

**Cases of coronary stenosis with
Very Good Collateral Flow verified by
Intracoronary Pressure Measurement**

Bong-Ki Lee, MD, PhD

Division of Cardiology

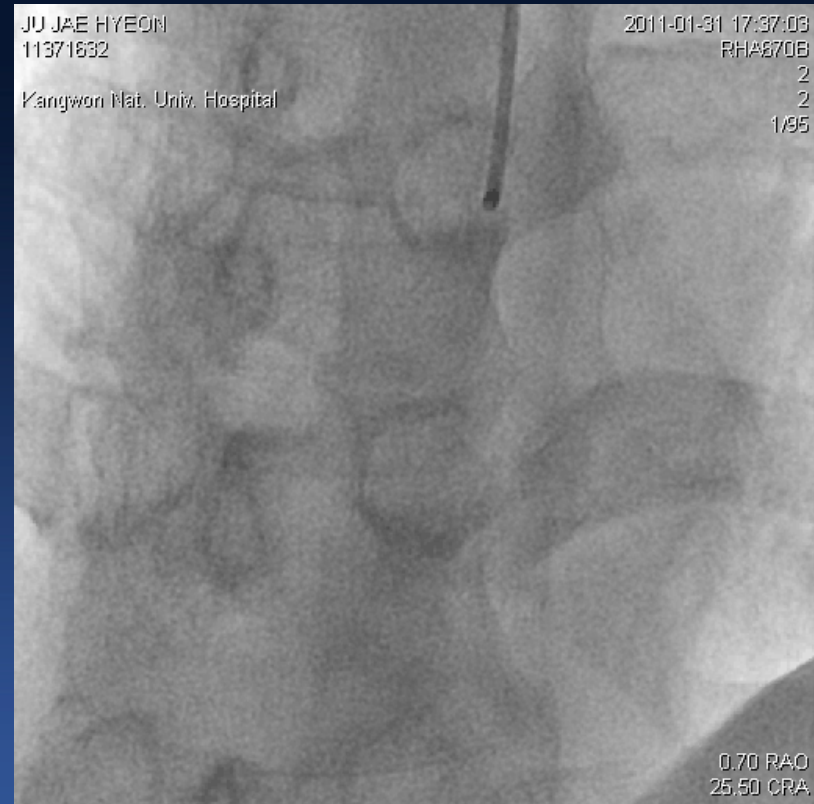
Department of Internal Medicine

Kangwon National University Hospital

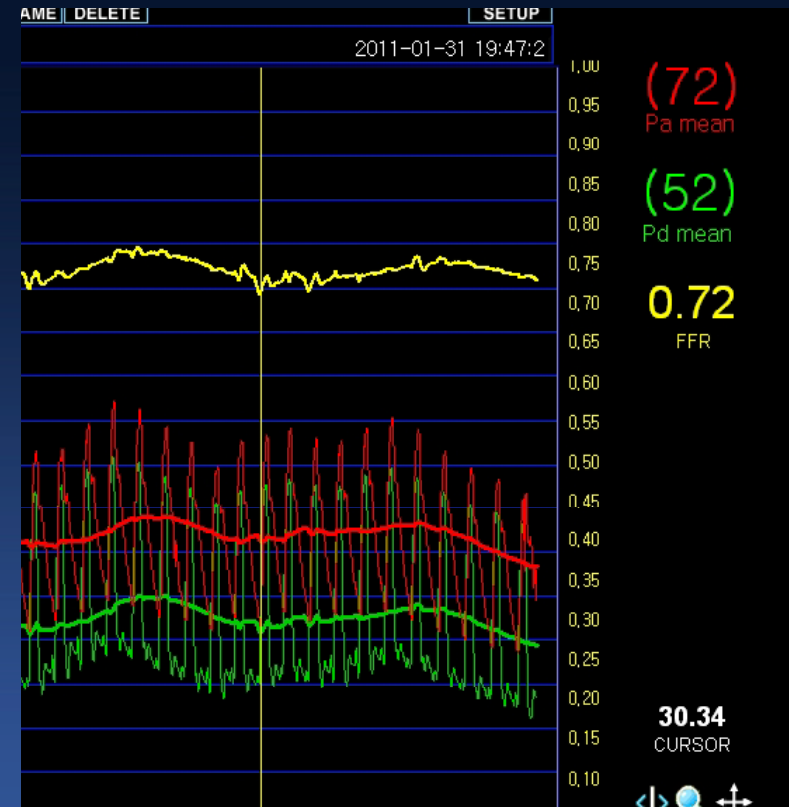
Case #1

- 43/M
 - with markedly active physical performance
(a director of Kendo school)
- Effort angina(CCS I) x 3 mon (without med)
 - “ I feel chest discomfort when I ride mountain bike.”
- Risk factor: Hypercholesterolemia (no med)
- Stress test: not done
- Echocardiogram: normal findings

