

A case of stable angina with
intermediate stenosis in LAD and RCA.
Examination from various aspects
by IVUS/OCT/FFR

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Case: 75's Male

Previous History: Prostate cancer

Family History: Father cerebral hemorrhage

Coronary Risk Factor: Dyslipidemia

Hypertension

Diabetes Mellitus

Smoking

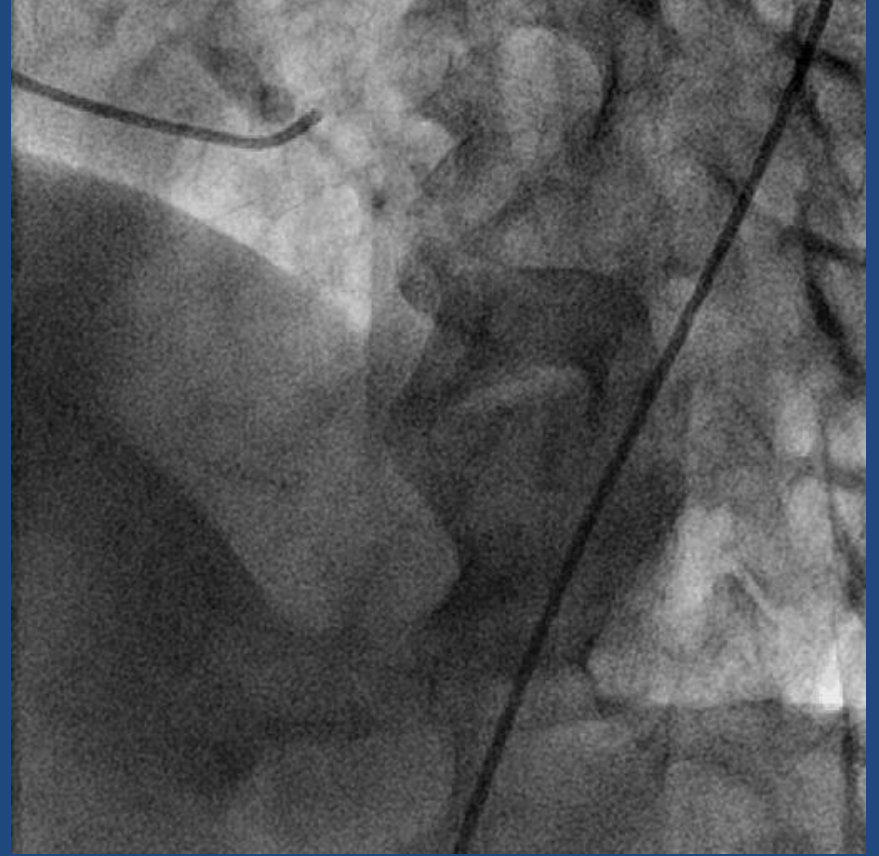
(30/day × 55years)

History of present illness

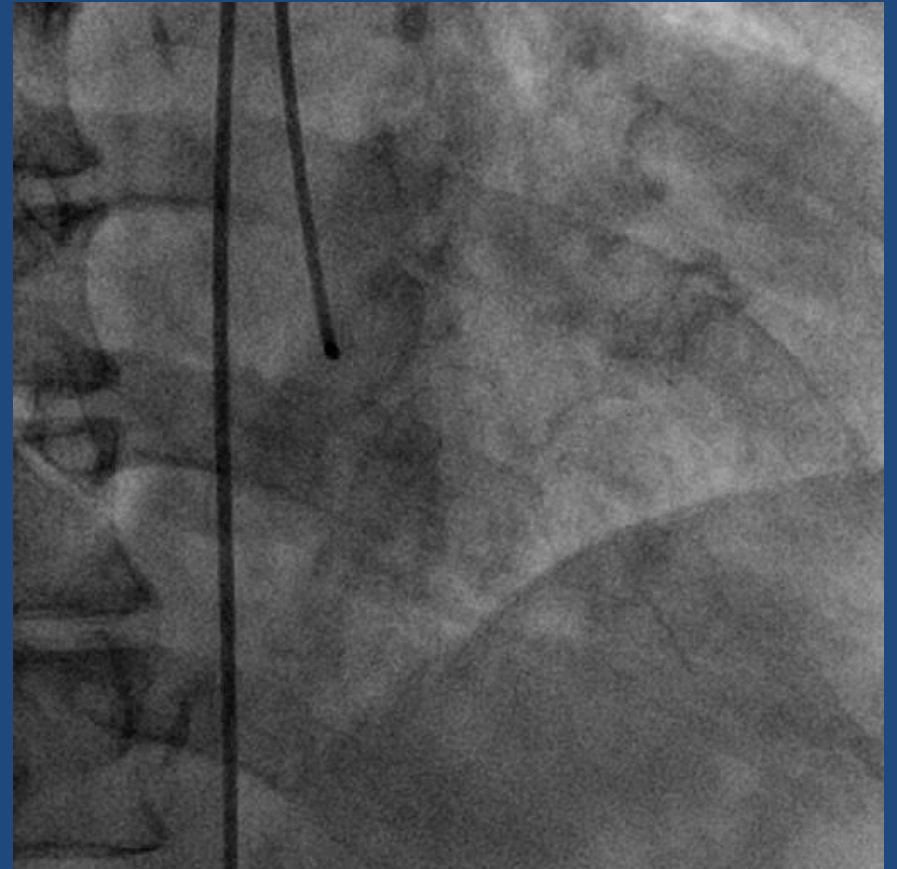
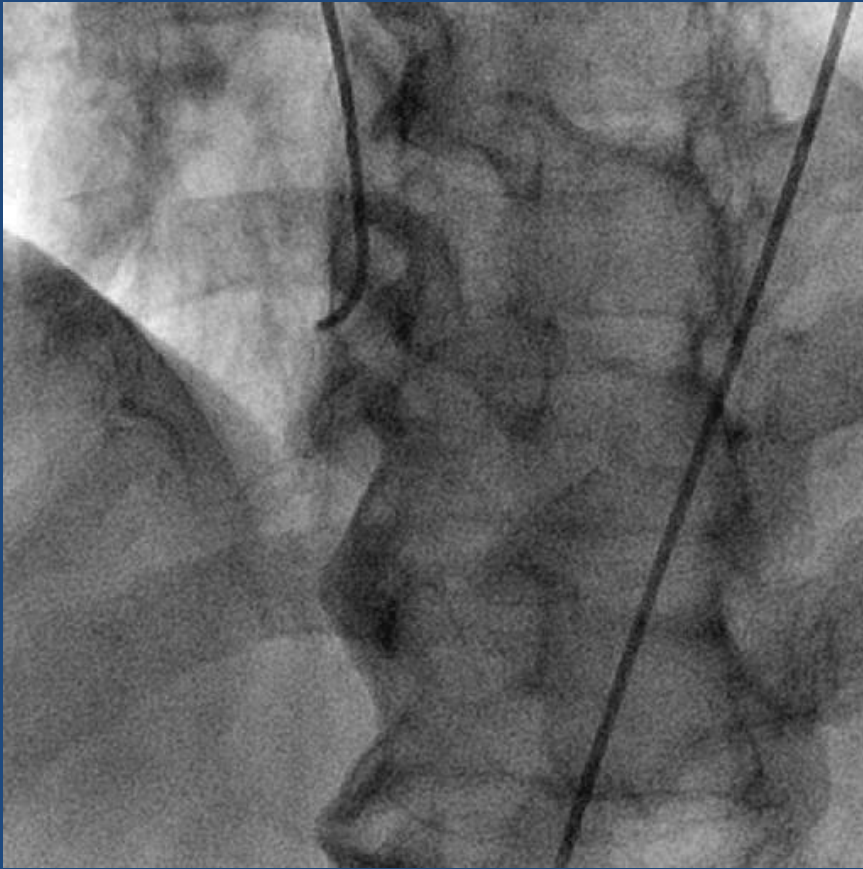
At the time of work, he suffered from chest oppression. Then he was admitted to our hospital. He received a coronary MRI, which showed multiple stenoses at LAD proximal and RCA mid portion.

