

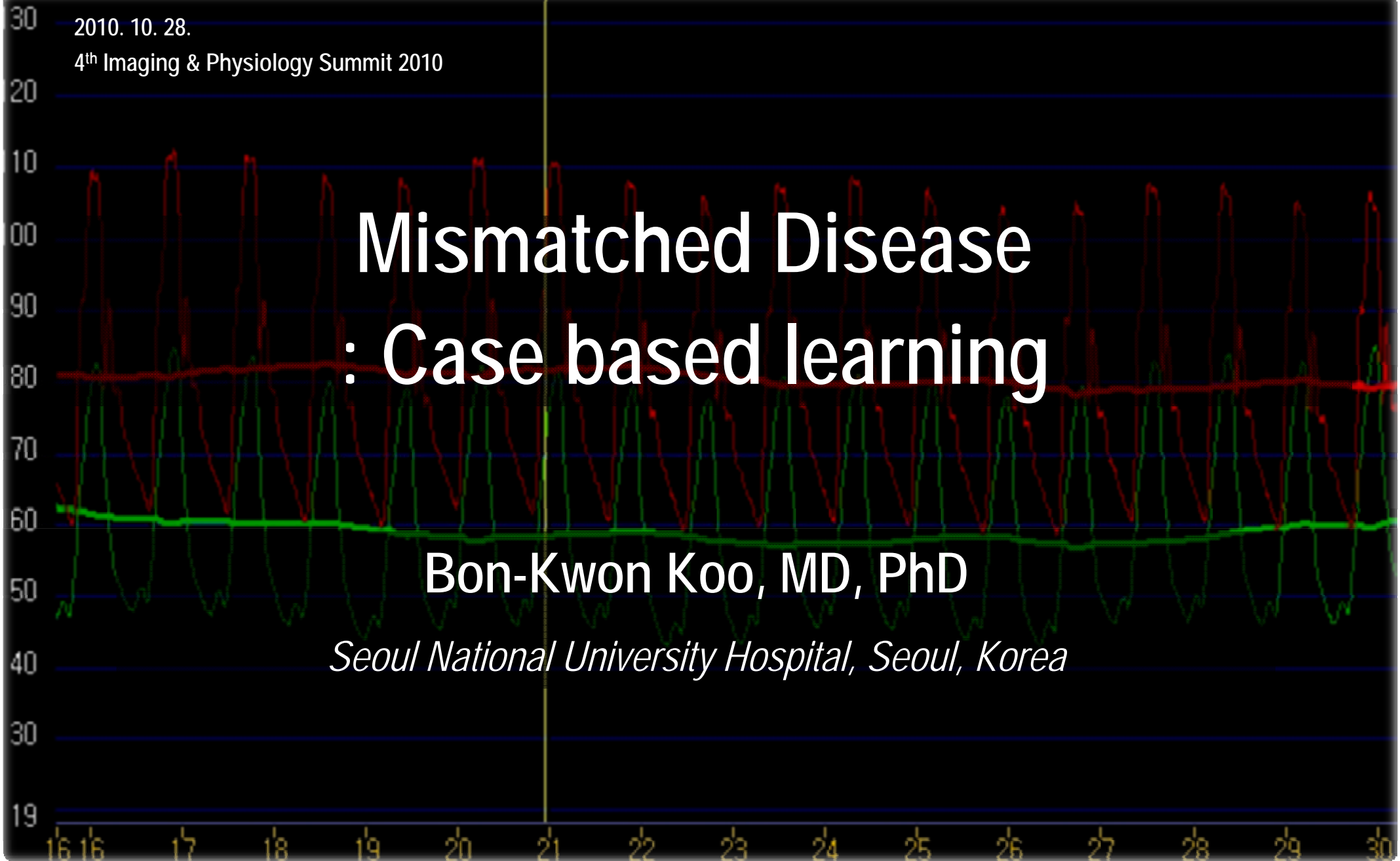
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4th Imaging & Physiology Summit 2010

Mismatched Disease : Case based learning

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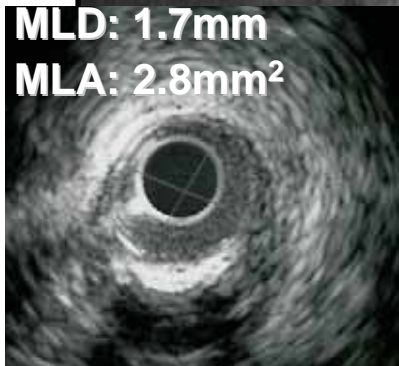
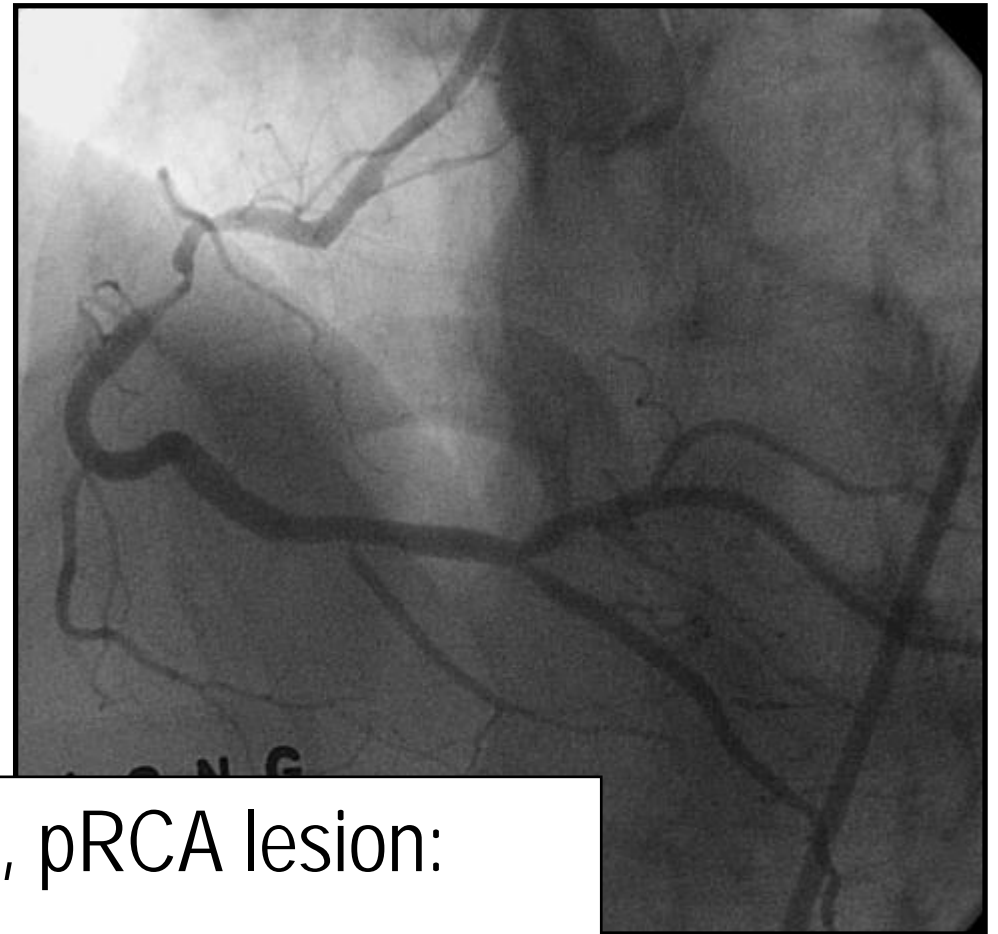
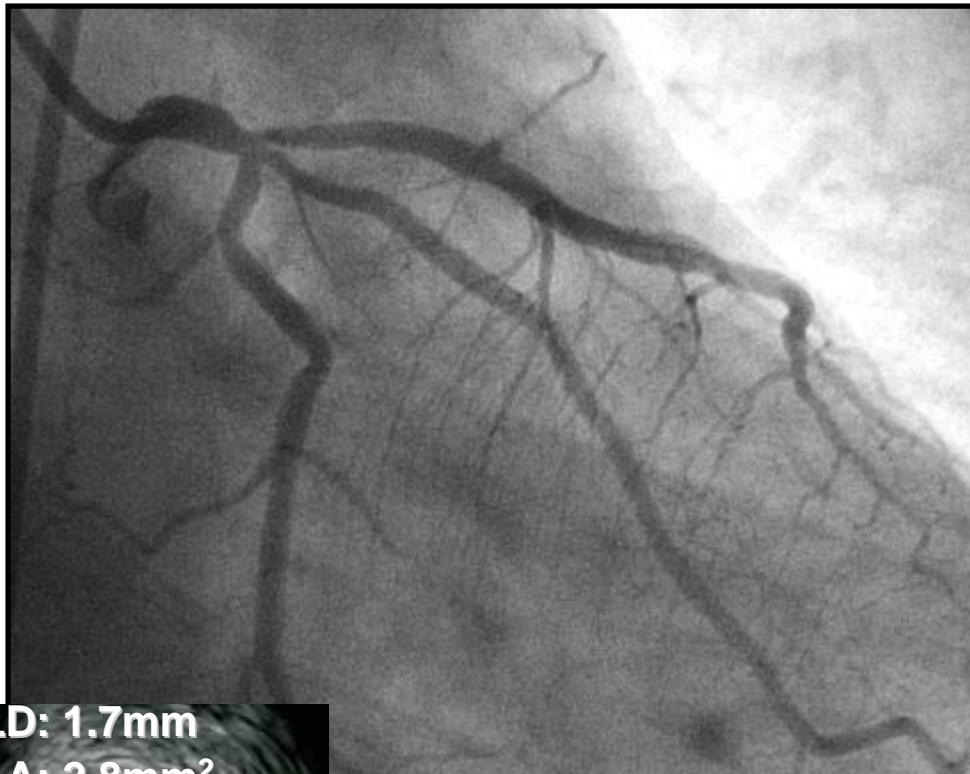
CASE 1