CAG



Pressure Measurement



FFR=0.72

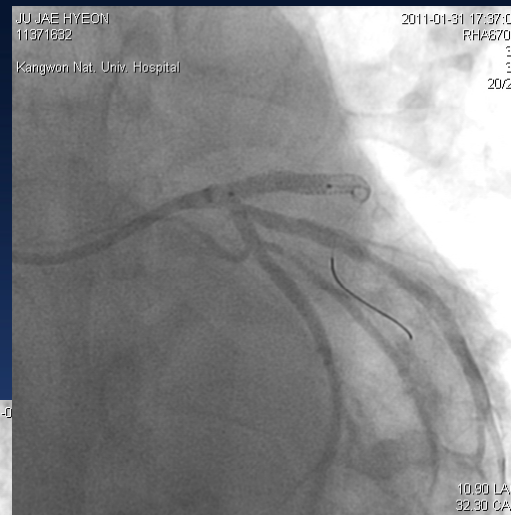
PCI for os-mid LAD Lesion

Promus Element 3.0x20/3.0x24mm

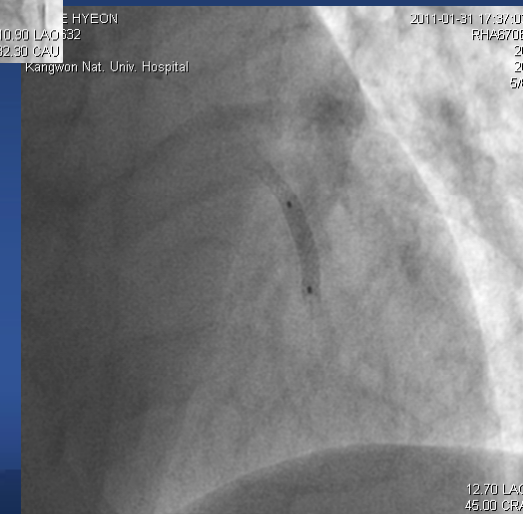
Ikazuchi 3.0 x 15mm



