TCTAP 2016

Introducing Core-wire Technology & Challenging Cases with Onyx

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Fast & Furious

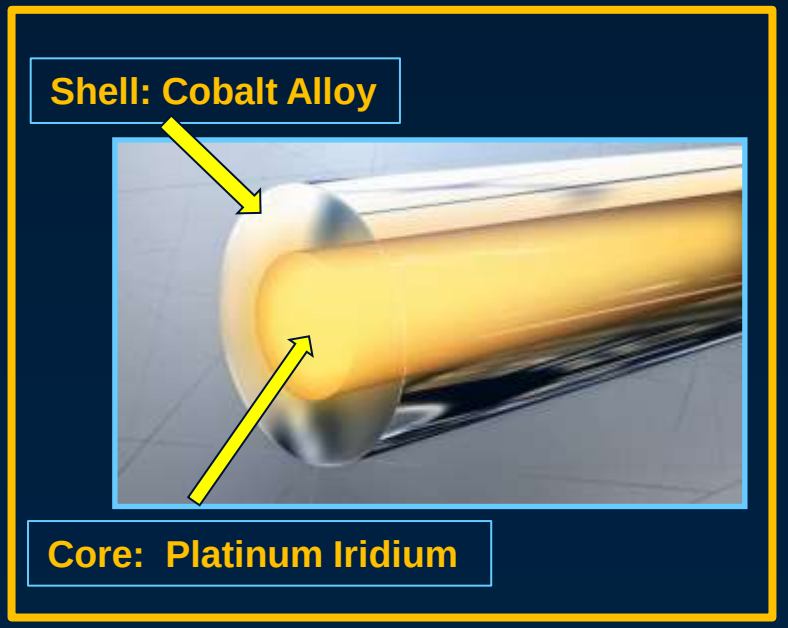
Quality of gear makes a difference!

Core Wire Technology

- Core Wire Technology, used in Resolute Onyx™, enables thinner struts without compromise in radiopacity and overall structural strength

- Denser, more radiopaque inner core material allows for improved visibility

- Cobalt alloy shell retains the structural strength



Continuous Sinusoidal Technology - CST

CST implemented with the Resolute Integrity Platform

- CST is created from a single wire shaped into a sinusoid, helically wrapped and laser fused allowing for a continuous range of motion
- This continuous flex improves deliverability and conformability compared to laser-cut stents

Core Wire and CST

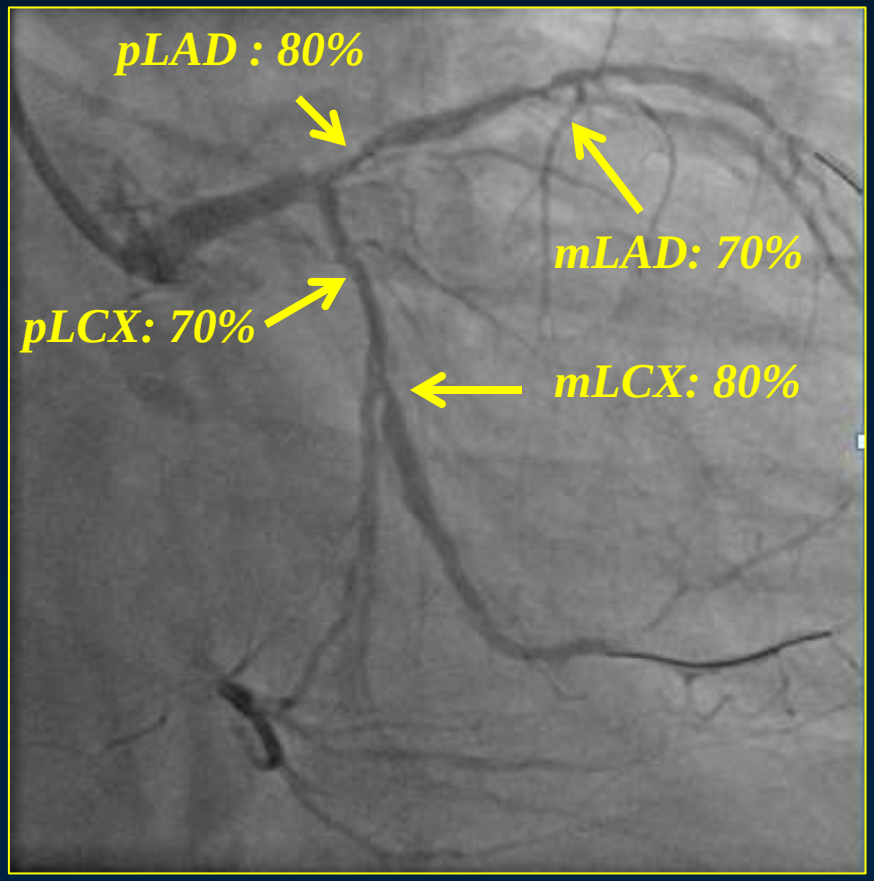
Core Wire and Continuous Sinusoidal Technologies

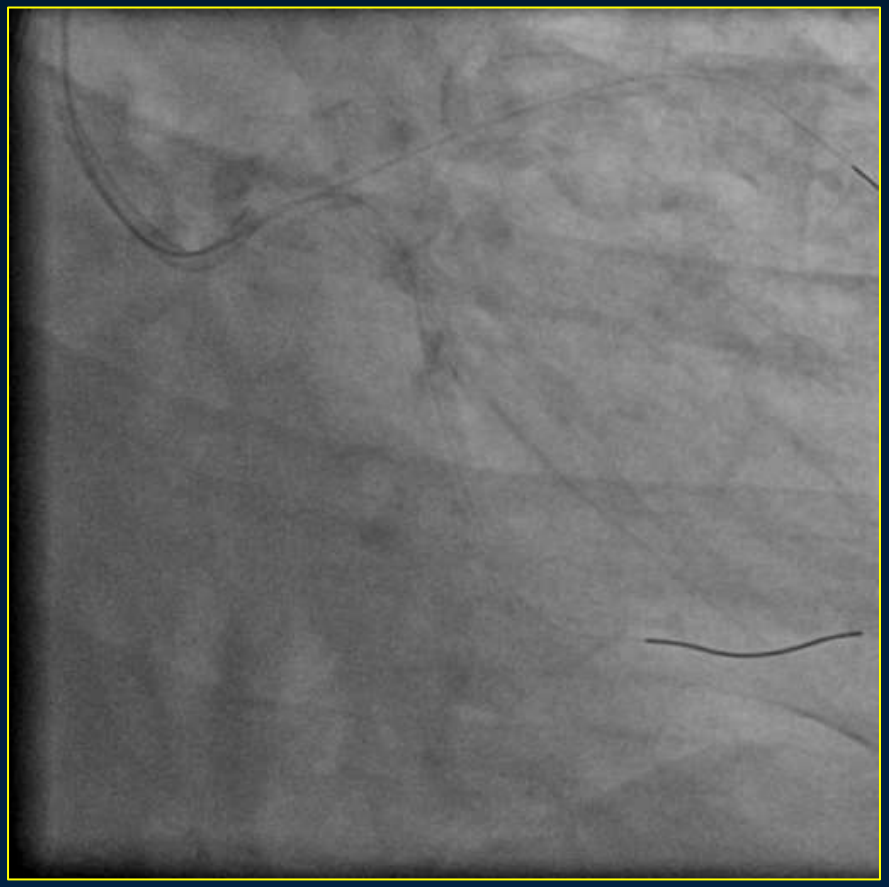
- **The combination of CST and Core Wire Technologies allows for improved deliverability and conformability**

Case 1

- Patient: M/72
- IDDM, hypertension
- Chronic AF on Eliqus
- Syncope and CT coronary showed severe triple vessel disease

Coronary Angiogram

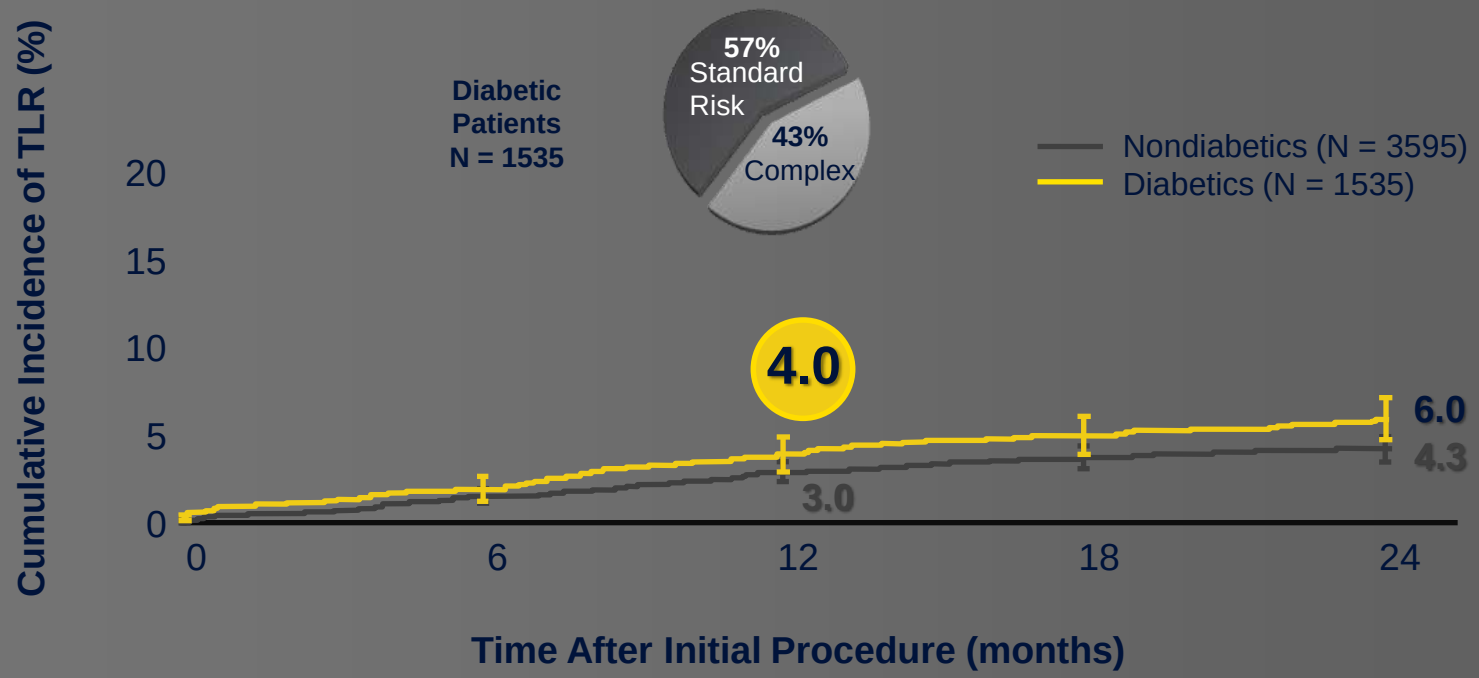




Coronary Angiogram

Low Rates in Patients with Diabetes Despite Higher Comorbidities

RESOLUTE Pooled Analysis, 24 Months

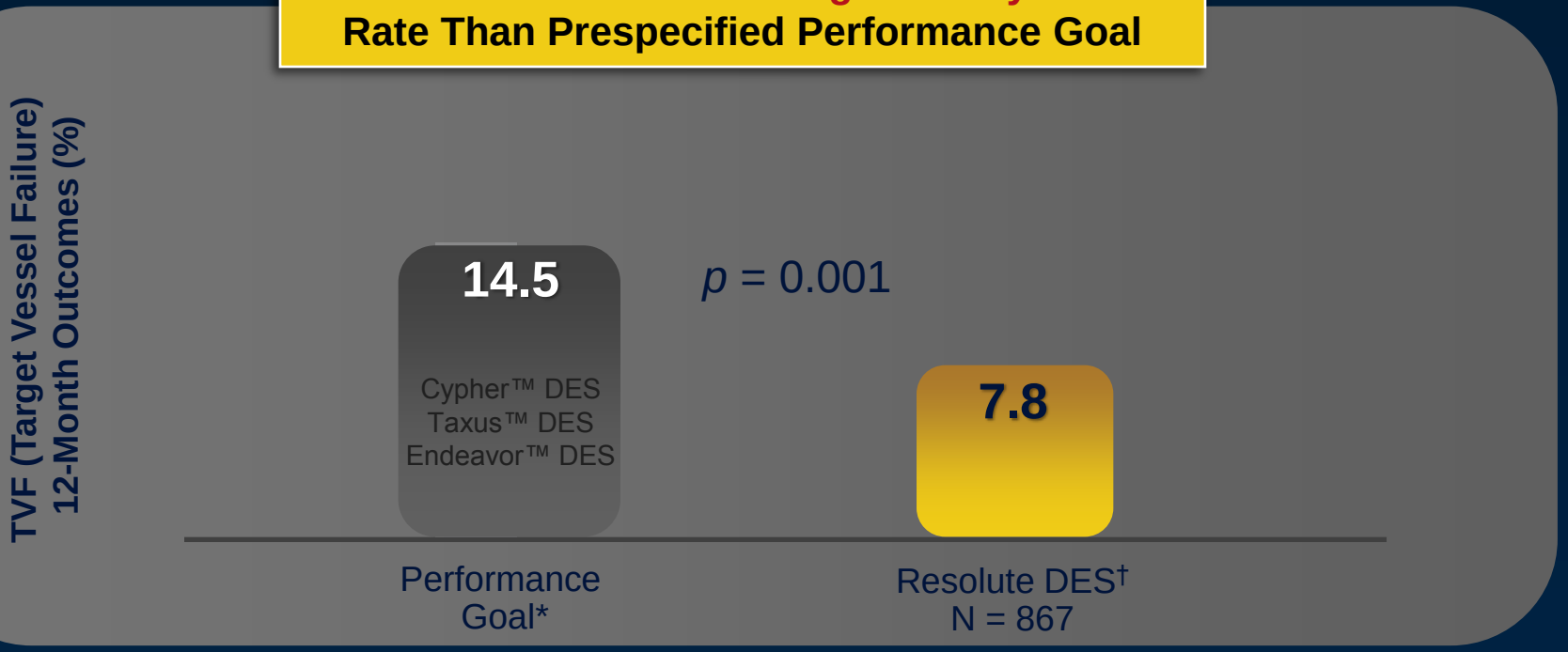


Resolute™ DES Data Allowed for FDA Approval for Patients with Diabetes*

Robust analysis led to first-of-its-kind FDA approval for patients with diabetes:

- **Prospective, powered diabetes analysis designed in close collaboration with FDA**
- **Independent analysis performed by Harvard Clinical Research Institute (HCRI)**

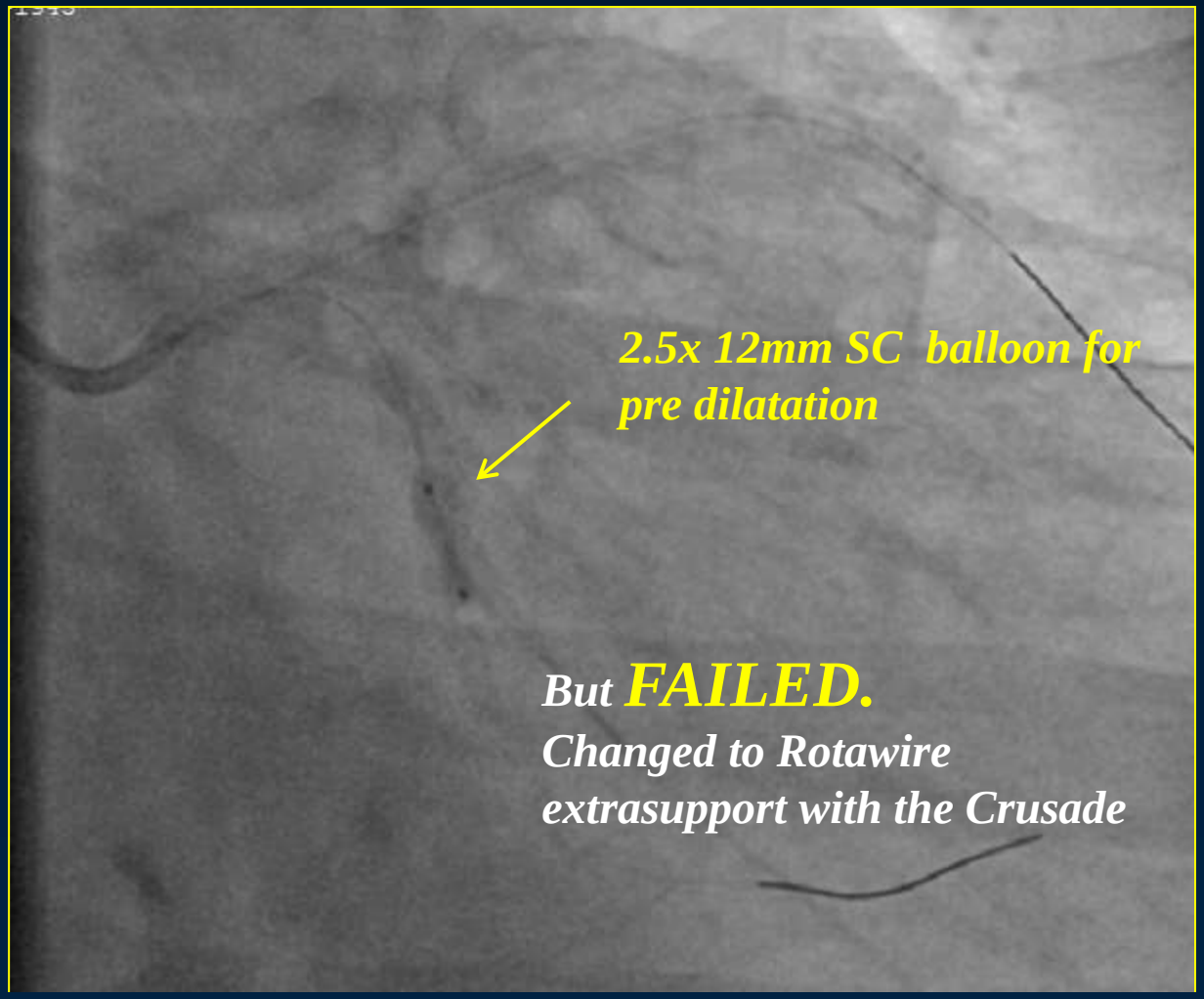
Resolute™ DES Showed Significantly Lower Rate Than Prespecified Performance Goal



Lesion Preparation for mLCX

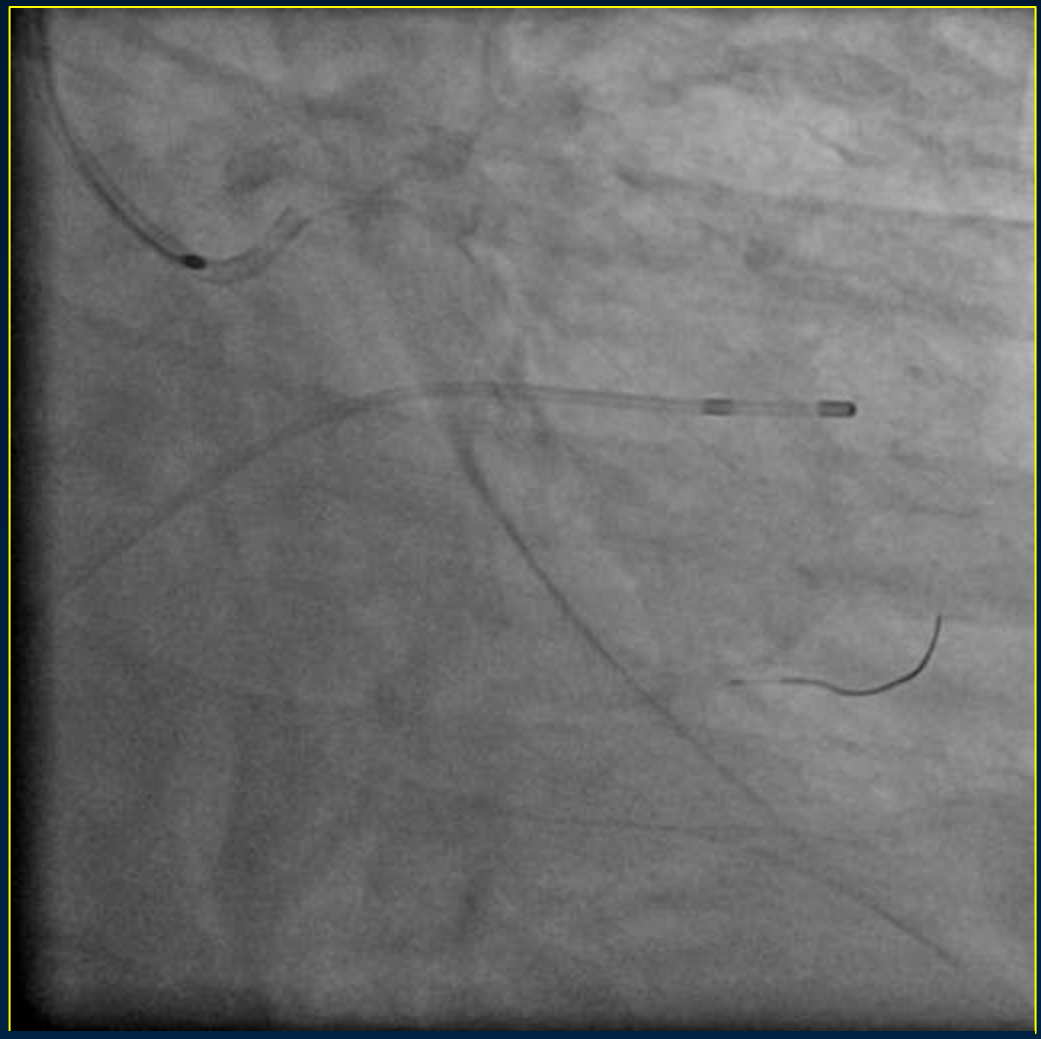
Use 2.5 x 12mm SC Balloon
to pre dilate the calcified stenosis

Lesion Preparation for mLCX

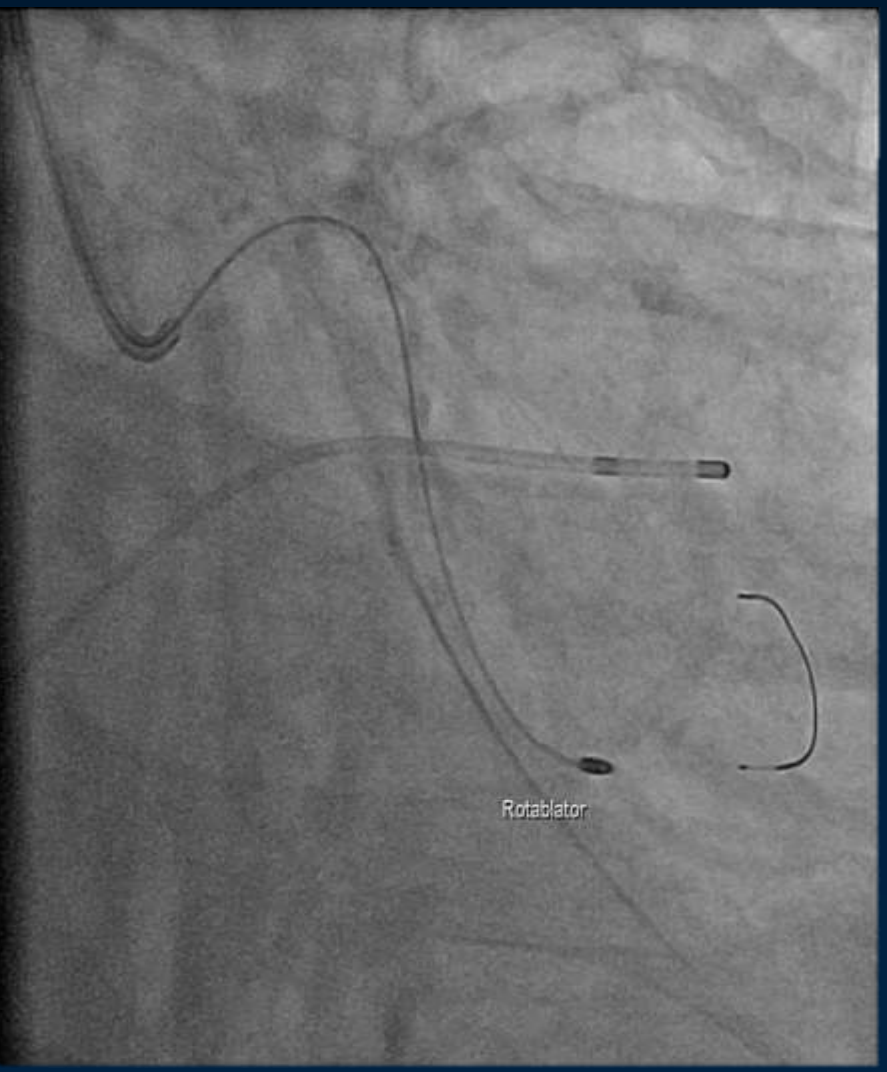


Temporary Pacing wire

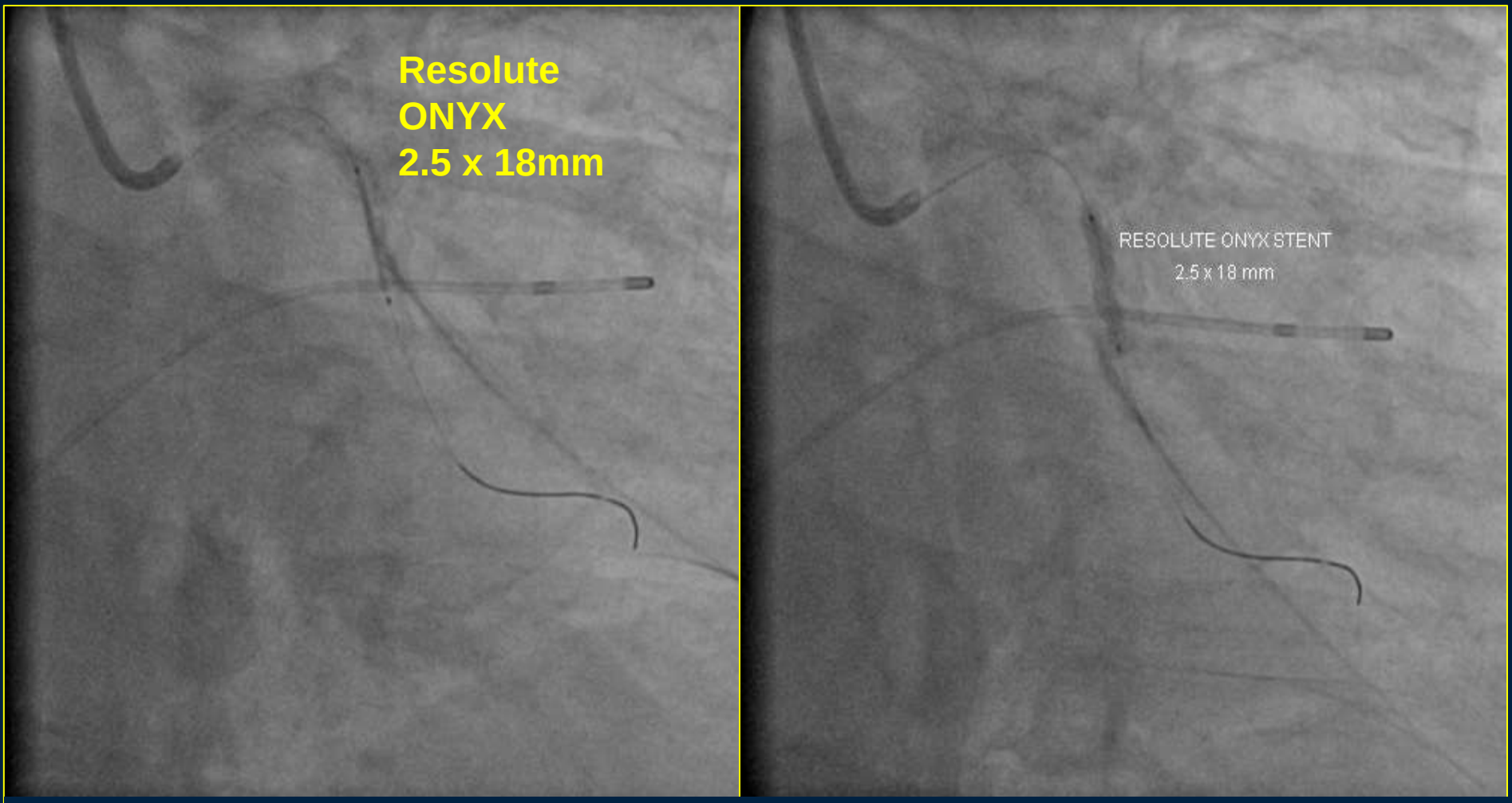
Temporary pacing wire inserted to cover the slow AF & rotablation