Mismatch between Angiogram/IVUS and FFR

M/63 HT, Hyperlipidemia

Recent onset resting and exertional chest pain

Referred from other hospital after CAG for urgent CABG



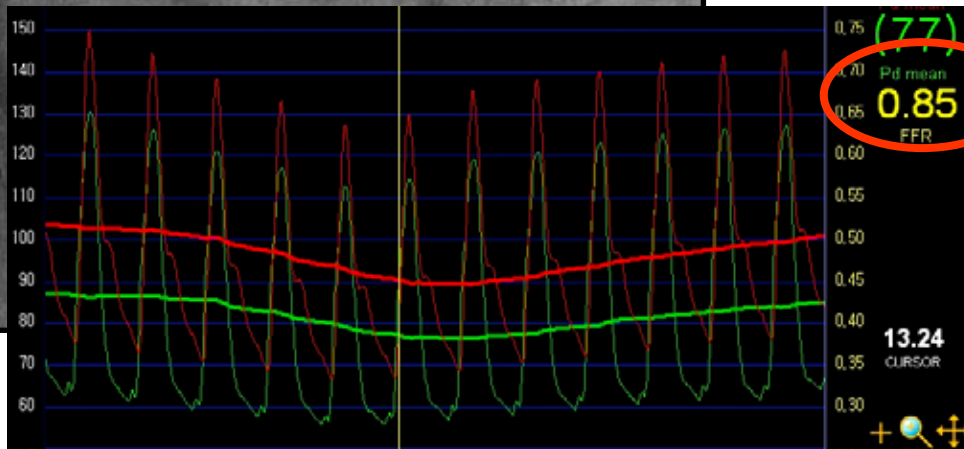
MLD: 1.7mm
MLA: 2.8mm²

Lt Main, LAD os, pRCA lesion:
CABG? PCI?

