Distal Trans-radial Access in Critical and Heavily Calcified Left Dominant of ULM patient

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Disclosure

- There is no potential conflict of interest in this presentation.

Introduction

- Critical unprotected LM (ULM) disease with heavy calcified lesion carries **higher prognostic risk** compared with other subsets of ischemic heart disease.
- However, this lesion may be solved using rotational atherectomy with or without cutting balloon and usually be performed by femoral access
- Distal trans-radial access (dTRA) using **slender sheath** in complex PCI maybe give several advantages either for patients and also operator.
- Here we describe the case of heavily calcified critical ULM using dTRA

78 y.o Male, Prolonged Chest Pain

History

- Referred from other hospital
- Progressive angina CCS III, worsened since 1 week ago
- CAD Risk factor : type II DM

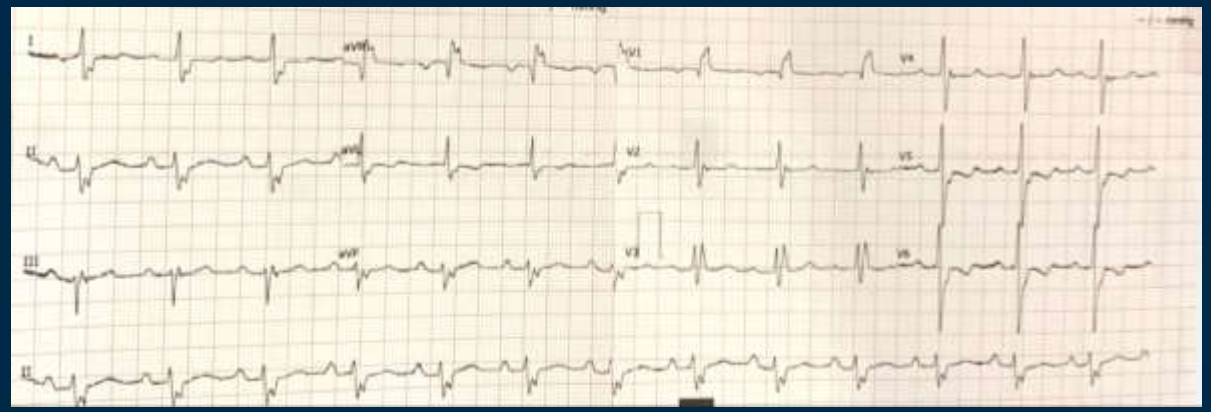
- Previous MI : None
- Previous intervention : None

Laboratory

- Hb **11.1** g/dL **/** NTproBNP 1509 pg/mL
- GDS 130 mg/dL, HbA1c 6.3 %,
- LDL 60 mg/dL,
- AST 10 mg/dL, ALT 11 mg/dL
- Ur 23 mg/dL, Cr 0.8 mg/dL

Echocardiography

- EDD 45 / ESD 26
- EF=73% (Teich)
- Global Normokinetik
- Diastolic dysfunction
- Moderate MR



Coronary Angiography

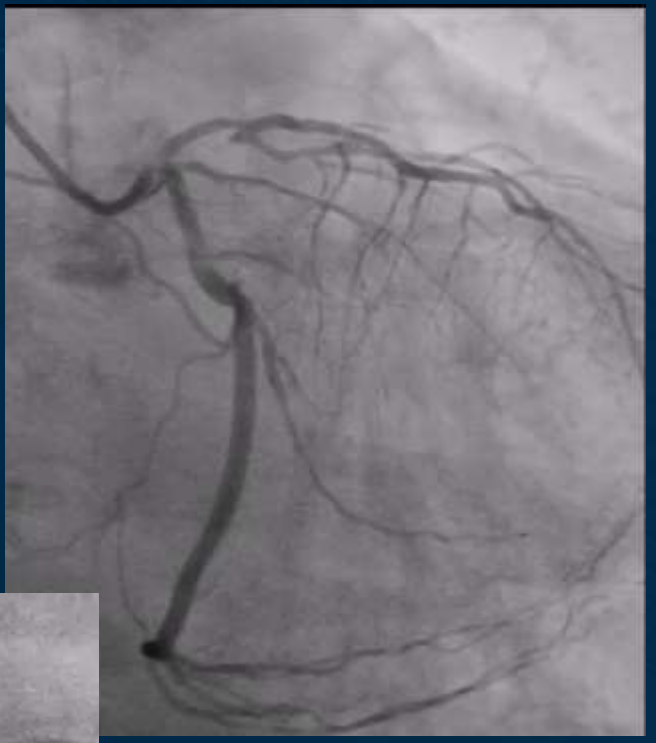
- Progressive Angina (UAP) with critical stenosis in unprotected LM

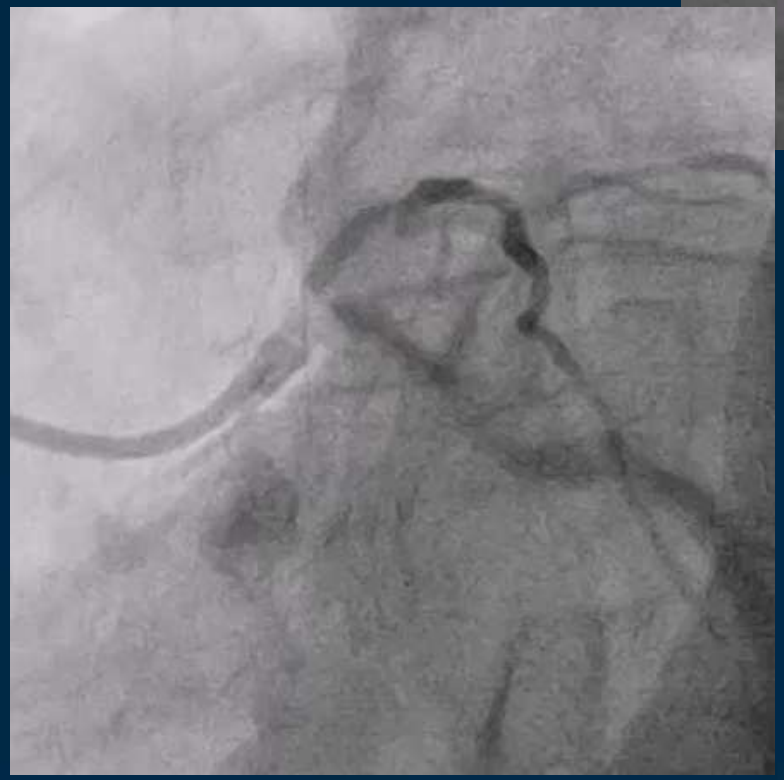
  (Left dominant system)

- Severe Calcified Lesion

Strategy

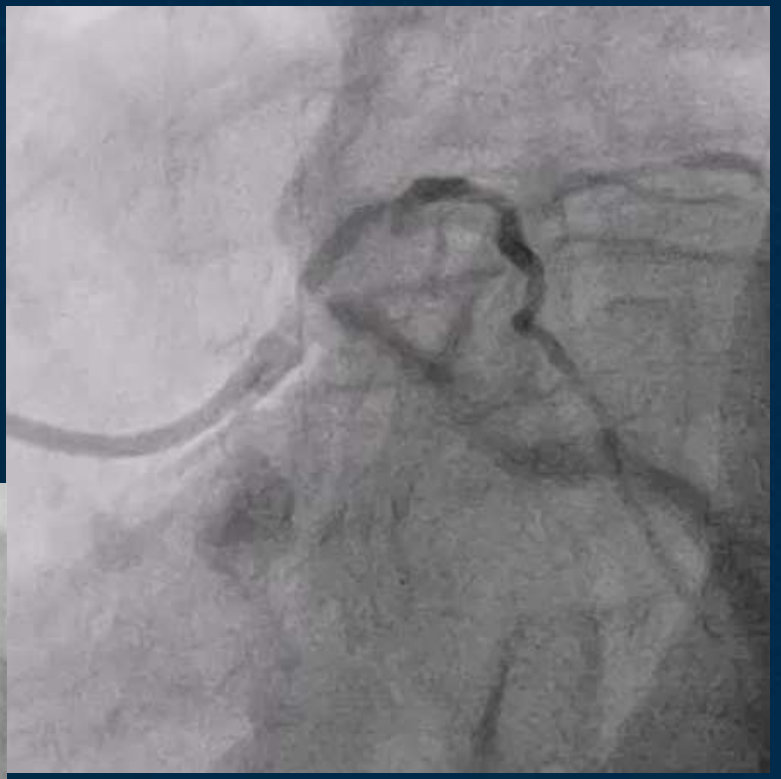
- Progressive angina with ULM and critical stenosis ➔ Mechanical Support (IABP) to reduce ischemic burden
- Left distal radial access with slender sheath (6/7 F) ➔ less complication, more comfortable for patient and operator
- LM bifurcation 2-stent strategy
  - DK Crush technique
- Aggressive lesion preparation ➔ Rota-Cut
- Intravascular Imaging → osteal lesion with IVUS
- 78 y.o with mild anemia ➔ HBR



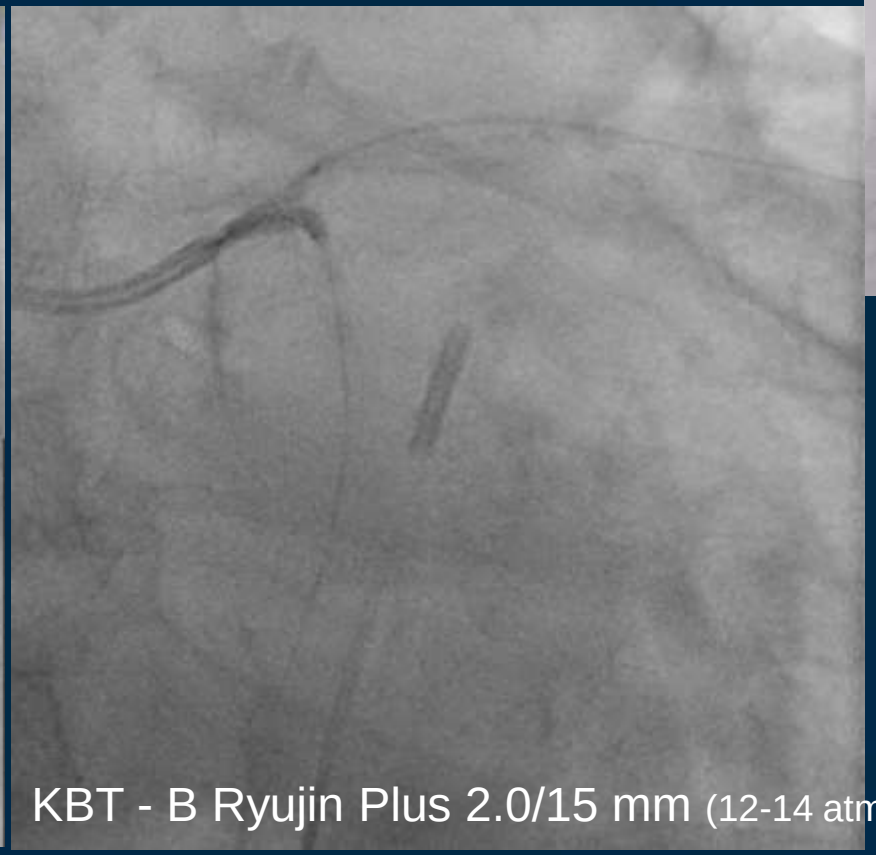


Procedure

- Left distal a. radialis with slender sheath 6/7 F
- IABP 40 cc inserted via right a.femoralis