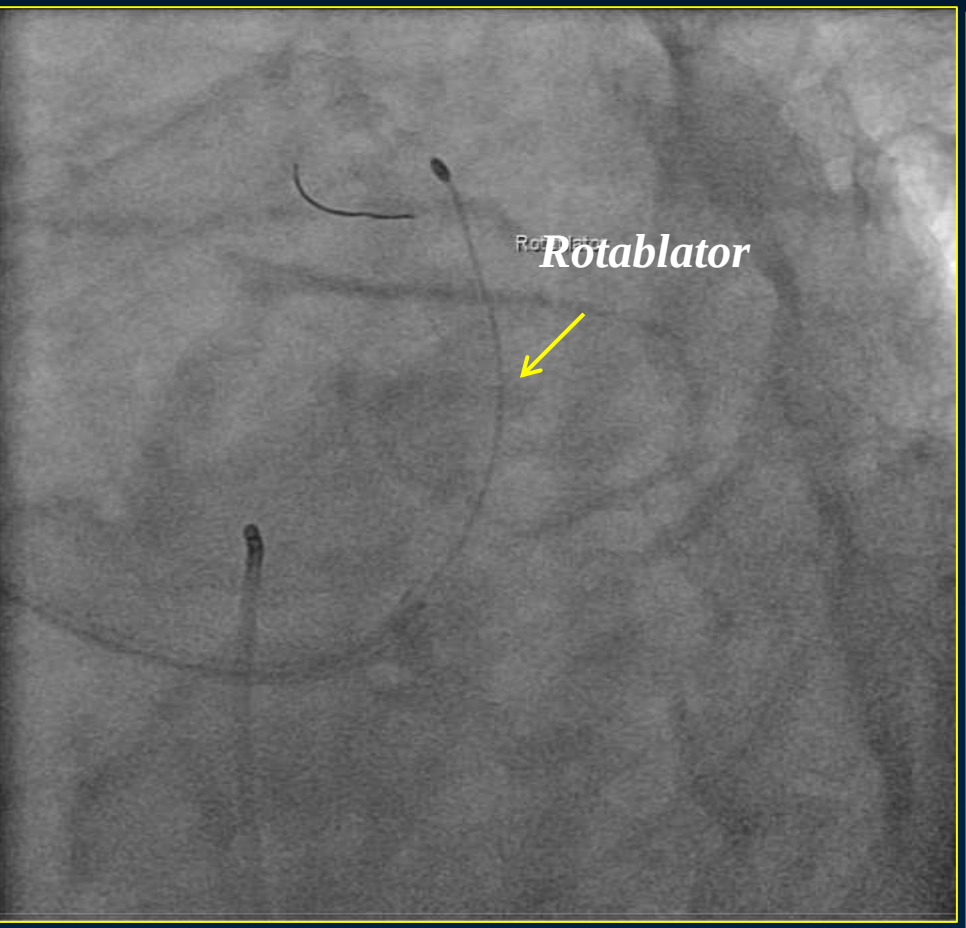
Rotablator at LCX, burr at 170,000rpm

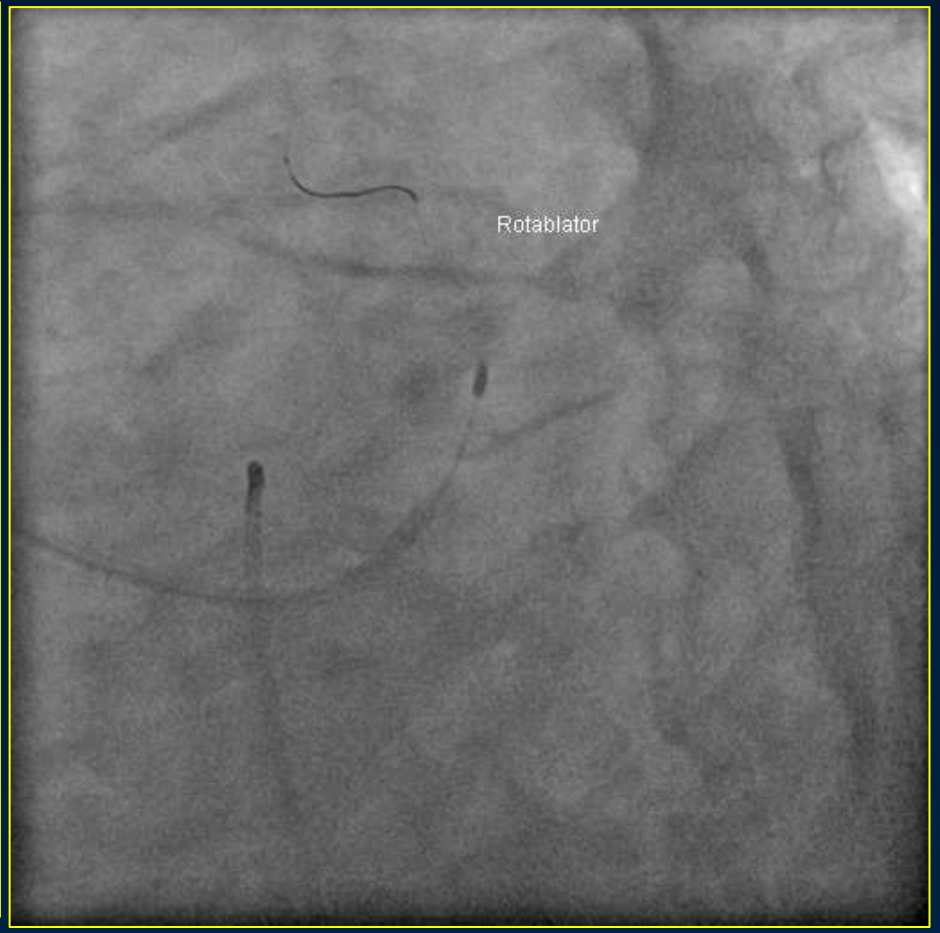


mLCX Stenting
crossing torturous proximal LCX smoothly

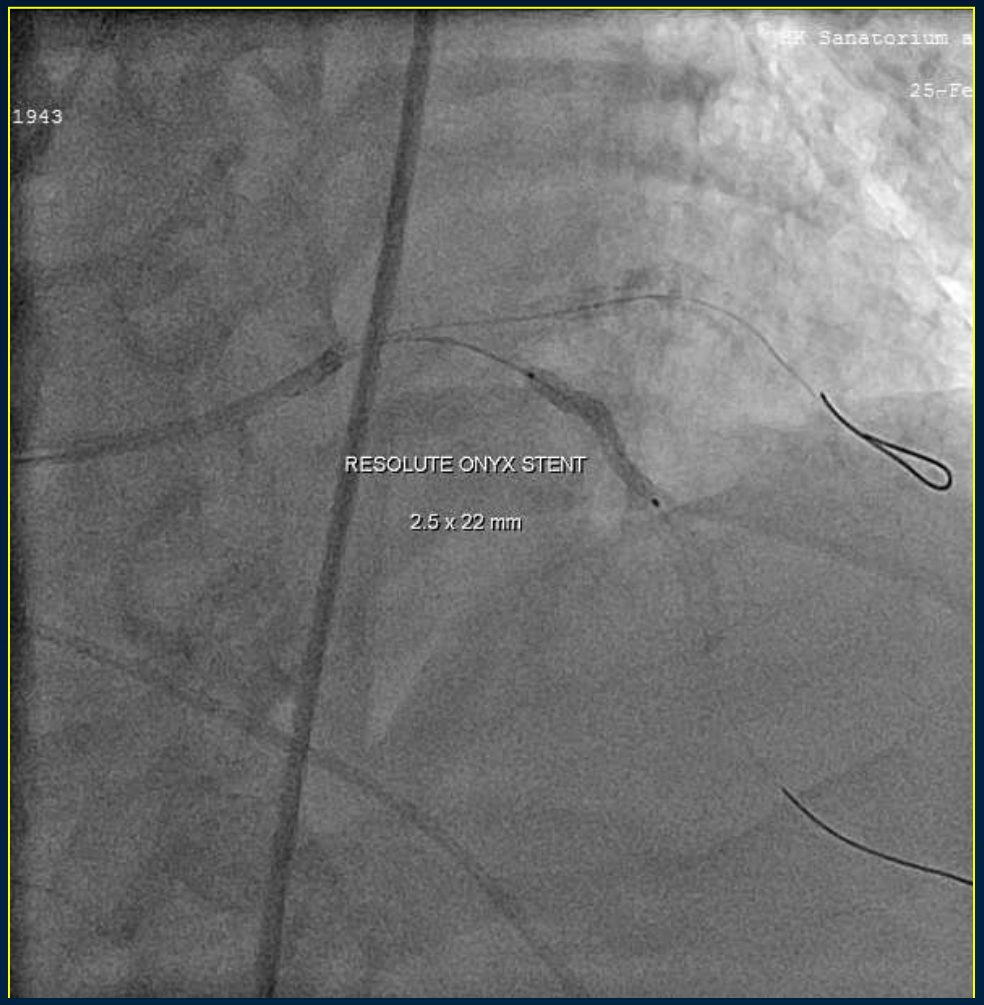


Rotablator at LAD, burr at 150000rpm

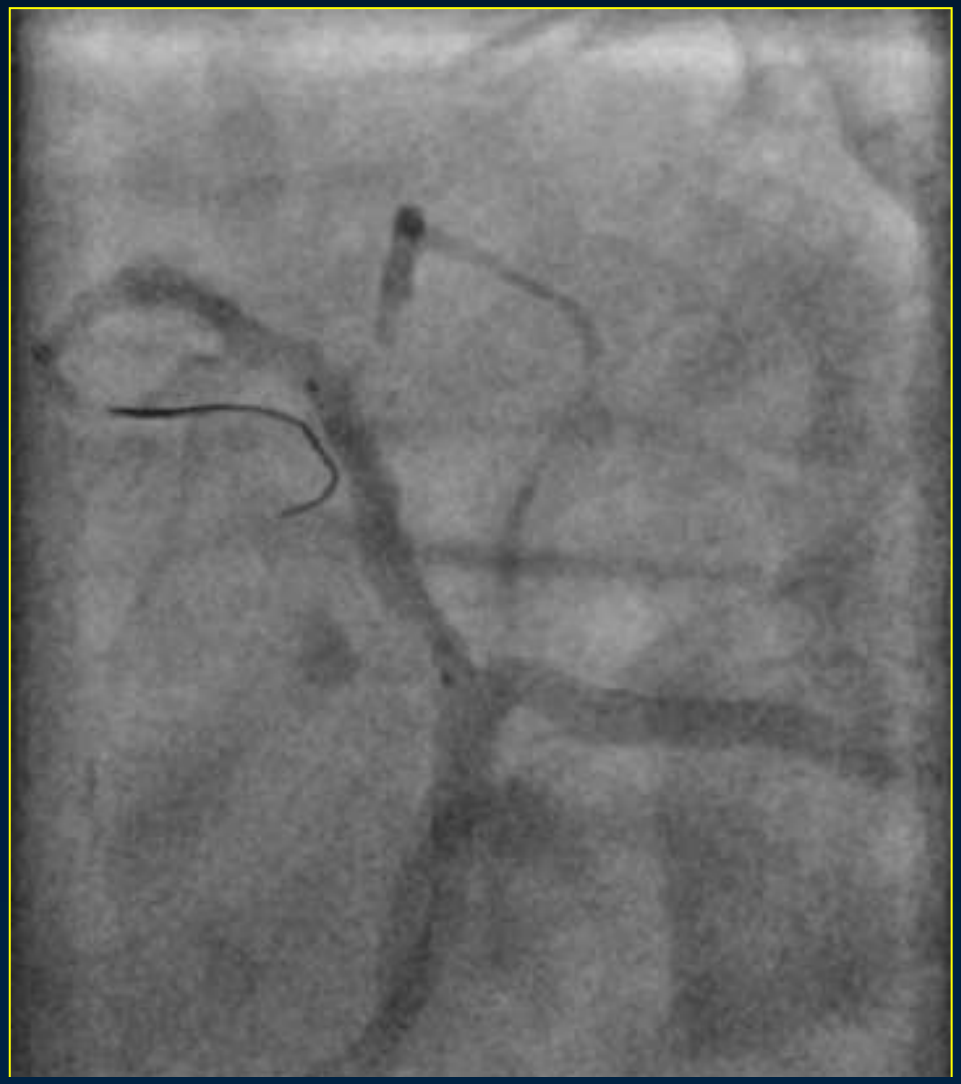




Stenting at mLAD
Resolute Onyx 2.5x22mm

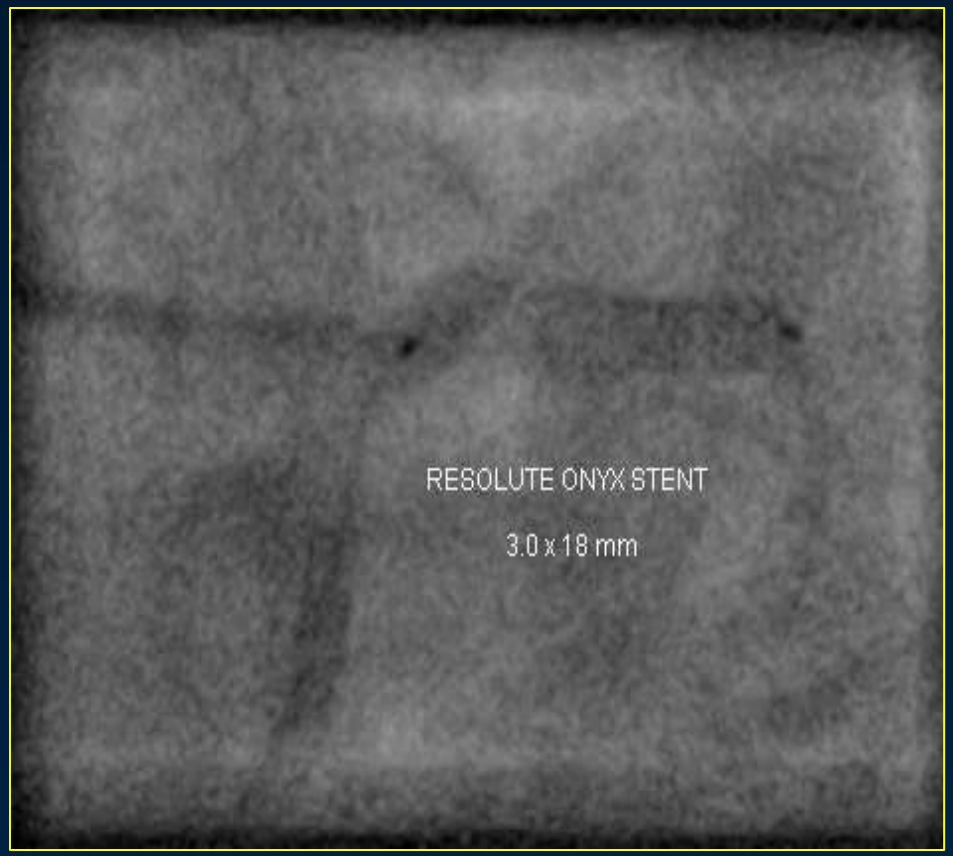


Stenting pLAD
Resolute Onyx 3.0x22mm

