4th Complex PCI
Make it Simple!

Seoul, Korea: 28-29 November 2019

Master's Keynote Lecture

Hand down a secret of calcified lesion PCI

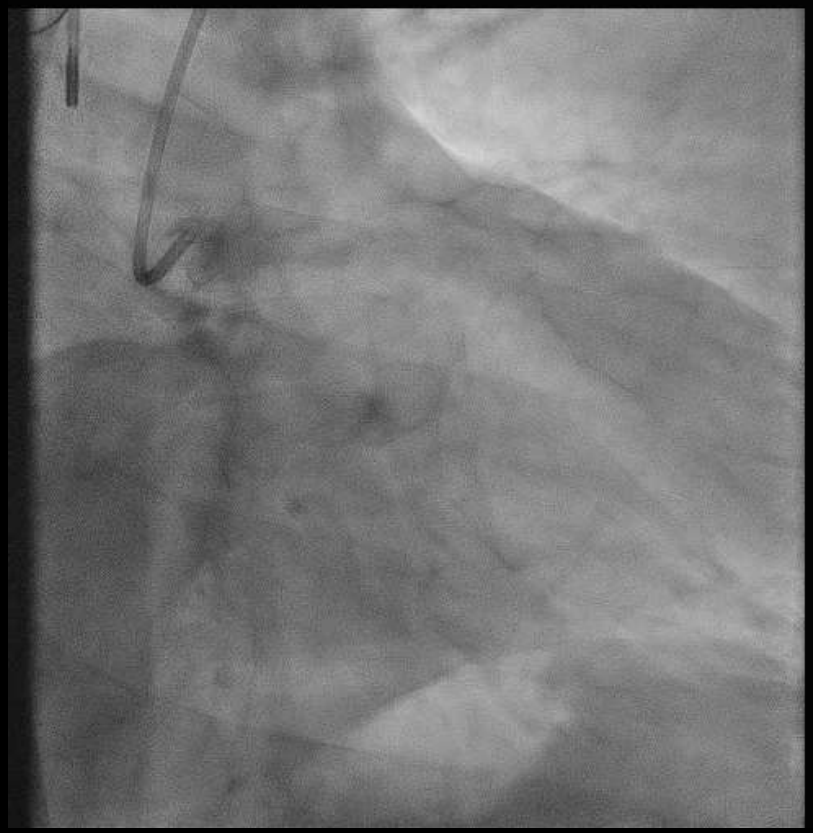
Speaker – 10'

Antonio Colombo

EMO-GVM, Centro Cuore Columbus, Milan,
Maria Cecilia Hospital ,Cotignola (RA)
and GVM Laboratories, Italy

No conflicts to disclose

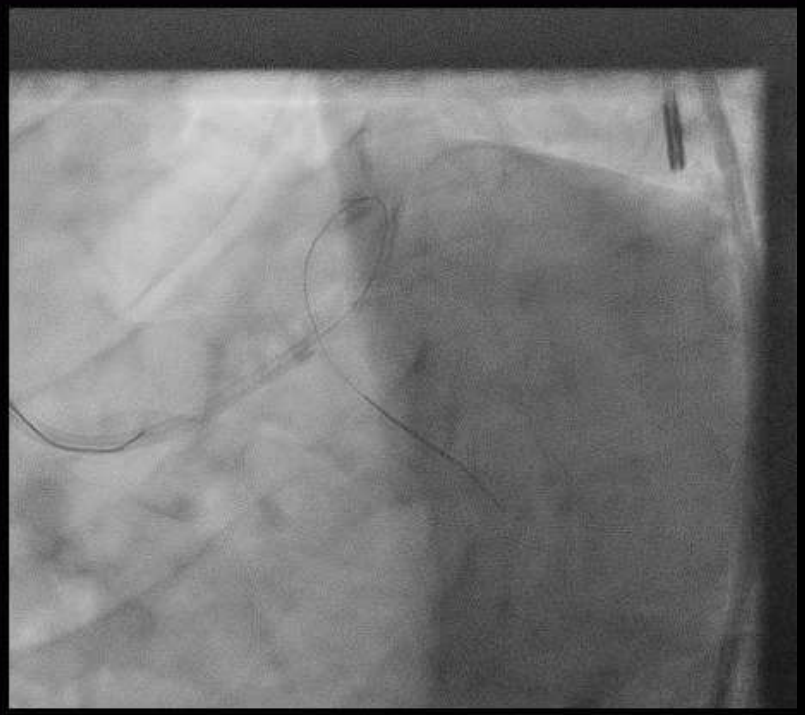
68 yrs. old male diabetic with stable angina
refused CABG, patent RCA, EF 55%

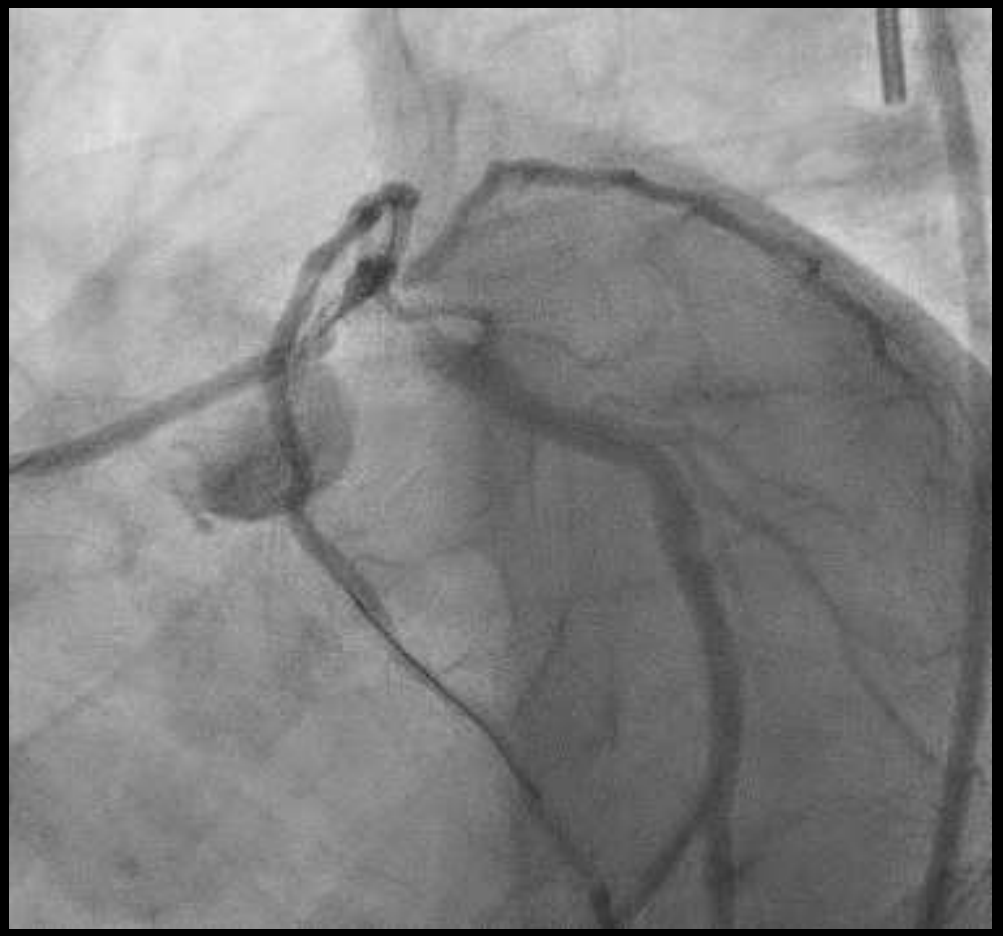


Baseline

75/2019

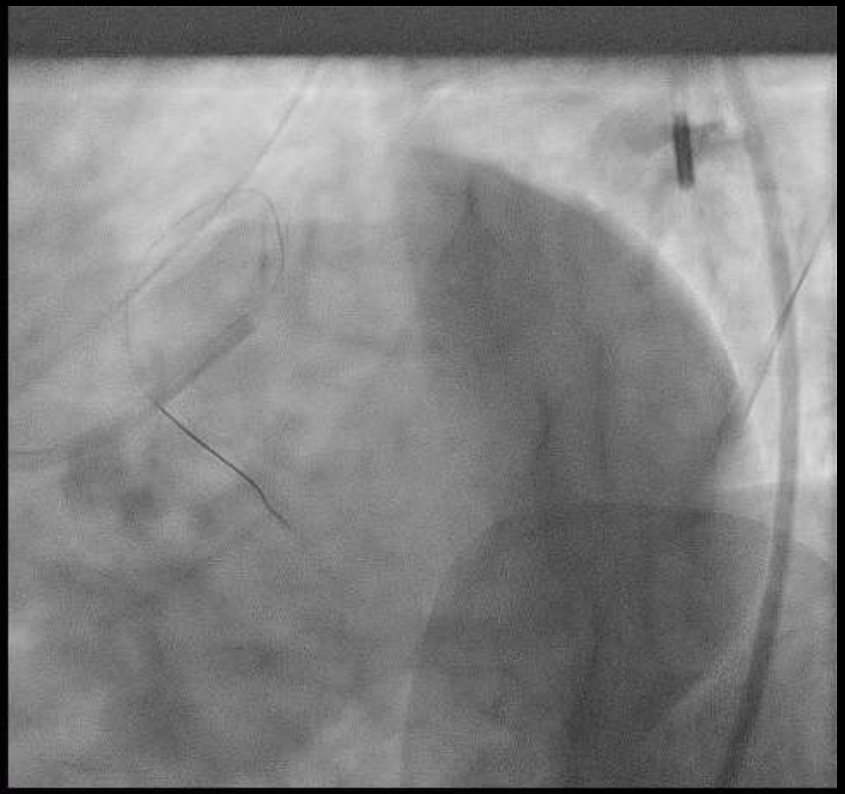
Femoral access 7 F, elective IABP

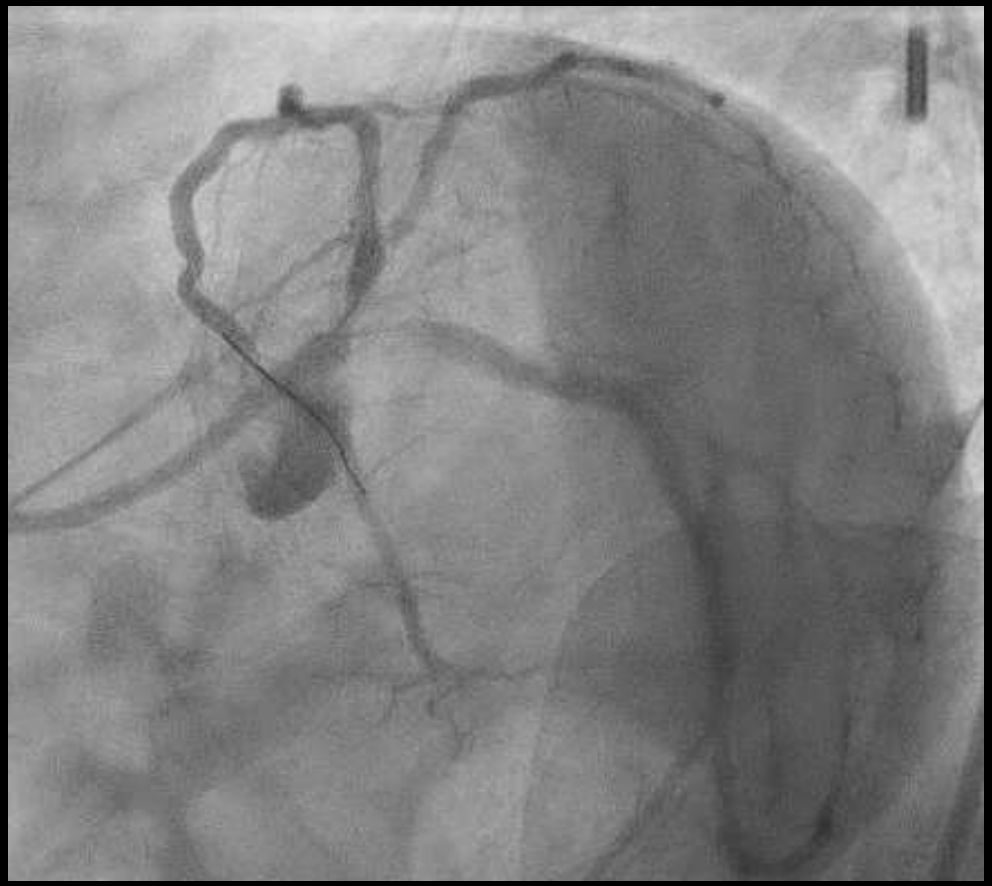




Baseline

Various attempts to wire LCX: Universal, Sion, Sion Black, Fielder, Fielder Xta; Intermediate





LCX wiring seems unsucessful

What would you do next?