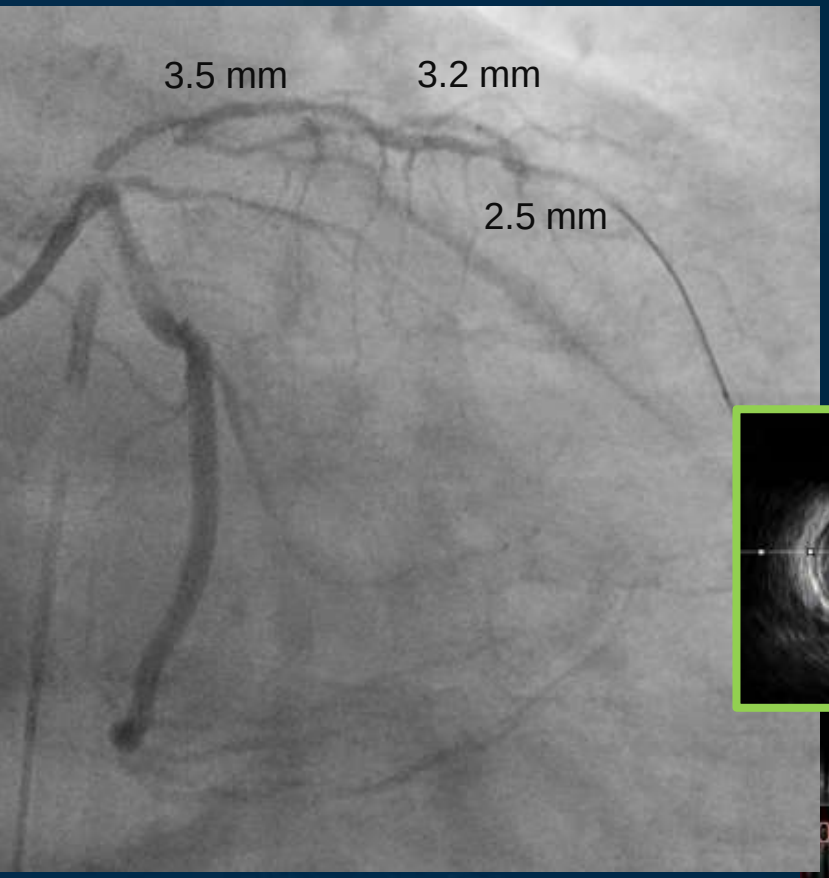


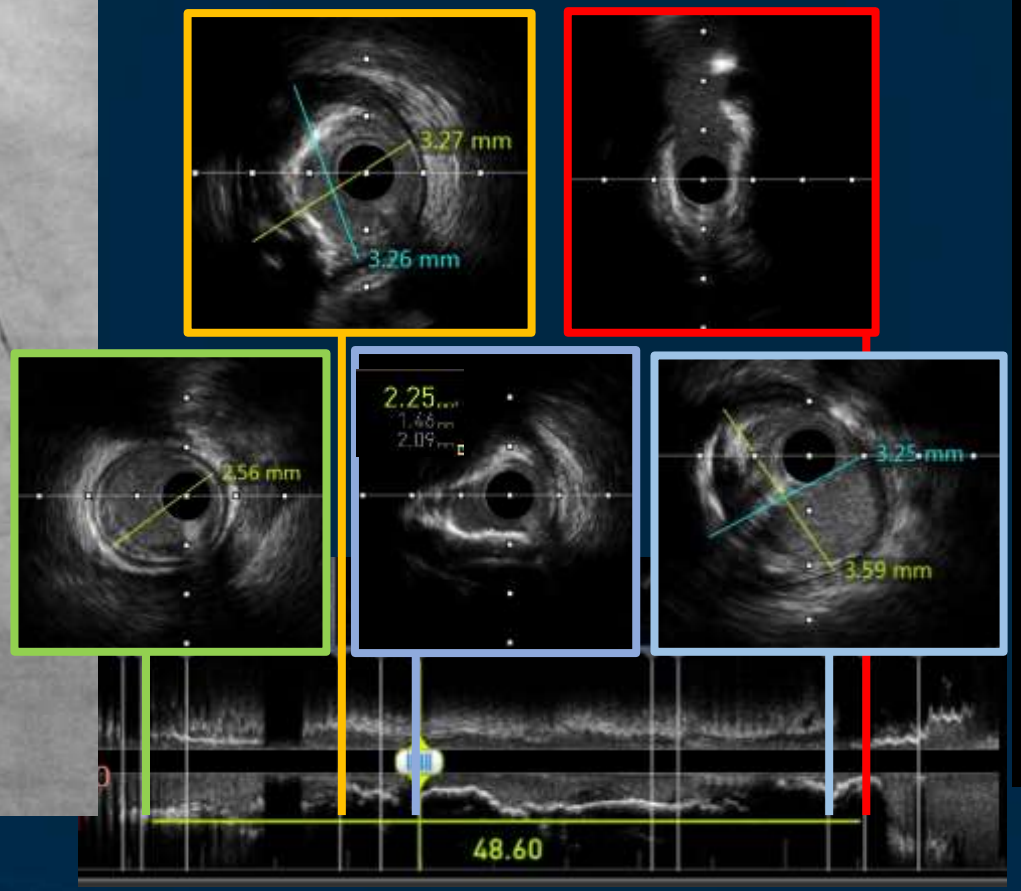
GW Runthrough hypercoat to LCx
Crusade type R + GW Sion to LAD

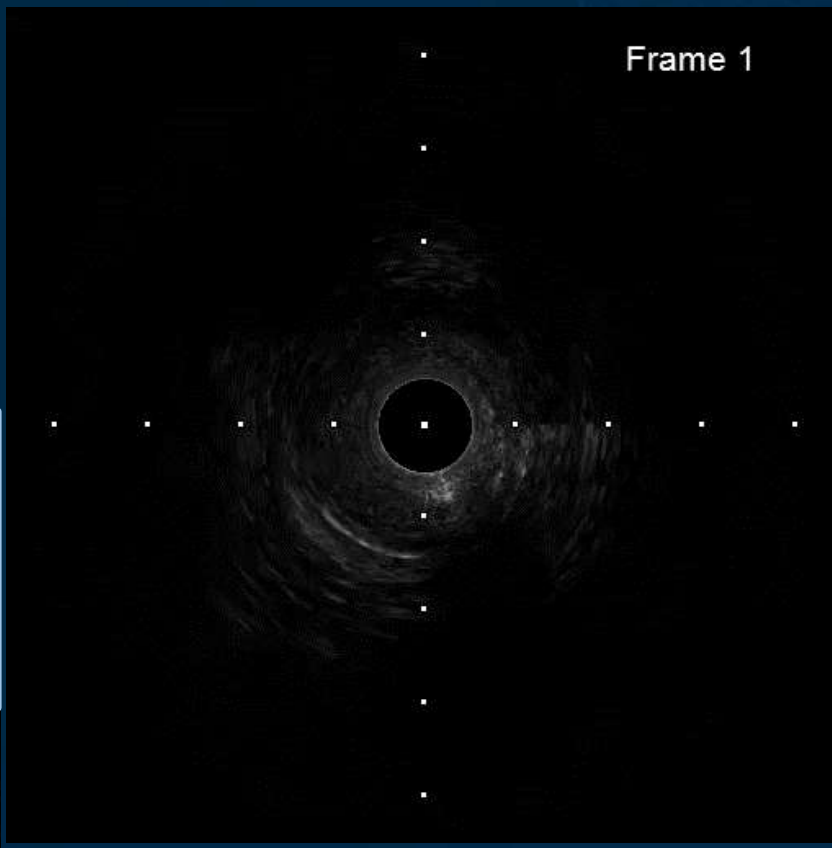


KBT - B Ryujin Plus 2.0/15 mm (12-14 atm)

