

TTT Session @ TCTAP 2016

April 26, 2016 6:00 PM - 8:00 PM

CTO Theater, Level 1

Imaging and Physiology: How Did It Change My Strategy in Complex PCI?

OCT/IVUS-Guided Rotational Atherectomy

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Cardiovascular Center, Chi-Mei Hospital, Liouying.

柳營奇美醫院 心血管中心

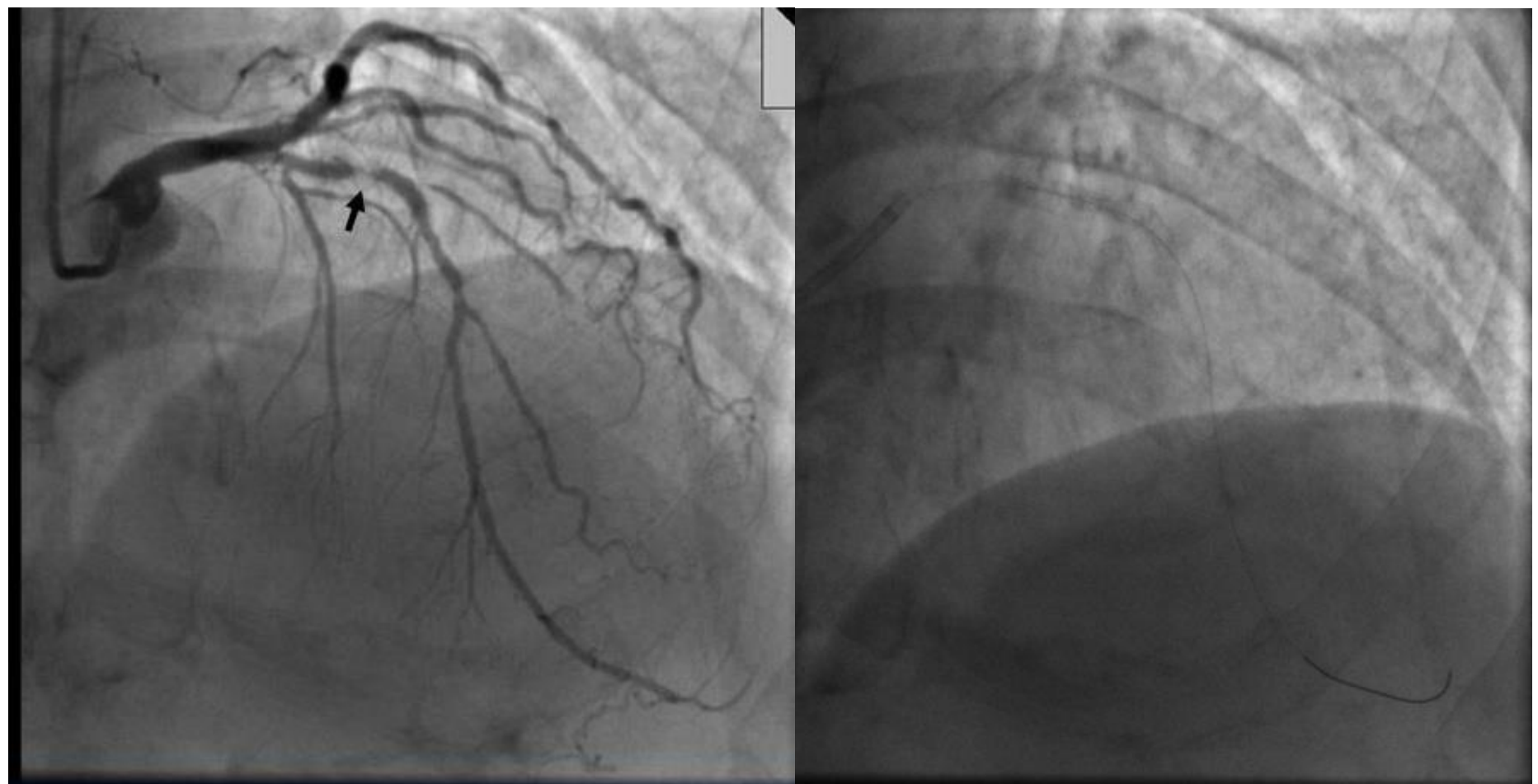
Speaker's name: Po-Ming Ku

I do not have any potential conflict of interest

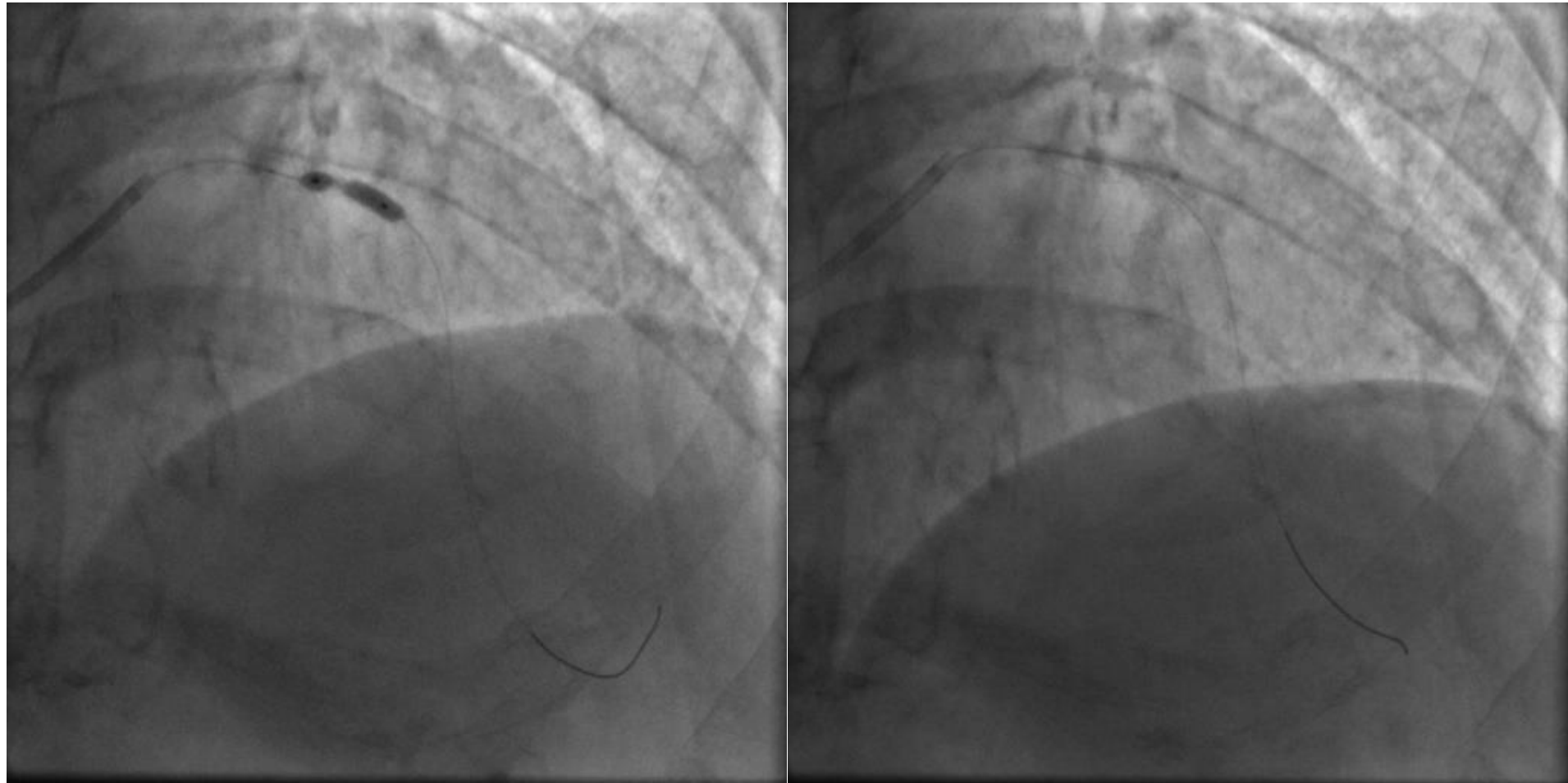
Two questions **after** rotational atherectomy

- Enough debulking for calcification? → OCT/IVUS guided
- Enough supporting for stenting?

66F, ACS, max Tn-I: 6.8 ng/ml
DM on H/D, dyslipidemia,
PES on LAD at another hospital 1 month ago



Quantum 3.25/12 mm, 18 atm

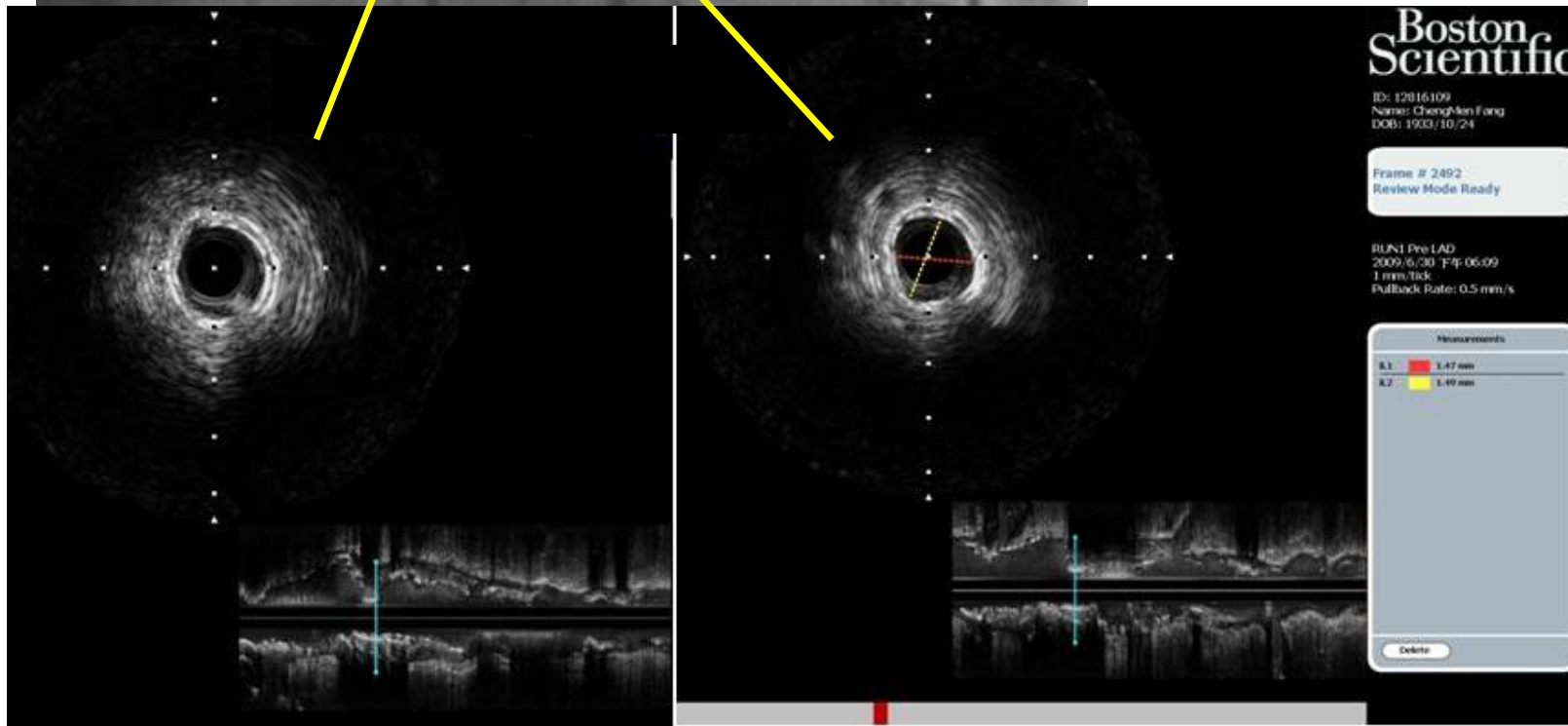


IVUS



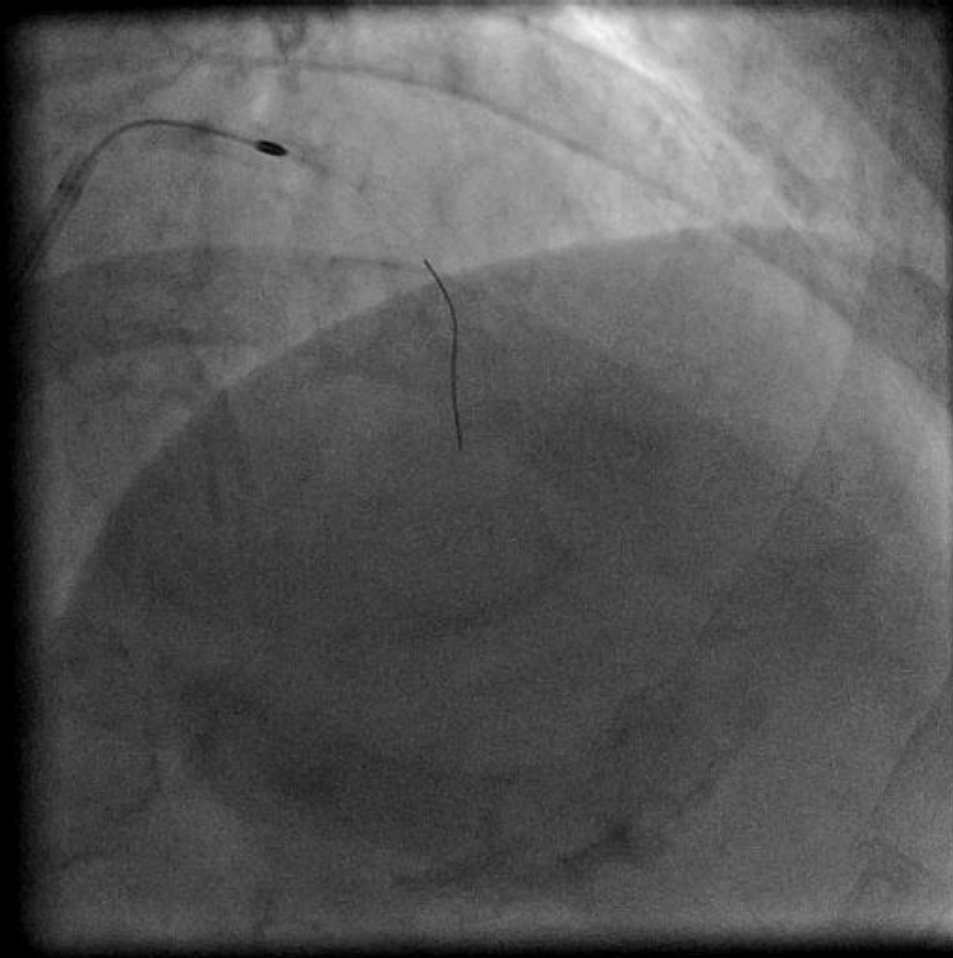
2 layers of ring, the inner one was stent and the outer one was calcification.

