CTEC 2025 International Session
PCI Live Case 1

Operator: Shoichi Kuramitsu

Imaging Interpreter: Umihiko Kaneko

Case Presentation

Age: 70's years
Gender: Male
BMI: 22 kg/m^2
Risk factors
: HTN, DL

Clinical Presentation

- CCS II angina
- Double vessel disease

: #6.90% #7.75% #9.90% #13. 90%

Medical History

- PCI: none
- Others: none

Cardiac Function and L/D

- LVEF72% w/o valve disease
- Cre 0.74 mg/dl (eGFR 79 ml/min/m^2)
- LDL-C 77 mg/dl, HbA1c 6.2%, Hb 13.8 g/dl

Medication

- APT, CCB, ARB, statin

Target Lesion

- Bifurcation lesion with severe calcification in LAD

Coronary Angiography

✓ **CAG reveals severe stenosis in LAD and LCx: #7.90% #9.90% #12.90% #14.90%**

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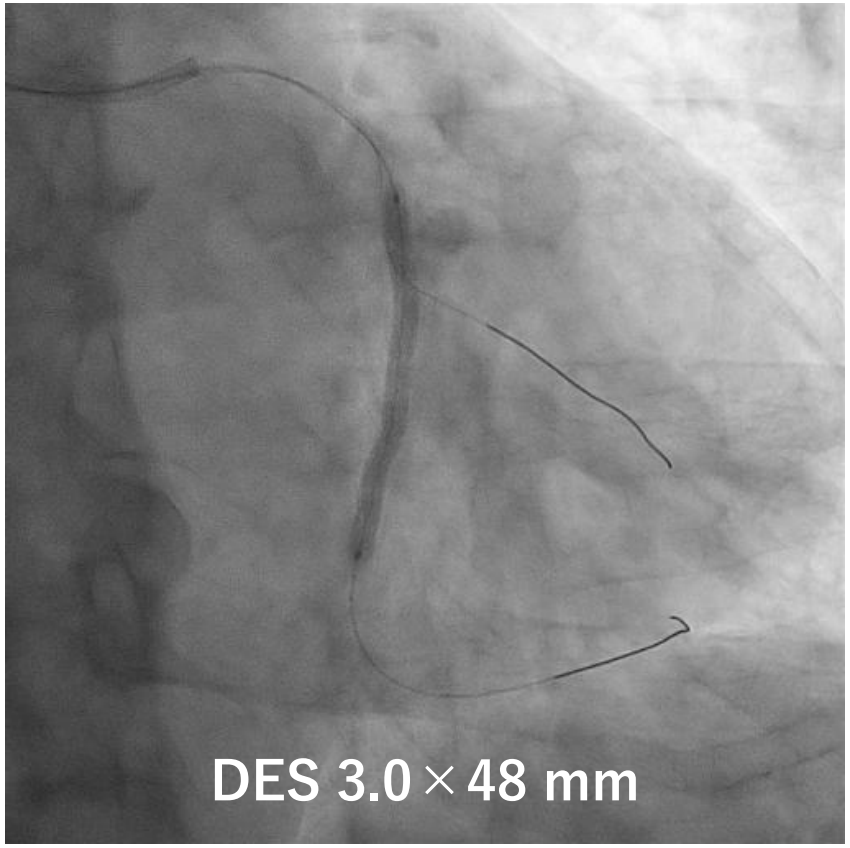
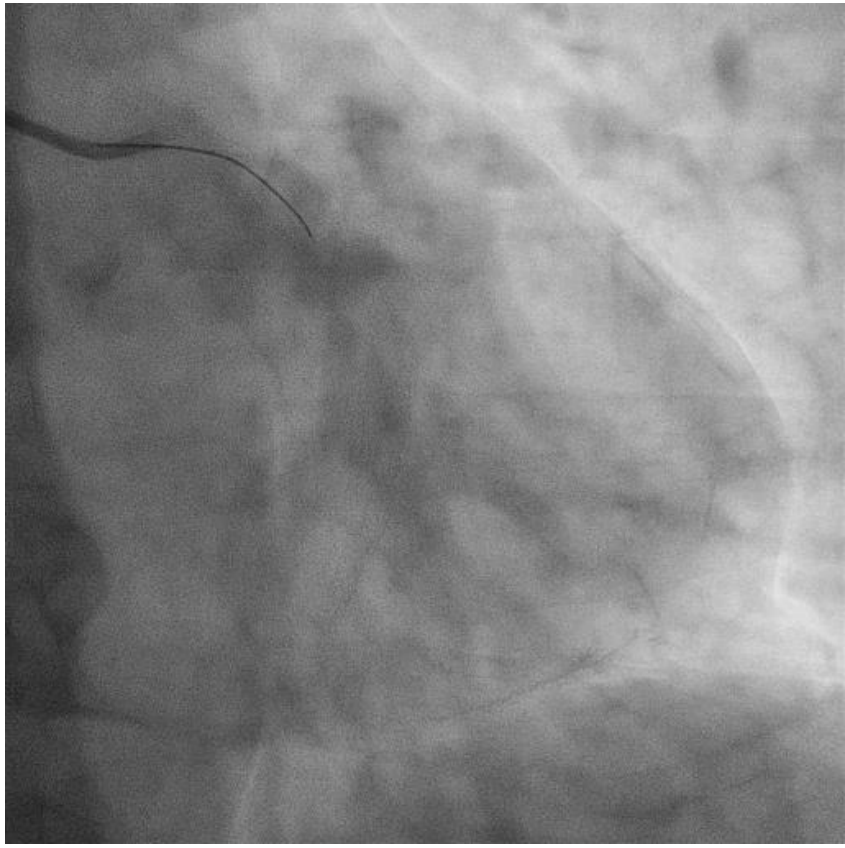
PCI for LCX Lesion