IVUS evaluation LAD

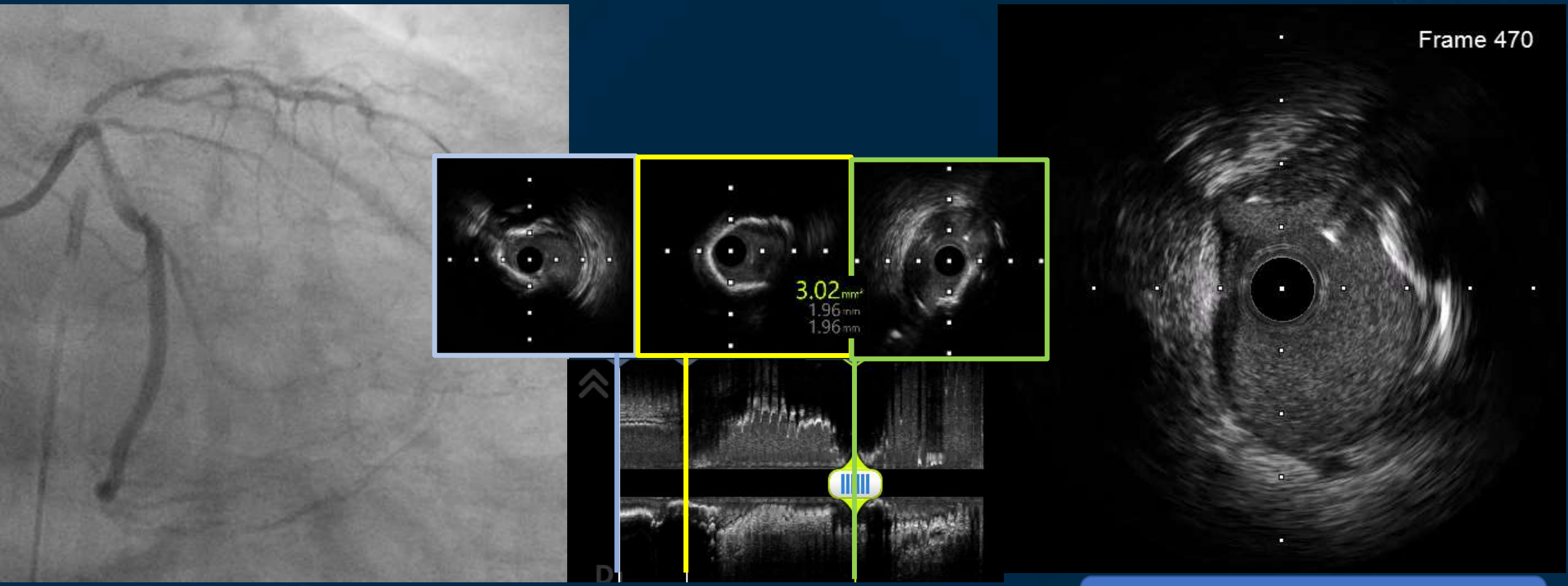






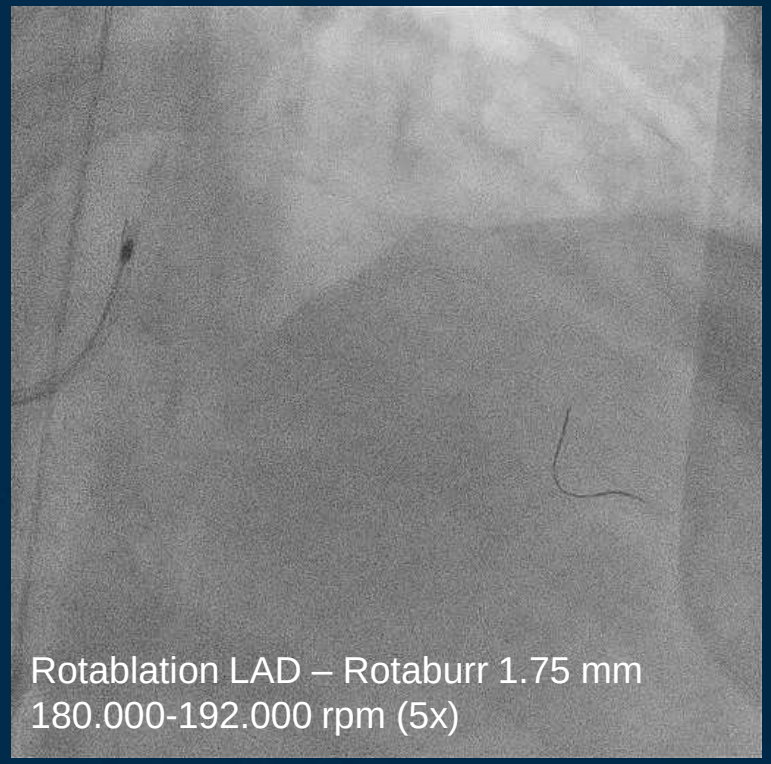
IVUS Calcium Score : 4

IVUS evaluation LCx

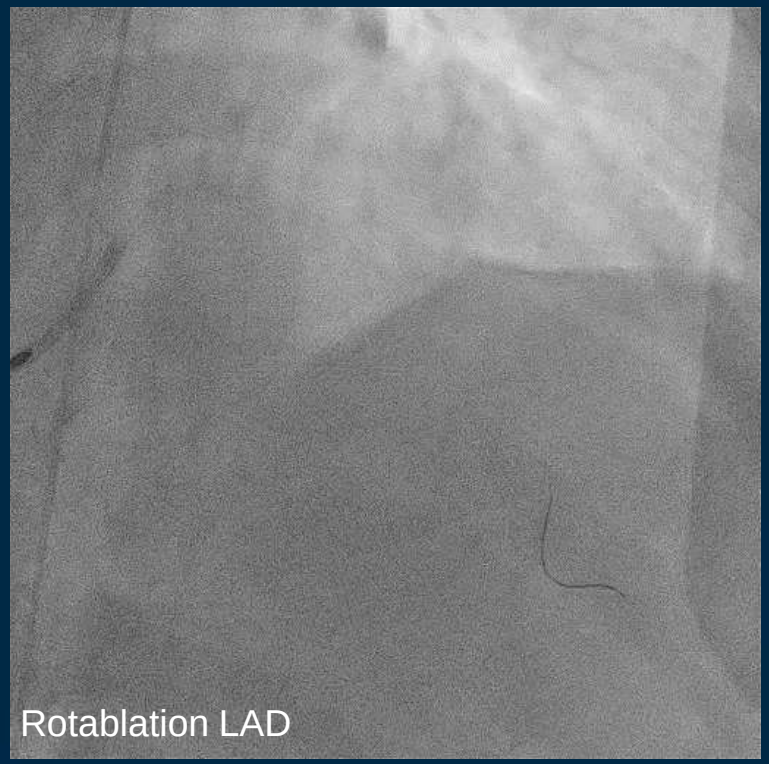


IVUS Calcium Score : 3

Rotablation at LAD and LCx



Rotablation LAD – Rotaburr 1.75 mm
180.000-192.000 rpm (5x)

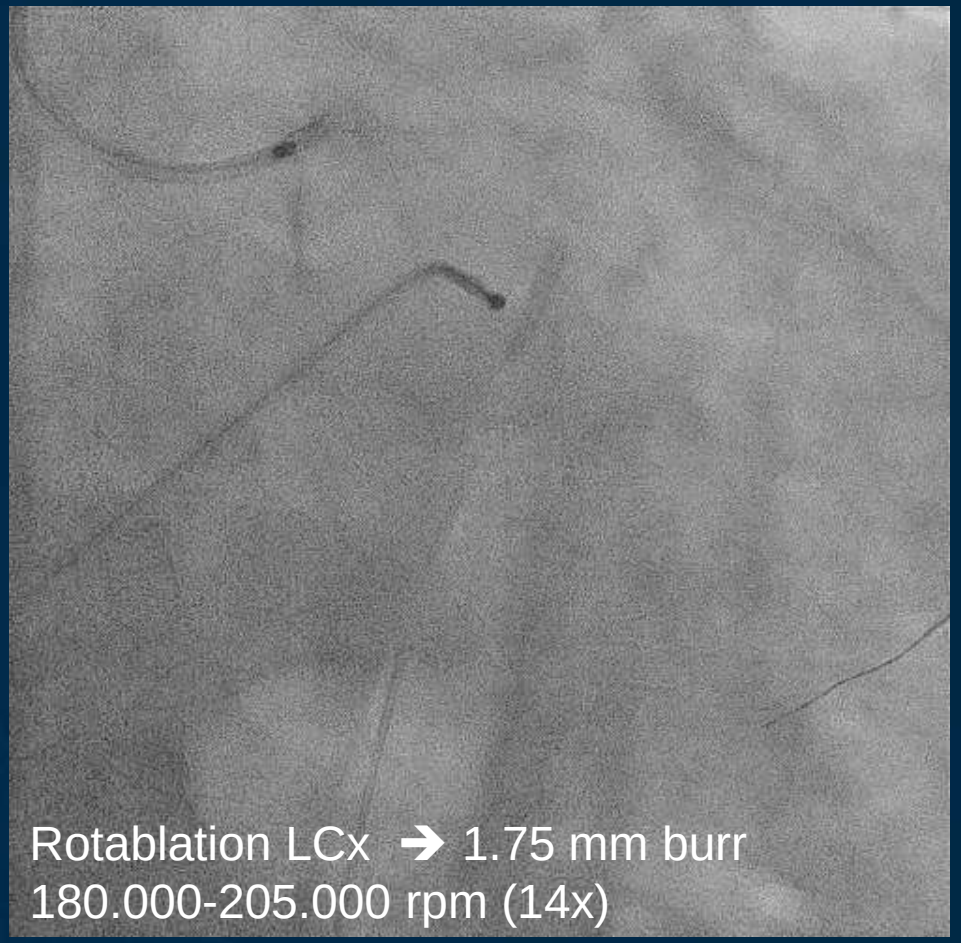


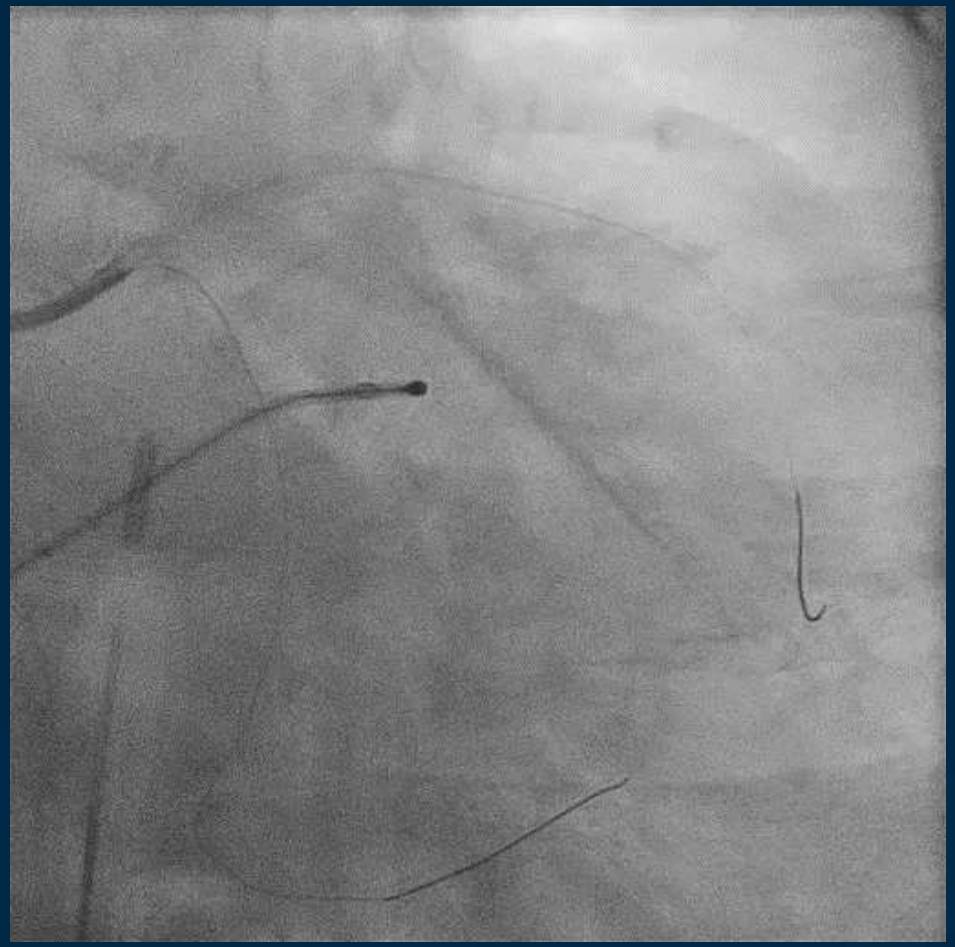
Rotablation LAD

Rotablation LCx

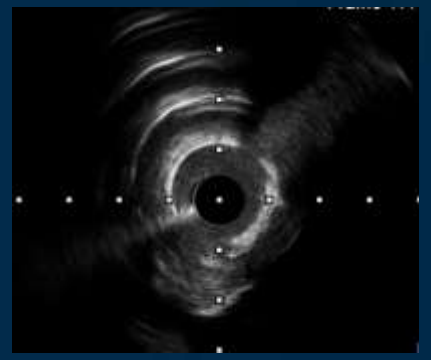
TPM + Rotablation LCx cont.