Based on the result, he was examined by CAG.

CAG



CAG

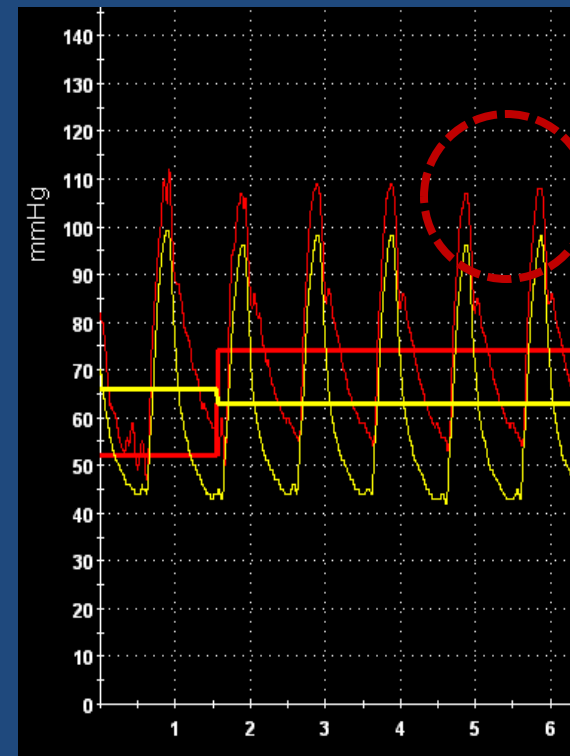


Examination by various modalities
~ IVUS/OCT/FFR ~

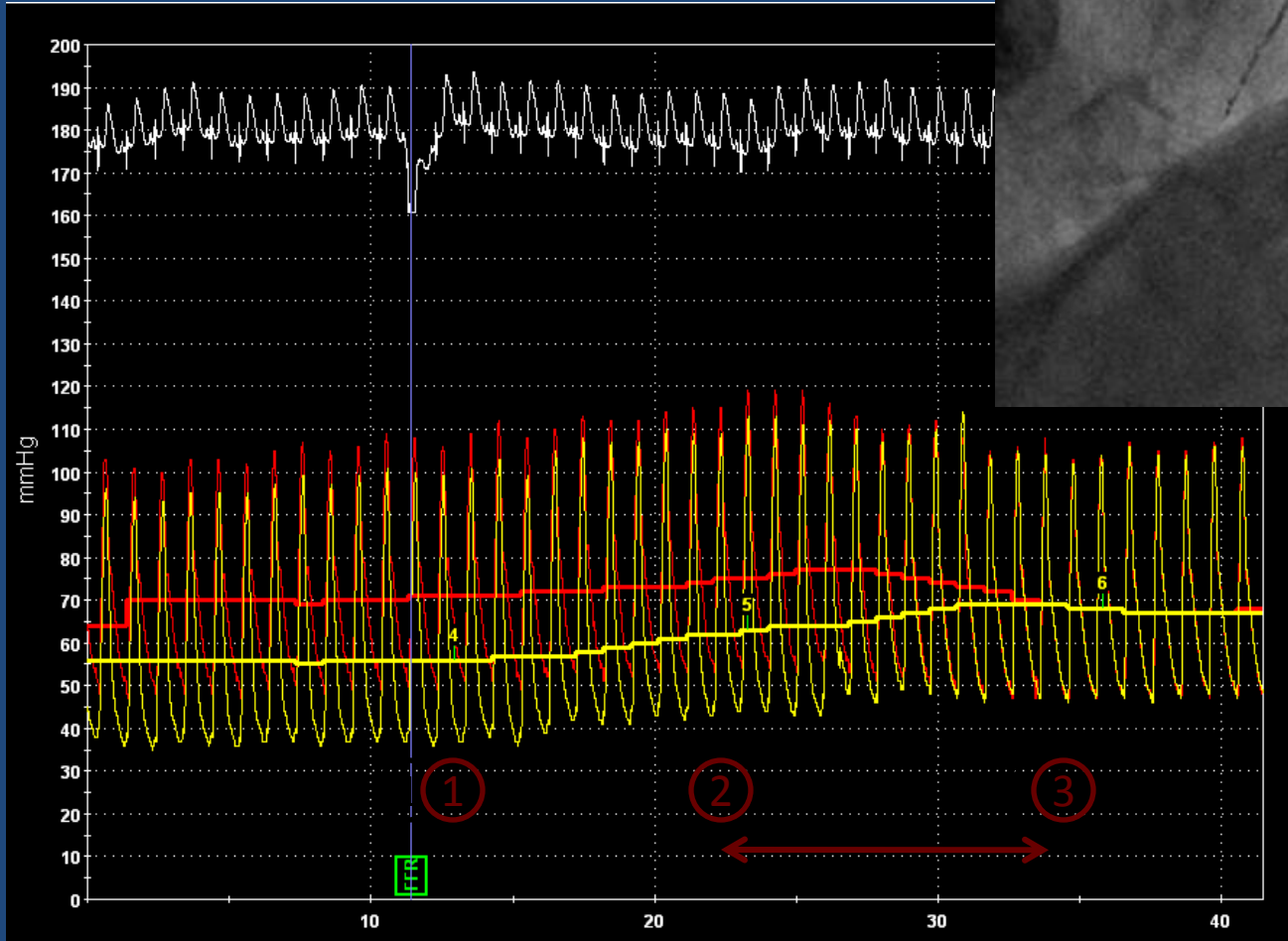