M/63 HT, Hyperlipidemia

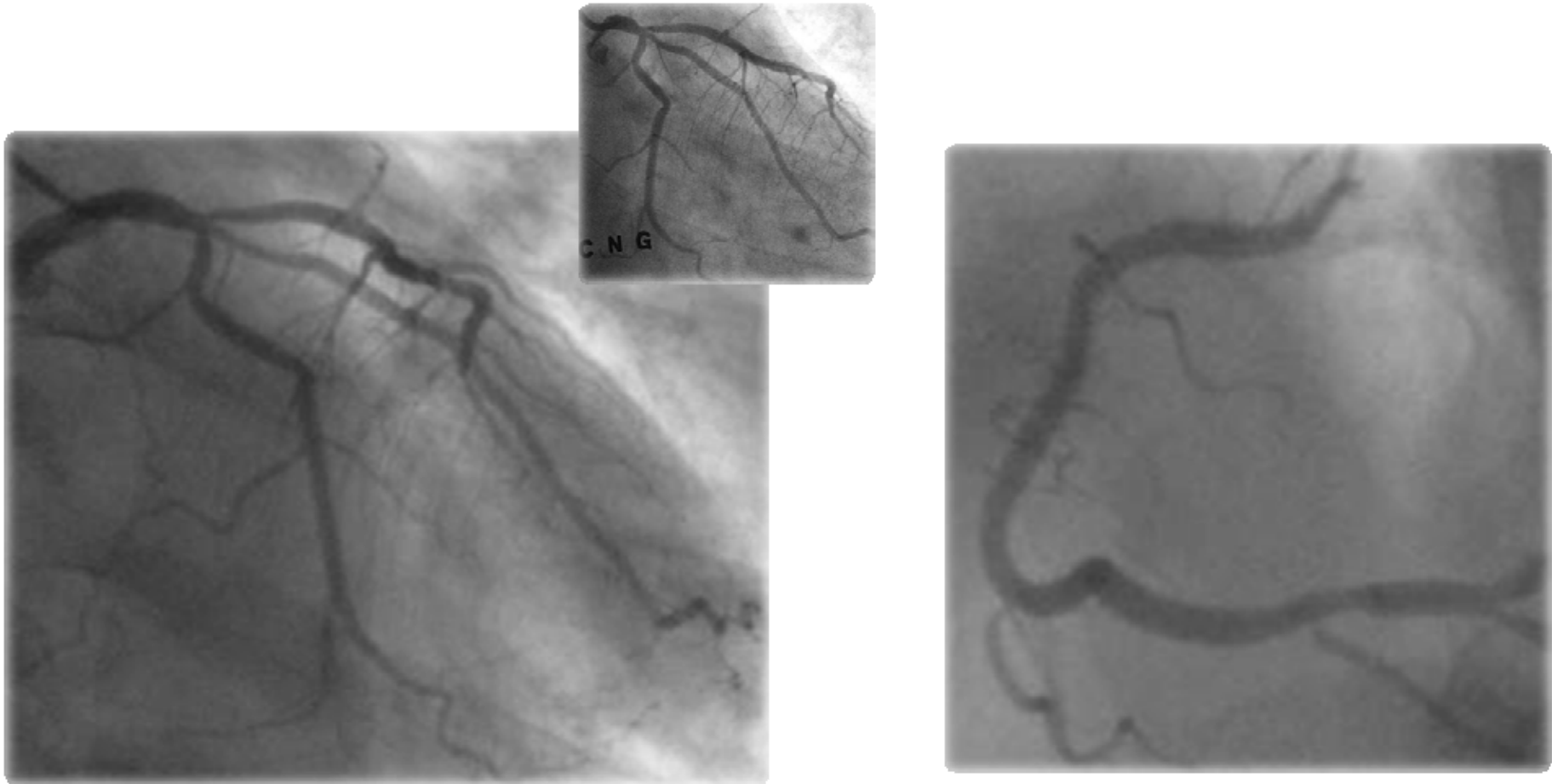
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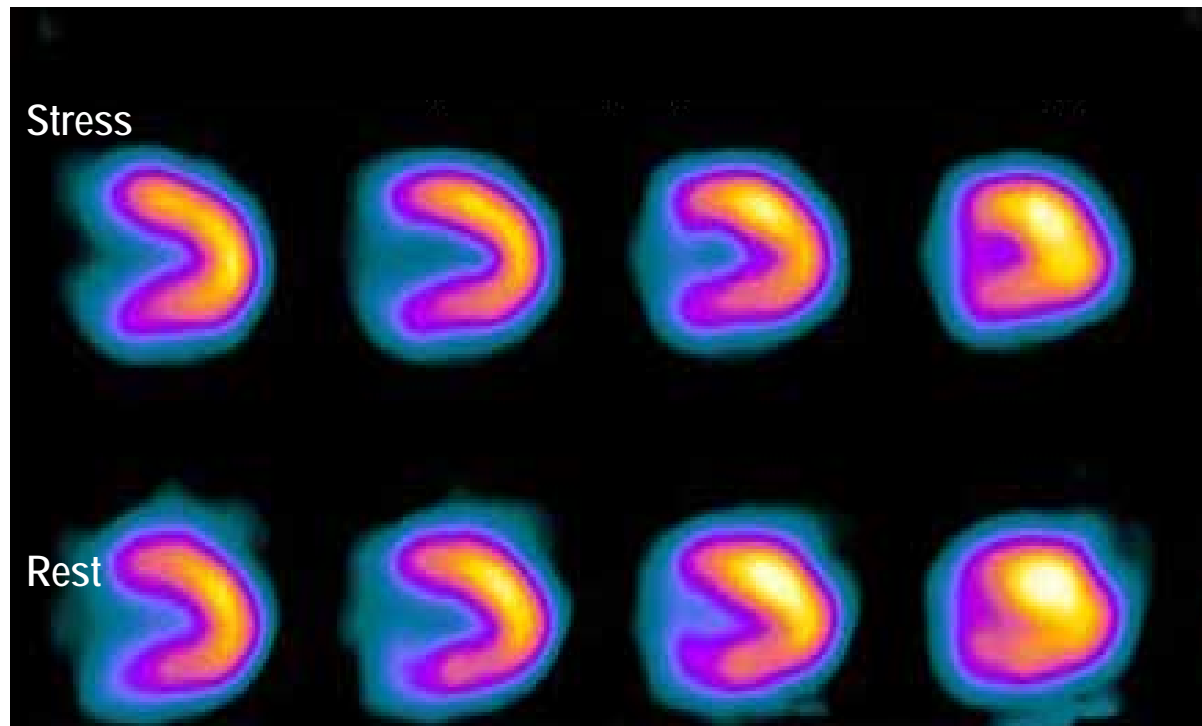
M/63 HT, Hyperlipidemia

7 months after PCI



M/63 HT, Hyperlipidemia

Myocardial SPECT 3yr after PCI



Mismatch between Angiogram/IVUS and FFR,
but good match between FFR and functional test/Patient's symptom

CASE 1

Mismatch between Angiogram/IVUS and FFR,

but good match between FFR and functional test/Patient's symptom

CASE 2

Mismatch between Angiogram/CT CAG/IVUS and FFR

M/57

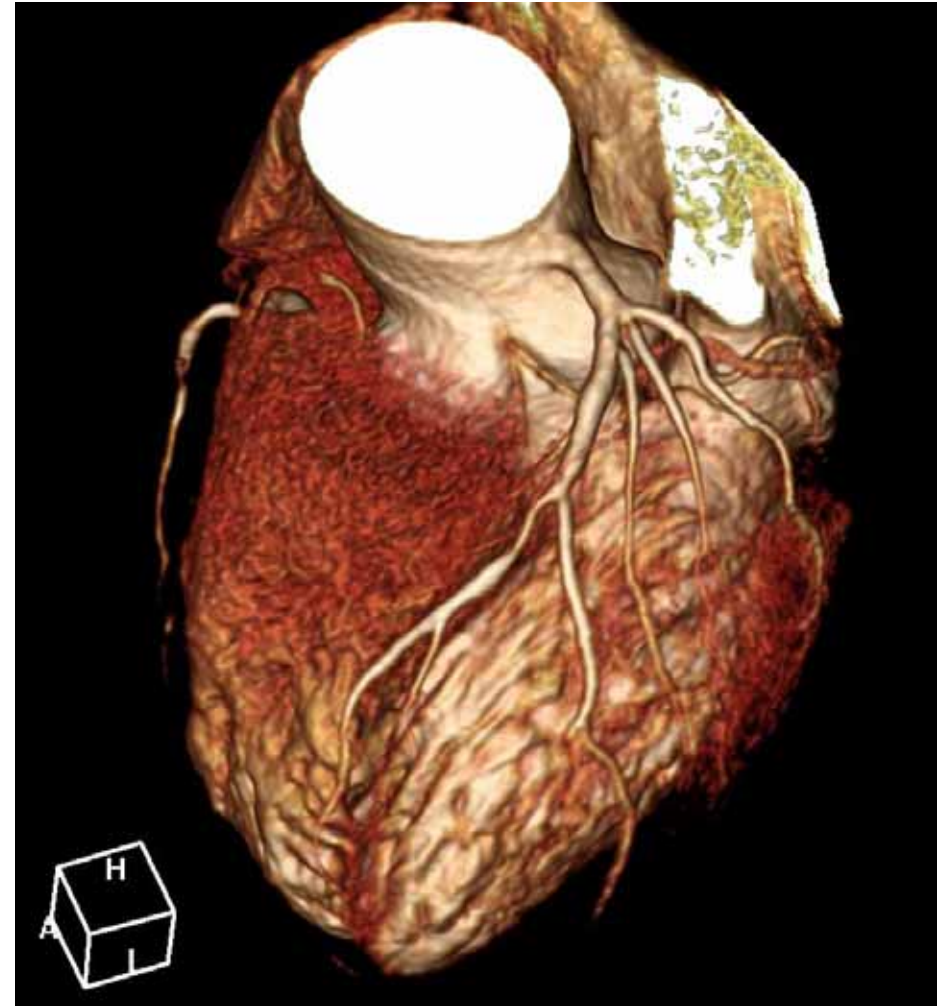
Dx: R/O silent ischemia; No subjective sx

