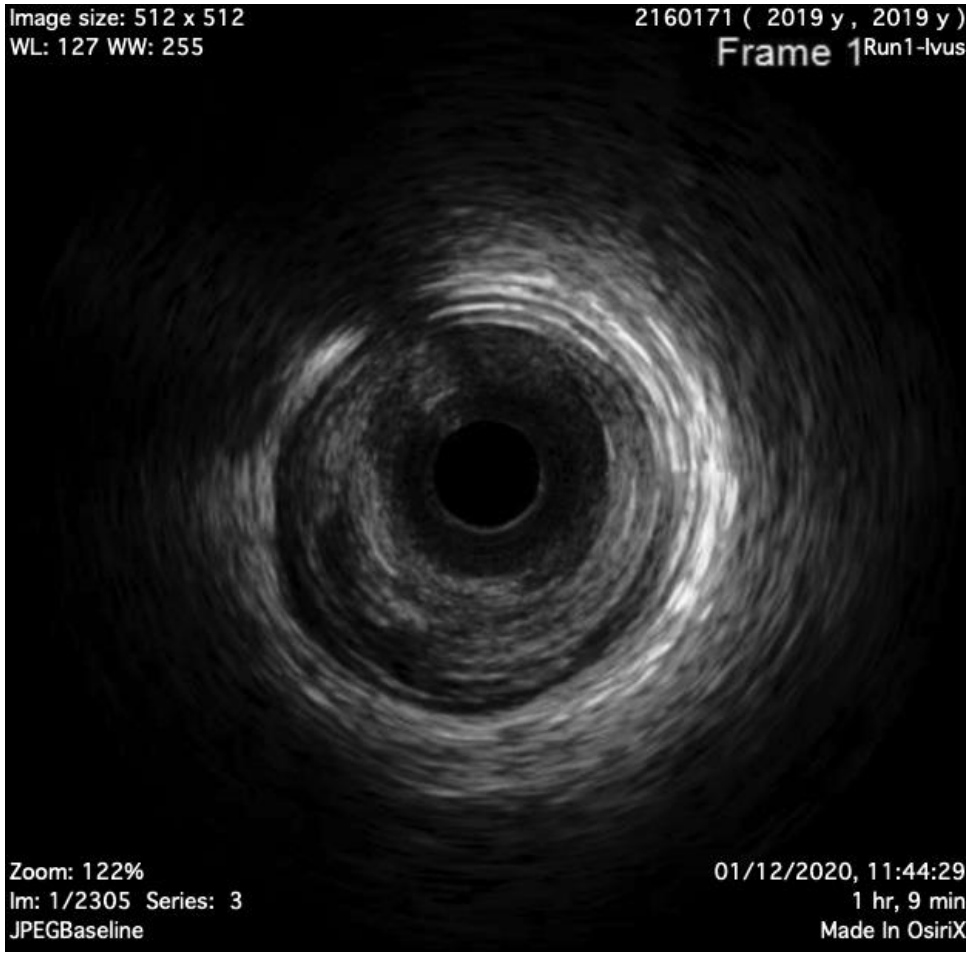


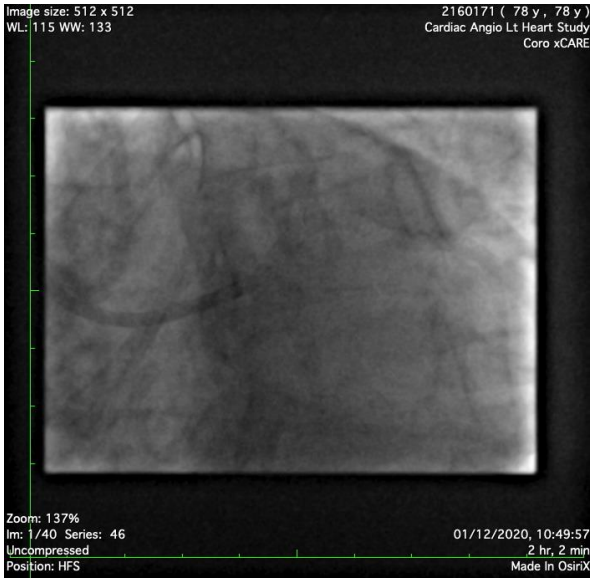


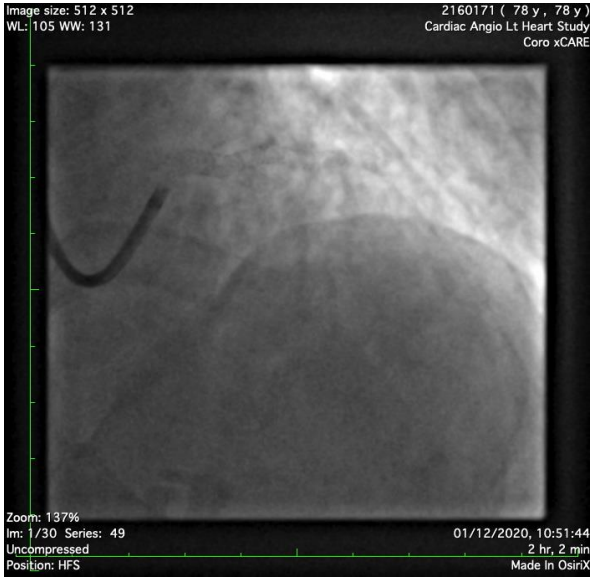


Re-wired LCx with sion blue, and dilated struts with a 2.0x12mm NC balloon.
Kissing balloon inflation LM into LAD and LCx with 2x 3.5x15mm NC balloons,
Followed by final POT in left main with a 4.0x8mm NC balloon.

Final result







Learning points

- Balloon assisted tracking of guide in radial and brachial artery useful in spasm but can also be used when there is vessel injury and contrast extravasation. The catheter itself can be used to tamponade bleeding.

- This case is a good example where although ostium of circumflex only mild to moderately diseased, due to angulation there was significant plaque shift into the ostium of the circumflex following pre dilatation of left main into LAD. Therefore always be prepared to switch from provisional to a two stent strategy.

- Demonstration of step by step approach to left main bifurcation PCI with culotte.