Promus Element 3.0 x 20mm

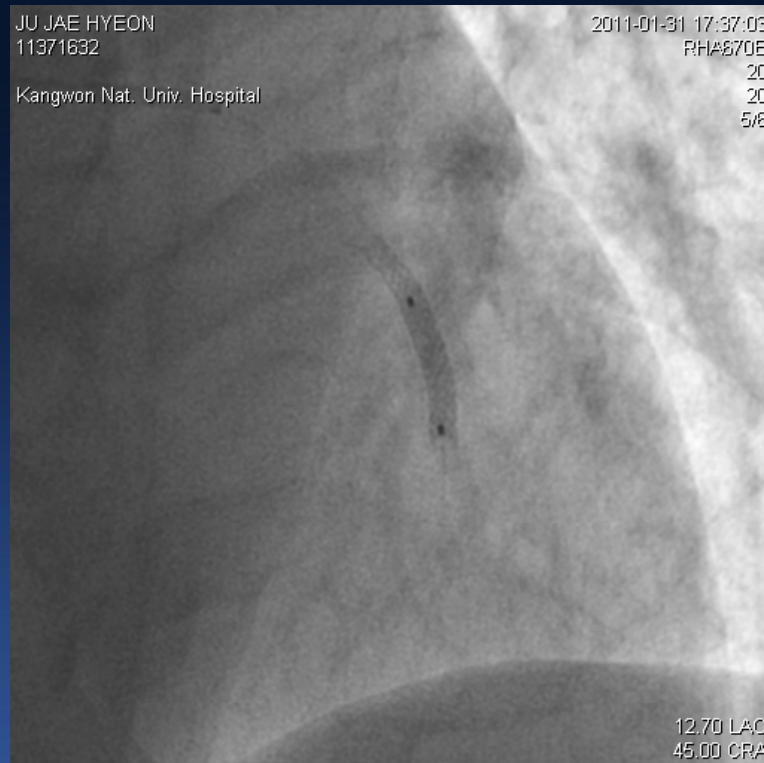


Ikazuchi 3.0 x 15mm



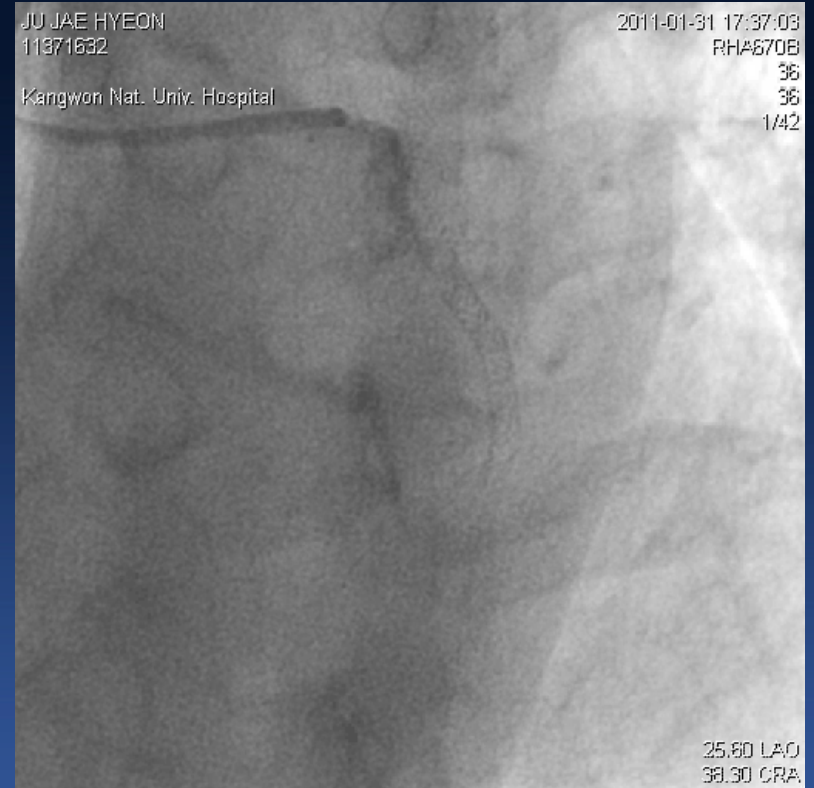
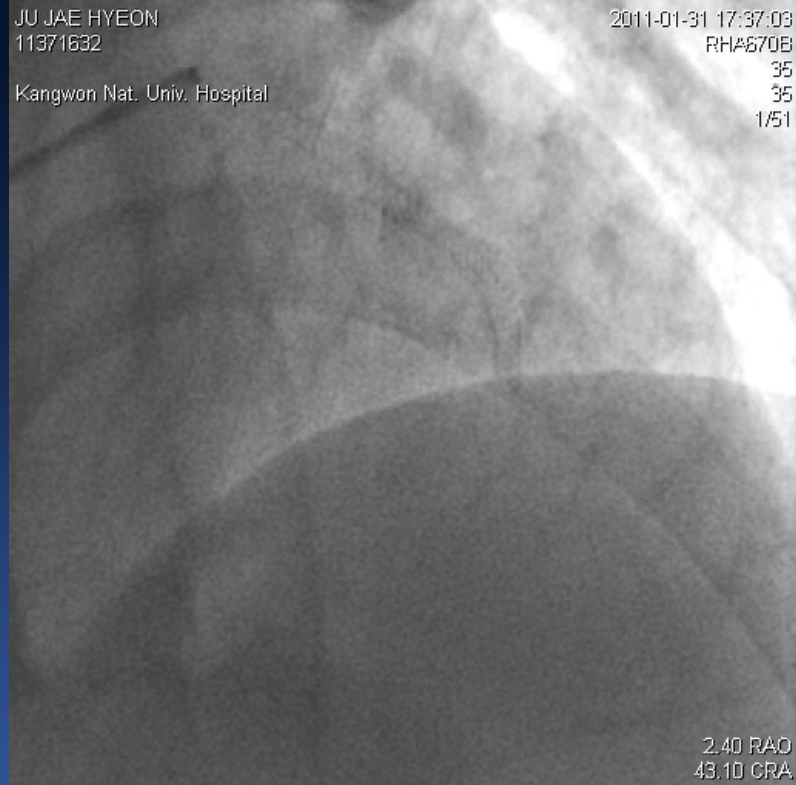
Promus Element 3.0 x 24mm