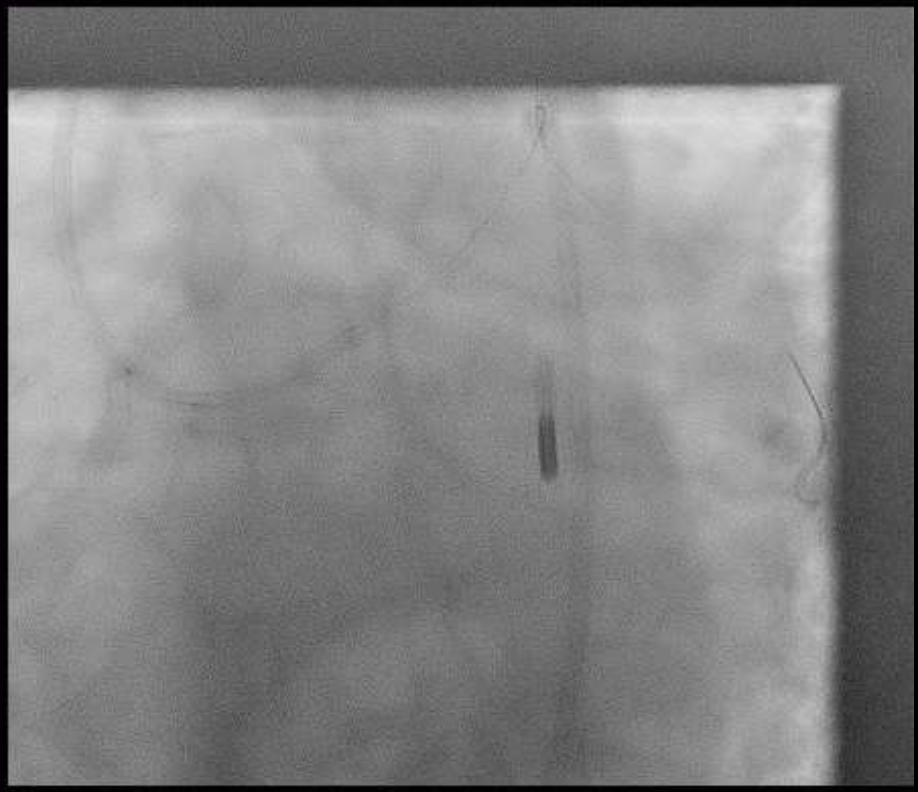
A)Elective CABG

B) Predilate LM

C) Rotablation on the LM

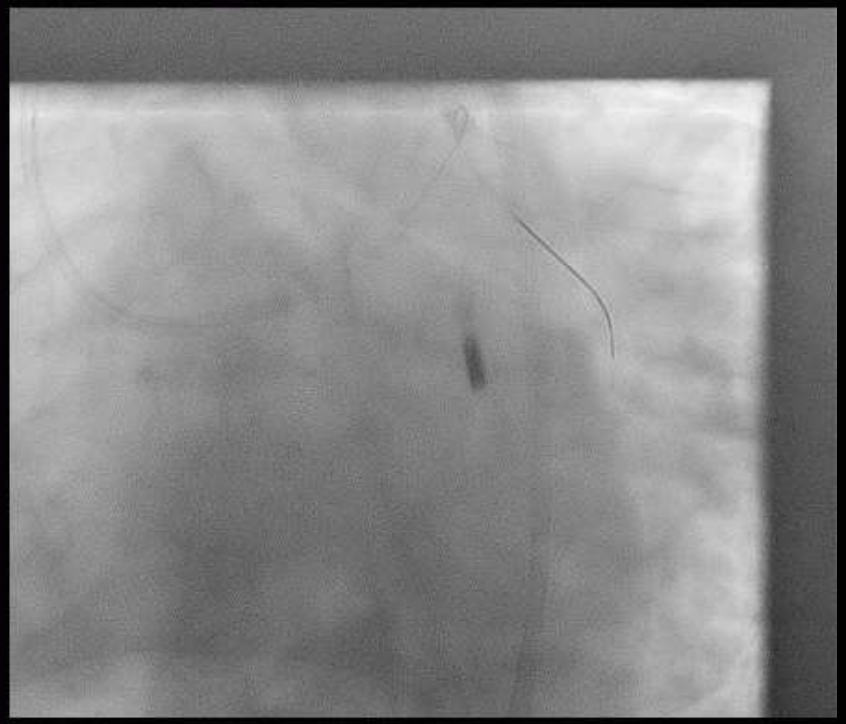
D) Use a different wire

Predilatation

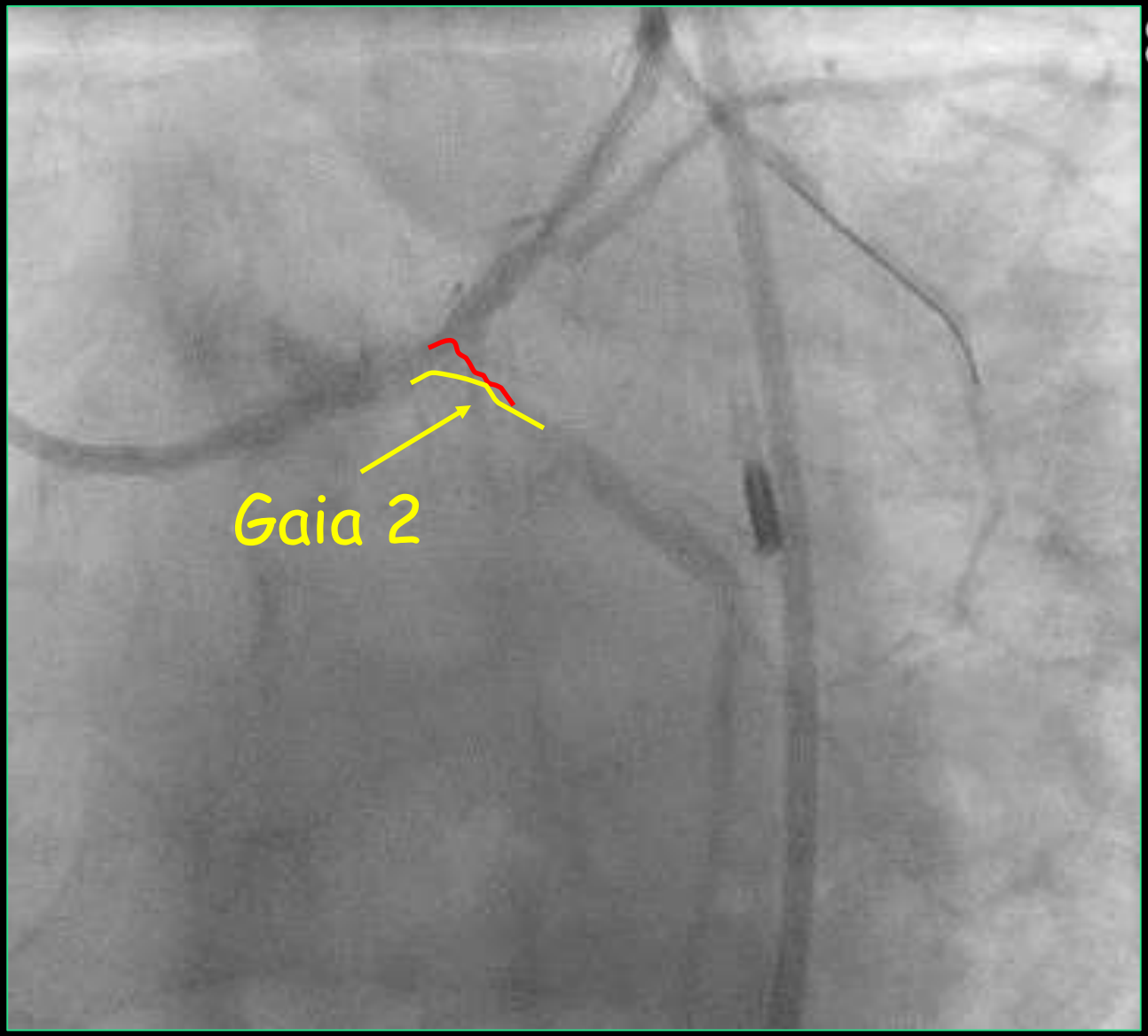


After Predilatation

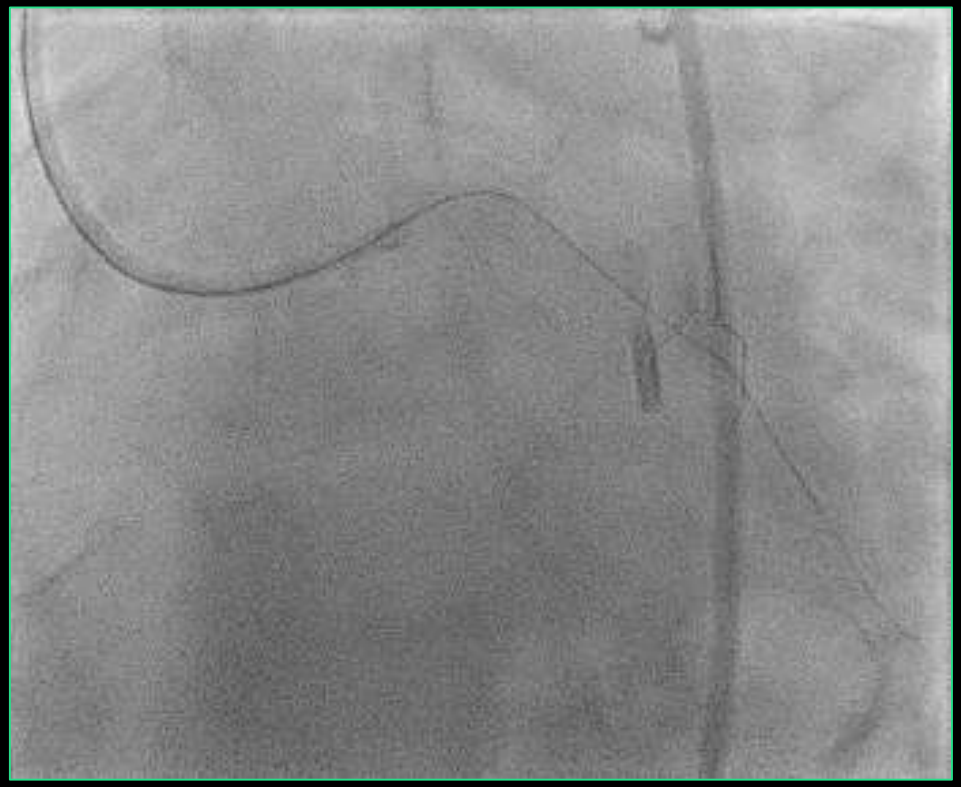
Still unsuccessful LCX wiring

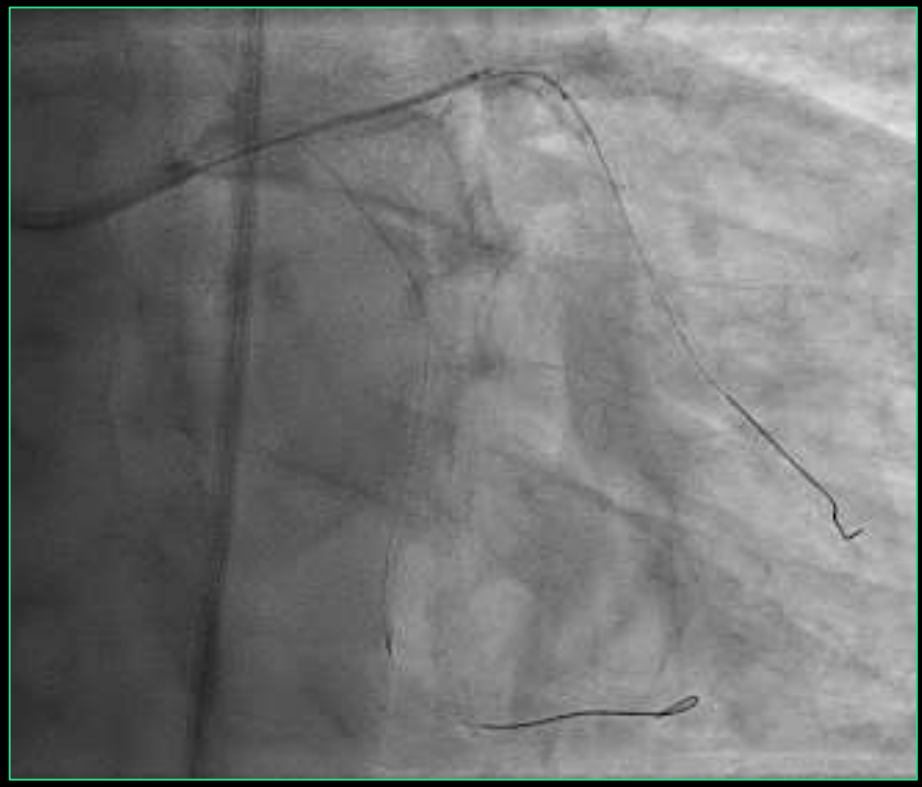


After Cutting Balloon and 1.75 RTB



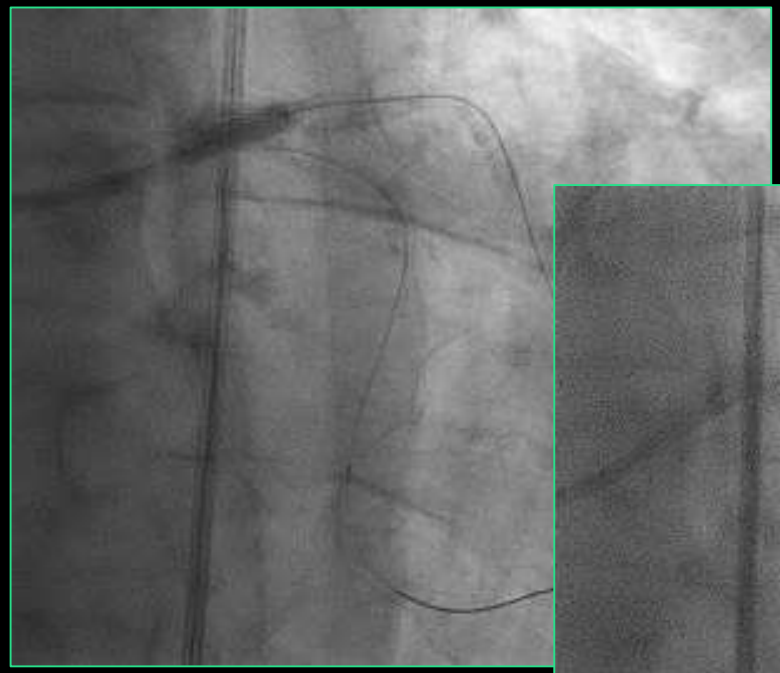
Instead of following the tiny path, Gaia 2 was selected to create a new intraplaque pathway



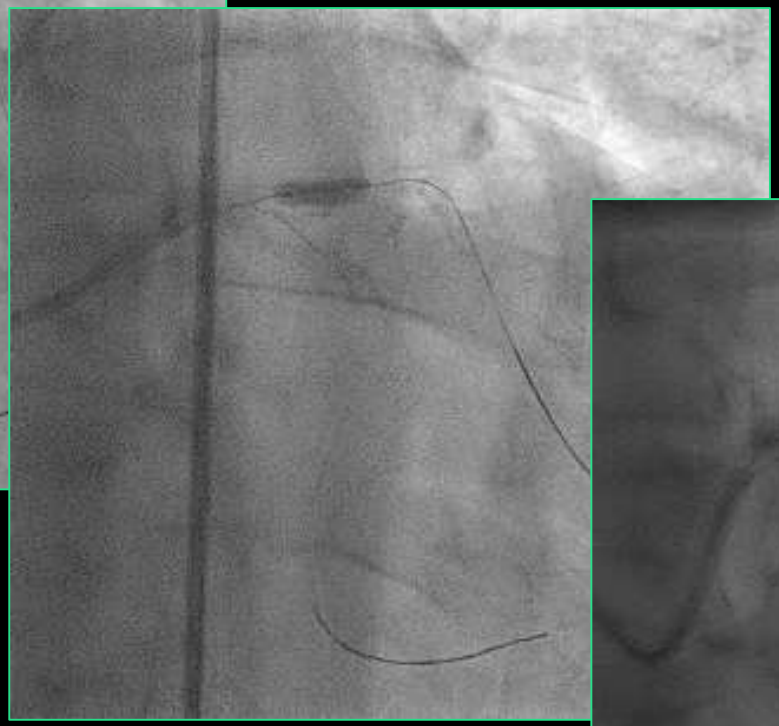


With Gaia 2, we can cross into LCX

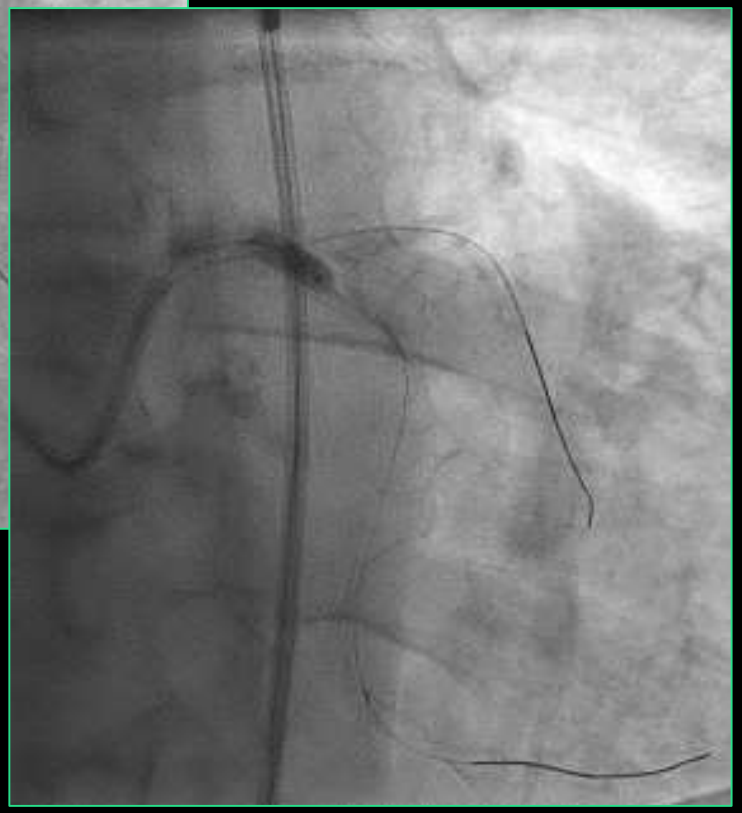
3.75 mm Shockwave balloon
8 runs in total



