

***Reverse-Mismatch
between Coronary Angiography and
FFR at the proximal site of LAD***

Tokyo Medical University Hospital

***Kunihro Sakoda, Nobuhiro Tanaka, Youhei Hokama, Kou Hosino,
Jun Yamashita, Akira Yamashina***

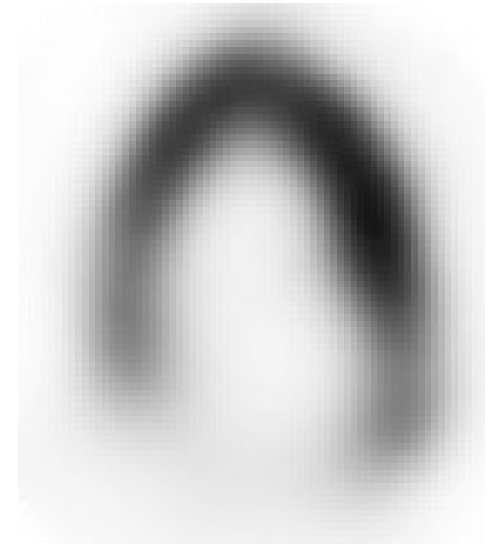
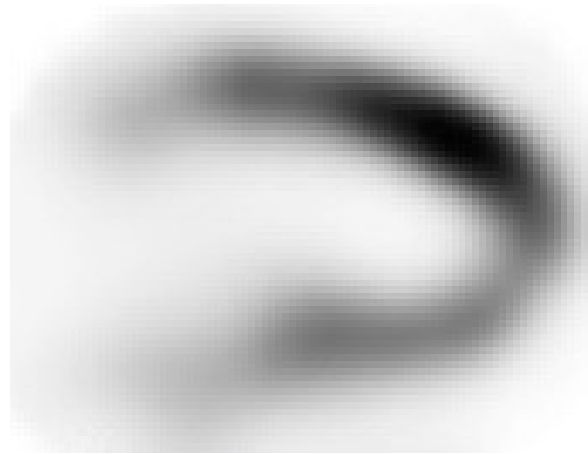
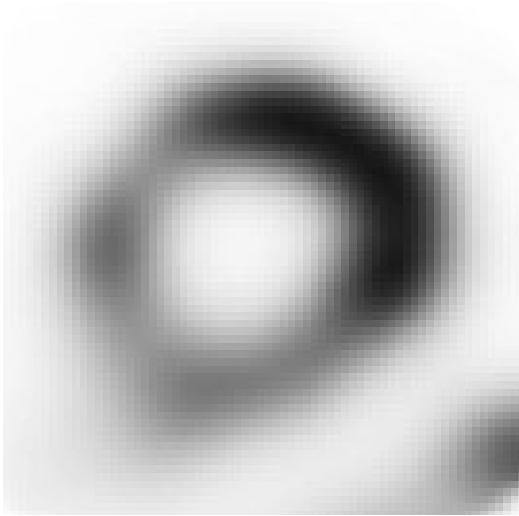
Clinical Course

A 70-year-old male with a history of hypertension, and CRF on hemodialysis was referred to our hospital because of chest pain.

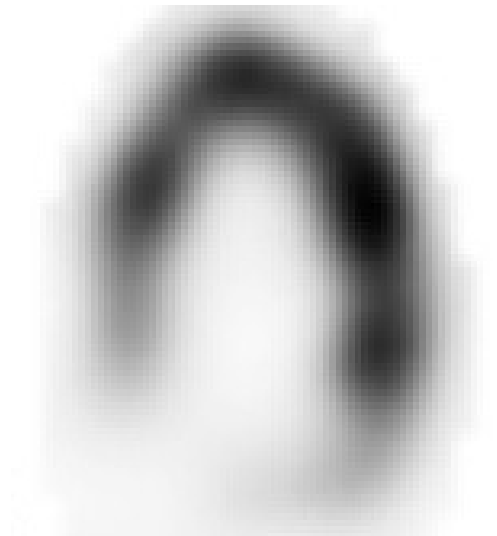
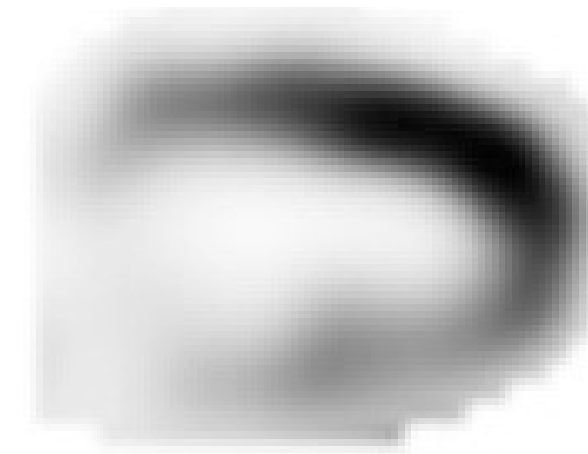
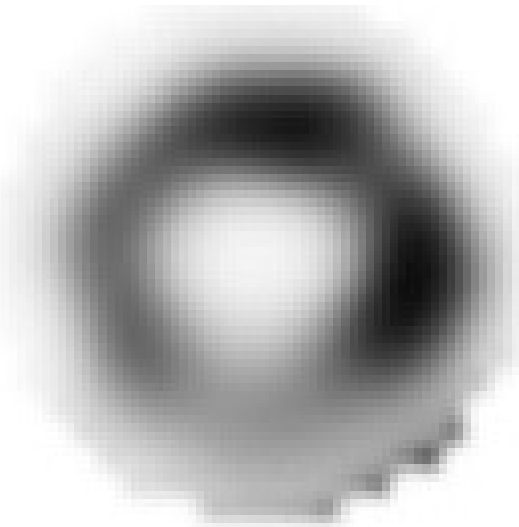
Stress Thallium-201 myocardial imaging did not show ischemia, however his chest pain was typical symptom of effort angina. So we decided to perform CAG.

