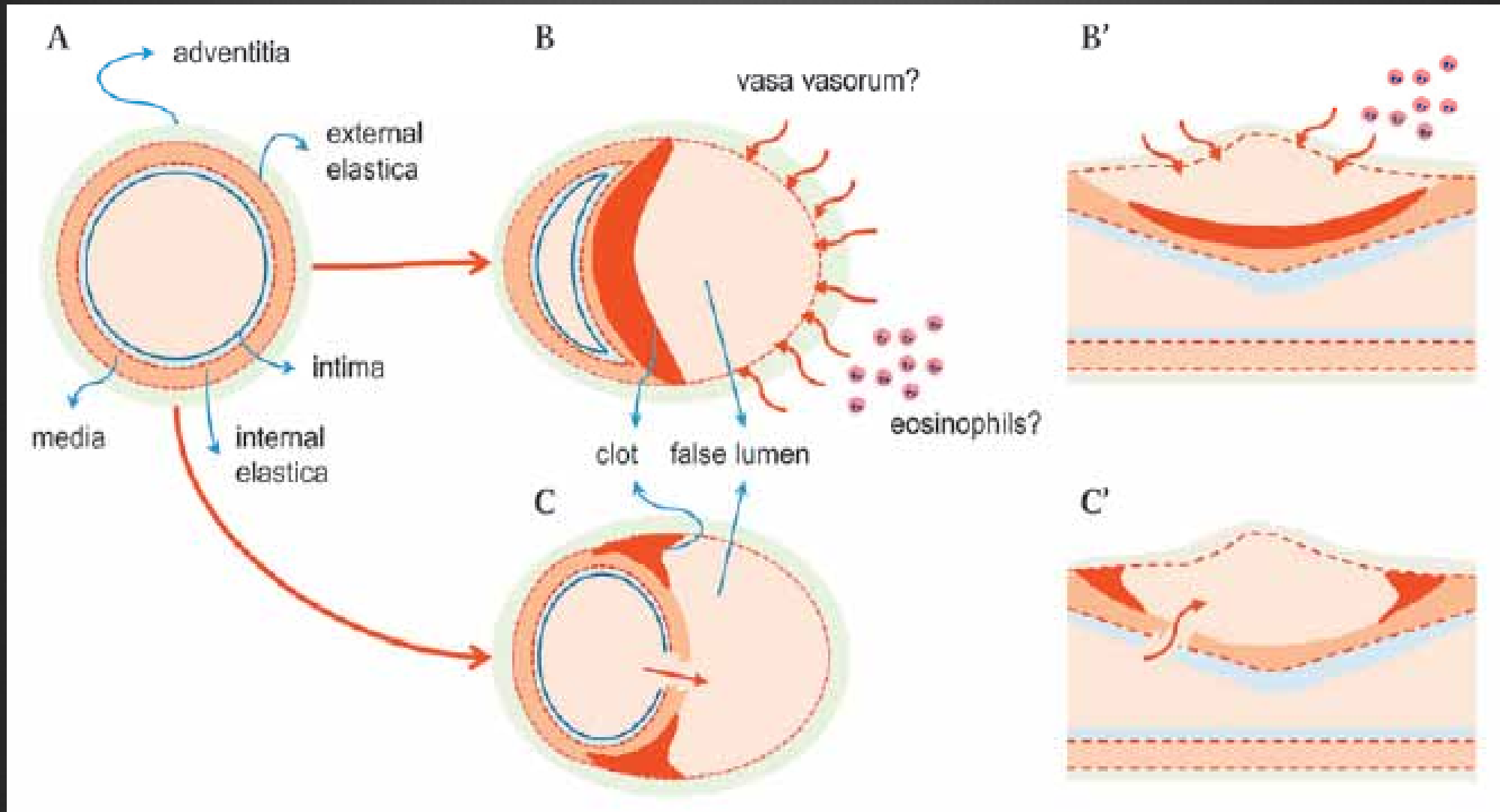


A Case of Spontaneous Coronary Artery Dissection with Optical Frequency Domain Imaging Guided PCI

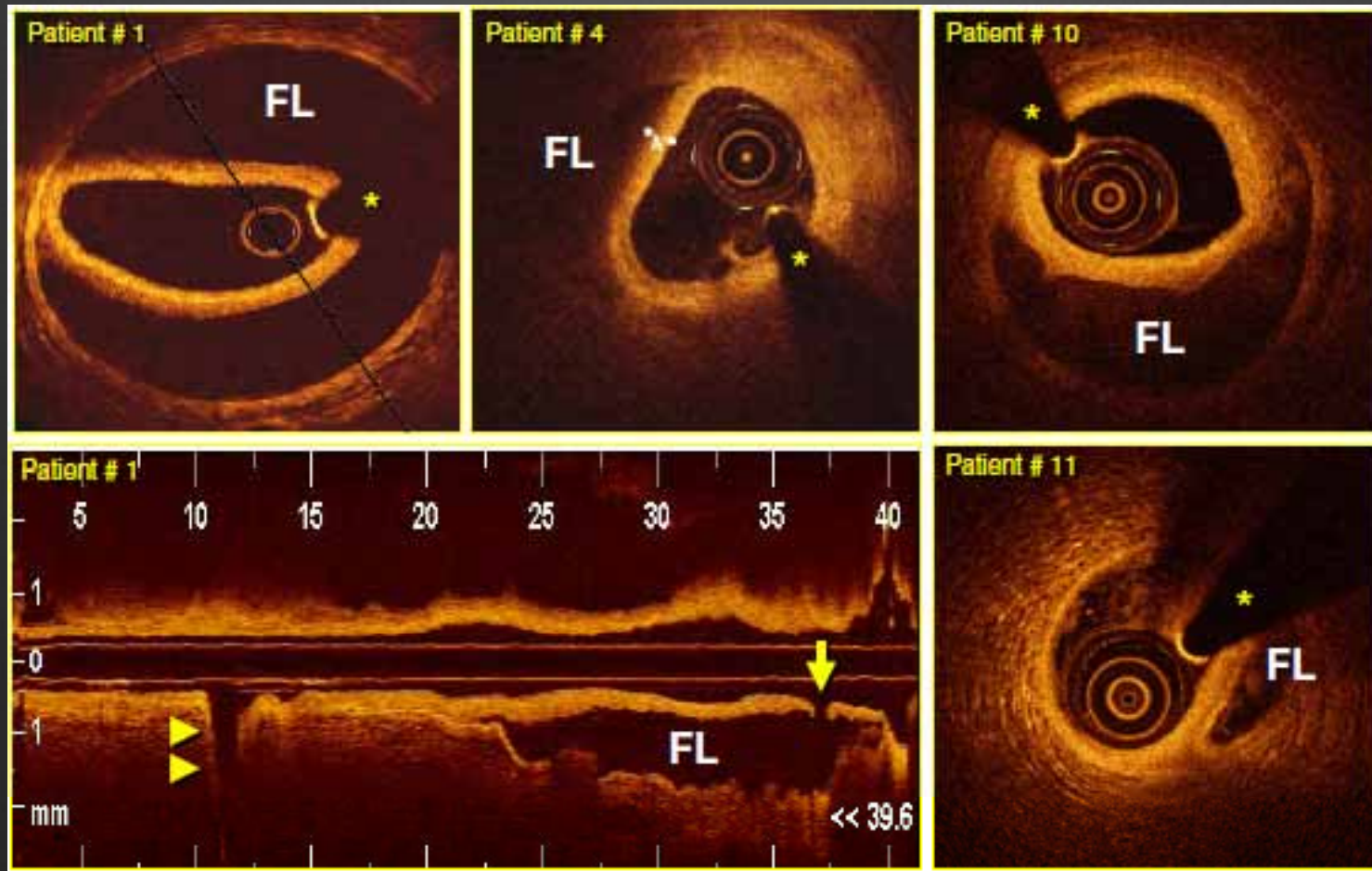
Wakayama Medical University Division of Cardiovascular medicine