Wedge Pressure Measurement after PCI



Wedge pressure = 46mmHg
CFI=0.43

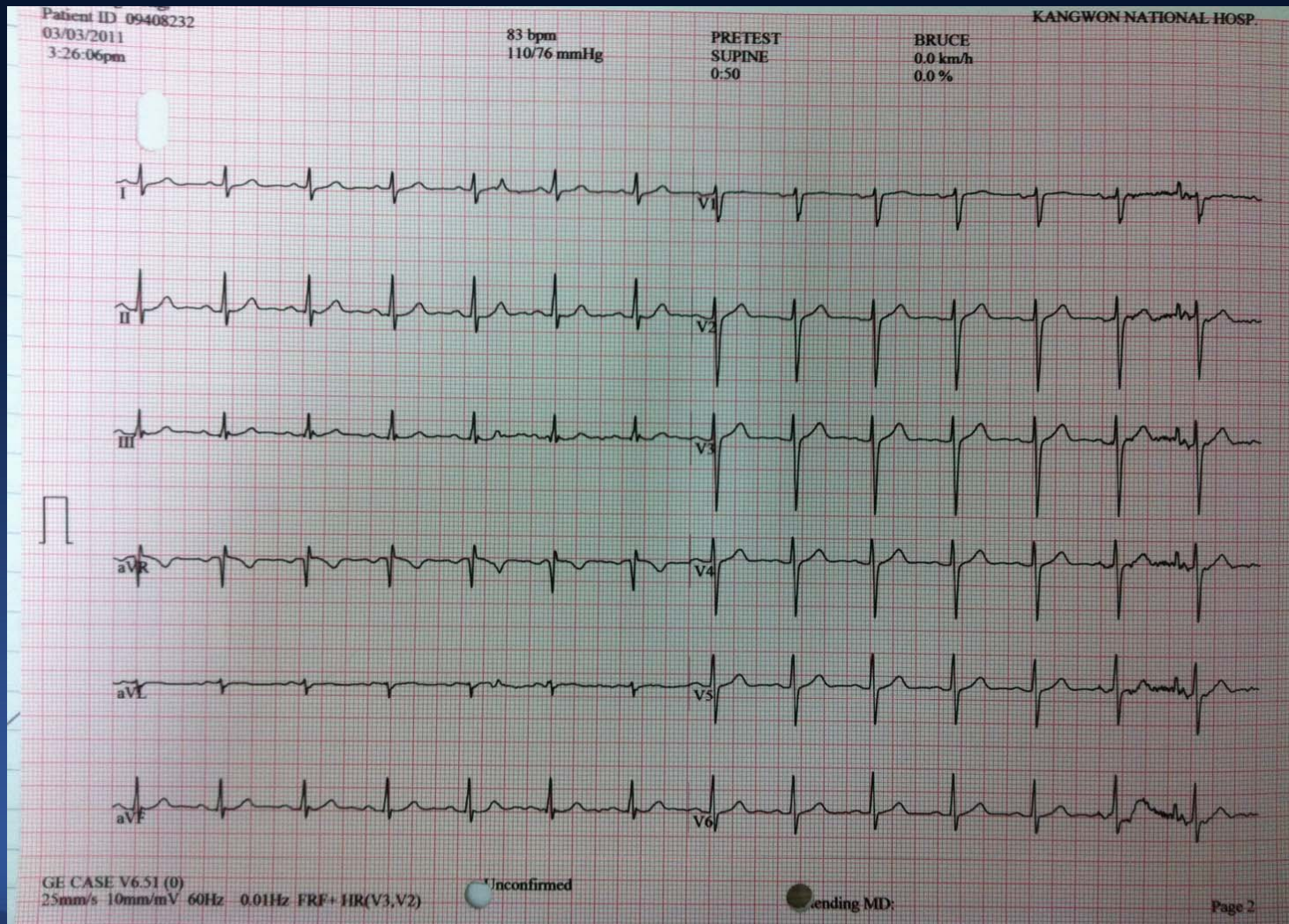
Final CAG



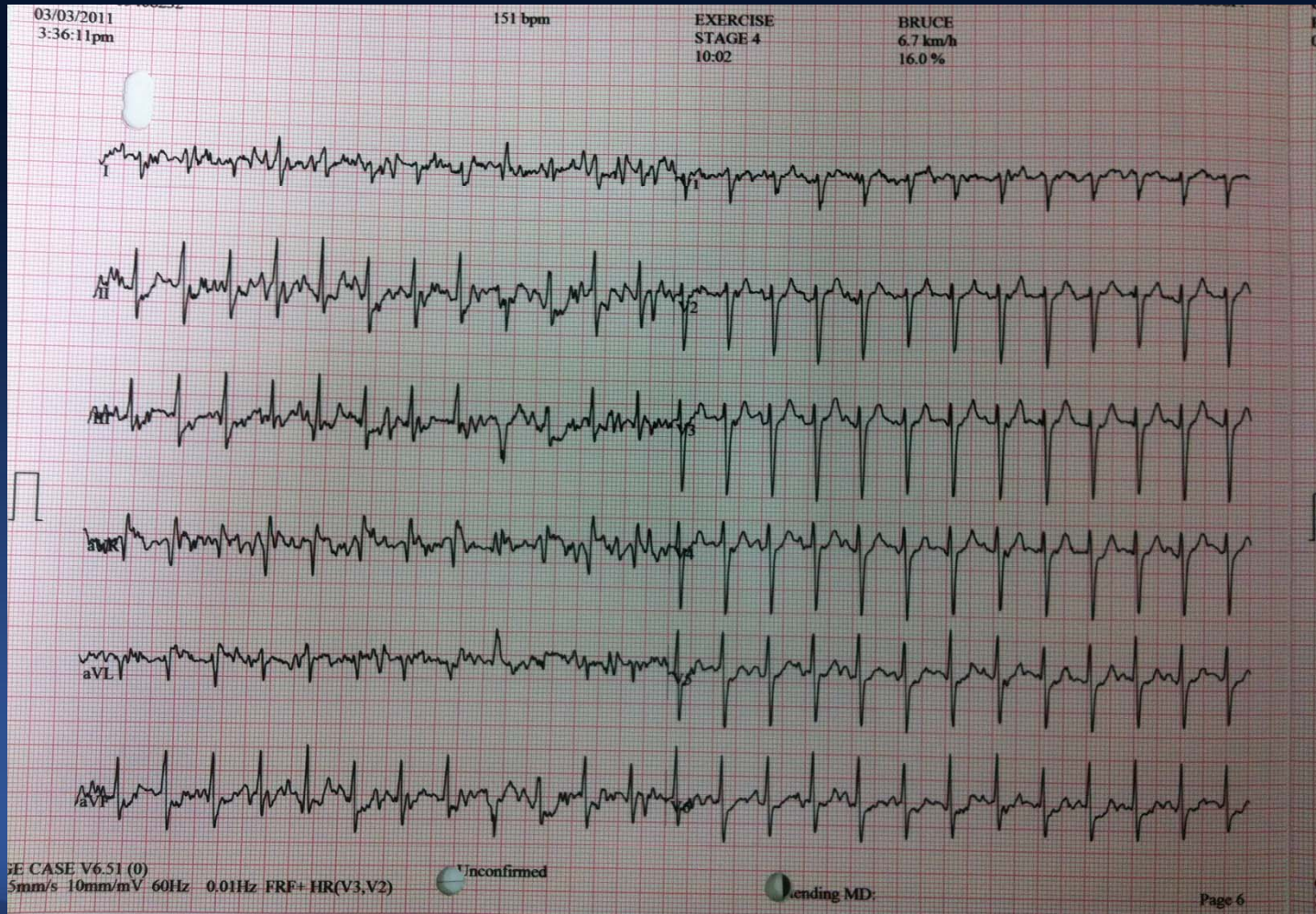
Case #2

- **69/F**
- **Effort angina(CCS I) x 1 yr (without med)**
- **DM(+) on OHA x 5 yrs**
HTN(+) on med x 10 yrs
- **TMT: Equivocal result**
(Chest pain without ST change)
- **Echocardiogram: normal findings**