Stress Tl-201 myocardial imaging

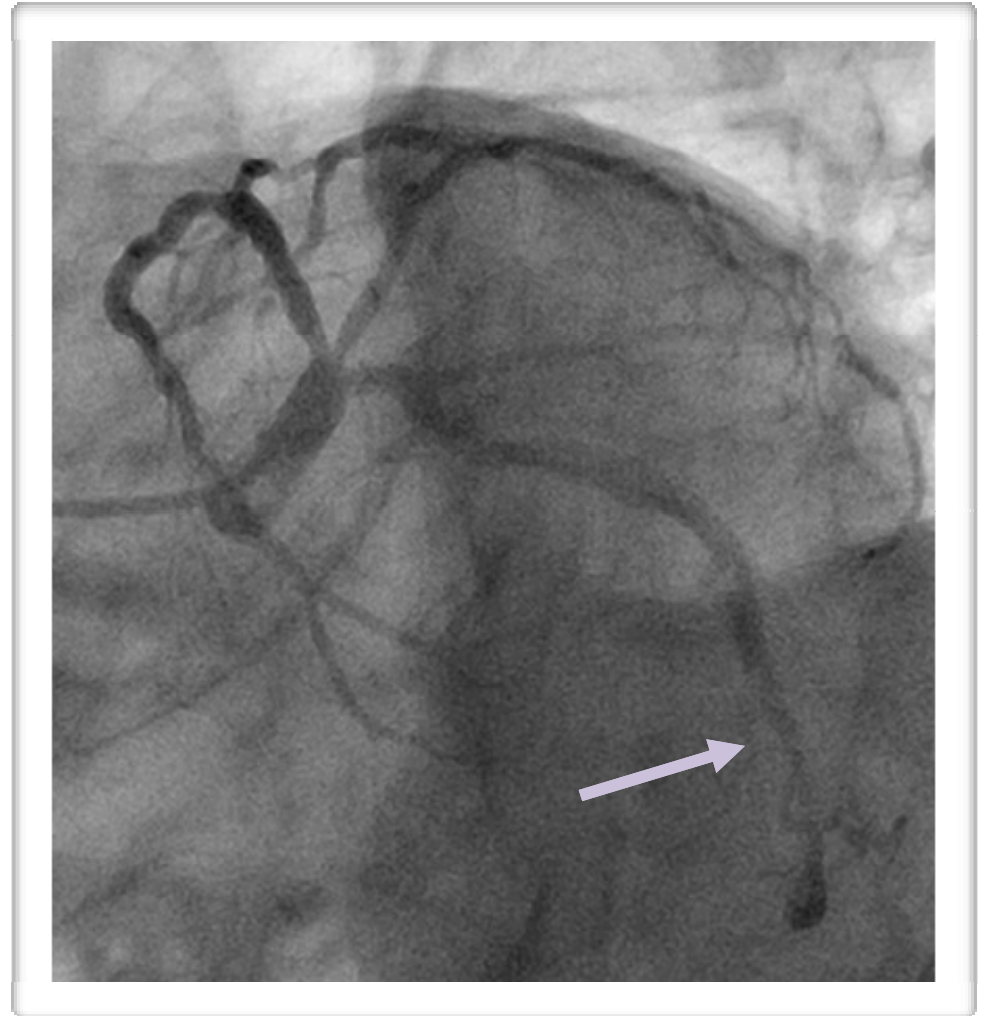
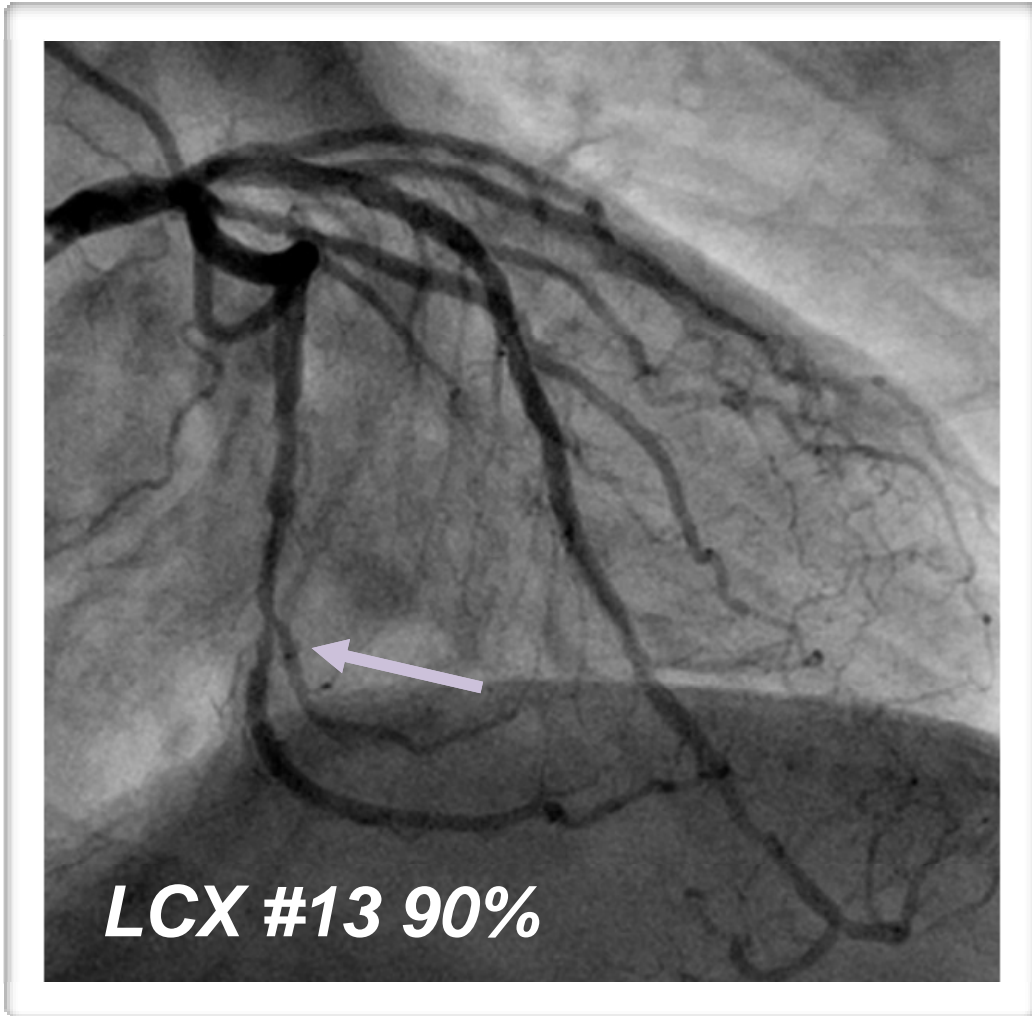
Stress



