



**TCTAP 2022
Satellite Symposium**

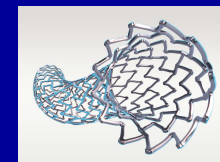


SYNERGY MEGATRON – Advancing Your Large Proximal Vessel Strategy for Improved Outcome

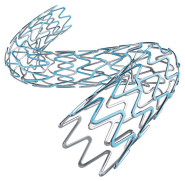
Tan Huay Cheem

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Senior Consultant Cardiologist, National University Heart Centre, Singapore (NUHCS)
Professor of Medicine, Yong Loo Lin School of Medicine, National University of Singapore
Chairman, Singapore Heart Foundation

SYNERGY MEGATRON™ BP Stent vs SYNERGY™ XD Stent System



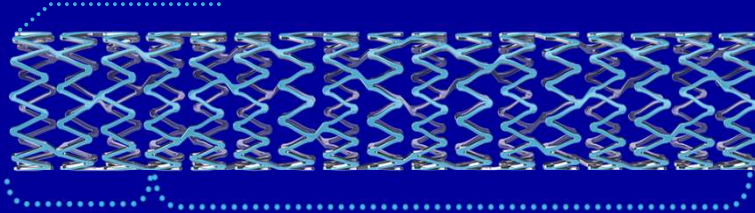
MEGATRON / SYNERGY Product Family Specifications

		SYNERGY™ XD			SYNERGY MEGATRON™
		SV	WH	LV	One Model
Nominal Diameter (mm)		2.25 - 2.75	3.00 - 3.50	4.00 - 5.00	3.50 - 5.00
Length (mm)		8 - 38			8 - 32
Stent Material		Platinum Chromium (PtCr)			
Coating Material		PLGA / Everolimus			
Coating Thickness (µm)		4 µm Abluminal			
Strut Thickness (µm)		74	79	81	89
Overall Thickness (µm)		78	83	85	93
Number of Peaks		8		10	12
Body Connectors		2			3
Proximal Connectors		4		5	4

SYNERGY MEGATRON™ BP Stent vs SYNERGY™ XD Stent System

SYNERGY MEGATRON™ BP Stent

12 Peak Design with Shorter Strut Length



4 Connectors on
Proximal
Two Segments

3 Connectors Throughout the Body

SYNERGY™ XD Stent System

10 Peak Design



5 Connectors on
Proximal
Two Segments

2 Connectors Throughout the Body

	Resolute Onyx™ 4.50 – 5.00	Xience Sierra™ 2.25 – 4.00	Resolute Onyx 2.00 – 4.00	SYNERGY MEGATRON™ 3.50 – 5.00	Orsiro™ 3.50 – 4.00	SYNERGY™ XD 4.00 – 5.00	SYNERGY XD 3.00 – 3.50	SYNERGY XD 2.25 – 2.75	Orsiro 2.25 – 3.00
Full DES Thickness Strut + Polymer	103	95	93	93	92	85	83	78	72
Strut Thickness	91 µm	81 µm	81 µm	89 µm	80 µm	81 µm	79 µm	74 µm	60 µm
Polymer Thickness	6 µm / side	7 µm / side	6 µm / side	4 µm	8 µm outer 4 µm inner	4 µm	4 µm	4 µm	8 µm outer 4 µm inner
Polymer type / Absorption time	Permanent	Permanent	Permanent	Bioabsorbable 3-4 months	Bioabsorbable 2 years	Bioabsorbable 3-4 months	Bioabsorbable 3-4 months	Bioabsorbable 3-4 months	Bioabsorbable 2 years
Coating	Conformal	Conformal	Conformal	Abluminal	Conformal	Abluminal	Abluminal	Abluminal	Conformal

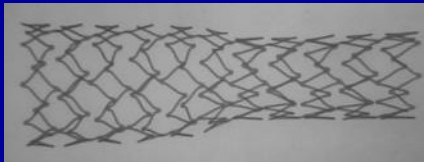
SYNERGY MEGATRON™ BP Stent

Uniform Lesion Scaffolding With 12-Peak Design

Uniform lesion scaffolding to minimize tissue prolapse
and maximize lumen gain¹

Stent pattern is maintained
as its expanded

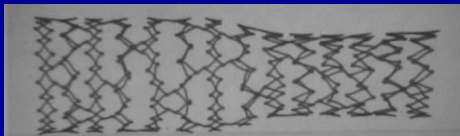
9-Peak Prototype DES



5.0
mm

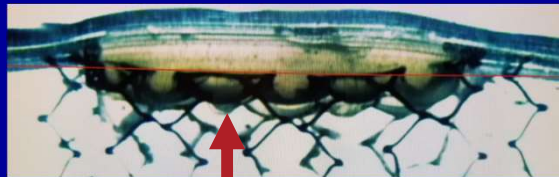
3.5
mm

SYNERGY MEGATRON 12-peak Design



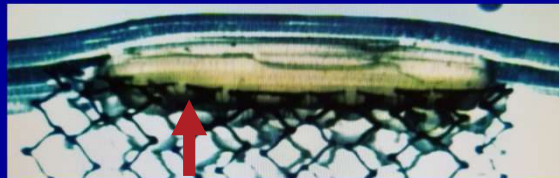
Less tissue prolapse with a
12-peak design

9-Peak Prototype DES



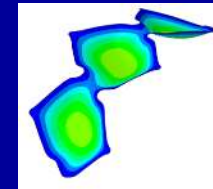
Visible tissue prolapse ("pillowing")

SYNERGY MEGATRON 12-peak Design

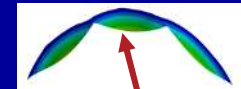


Minimal tissue prolapse (smoother edges)

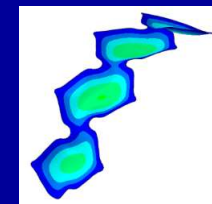
33% improvement in tissue prolapse
which can lead to larger MLDs¹



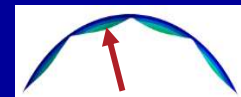
9-Peak Prototype DES



0.30 Max Displacement



SYNERGY MEGATRON
12-peak Design

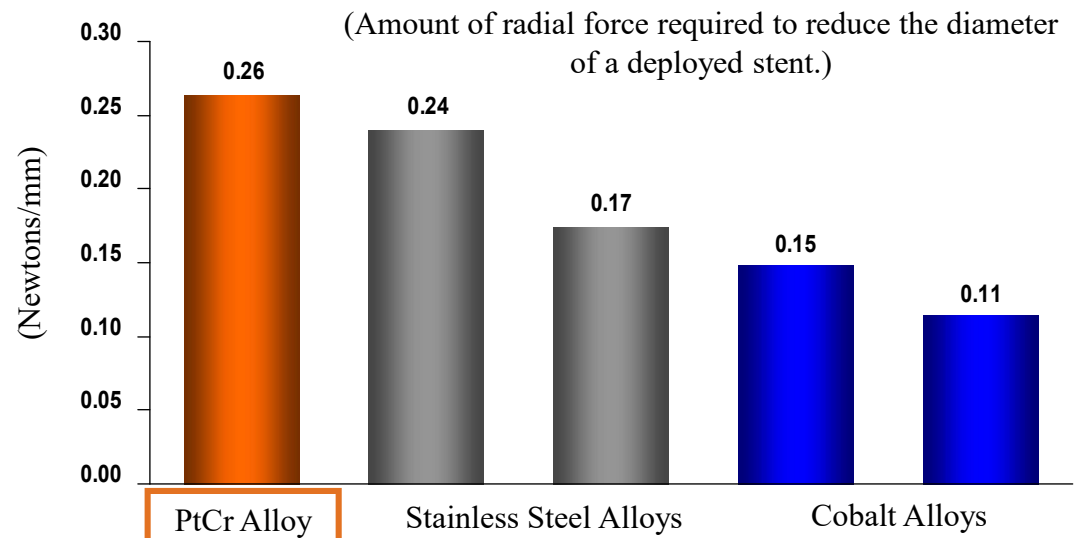
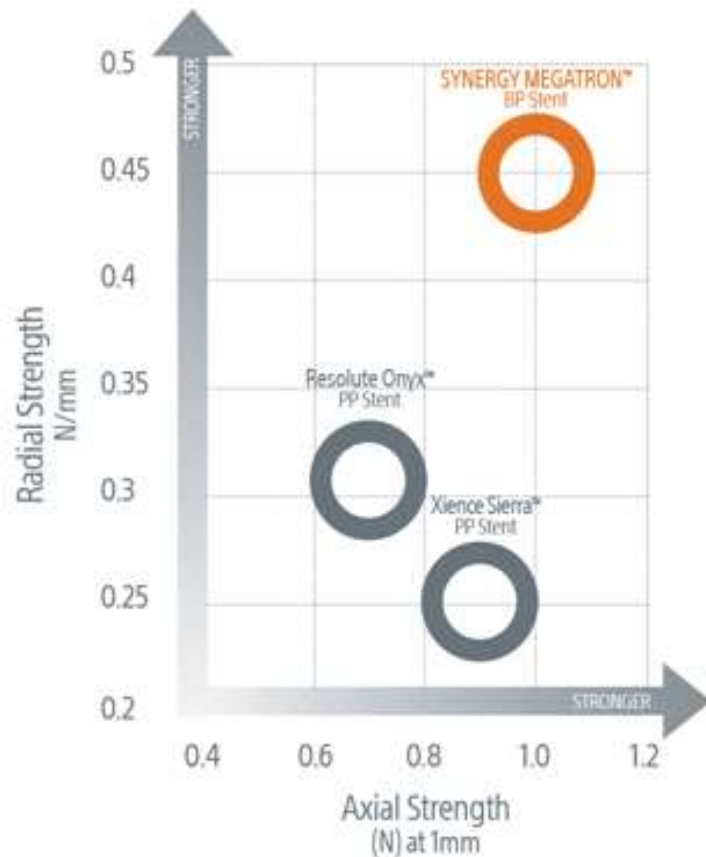


0.20 Max Displacement

Bench tests performed by Boston Scientific Corporation. 1. All stents 4.0mm. N=3 minimum. 2. All stents 5.0 N=3 minimum.