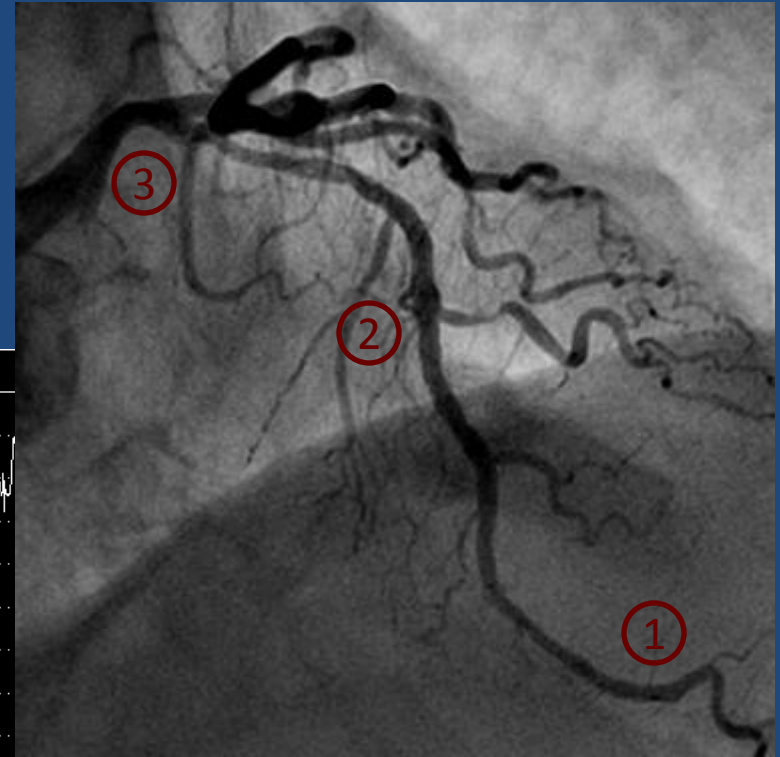
FFR (LAD)



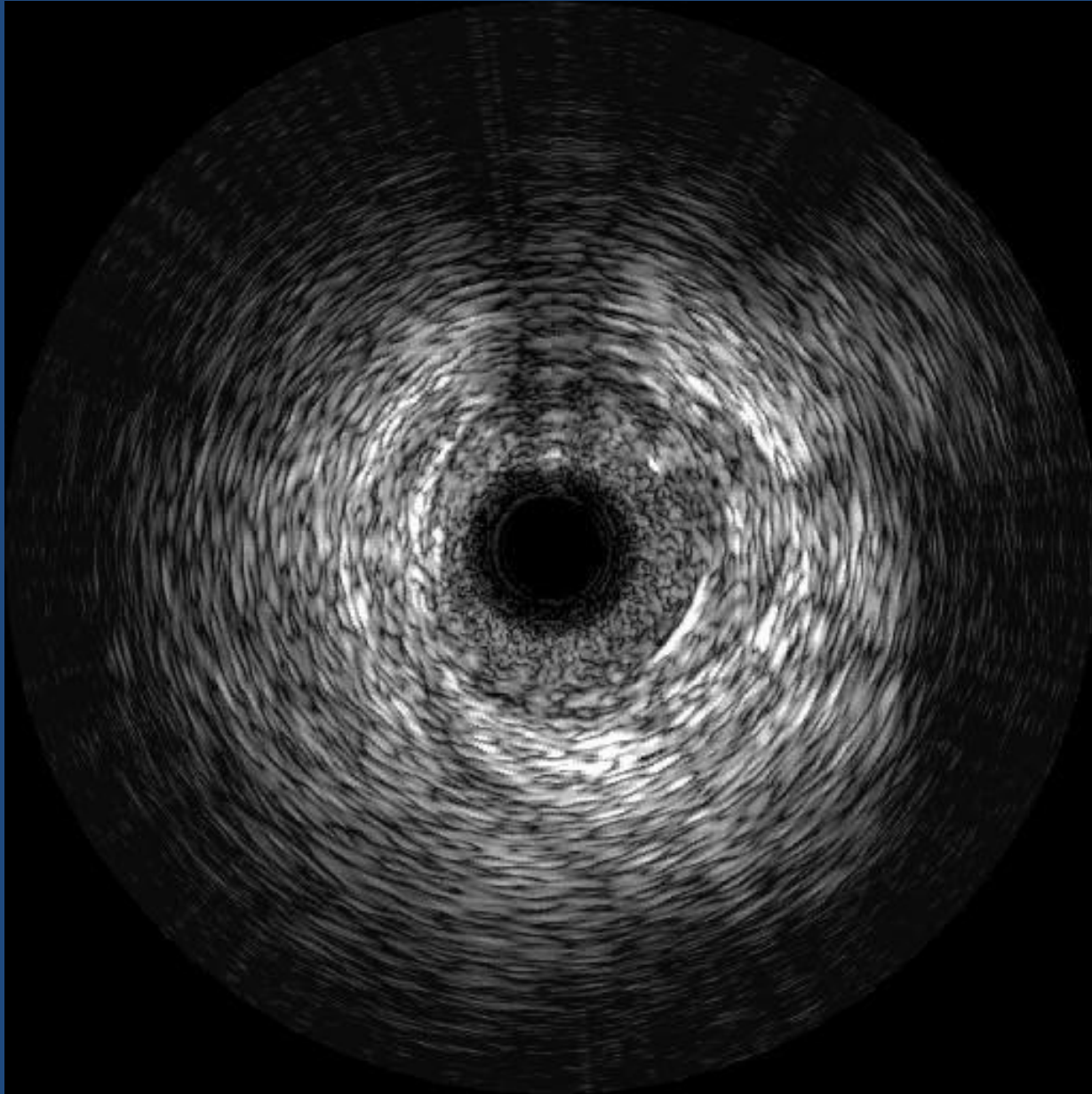
FFR	0.79
Pd/Pa	0.79
Pa:iPa	71:77
Pd:iPd	56:63
Pa-Pd(m)	15
HR	60