Rest



1st CAG

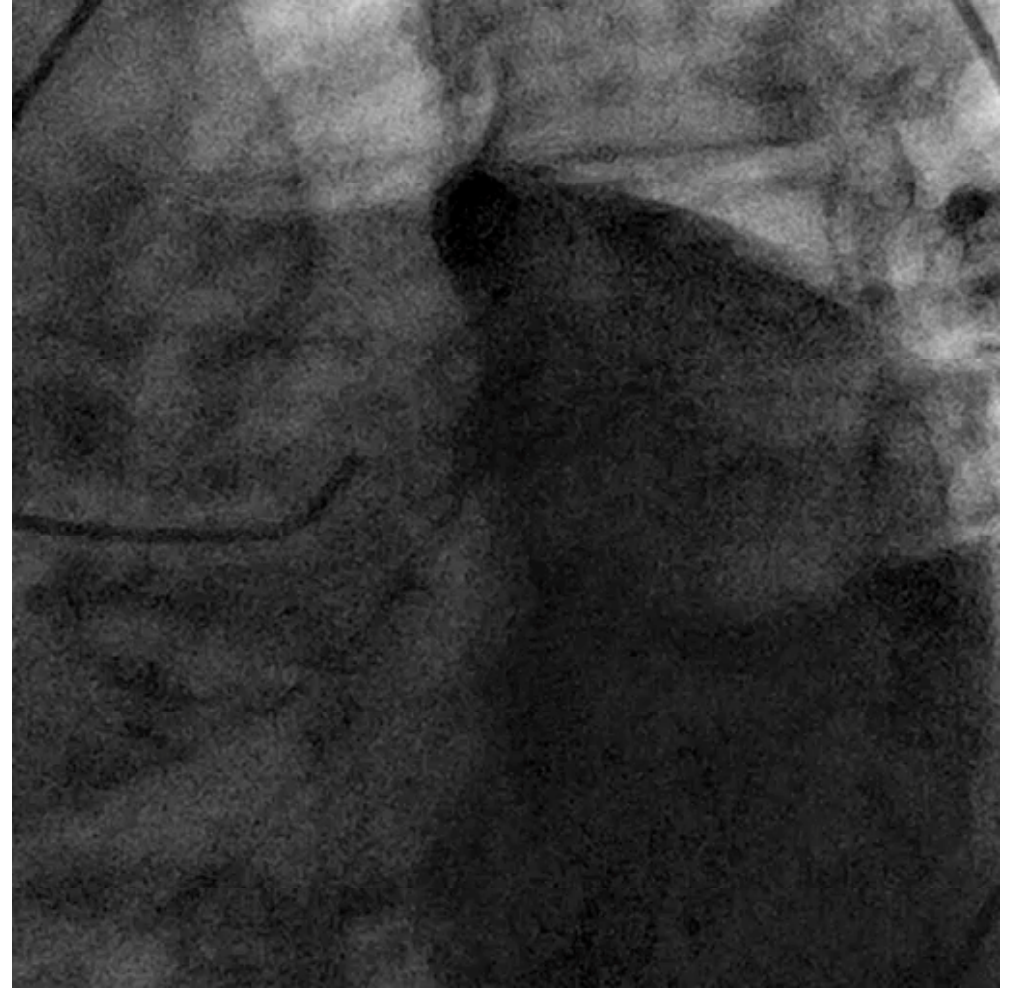
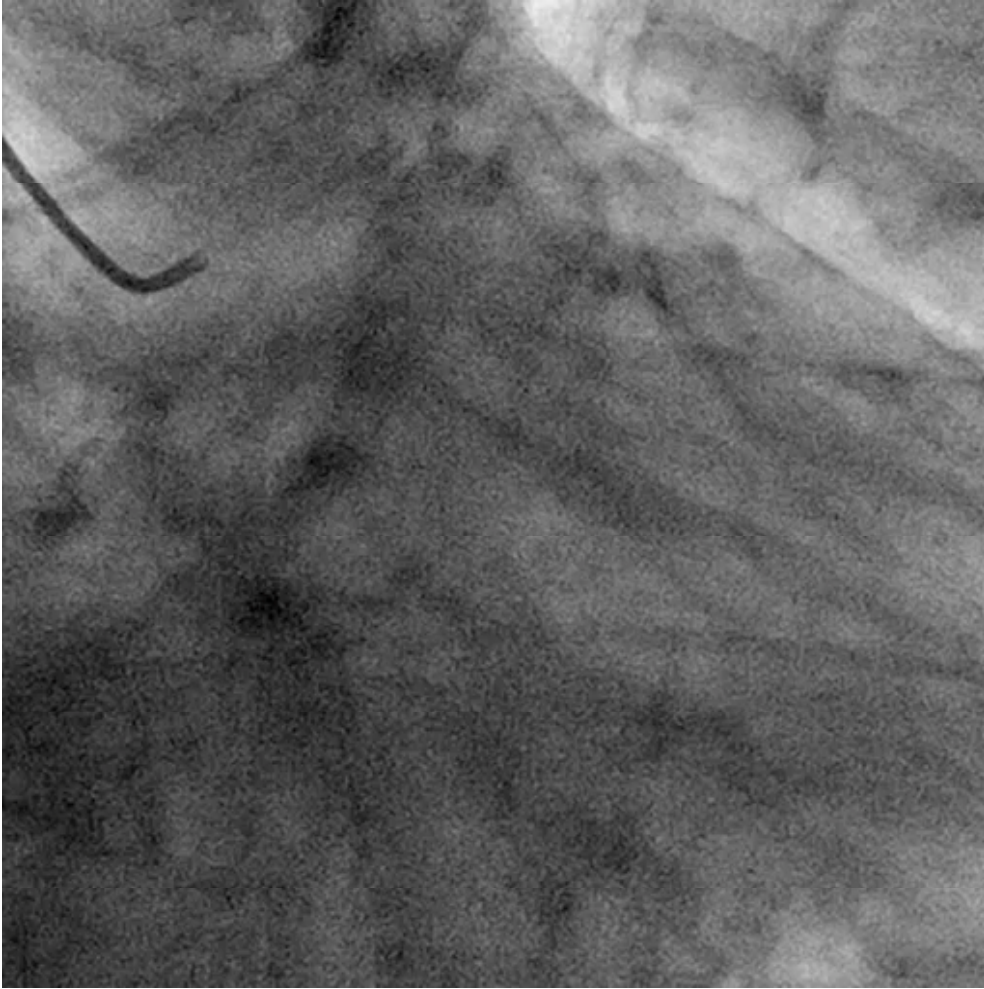