The most narrow part was 1.47mm x 1.49mm in diameter

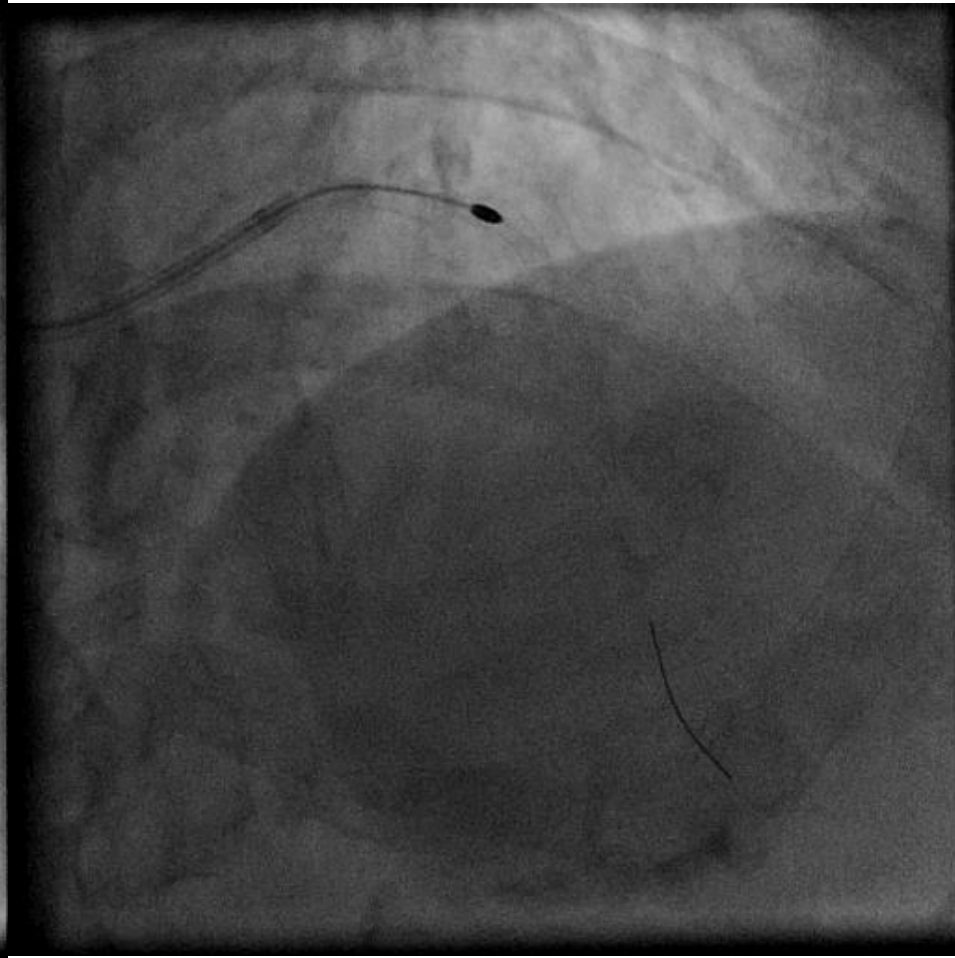


Taiwan. 2009

Rotational atherectomy

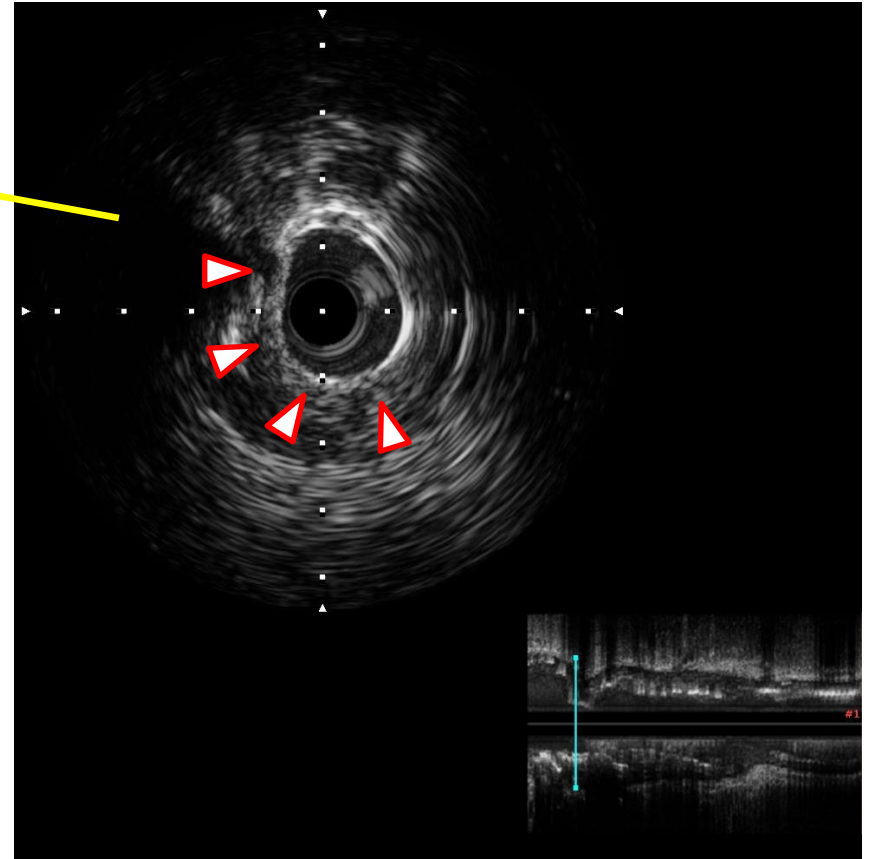
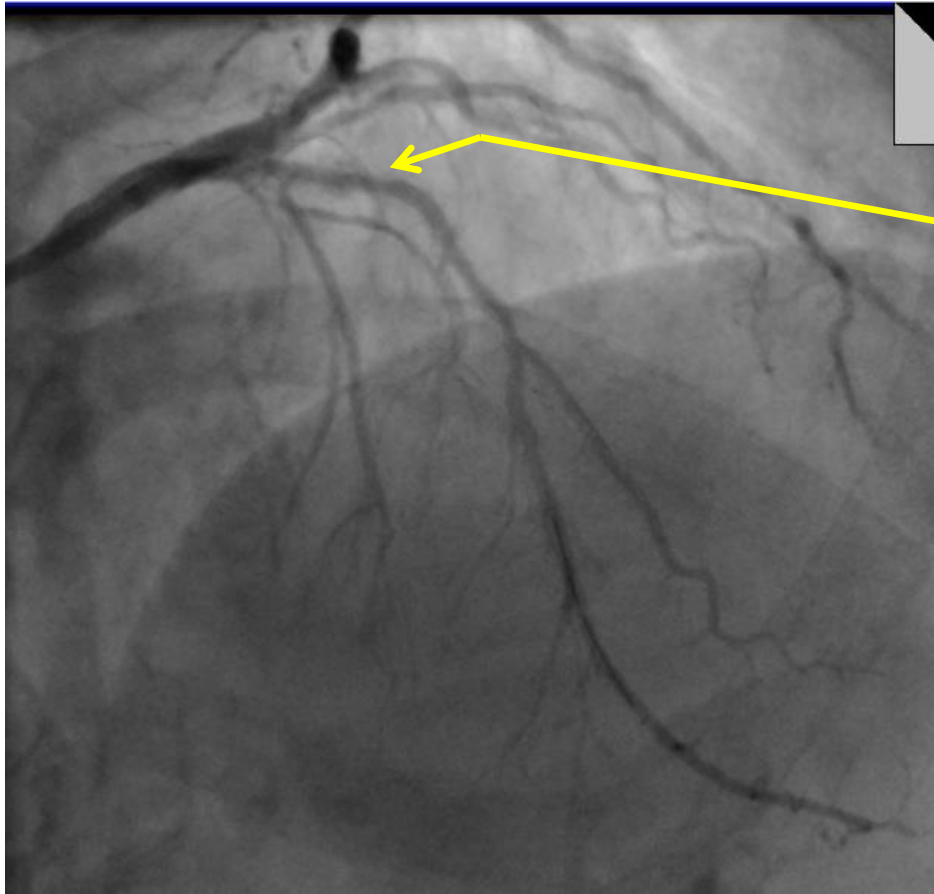


1.5mm burr, 150000 rpm



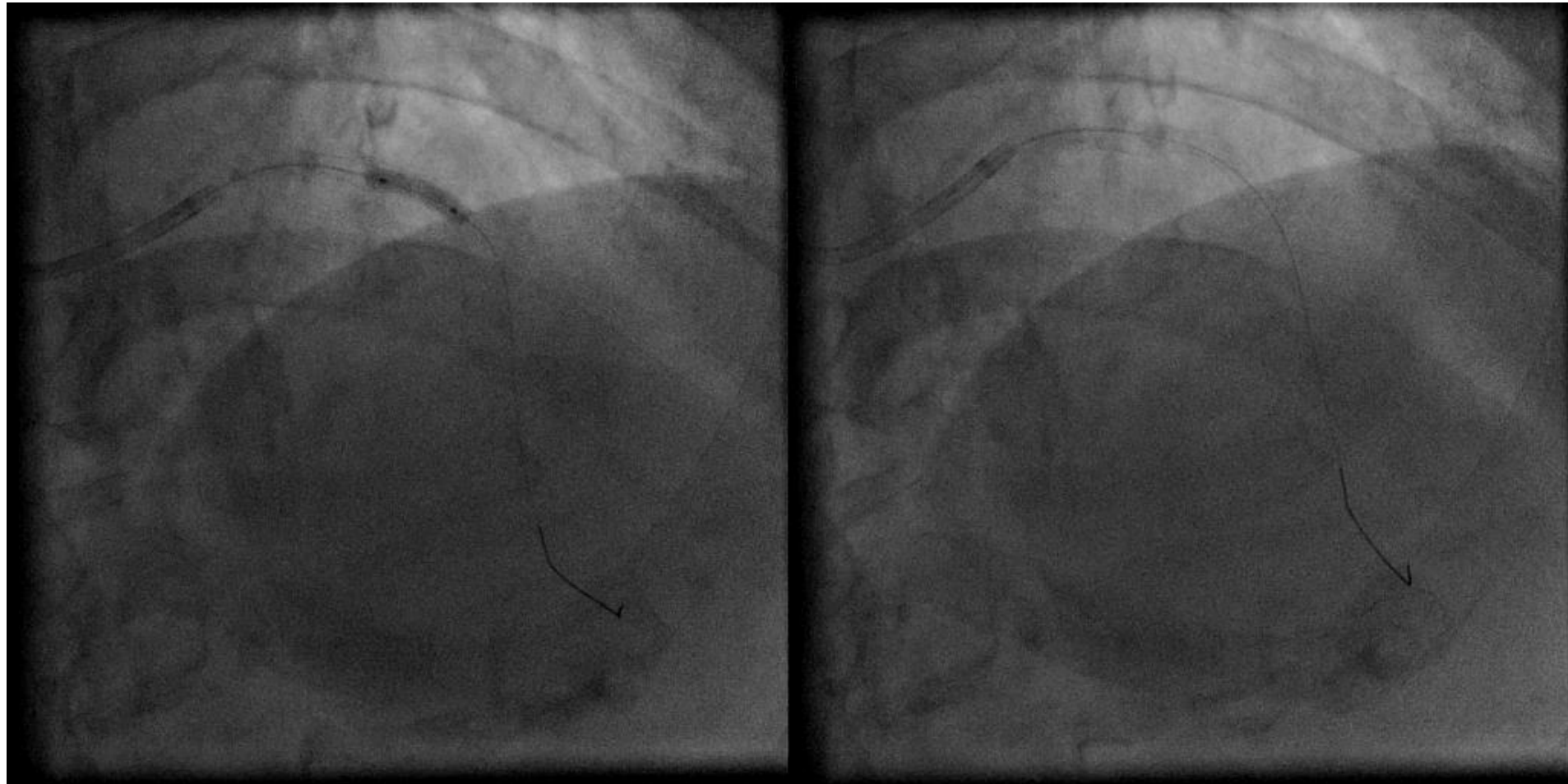
1.75mm burr, 150000 rpm

IVUS after 1.75 mm burr ablation

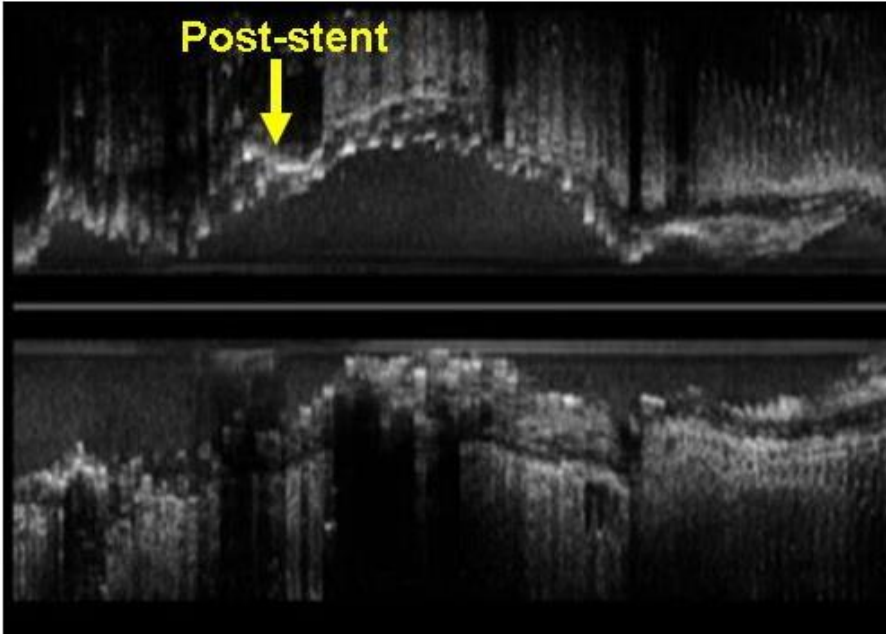
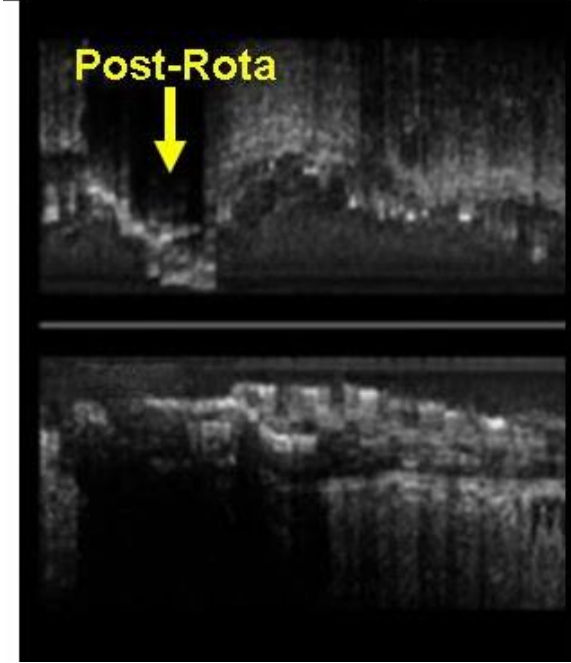
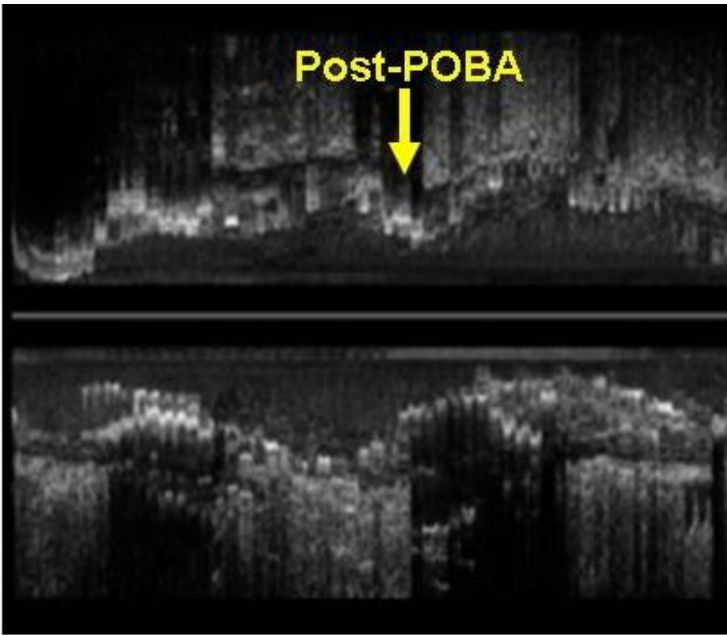
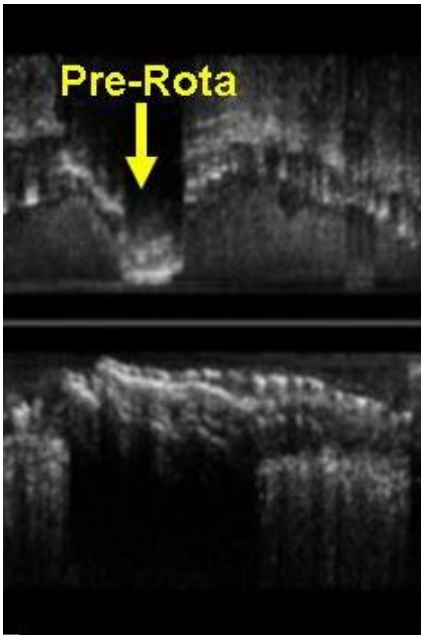