SYNERGY MEGATRON™ BP Stent vs SYNERGY™ XD Stent System

Best-in-Class Axial & Radial Strength: For Proximal Fibrotic Lesions



**PtCr Stent 73% More Radial Strength
than Cobalt Alloy Stents**

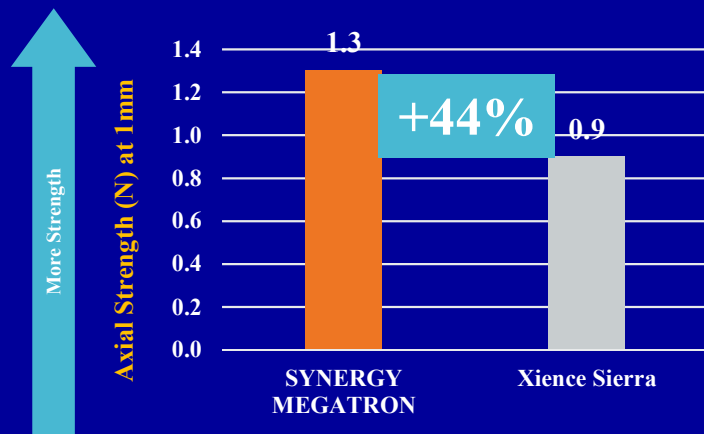
SYNERGY MEGATRON™ BP Stent

Axial Strength Bench Test Data

Highest Axial Strength
Compared to Largest Diameters of Xience Sierra and Resolute Onyx^{1,2}

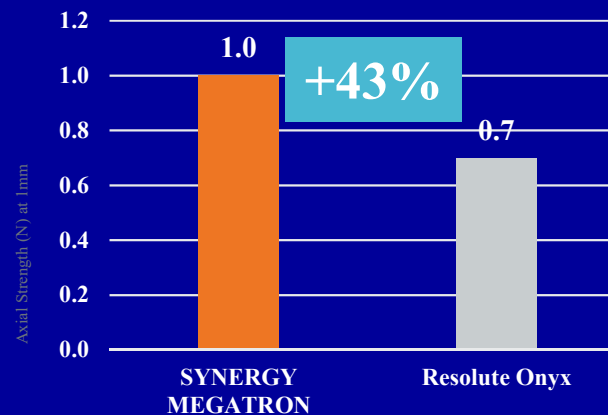
Axial Strength Test
vs Xience Sierra¹

At 4.0 mm



Axial Strength Test
vs Resolute Onyx²

At 5.0 mm



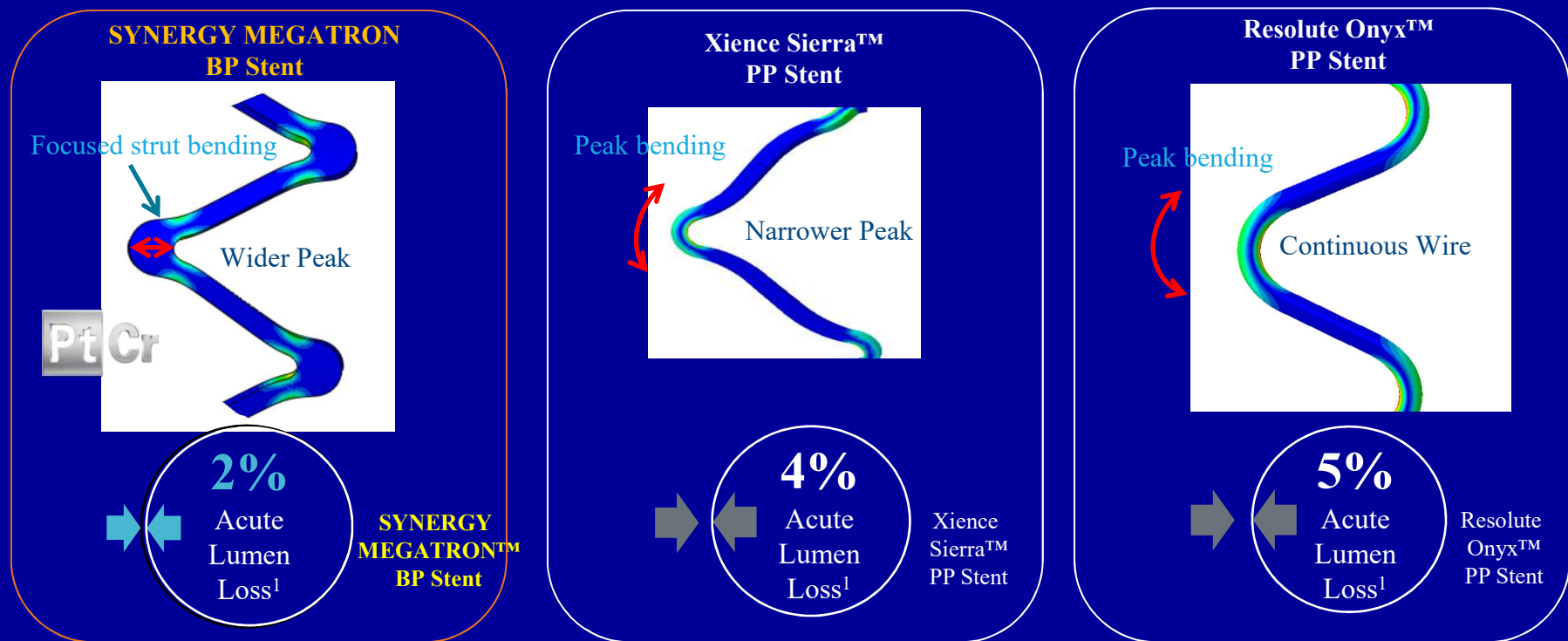
Force to cause 1 mm
of deformation on the
proximal 3mm of a
stent

Bench tests performed by Boston Scientific Corporation. 1. All stents 4.0mm. N=3 minimum. 2. All stents 5.0 N=3 minimum.

SYNERGY MEGATRON™ BP Stent: Lowest Recoil¹

SYNERGY MEGATRON BP Stent design reduced recoil by moving the strain outside of the peaks

At a 5.0 mm diameter, 4% recoil leads to a 0.2 mm reduction.

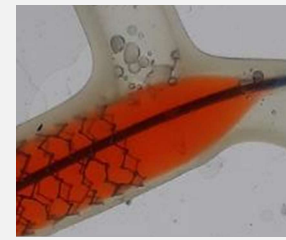


Bench tests performed by Boston Scientific Corporation. 1. All stents 4.0mm. N=3 minimum. 2. All stents 5.0 N=3 minimum.

SYNERGY MEGATRON™ BP Stent Reduced Balloon Cone on 4.5/5.0 mm

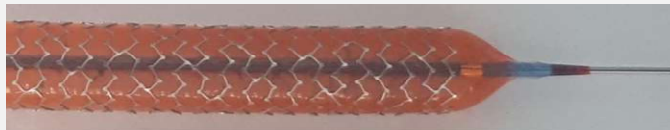
Reduced interaction between balloon cone and distal vessel due to less balloon overhang

**LONGER
CONES**
SYNERGY™
5.0 mm



SHORTER CONES

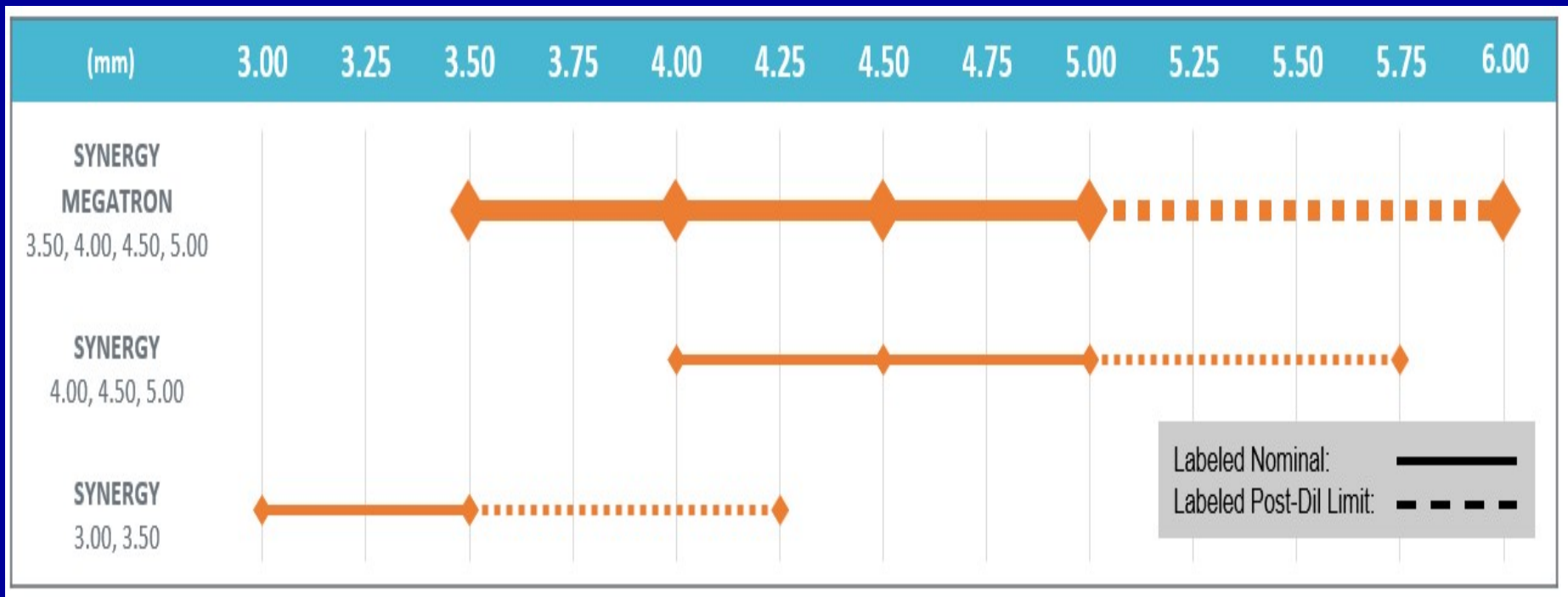
SYNERGY
MEGATRON
5.0 mm



Bench tests performed by Boston Scientific Corporation. 1. All stents 4.0mm. N=3 minimum. 2. All stents 5.0 N=3 minimum.