Shockwave LM

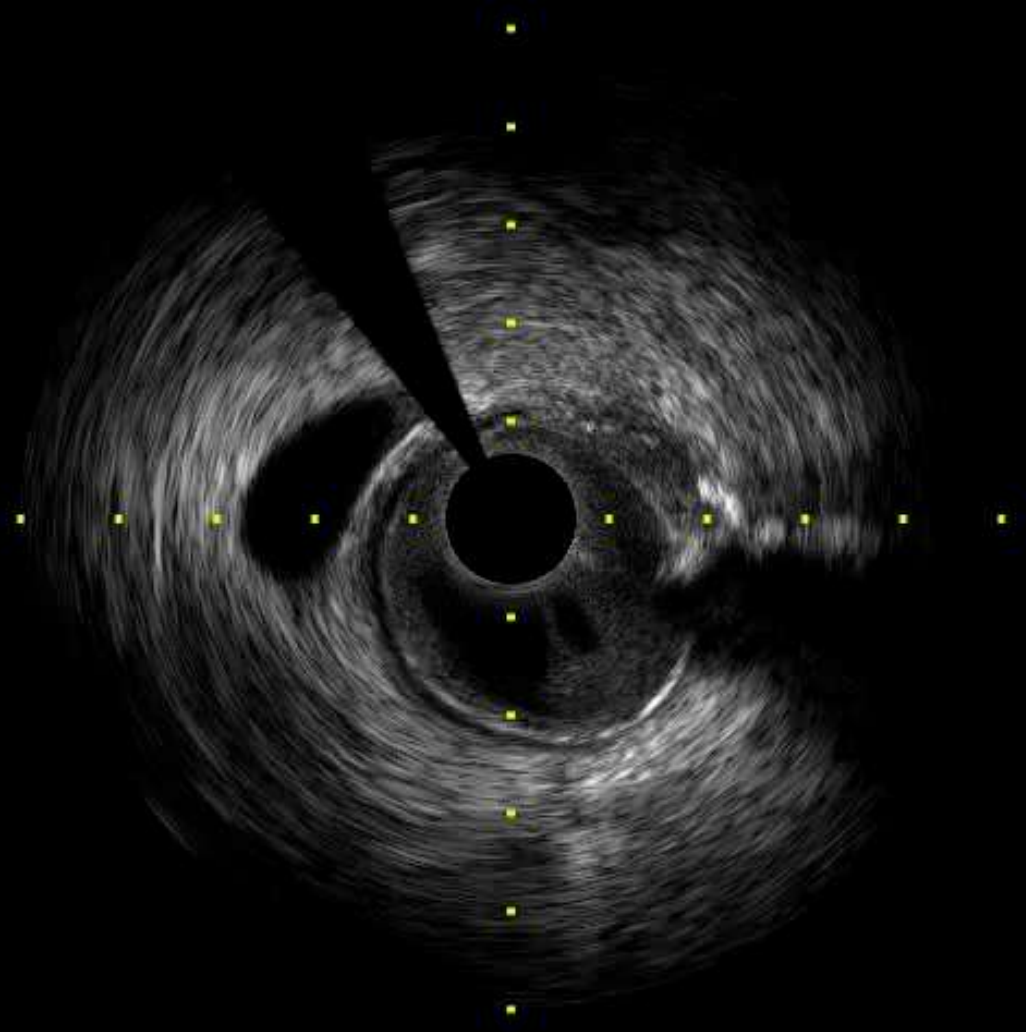


Shockwave LAD

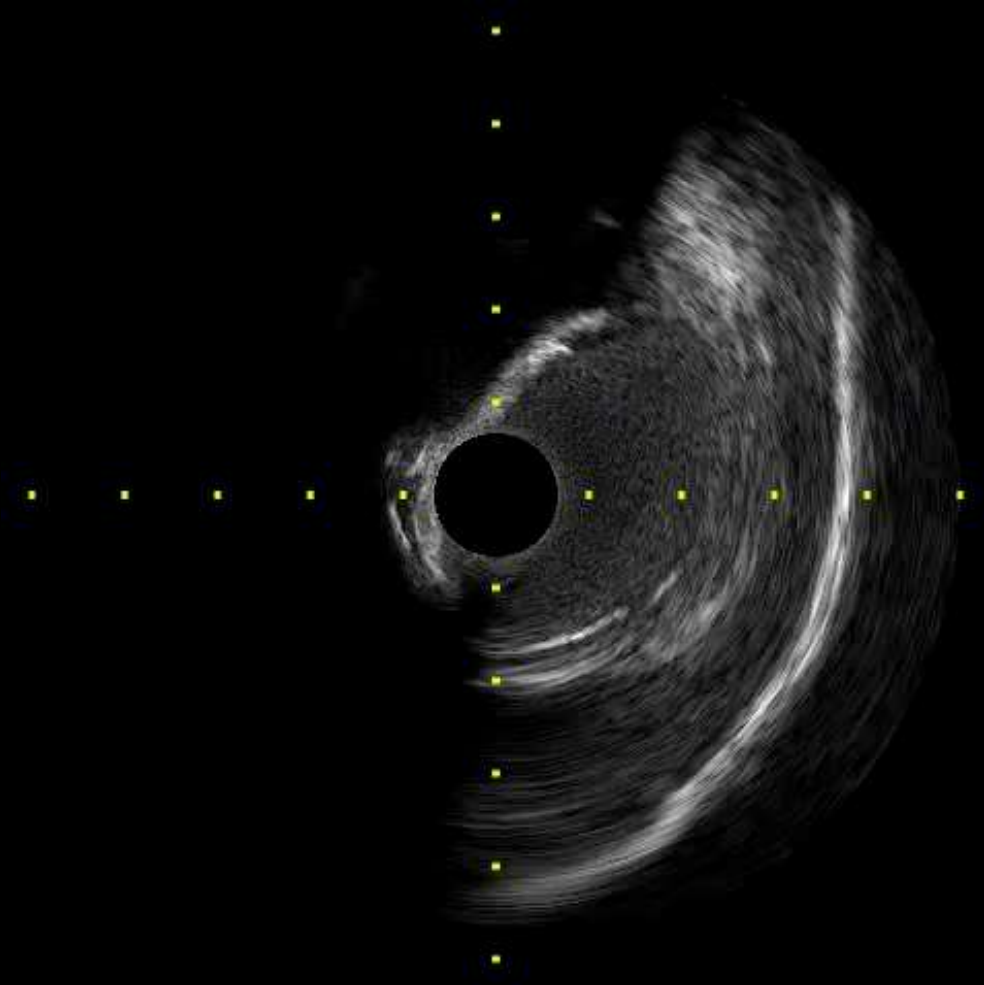


Shockwave LCx

Calcific Lesion has been fragmented

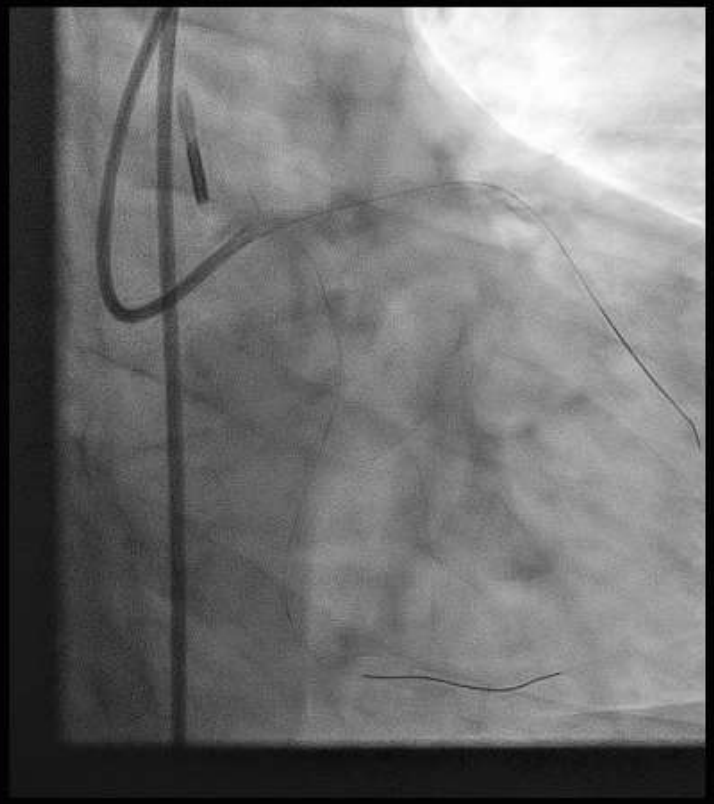


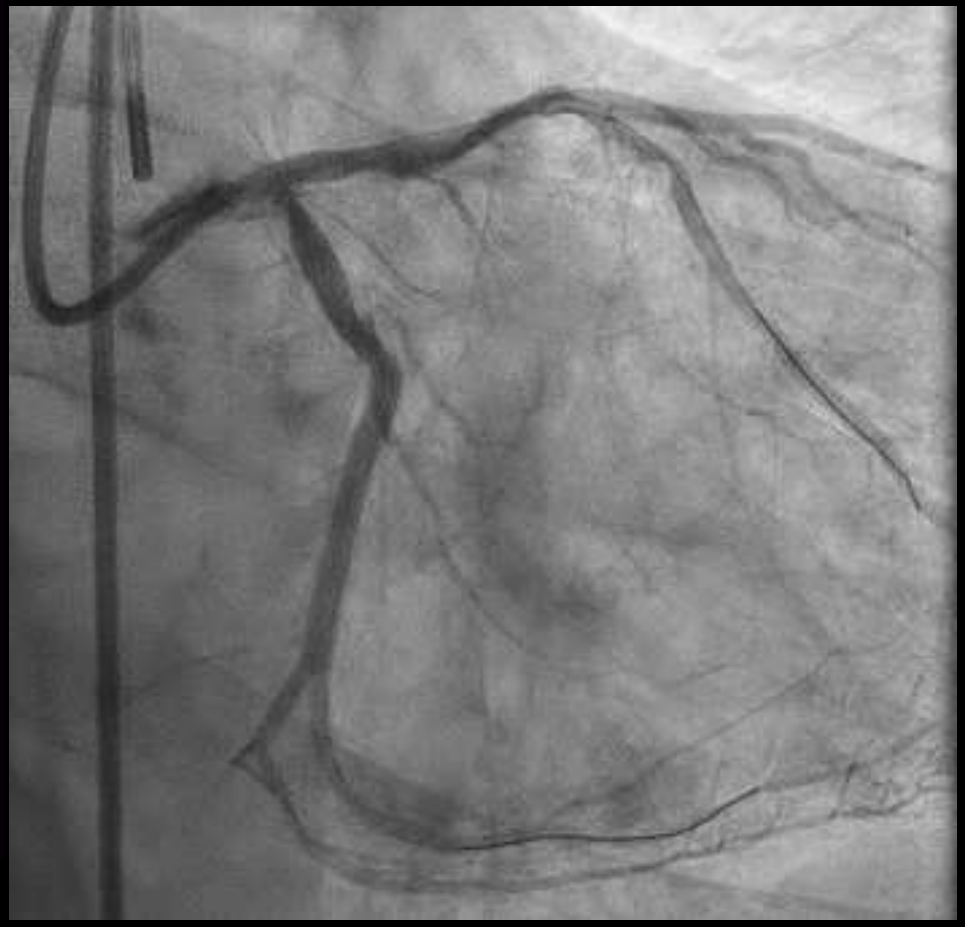
Result after Shockwave LM



Result after Shockwave LCx

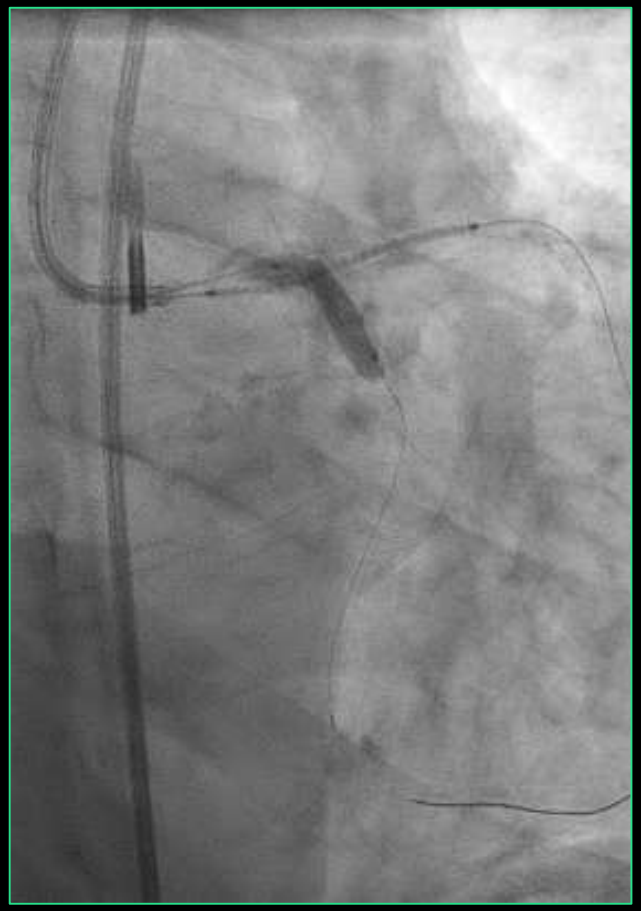
75/2019



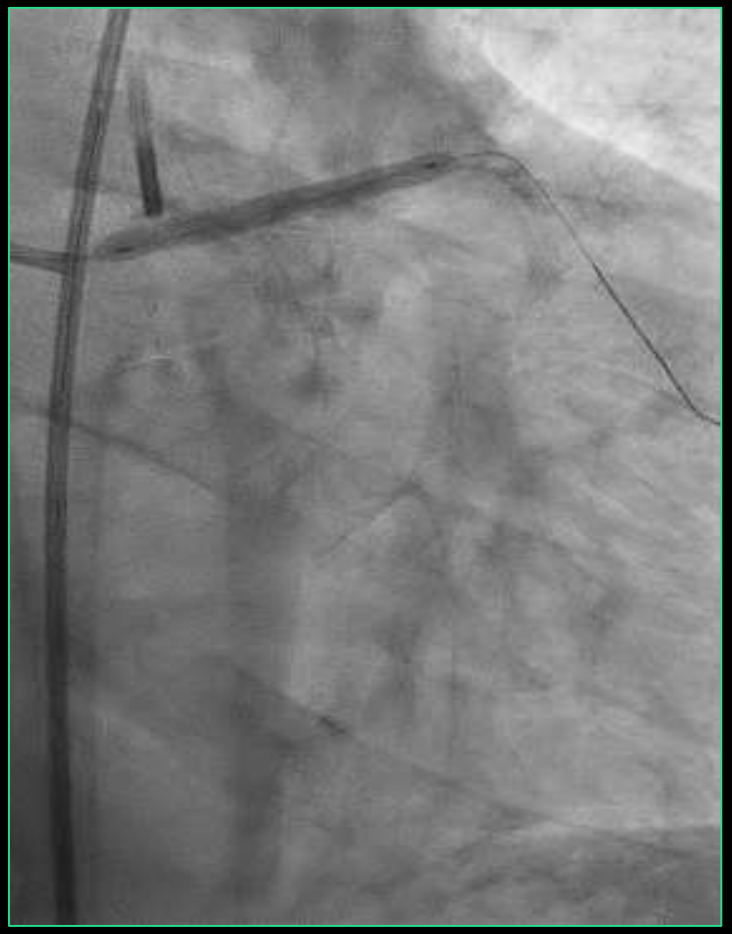


Result after Shockwave

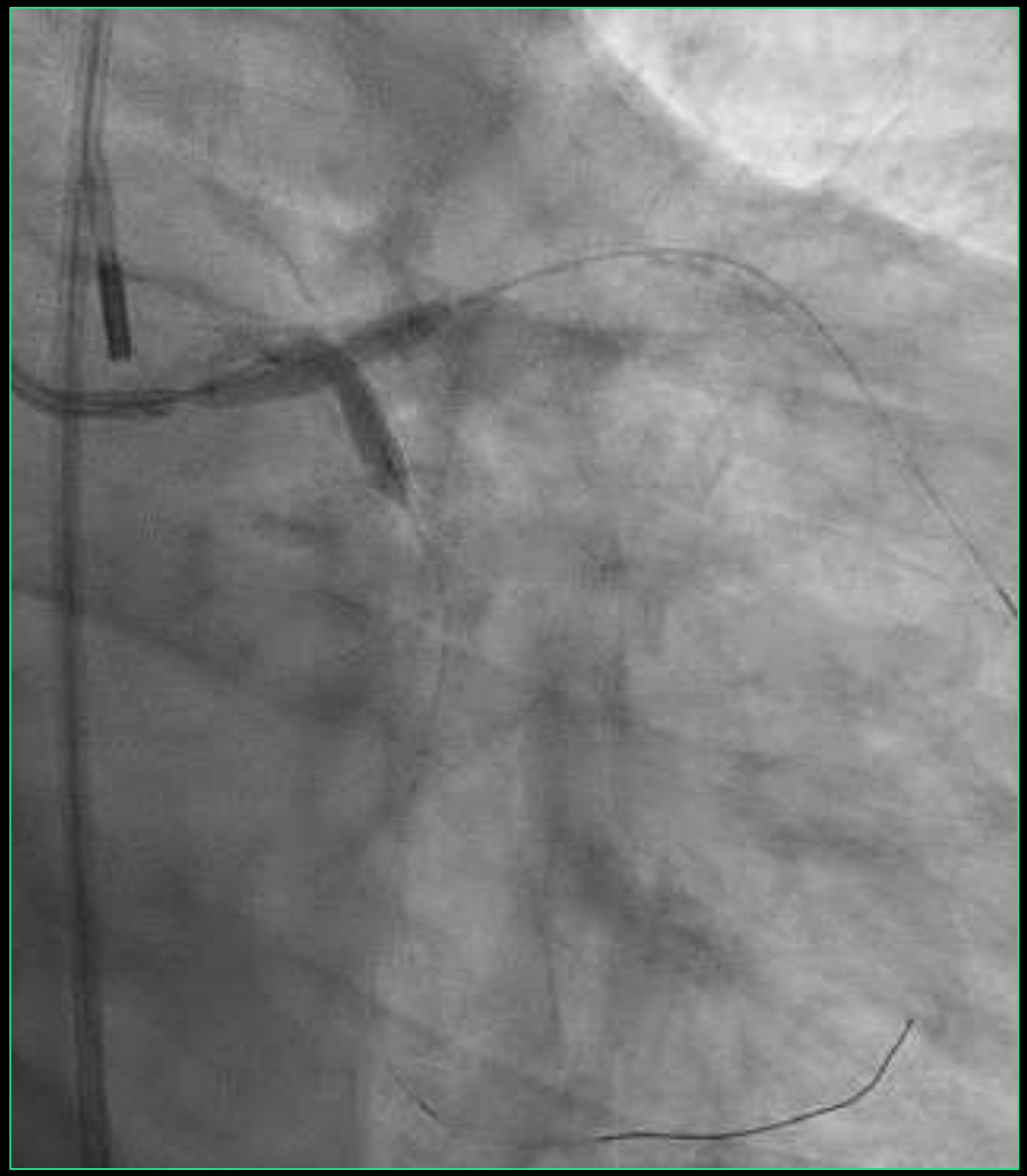
Minicrush stenting



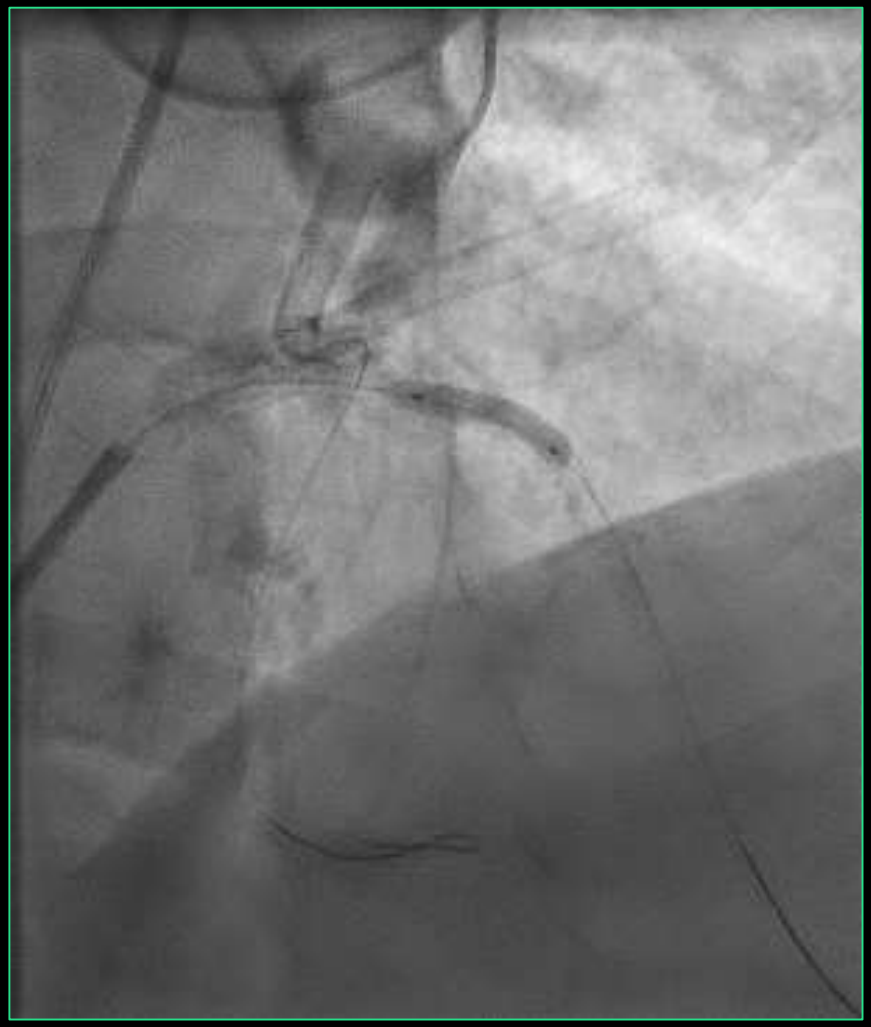
Stent on the LCX



Stent on the LAD

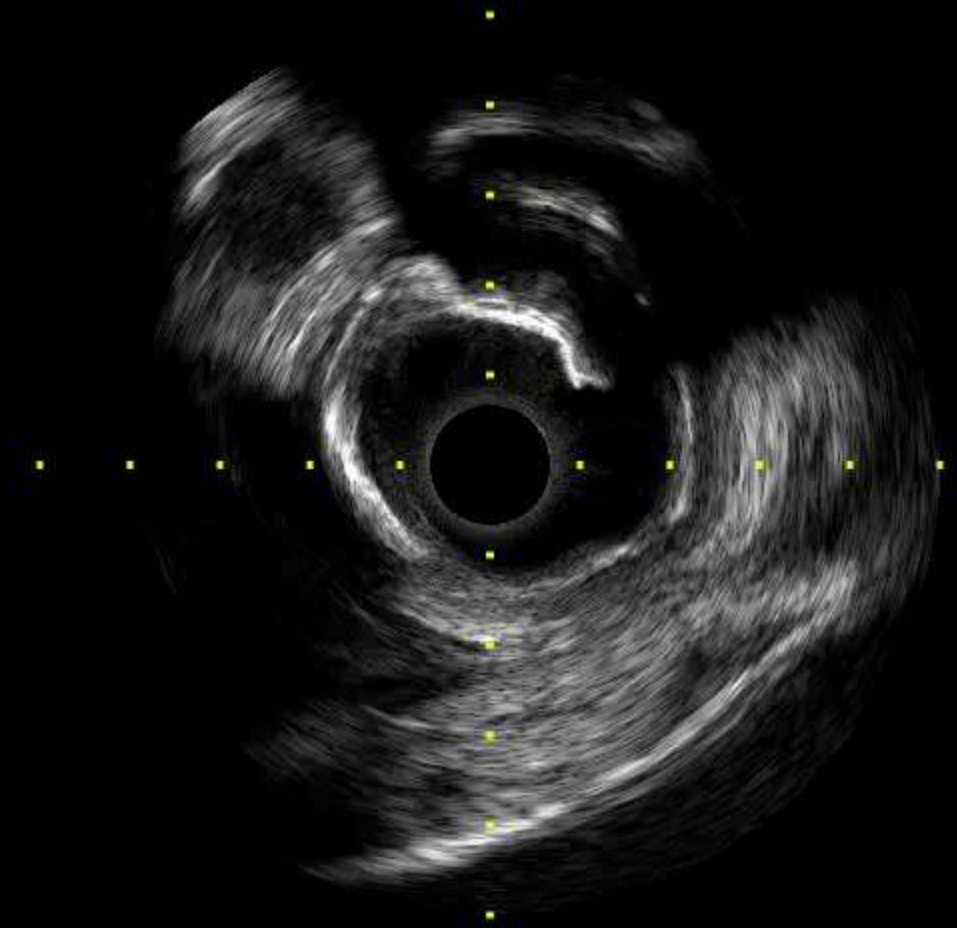


Final Kissing with 3.5 mm balloons and
LM dilatation with 4 mm balloon