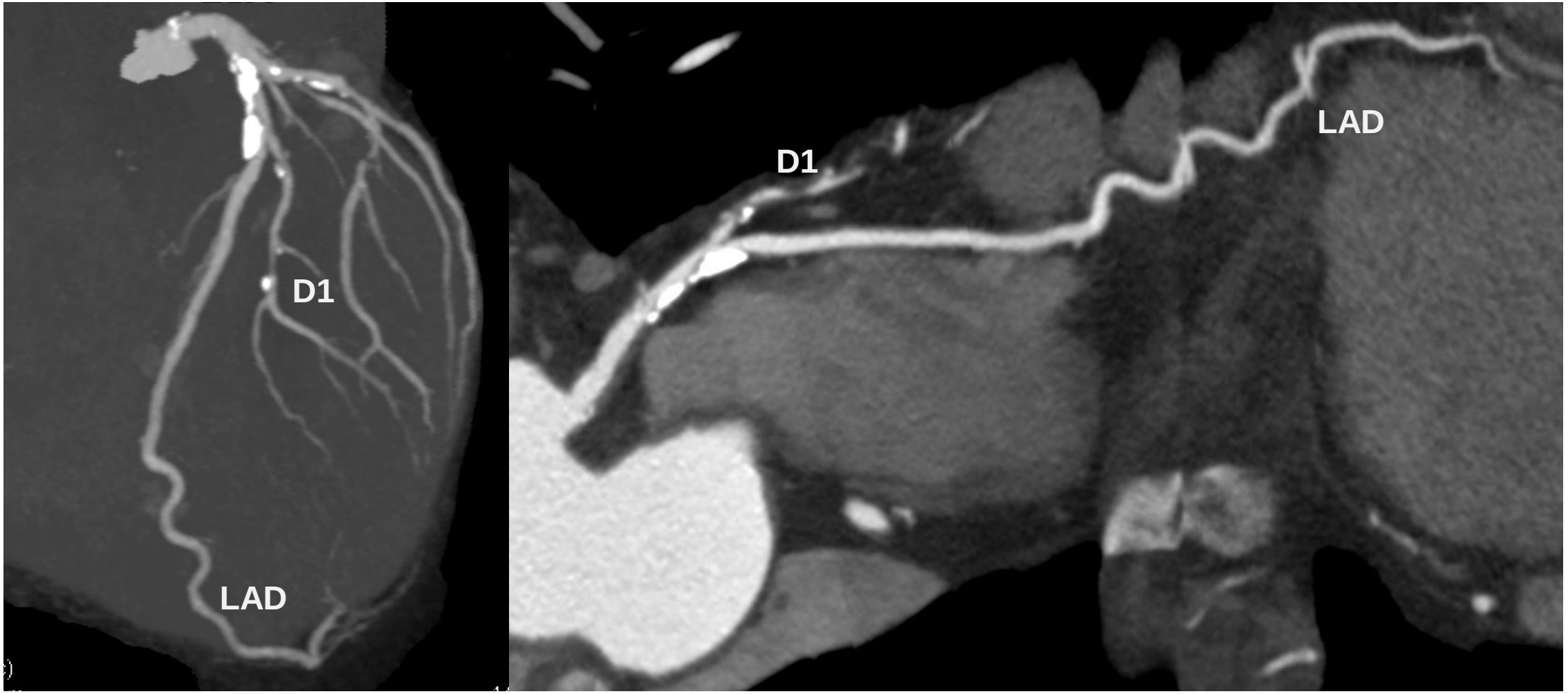




✓ **LCX lesion was treated with DES.**

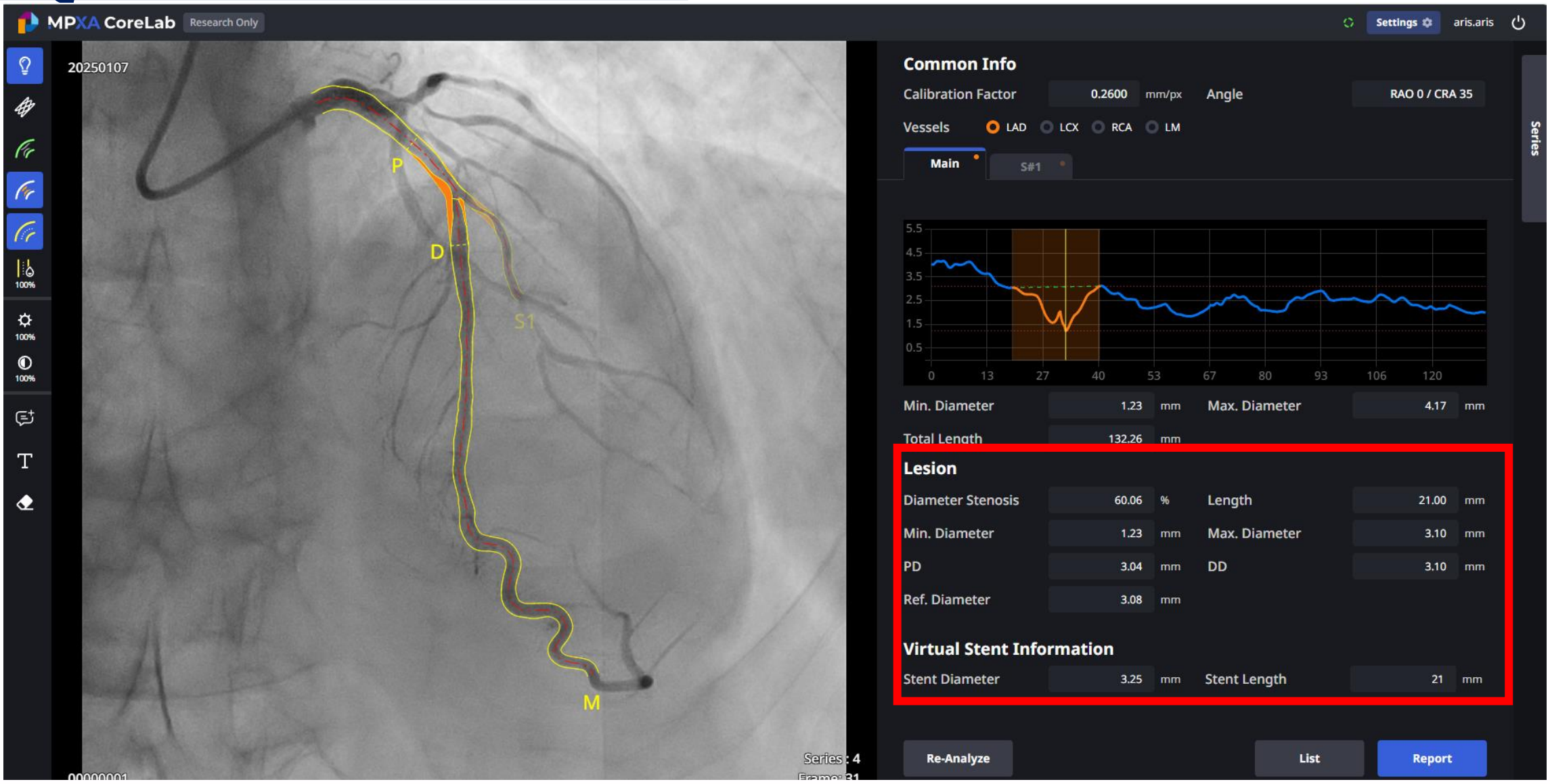
Coronary CTA

CTEC
IN SAPPORO
HEART CENTER



✓ **CCTA reveals severe calcification at the opposite side of Diagonal branch.**

AI-QCA Assessment



PCI Strategy and Learning Objective

Target Lesion

- ✓ Proximal LAD bifurcation with severe calc

Initial PCI Planning and Discussion Points

- ✓ Radial approach
- ✓ Physiological assessment for MB and SB
- ✓ Imaging-guided PCI (IVUS or OCT)
- ✓ AI-QCA guidance
- ✓ Final devices (DES or DCB)

Learning Objective

- ✓ How to optimize bifurcation PCI using imaging and physiology

CTEC 2025 International Session
PCI Live Case 2

Operator: Takuro Sugie

Imaging Interpreter: Shoichi Kuramitsu

Case Presentation

Age: 70's years
Gender: Male
BMI: 24 kg/m^2
Risk factors
: HTN, DL, DM

Clinical Presentation

- CCS II angina
- Triple vessel disease

Medical History

- None

Cardiac Function and L/D

- LVEF 42%, inf hypokinesis, LVDd 48 mm
- Cre 0.67 mg/dl (eGFR 91 ml/min/m^2)
- LDL-C 83 mg/dl, HbA1c 6.4%, Hb 14.9 g/dl