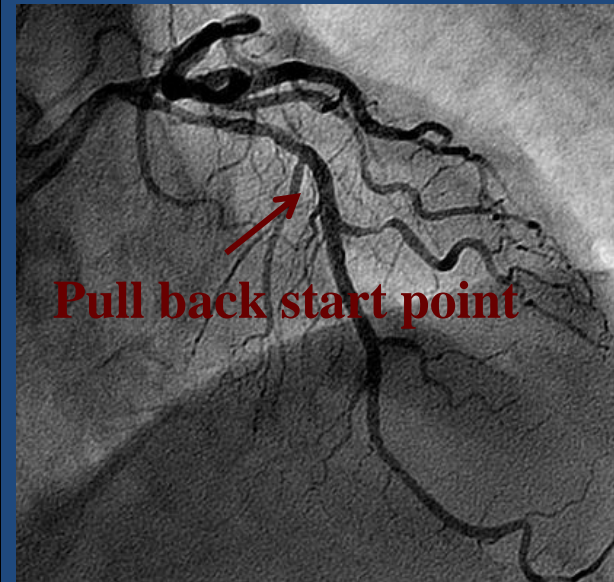
FFR (pull back recording)



LAD



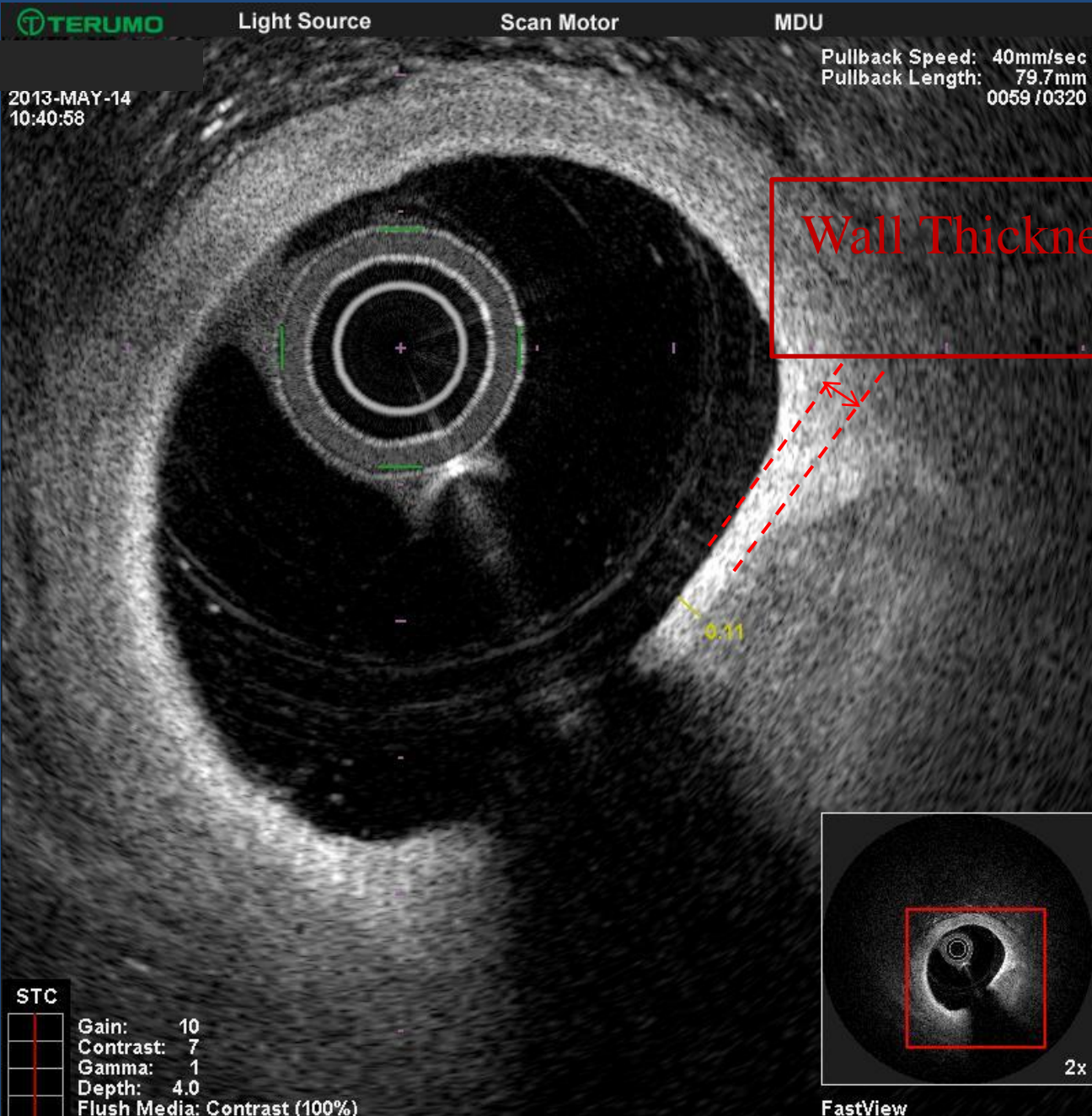
IVUS (Pre-LAD)



Pull back start point

2013-MAY-14
10:40:58

Pullback Speed: 40mm/sec
Pullback Length: 79.7mm
0059 / 0320

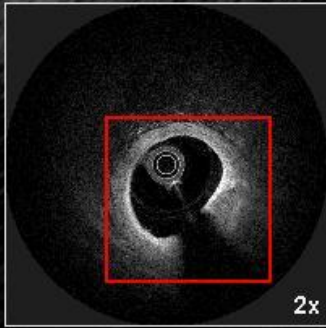


Wall Thickness of Fibroatheroma
110 μ m

OCT (Pre-LAD)