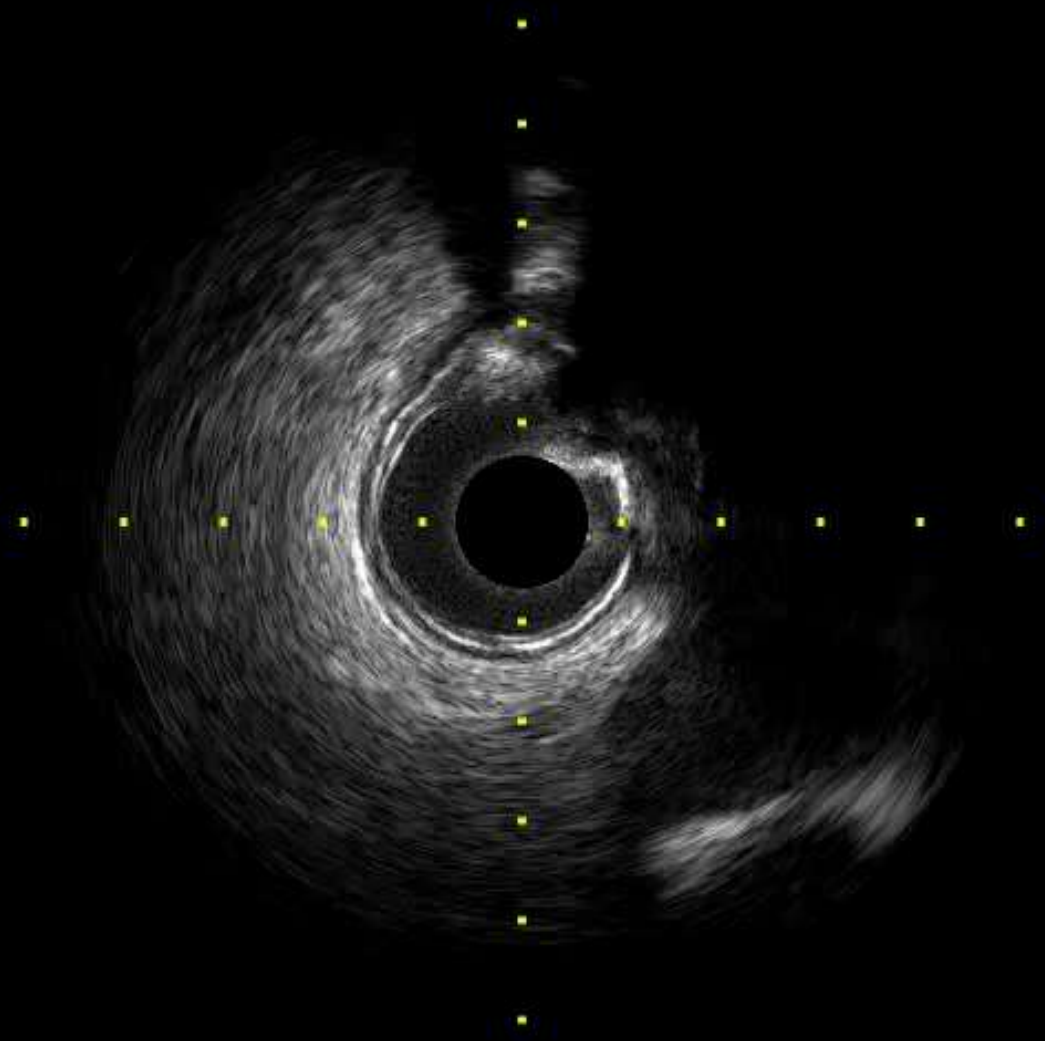


Stent mid LAD

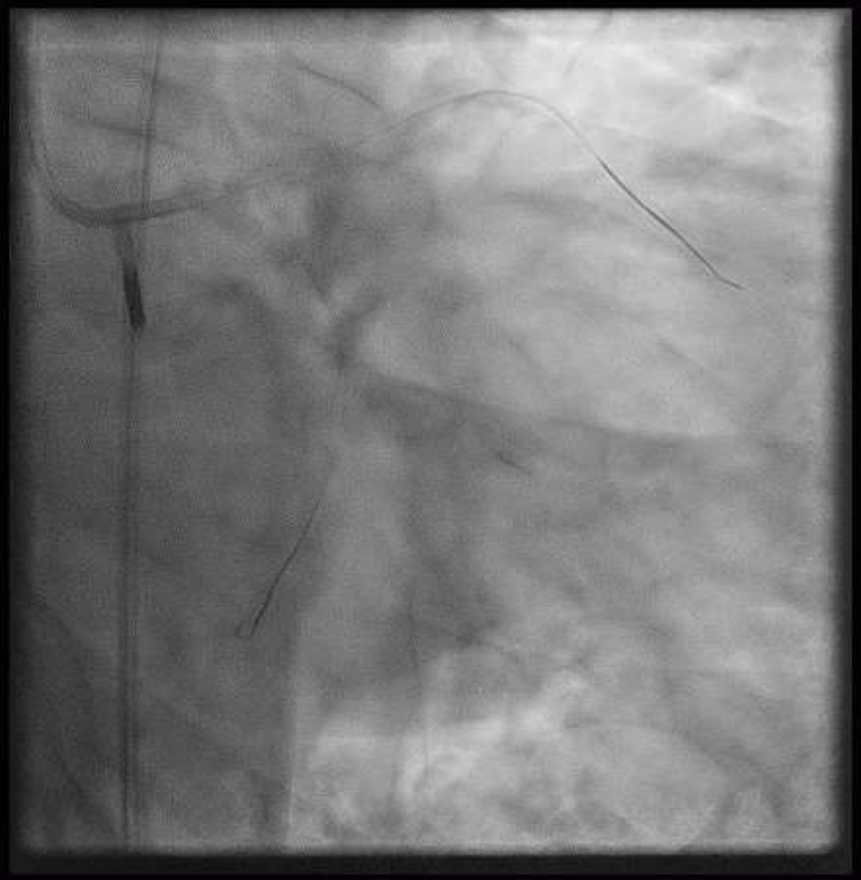
Final Result LCx

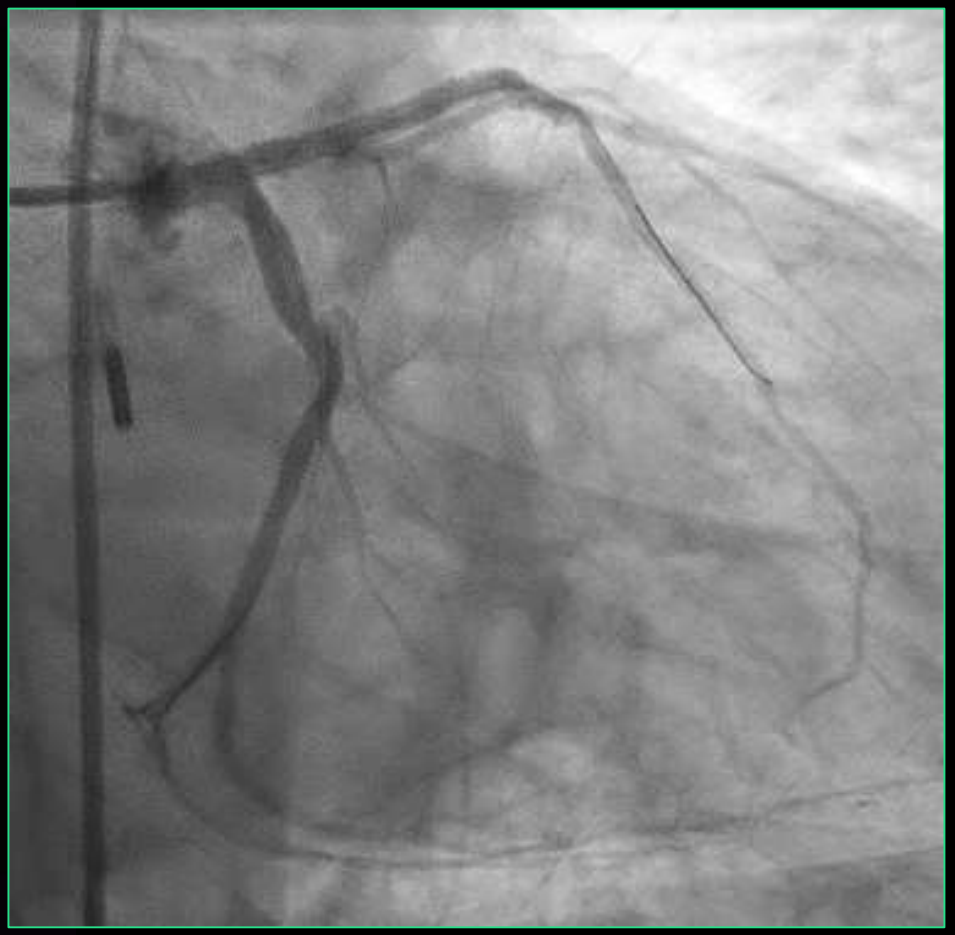


Final Result LAD-LM

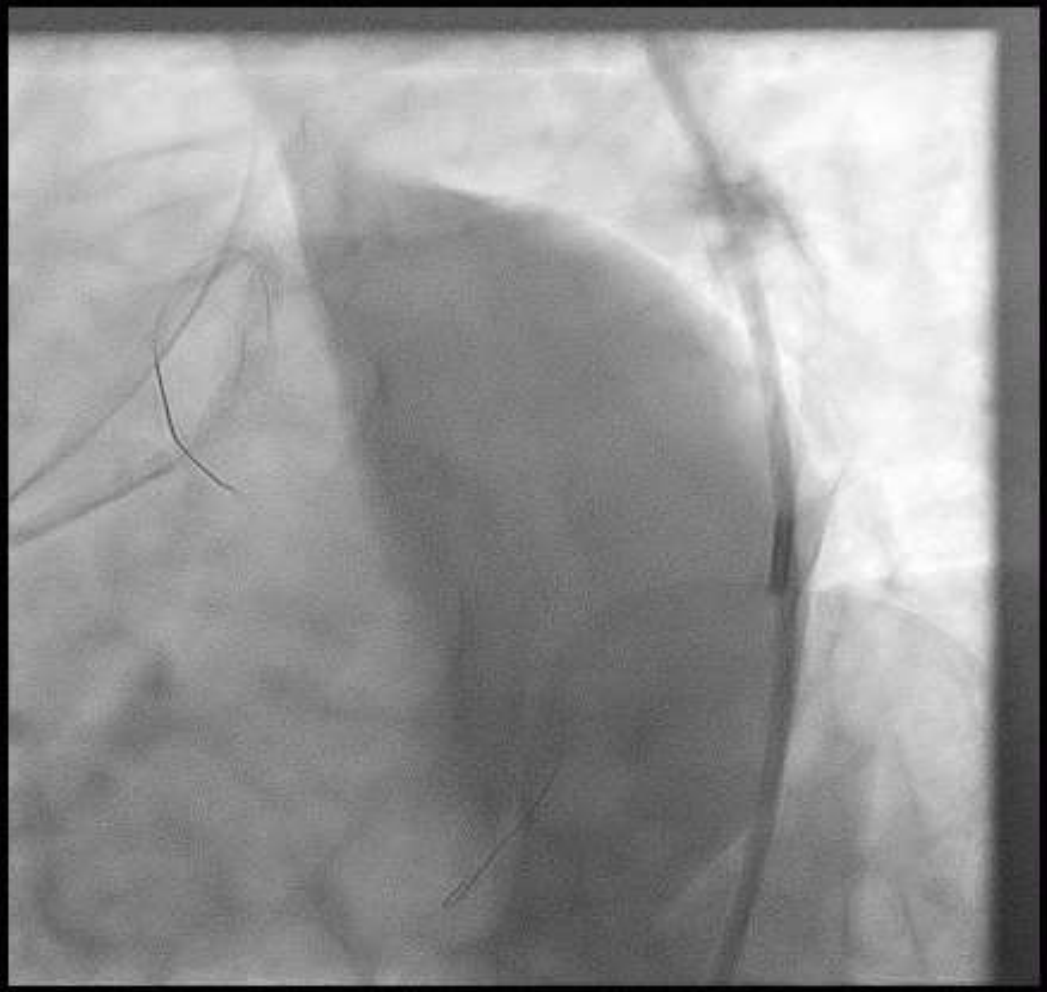


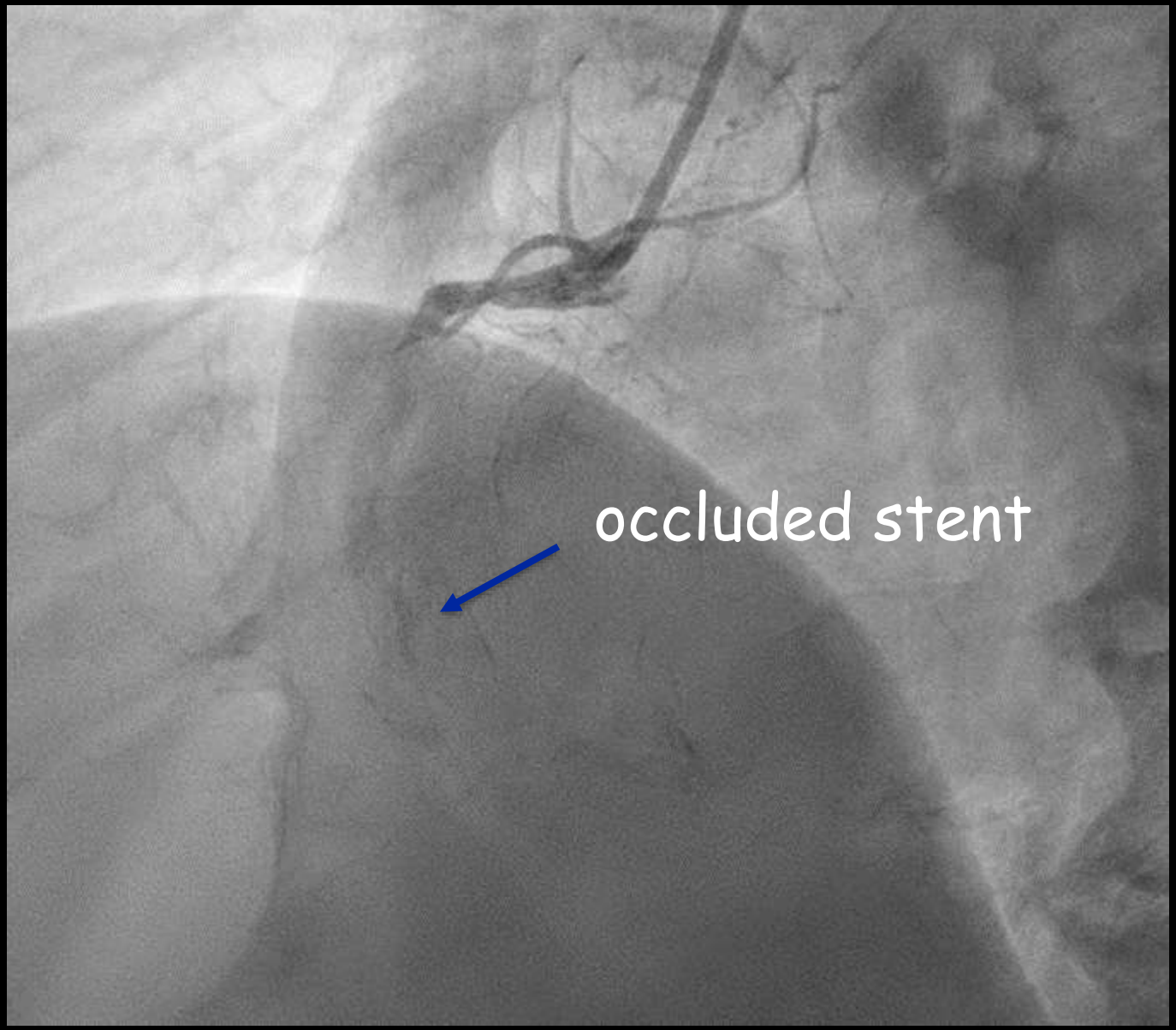
Final Result

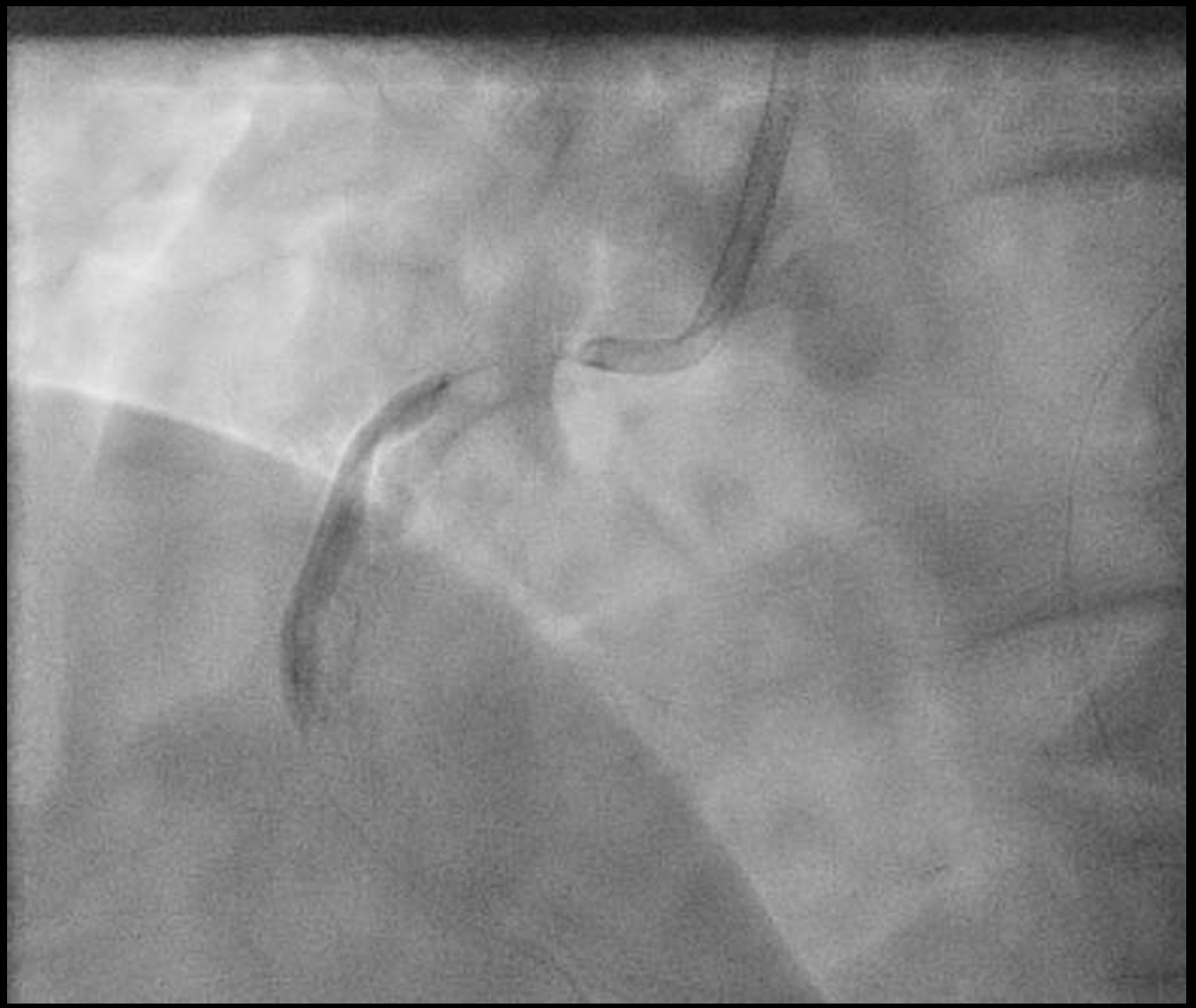




Final Result

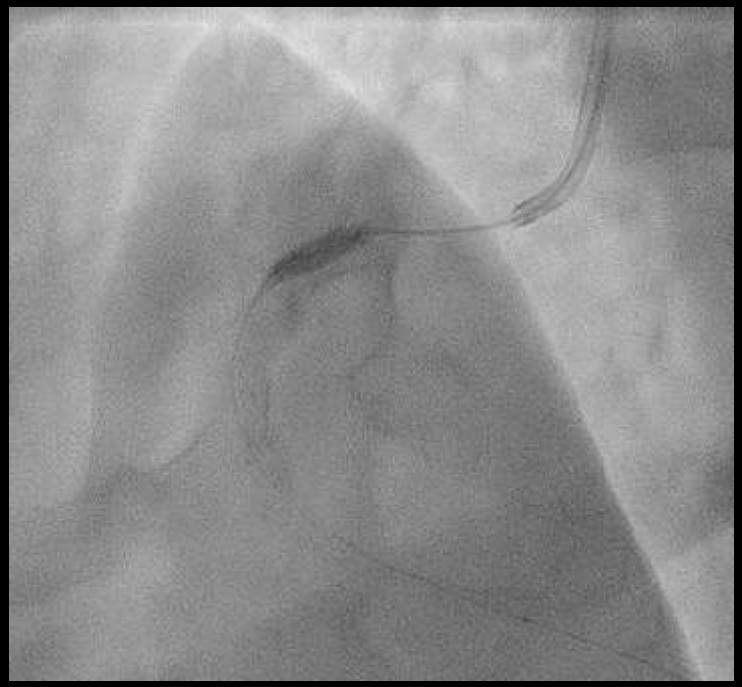



occluded stent

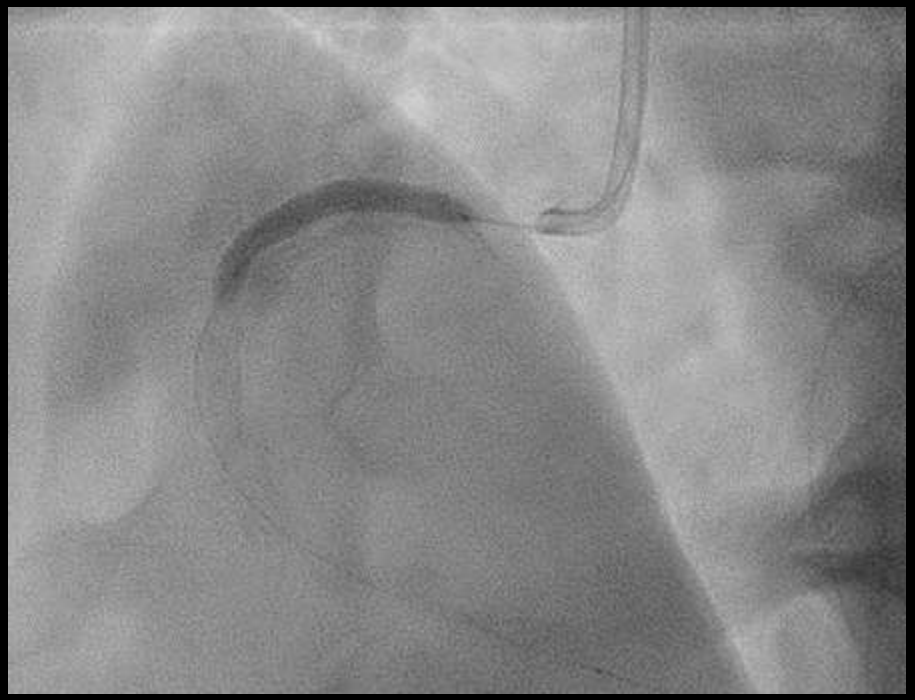


The passage has been subintimal all the way

Shockwave balloon



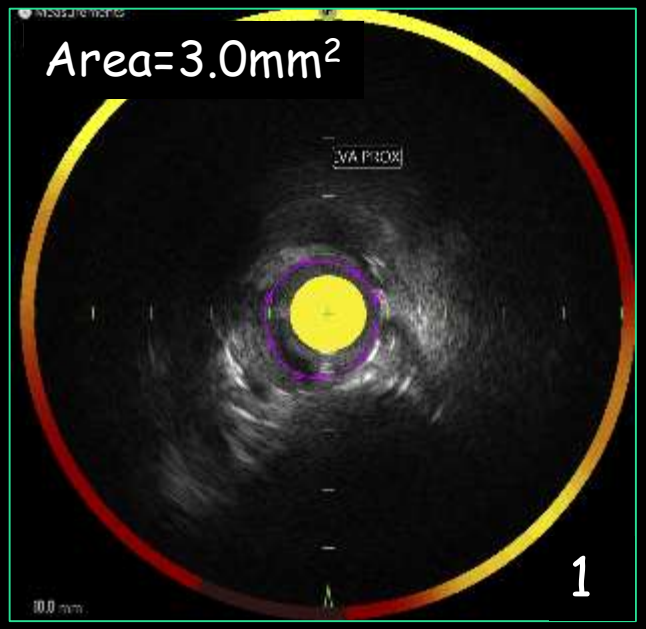
Full inflation of NC balloon

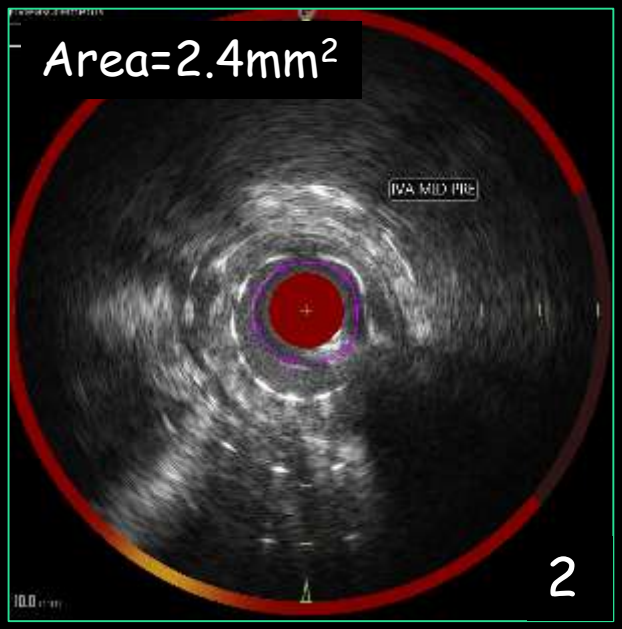


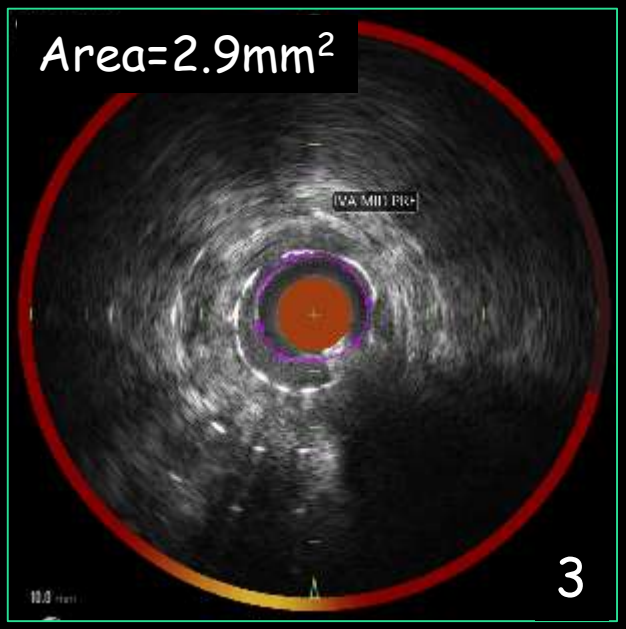