Keisuke Satogami, Yasushi Ino, Takashi Kubo, Tomoyuki Yamaguchi, Tsuyoshi Nishiguchi, Makoto Orii, Kunihiro Shimamura, Yasutugu Shiono, Takashi Yamano, Takashi Tanimoto, Yoshiki Matsuo, Kumiko Hirata, Atsushi Tanaka, Toshio Imanishi, and Takashi Akasaka

Spontaneous Coronary Artery Dissection (SCAD)



Diagnosis of Spontaneous Coronary Artery Dissection by Optical Coherence Tomography



OCT provides unique insights in patients with SCAD that allow an early diagnosis and adequate management.

Case

- 51-year-old woman
- She was urgently admitted to our hospital due to chest pain.
- Coronary risk factor : current smoking

Physical examination

Body temperature:36.3

Respiratory rate:18/min, SpO₂ 99%(room air)

Pulse rate 72/min, Blood pressure:150/84mmHg

Heart sounds: S1→ S2→ S3(-) S4(-) no murmur

Lung sounds: clear, no rale

Abdomen: soft and flat, no tenderness

Edema in legs(-)

Laboratory data

CBC

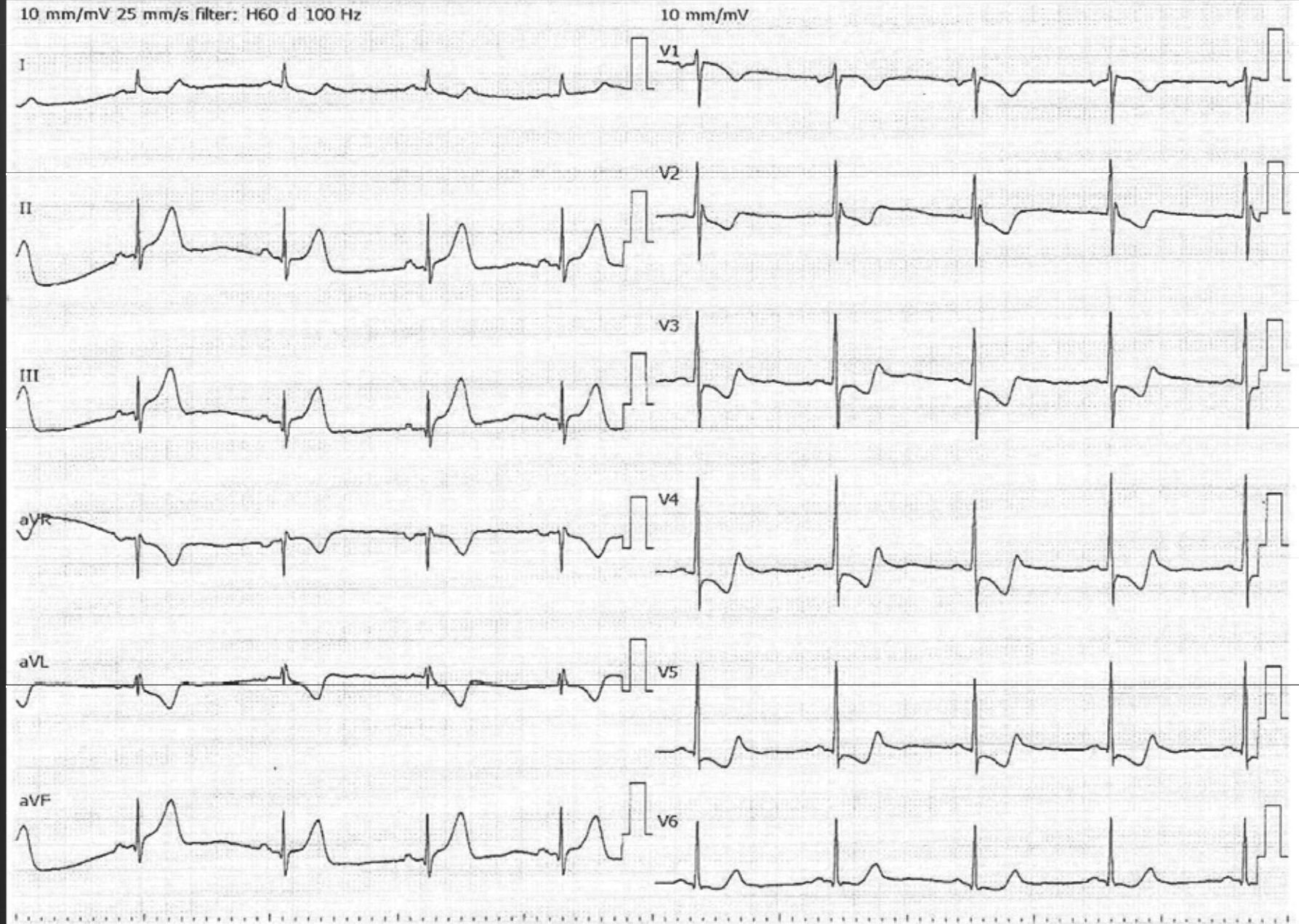
WBC 5020/ μ L
RBC 475x10⁴/ μ L
Hb 12.2g/dL
Ht 36.8%
Plt 23.2x10⁴/ μ L

Biochemistory

TP 7.0 g/dL
Alb 3.8 g/dL
AST 33 IU/L
ALT 12 IU/L
LDH 179 IU/L
T-Bil 0.8 mg/dL
BUN 16 mg/dL
UA 5.3 mg/dL
Cr 0.49 mg/dL
Na 143 mEq/L
K 3.5 mEq/L
Cl 103 mEq/L
CRP 0.19 mg/dL

CK 40 IU/L
CKMB 5 IU/L
Troponin T (-)