SYNERGY MEGATRON™ BP Stent: Unmatched Expansion

One model (3.5-5.0mm) with over-expansion to **6.0** mm³ to accommodate wide diameter mismatch

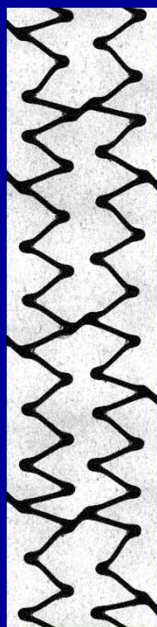


SYNERGY MEGATRON™ BP Stent

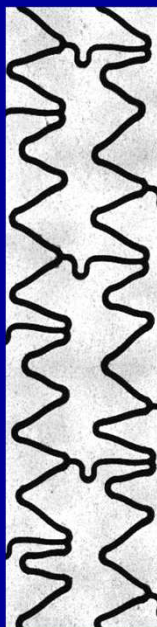
Large Side Branch Expansion¹

Similar side
cell access
as other
DES on the
market

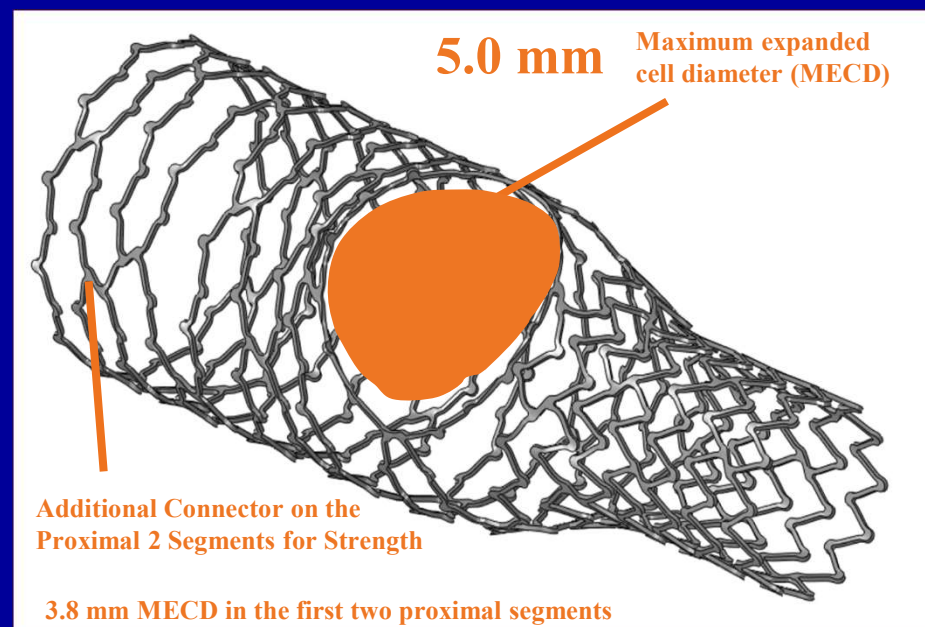
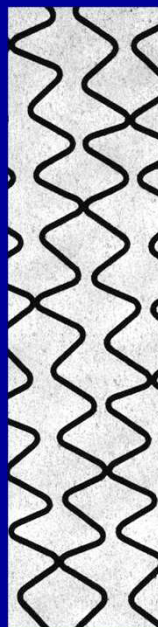
**SYNERGY
MEGATRON**



**Xience
Sierra™**



**Resolute
Onyx™**



SYNERGY MEGATRON™ Stent System

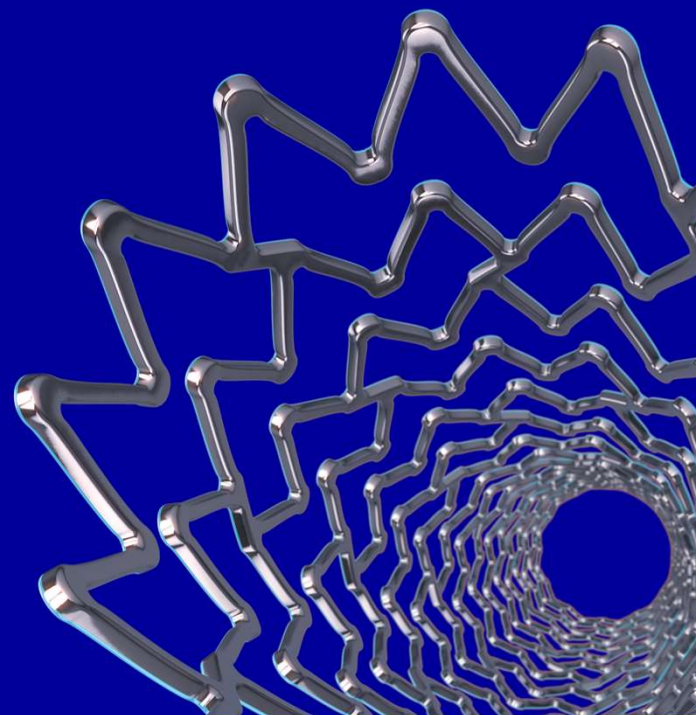
Compatibility Overview

Guide Catheter Compatibility

Guide Catheter	SYNERGY MEGATRON	SYNERGY™ XD
5F	3.50 – 4.00 mm	2.25 - 4.00 mm
6F	4.50 – 5.00 mm	4.50 - 5.00 mm

GUIDEZILLA™ II Guide Extension Catheter Compatibility

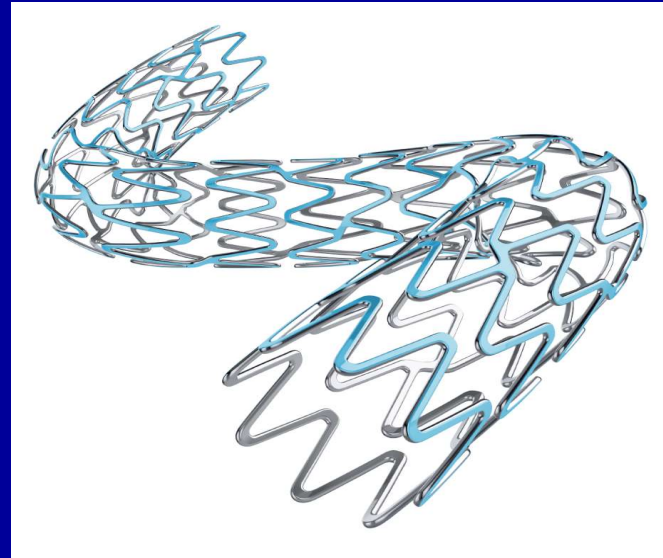
GUIDEZILLA II	SYNERGY MEGATRON	SYNERGY™ XD
6F	3.50 – 4.00 mm	2.25 - 4.00 mm
7F	4.50 – 5.00 mm	4.50 - 5.00 mm



SYNERGY MEGATRON™ BP Stent vs SYNERGY™ XD Stent System

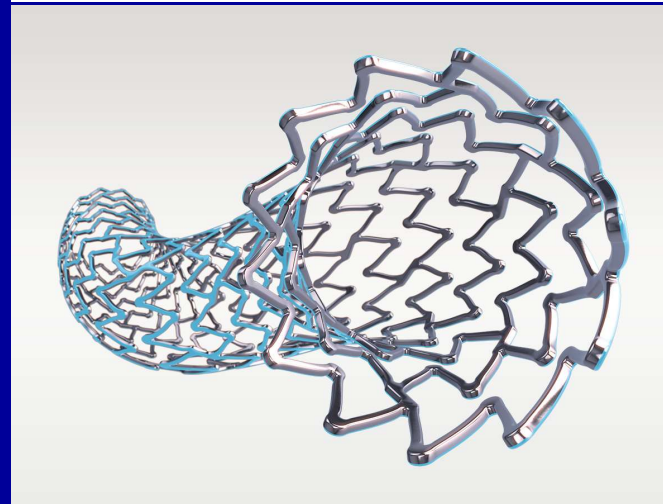
SYNERGY™ XD:

Designed to Heal
With Extra Deliverability



SYNERGY MEGATRON™:

Designed to Heal
with Strength



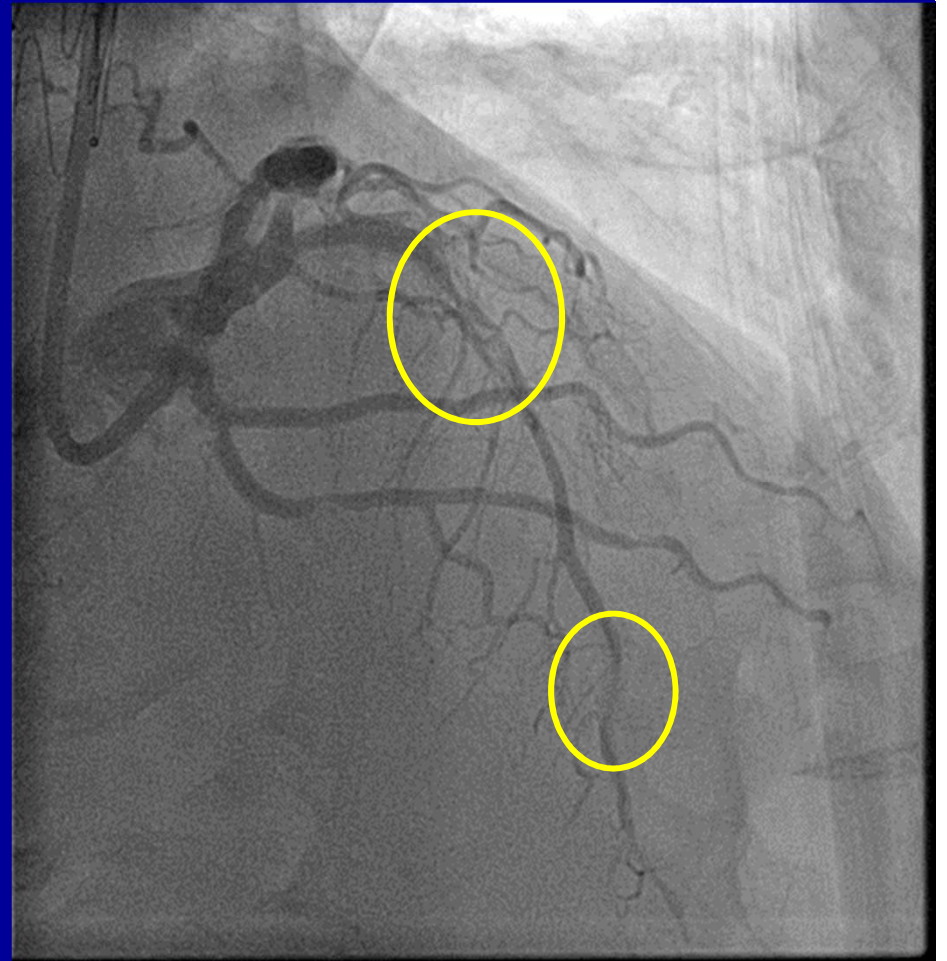
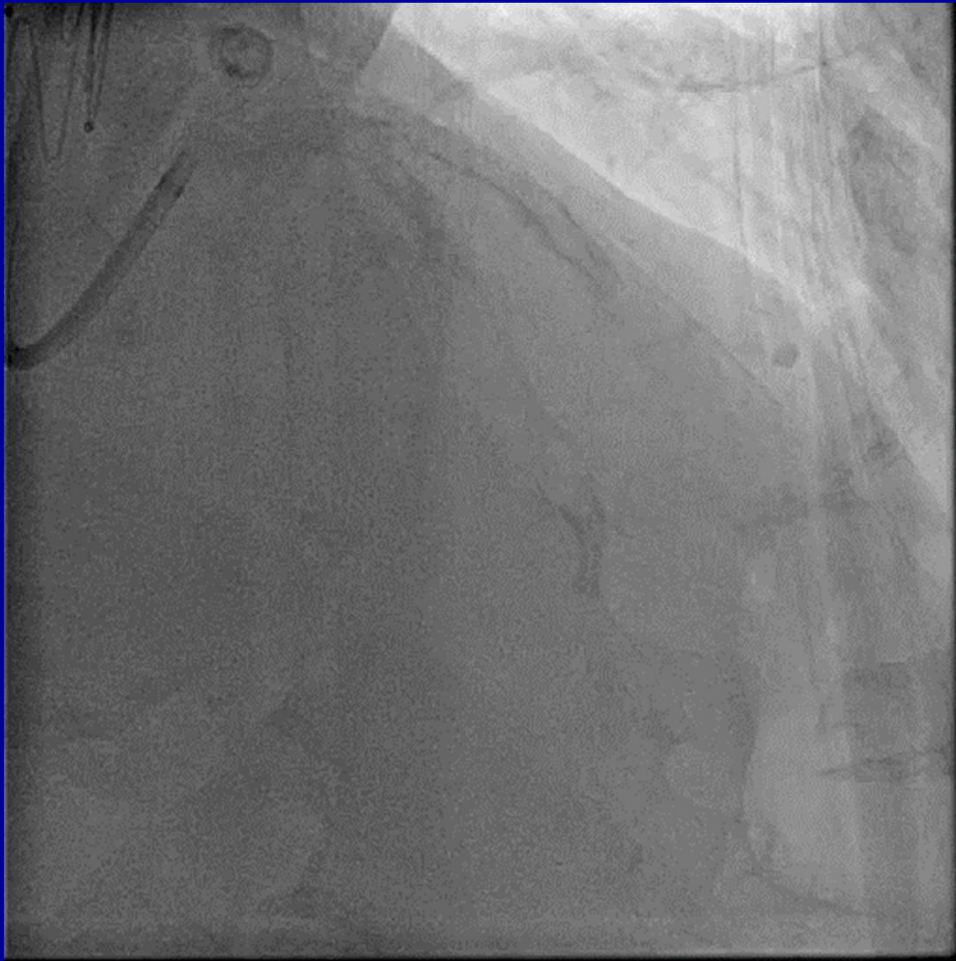
Clinical History

- M/73. CVRFs insulin req DM, hypertension
- Chronic renal impairment (Se creatinine 220 $\mu\text{mol/L}$, eGFR 29mL/min)
- s/p aortic dissection from traffic accident 2009
- Known CAD s/p PCI LADD1 2007, s/p failed PCI to distal LAD 2018
- Presented with NSTEMI and recurrent pulmonary edema
2D echo showed normal LVEF
Hb 12.0 g/dL, HbA1c 8.8%