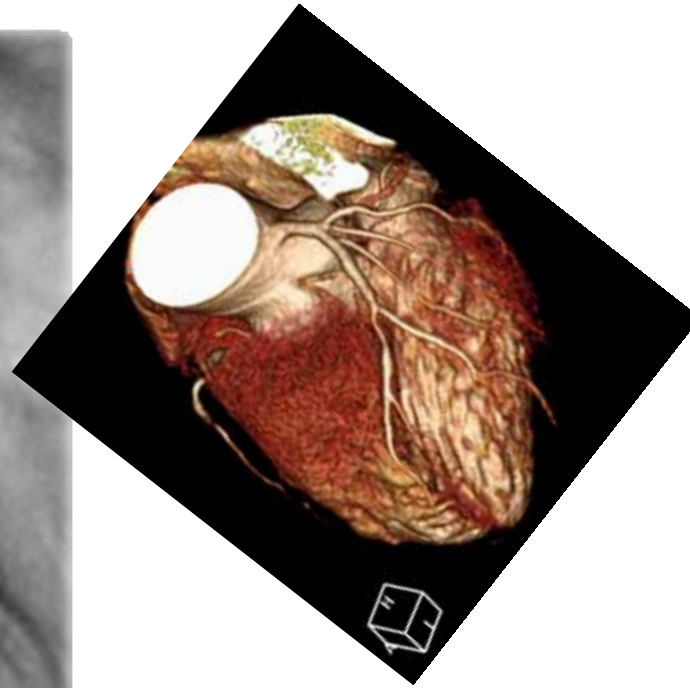
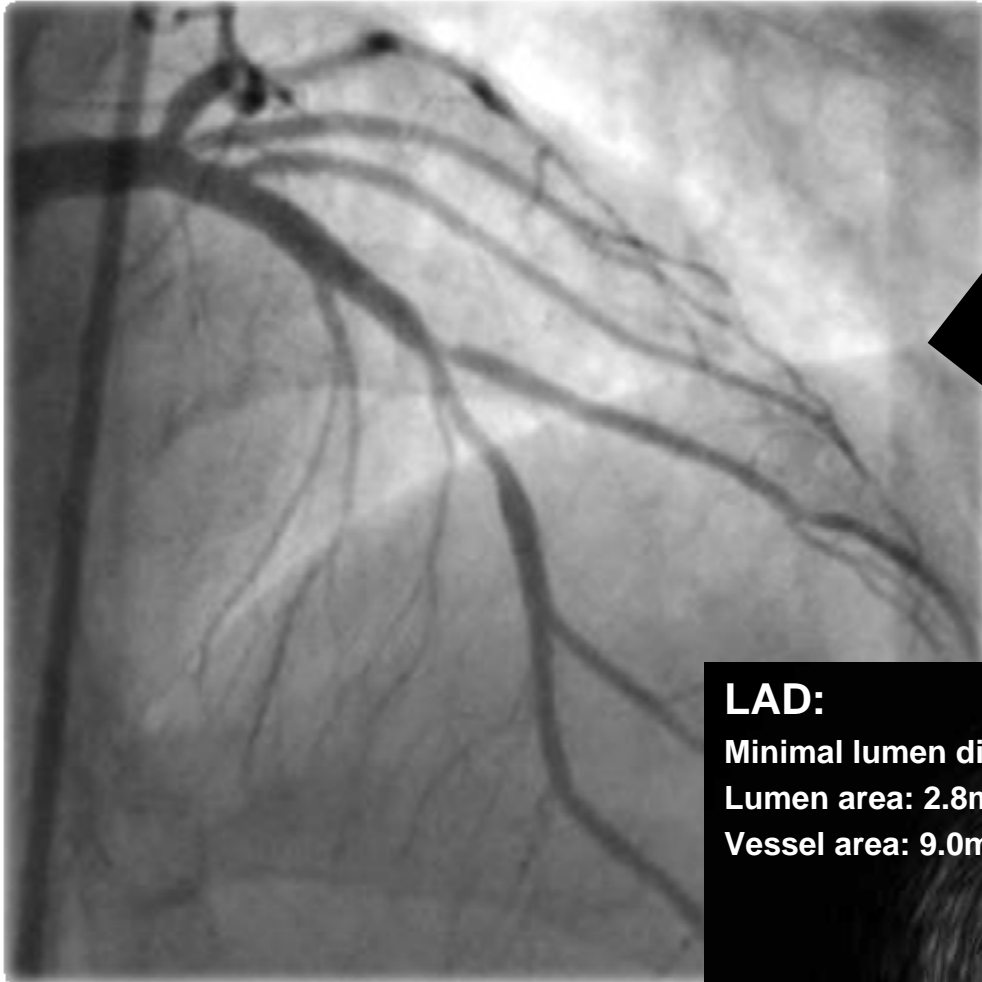
CT coronary Angiography:

LAD severe stenosis with mixed plaque

RCA os mild stenosis

RCA mid calcified plaque with mild stenosis



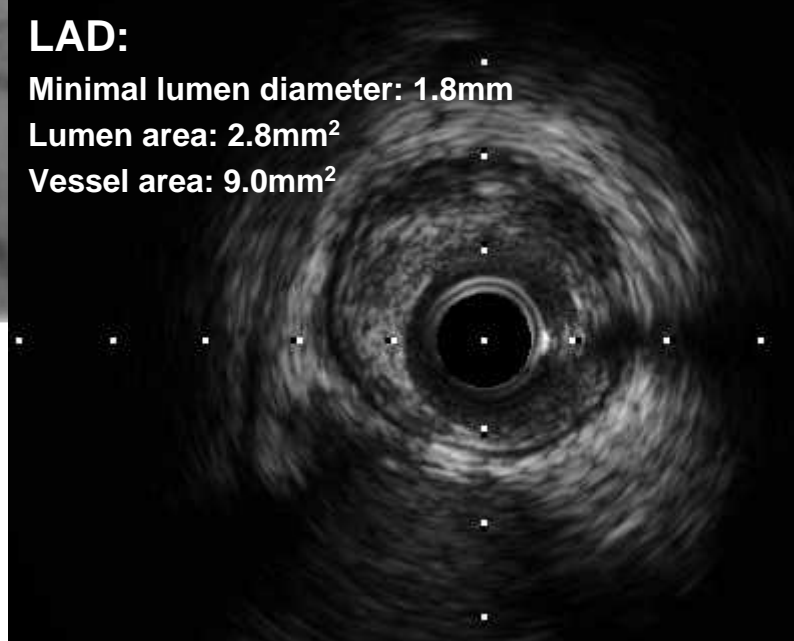


LAD:

Minimal lumen diameter: 1.8mm

Lumen area: 2.8mm²

Vessel area: 9.0mm²

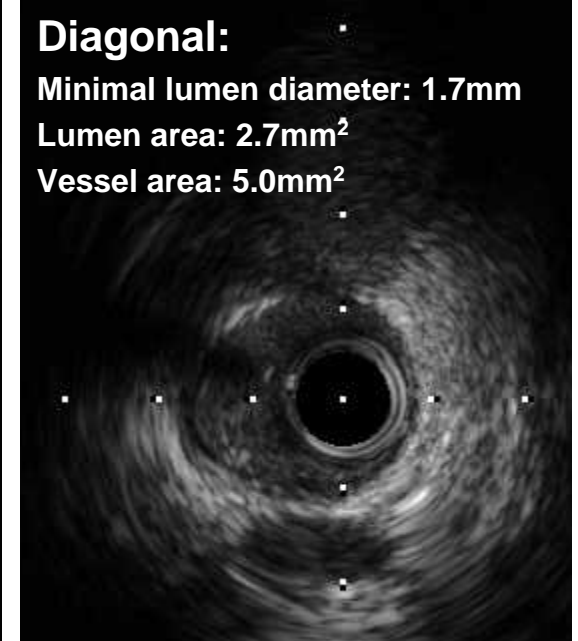


Diagonal:

Minimal lumen diameter: 1.7mm

Lumen area: 2.7mm²

Vessel area: 5.0mm²



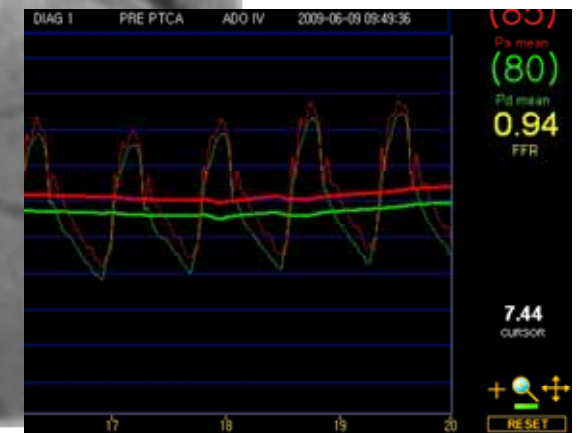
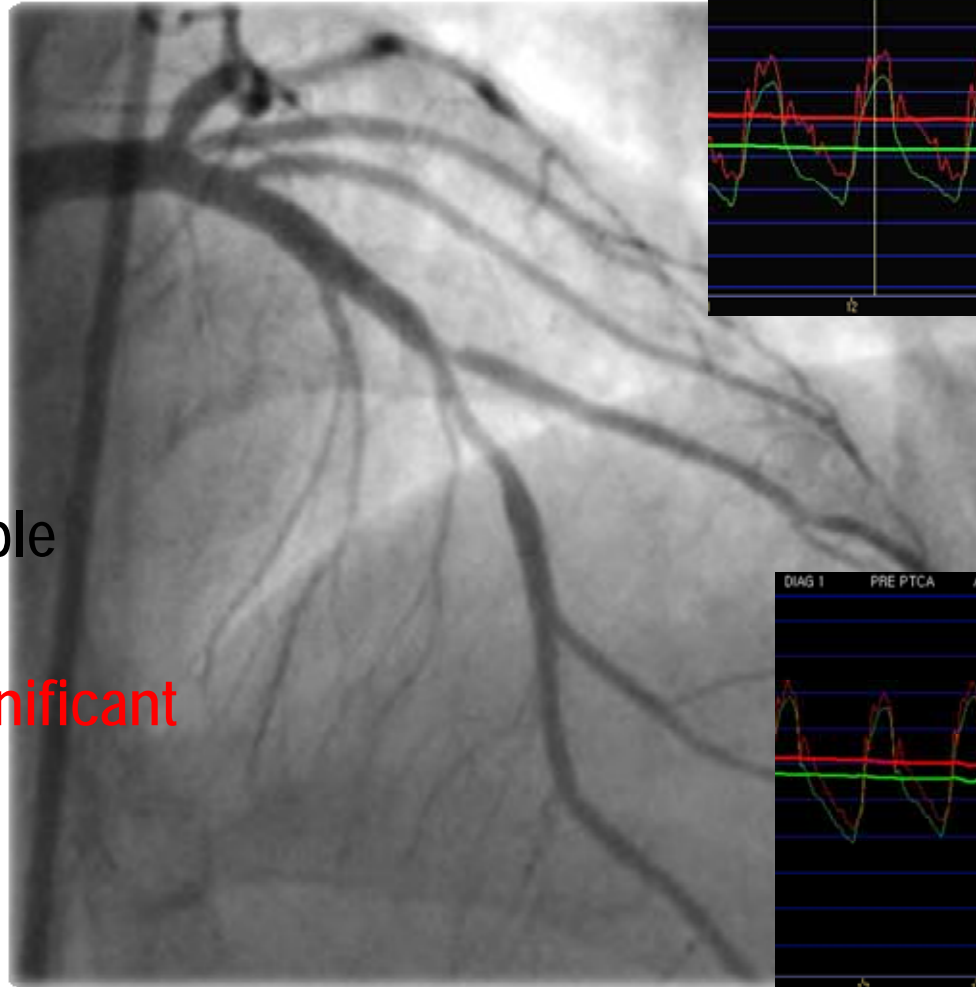
How to treat this bifurcation lesion?