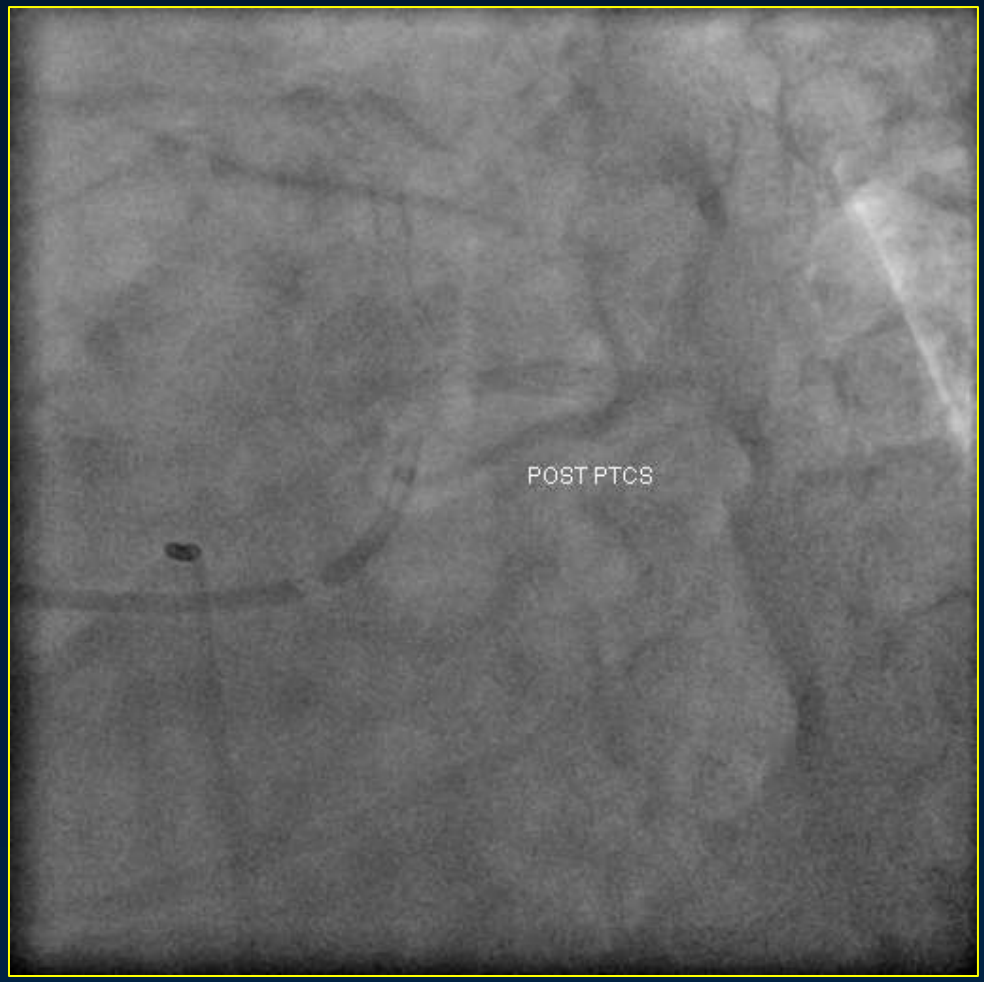


Stenting at pLCX
Resolute Onyx 3.0x18mm

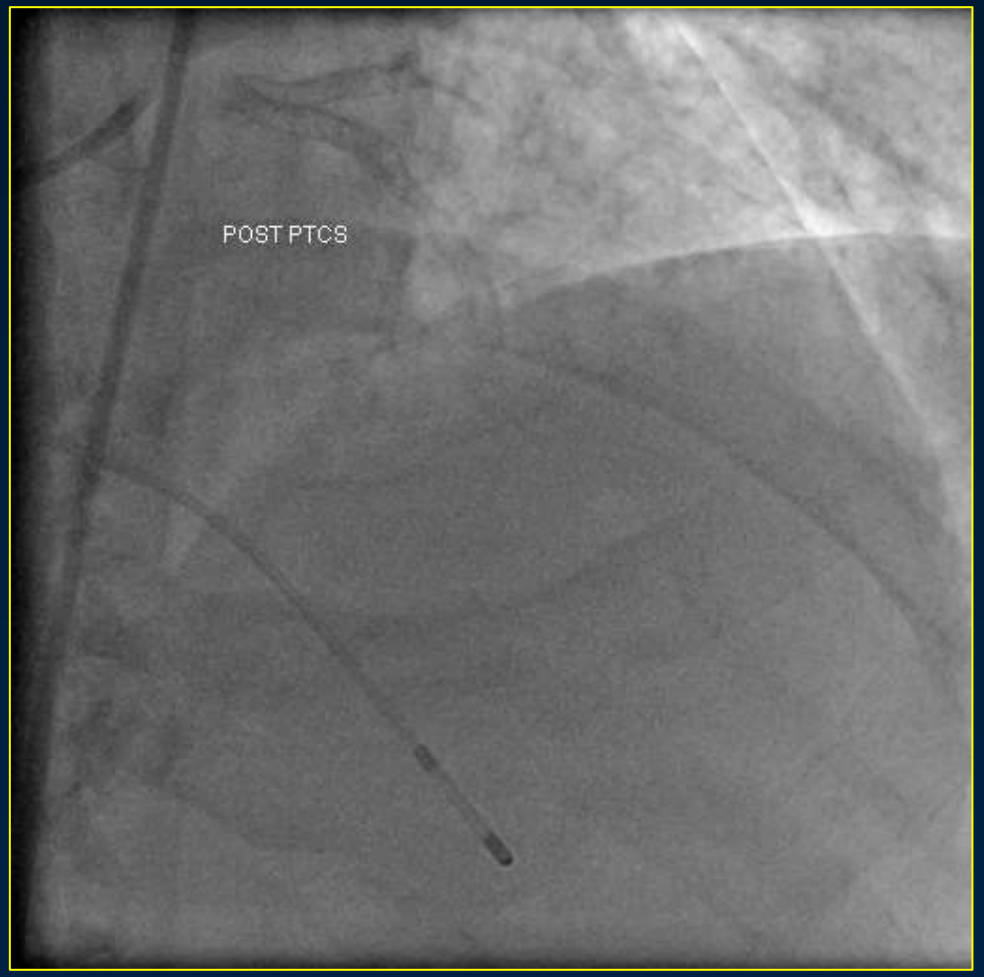
Stenting at pLCX
Resolute Onyx 3.0x18mm



Result



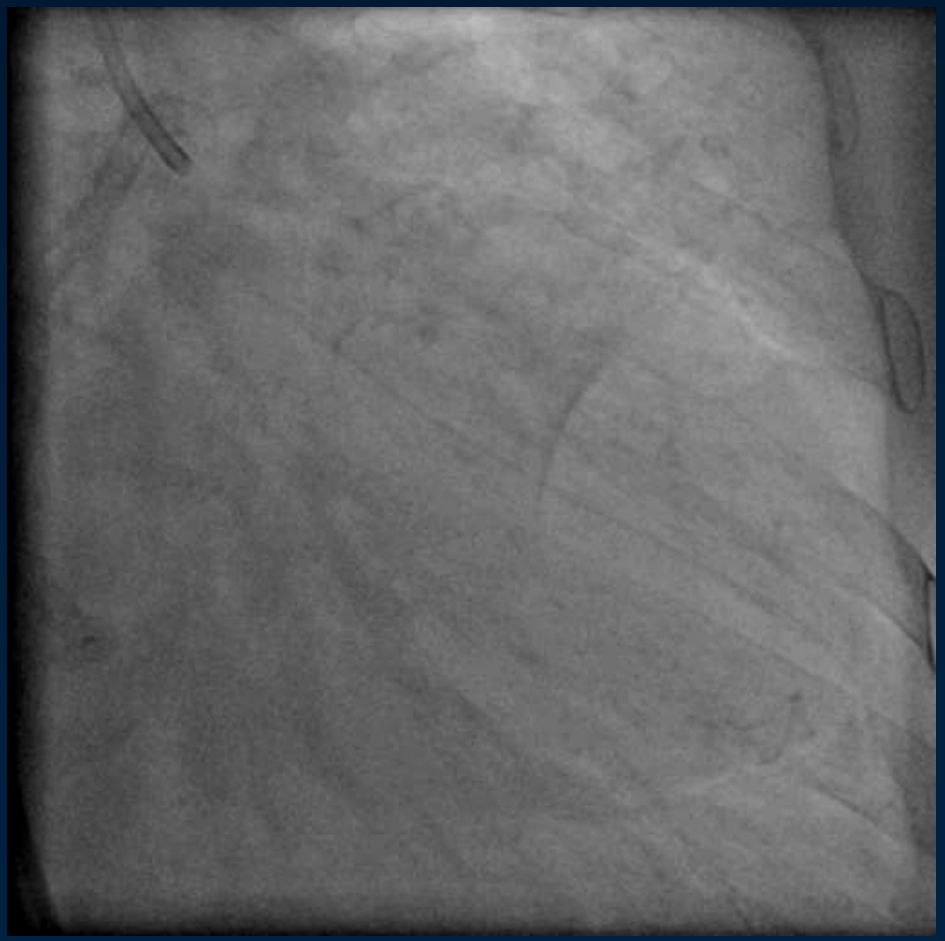
Result



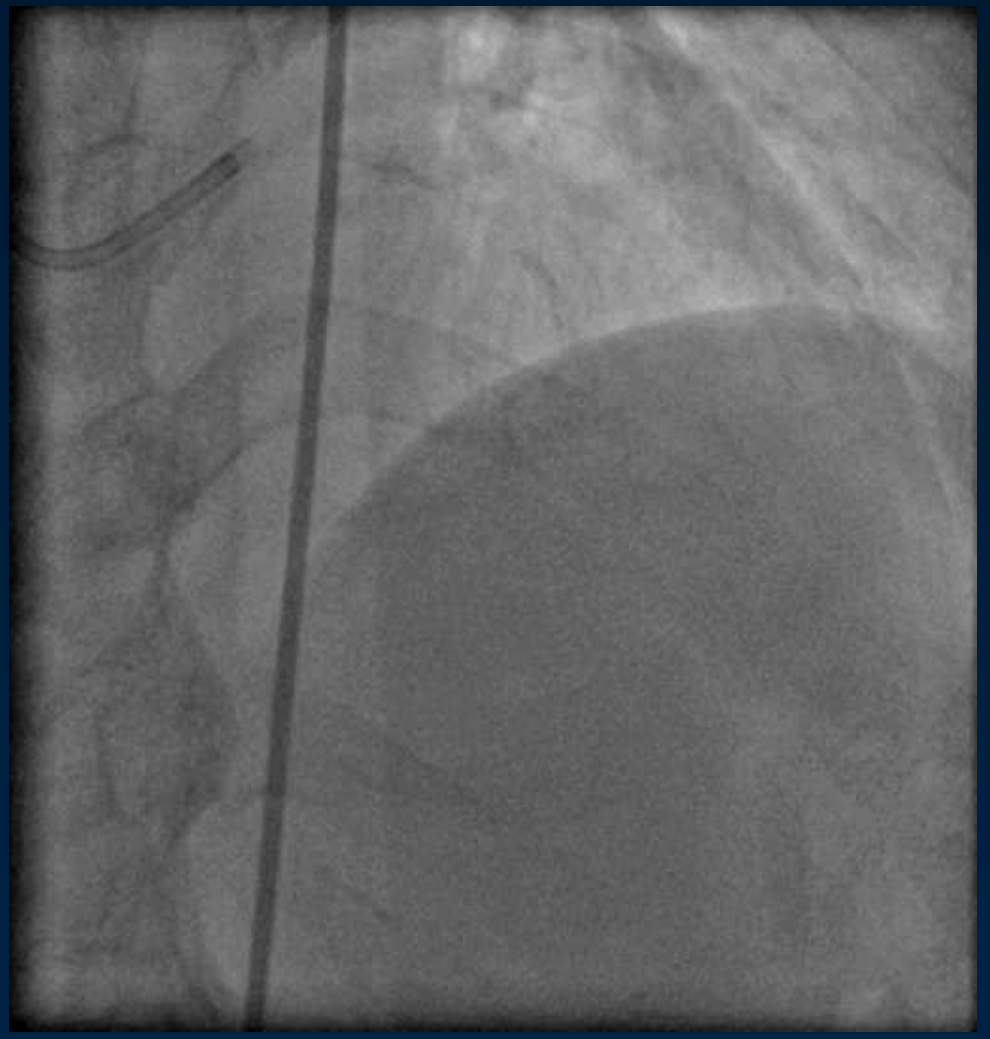
Case 2

- Patient: F/58
- RA, on steroid, MTX
- Recent inferior MI
- Primary PCI to RCA done about 3 weeks ago
- Severe triple vessel disease
- Staged II PCI today