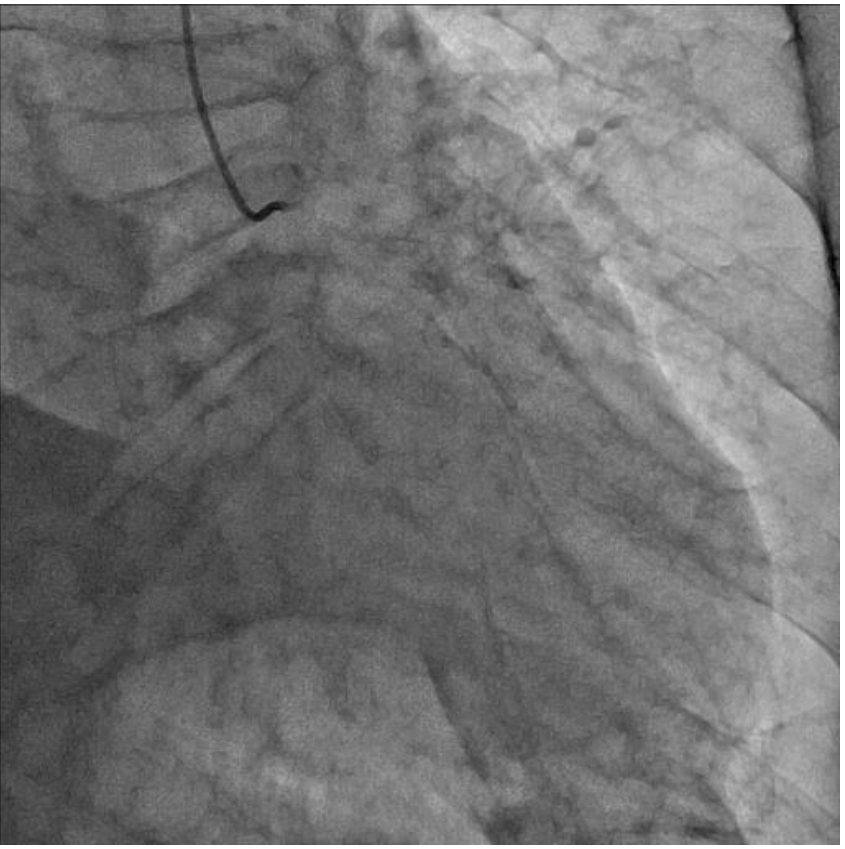
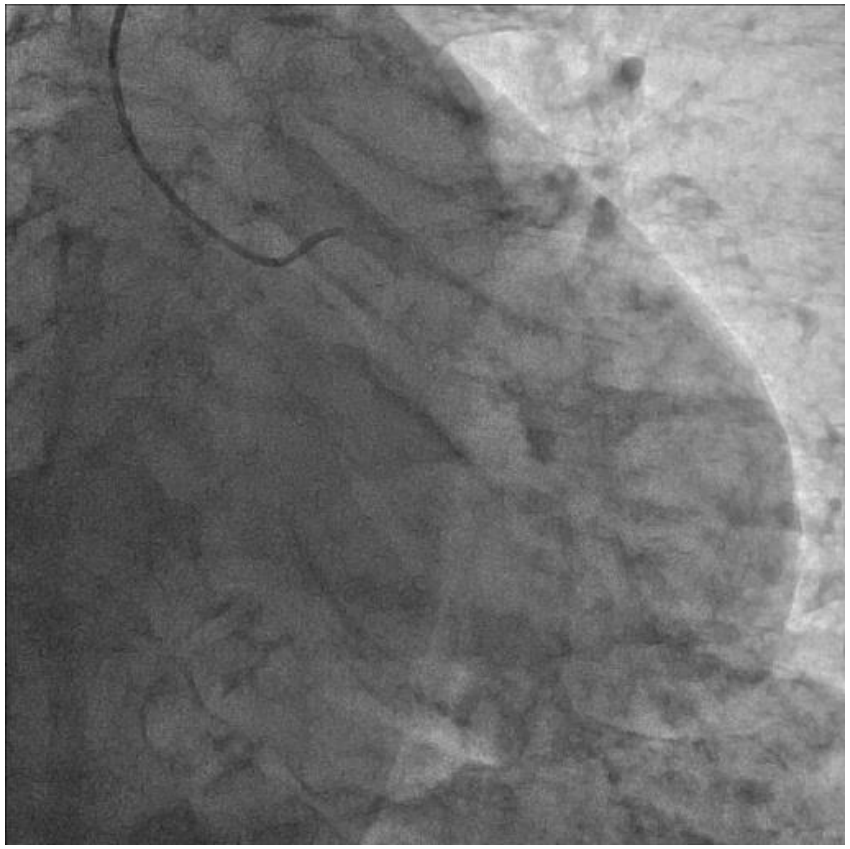
Medication