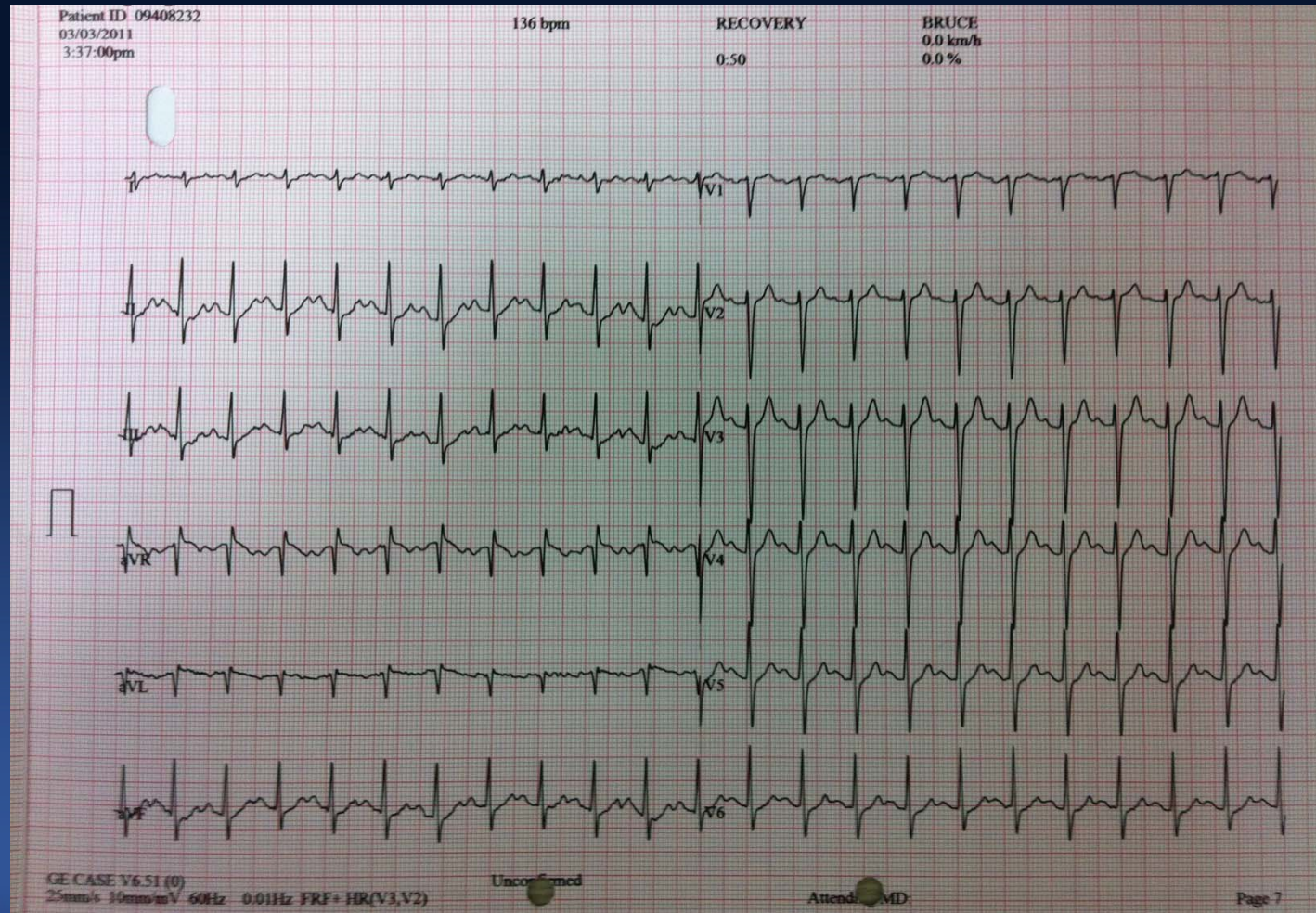
TMT (Baseline)



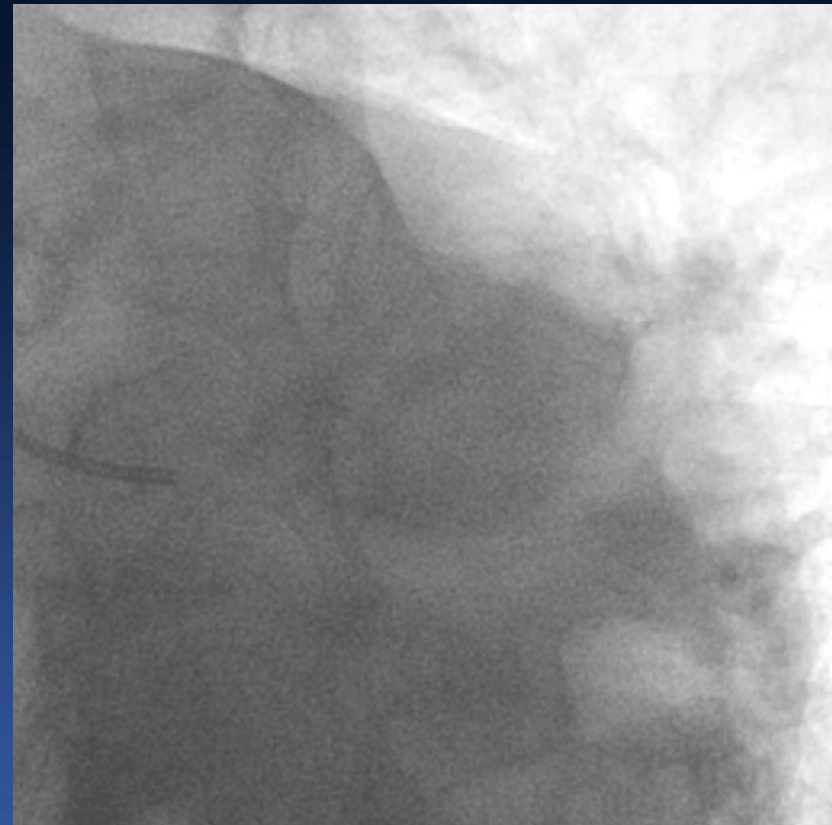
TMT (Stage 4)