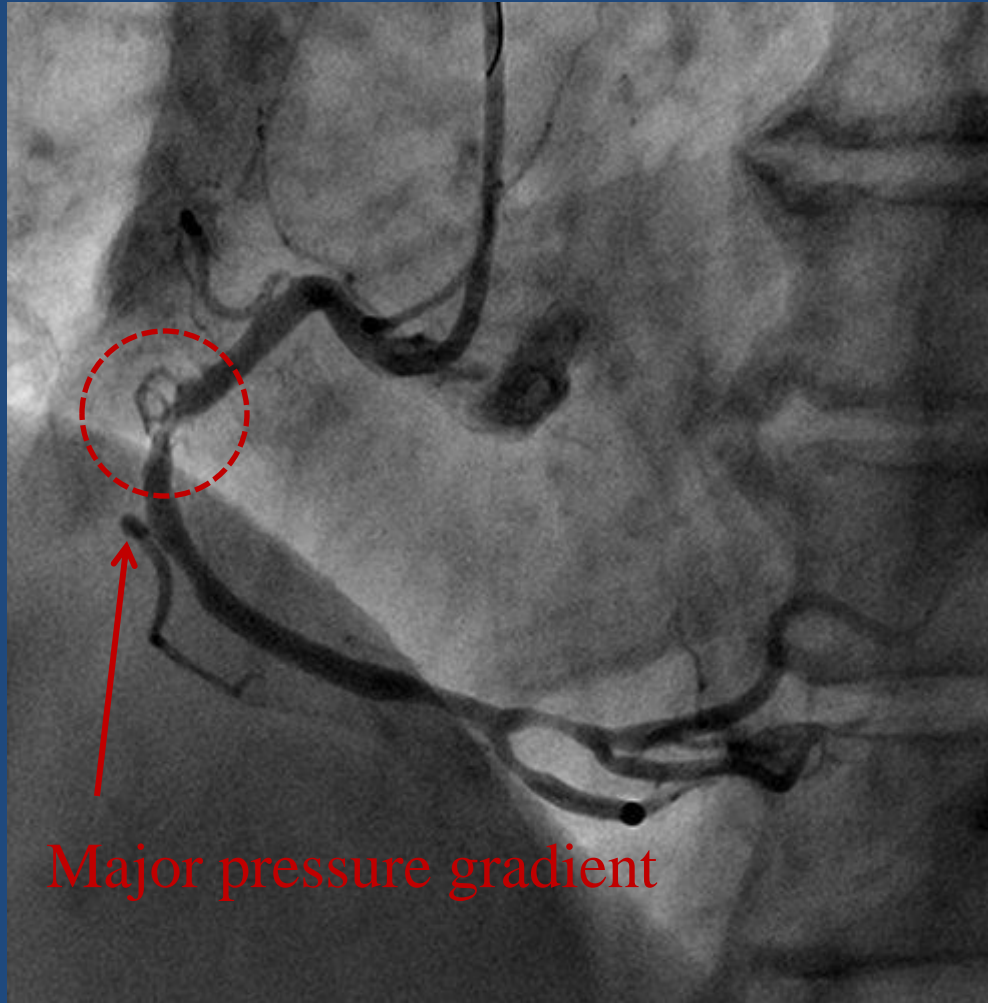
STC

Gain:	10
Contrast:	7
Gamma:	1
Depth:	4.0
Flush Media:	Contrast (100%)



FastView

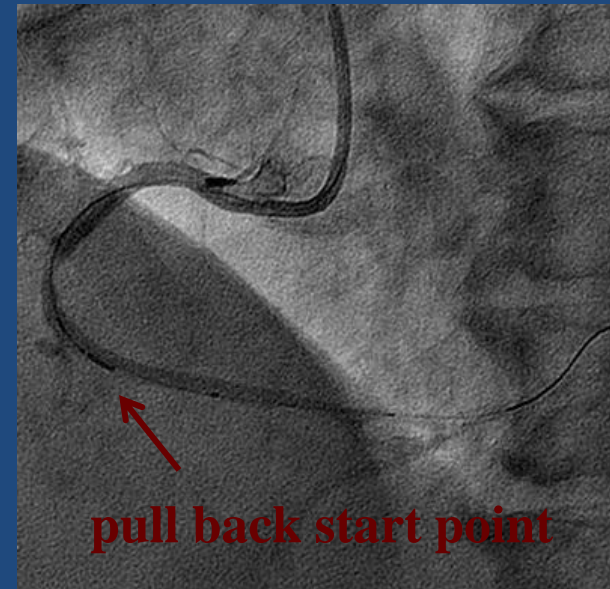
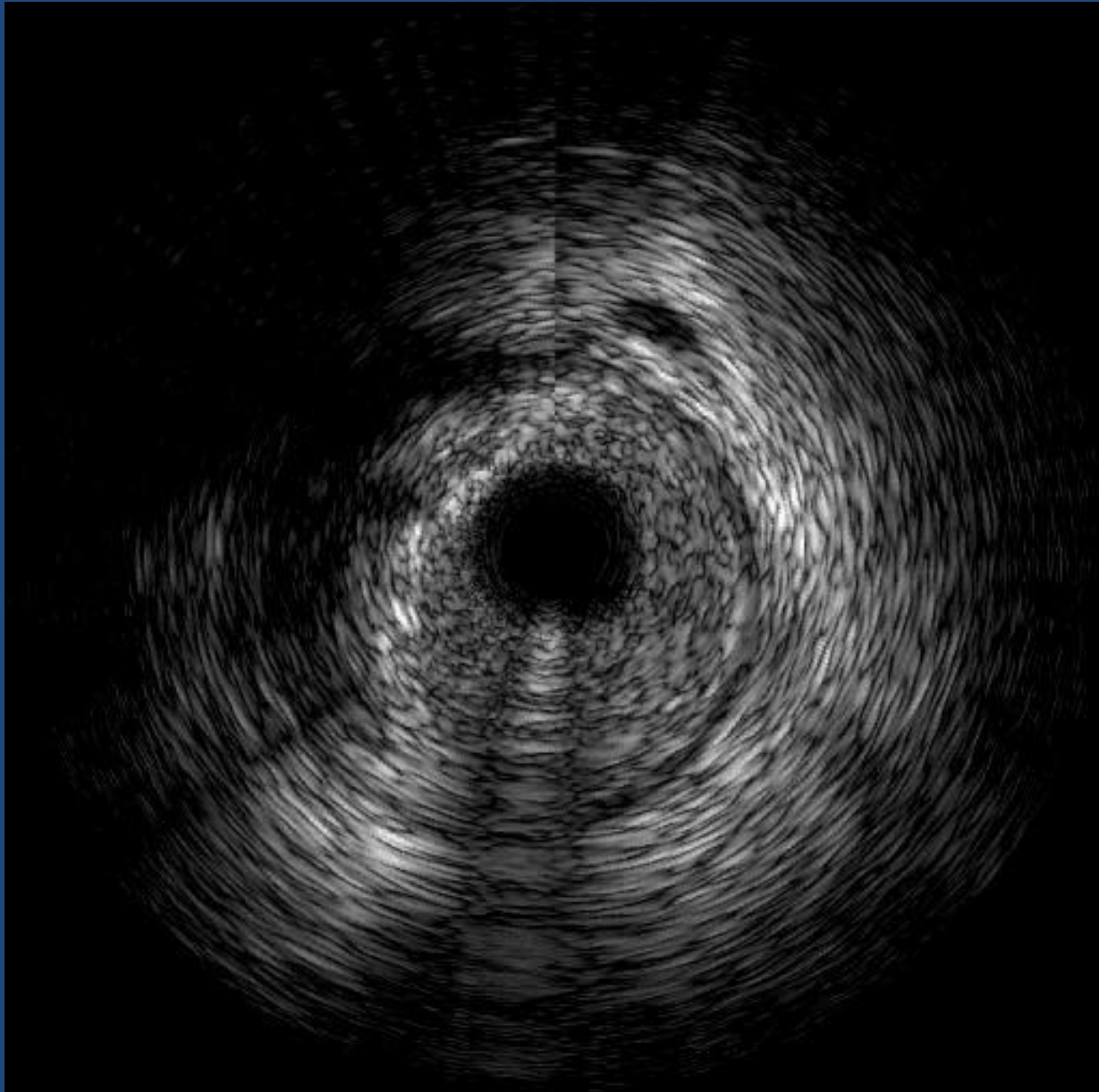
FFR (RCA)

