

Mechanical Issues of LM Stenting Gap, Incomplete Crush, Deformation and More

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Disclosure Statement of Financial Interest

Within the past 12 months, I or my spouse/partner have had a financial interest/arrangement or affiliation with the organization(s) listed below.

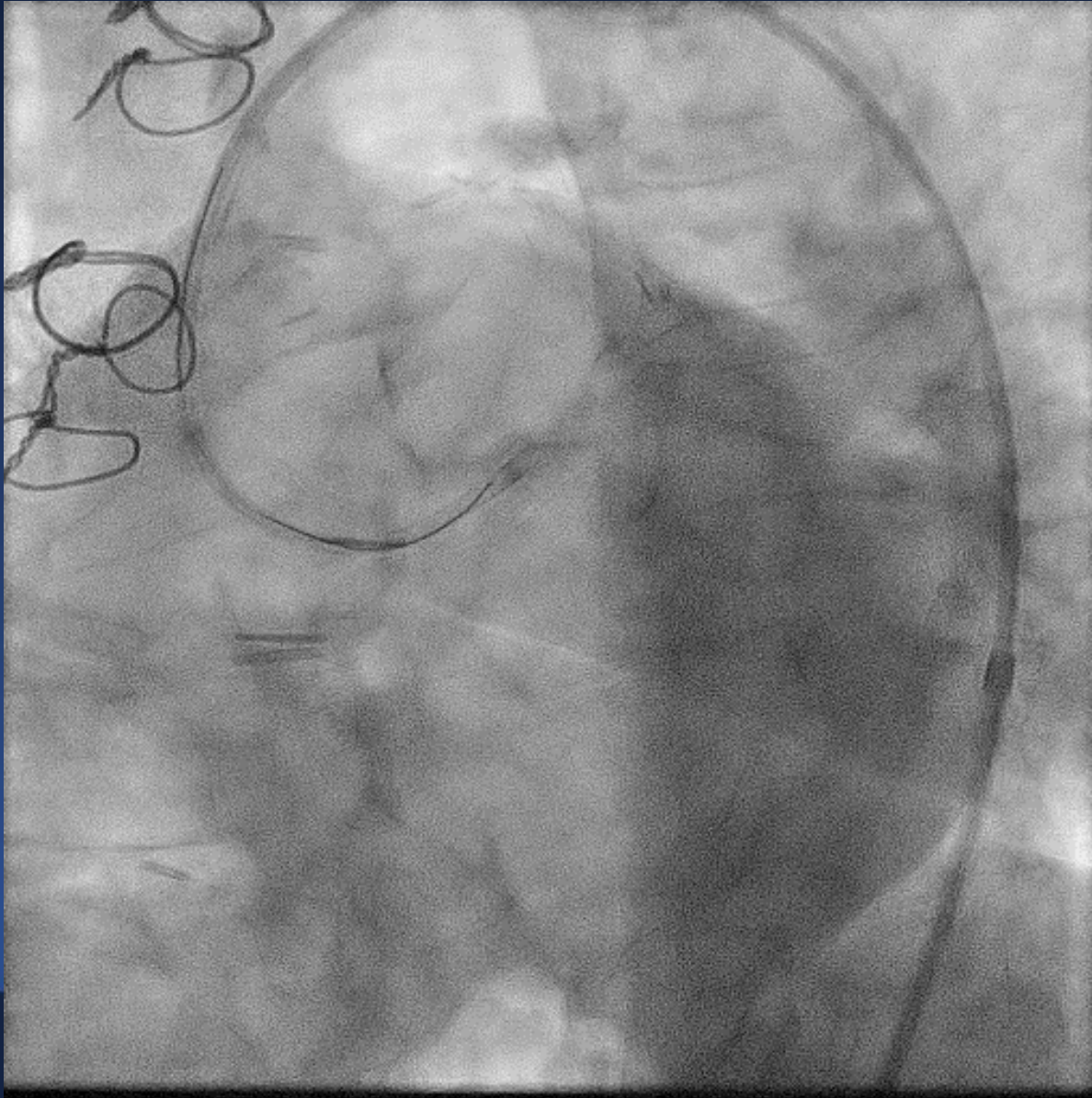
Affiliation/Financial Relationship

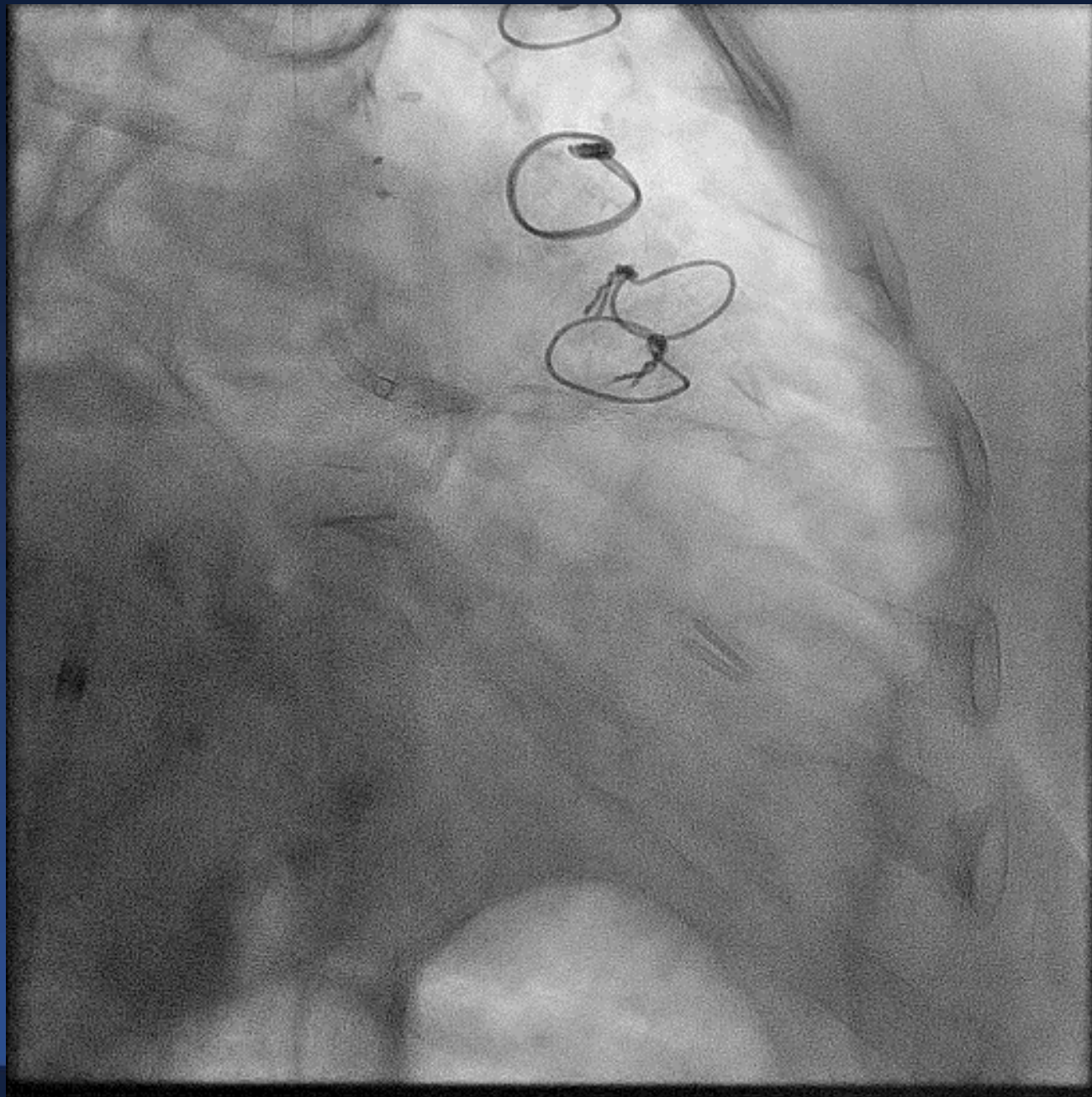