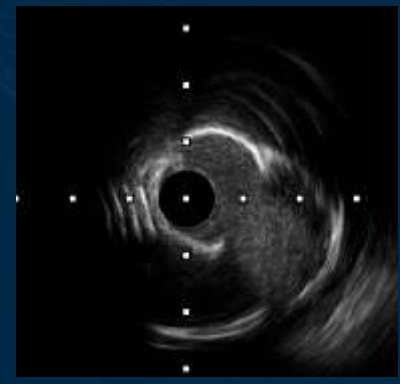
- TPM insertion

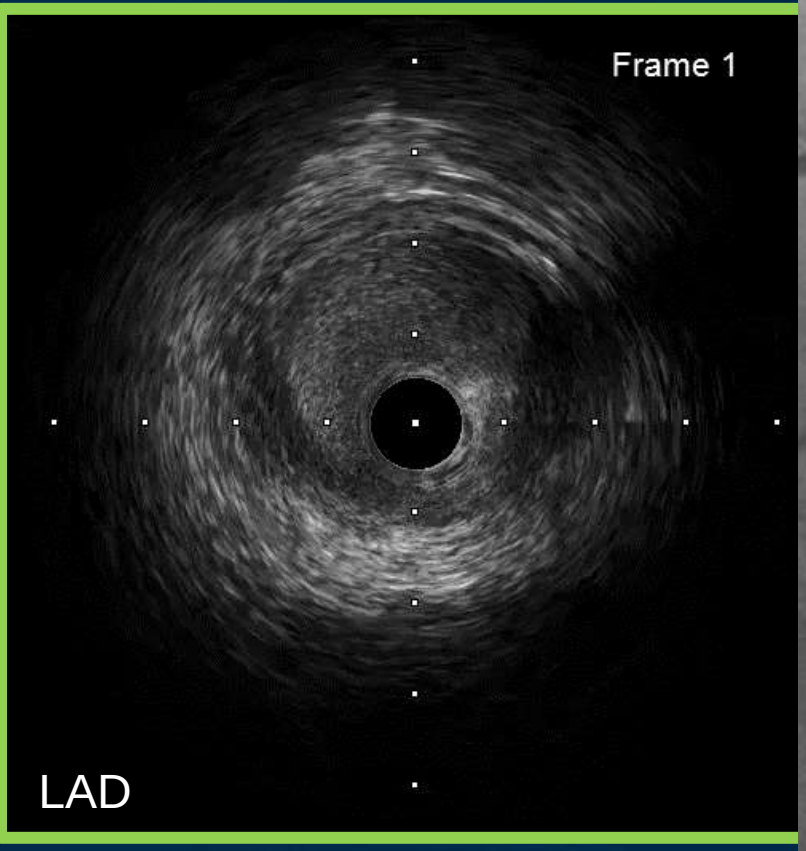


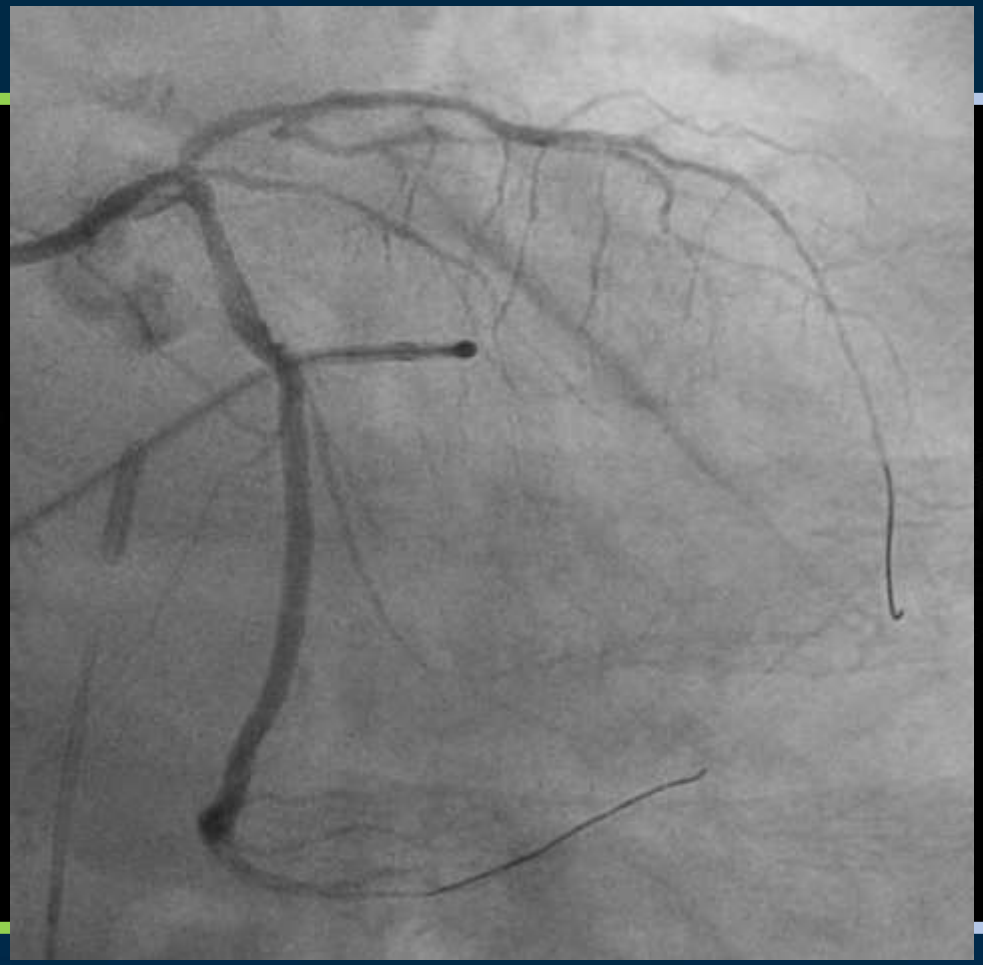


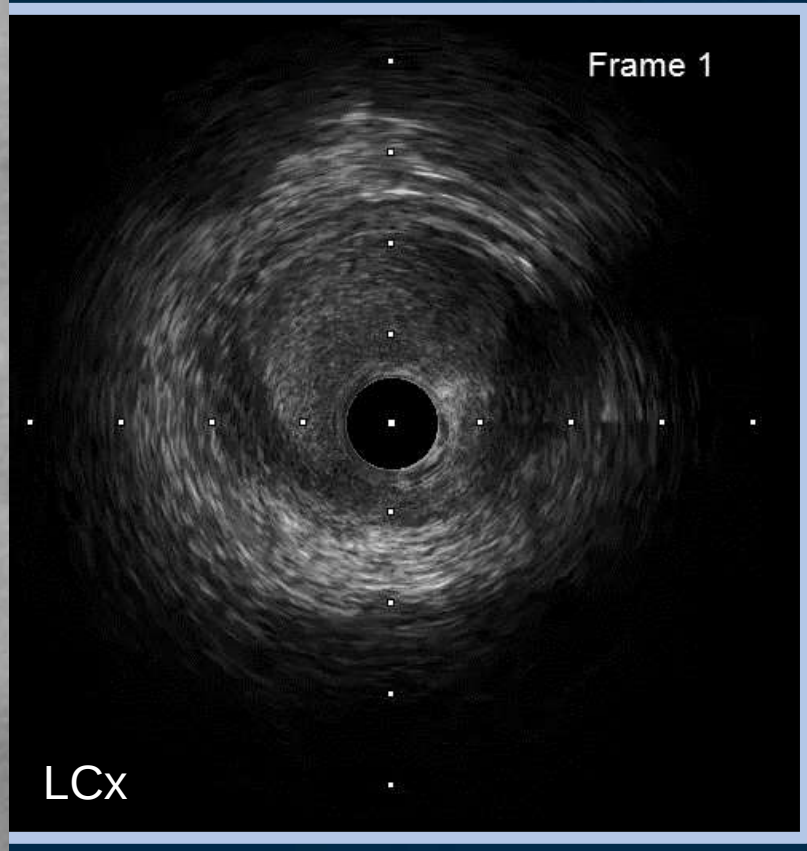
IVUS post Rotablation



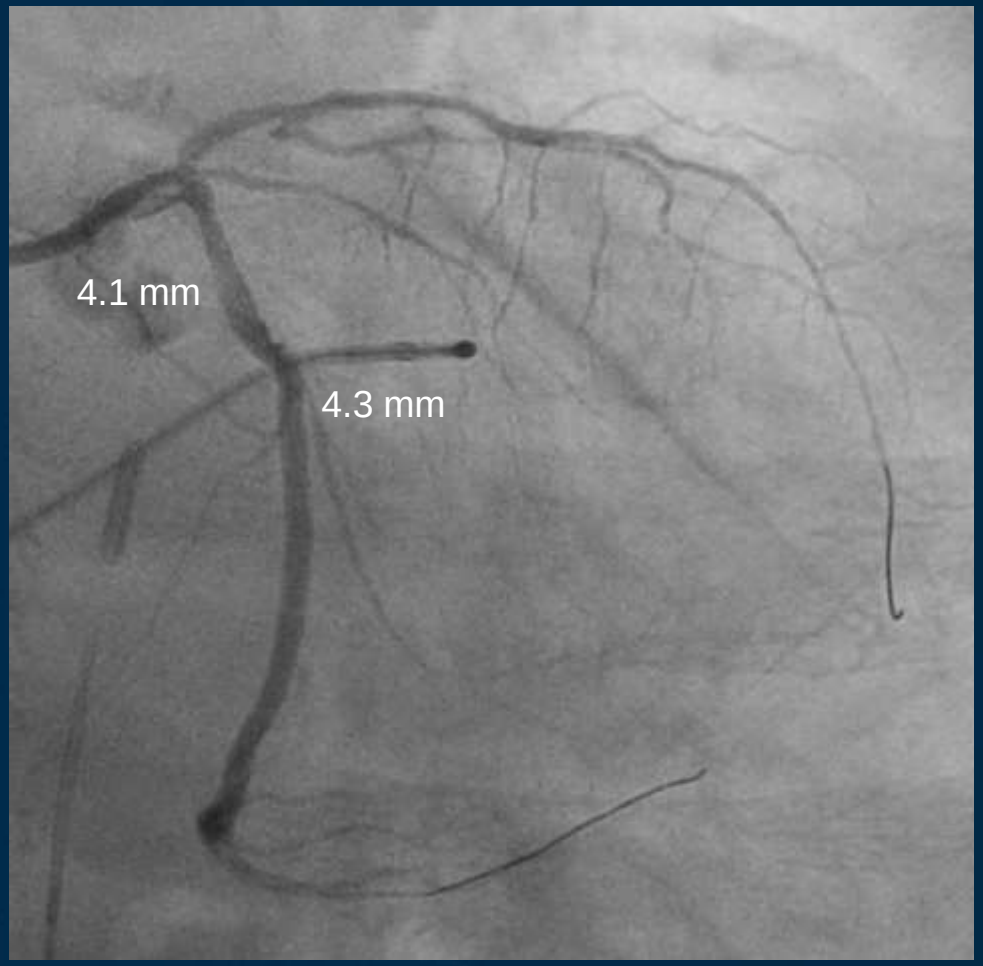