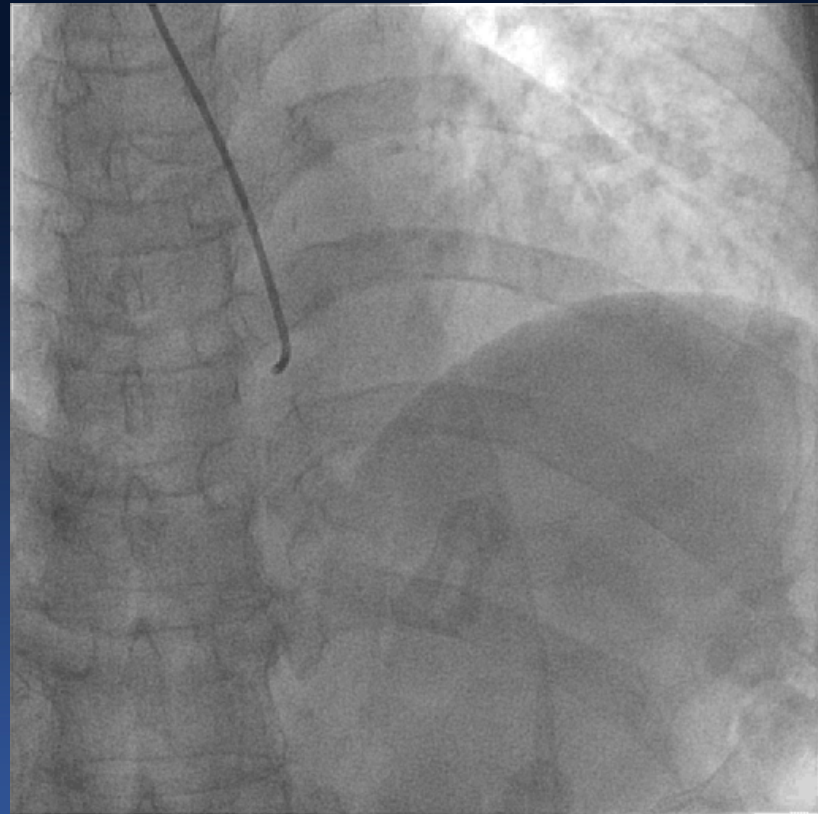
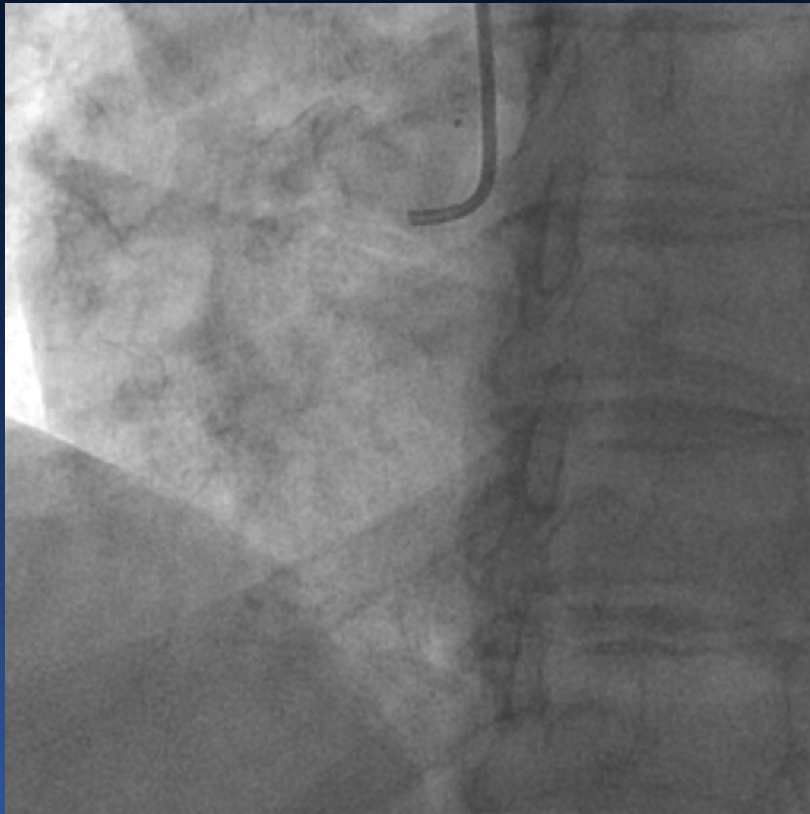
TMT (Recovery)