- Grant/Research Support
- Consultant

Company

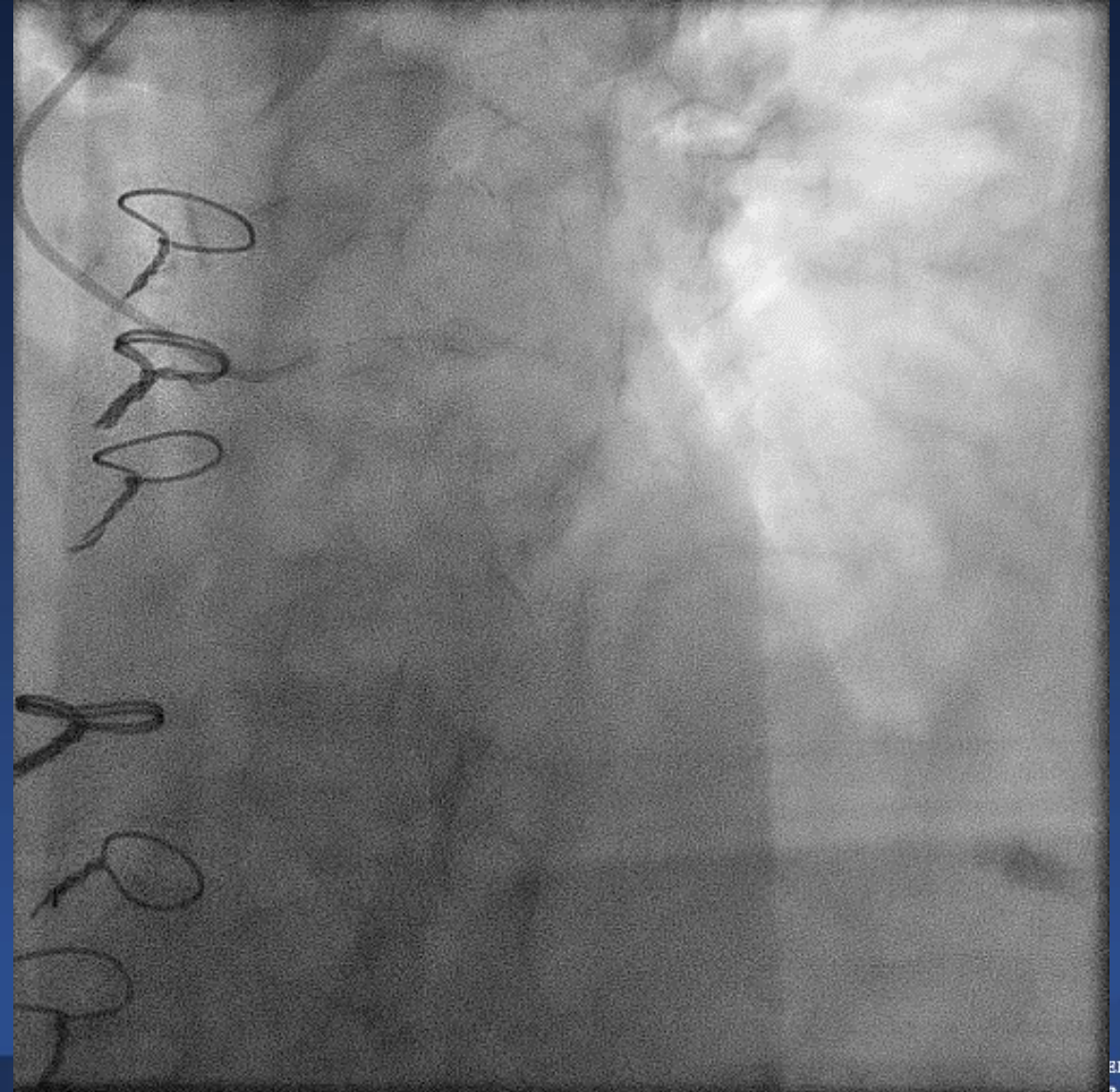
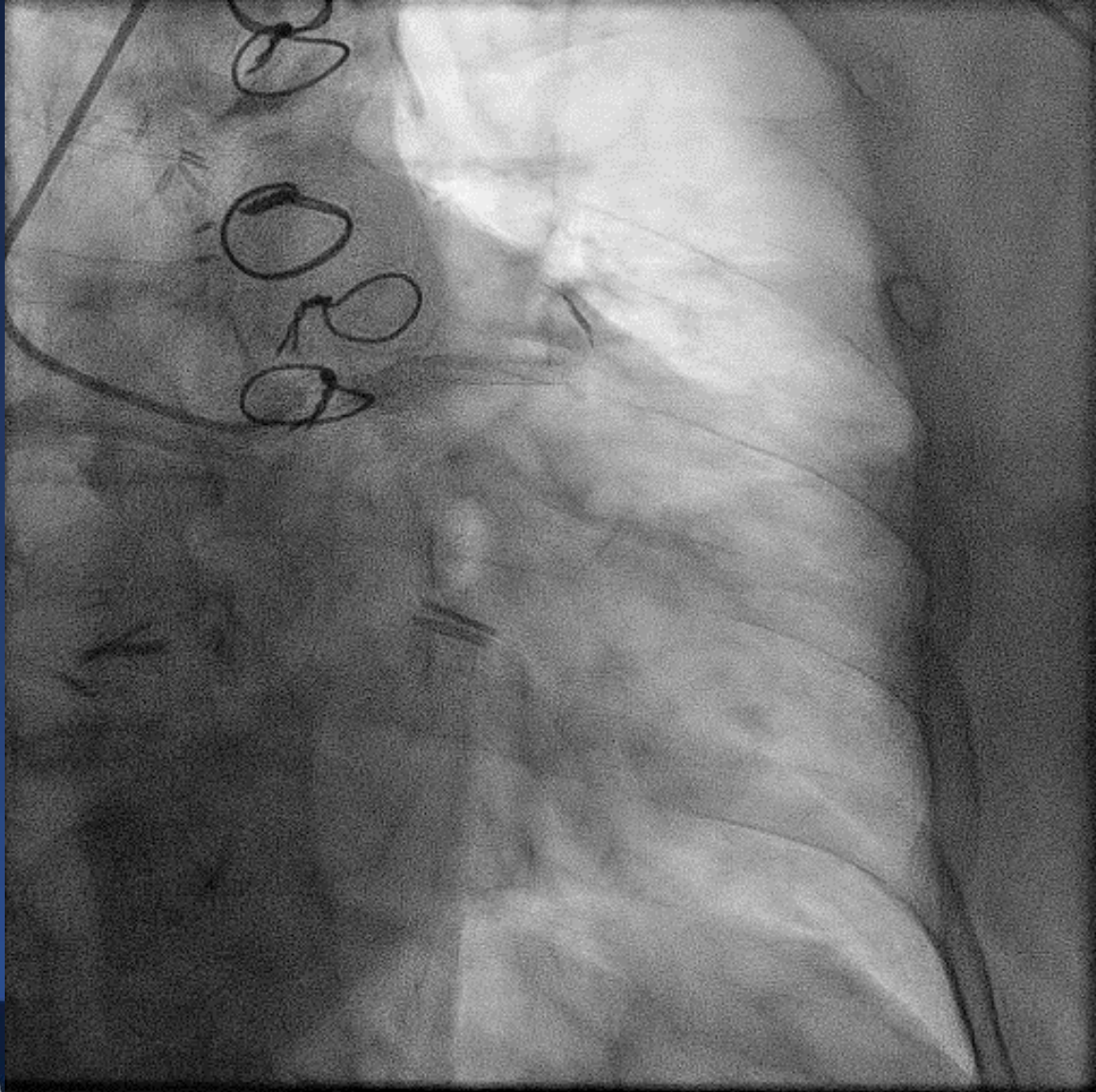