Final

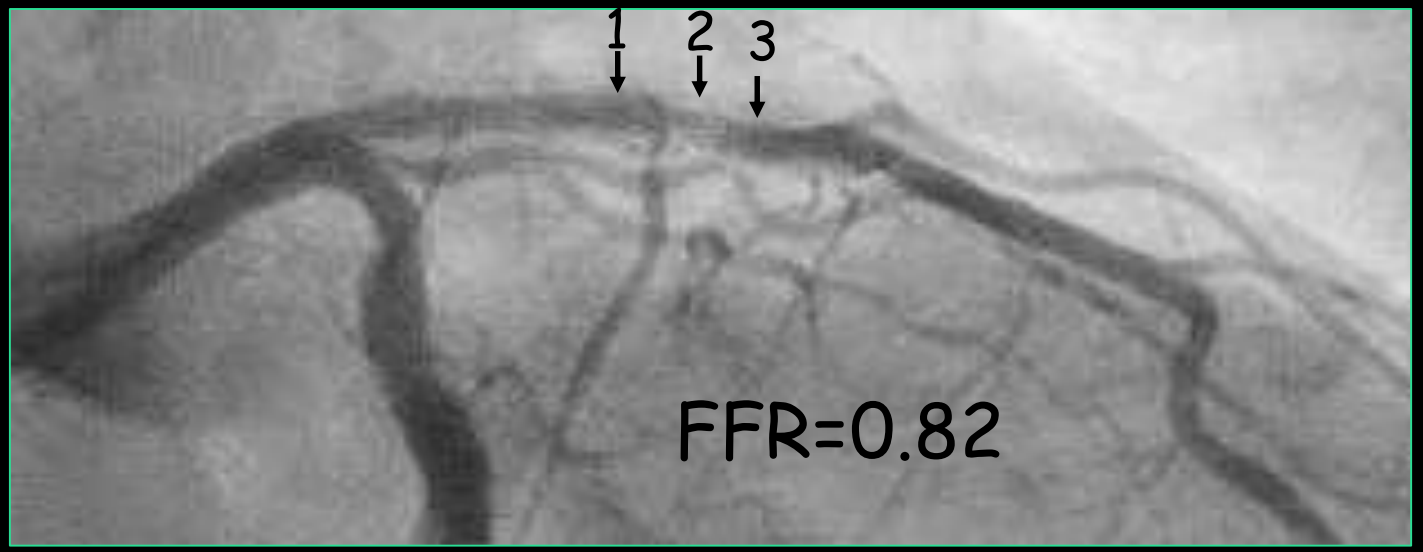
ISR

October 2019 LAD



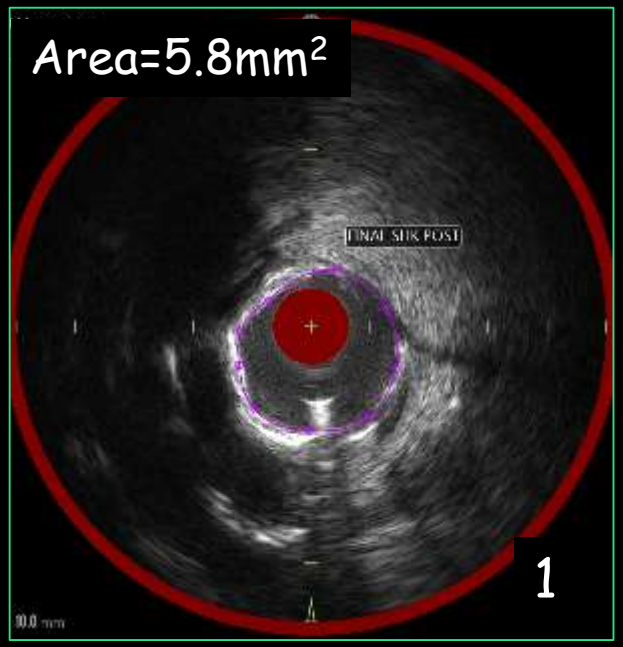


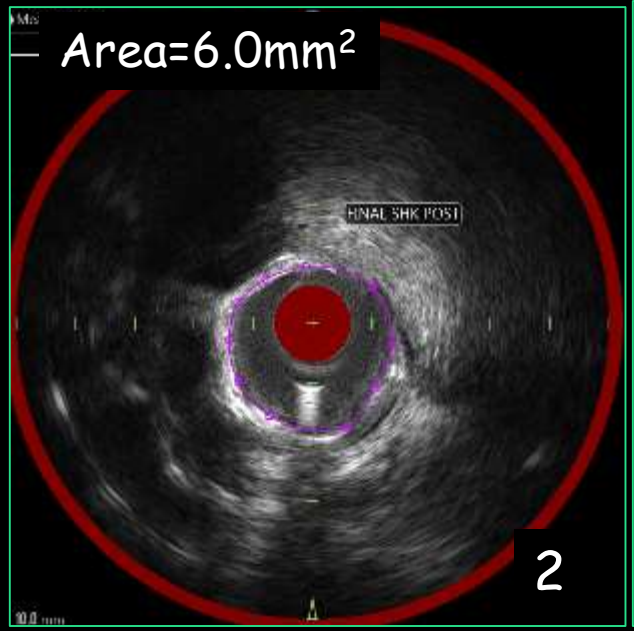


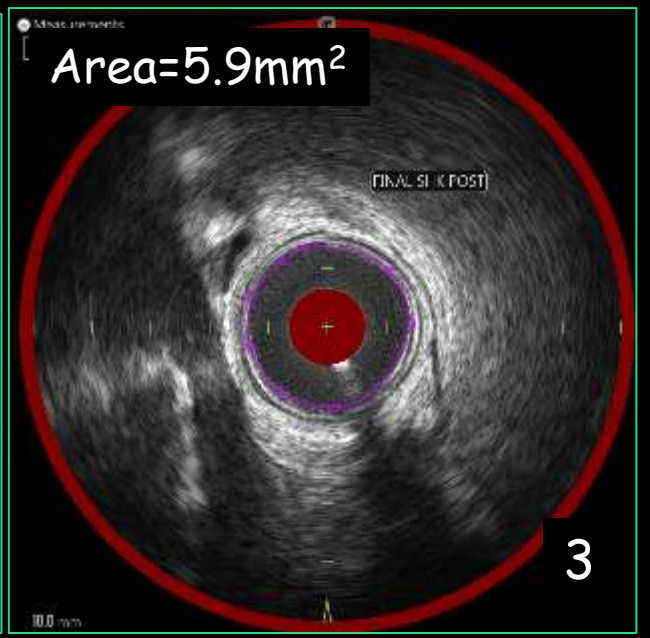


ISR

October 2019 LAD after Shockwave and dilatation







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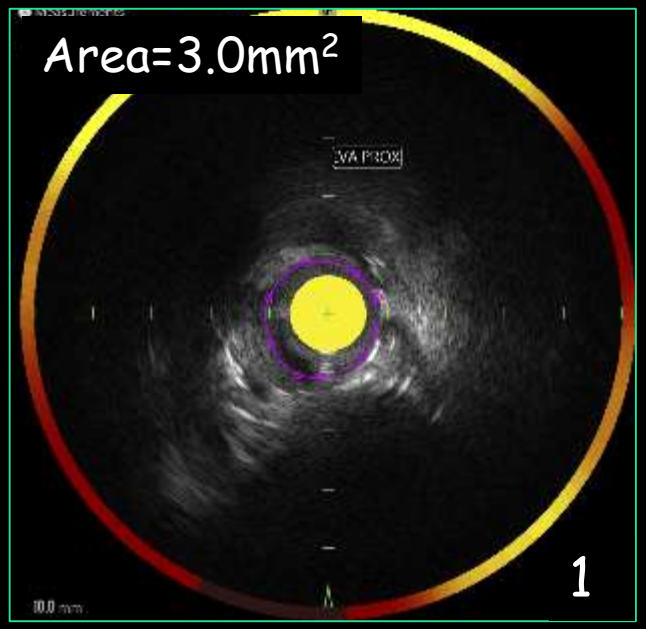
Area=3.0mm²
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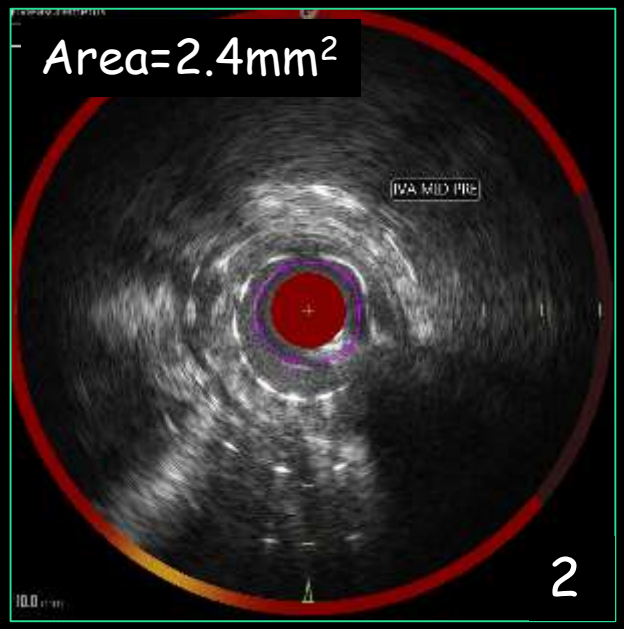
Area=2.4mm²
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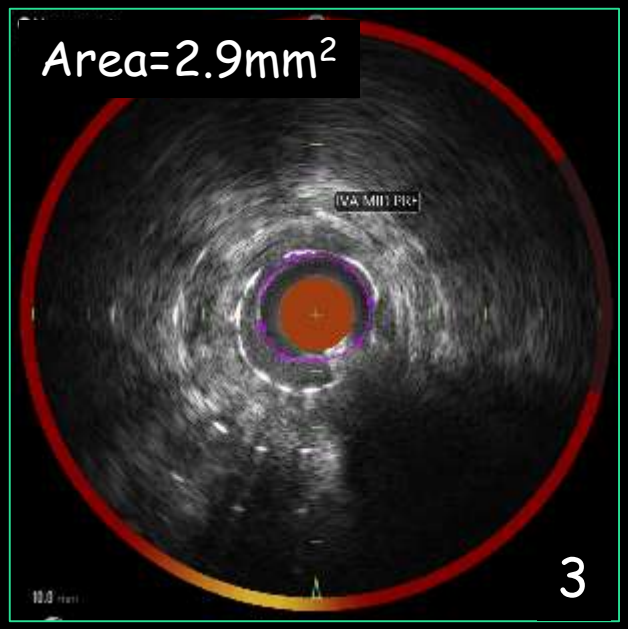
Area=2.9mm²
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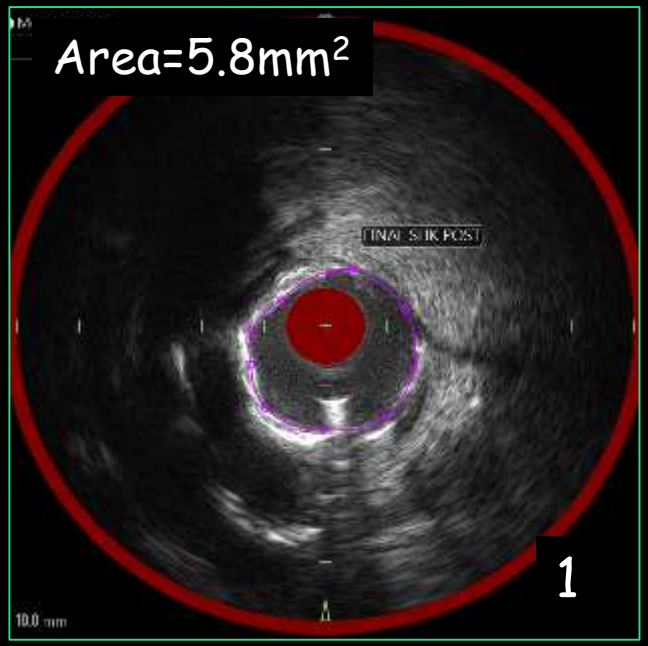