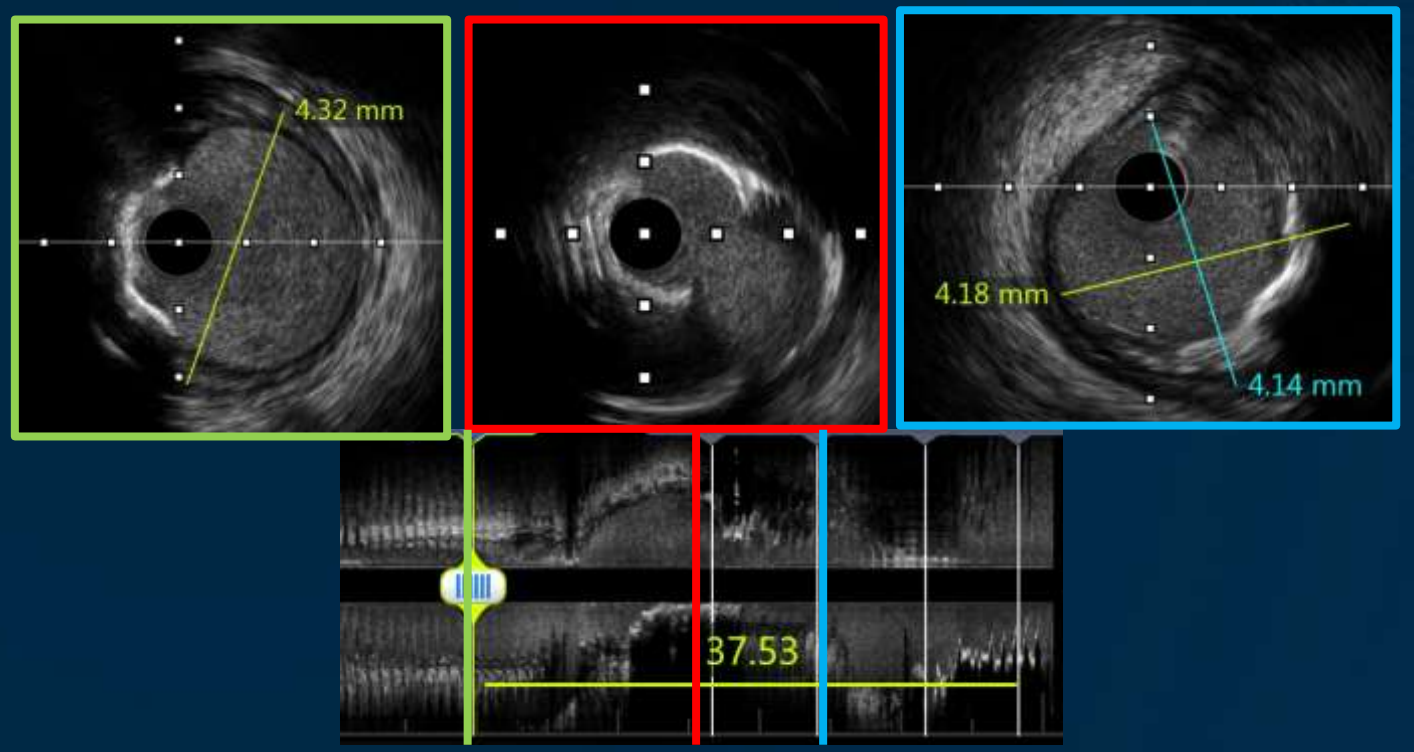






LCx IVUS Re-evaluation





Lesion Preparation – RotaCut

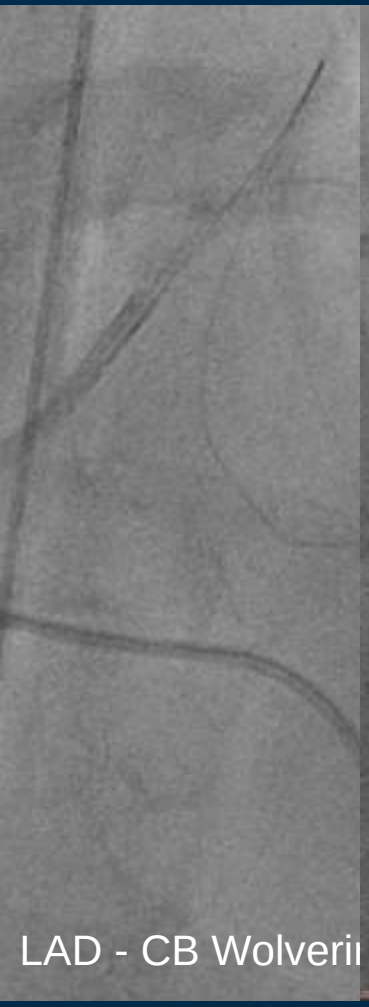
LAD - CB Wolveri

LCx - CB Wolverine 2.5/1

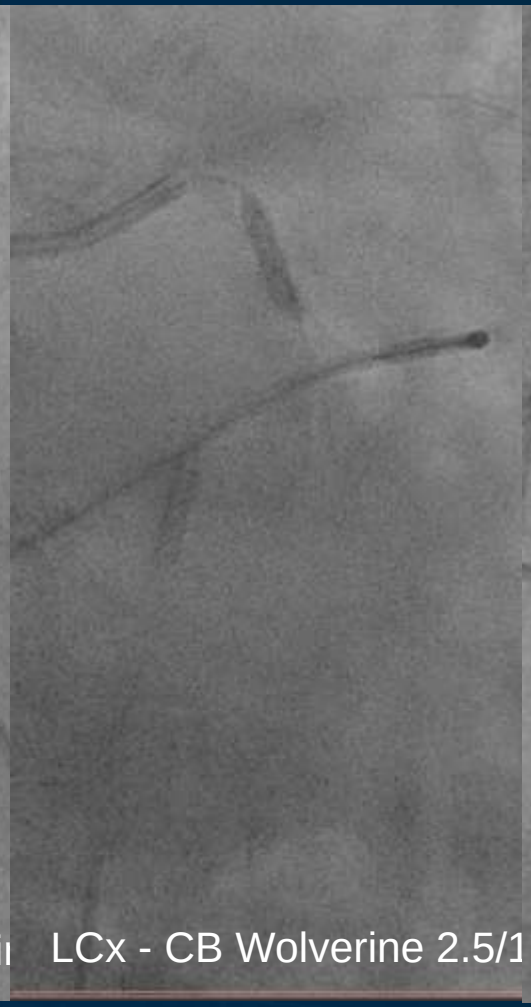
LAD - CB Wolverine 3.25/15 r

LCx CB Wolverine 3.25/15 mm (12 atm)