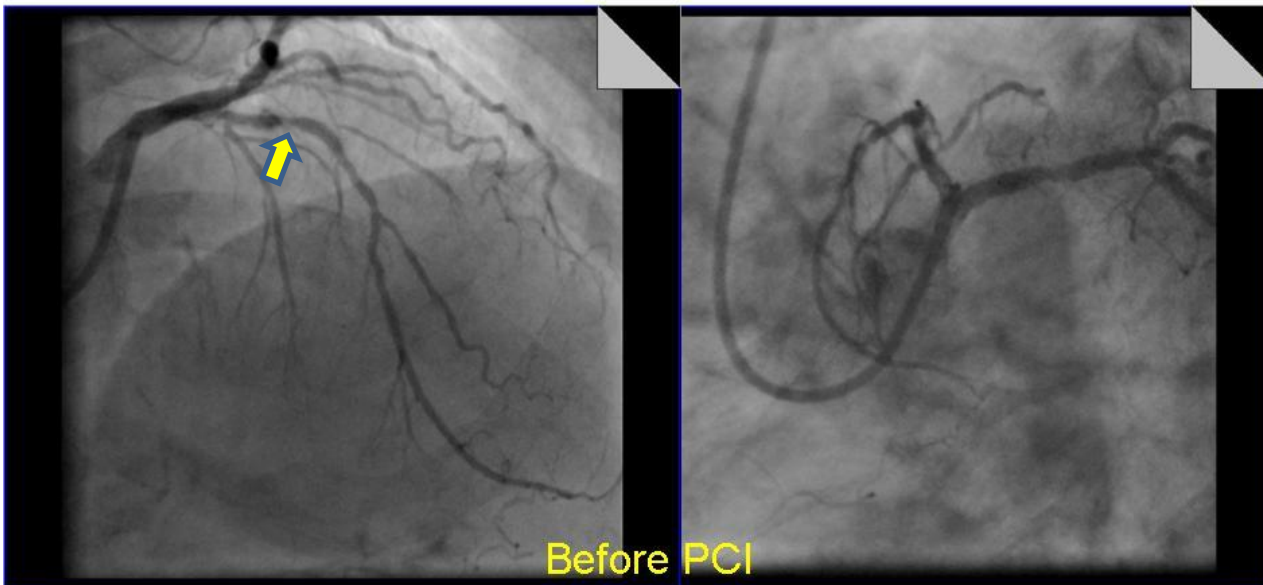
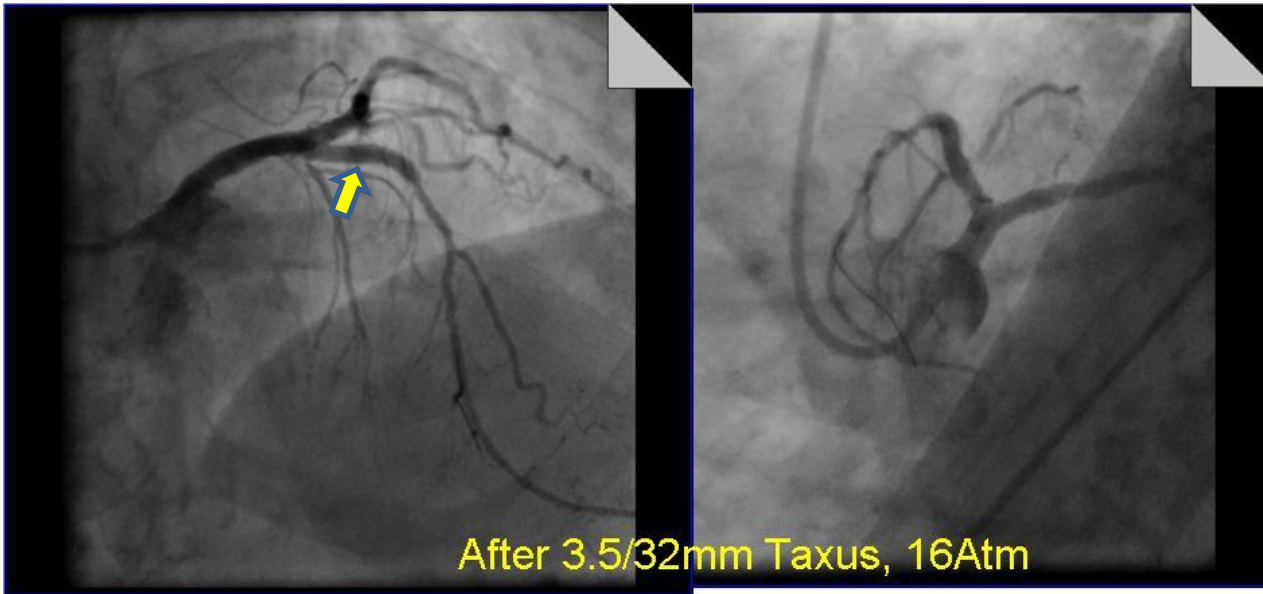
Tainan, Taiwan. 2009

3.0/15 mm Sprinter balloon, 10 atm



Tainan, Taiwan. 2009

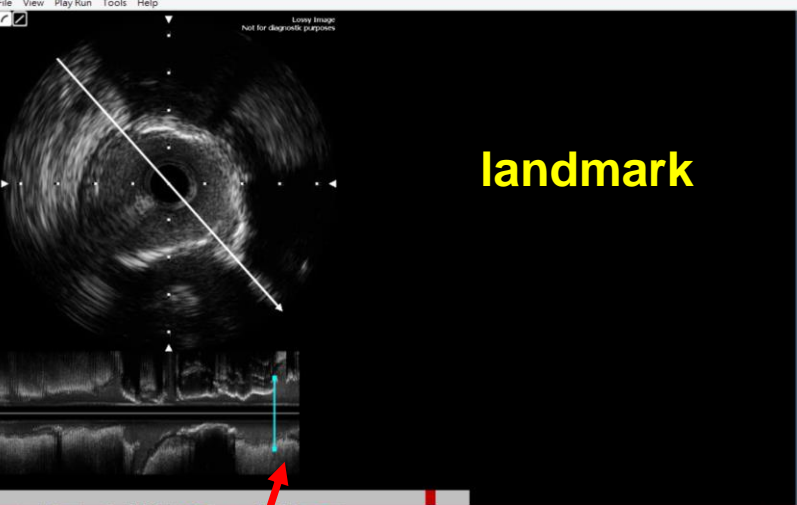




Case 2

IVUS 1st run

IVUS 2nd run



landmark

ID: 53215909
Name:
DOB:

Runlist Print

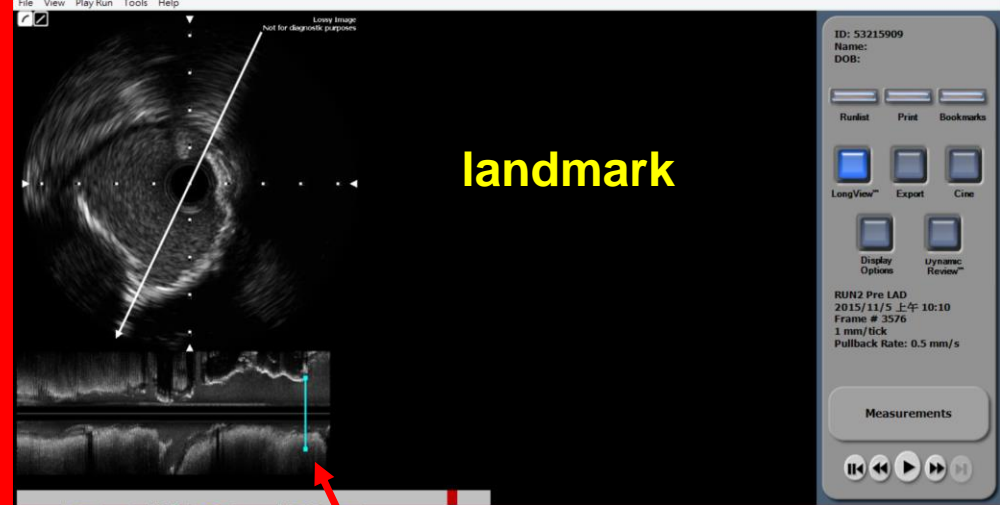
LongView™ Export

Display Options

RUN1 Pre LAD
2015/11/5 上午
Frame # 3450
1 mm/tick
Pullback Rate: 0.5

Measurements

⏪ ⏩



landmark

ID: 53215909
Name:
DOB:

Runlist Print Bookmarks

LongView™ Export Close

Display Options Dynamic Review™

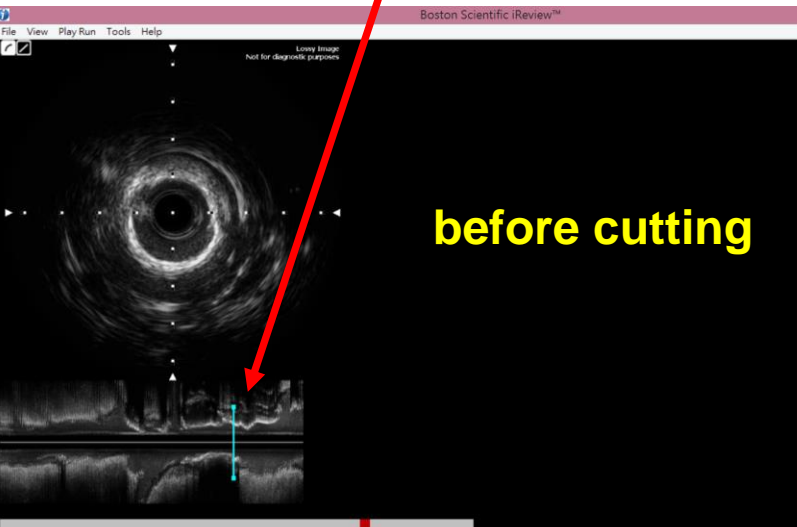
RUN2 Pre LAD
2015/11/5 上午 10:10
Frame # 3576
1 mm/tick
Pullback Rate: 0.5 mm/s

Measurements

⏪ ⏩

$3450 \rightarrow 2898 = 552$

$3576 - 552 \rightarrow 3024$



before cutting

ID: 53215909
Name:
DOB:

Runlist Print

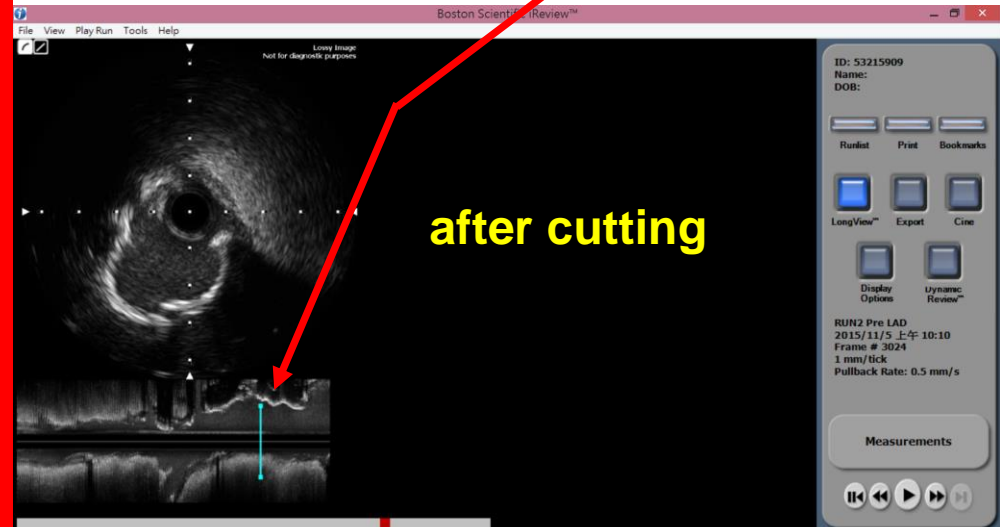
LongView™ Export

Display Options

RUN1 Pre LAD
2015/11/5 上午
Frame # 2898
1 mm/tick
Pullback Rate: 0.5

Measurements

⏪ ⏩



after cutting

ID: 53215909
Name:
DOB:

Runlist Print Bookmarks

LongView™ Export Close

Display Options Dynamic Review™

RUN2 Pre LAD
2015/11/5 上午 10:10
Frame # 3024
1 mm/tick
Pullback Rate: 0.5 mm/s

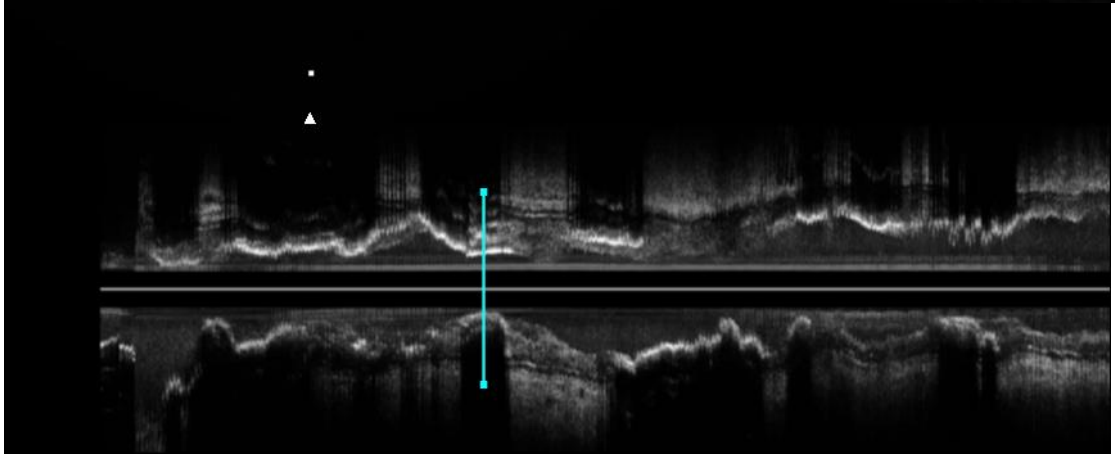
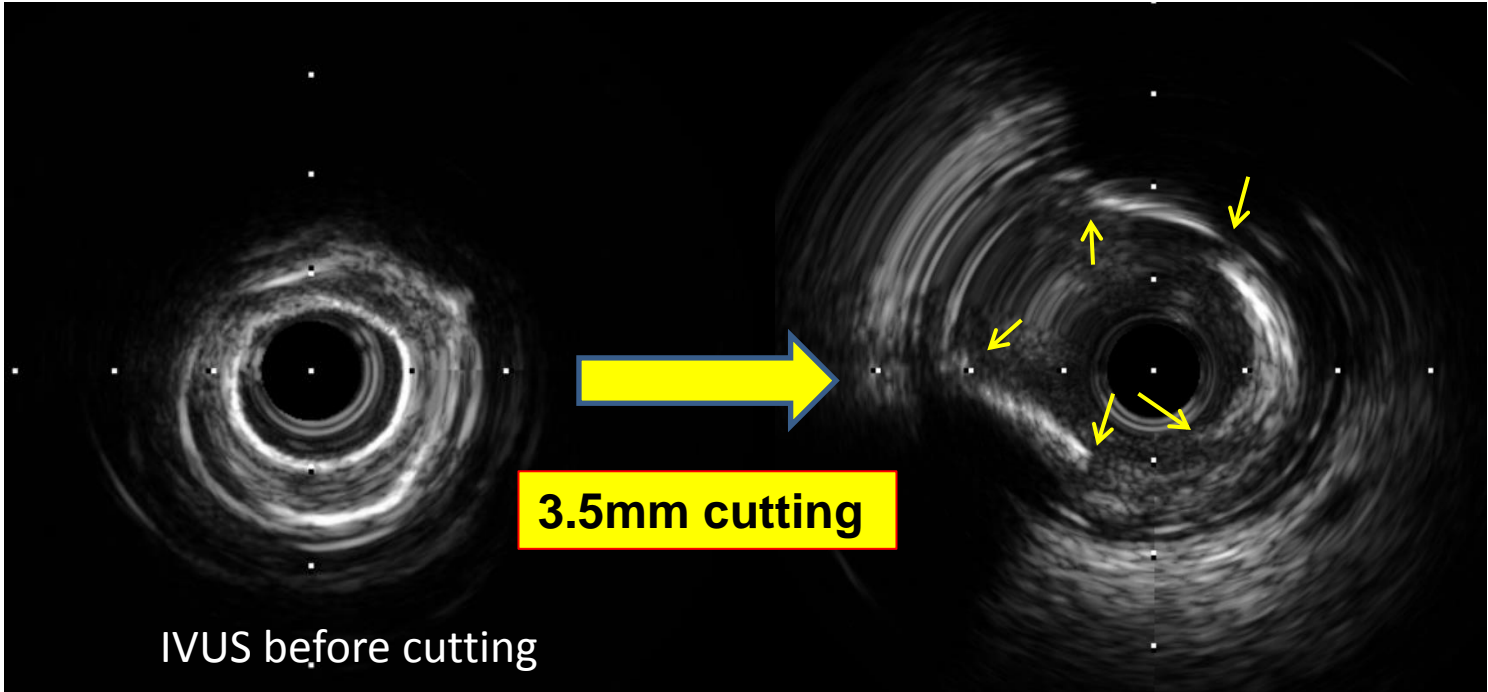
Measurements