Clinical Course

Four-months later, he complained chest pain on effort again, although he took the medicine.

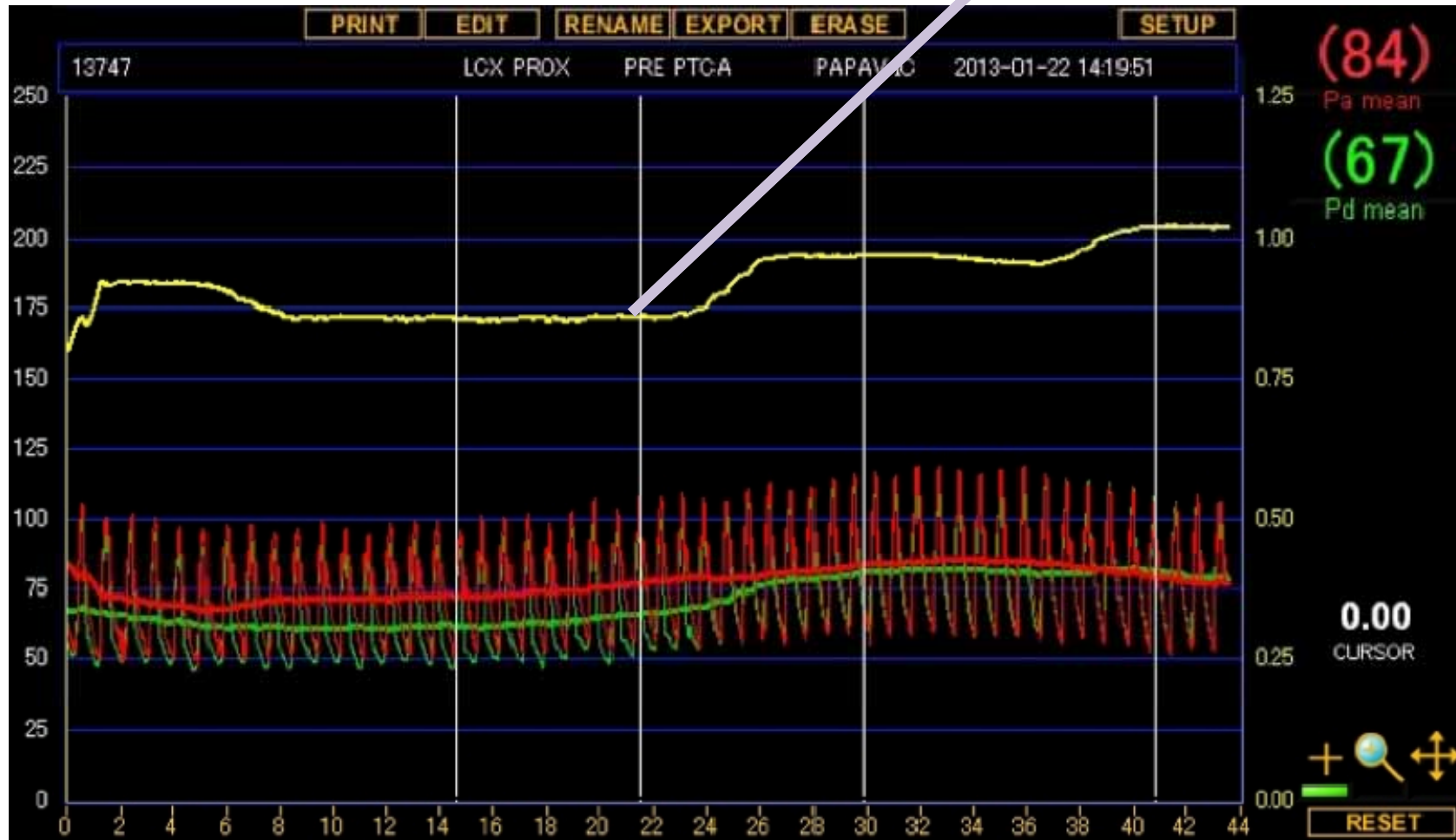
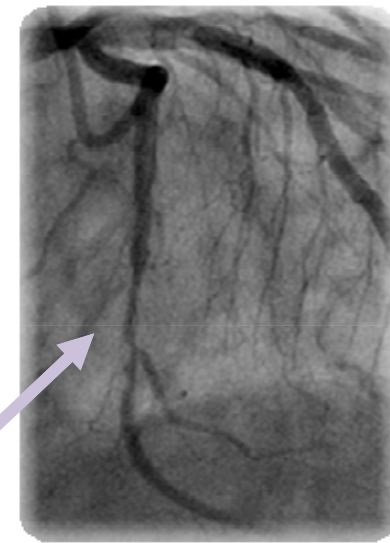
Because we thought the symptom was caused by the ischemia of LCX, so that we planned to perform PCI for LCX.