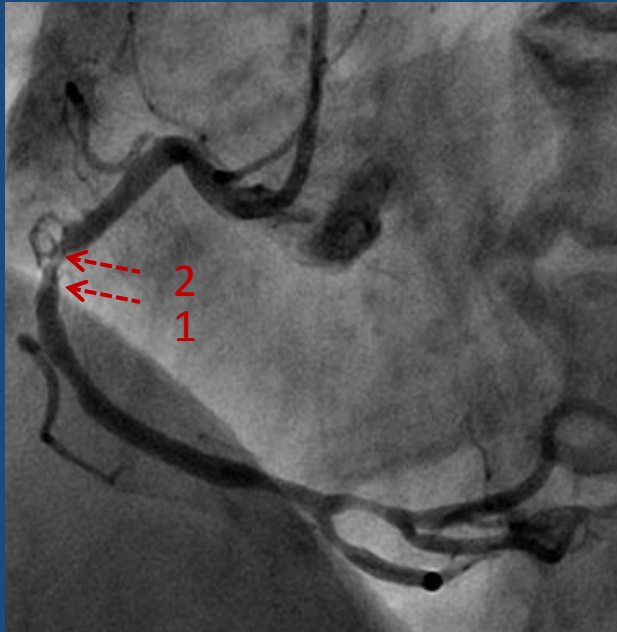


FFR	0.80
Pd/Pa	0.80
Pa:iPa	96:96
Pd:iPd	77:76
Pa-Pd(m)	19
HR	69

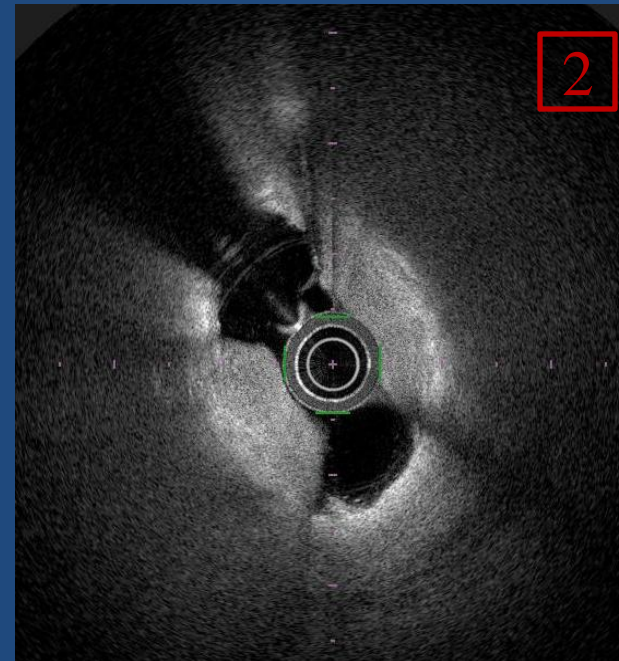


IVUS (Pre-RCA)





OCT (RCA)



What strategy would you choose
based on the FFR/IVUS/OCT findings?