Area=5.8mm²
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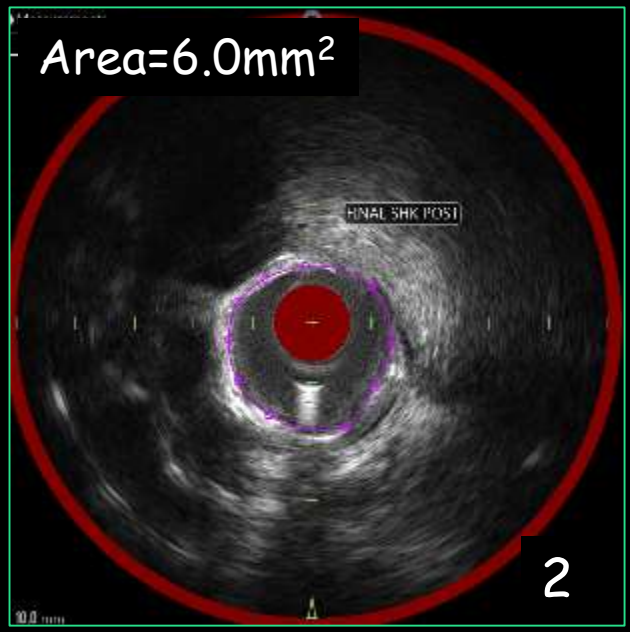
Area=6.0mm²
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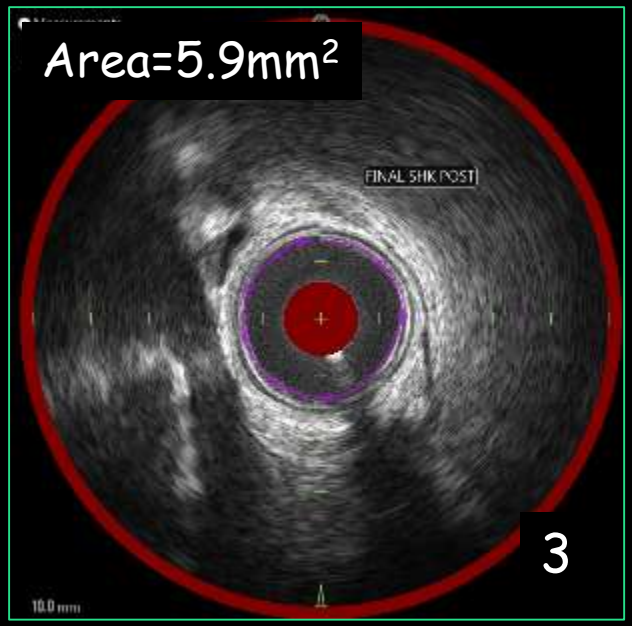
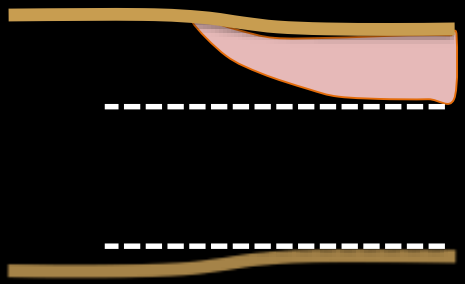
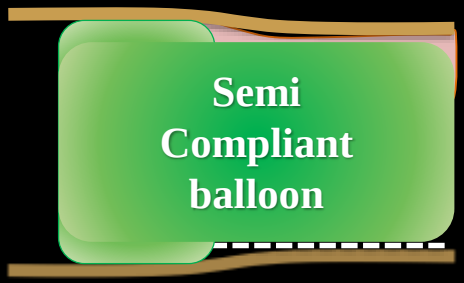

Area=5.9mm²
3

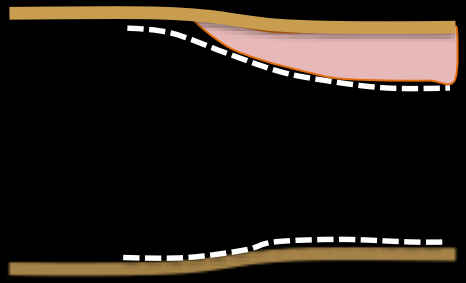
Non Compliant Balloon



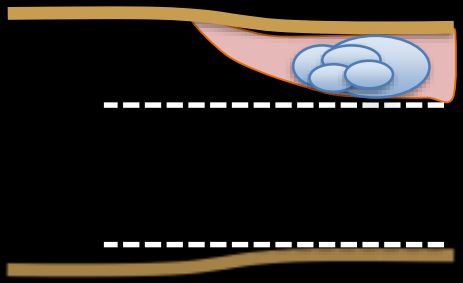
Distal expansion capability (+)
- ✓ Less vessel size discrepancy
- ✓ Compressible plaque



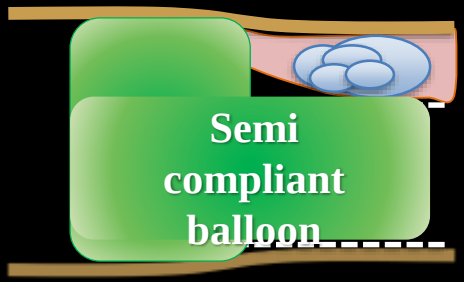
Post-dilatation with
Slightly undersized NC/SC
balloon as needed



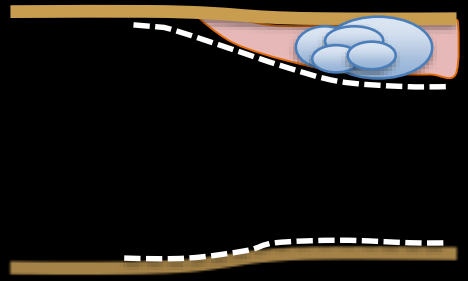