- Boston Scientific, Abbott Vascular
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✓ 84 years old female, Stable angina, post CABG (only patent SVG-RCA), HL, HT, Smoker, COPD

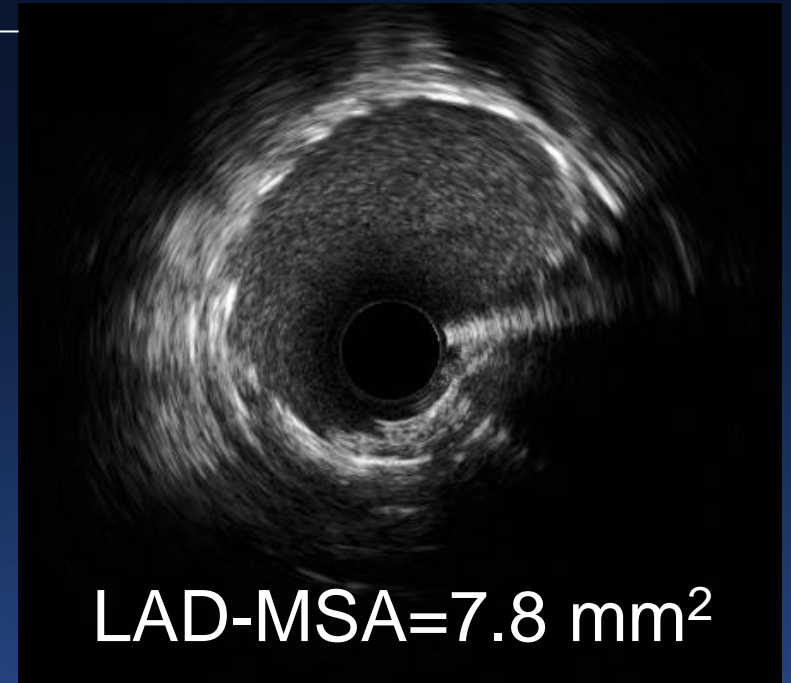
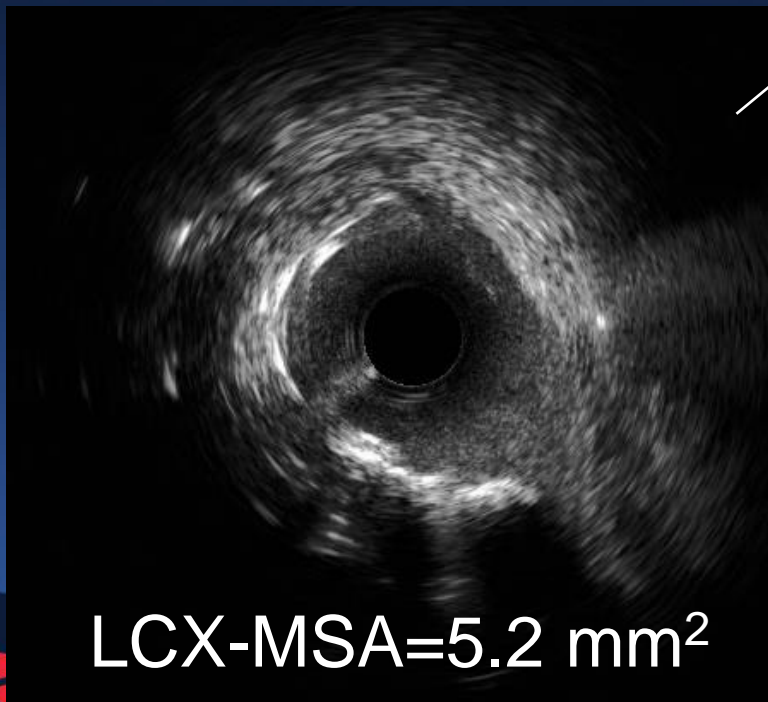
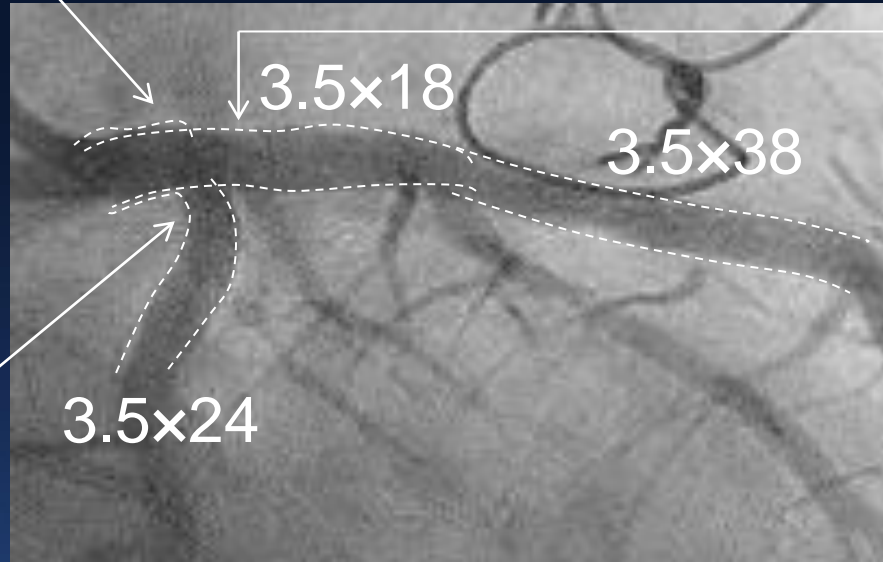