CT angiography: **significant**

Angiography: **significant**

Non-invasive test: not available

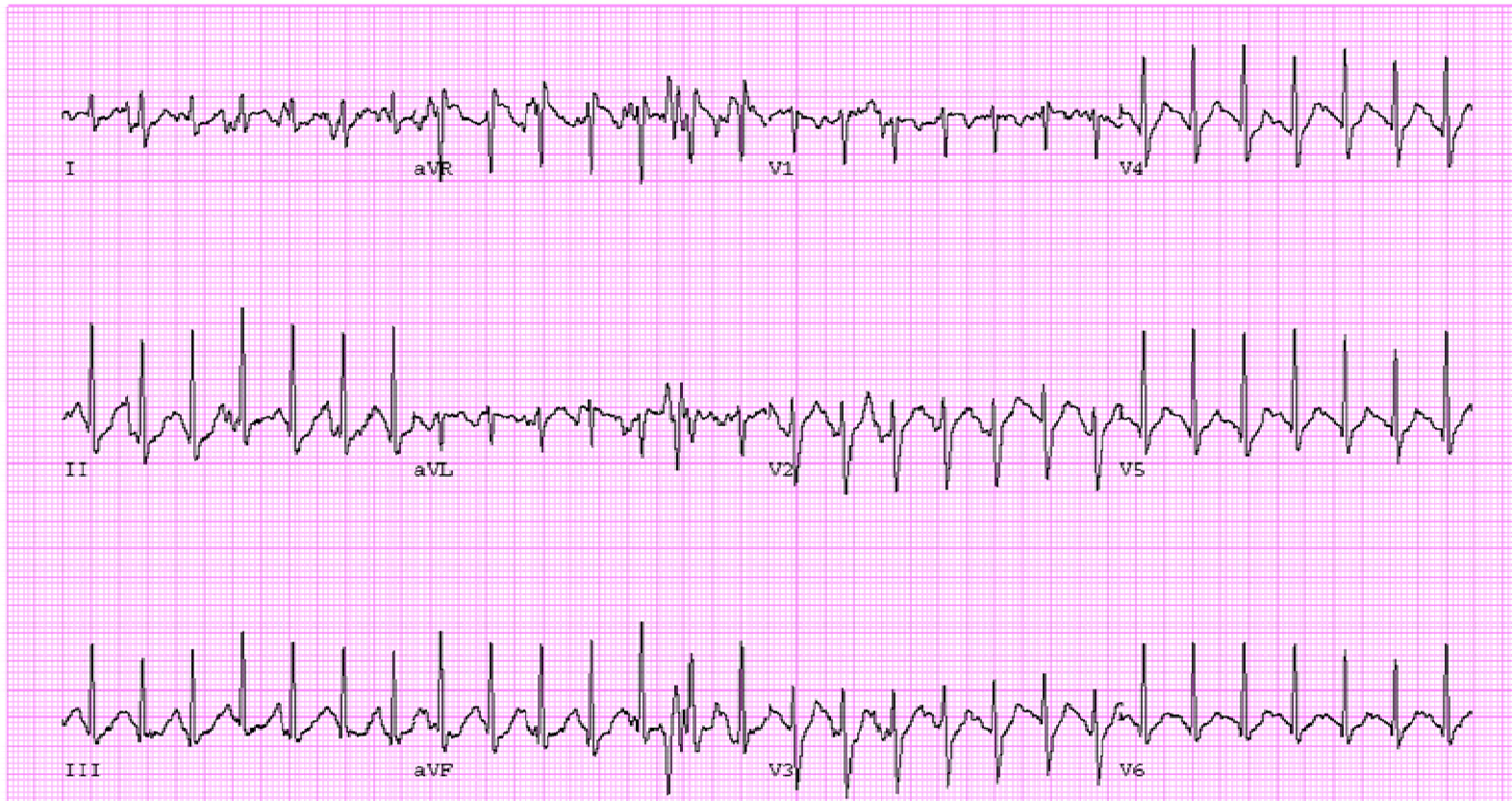
Intravascular ultrasound: **significant**



Exercise stress test

(on ASA and statin)

12-Lead Report (PEAK EXERCISE)
169 bpm EXERCISE BRUCE
201/100 mmHg STAGE 4 6.8 km/h
11:31 16.0 ‡



GE Medical Systems IT

For 1.5yrs, no symptom, no event...

CASE 2

Mismatch between Angiogram/CT CAG/IVUS and FFR

but good match between FFR and functional test/Patient's symptom

CASE 3

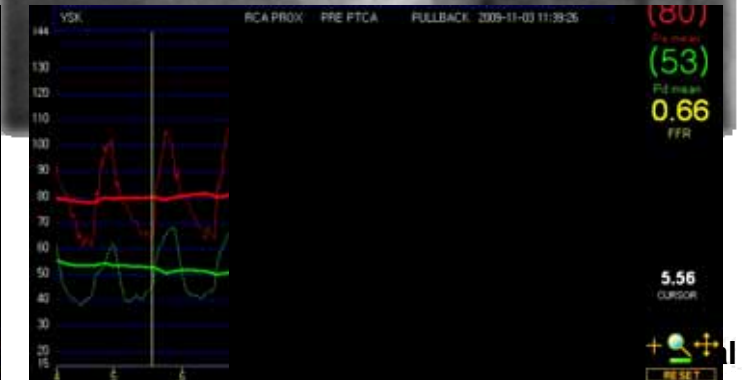
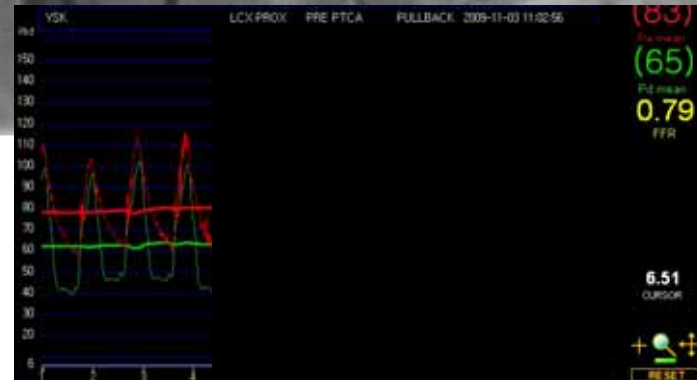
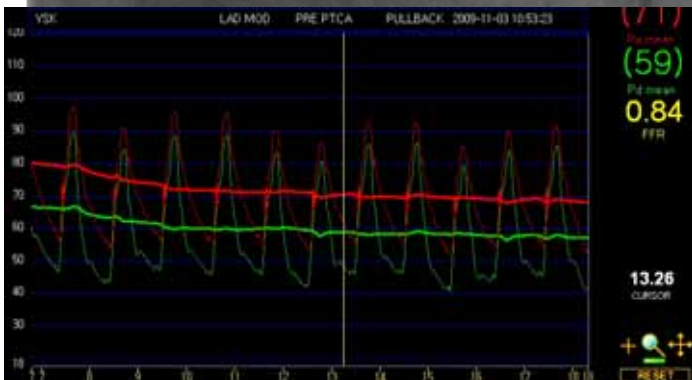
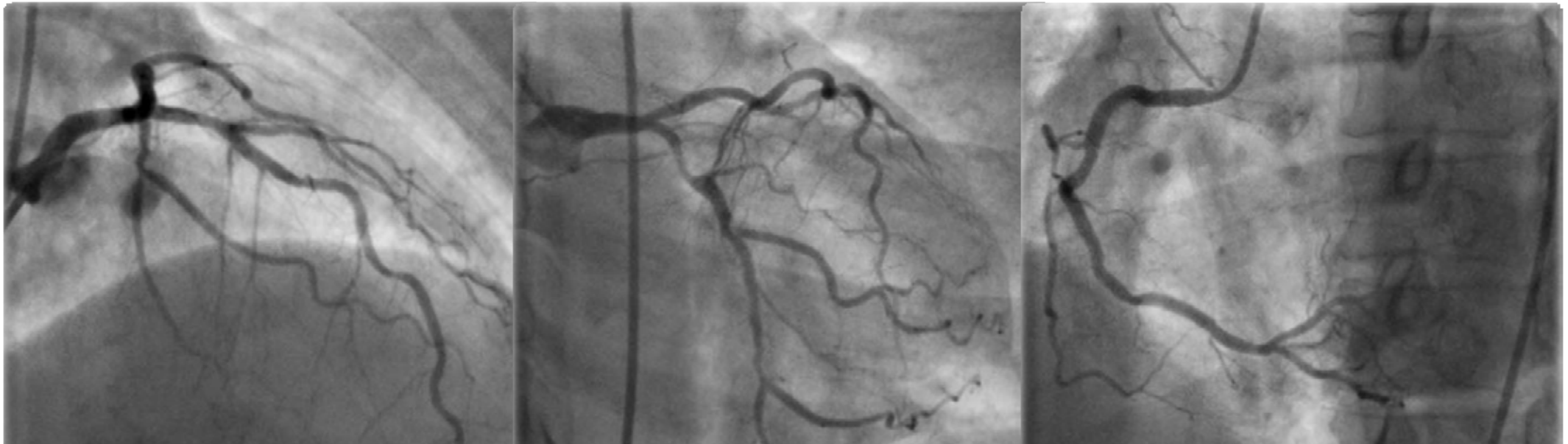
Mismatch between CT CAG/Angio and FFR in multiple/multi-vessel lesions