Lesion Preparation – RotaCut

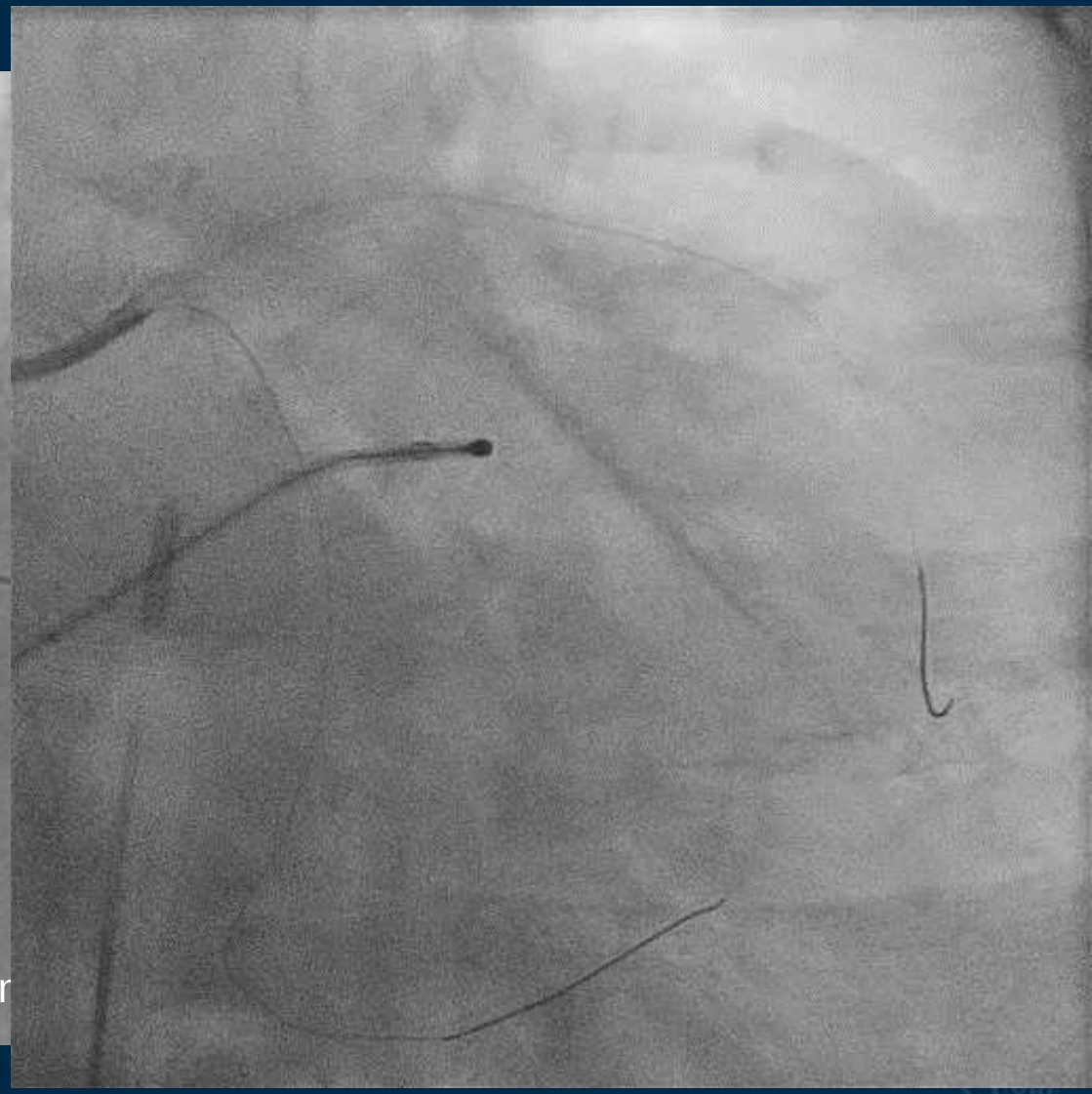


LAD - CB Wolveri



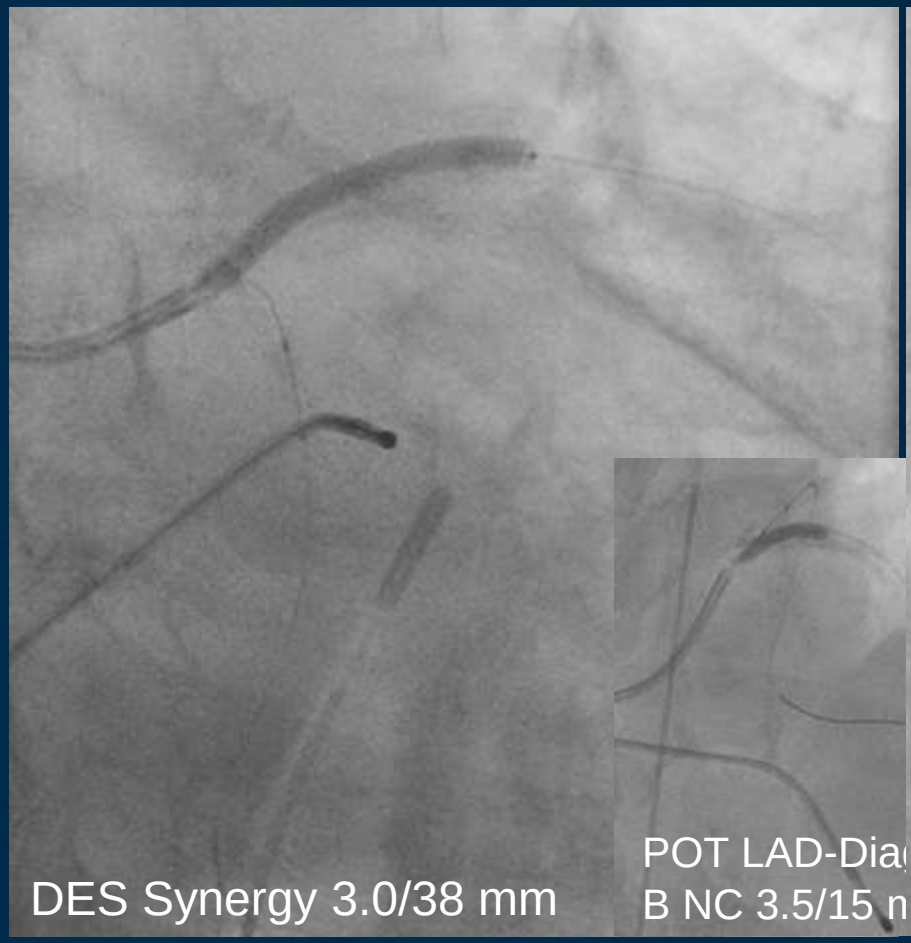
LCx - CB Wolverine 2.5/1

LAD - CB Wolverine 3.25/15 r



DK Crush (1)

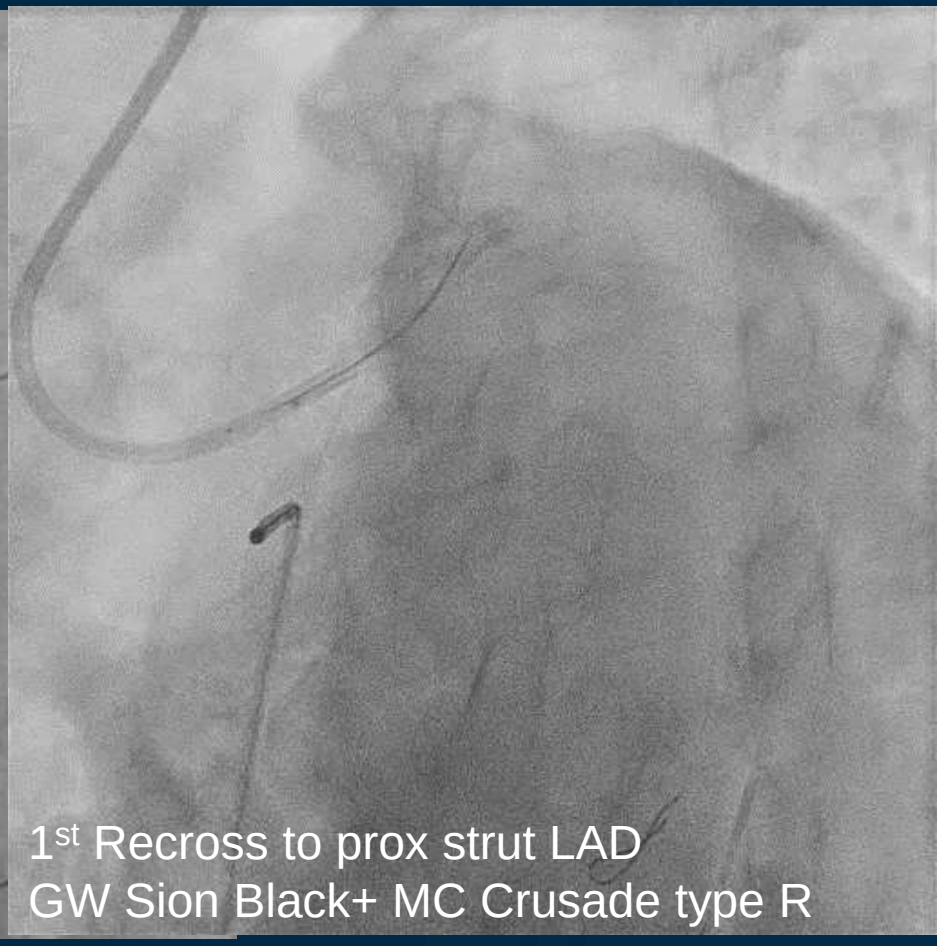
LM-LCx as Main vessel ; LAD as Side branch