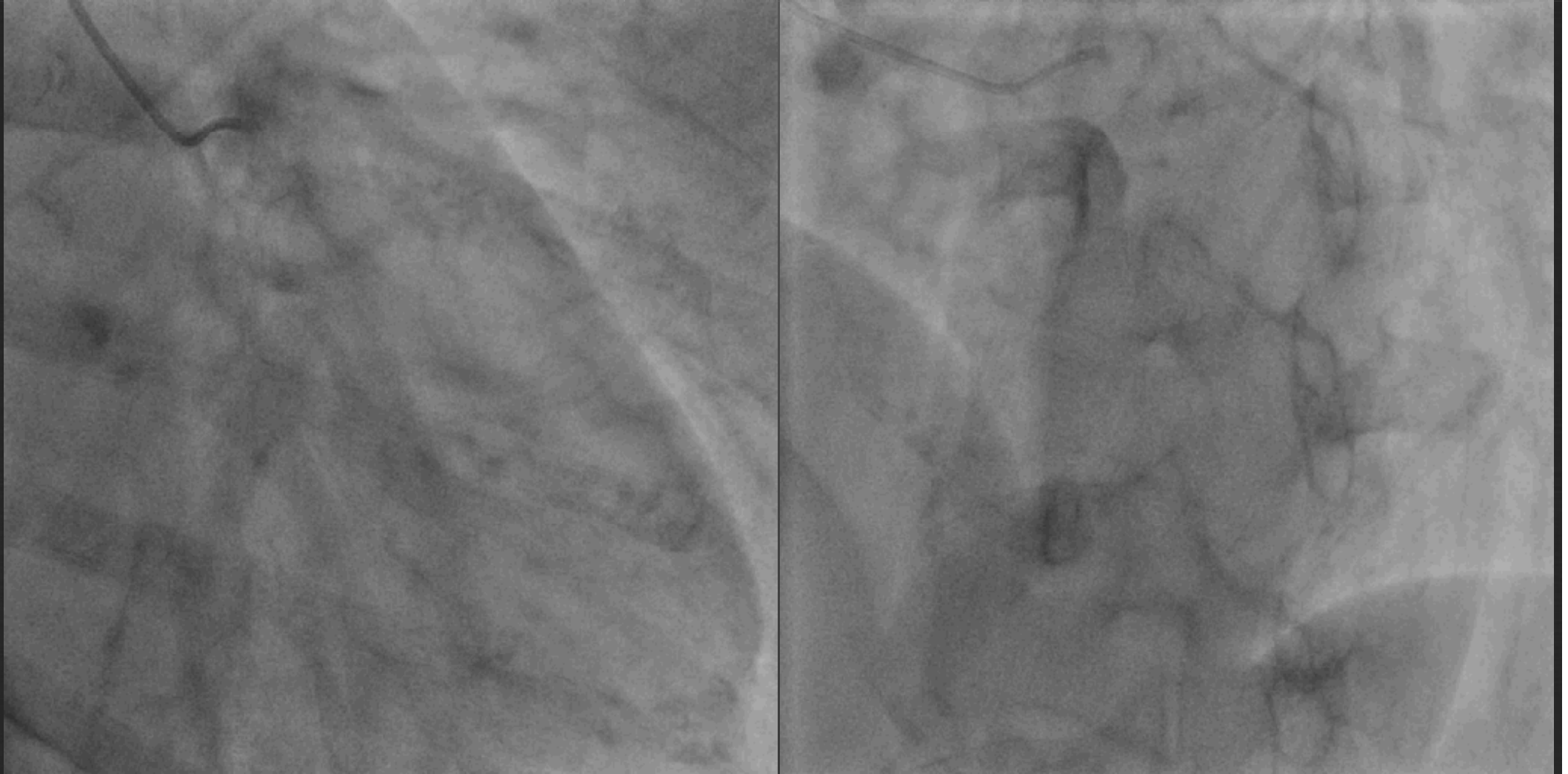
ECG



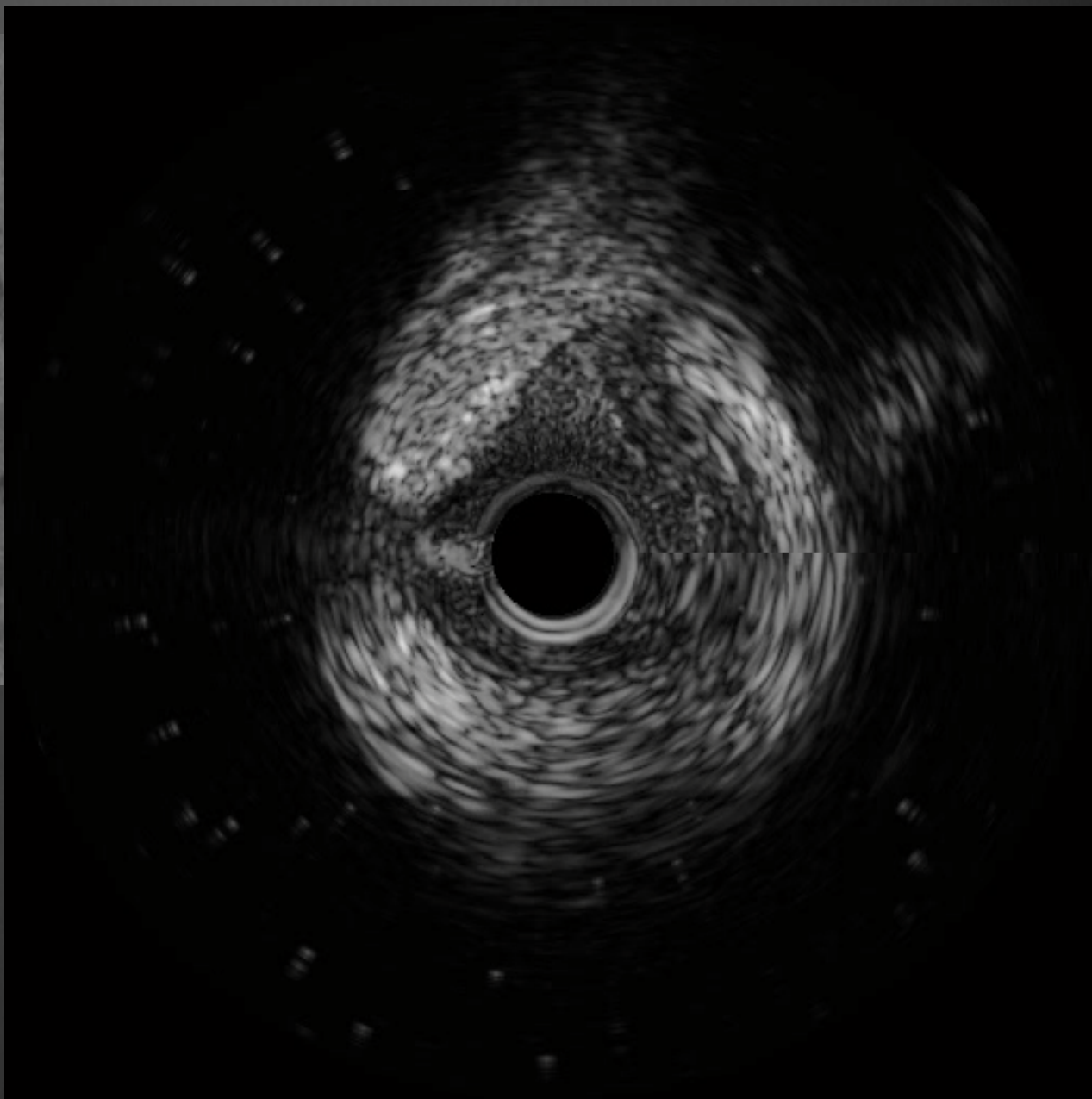
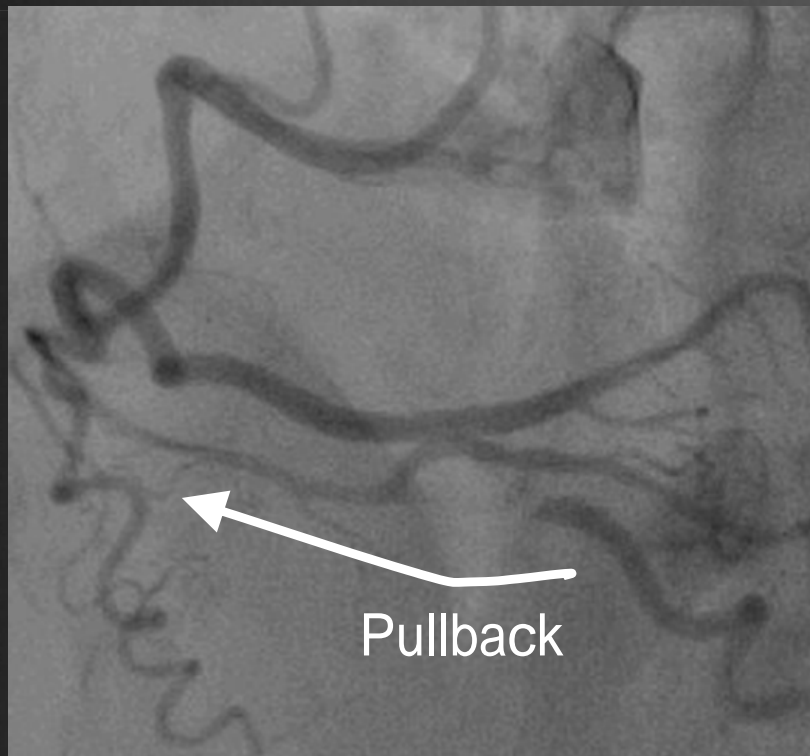
CAG (RCA)