CAG

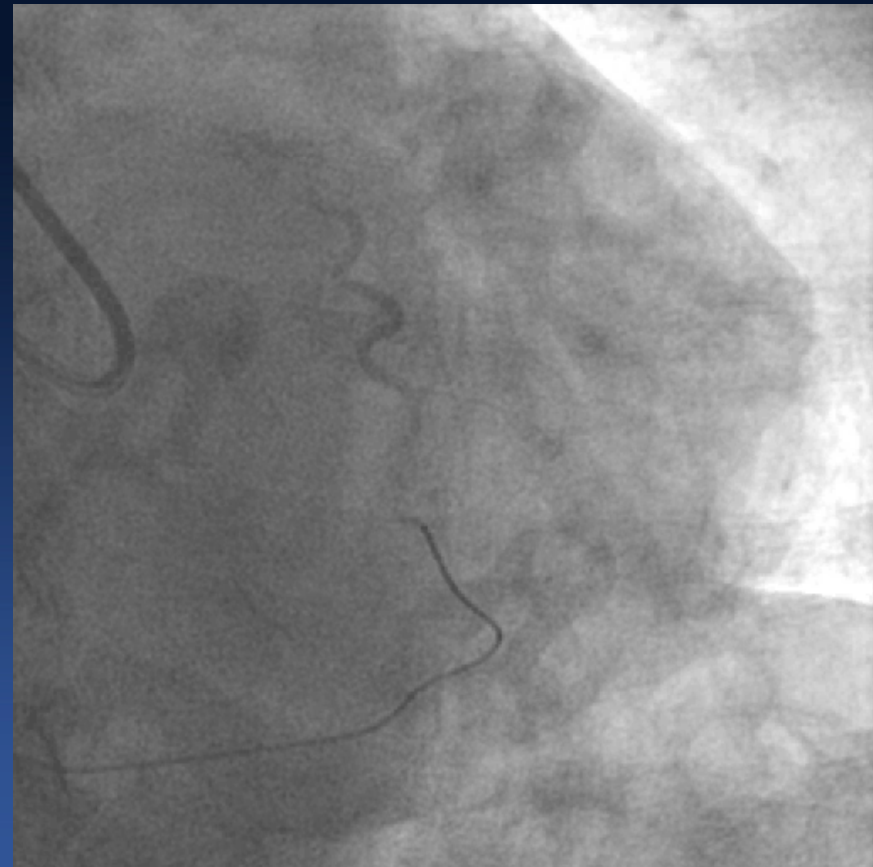
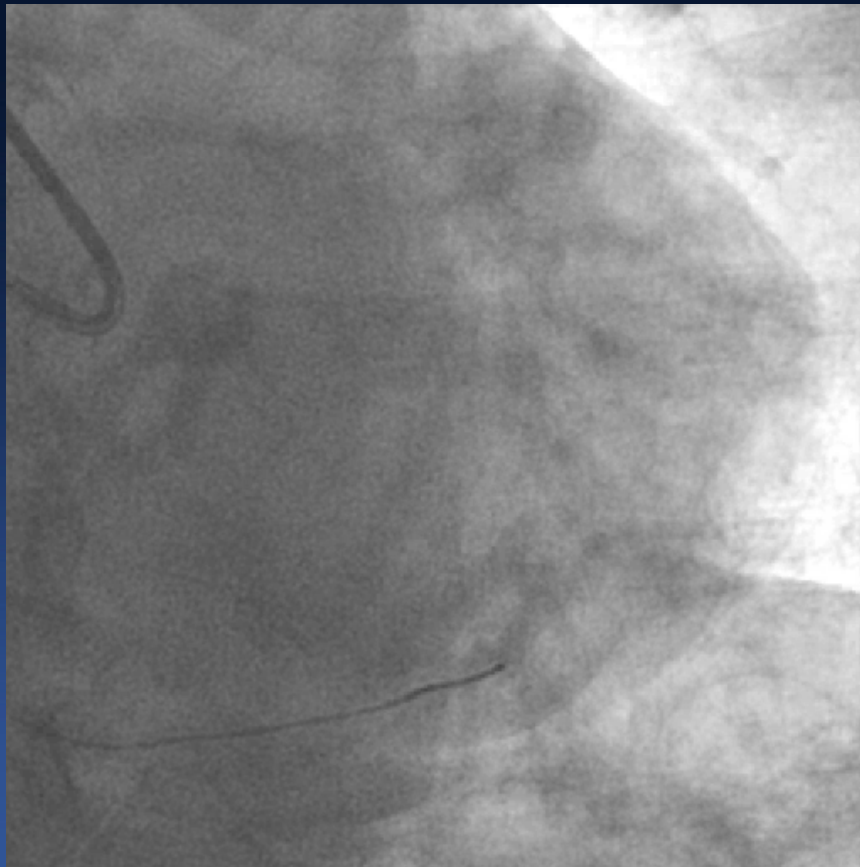