⏪ ⏩

IVUS 1st run

IVUS 2nd run

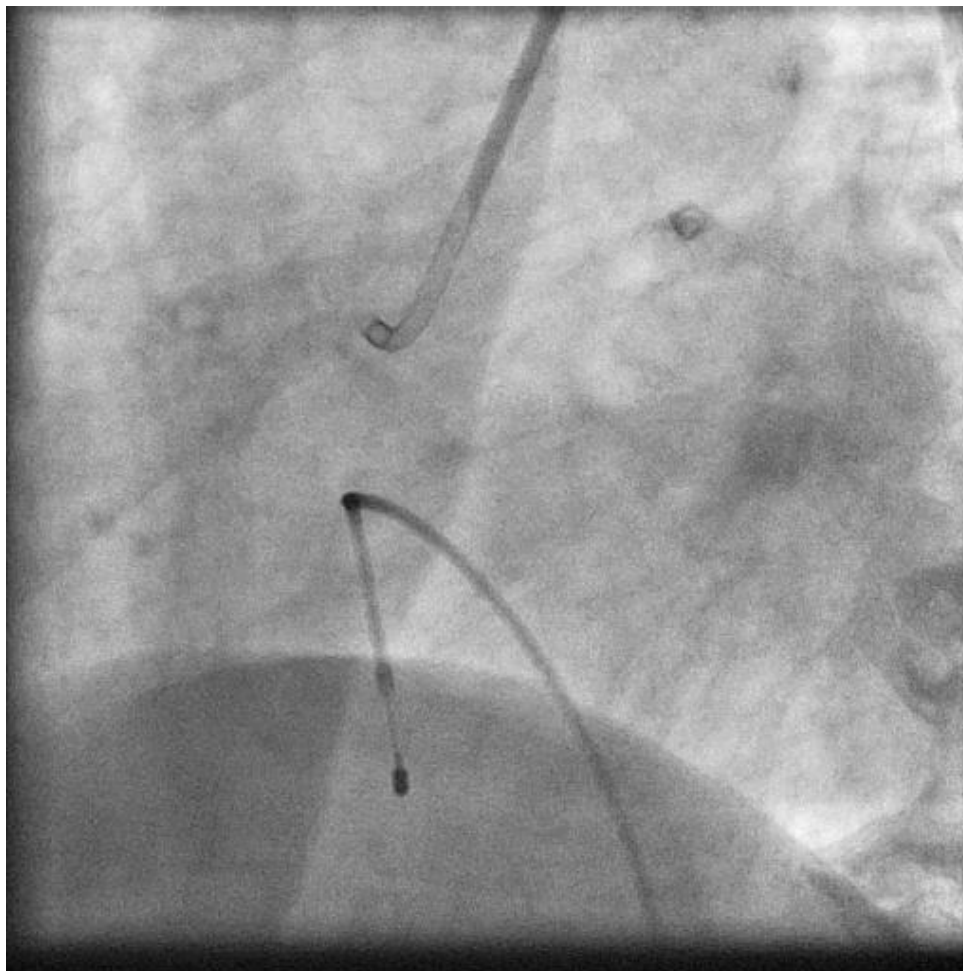
IVUS after 1.5mm ROTA



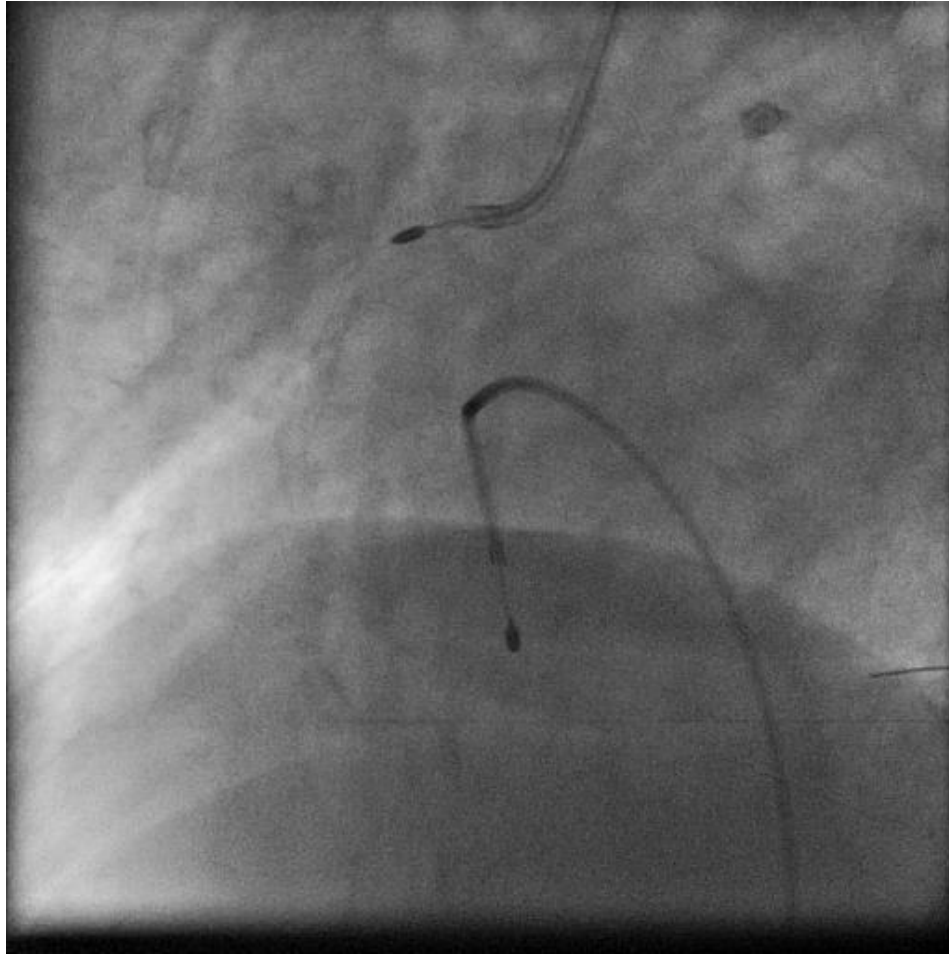
76F, exertional angina, ccs 3

DM on insulin, dyslipidemia, HCVD, Cr: 1.5, eGFR: 48.6

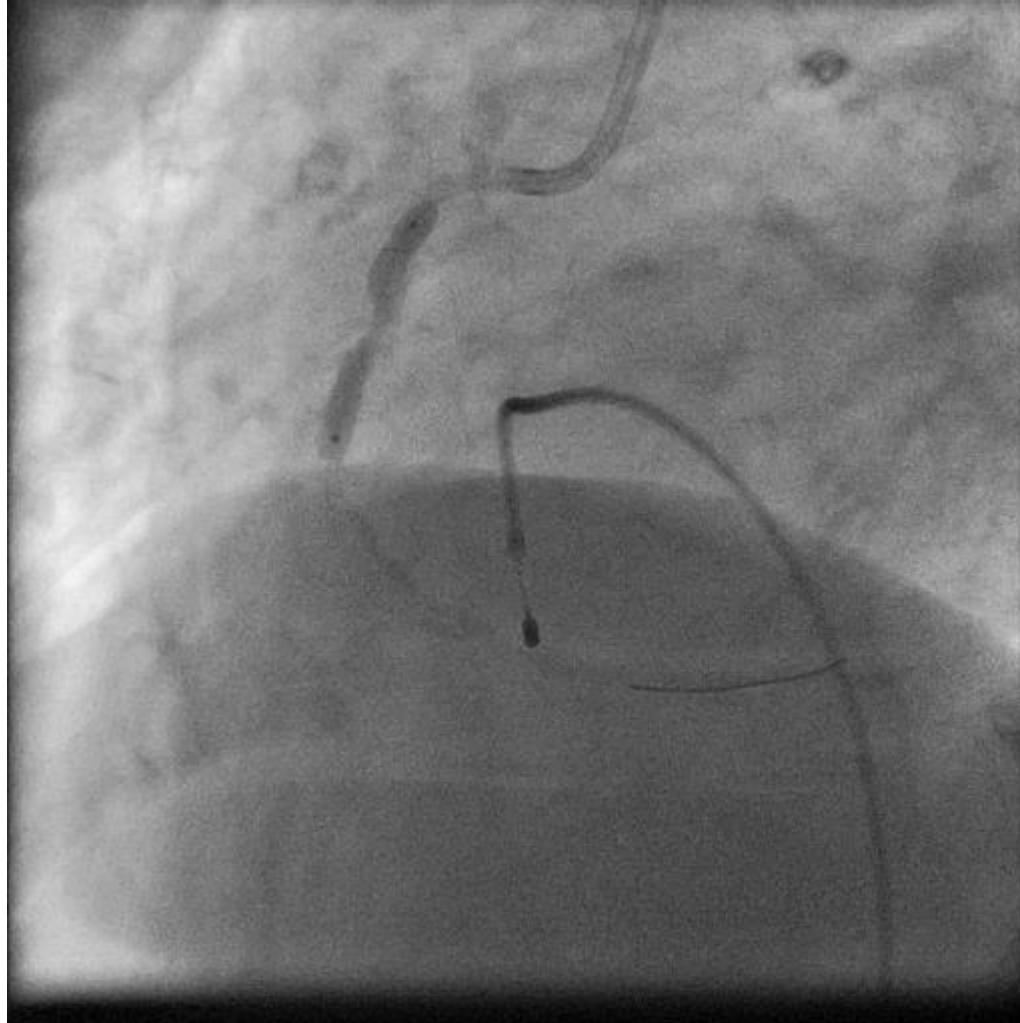
referral for rota-ablation for an undilatable lesion on RCA-M



Transfemoral, 7F, JR4 SHGC, 1.5mm burr, 2 runs
Rota-solution, TPM(+)