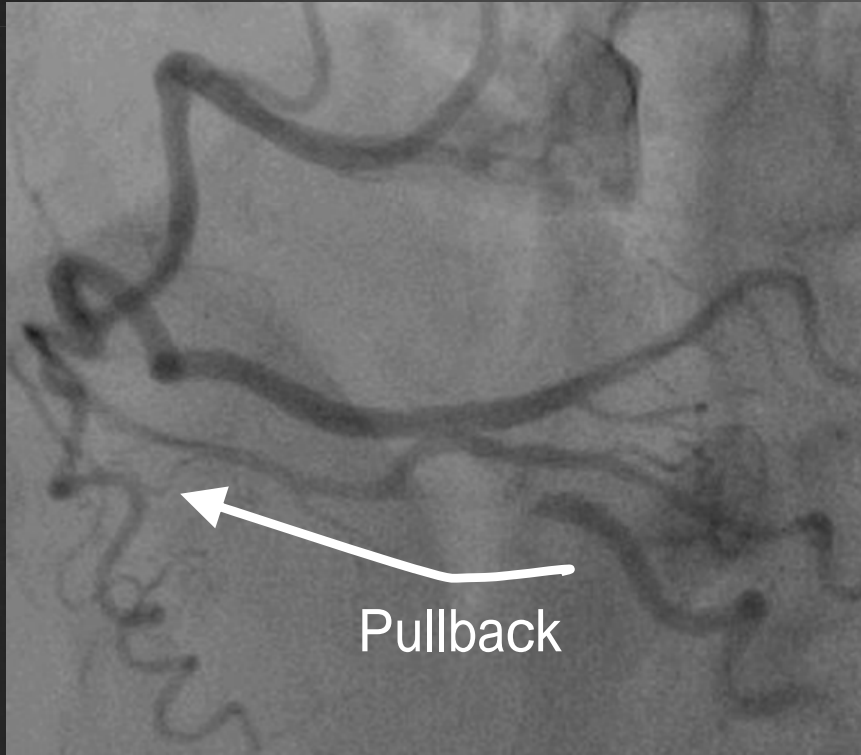
CAG (LCA)



IVUS (PD → RCA prox)



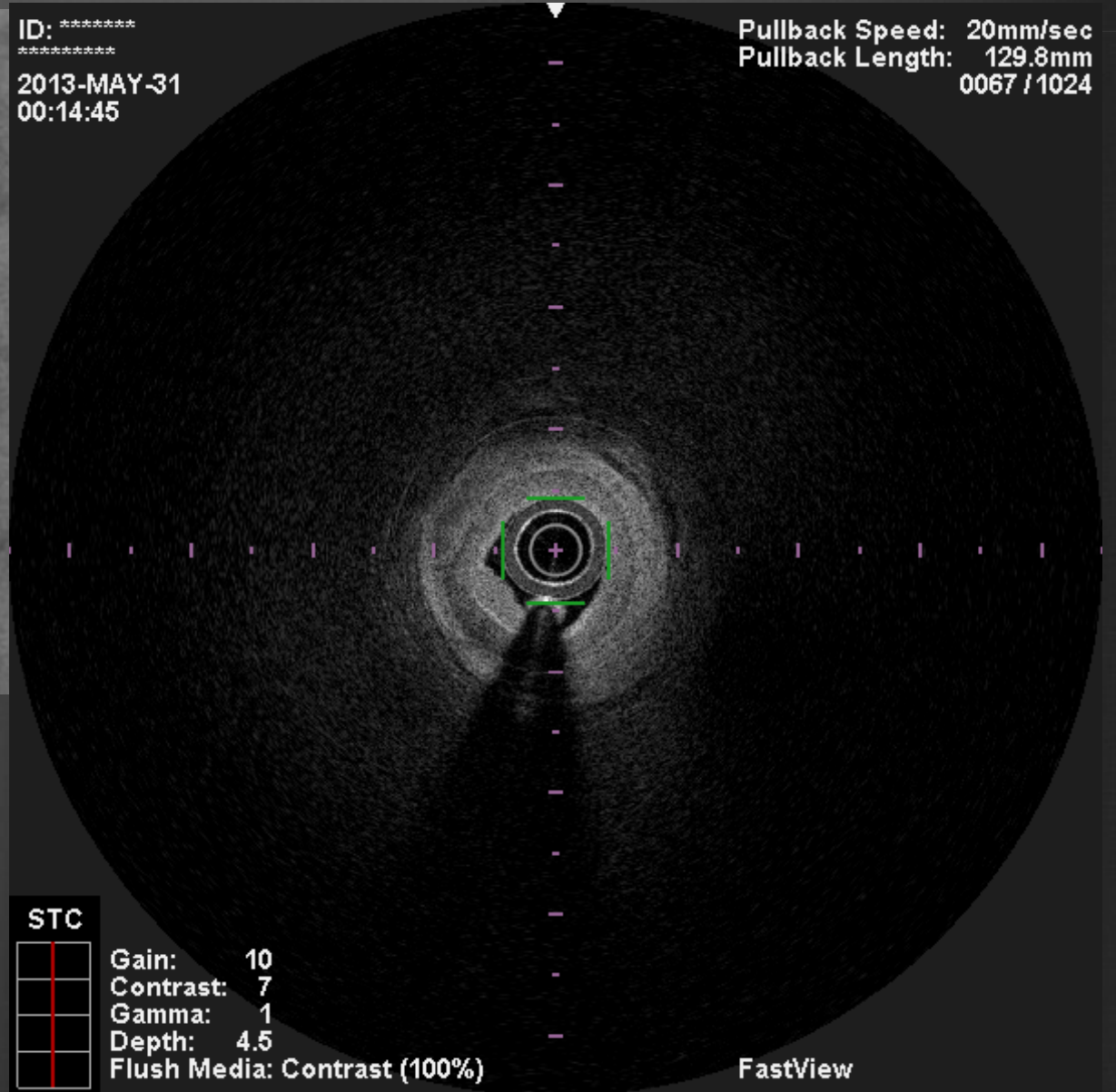
OFDI images(PD→RCA prox)