✓ Correcting malapposition
(+/- Achieving larger lumen)



Distal expansion capability (-)
- ✓ Uncompressible plaque



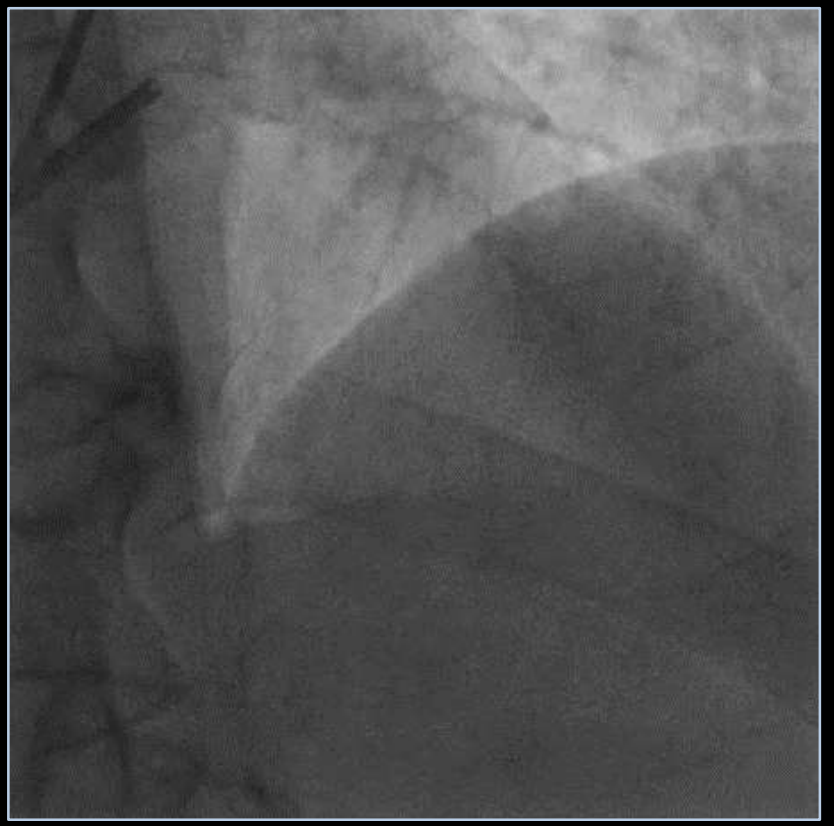
Post-dilatation with
Slightly undersized SC
balloon as needed



✓ Correcting malapposition

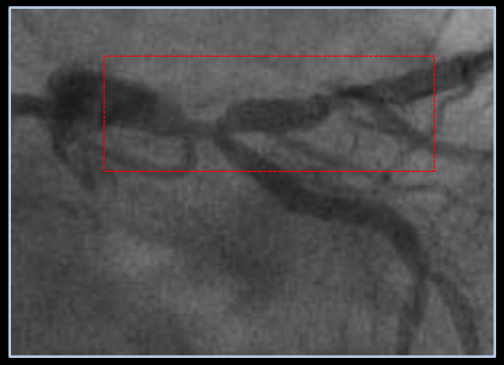
Efficacy of SC balloon postdilatation in the lesion with eccentric calcified lesion

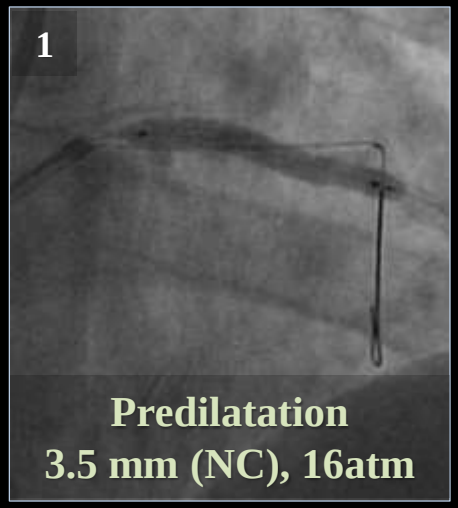
Distal LMT : eccentric calcified lesion (75%)

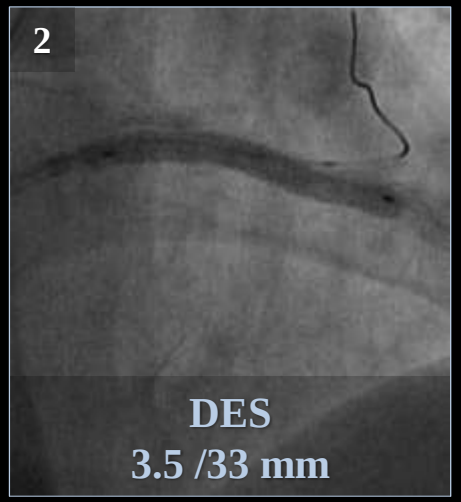


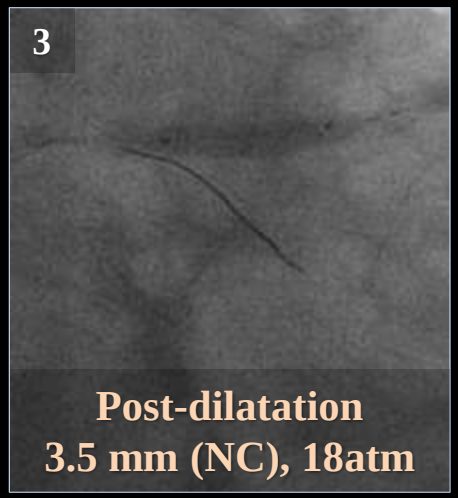
Proximal LAD: diffuse calcified lesion (75%)

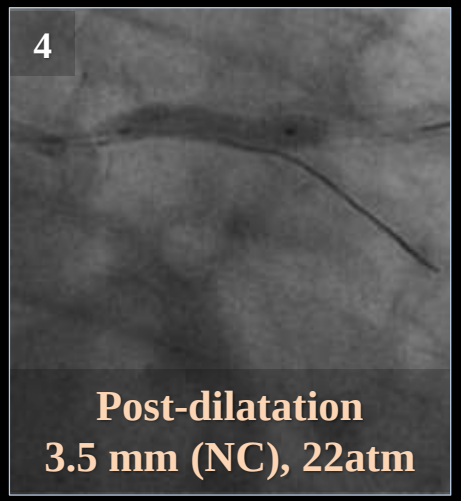
PCI for distal LMT to proximal LAD lesion