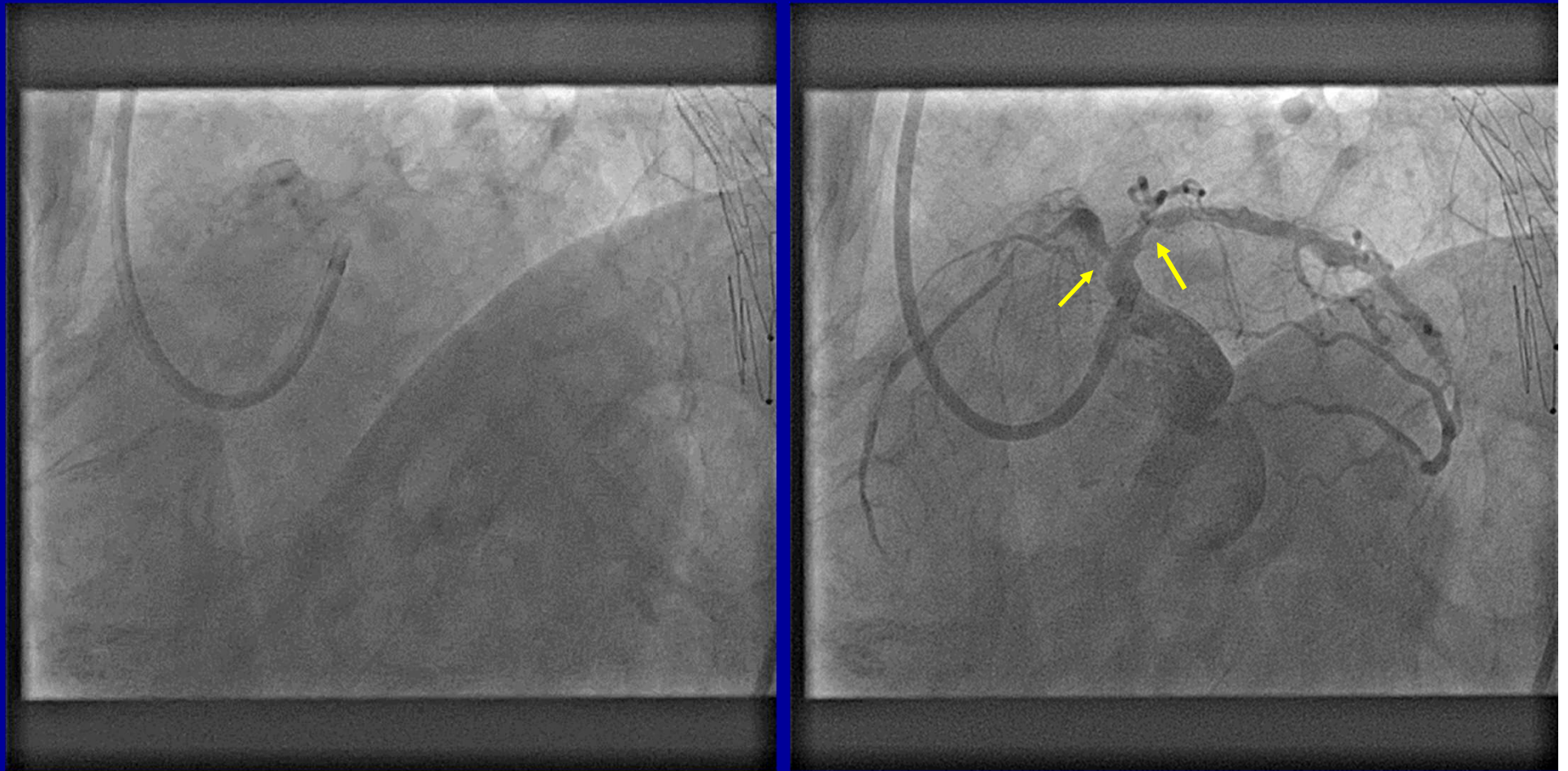
Right Coronary Angiography



Left Coronary Angiography



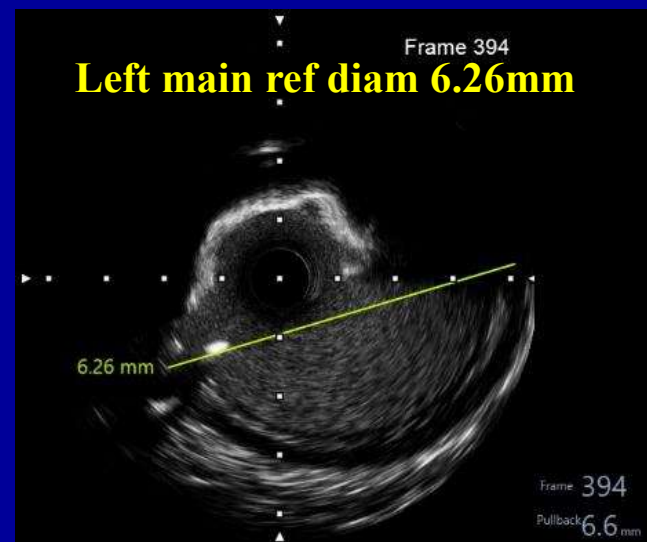
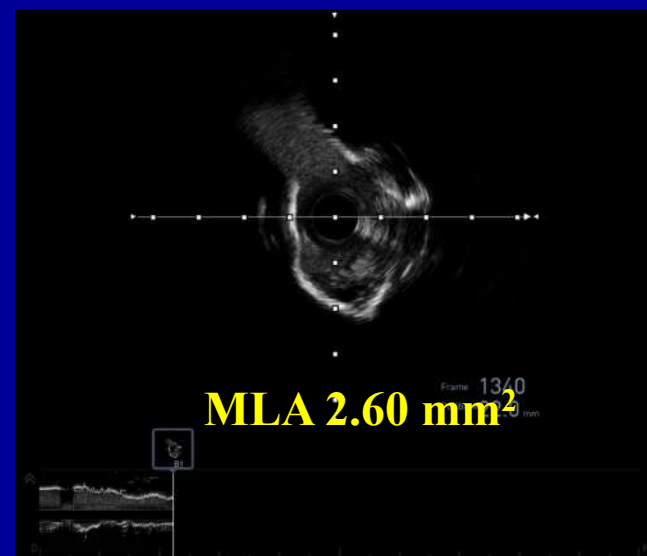
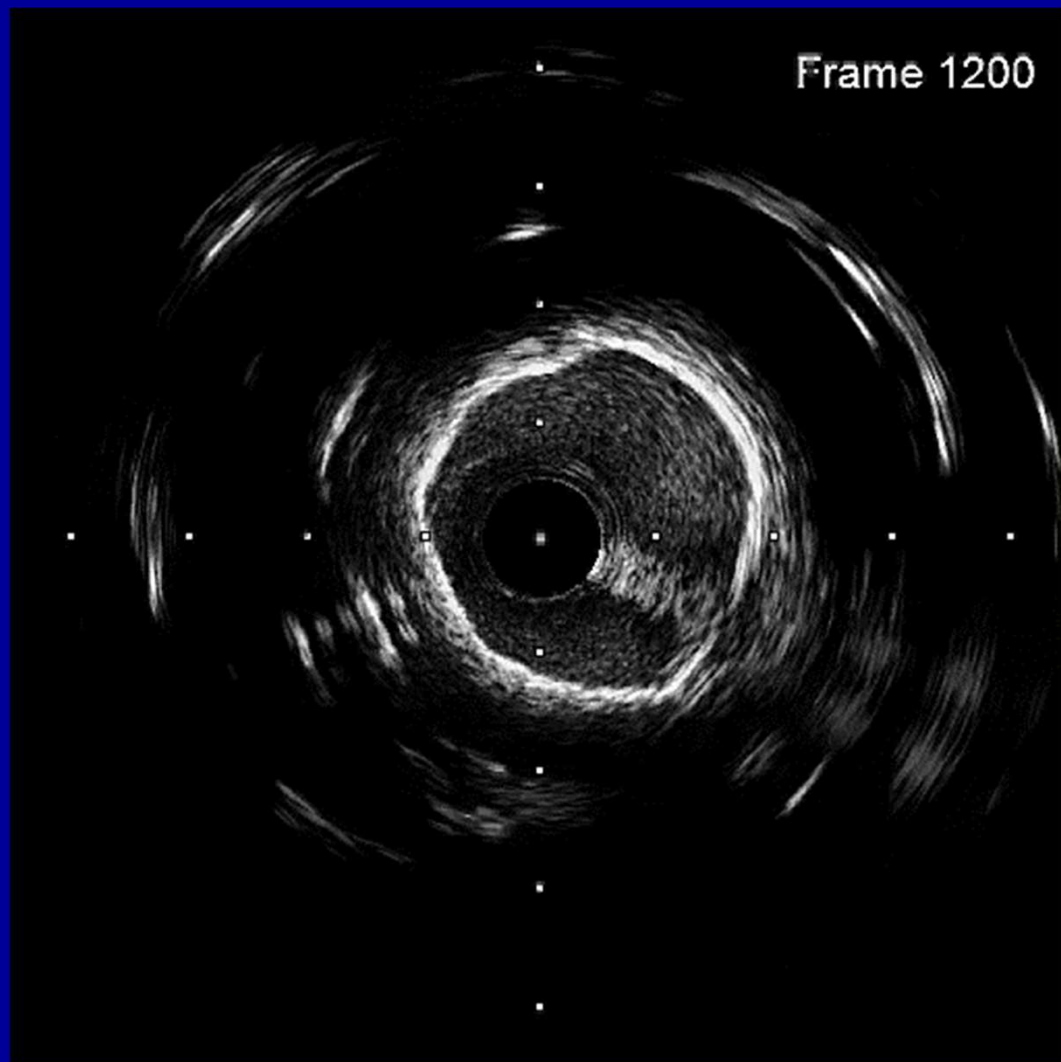
Left Coronary Angiography



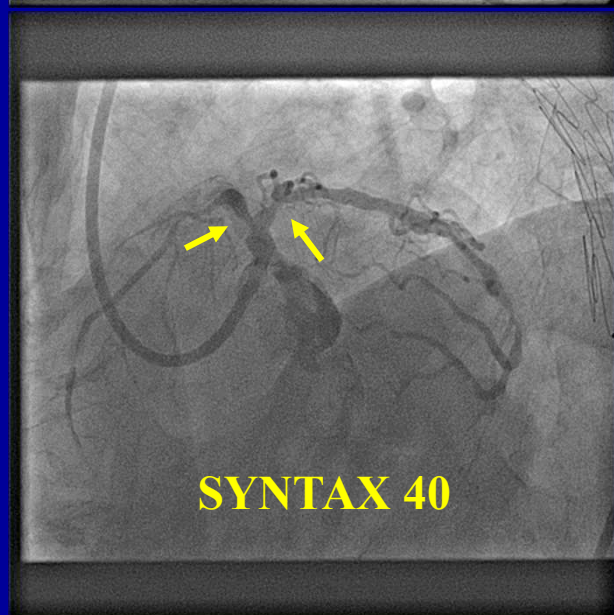
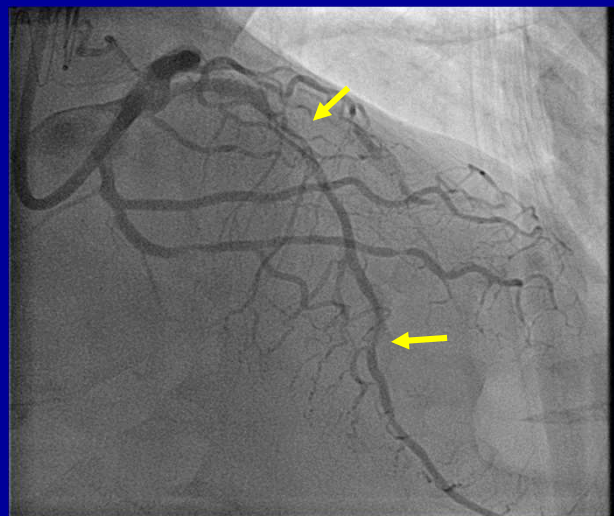
Left Coronary Angiography



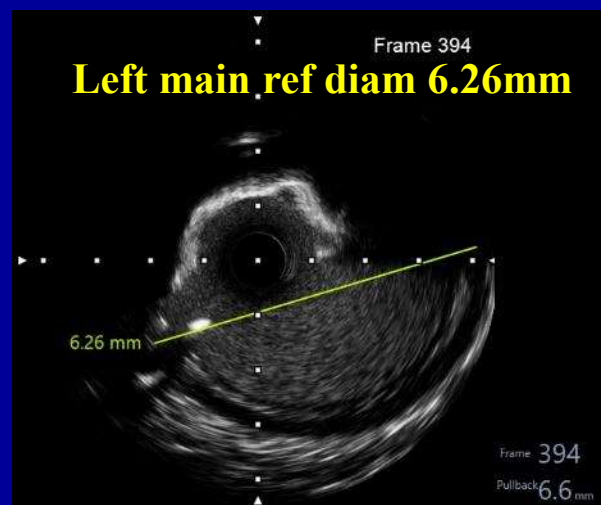
Intravascular Ultrasound Left Circumflex