CAG at re-attack



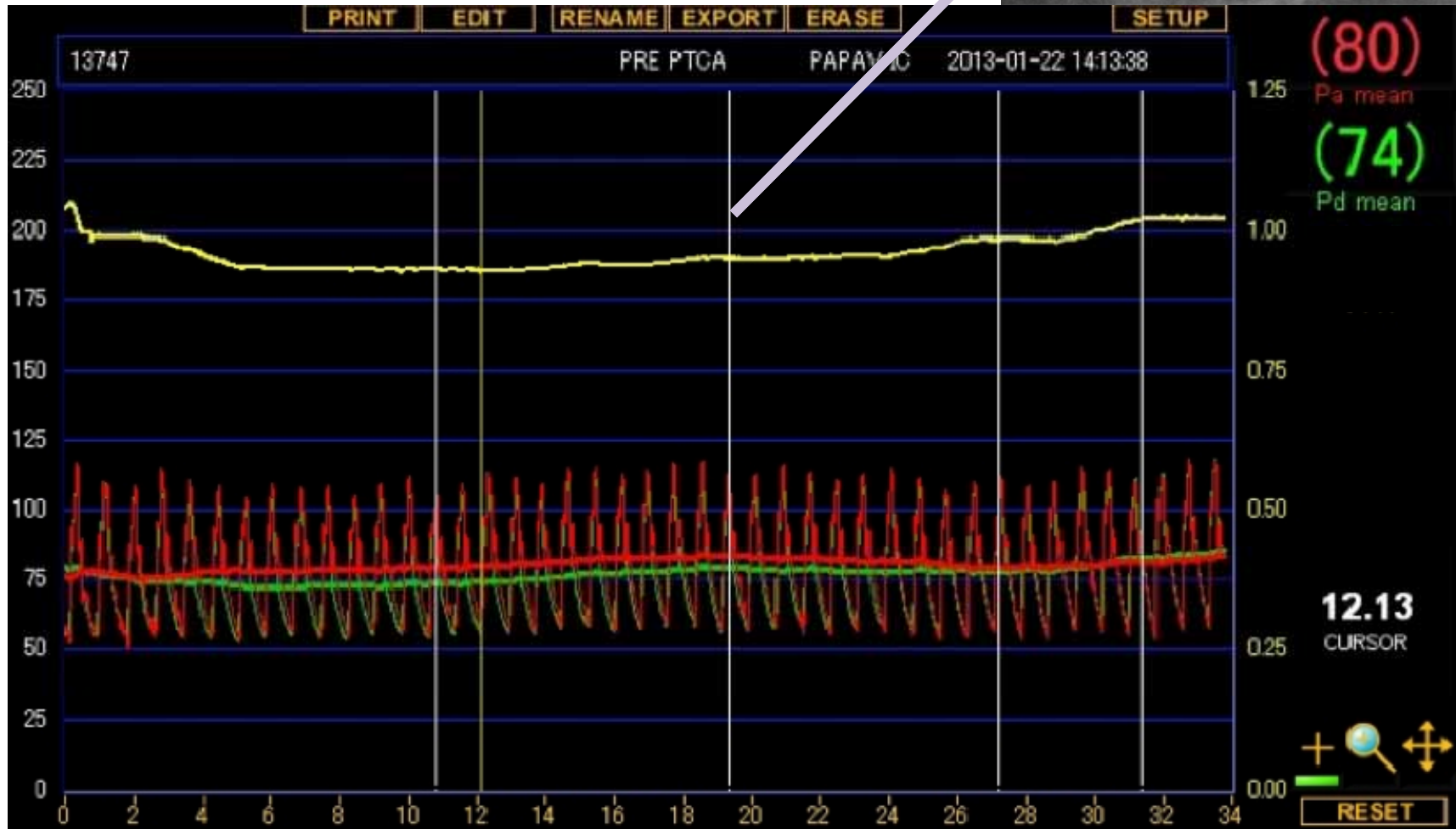
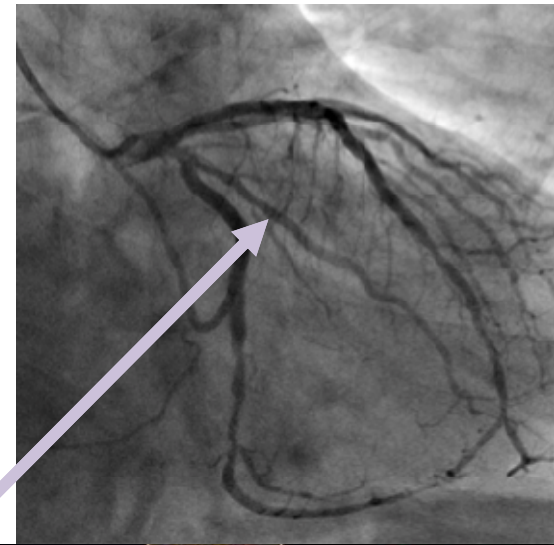
FFR (LCX) 0.83

FFR in LCX was 0.83 which indicated no hemodynamic significance.