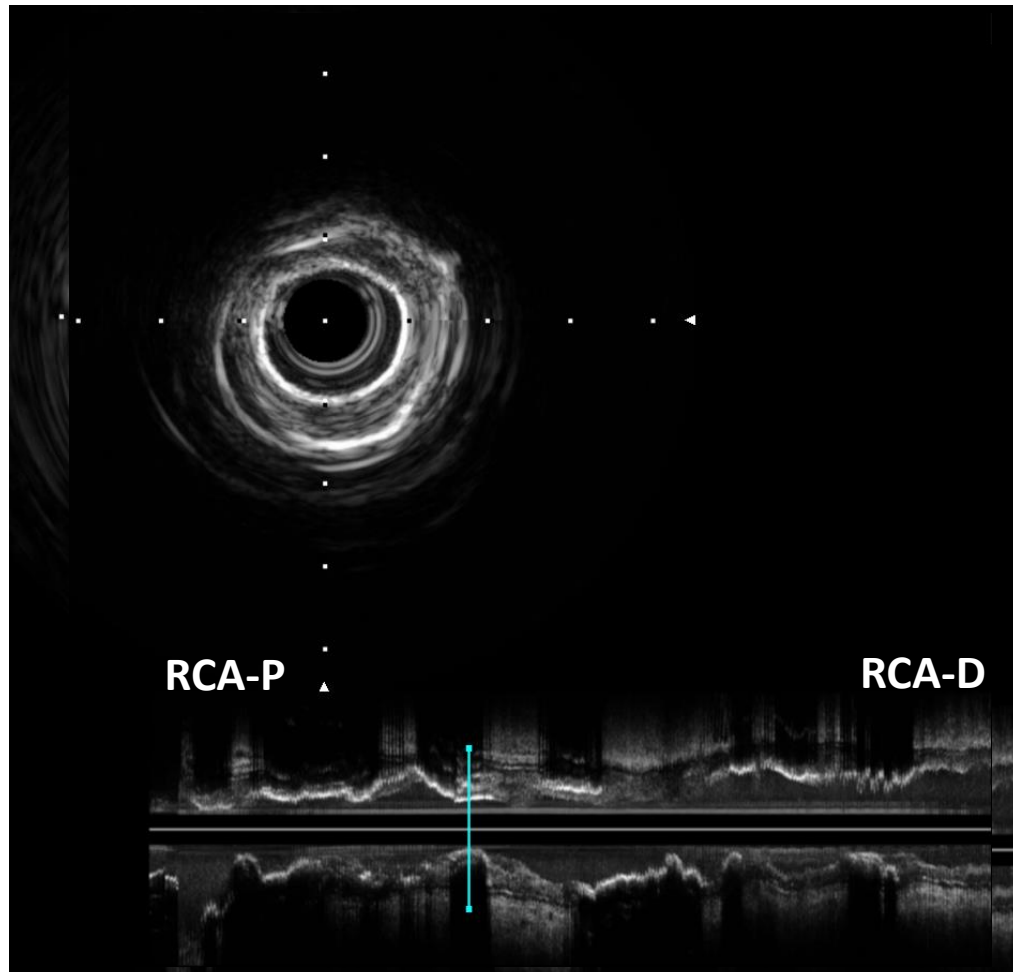


Sprinter 3.5/30 mm balloon, 18 atm

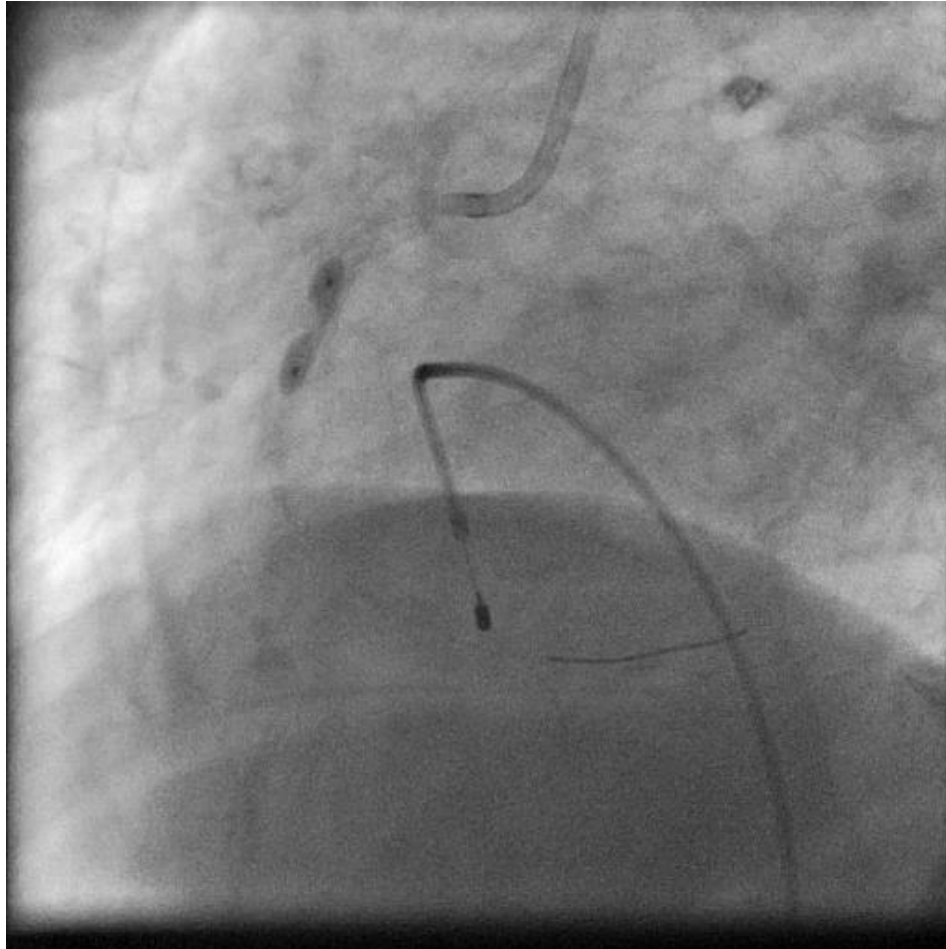


Tainan, Taiwan. 2012

IVUS after ablation with 1.5mm burr

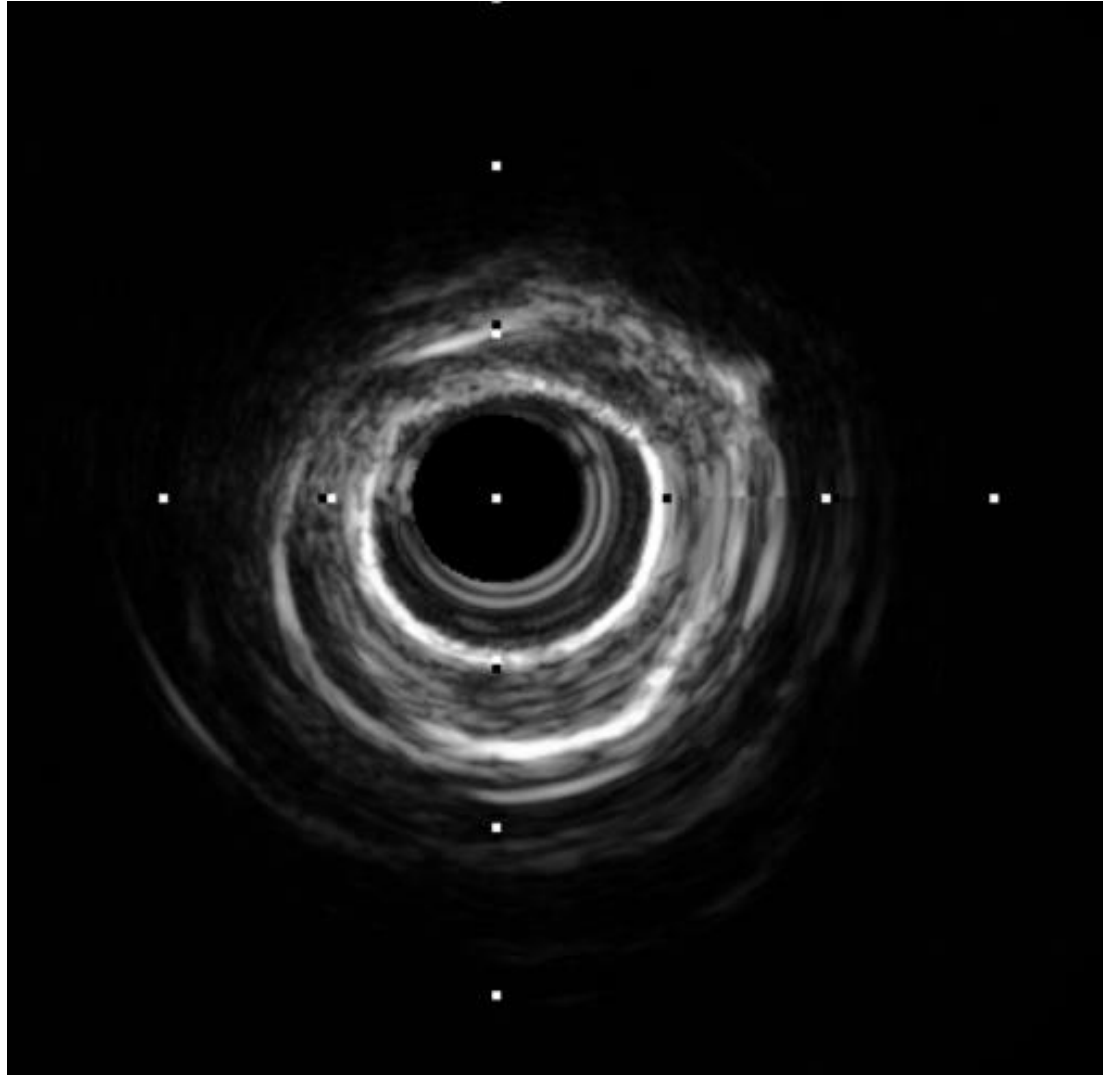


3.5/10 mm cutting balloon

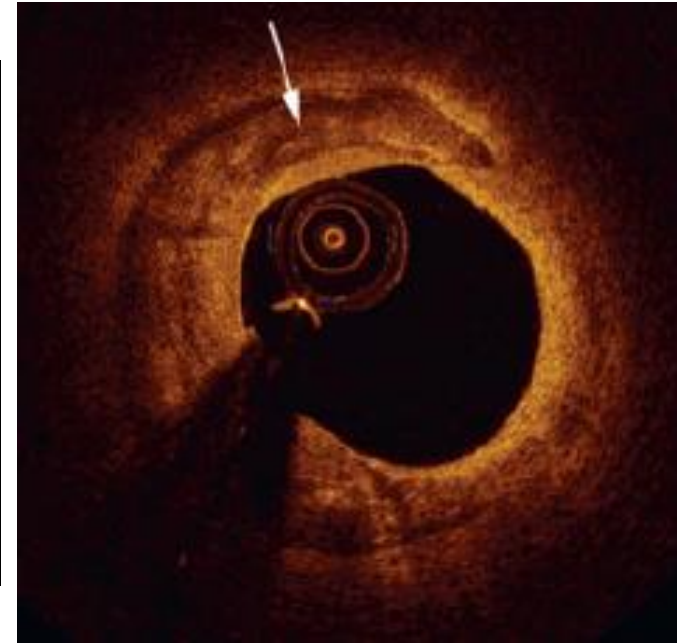
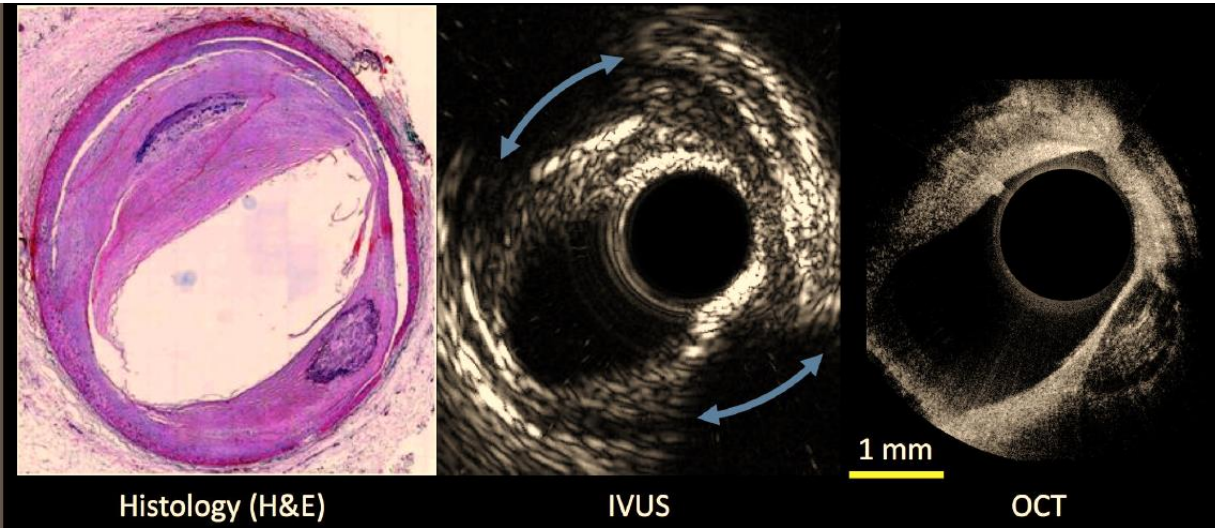


18 atm

? thickness of calcified ring by **IVUS** after
Rota-ablation



Assessment of de-bulking effect for calcified lesions



How the calcified lesion break?

Calcium $<0.7\text{mm}$ and $>210^\circ$



→ Ballooning

Calcium $>0.7\text{mm}$ or $<210^\circ$

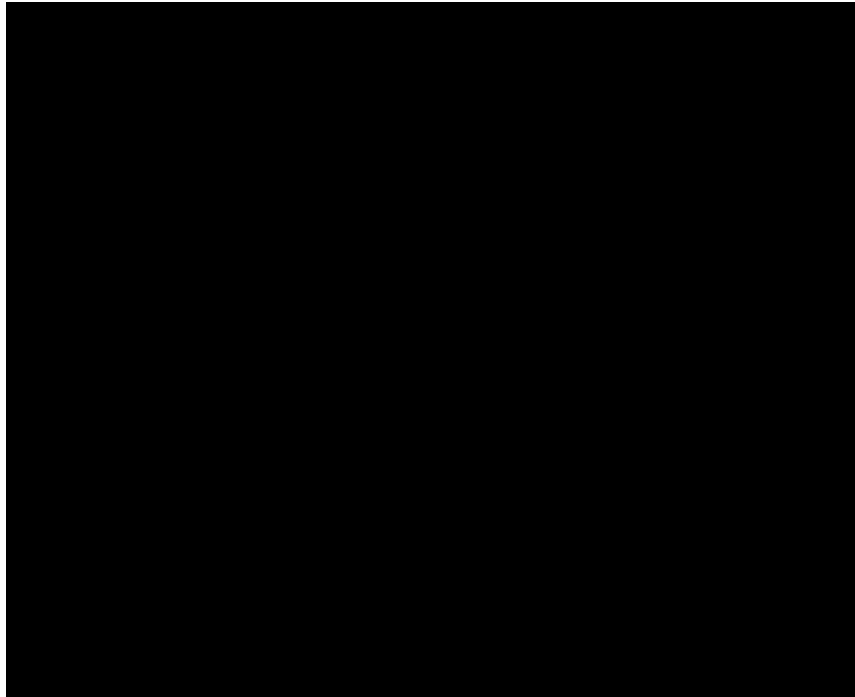
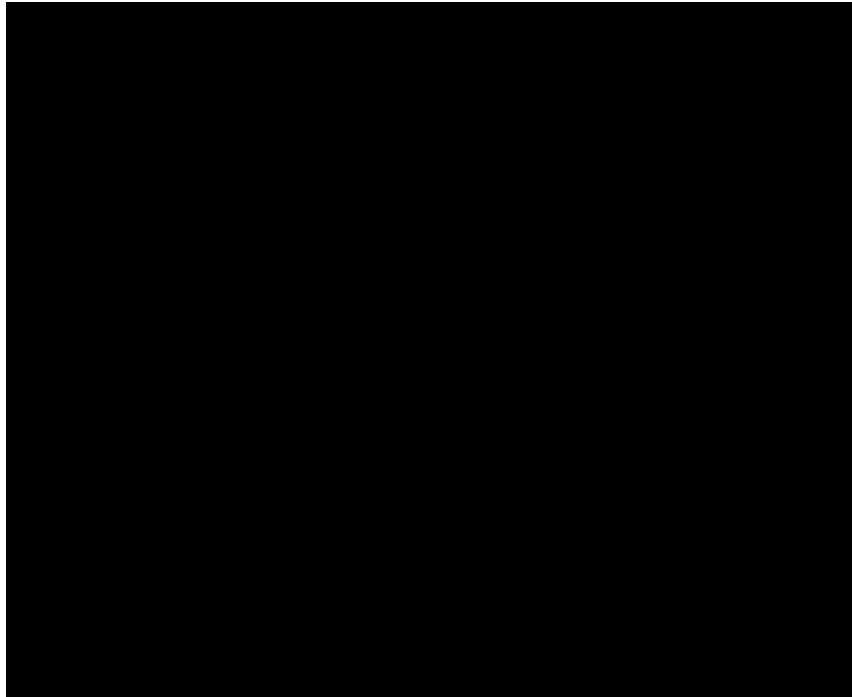


→ Rotational atherectomy

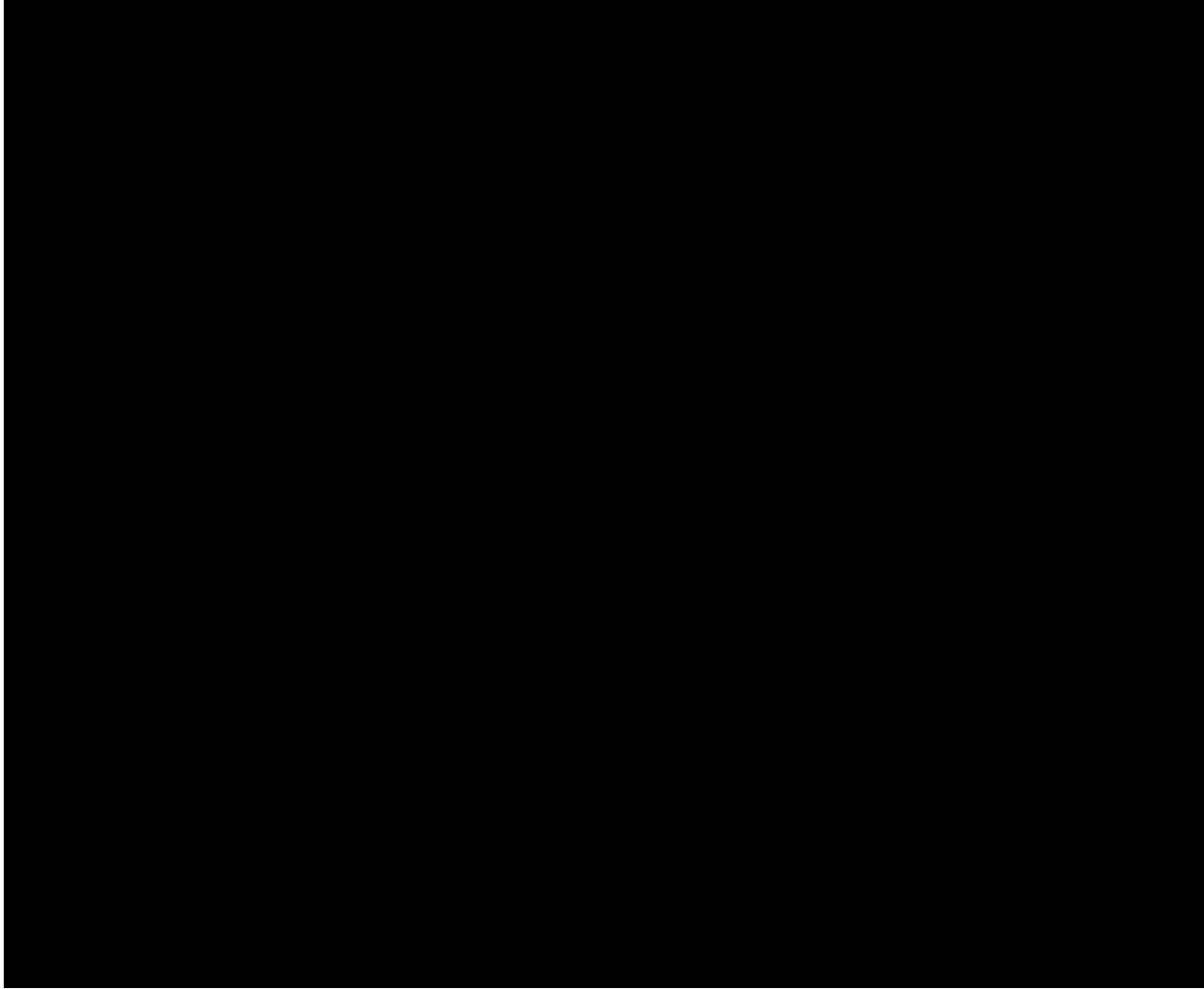
78F, typical angina for 4 mons

SYNTAX score: 28

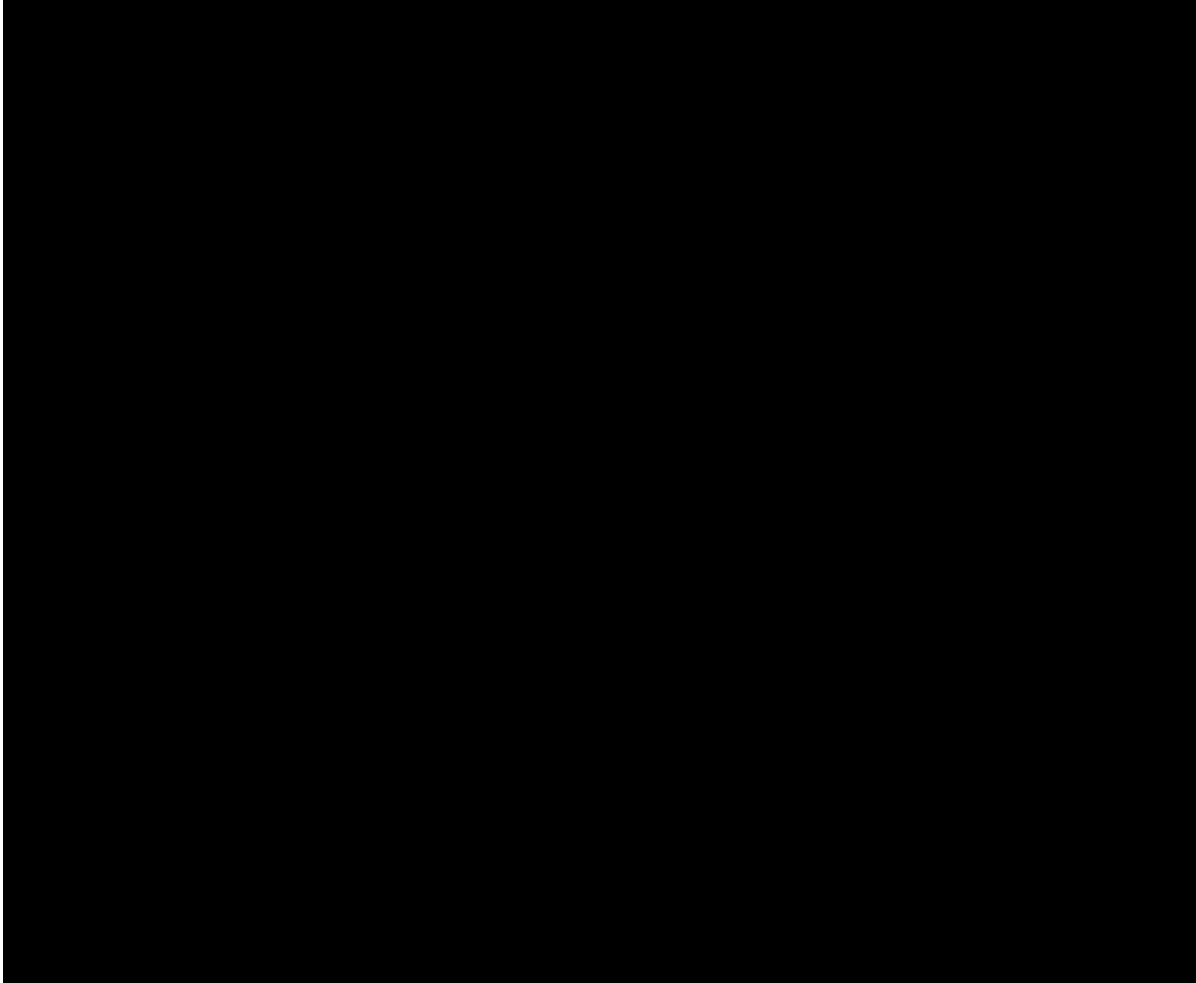
Tl scan: ant wall ischemia, DM, LVEF = 68%