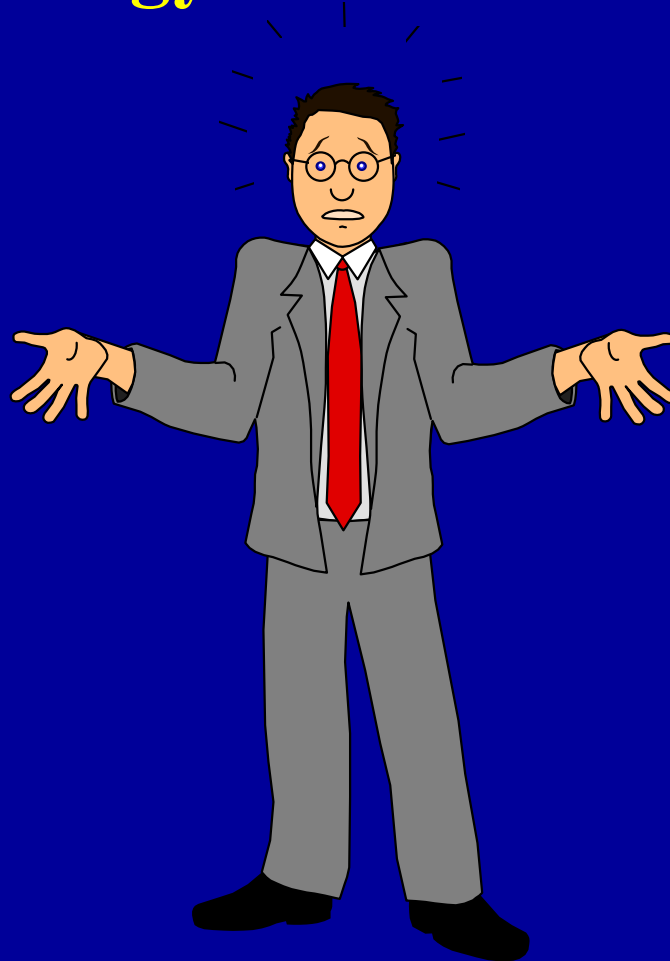
PCI Considerations



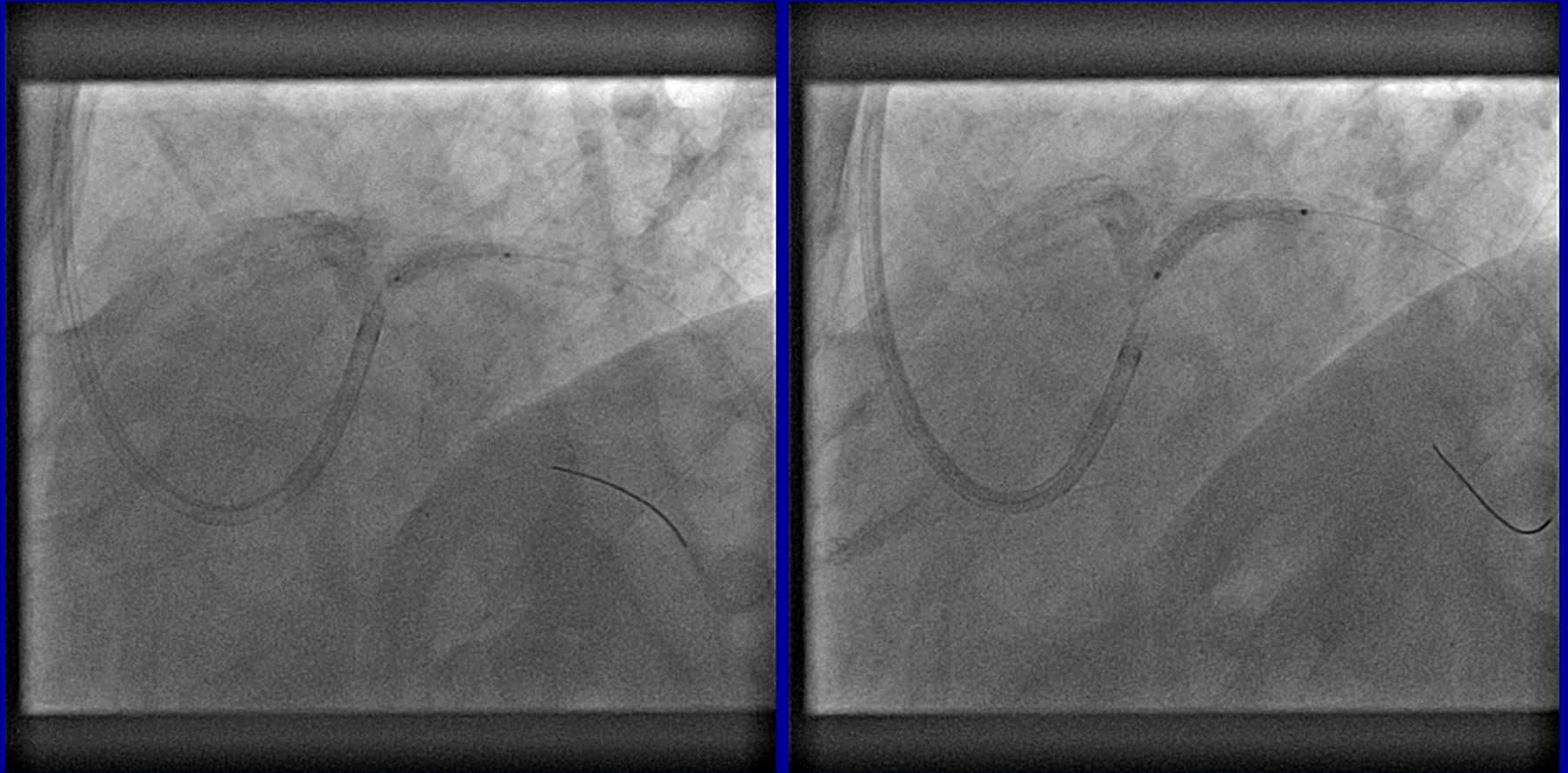
- Calcified coronary arteries
- Distal left main bifurcation stenoses involving both ostia LAD/ LCx stenosis
- Diffuse calcified proximal and distal LAD 90% stenoses
- Mismatch in calibre between left main and LAD vessel



PCI Strategy: Modified T-Stenting



PCI Of Left Circumflex Artery



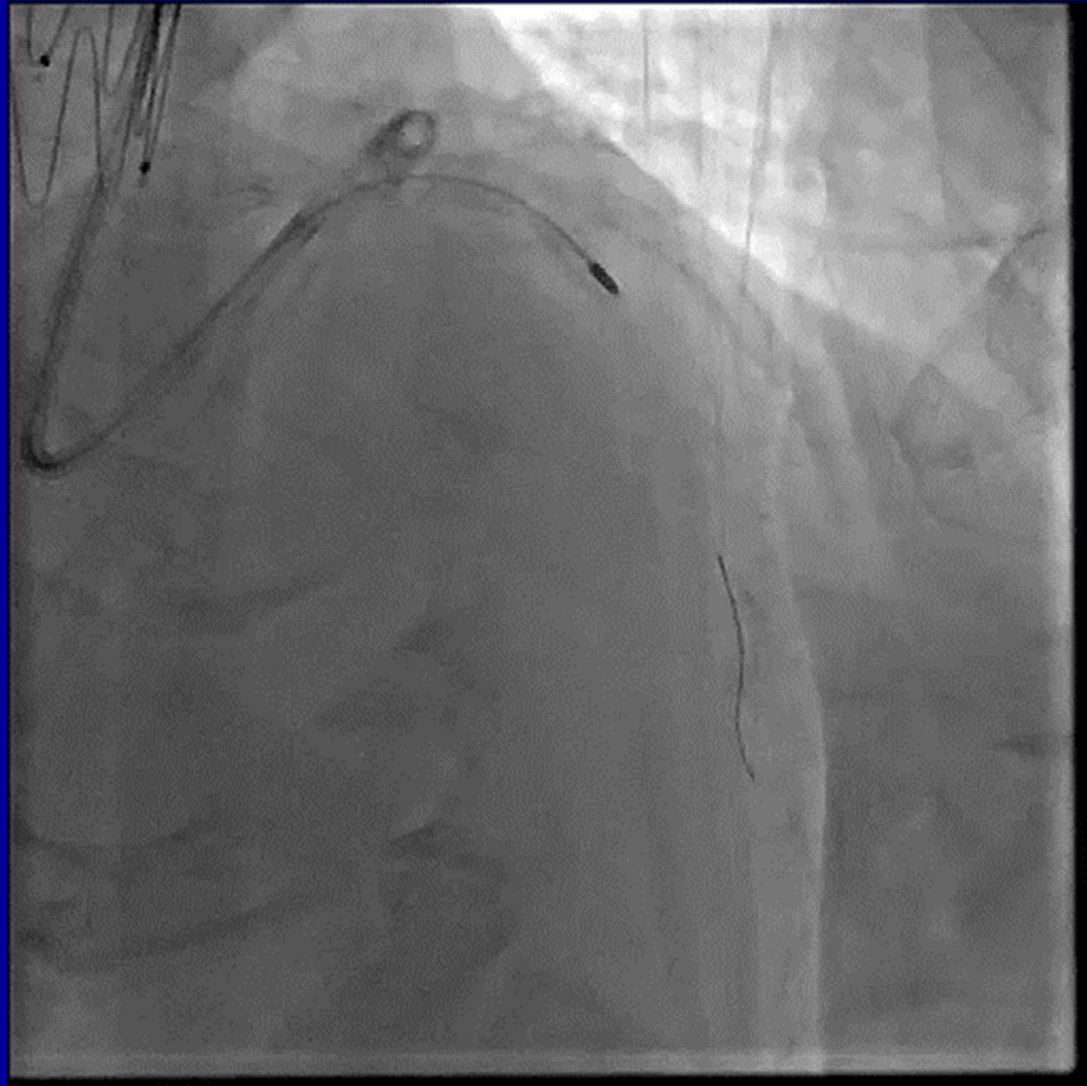
Post Stenting In Left Circumflex Artery



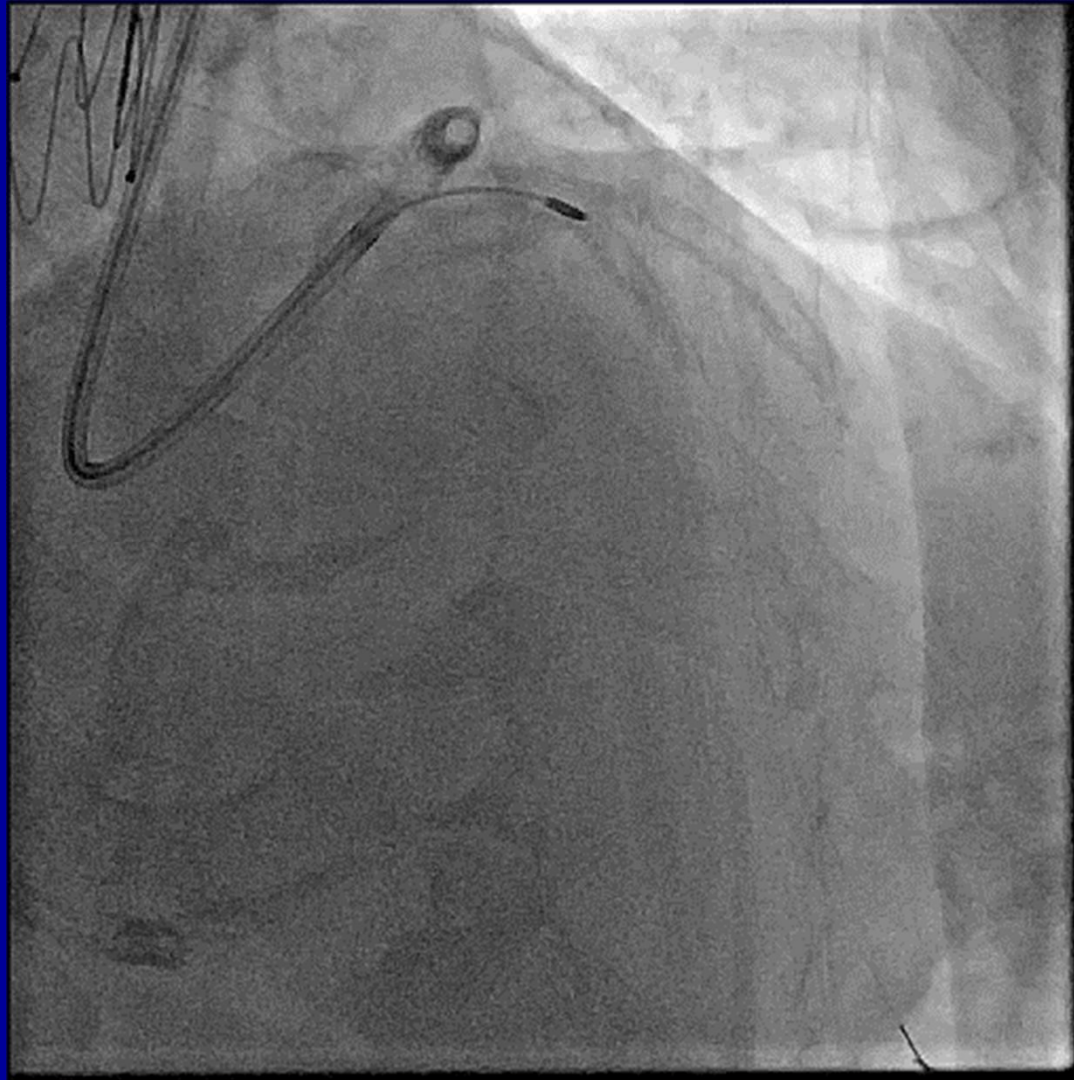
Free Wiring of Rota Floppy Guidewire In LAD