Coronary Angiogram



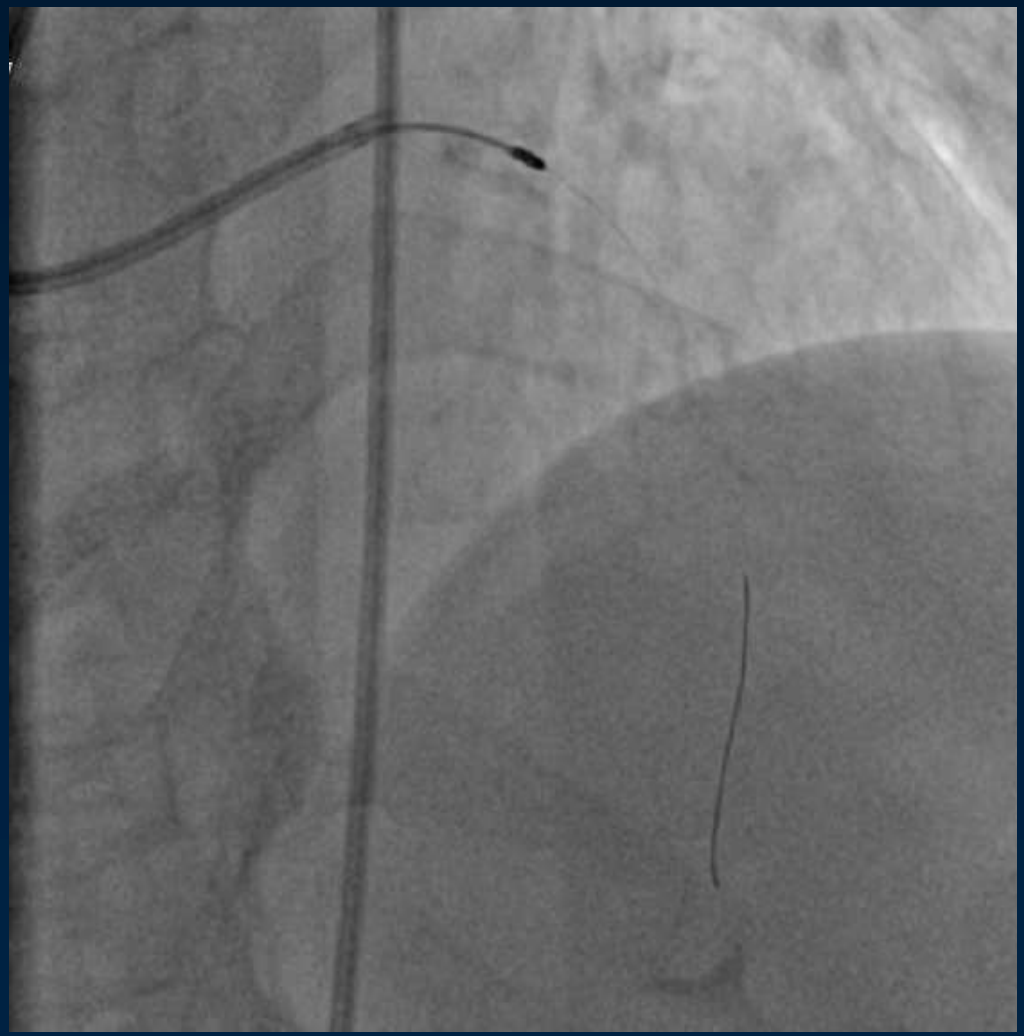
Coronary Angiogram



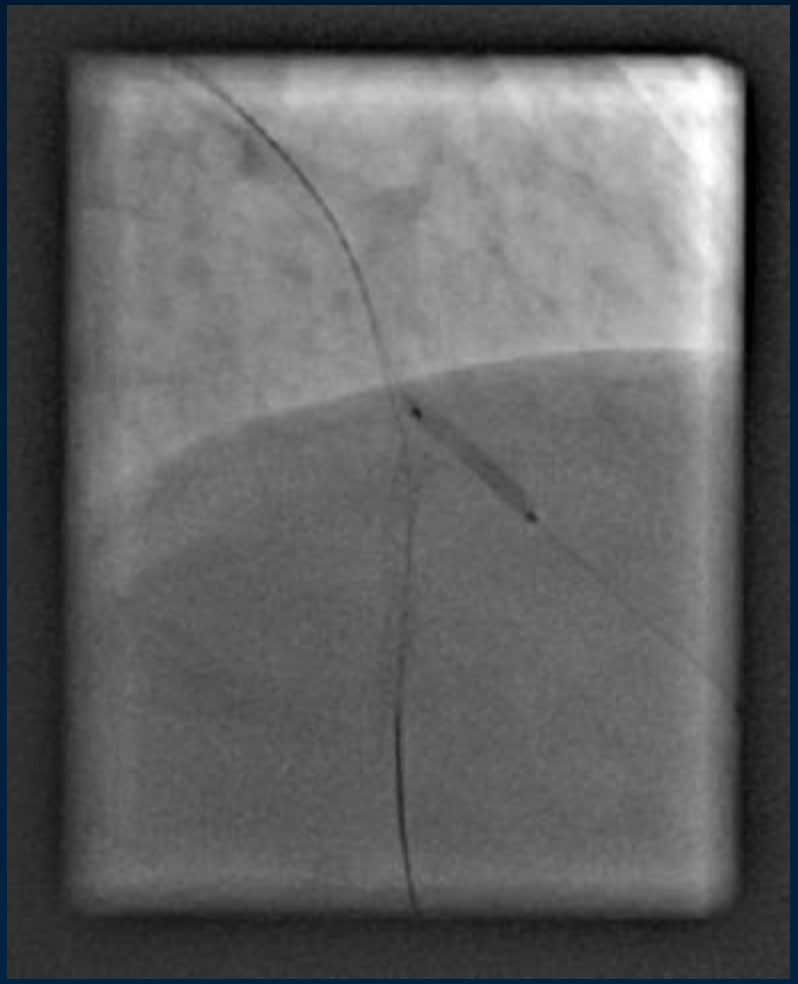
Procedure

- 6F EBU 3.5 guiding
- PTCA to LAD-> PTCA/S to dLAD, mLAD-> pLAD; dLCX-> pLCX
- Right femoral artery approach
- IV Diazemuls 3mg, Primperan 10mg, Pethidine 10mg
- IA Heparin, 2,000 units
- IC Heparin 2,000 units at start of PCI + 1,000units at the midst of PCI
- IV Protamine 10mg at termination of PCI

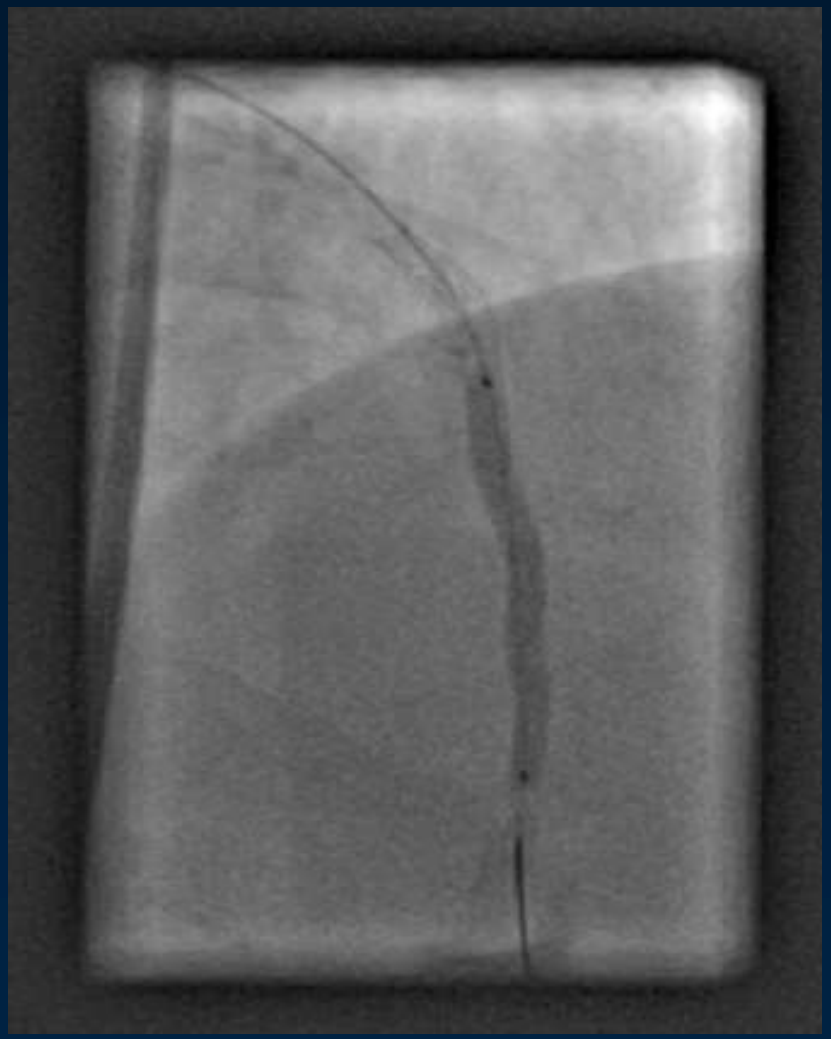
Rotablator at LAD, 1.25 mm burr at 170,000rpm