- APT, ARB, statin, OHA

Target Lesion

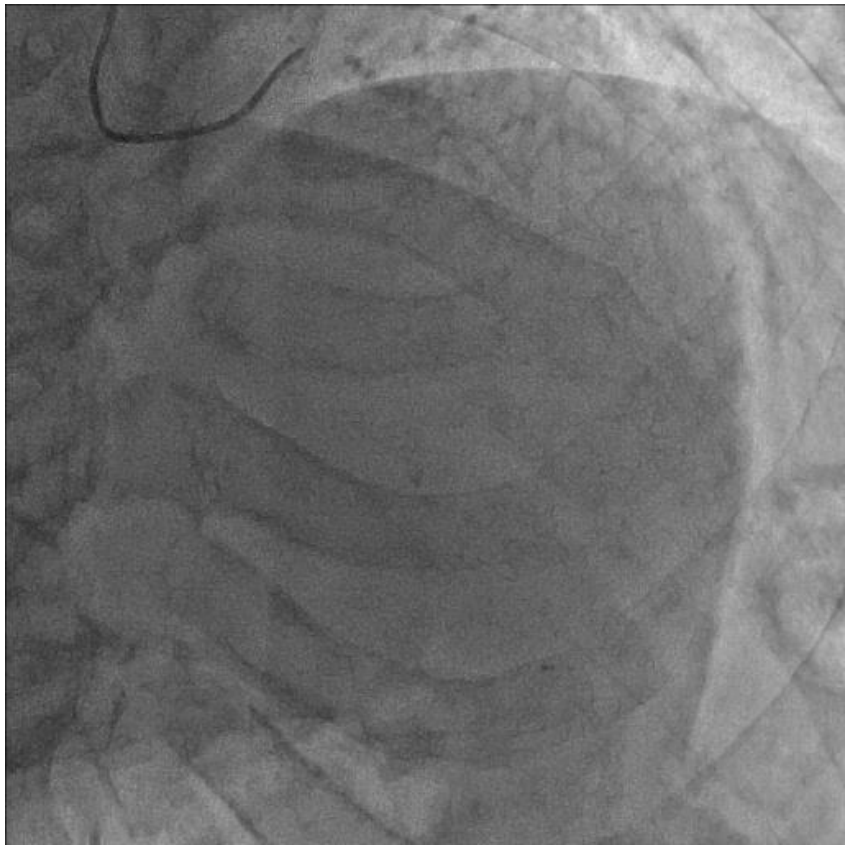
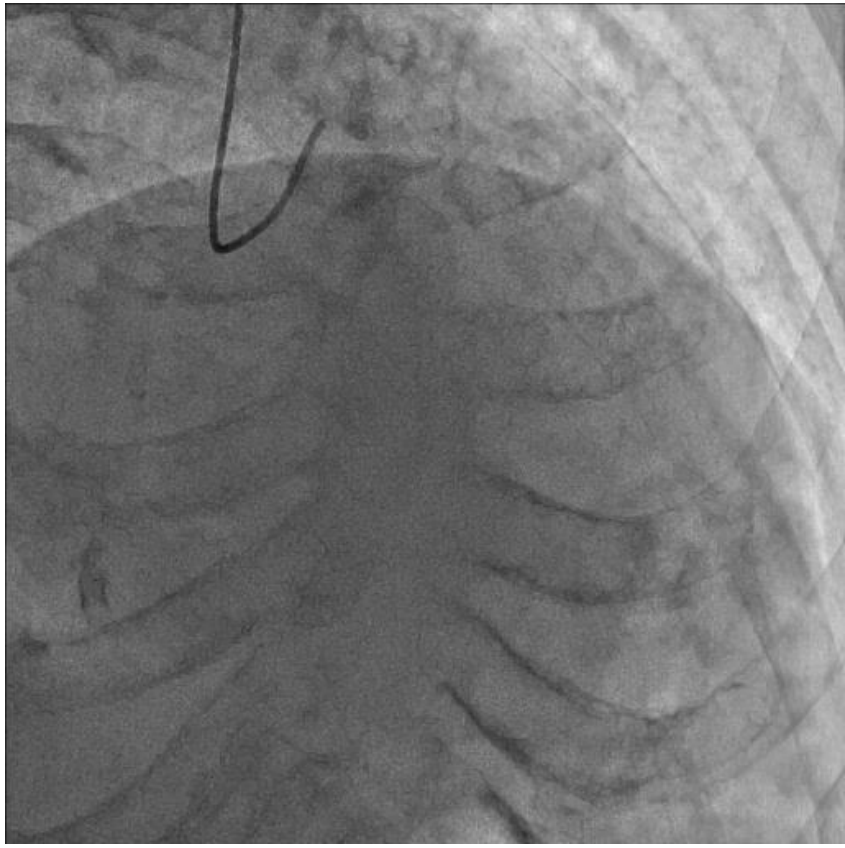
- Mid-RCA CTO