Rotablation With 1.25mm and 1.5 Burrs



Rotablation With 1.25mm and 1.5 Burrs

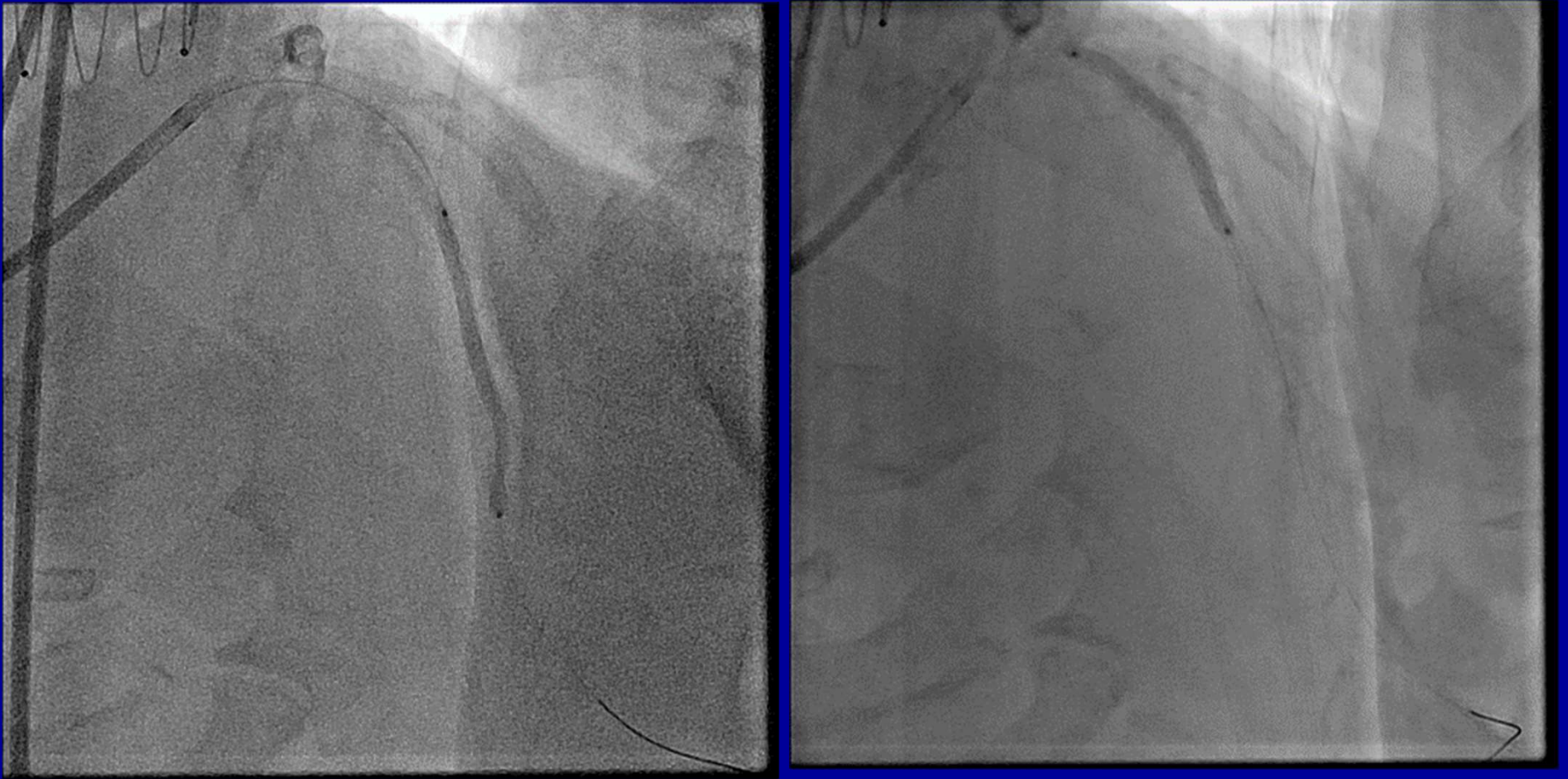


Post Rotablation Balloon Angioplasty



NC Balloons 2.25x15mm, 2.5x15mm At 30 Atmospheres

Sequential Stenting



DES 2.25x38mm, 2.5x28mm, 3.5x20mm

Coronary Stenting with 3.5x20mm DES

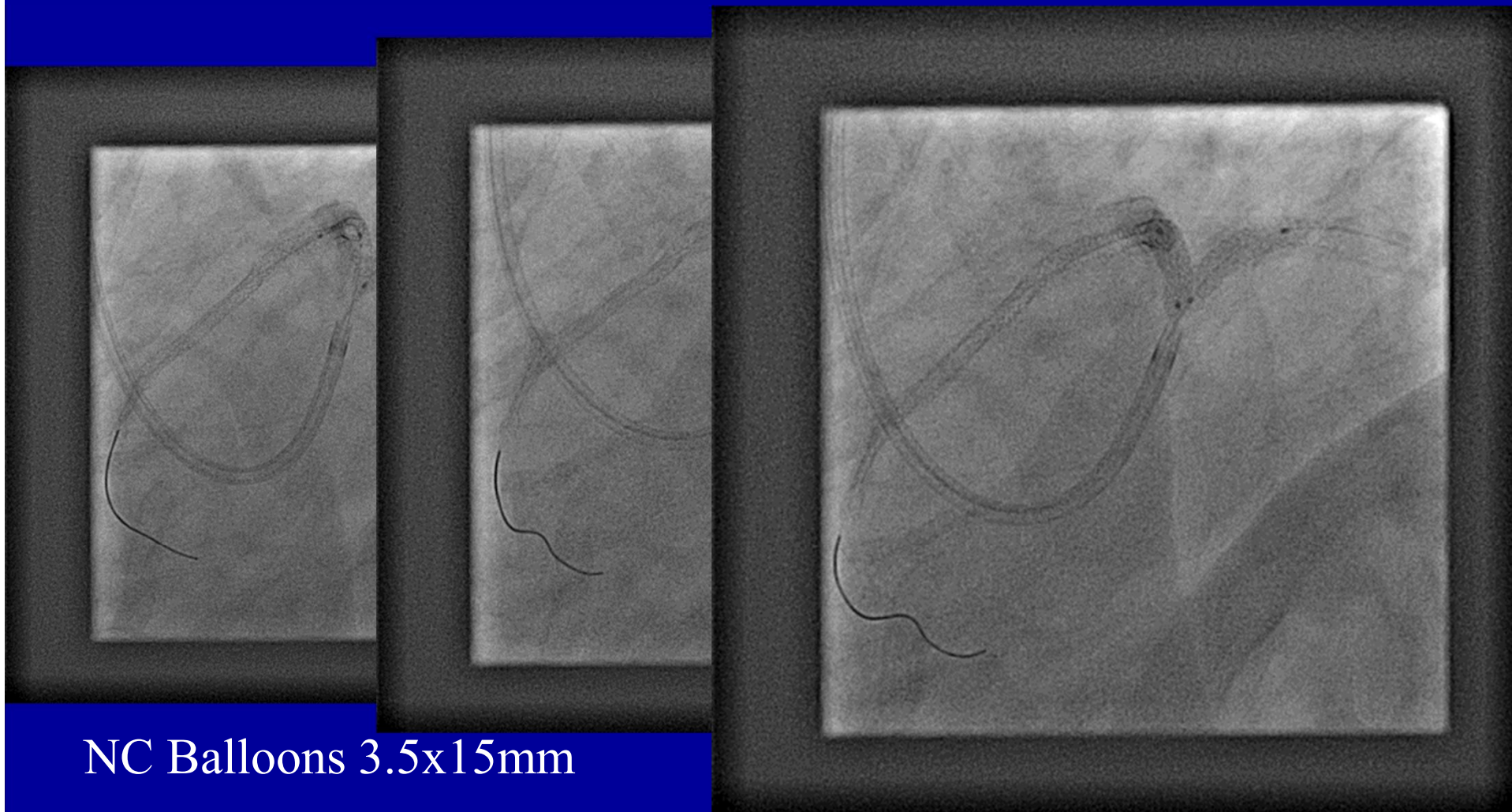


Post Stent Balloon 6.0x8mm Dilation



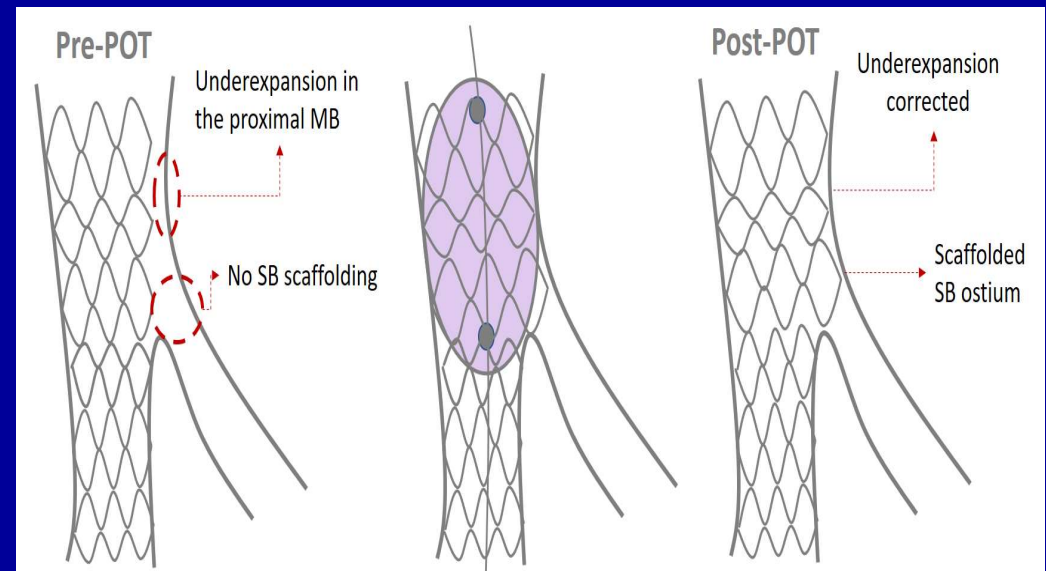
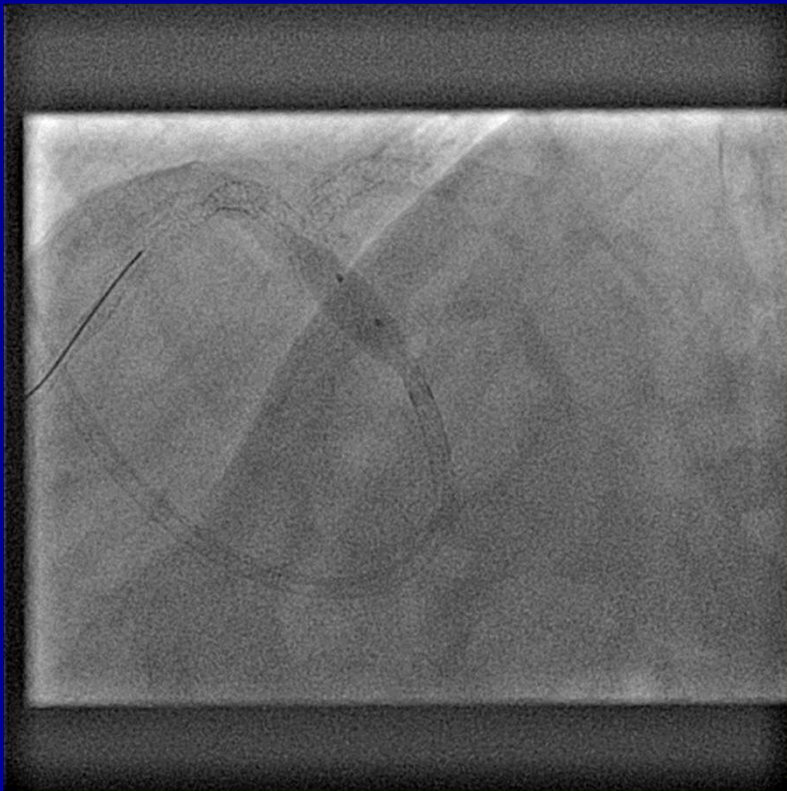
NC Balloon 4.5x8mm and 6.0x8mm

Two-Step Kissing Balloon Inflations

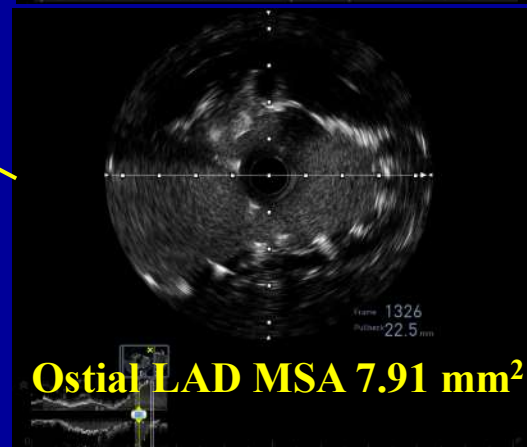