PTCA :D2 with 2.0mm Balloon

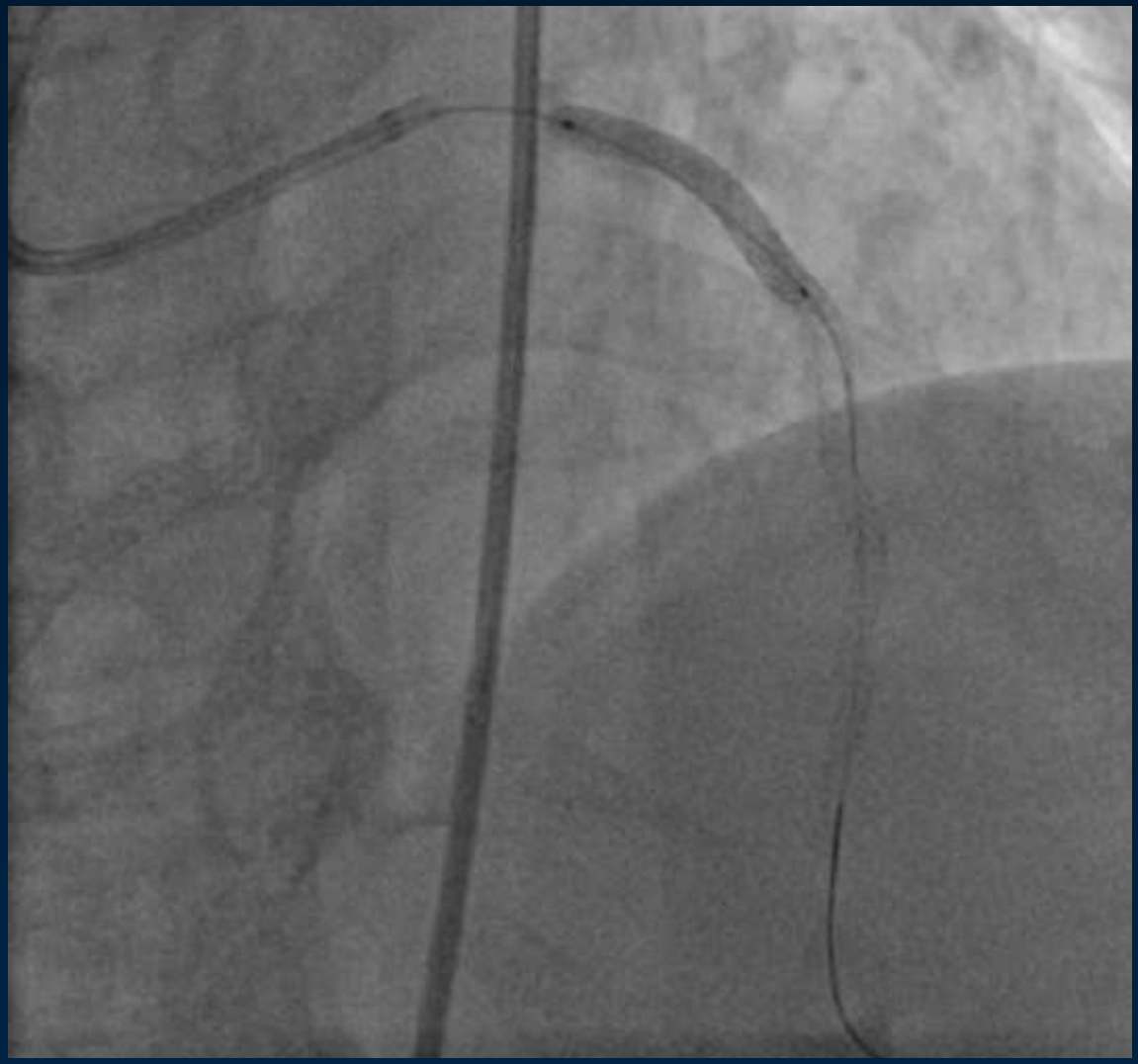


Stenting dLAD
Resolute Onyx 2.25x26mm

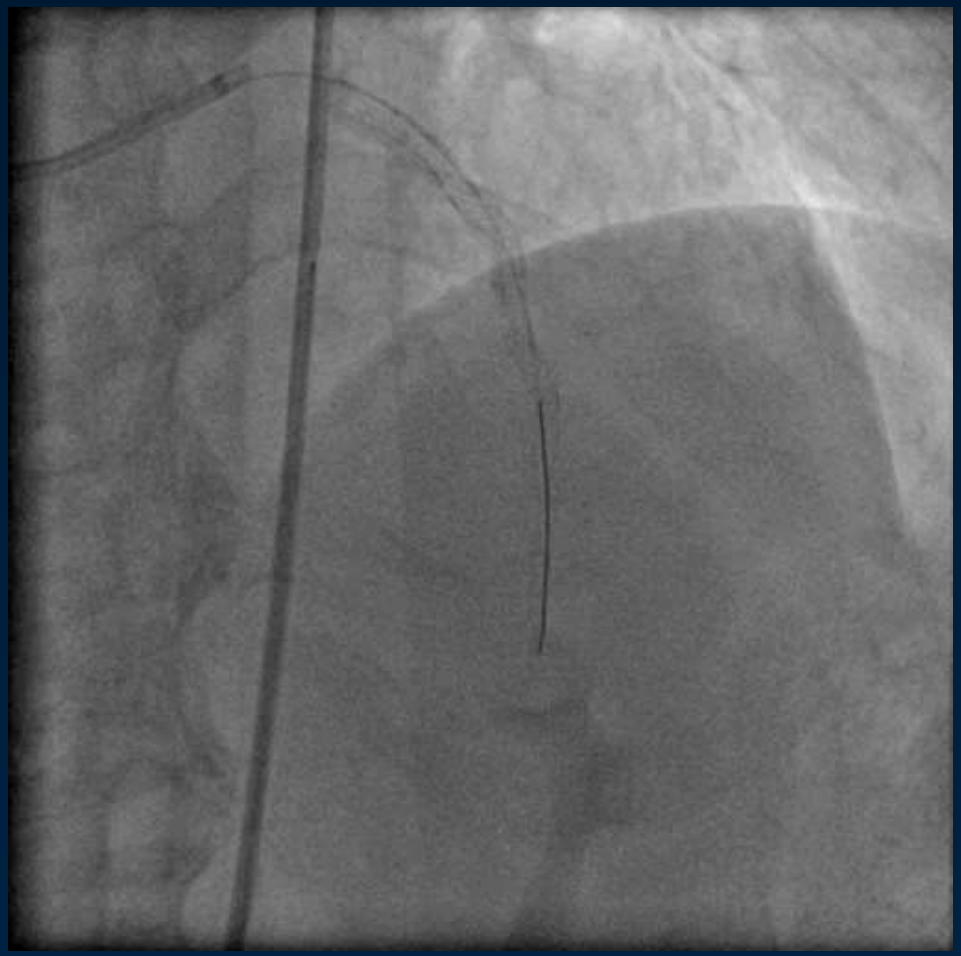


Stenting mLAD
Resolute Onyx 2.75x30mm

Stenting pLAD
Resolute Onyx 3.0x22mm



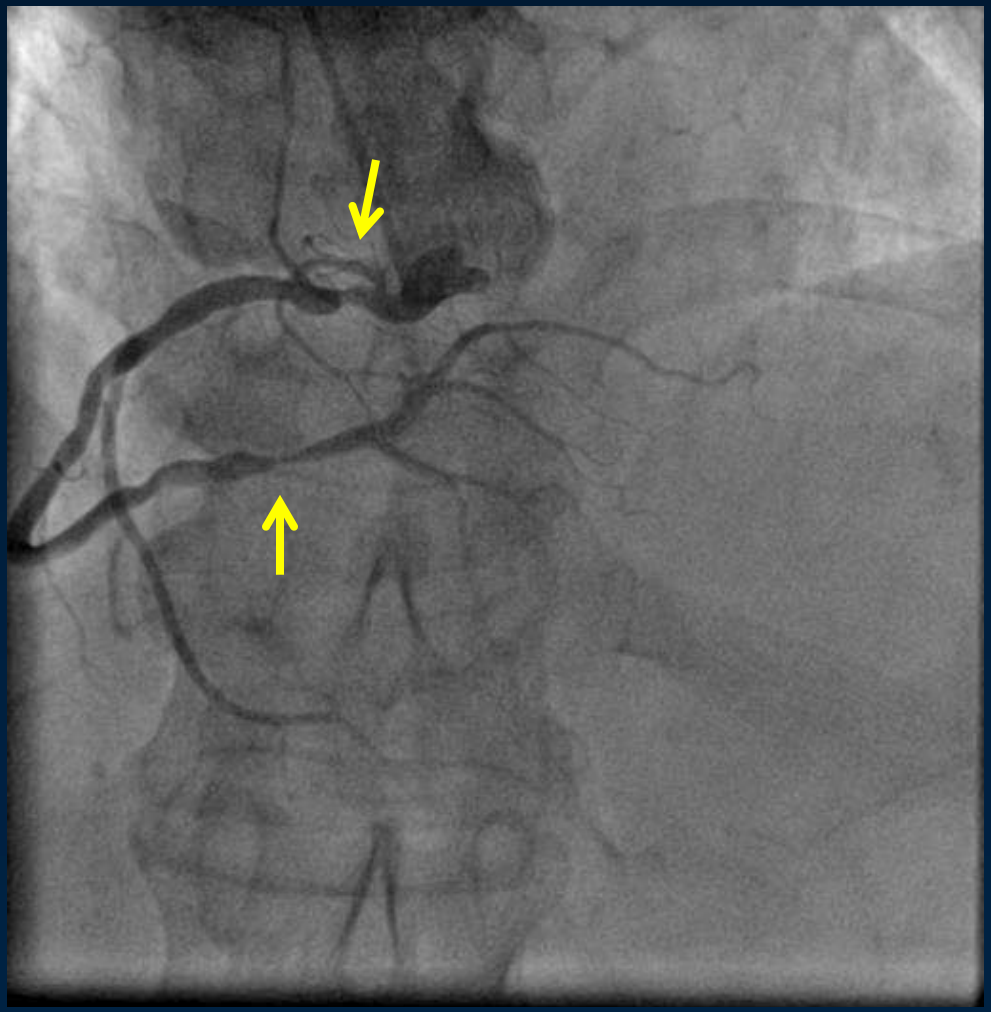
Result



Case 3

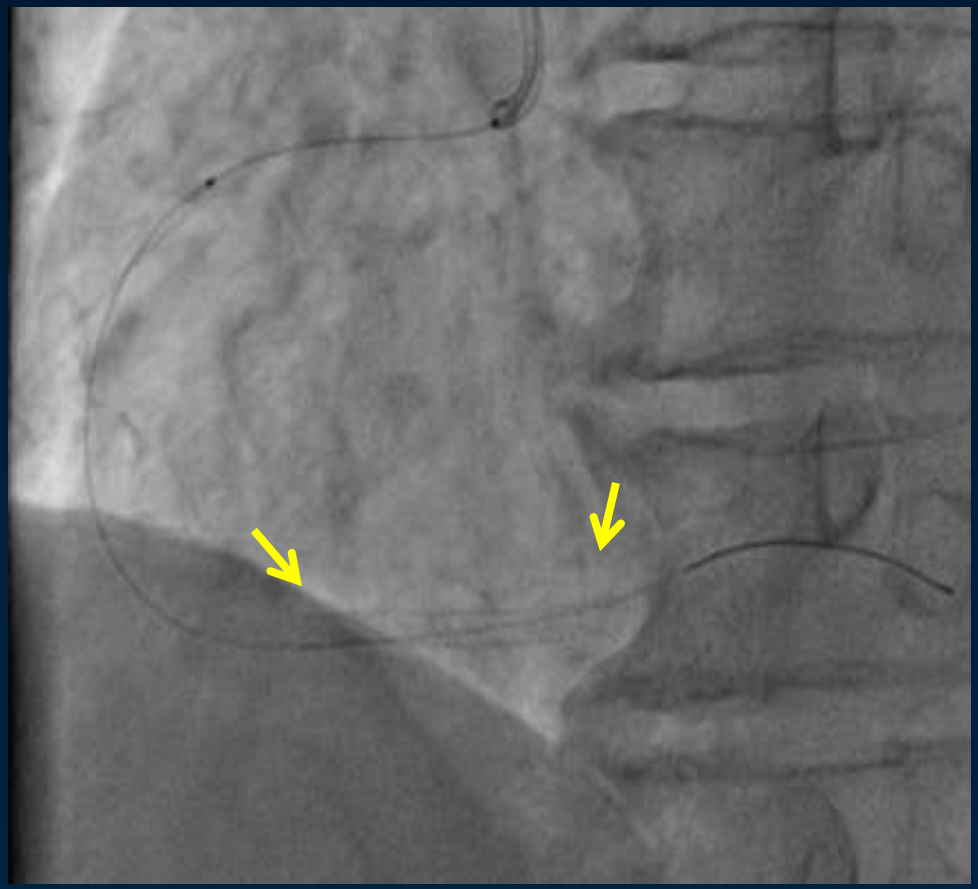
- Patient: M/77
- Angina
- CT Coro was strongly positive