FFR (HL) 0.93

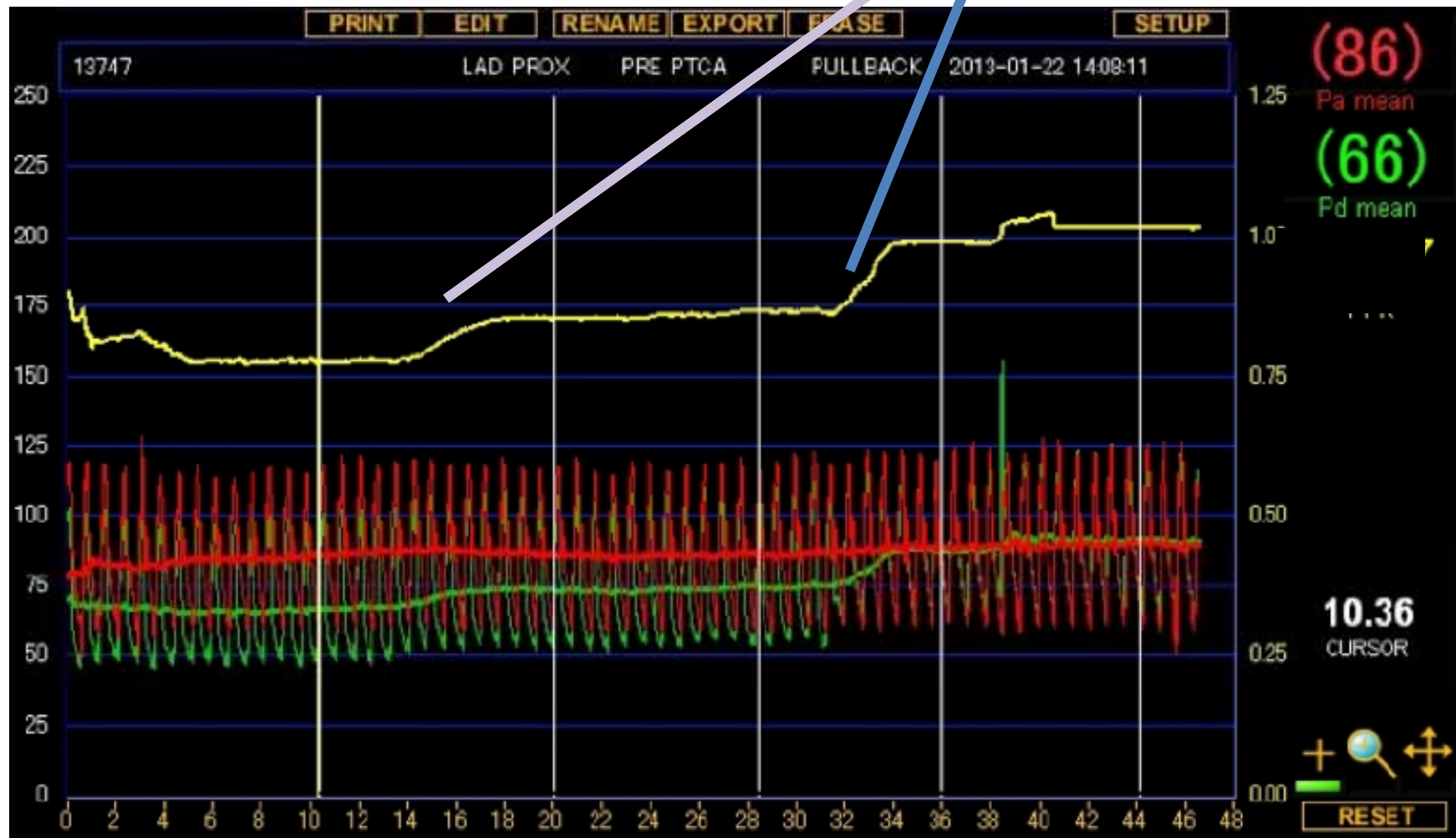
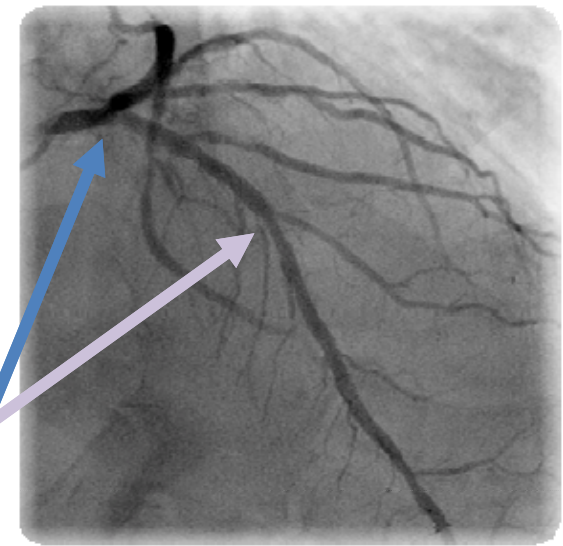
FFR in HL was 0.93 which indicated no hemodynamic significance.