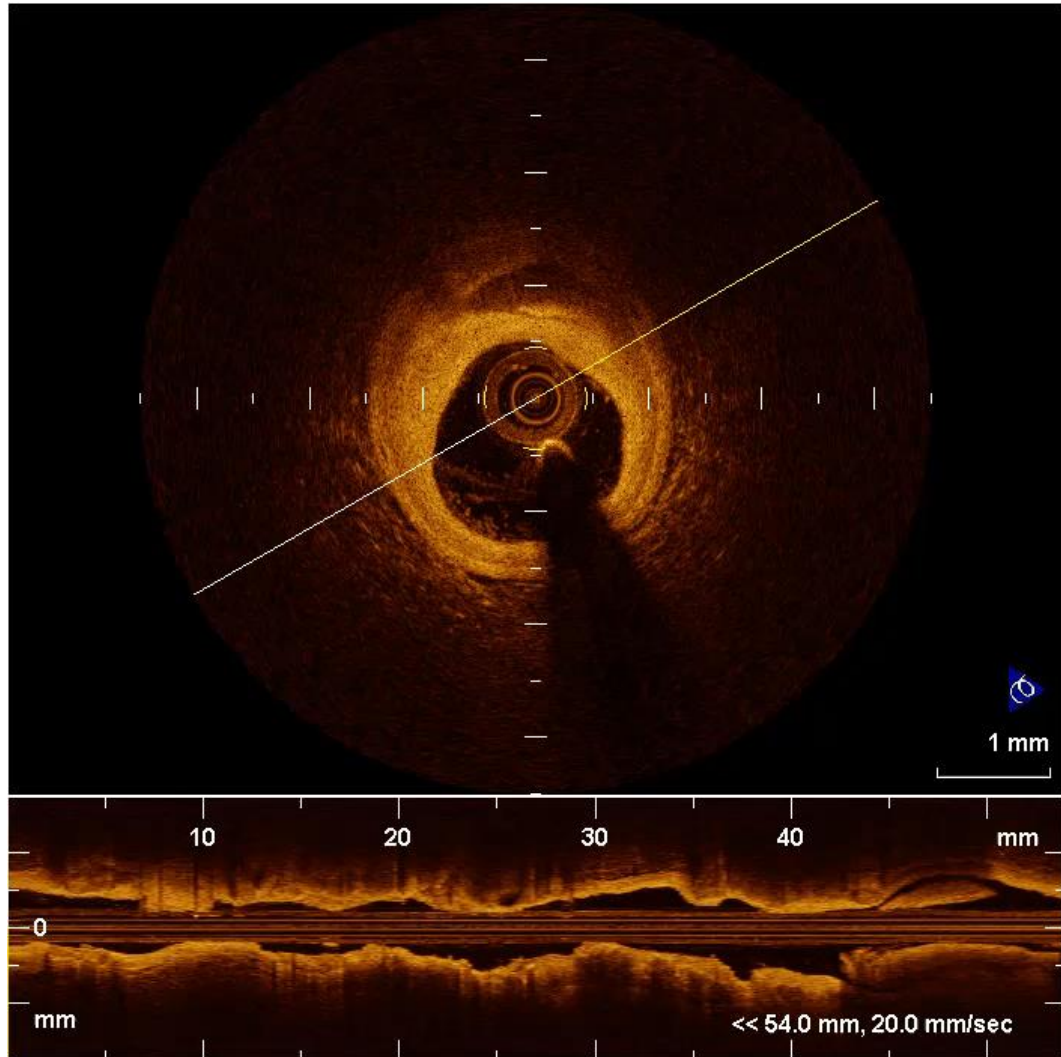
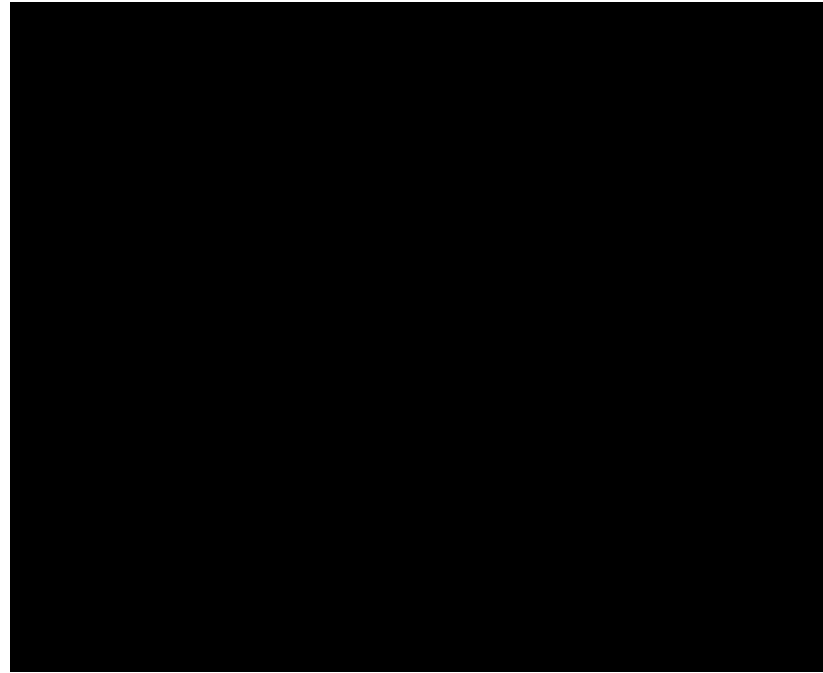
1.5mm Burr



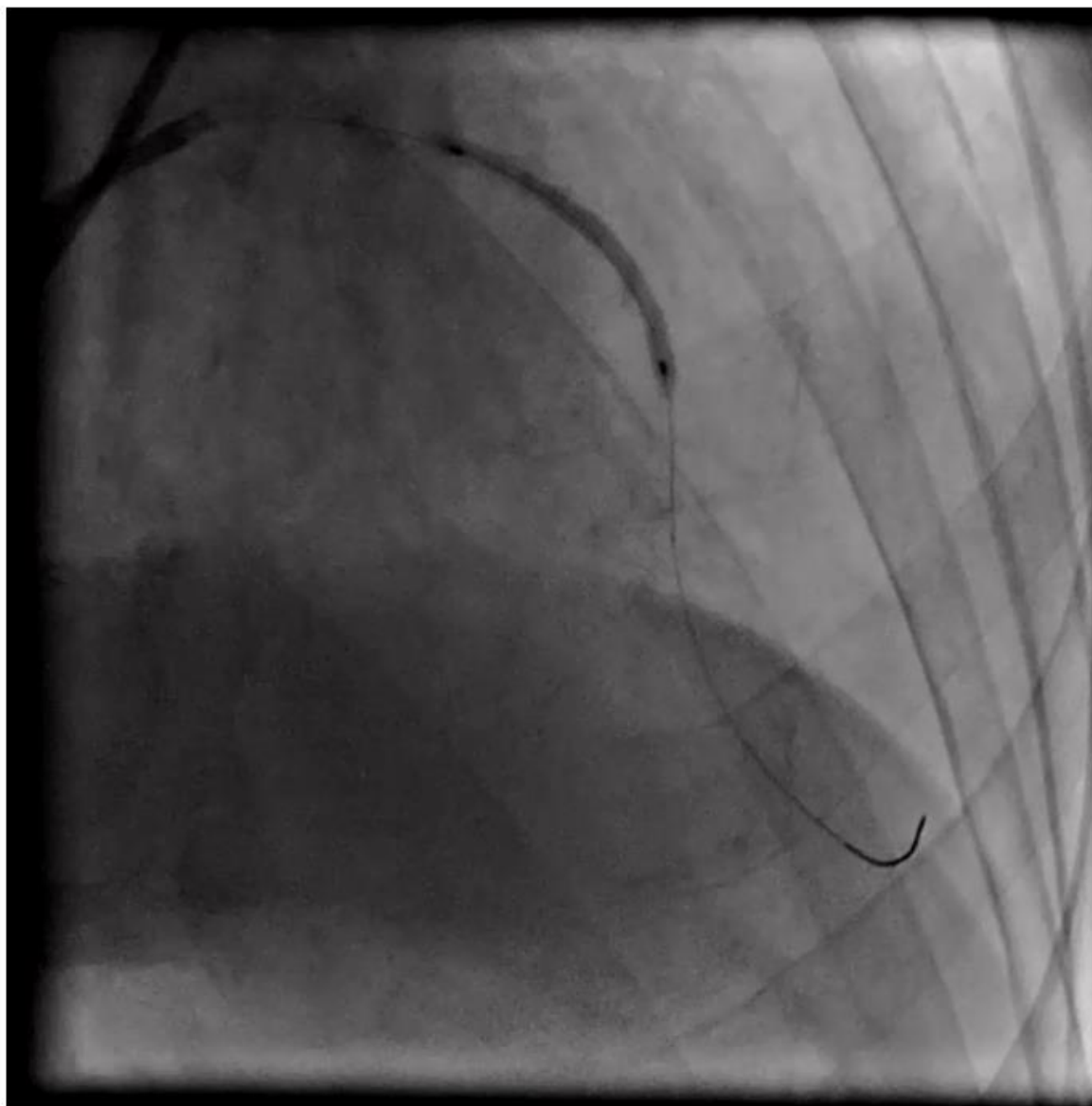
OCT catheter can not cross the lesion after 1.5mm Rota ,
→ 1.75mm burr



OCT after 1.75 mm Rota

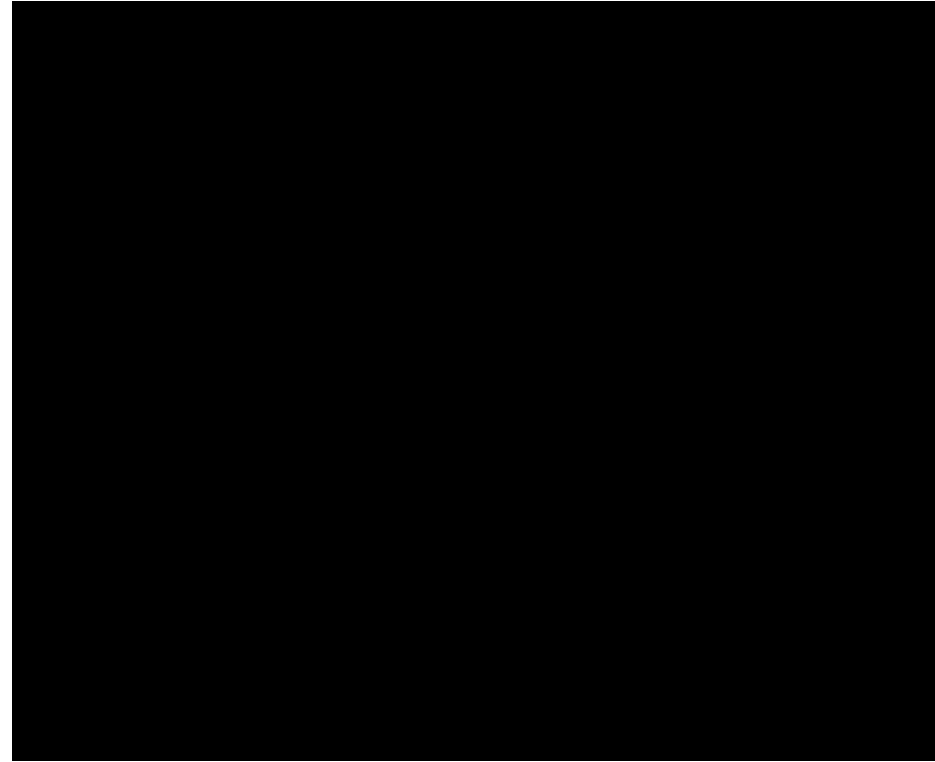
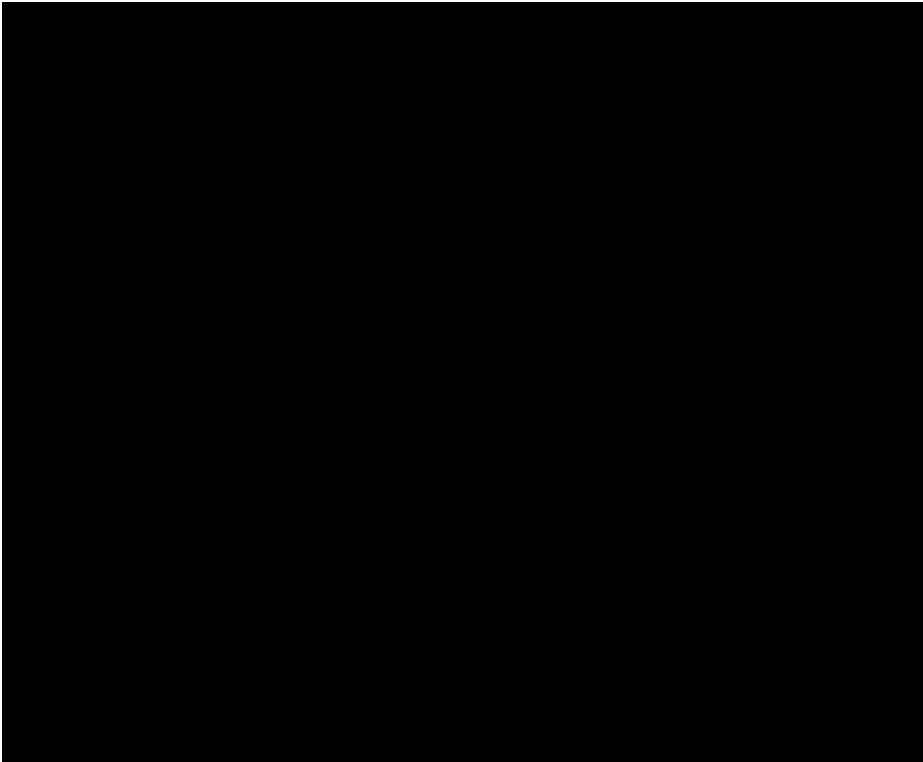


Full dilatation of Maverick 2.5/30mm BC at 10 atm



Final angio after RotaDES

Initial angio

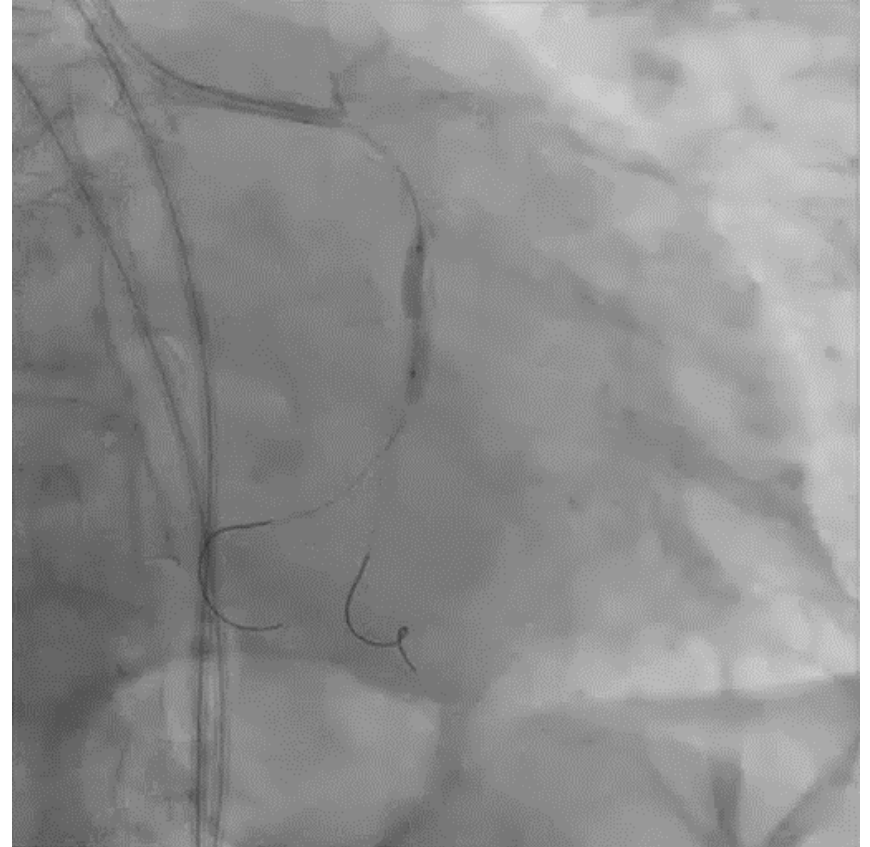
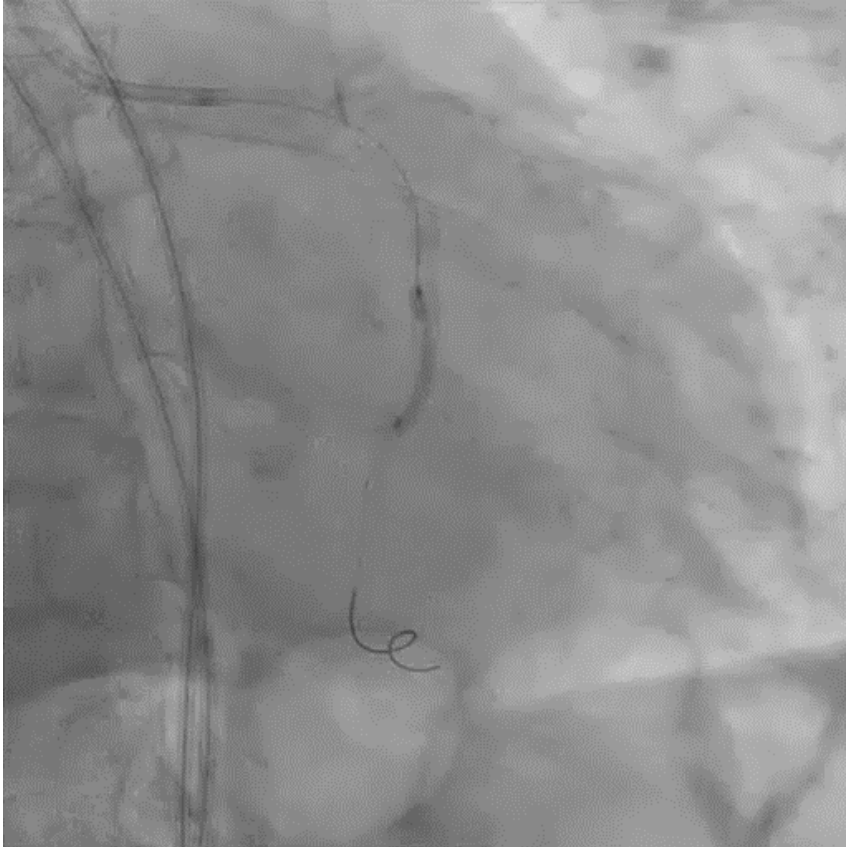