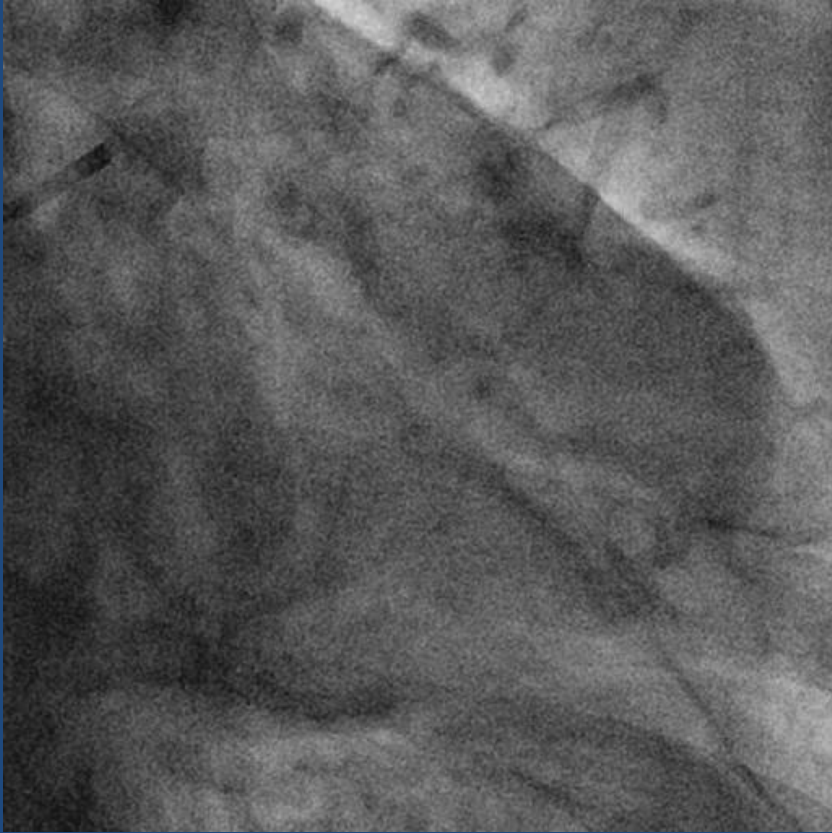
Strategy (LAD)

FFR-LAD value was 0.79. IVUS indicated the possibility of unstable plaque. However OCT confirmed diffuse fibrous plaque and lipid pool with thick cap.

Therefore, we selected the placement of stent.

The procedure was successful.

Final Angiogram (LAD)

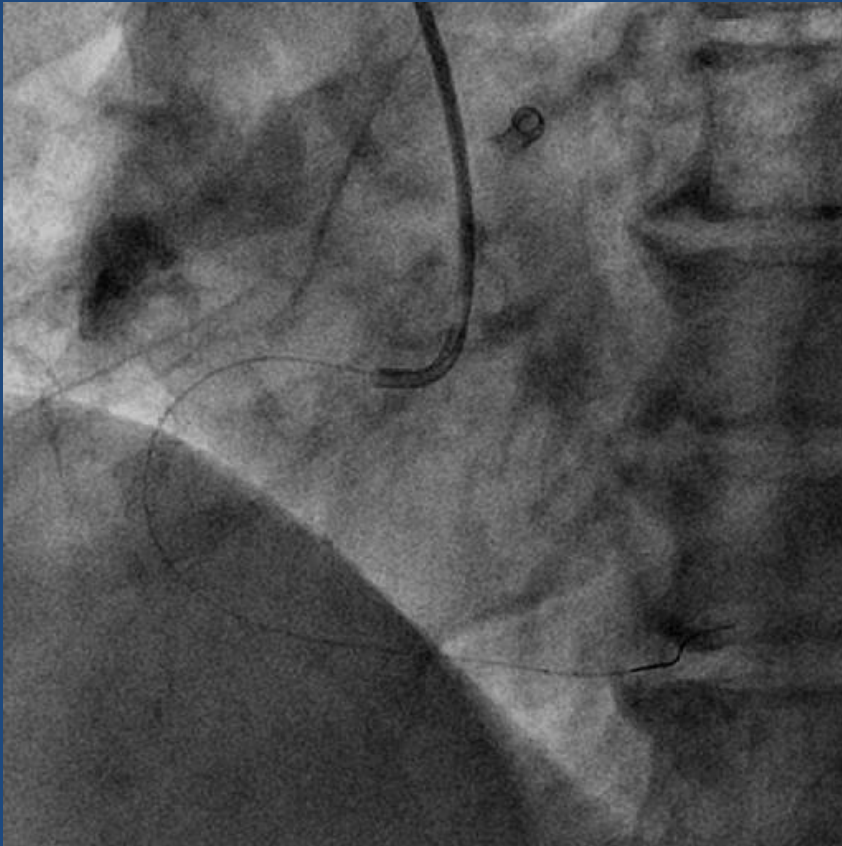


LAD#6 → Nobori 3.0 × 24mm → 0%

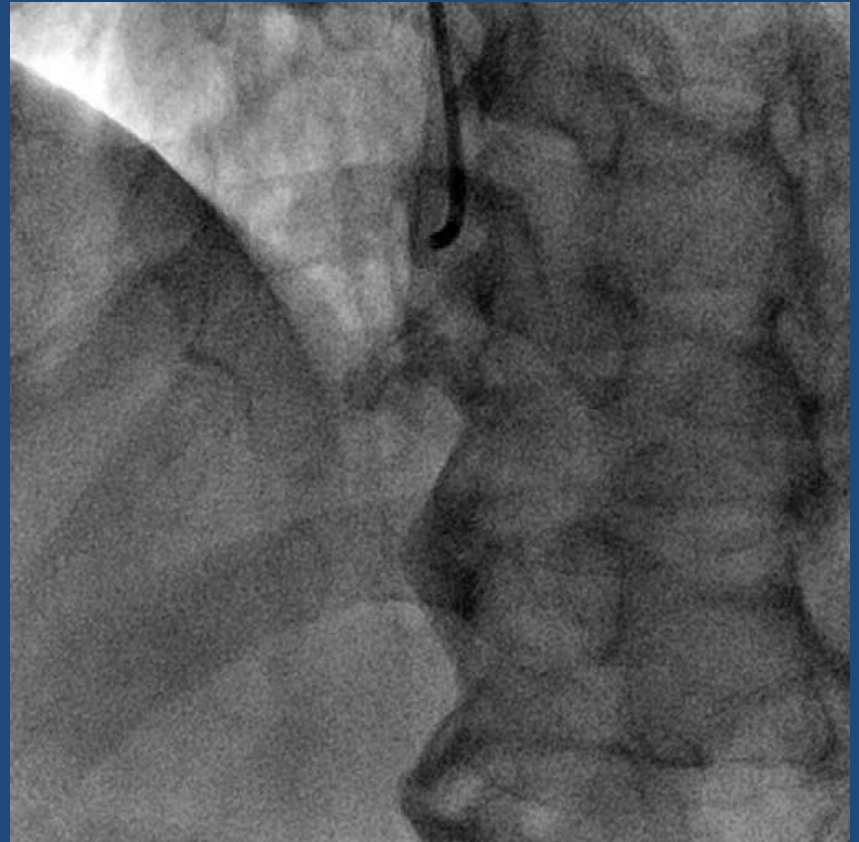
Strategy (RCA)

- FFR-RCA was 0.80. Initially, we planned to defer.
- The IVUS and OCT images showed unexpectedly small MSA with organized thrombus.
Because attenuation plaque was focal, we placed a stent without distal protection.
- But, stent placement caused slow flow. The RCA flow was recovered by intra coronary injection of nicorandil.