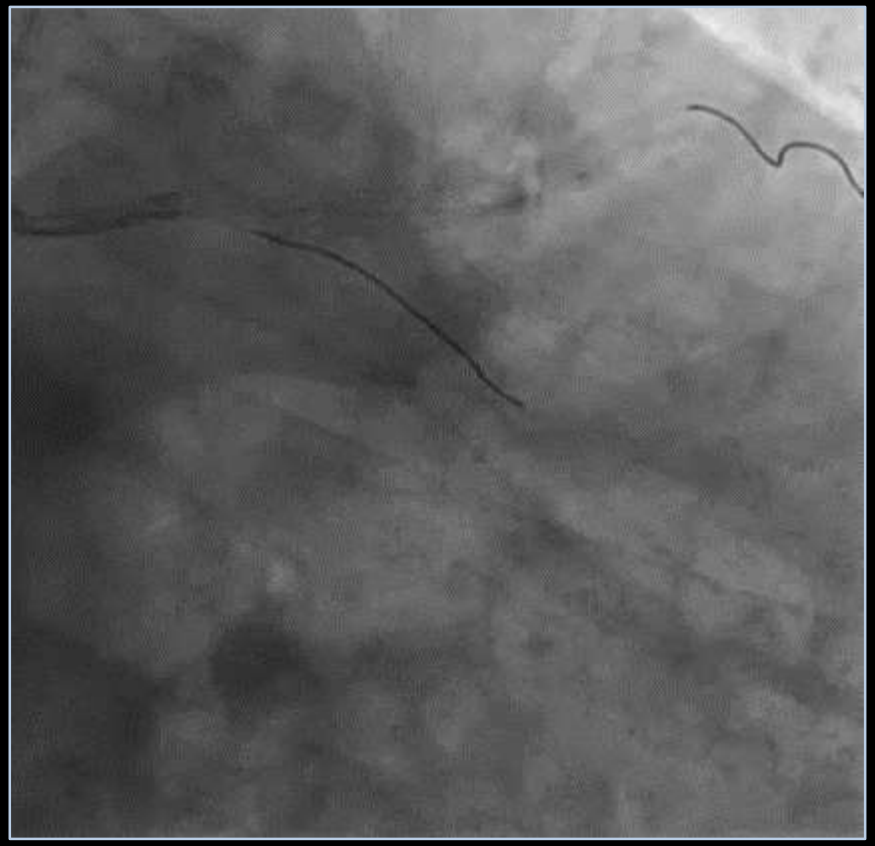


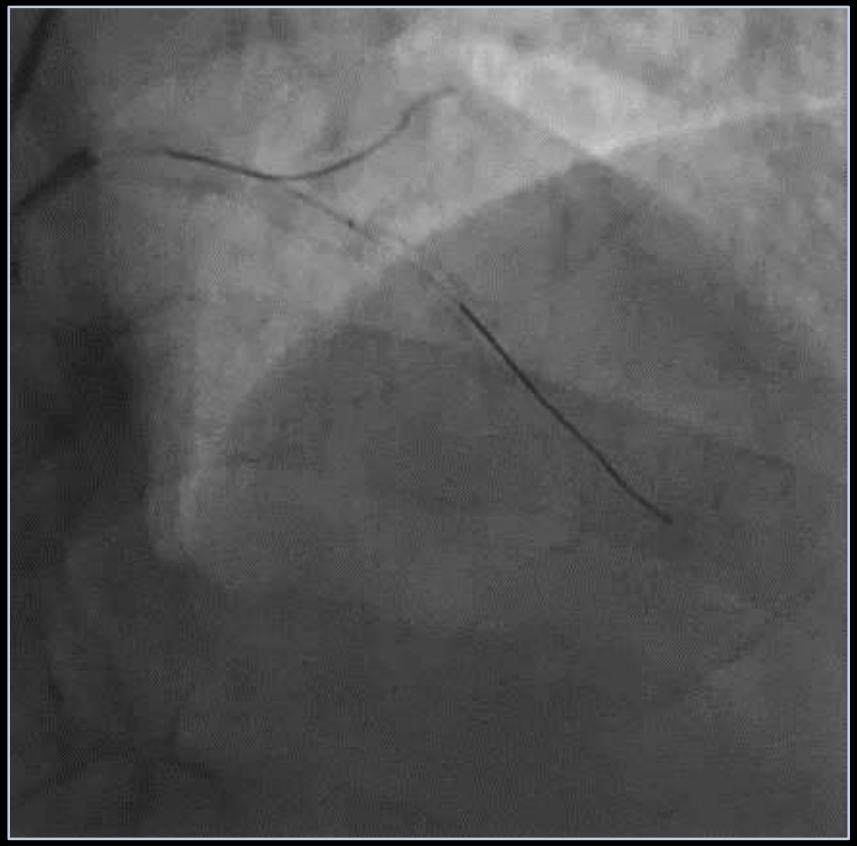






PCI for distal LMT to proximal LAD lesion

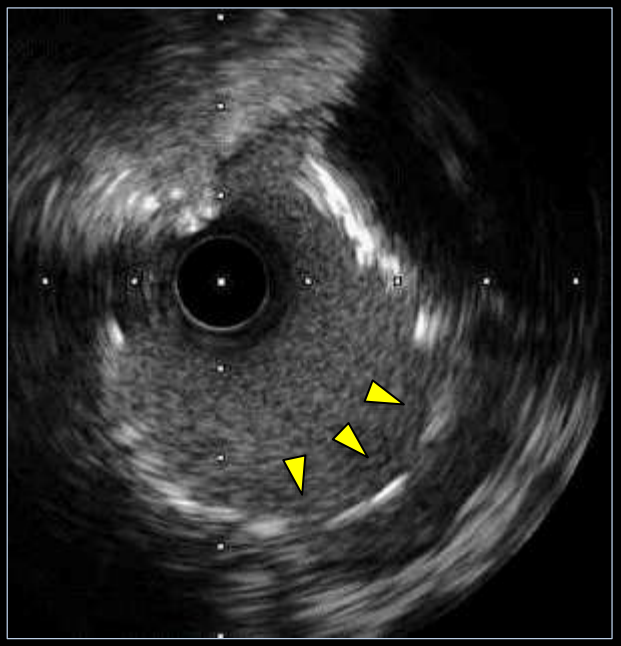




After stent implantation and 1st post-dilatation

➡ **Excellent angiographic results**

IVUS evaluation after stent implantation and 1st post-dilatation

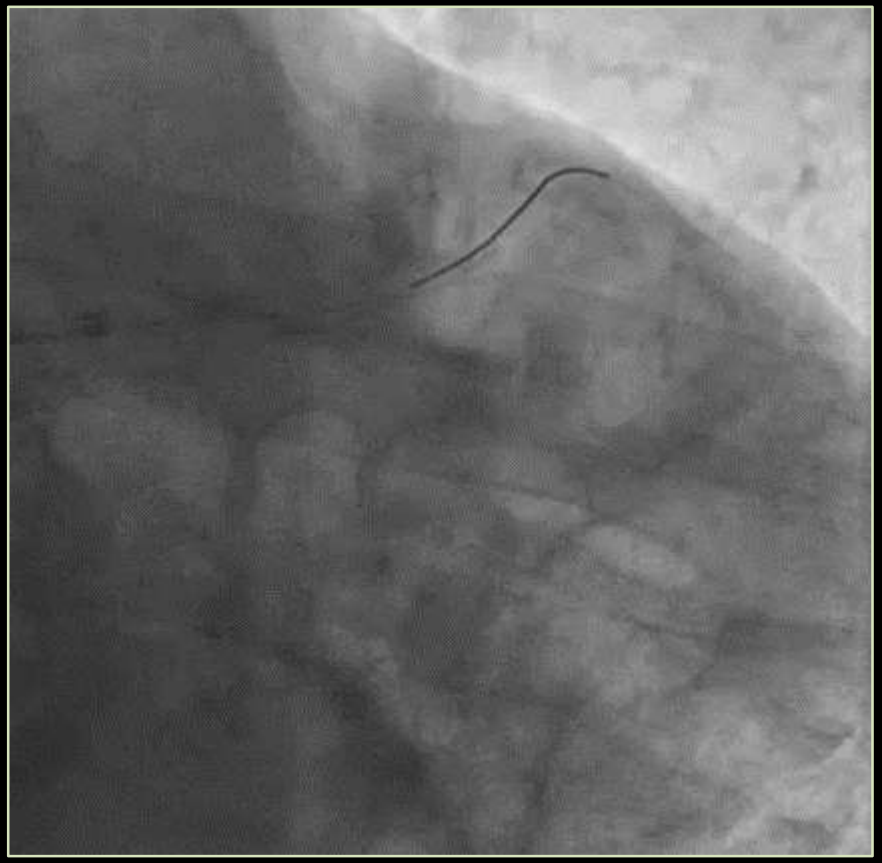


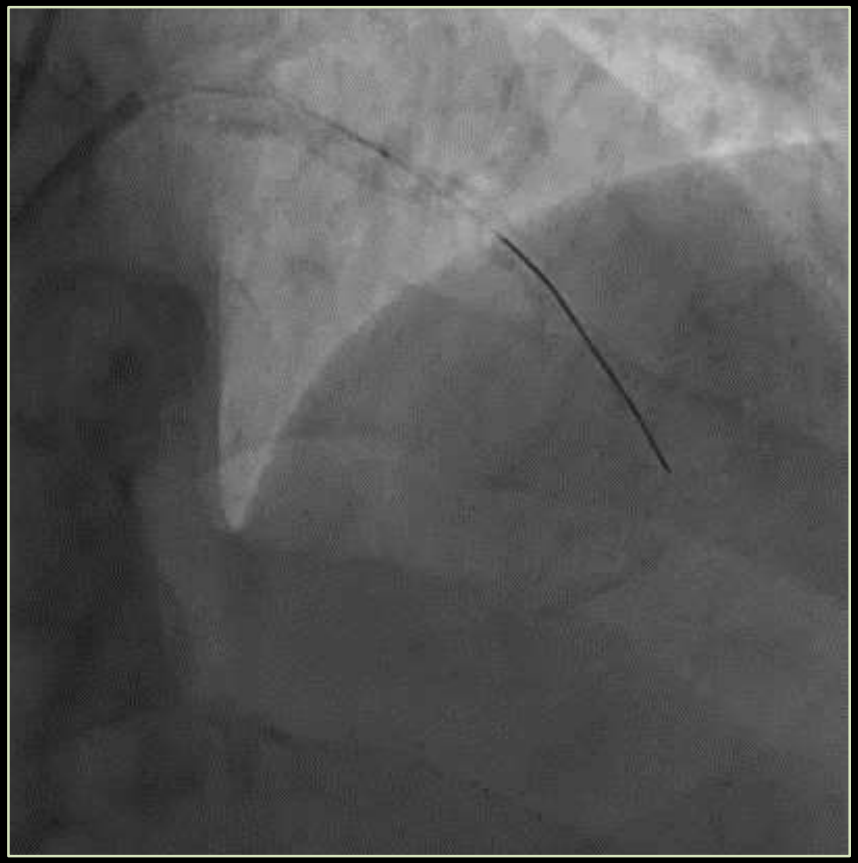
Stent diameter: 3.53 mm
Lumen diameter: 4.23 mm
➡ **4.0 mm SC balloon**

Major malapposition
- ✓ **Eccentric plaque**
- ✓ **Calcified plaque (uncompressible)**

➡ **SC balloon**

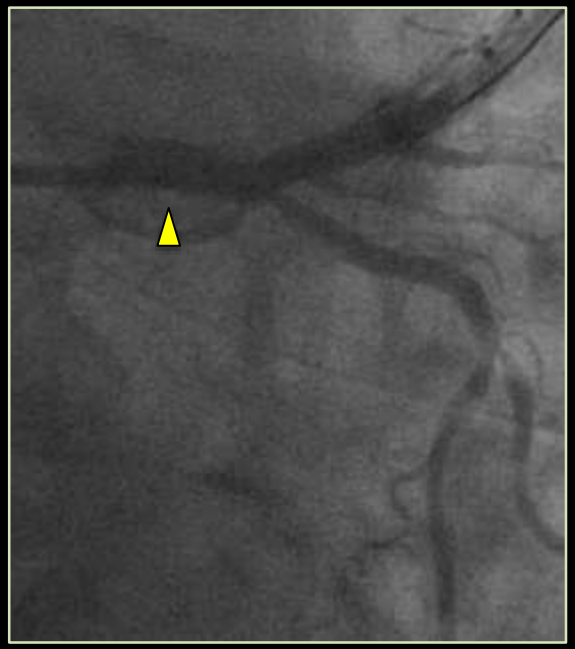
Additional post-dilatation to optimize malapposition

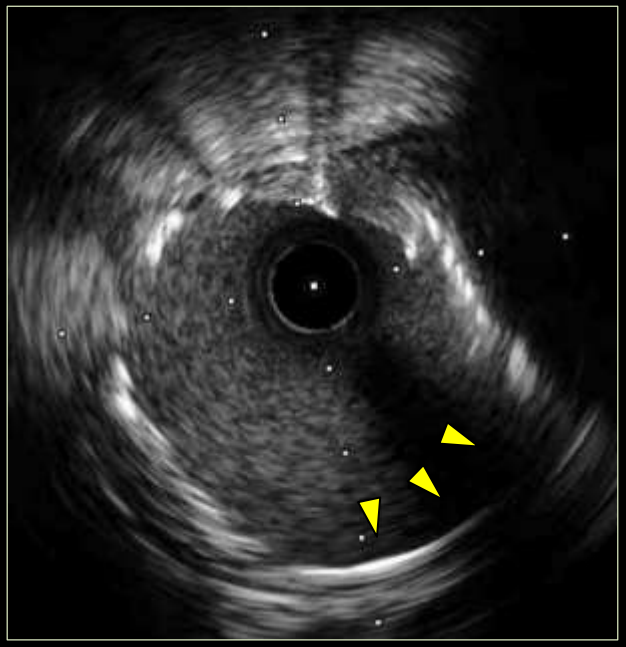




After 2nd post-dilatation with SC balloon

IVUS evaluation after 2nd post-dilatation

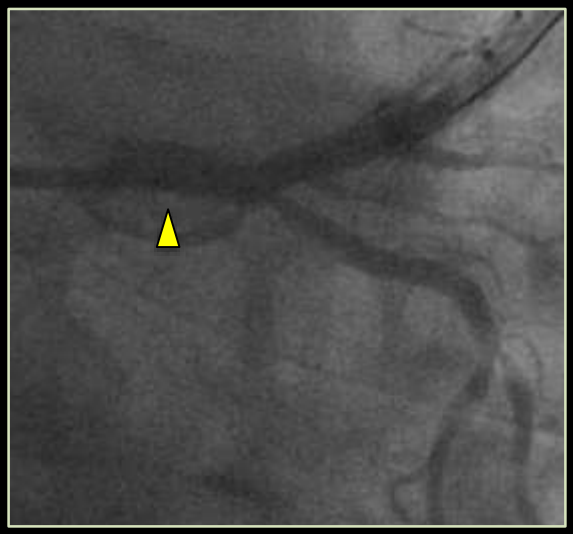


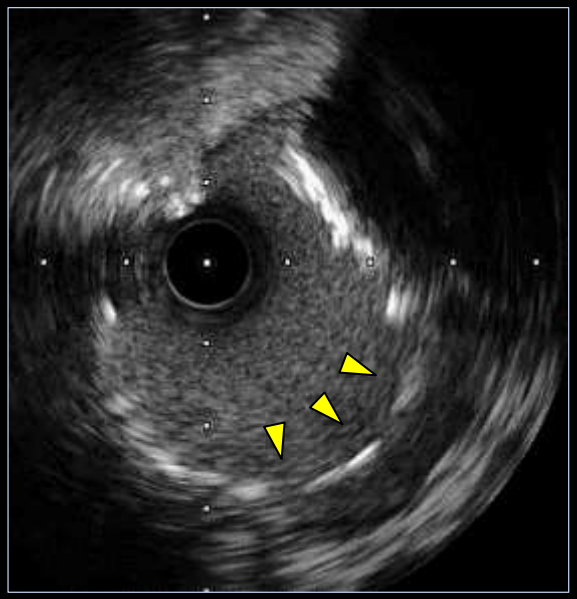


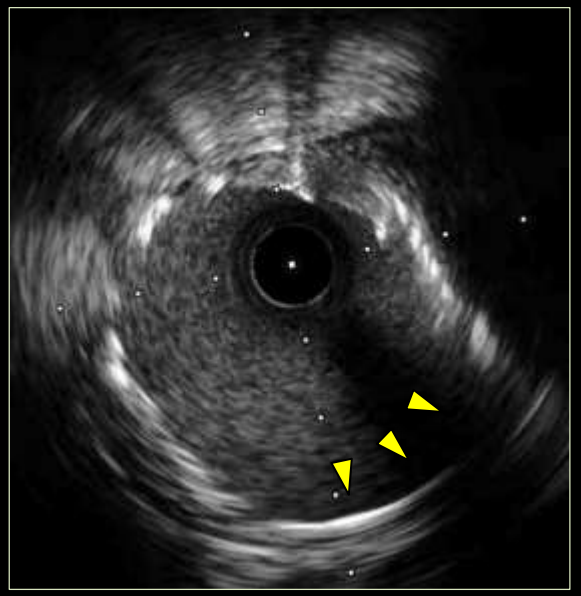
Optimally corrected malapposition

✓ **No proximal edge dissection**

Comparison of IVUS findings







After 1st post-dilatation with 3.5 mm NC balloon

After 2nd post-dilatation with 4.0 mm SC balloon

In calcific lesions learn how to select different solutions