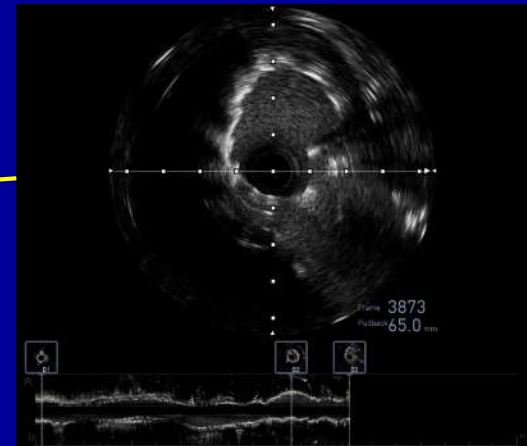


NC Balloons 3.5x15mm

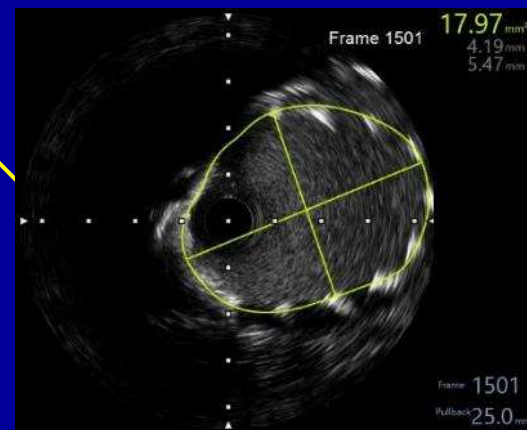
Re-POT



Post-PCI LAD IVUS



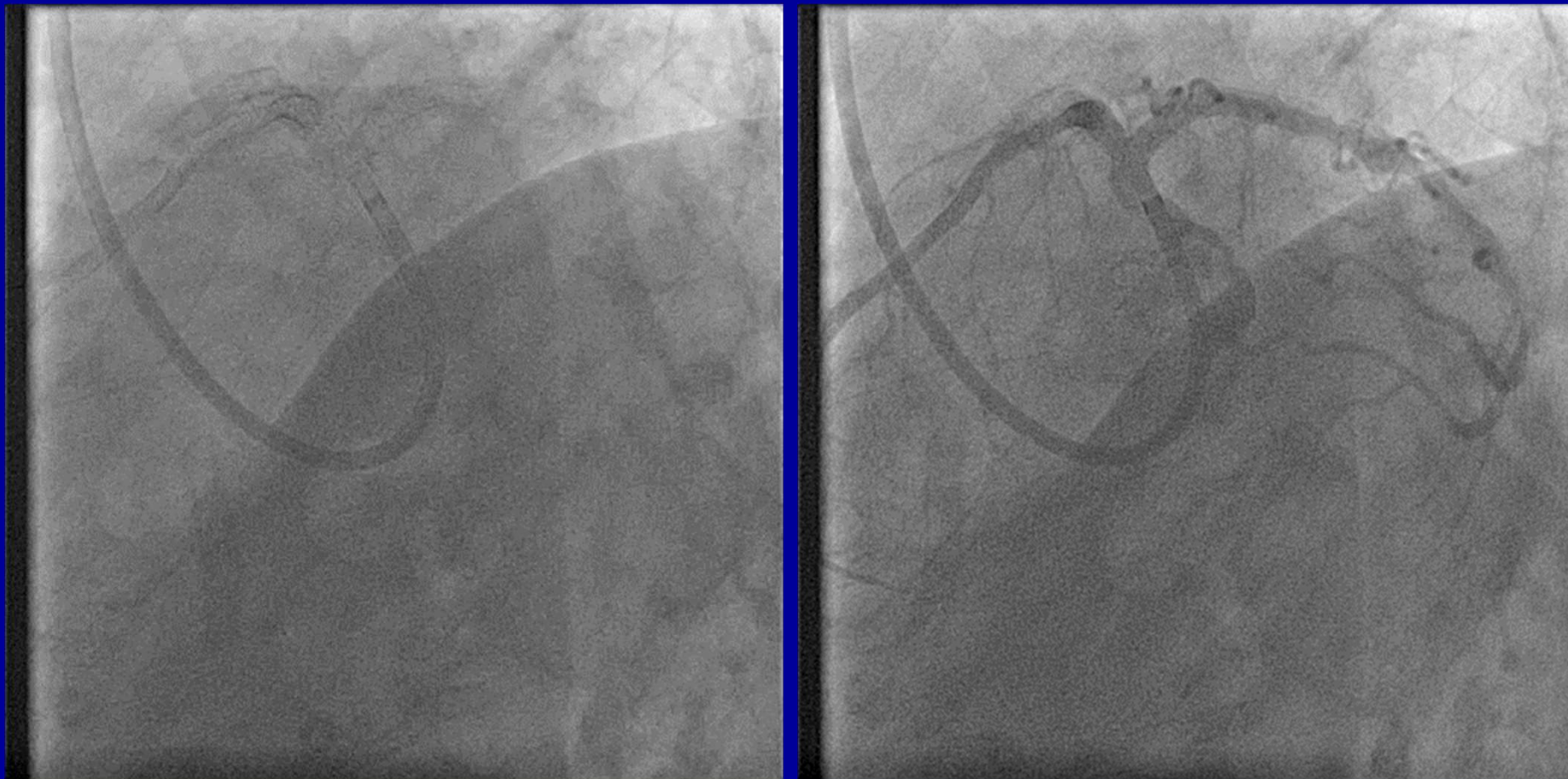
Ostial LAD MSA 7.91 mm²



Final Coronary Angiography



Final Coronary Angiography



Conclusion

- Modification of stent geometry and design answers clinical needs for improved radial and axial strength and greater expansile characteristics
- Dedicated stent designed and purpose-made for large vessel, best suited for left main, ostial/ proximal and calcified lesions