ID: *****

2013-MAY-31
00:14:45

Pullback Speed: 20mm/sec
Pullback Length: 129.8mm
0067 / 1024



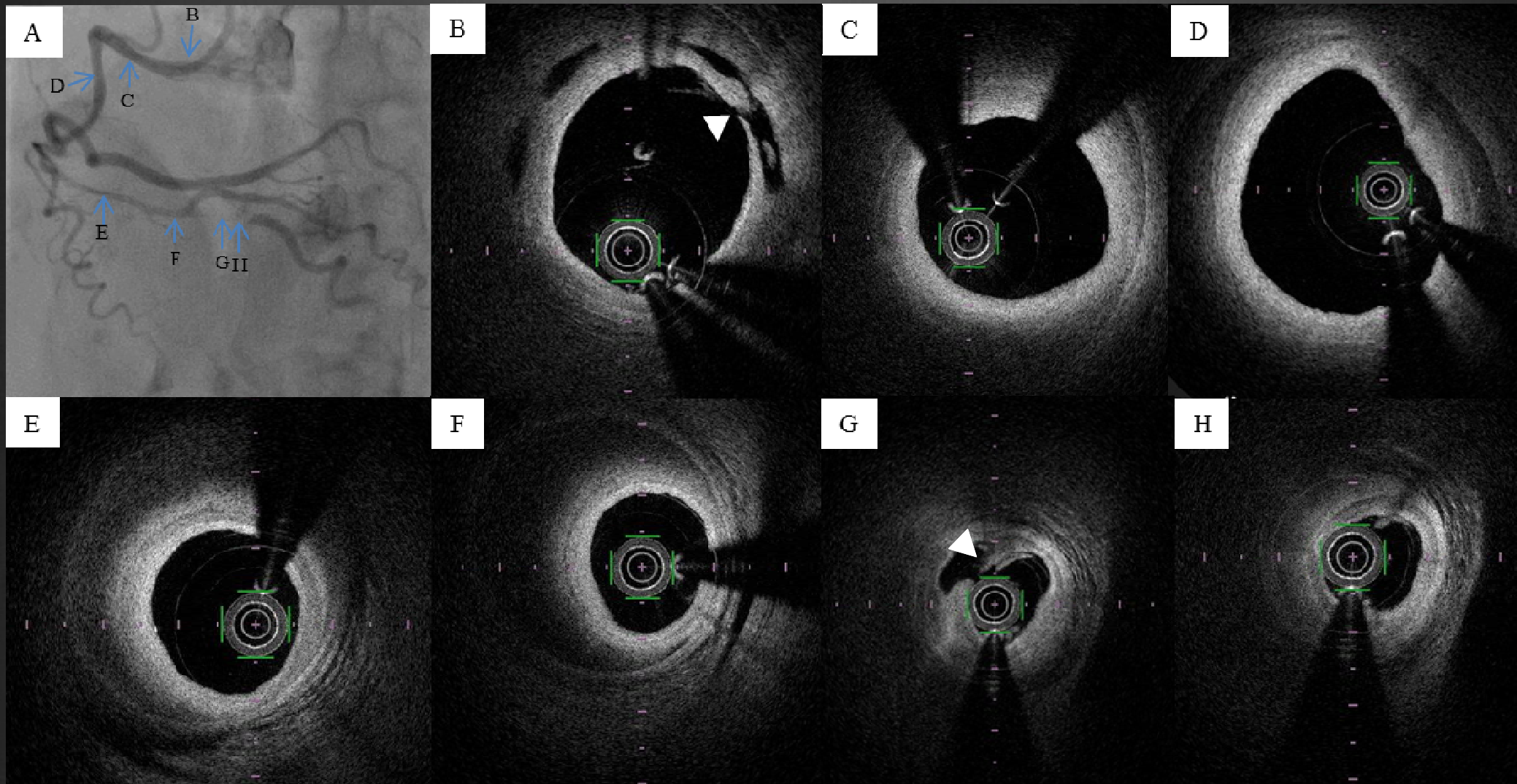
STC



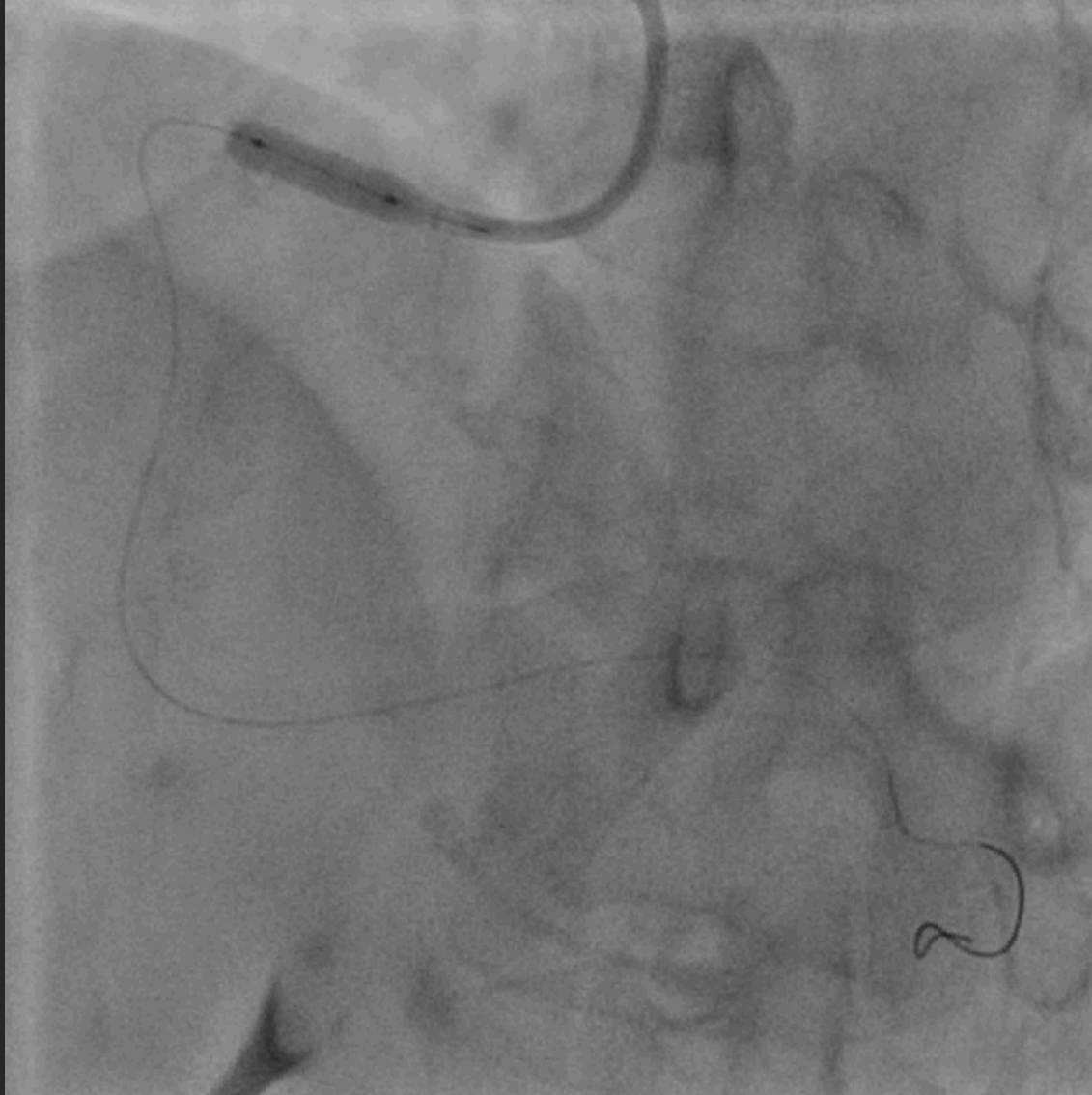
Gain: 10
Contrast: 7
Gamma: 1
Depth: 4.5
Flush Media: Contrast (100%)