77M, typical angina for 12mons
ACS to ER, DM, LVEF = 58%, eGFR = 68

SYNTAX score: 23



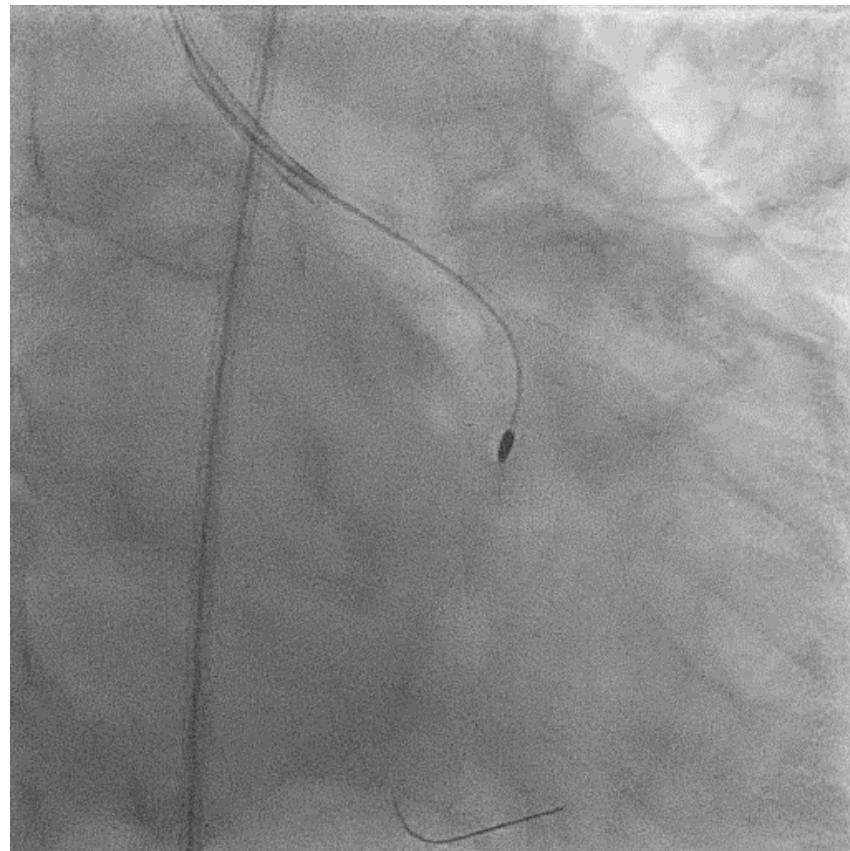
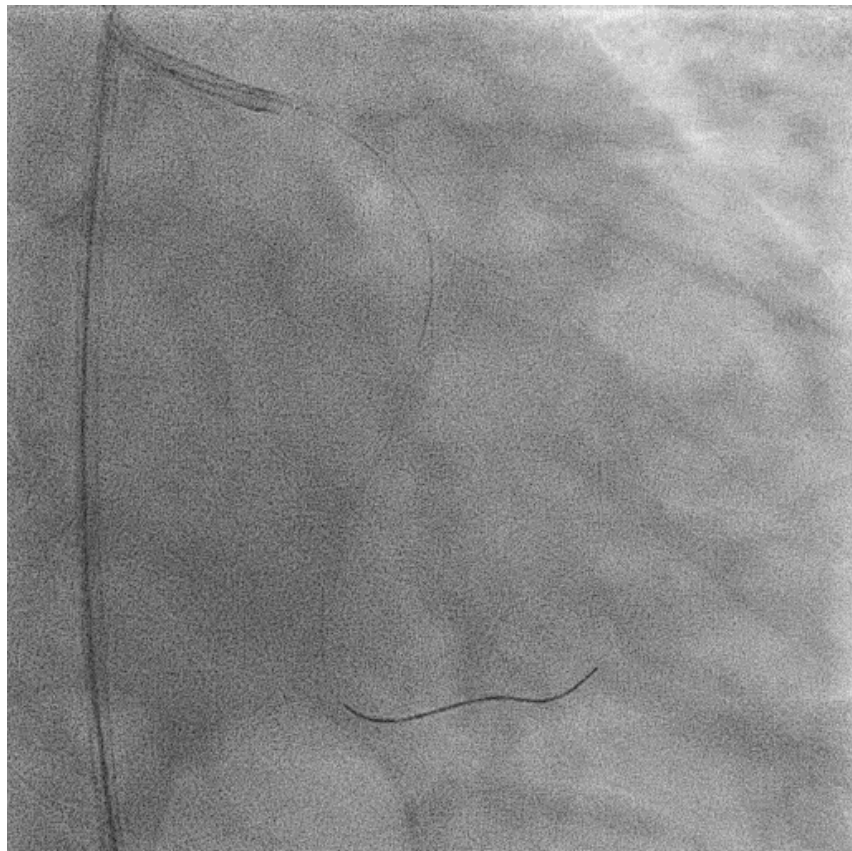
Undilatable with **NC** Quantum 2.5/20mm, 16 atm



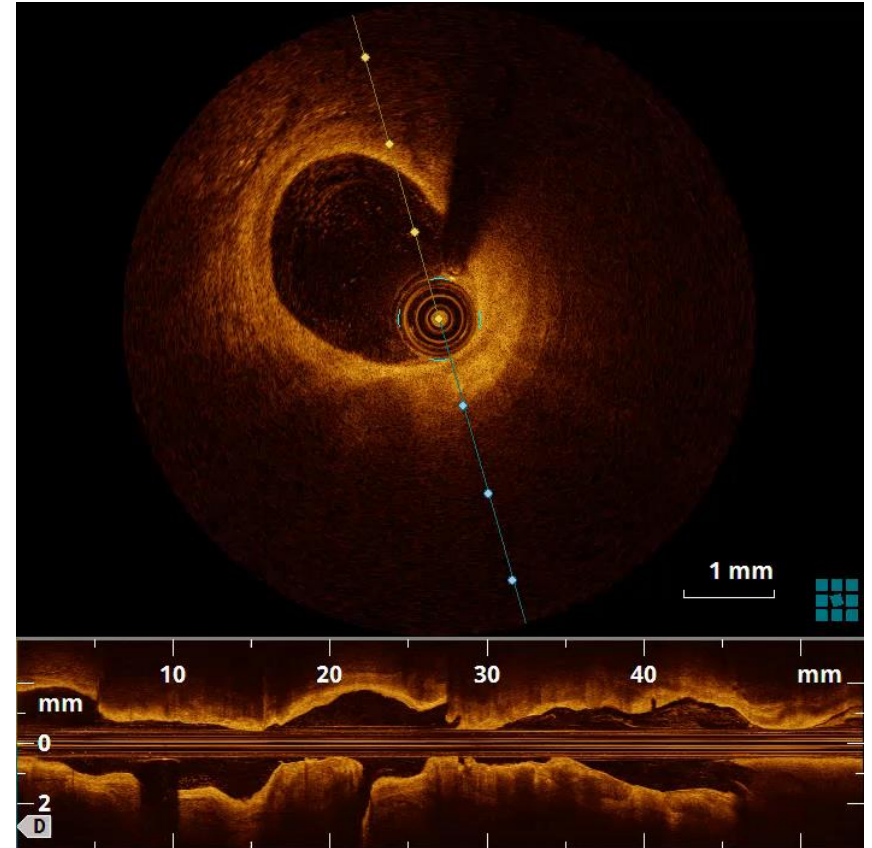
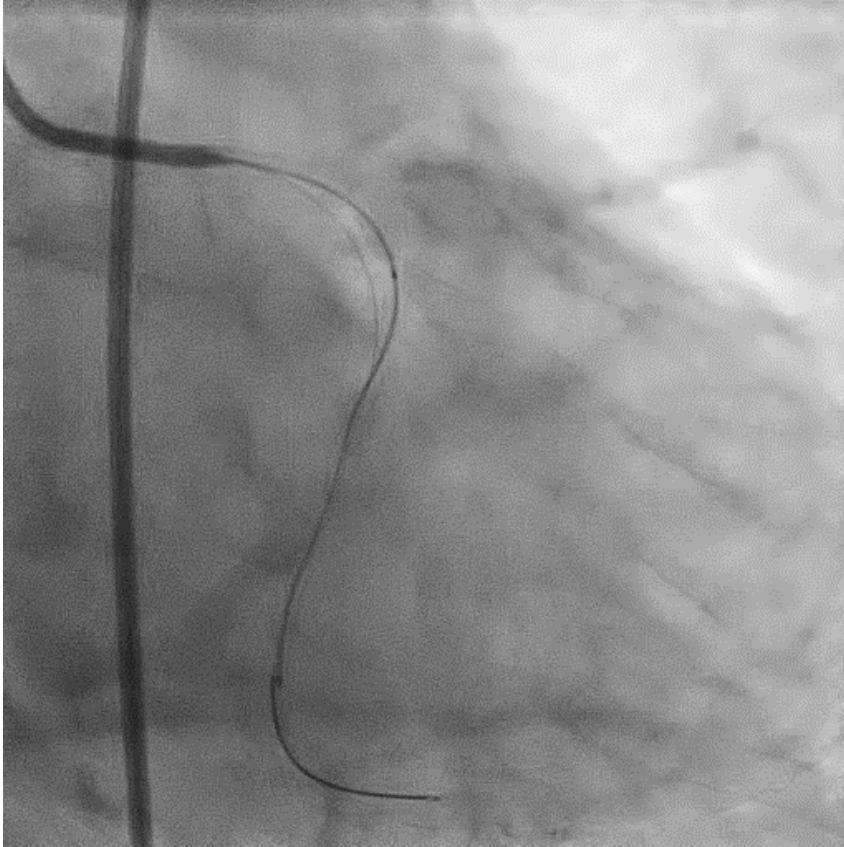
After poorman's cutting



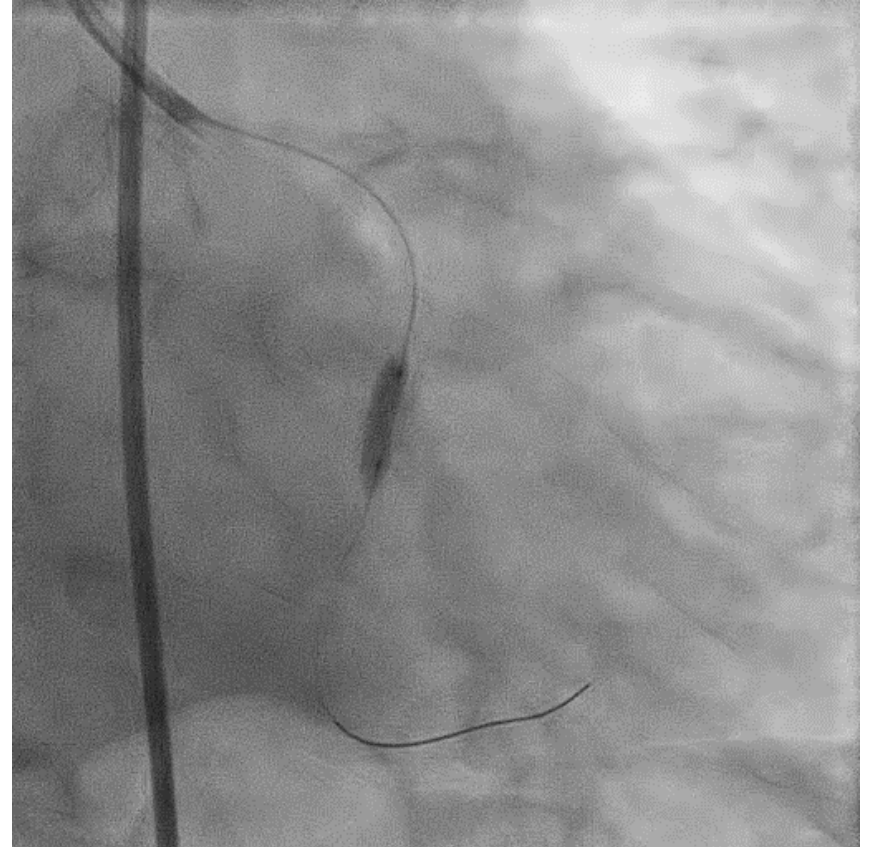
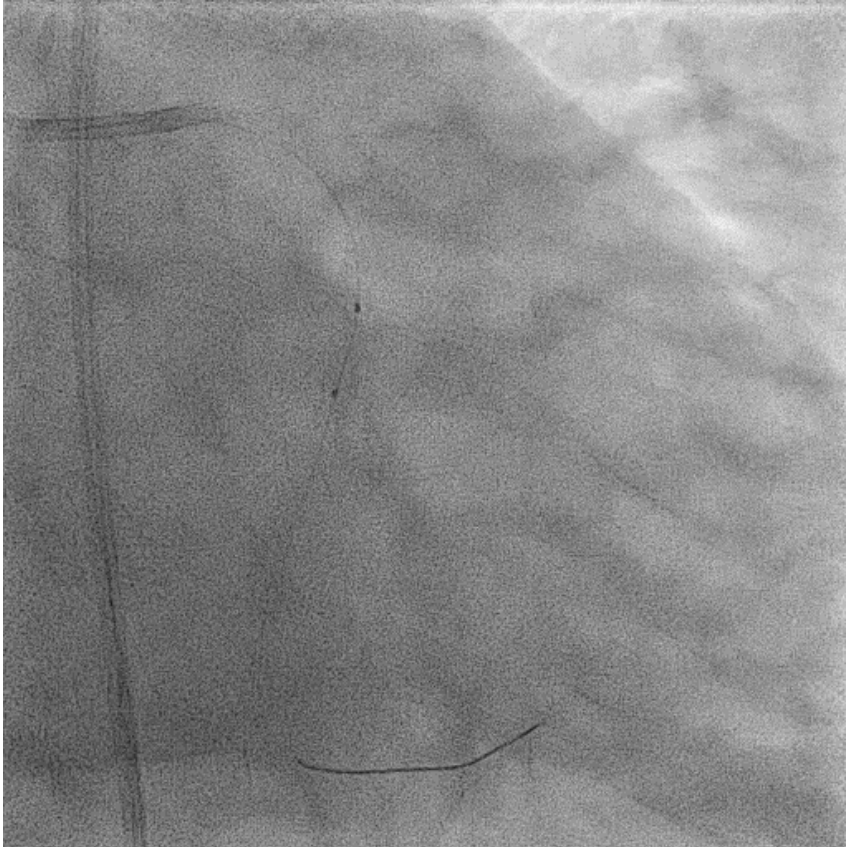
OCT catheter can't cross it → 1.5mm **Rota**