F/52

Stable angina, Recent aggravation

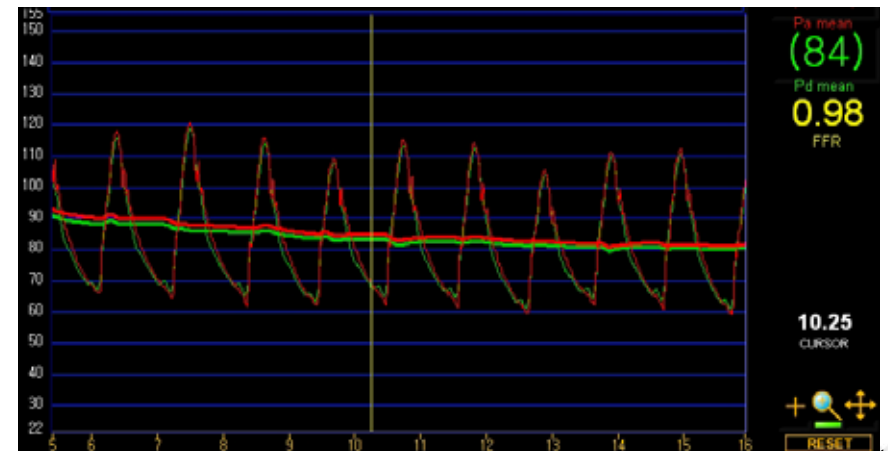
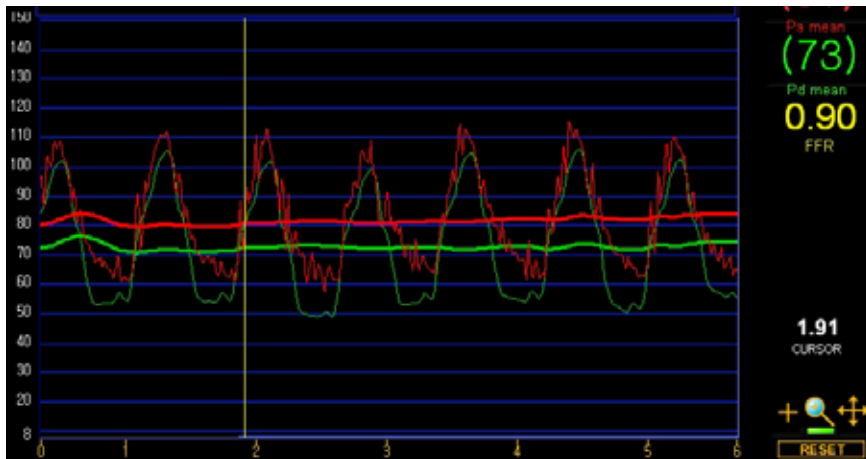
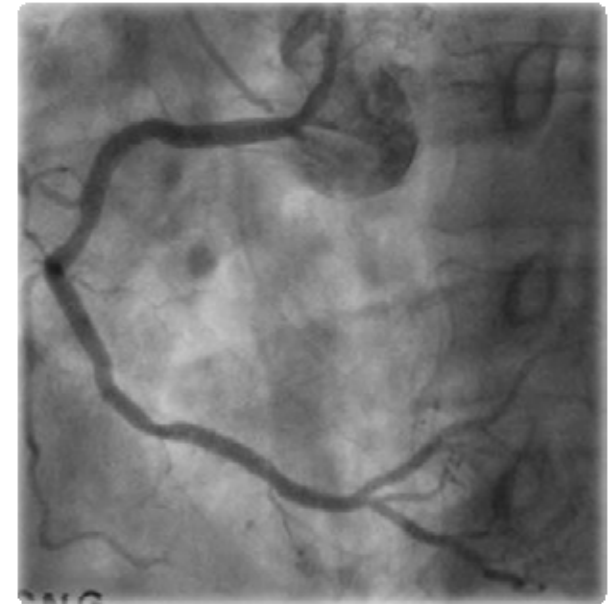
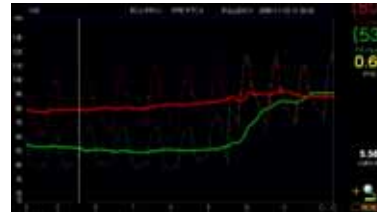
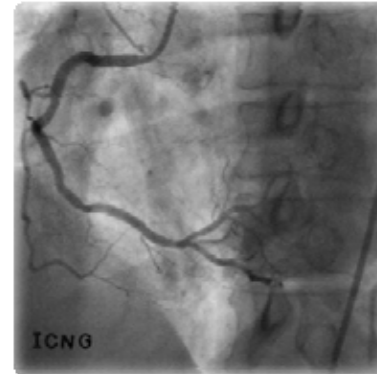
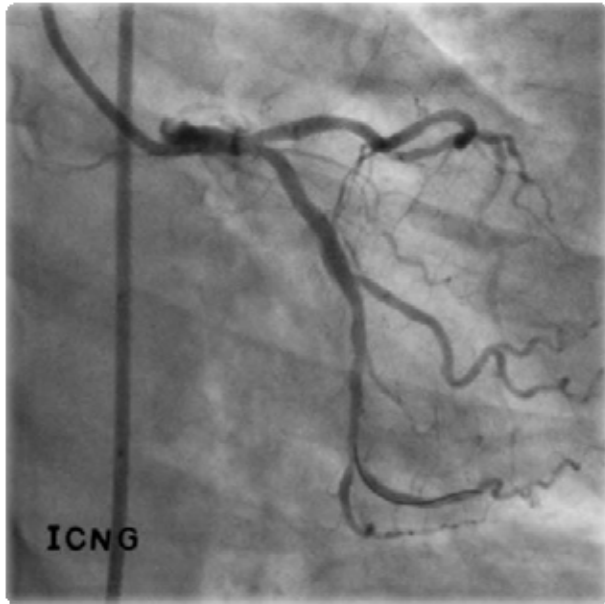
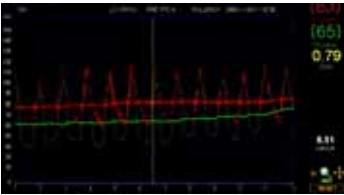
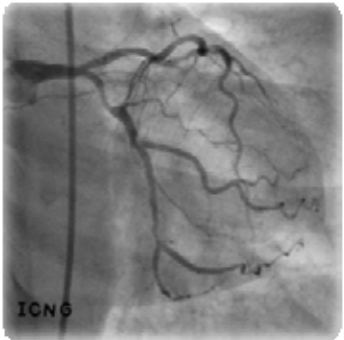
CT CAG: pLAD 50%, pLCX 70%, RCAos 40%