CAG

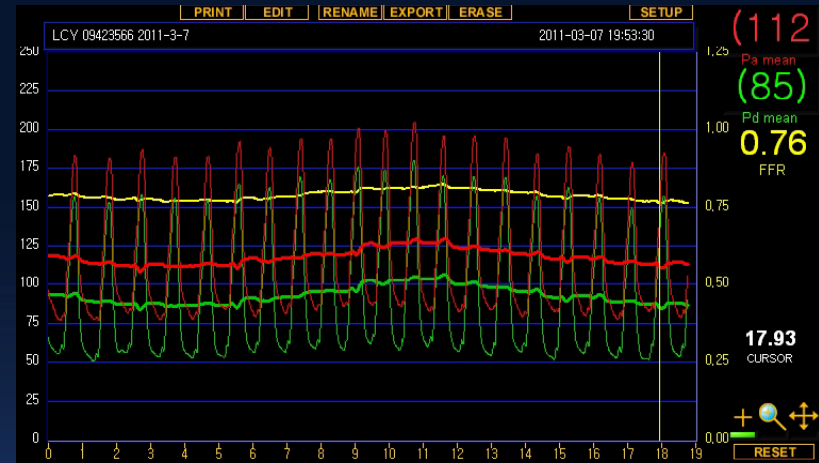


Introducing Pressure Wire using Transit Cath

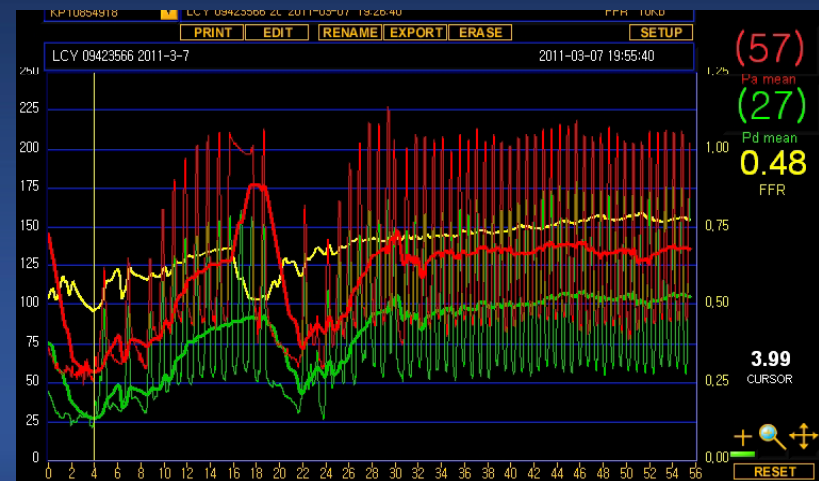
Progreat 2.7Fr



Pressure Measurement

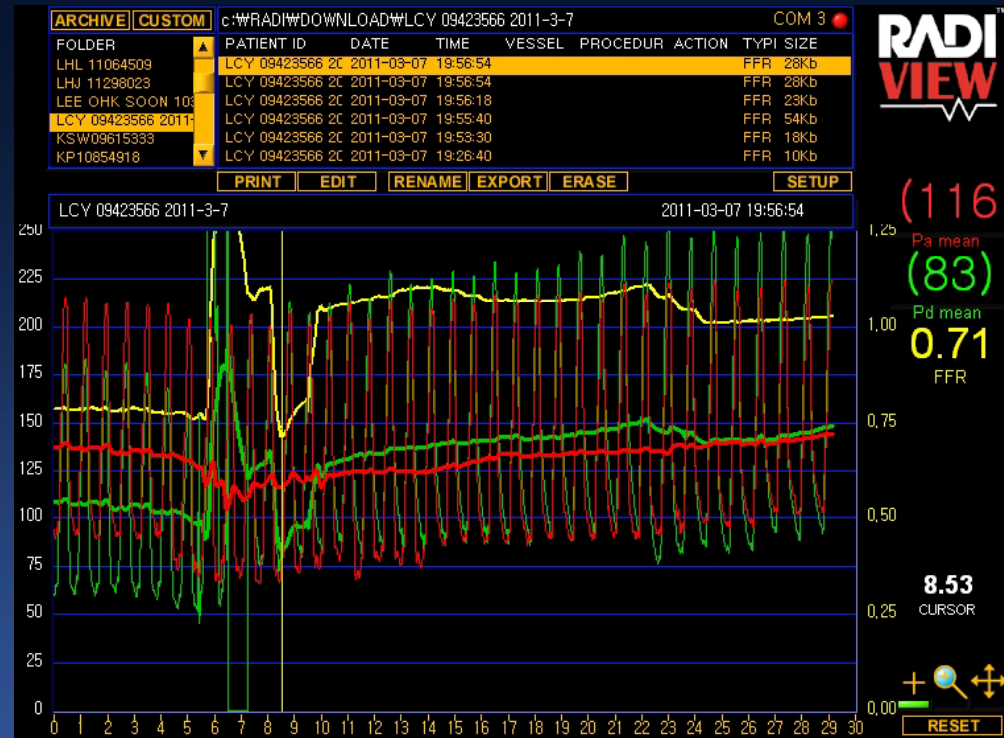


Baseline



Hyperemic

Pressure Wire Pull Back during Hyperemia



Final CAG



Clinical Course

- **PCI was not performed.**
- **Modest anti-anginal medication has been added and maintained.**
- **The patient has been symptom free.**

Summary & Conclusion

- **In some patients with CTO lesion, collateral coronary perfusion is exceptionally well developed, may be enough to be free from myocardial ischemia.**
- **Intracoronary pressure measuring might be used as an reliable and precise modality for verifying collateral perfusion status and making treatment decision to avoid unnecessary PCI and stent implantation.**