FastView

OFDI images



Stent implantation for the Ostium of RCA

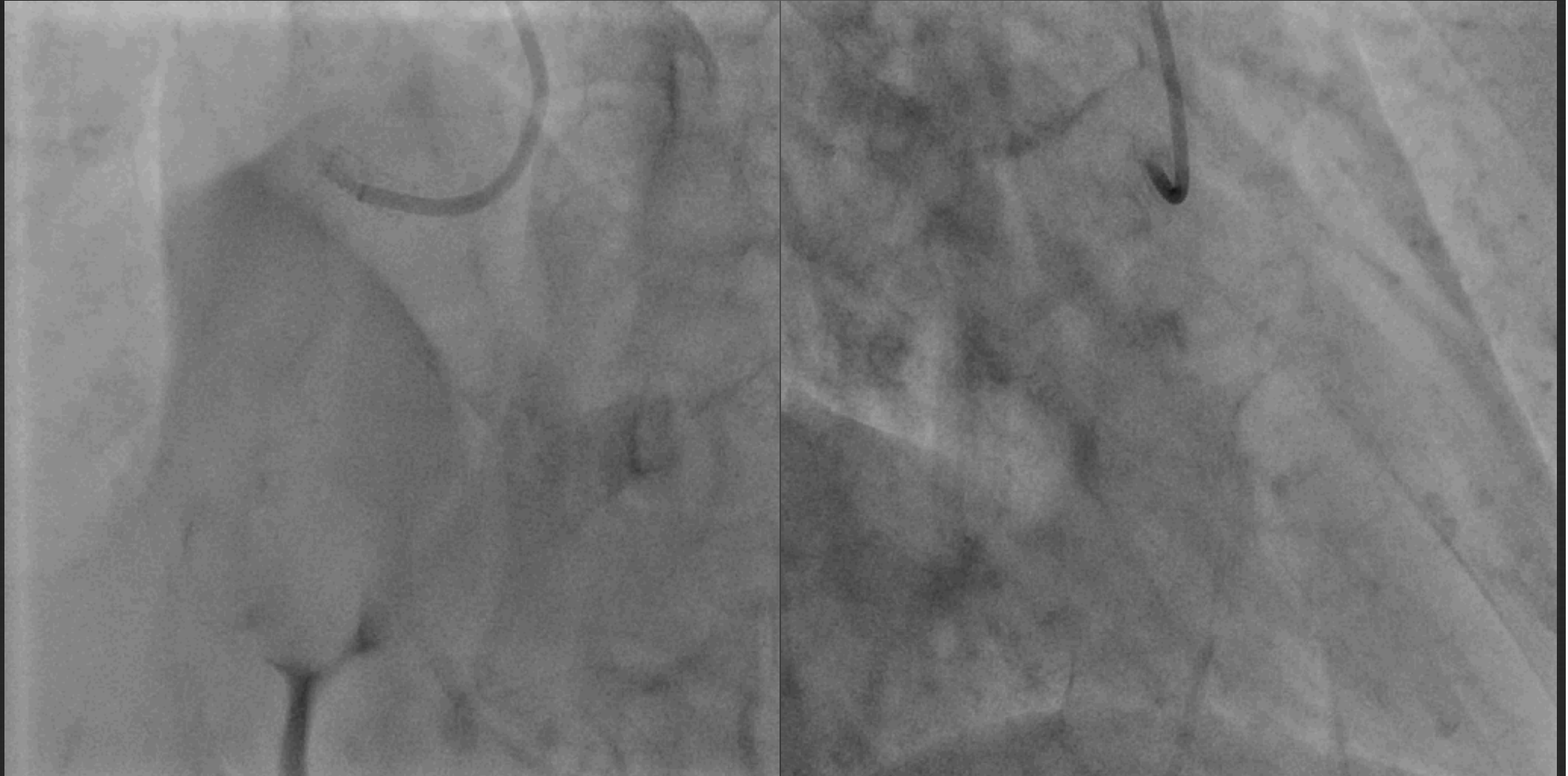


Guiding catheter:
6Fr Heartrail IR1.0

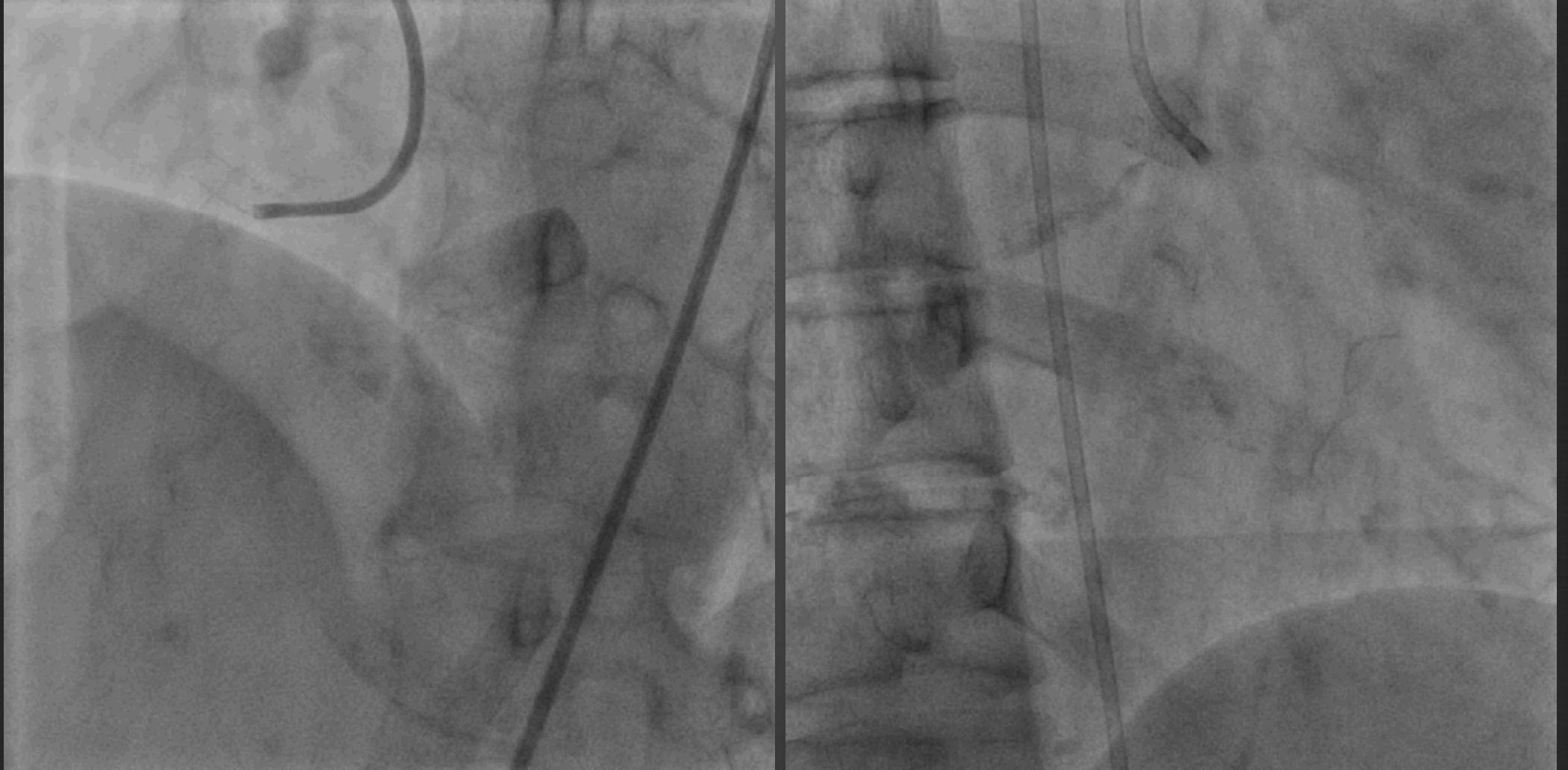