TMT: + at 4min exercise



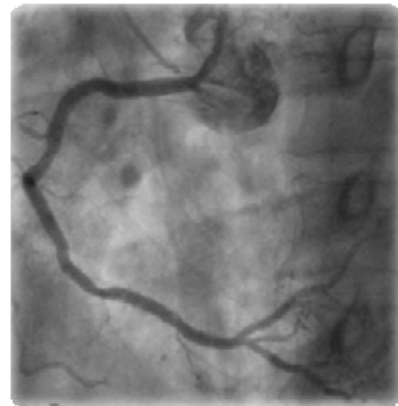
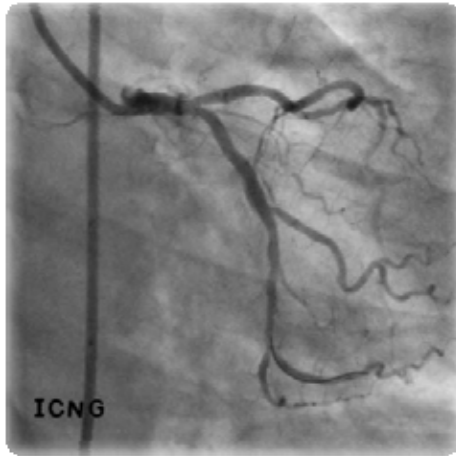
F/52

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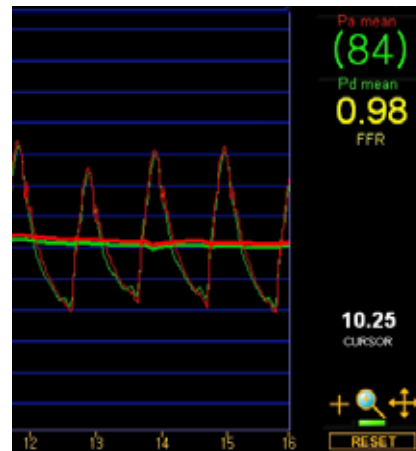
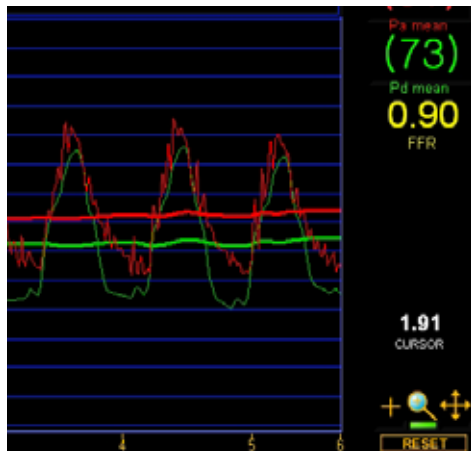
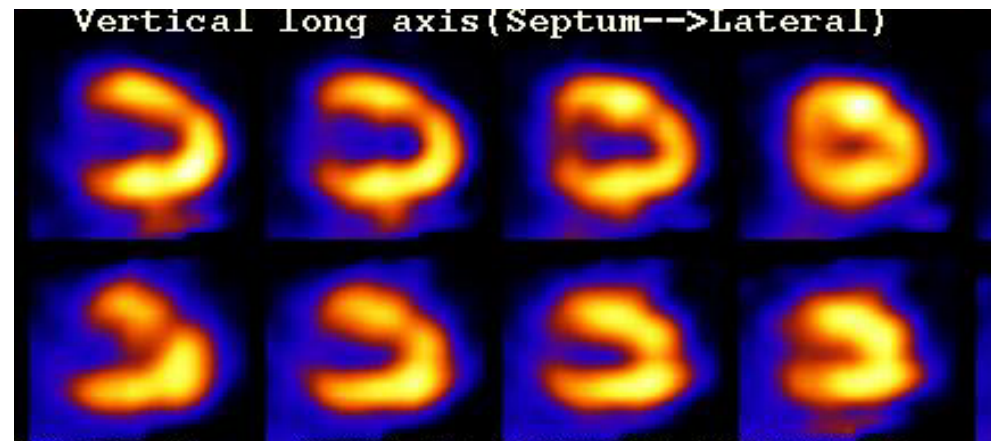
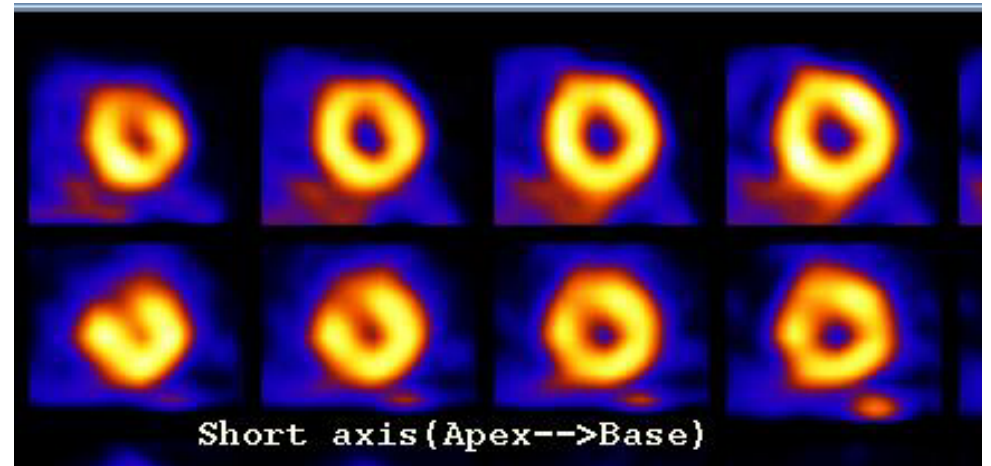


F/52

s/p FFR-guided PCI:



Myocardial SPECT 8months after PCI



CASE 3

Mismatch between CT CAG/Angio and FFR in multiple/multi-vessel lesions

→ good match between post PCI FFR and functional test/Patient's symptom