PCI (RCA)

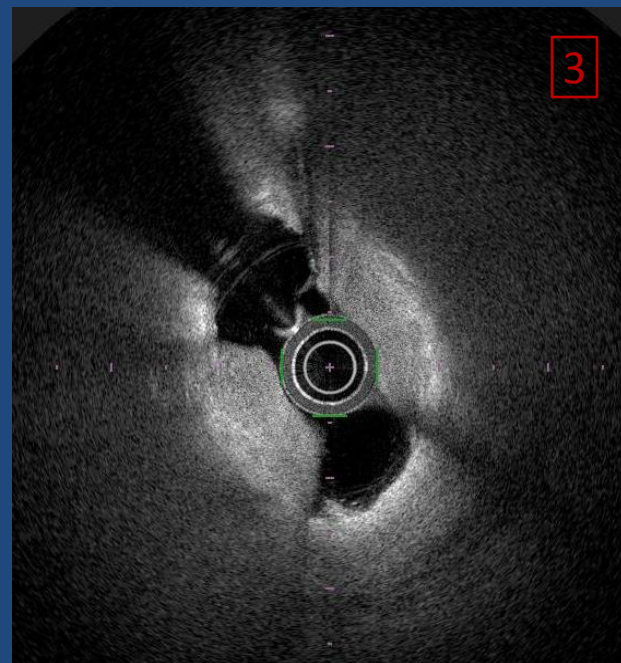
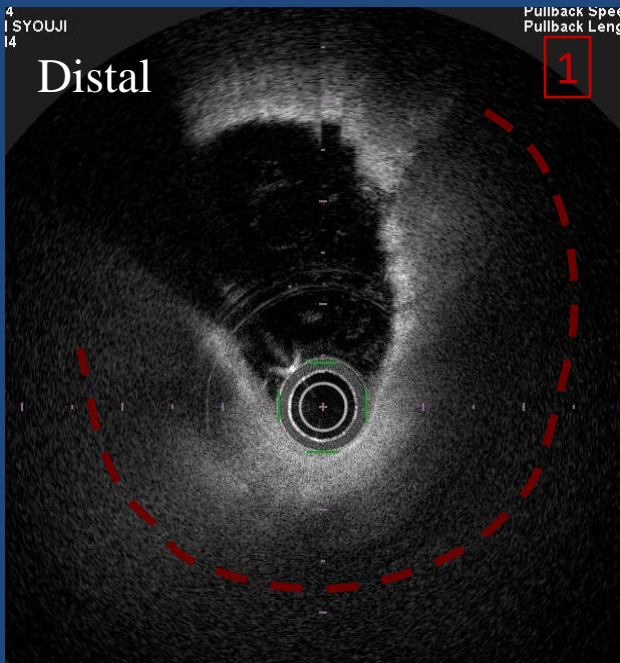
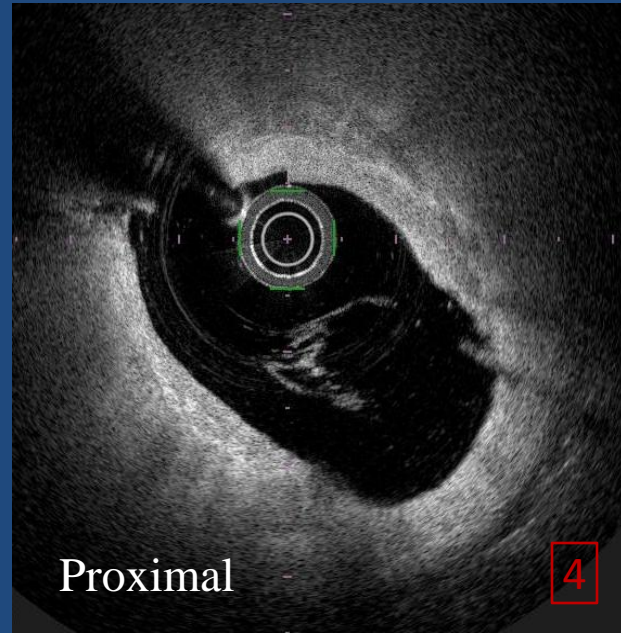
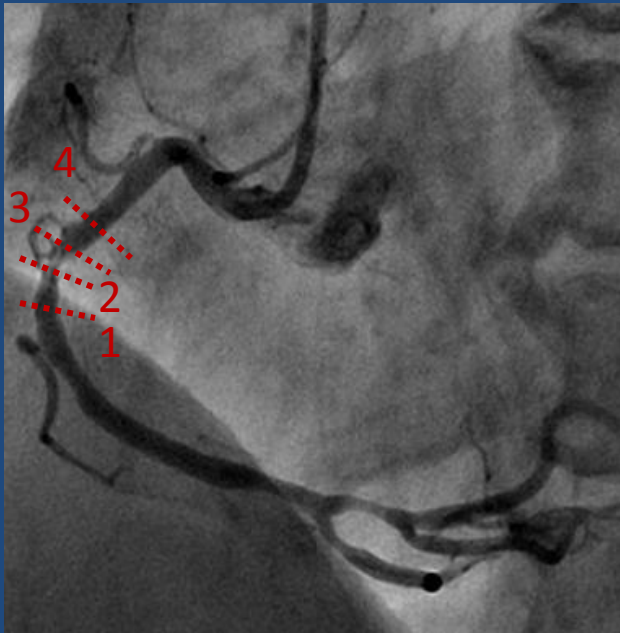


Slow Flow



Final Angiogram

OCT (RCA)



Proximal

4

Distal

1

2

3

Thrombus

Pullback Speed
Pullback Length

Conclusion

- We presented a case of Angina pectoris with intermediate stenosis evaluated by IVUS, OCT, and FFR.
- We have to consider plaque property, especially unstable plaque, based on findings from each modality.