Coronary Angiogram



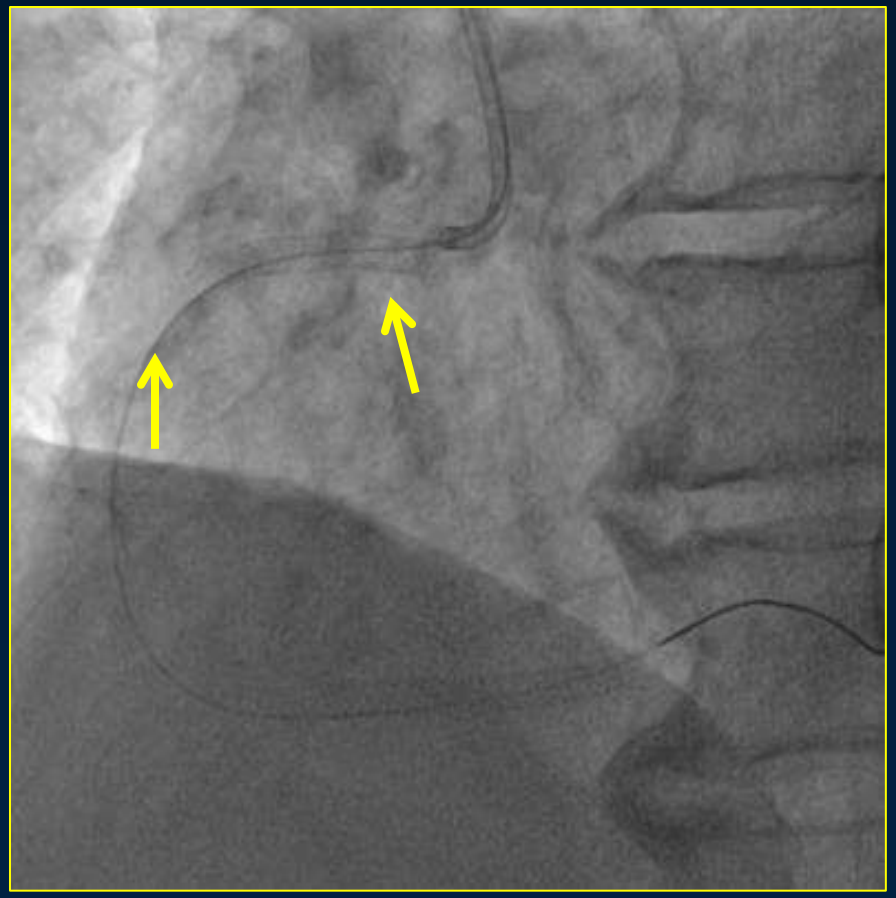
Stenting at dRCA

Resolute Onyx 2.75x30mm

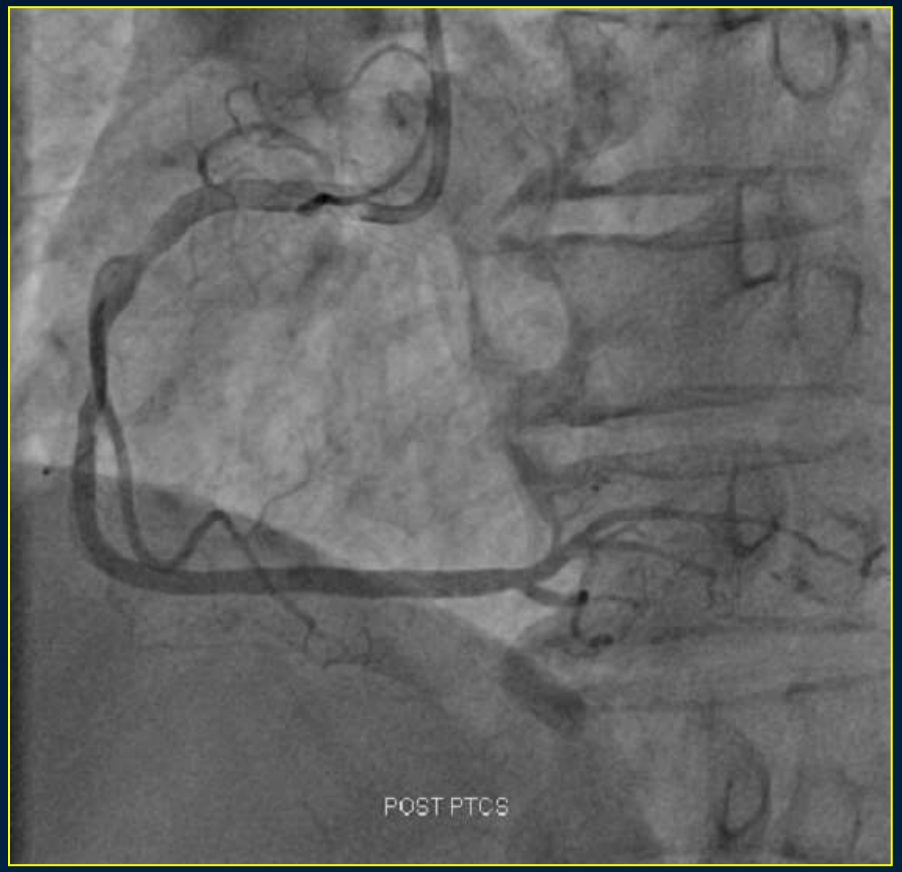


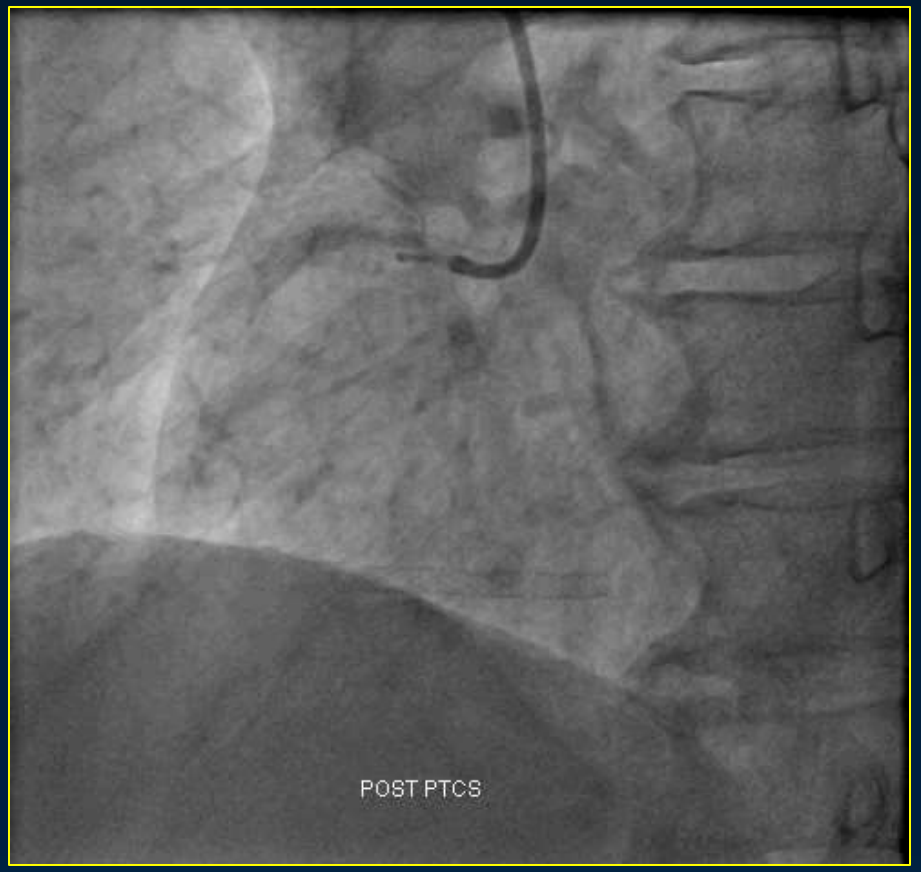
Stenting at pRCA

Resolute Integrity 3.0 x 26mm



Result





Result

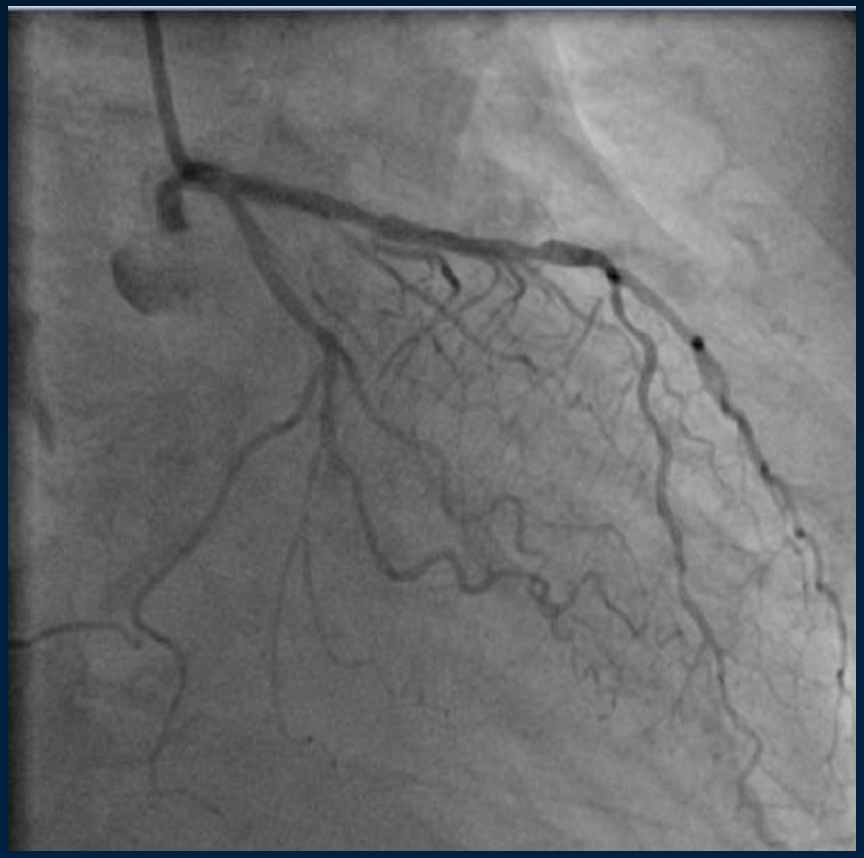
Case 4

F/84 with history of NIDDM, HT, CAD, on OMT.

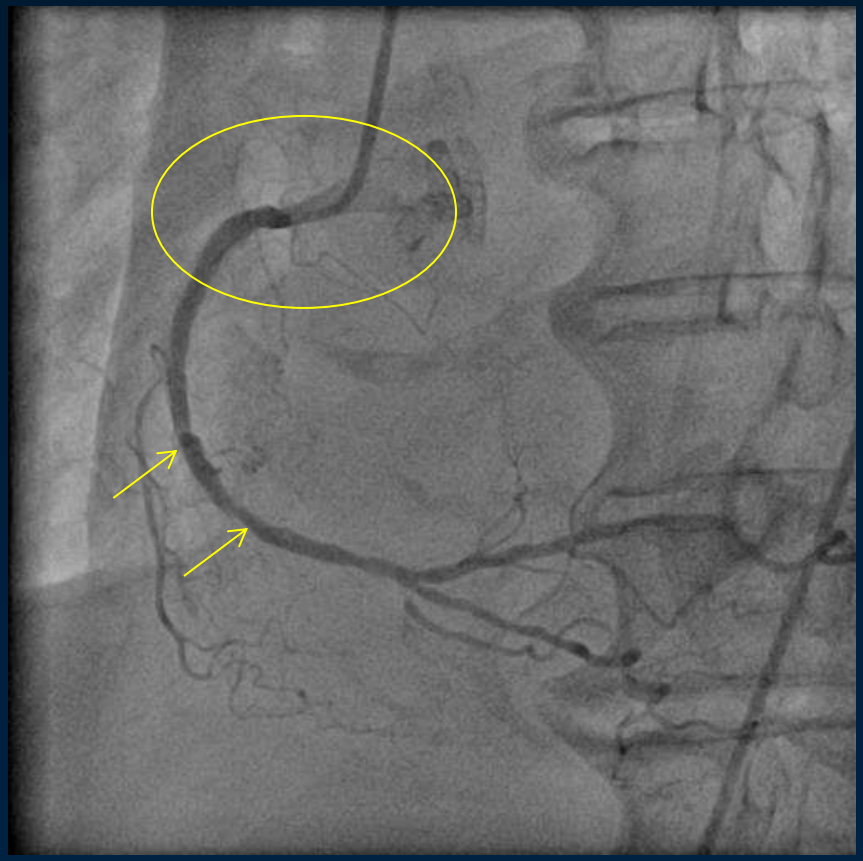
Admitted for acute pulmonary edema with resuscitated cardiac arrest. Stabilized with ventilator care.