Guide wire: ASAHI SION blue (PD)
Neos Rinato (PL)

Stent: MultiLink 8 (BMS) 4.0 × 12mm

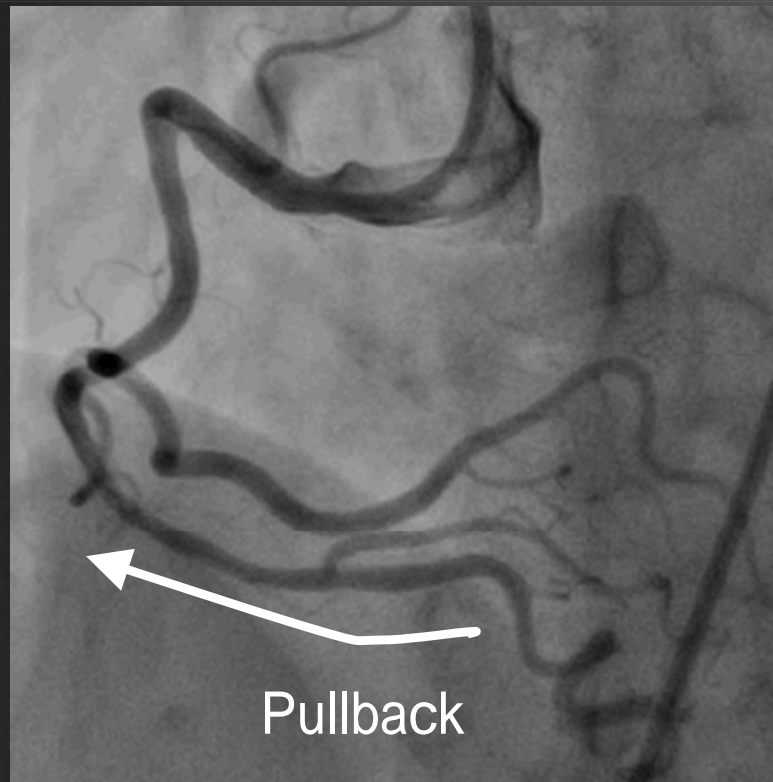
Post PCI



3-week f/u CAG



3-week f/u OFDI (RCA)