DES Synergy 3.0/38 mm

POT LAD-Dia(
B NC 3.5/15 n

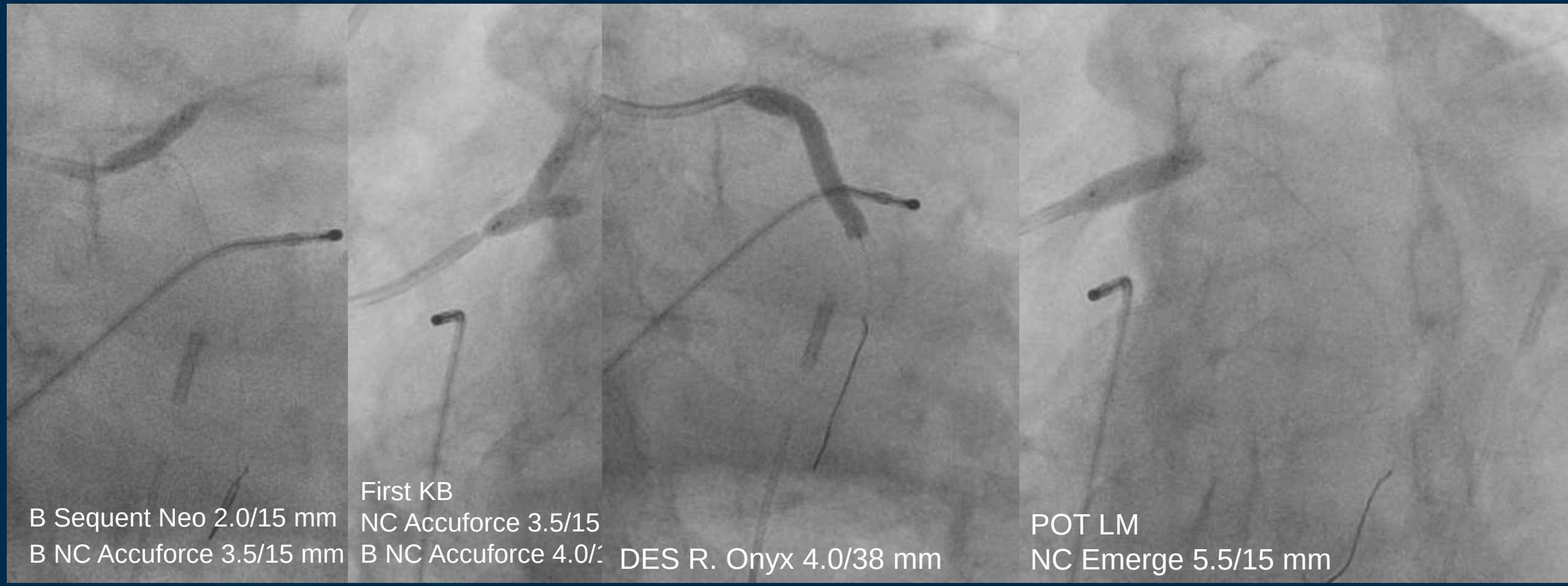
Crush LM-LAD
B NC Accuforce 4.0/12 mm



1st Recross to prox strut LAD
GW Sion Black+ MC Crusade type R

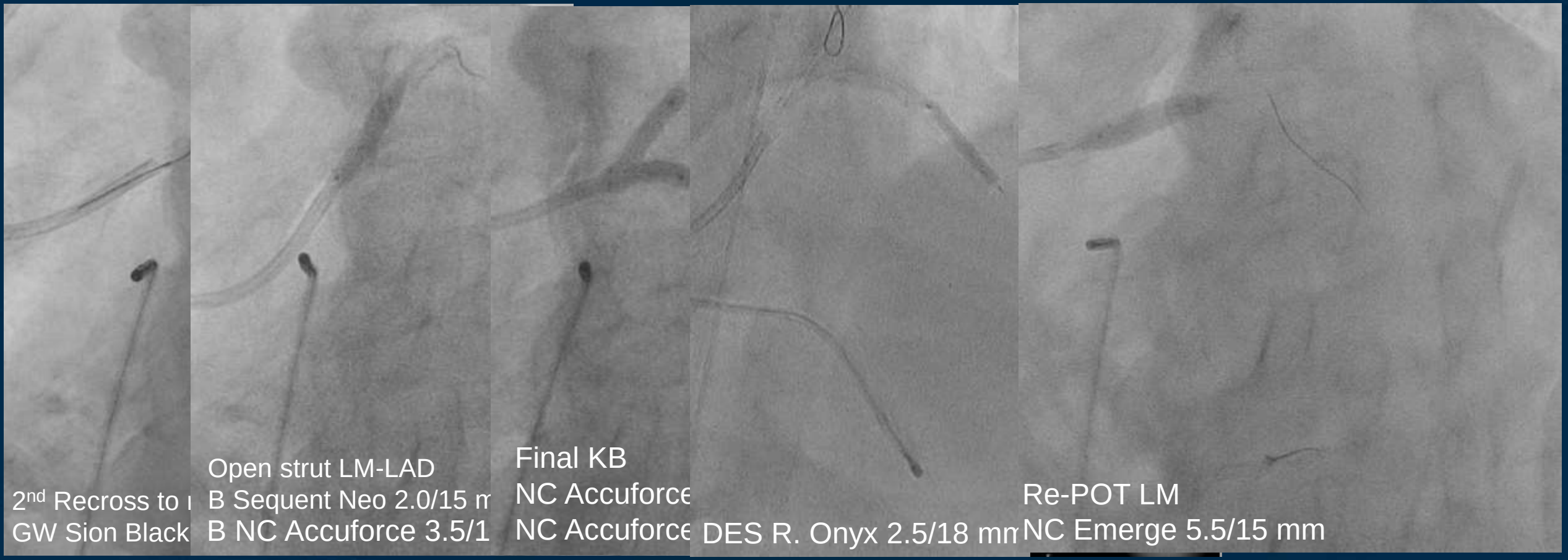
DK Crush (2)

- Open strut LM-LAD + First KB

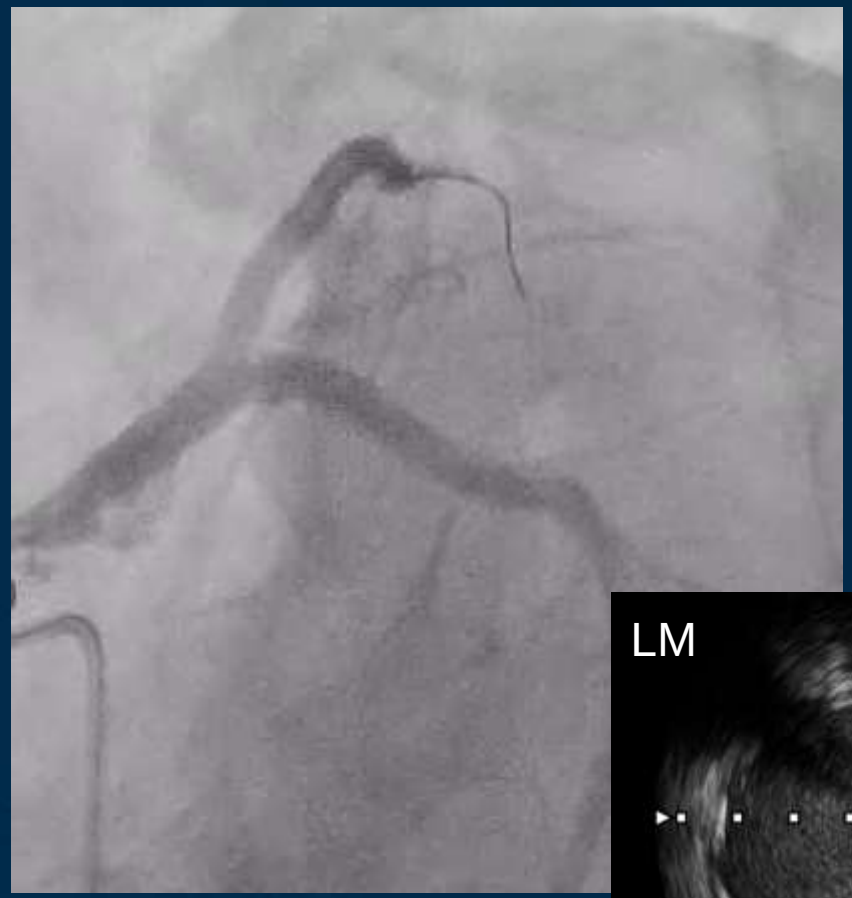


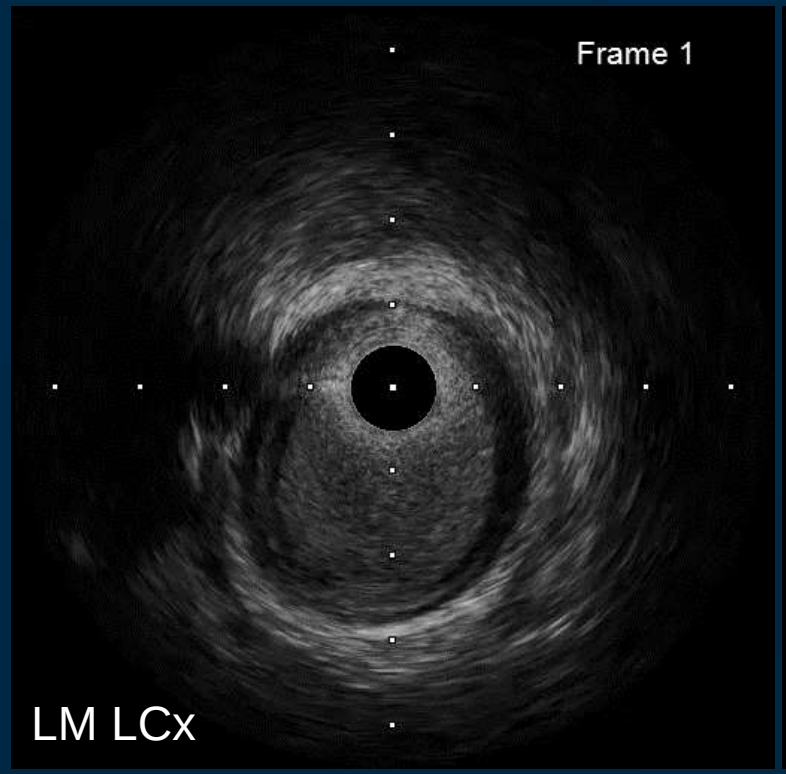
DK Crush (3)