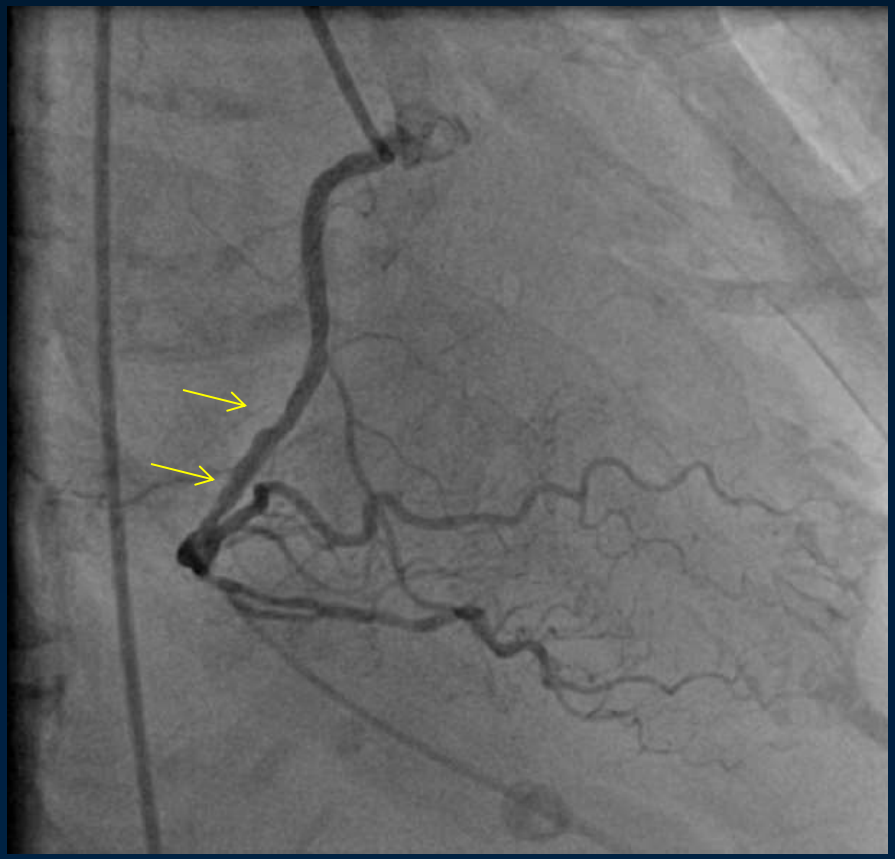
Coro +/- PCI the next day

Coronary Angiogram



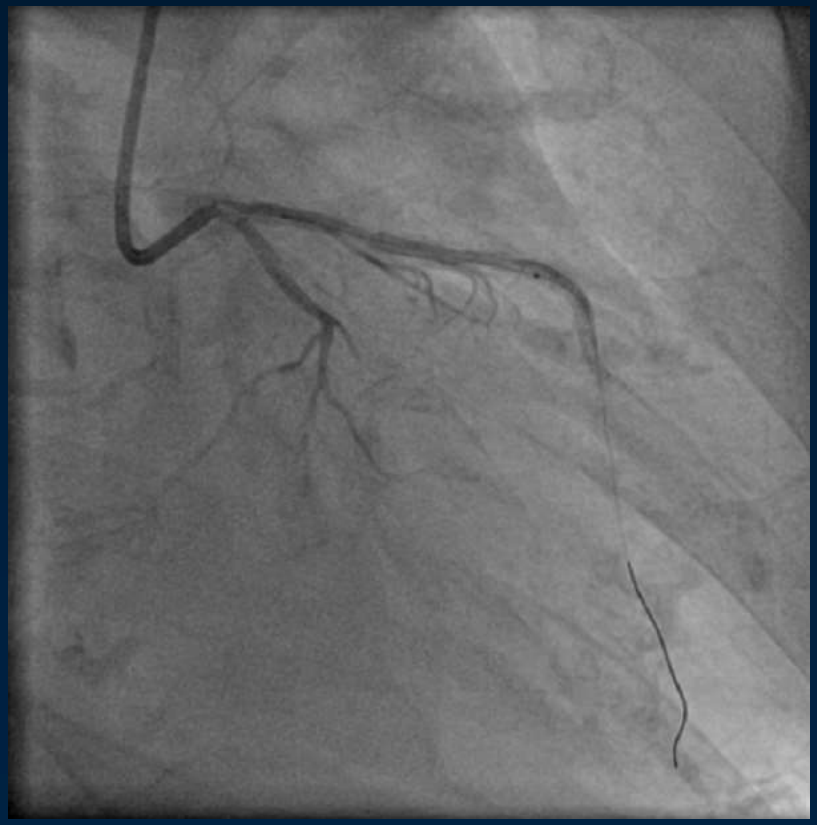
Coronary Angiogram

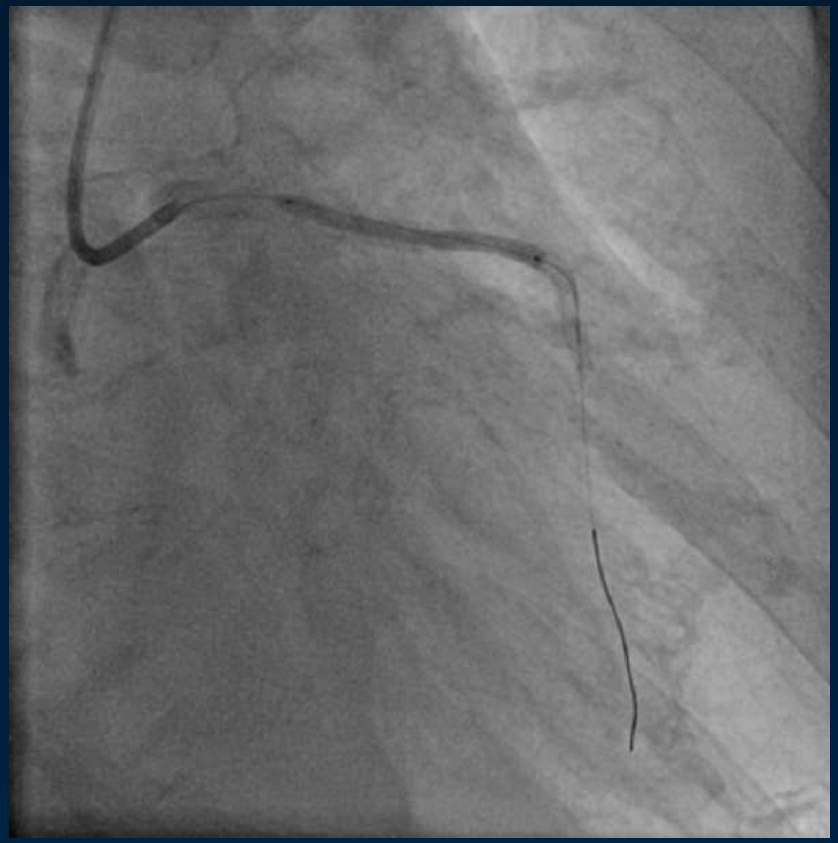




Stenting at mLAD
Resolute Onyx 2.25x34mm

Stenting at pLAD
Resolute Onyx2.75x34mm





Final Result

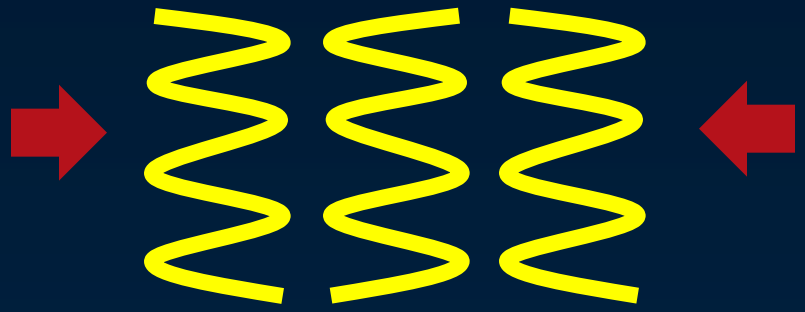
Next: RCA

Core Wire Technology Enables Thinner Struts with No Compromise to Longitudinal Strength

Peak-to-peak stent designs provide **longitudinal compression resistance***†‡

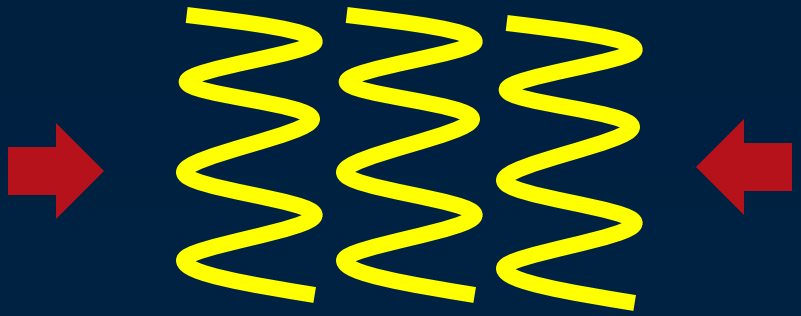
Resolute Onyx™ platform

Crowns align to provide resistive strength against compression (peak-to-peak)

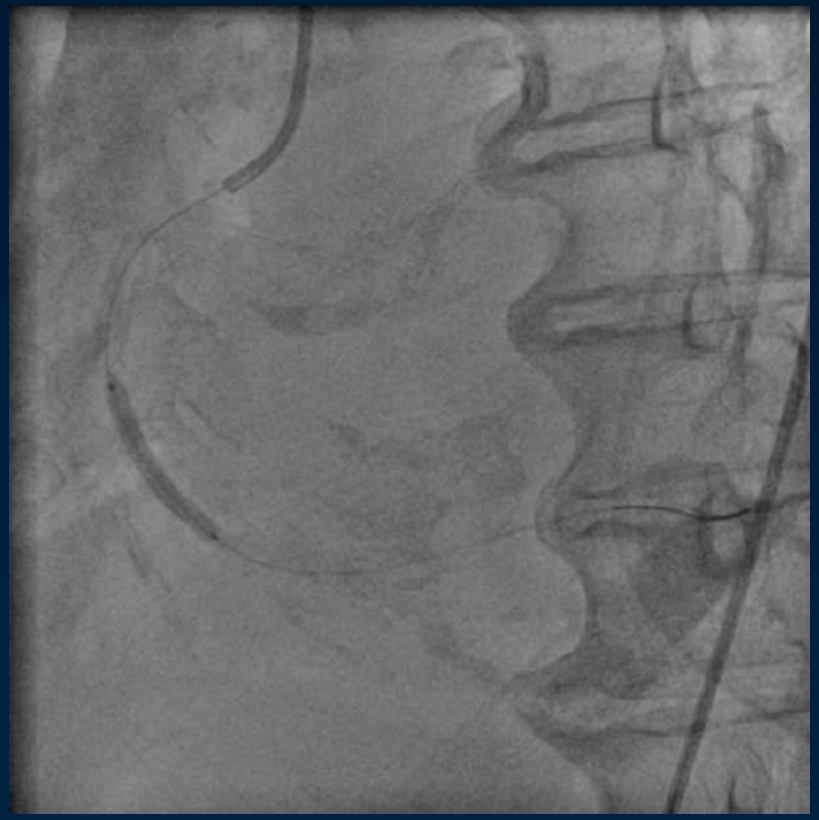


Promus Premier™ platform

Crowns are not aligned, which allows them to compress (offset peak-to-peak)

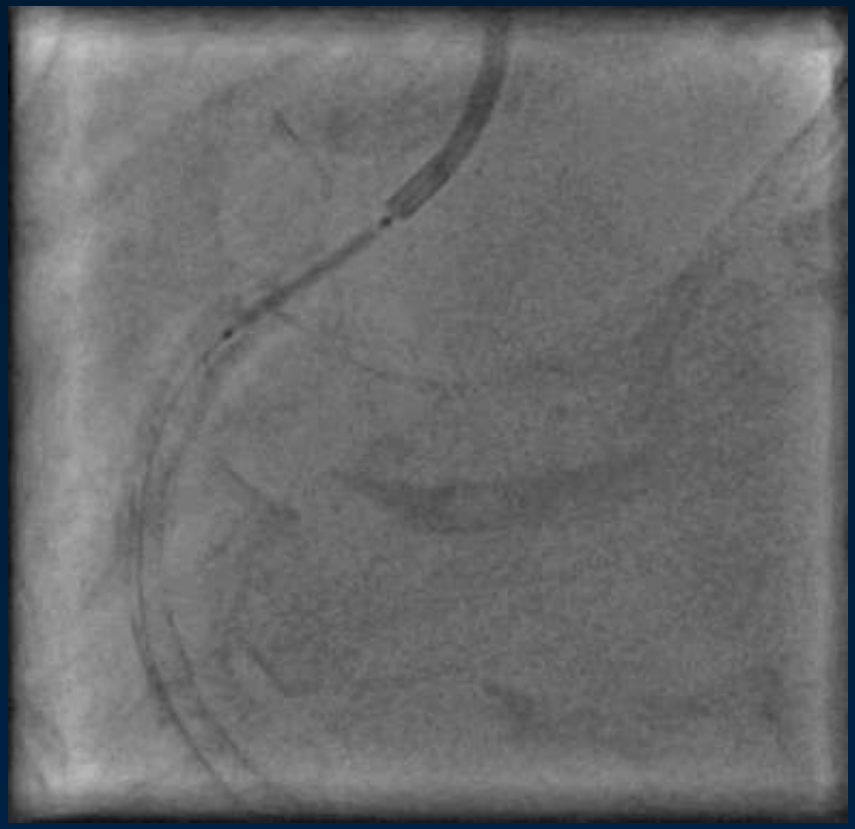


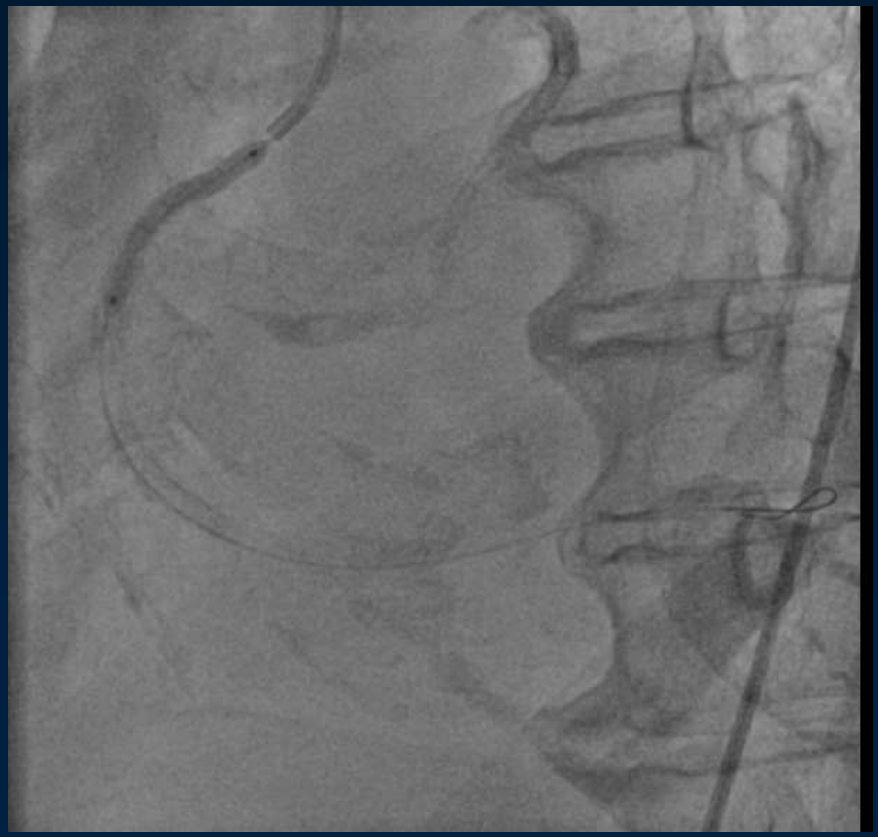
Stenting at mRCA
3.0x26mm



Stenting at mRCA
3.5x38mm

Stenting at pRCA
4.0x15mm





Final Result

Stent Over Expansion Maximum Diameter Chart

Onyx	Stent Diameter (mm)	2.00-2.50	2.75-3.00	3.50-4.00
	Over Expansion Max. Diameter (mm)	3.25	3.75	4.75
Resolute Integrity	Stent Diameter (mm)	2.25-2.75	3.00-4.00	
	Over Expansion Max. Diameter (mm)	3.50	4.75	

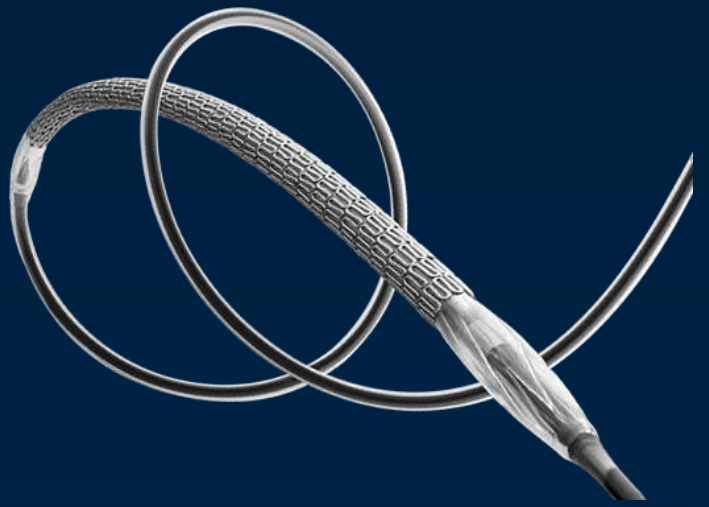
Resolute Onyx Size Matrix

STENT DIAMETER (mm)	STENT LENGTH (mm)									
	2.00	8	12	15	18	22	26	30		
	2.25	8	12	15	18	22	26	30	34	38
	2.50	8	12	15	18	22	26	30	34	38
	2.75	8	12	15	18	22	26	30	34	38
	3.00	8	12	15	18	22	26	30	34	38
	3.50	8	12	15	18	22	26	30	34	38
	4.00	8	12	15	18	22	26	30	34	38
	4.50		12	15	18	22	26	30		
	5.00		12	15	18	22	26	30		

Conclusion

- *Core Wire Technology contributes to the thinner stent struts 0.0032“/81 µm and improved delivery system, Resolute Onyx could be easily delivered to tortuous vessels and treat the complex lesions.*

  With improved radiopacity, physicians can save much procedural time on stent positioning.



Thank You