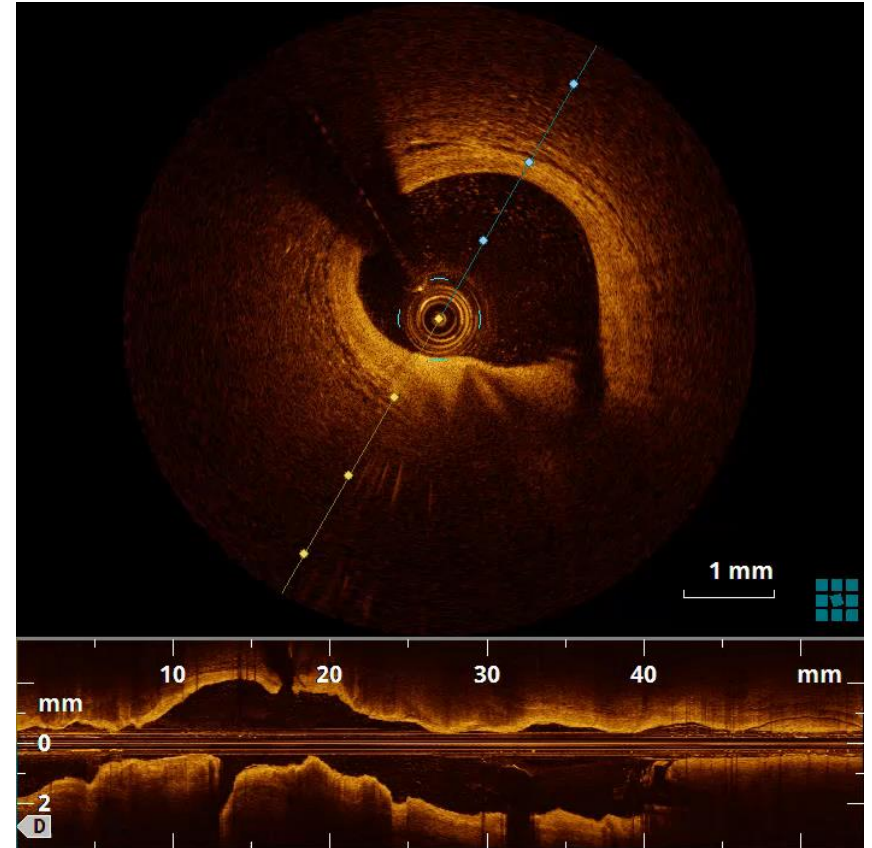
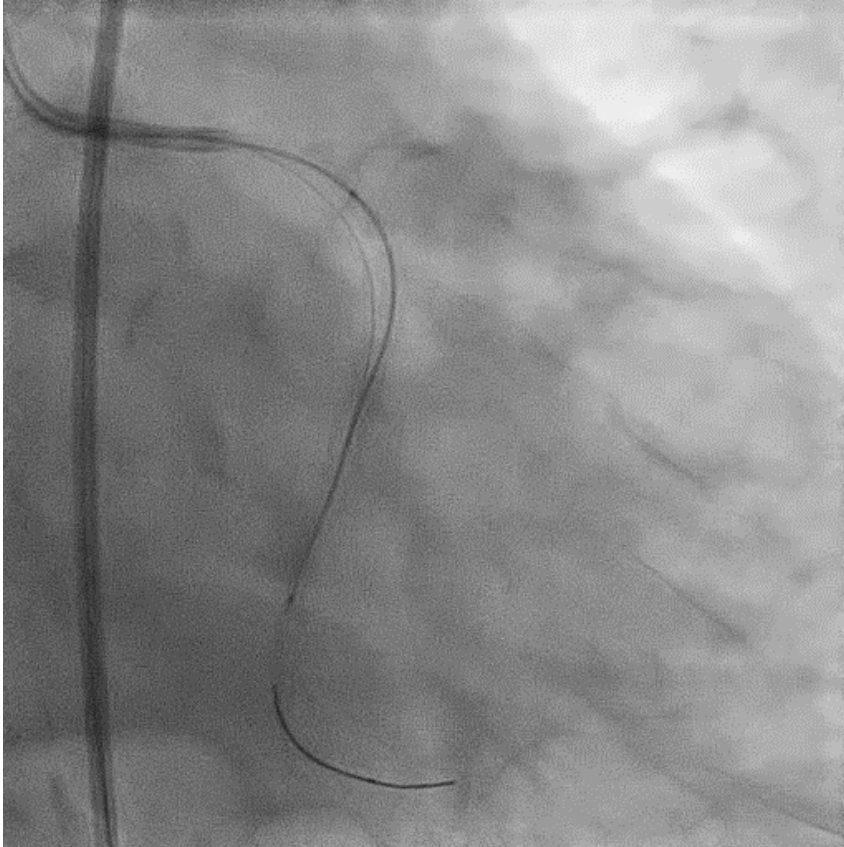
OCT after 1.5mm Rota-ablation



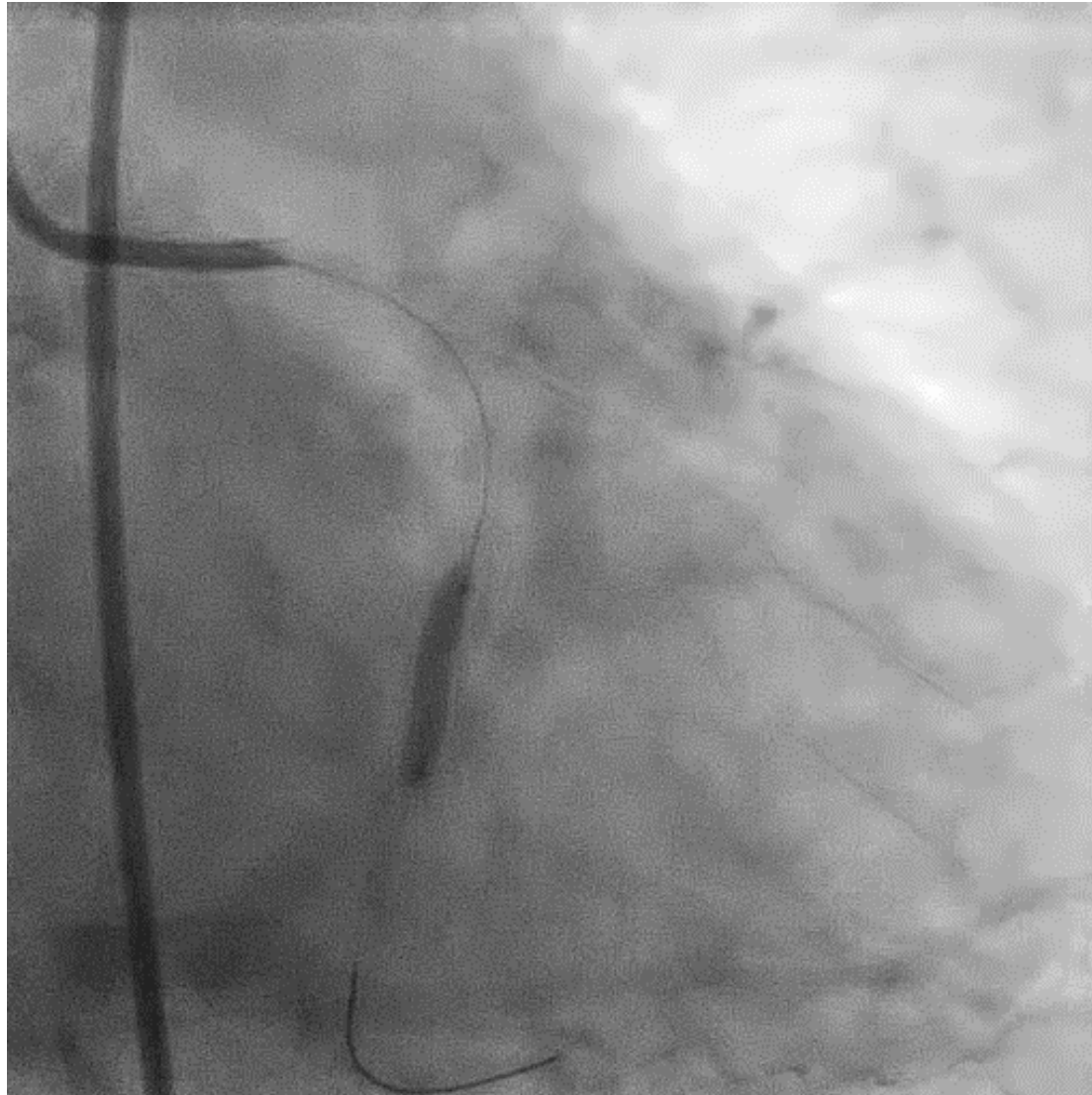
3.0/10mm cutting balloon, 12 atm



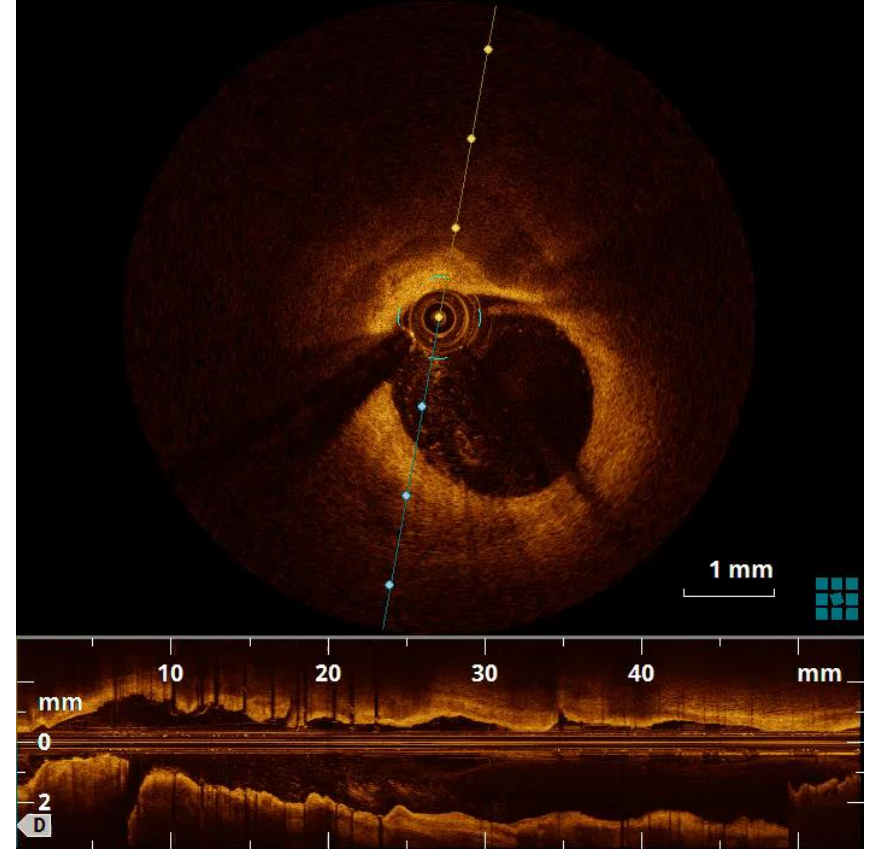
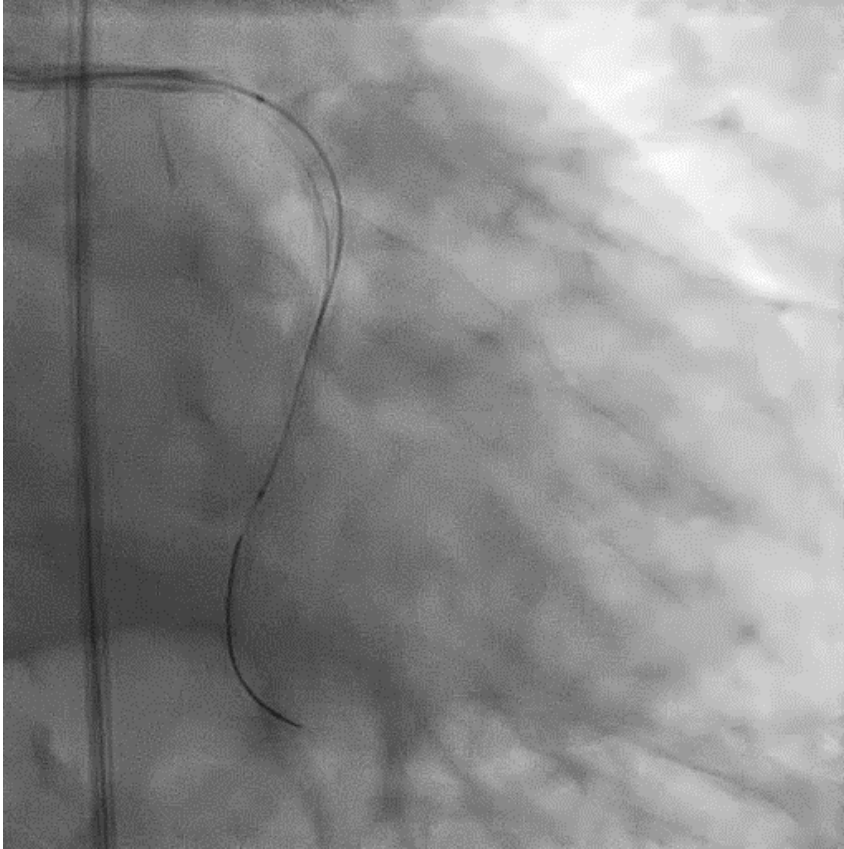
OCT after 3.0mm cutting



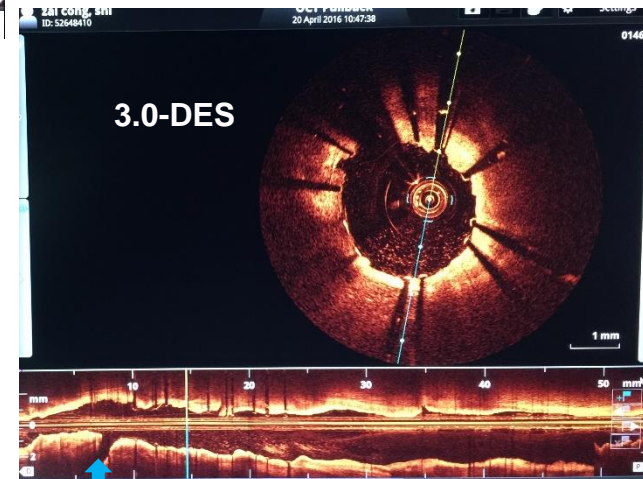
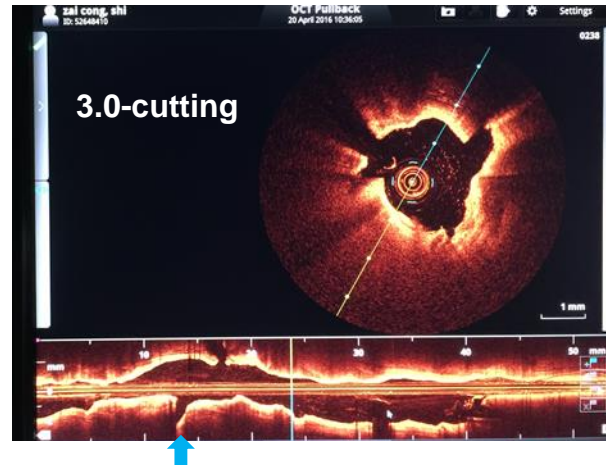
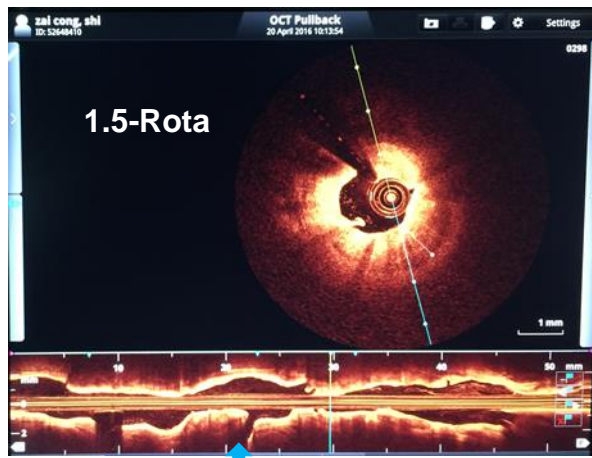
DES 3.0/18_{mm}, 12 atm



Final OCT



OCT summary (OM br. as landmark)



Take Home Messages

- IVUS/OCT evaluation is useful before stent implantation over the severe calcified lesions (which adjunctive devices - Rota or cutting for lesion preparation under IVUS/OCT guidance).



TAIWAN TRANSCATHETER THERAPEUTICS

**LIVE COURSE
JAN 07-08, 2017**

NTUH International
Convention Center,
Taipei, Taiwan