Coronary Angiography

✓ **CAG reveals 3VD: #2.100% #6.75% #7.90% #11.99% #13.90%**

Coronary Angiography

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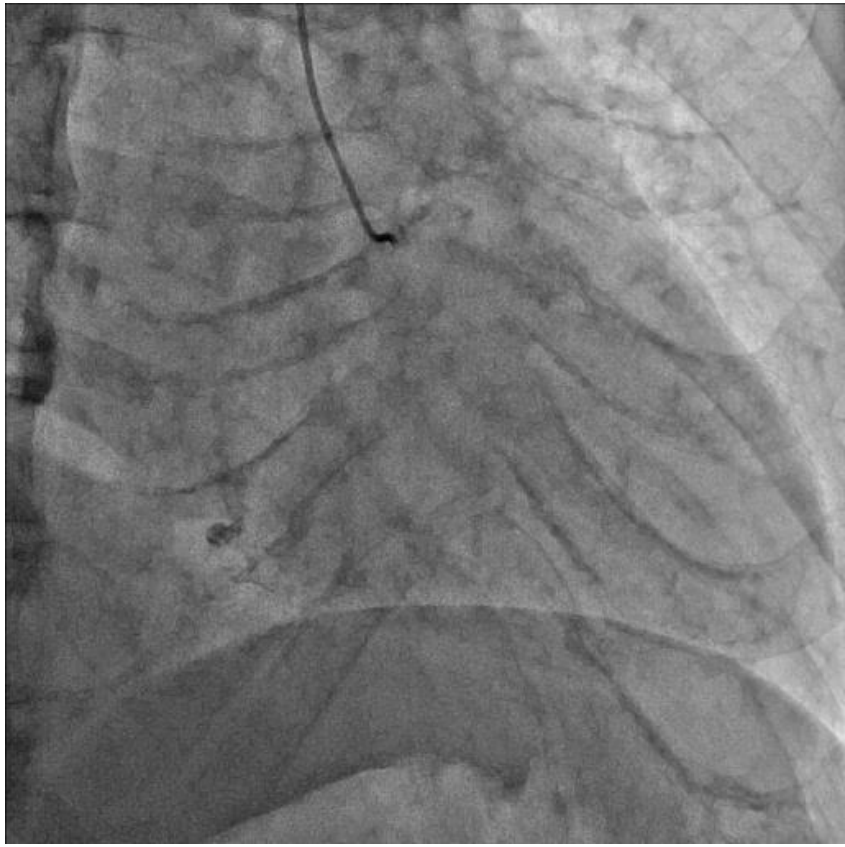
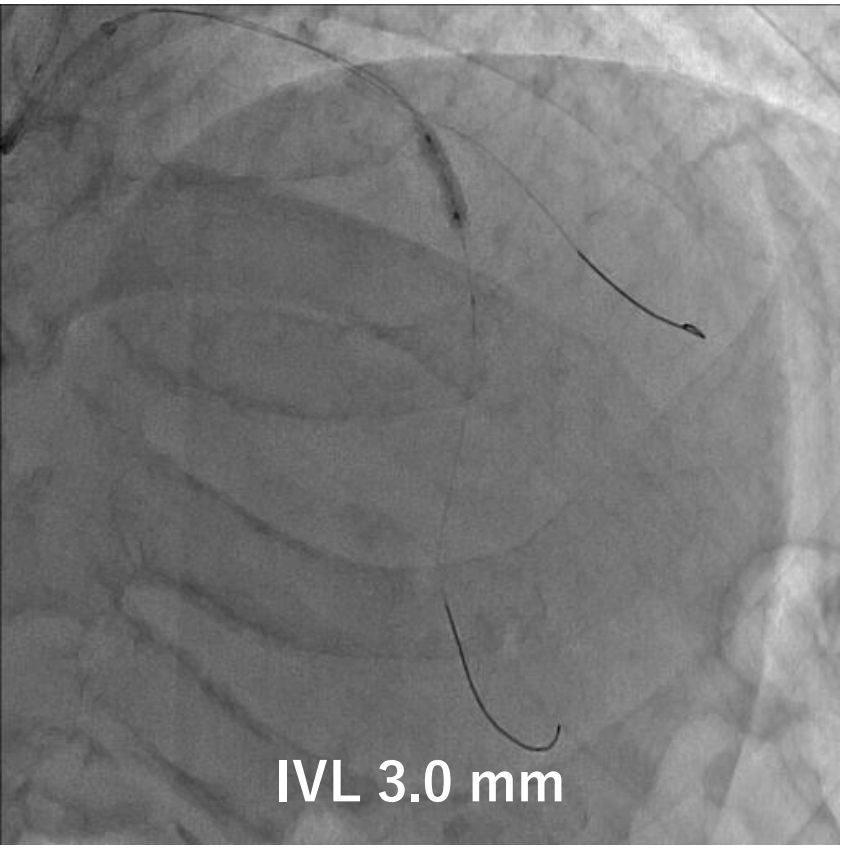
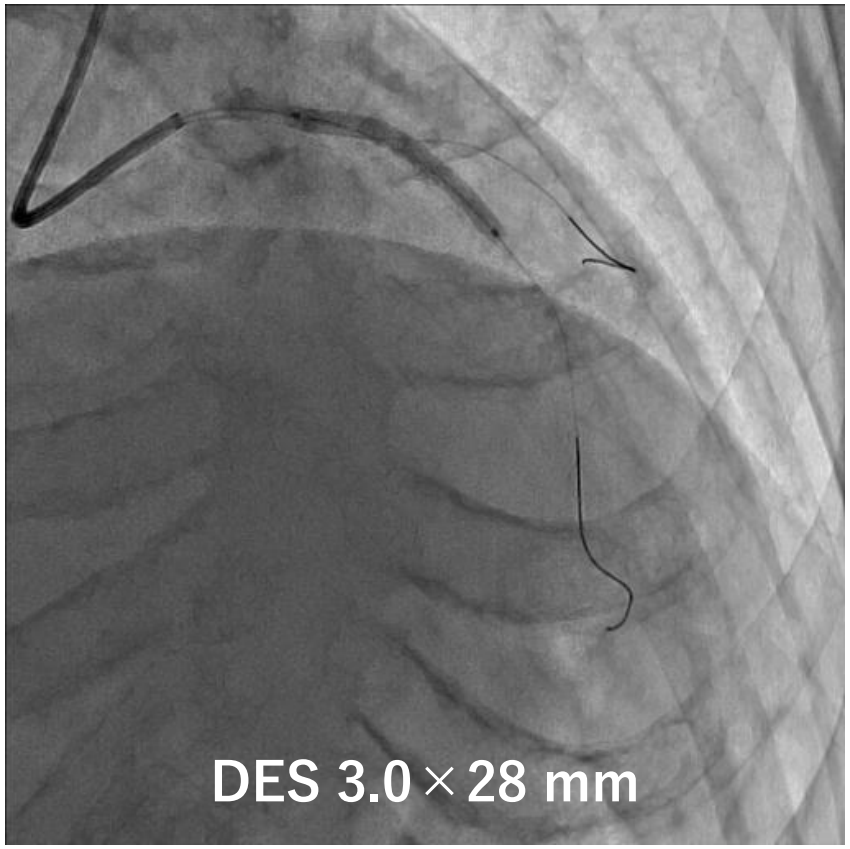
Coronary Angiography