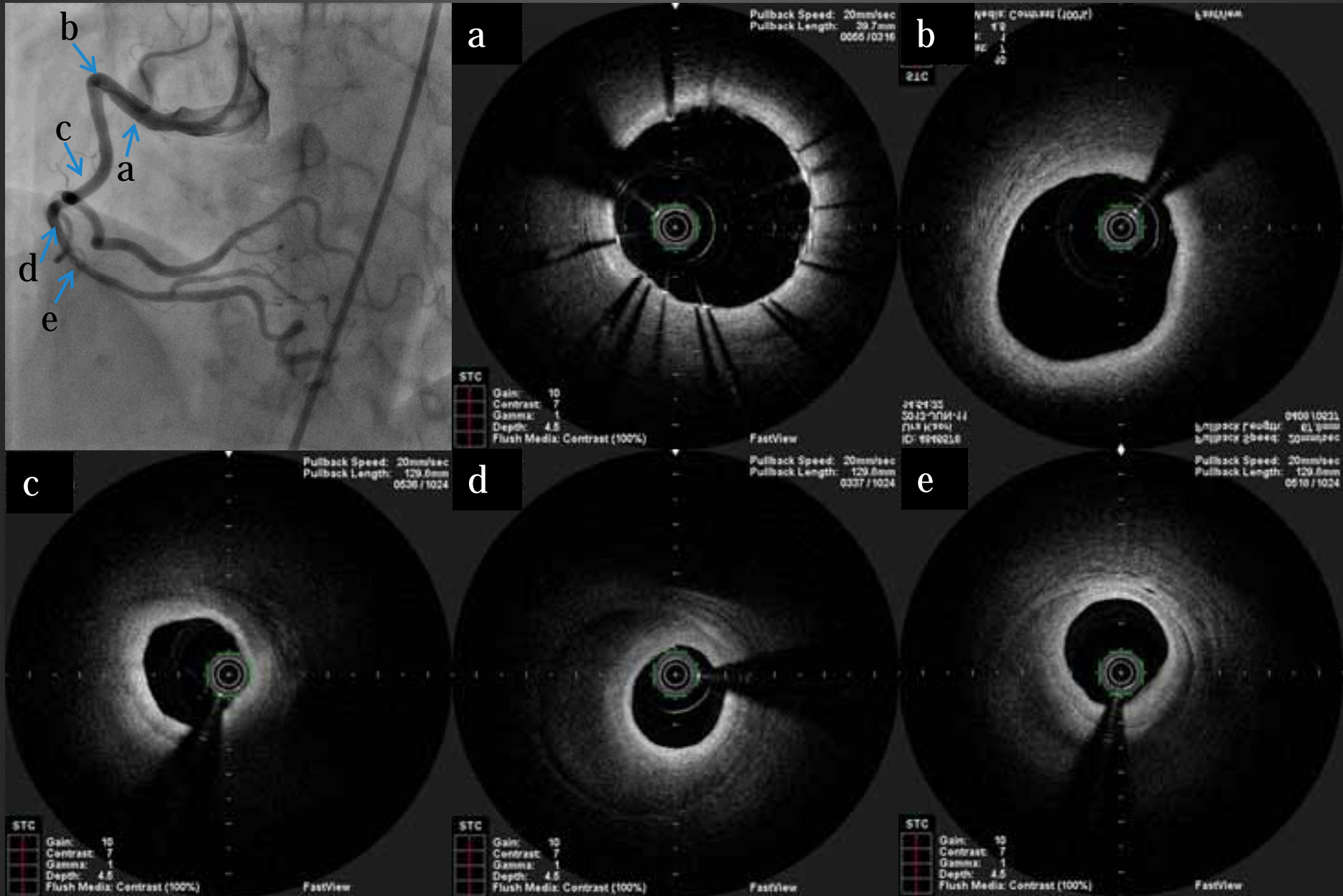


2013 JUN-11
14:54:32

0001/0537

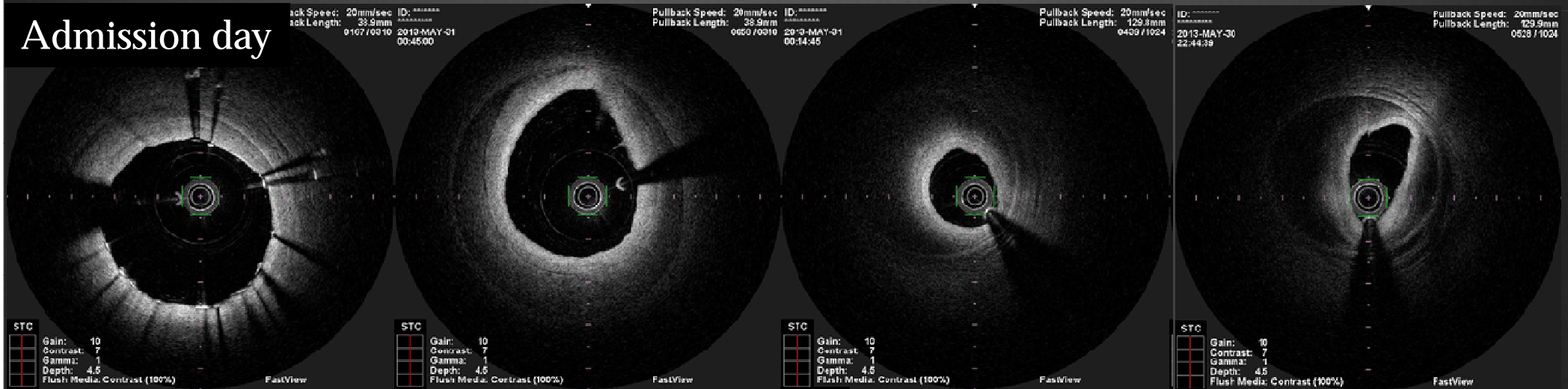


3-week f/u OFDI (RCA)

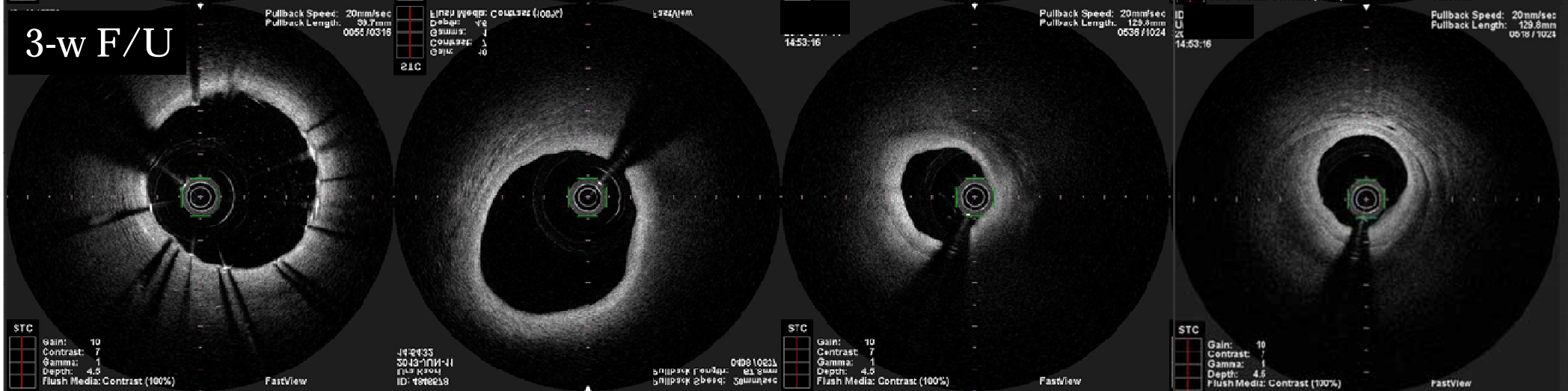


Serial OFDI images

Admission day



3-w F/U



Proximal



Distal

Unstable angina
Non-ST elevation MI
ST elevation MI
Sudden death & Successful CPR

- Young patient
- Low coronary risk profile
- Female sex
- Post-partum

Coronary angiography

Severe CAD

SCAD

Asymptomatic

Ongoing myocardial ischaemia

Left main or multivessel dissection

Medication

IVUS or OCT imaging

CABG

Cardiac CT angiography

PCI

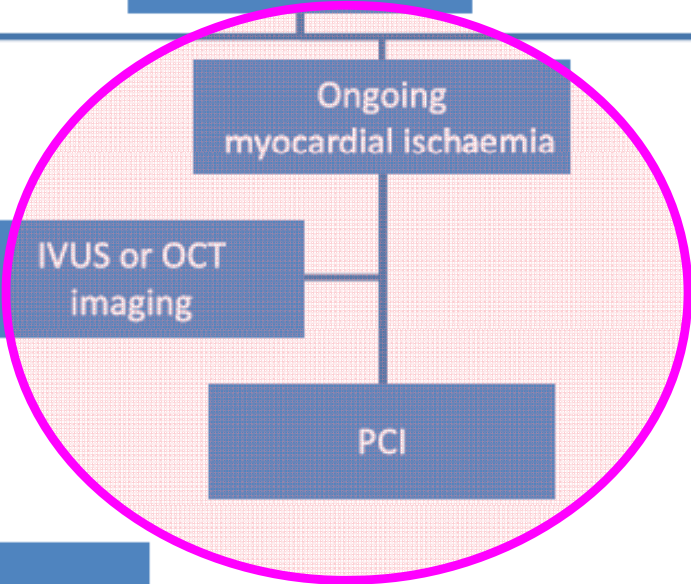
Resolution

Persistent

Conservative treatment

IVUS or OCT imaging

PCI



Summary

- ✓ We experienced a case with spontaneous coronary artery dissection (SCAD) .
- ✓ OCT(OFDI) could detect the entry and re-entry portion of SCAD clearly.
- ✓ Stent was deployed to close the entry of SCAD, and a good recanalization was obtained.
- ✓ OCT(OFDI) was useful to diagnose SCAD and determine the strategy of PCI.