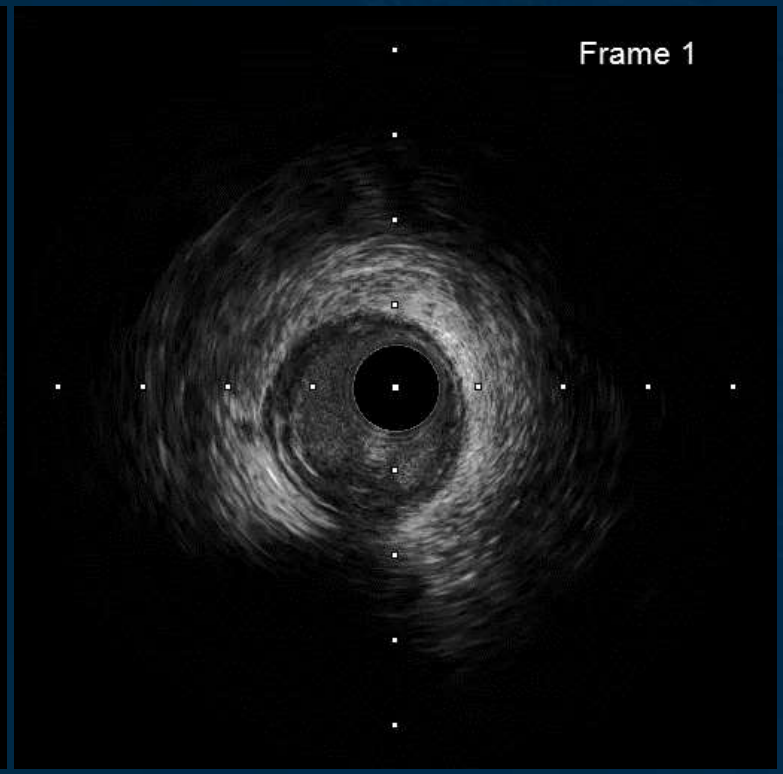
- 2nd recrossing + Final KB

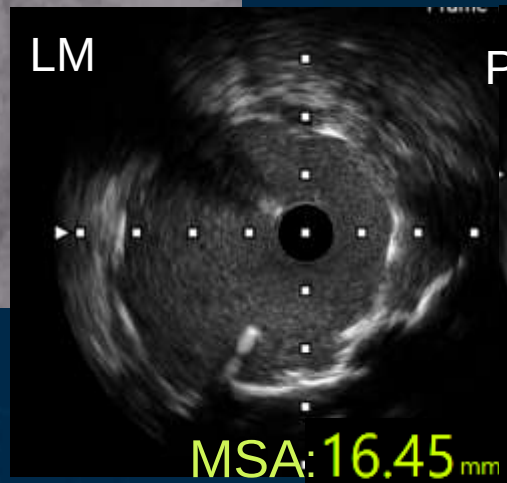


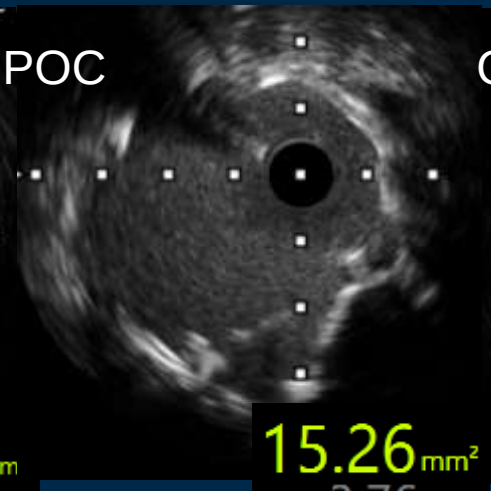
IVUS Post PCI

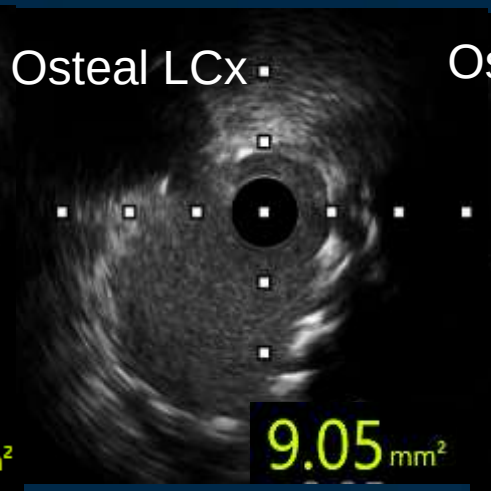


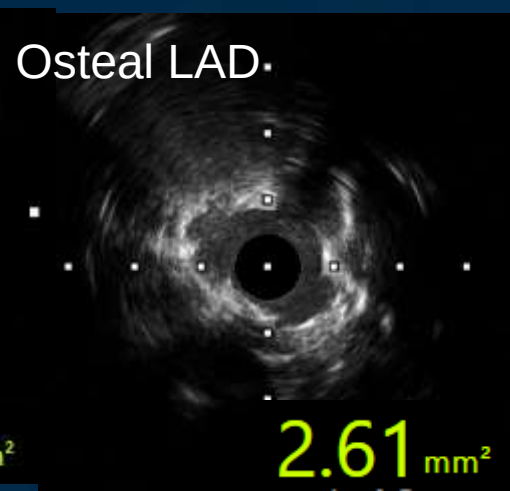






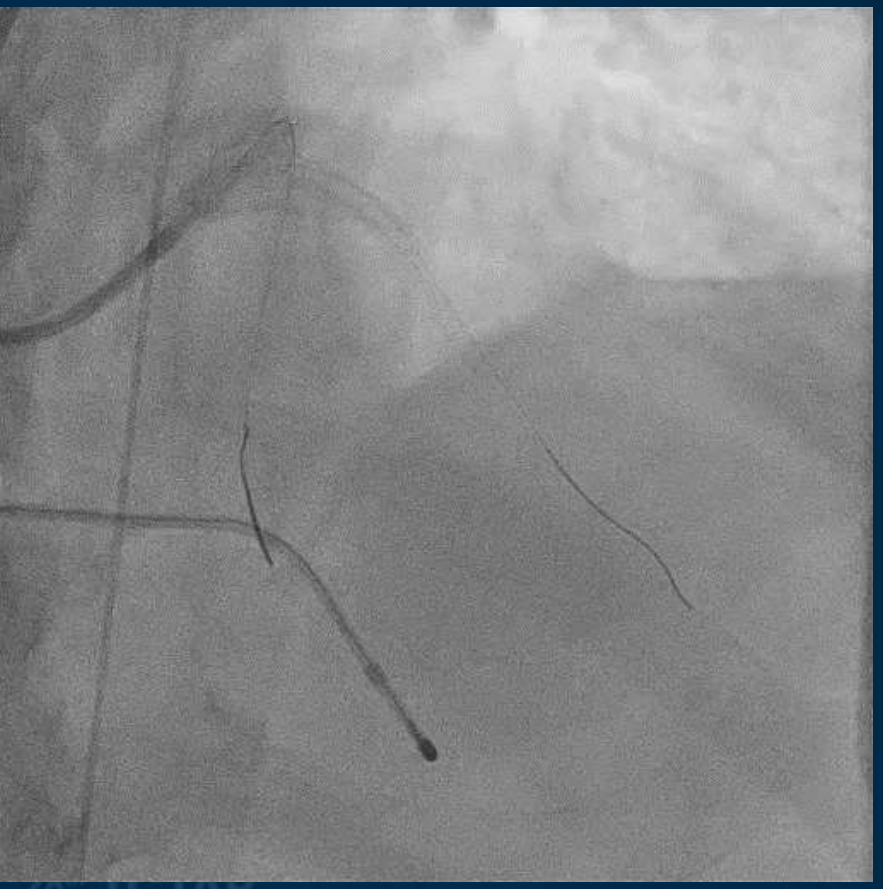


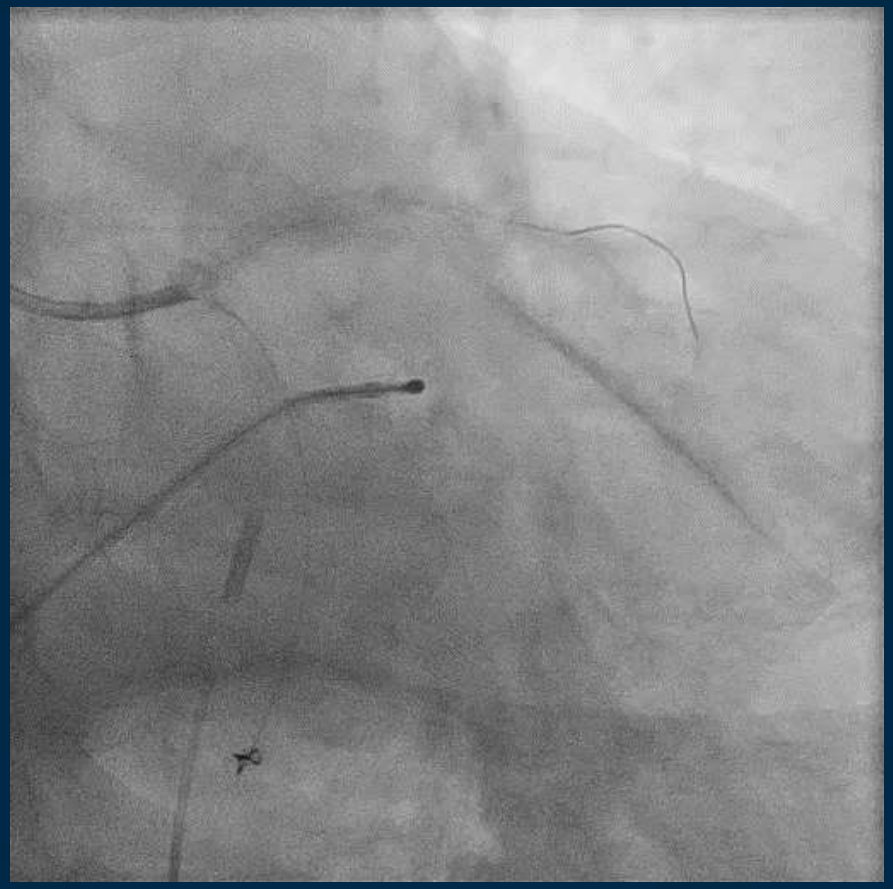


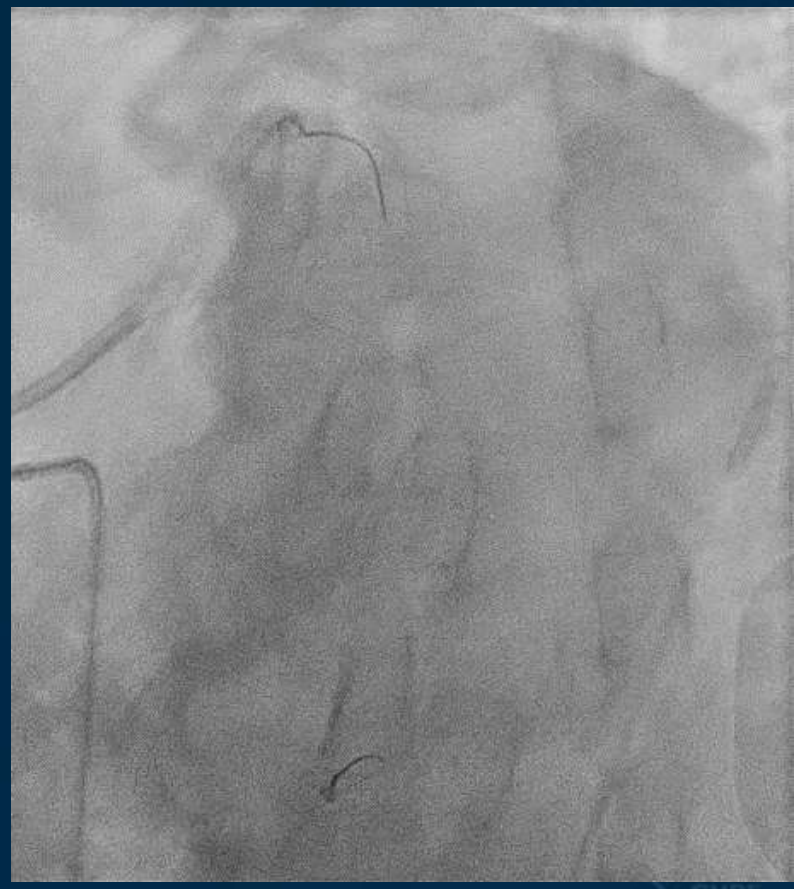


Final Result

LM 2-stent strategy DK Crush, with ROVUS + TPM + IABP







Summary

- Critical Heavily Calcified in Unprotected LM
  - IABP to reduce ischemic burden
  - Distal radial access ➔ more comfortable for complex case
  - Temporary pacemaker during rotablation in LCA may needed
  - 2-stent strategy DK Crush for complex LM lesion
- Good lesion preparation before stenting is compulsory
  - Rota-Cut technique
- HBR
  - Good Lesion preparation
  - Intravascular imaging
  - HBR dedicated stent