✓ **Mid-RCA CTO lesion receives collateral flow from LAD and LCX.**

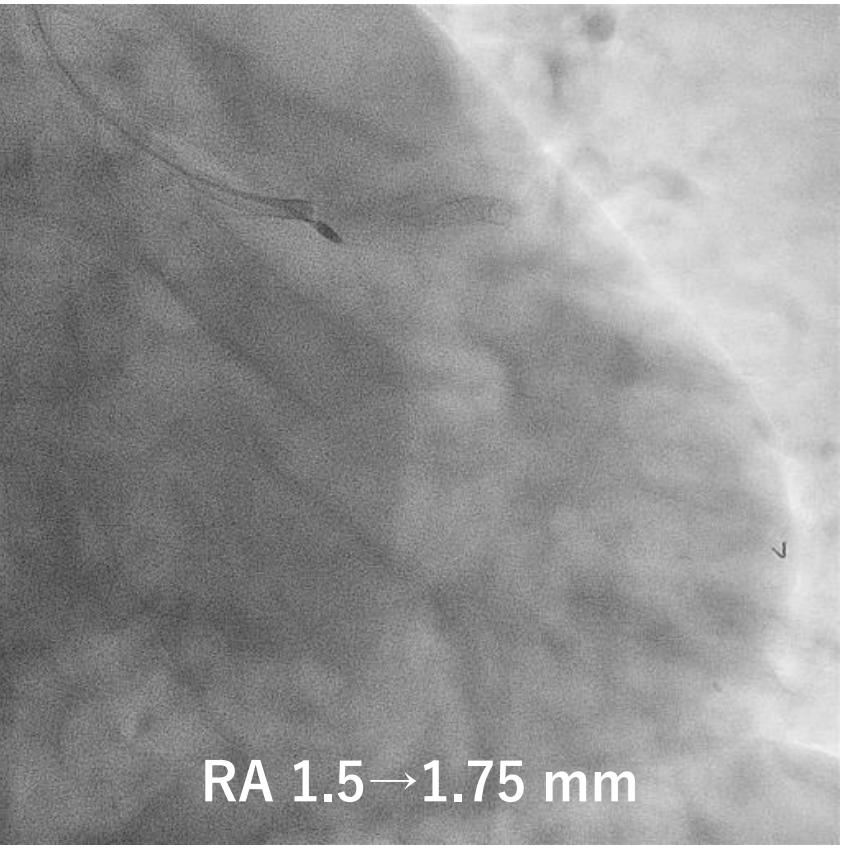
PCI for LAD Lesion

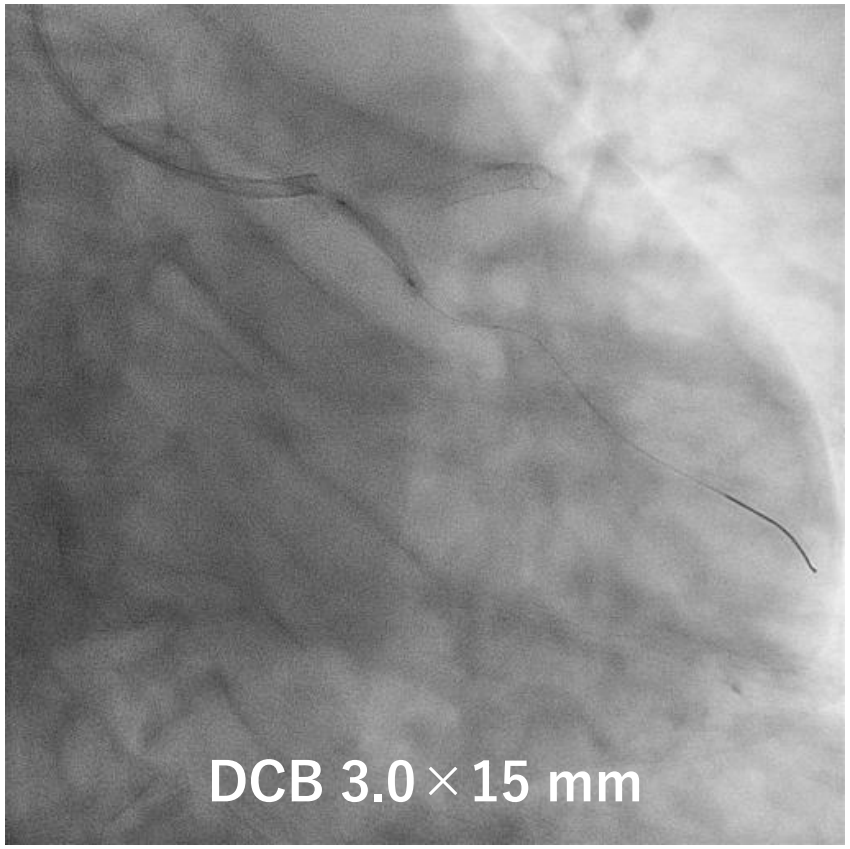




✓ **LAD lesion was treated with IVL, followed by DES.**

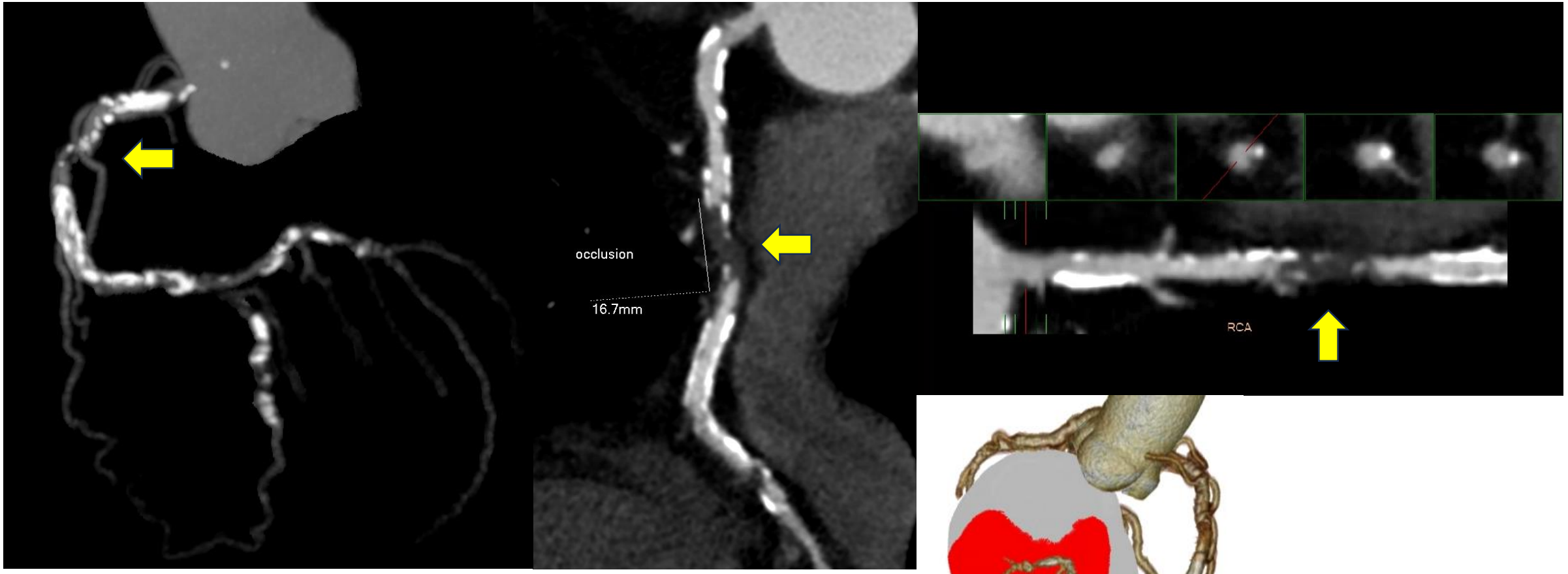
PCI for LCX Lesion

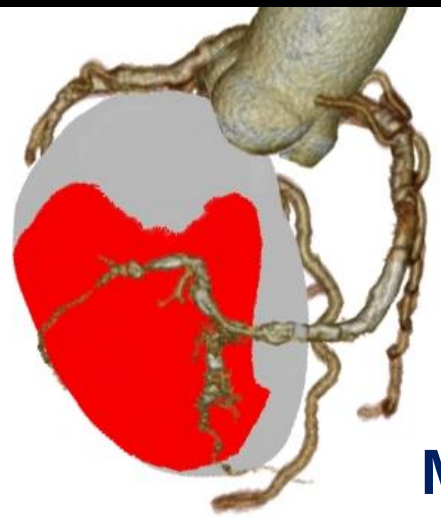




✓ **Ostial LCX lesion was treated with Rotablator, followed by DCB.**

Coronary CTA





- ✓ **Coronary CTA reveals mid-RCA CTO lesion without significant calcification.**

MMAR: RCA 33.4%

PCI Strategy and Learning Objective

J-CTO score 1 (Entry sharp: blunt type)

Target Lesion

- ✓ Mid-RCA CTO

Initial CTO-PCI Planning

- ✓ Radial approach
- ✓ Puncture proximal cap with NEXT 2
- ✓ Confirm puncture site from SB IVUS
- ✓ Advance MC into intraplaque
- ✓ Inject a small dose (0.5 mm) of contrast (HDR)

Learning Objective

- ✓ How to perform HDR (HydroDynamic contrast Recanalization), a new concept of antegrade CTO-PCI approach.