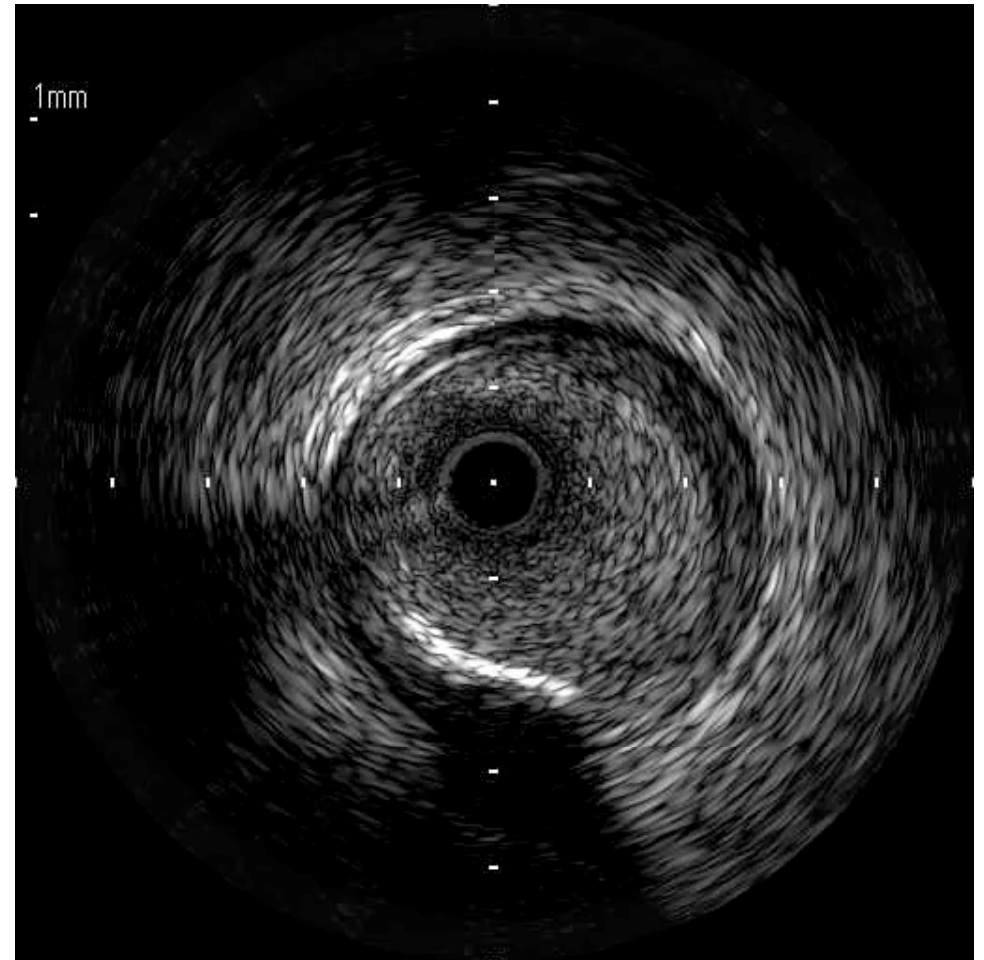
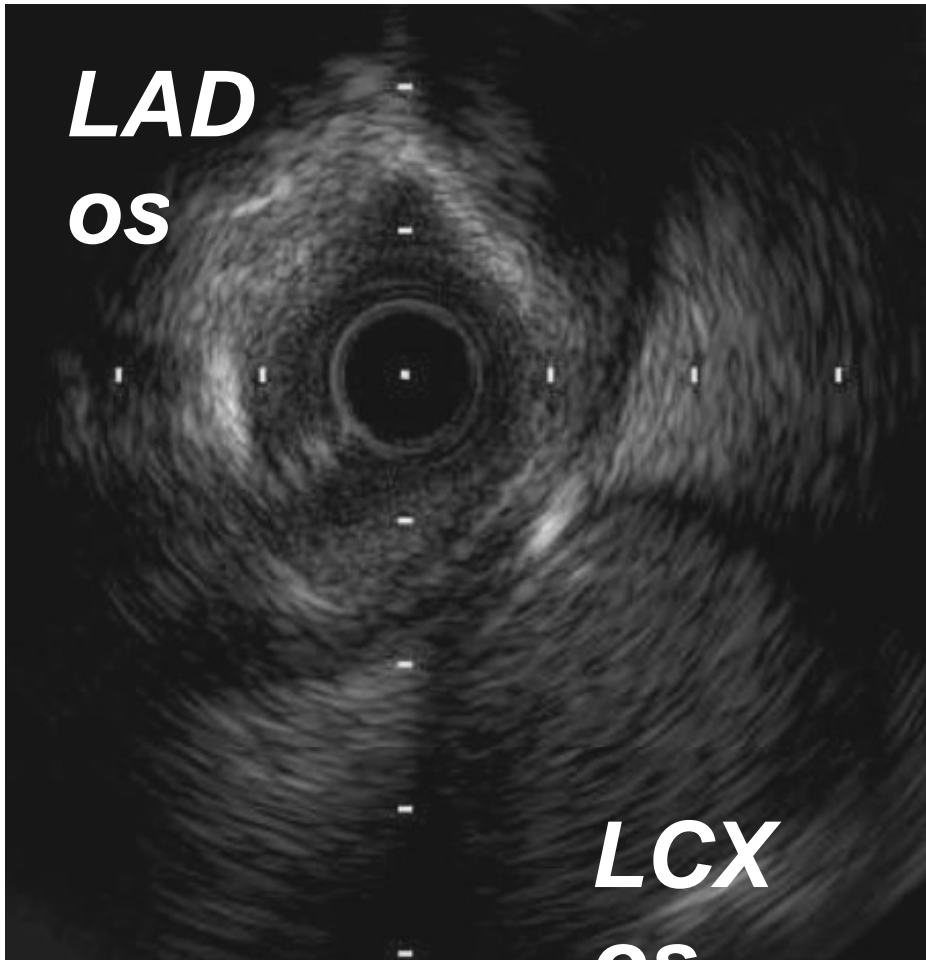
FFR(LAD) 0.75

FFR in LAD was 0.75.

In the pullback recording, the biggest pressure drop was at the proximal site of LAD.



IVUS (LAD)



IVUS showed focal plaque at the LAD ostium.

PCI for ostial LAD



BES was implanted to LAD osmium.
After the procedure, FFR improved to 0.91, and his
symptom became completely free.

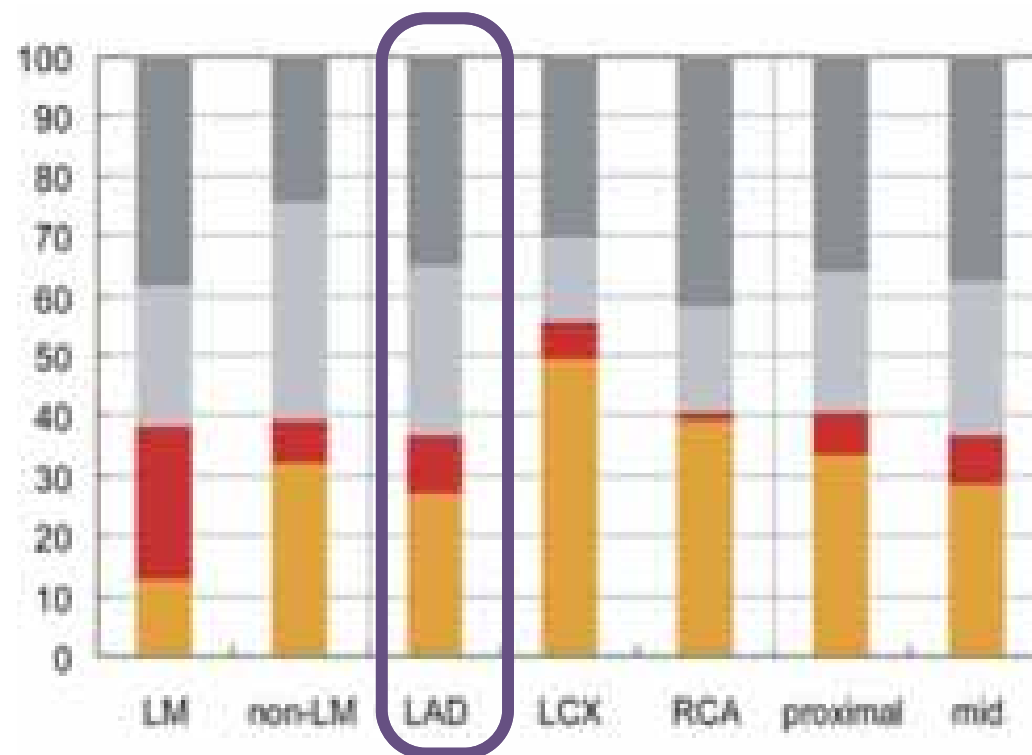
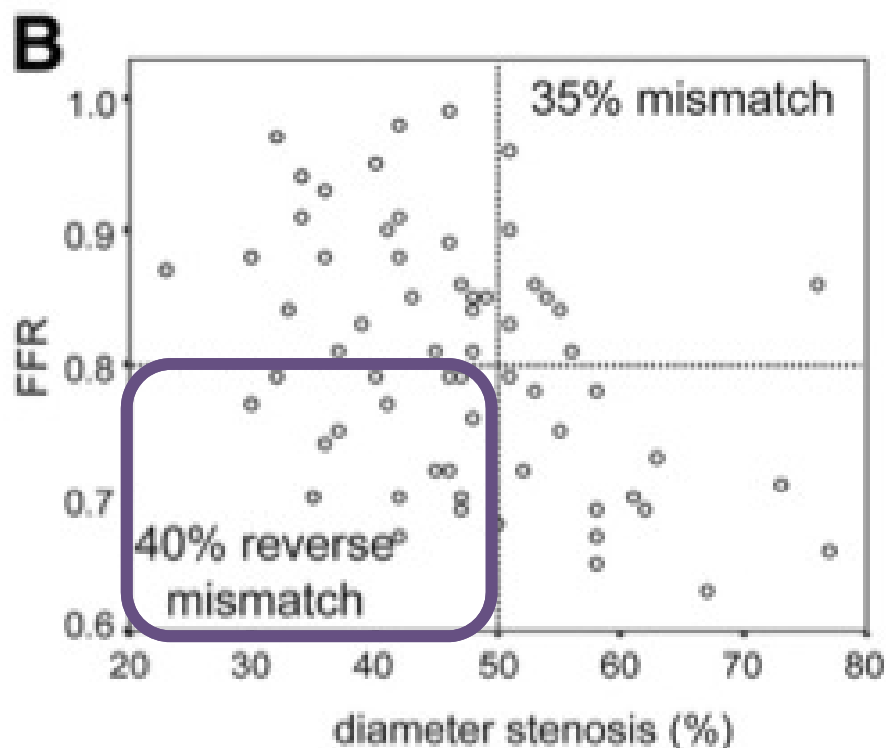
Discussion

Reverse-mismatch

Visual-Functional Mismatch Between Coronary Angiography and Fractional Flow Reserve

Seung-Jung Park, MD, PhD,* Soo-Jin Kang, MD, PhD,* Jung-Min Ahn, MD,*
Eun Bo Shim, PhD,† Young-Tae Kim, PhD,† Sung-Cheol Yun, PhD,‡
Haegun Song, MD,* Jong-Young Lee, MD,* Won-Jang Kim, MD,*
Duk-Woo Park, MD, PhD,* Seung-Whan Lee, MD, PhD,* Young-Hak Kim, MD, PhD,*
Cheol Whan Lee, MD, PhD,* Gary S. Mintz, MD,§ Seong-Wook Park, MD, PhD*

Seoul and Kangwon-do, Korea; and New York, New York



- DS ≤ 50% and FFR ≥ 0.80
- DS > 50% and FFR < 0.80
- Reverse-mismatch
- Mismatch

Summary

- As our case with multiple stenotic lesion, FFR should be measured to diagnose the culprit lesion, especially the lesion was at the LAD.
- Although FFR is useful method, it is impossible to be effective of FFR, if not to attempt to be measured.
- Finally, we always should be aware the presence of Reverse Mismatch.