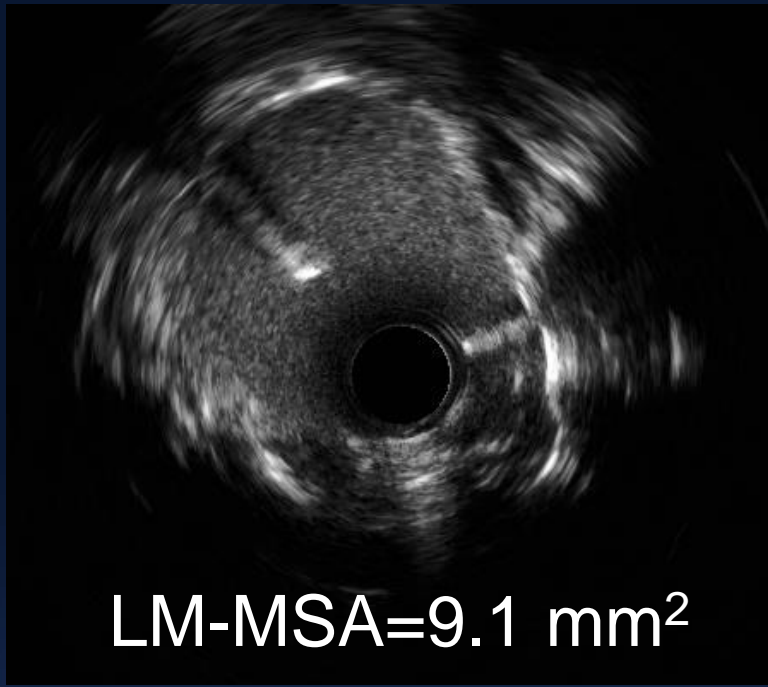




✓ Two month later, NSTEMI

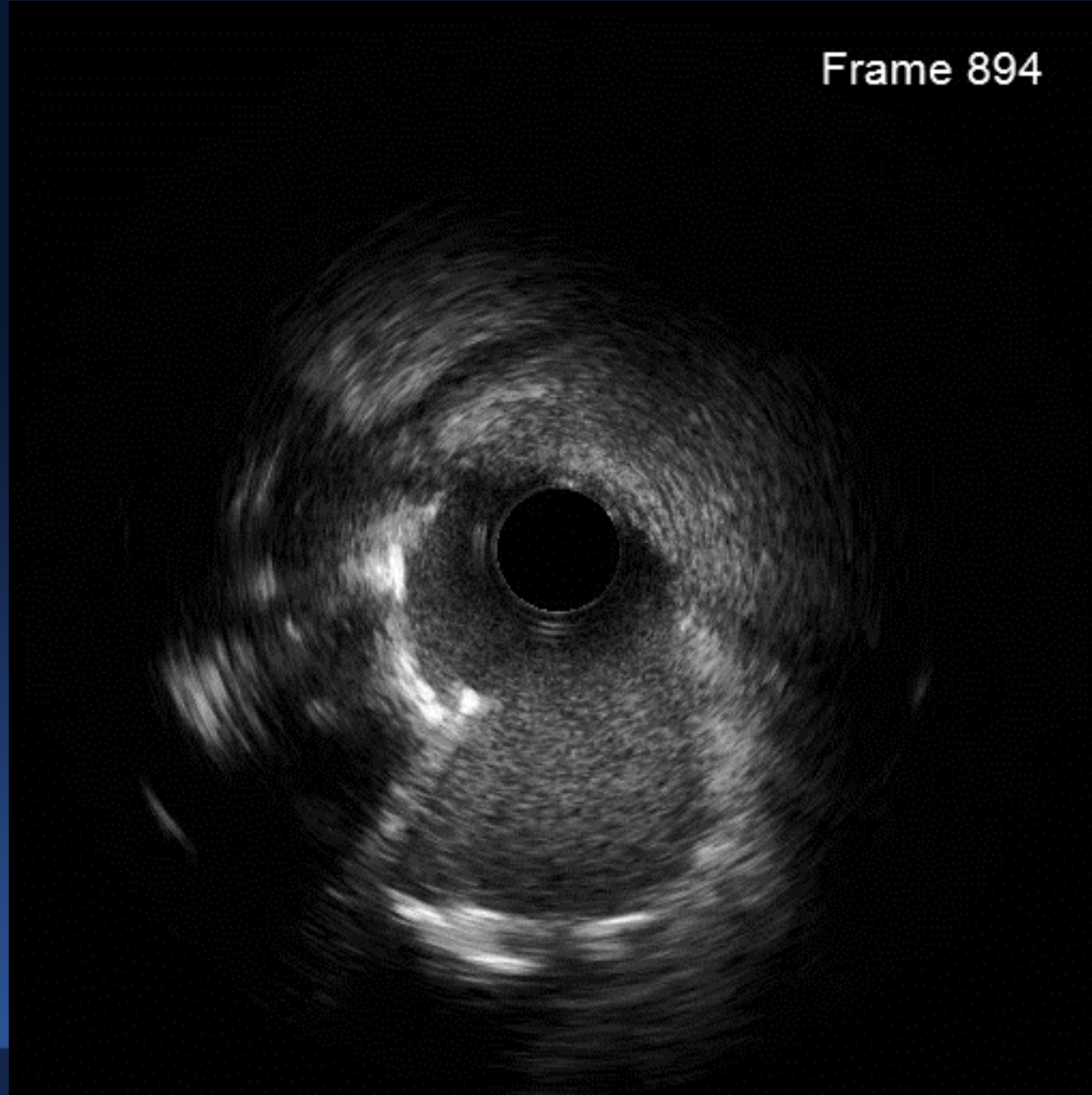


Post-Culotte Stenting

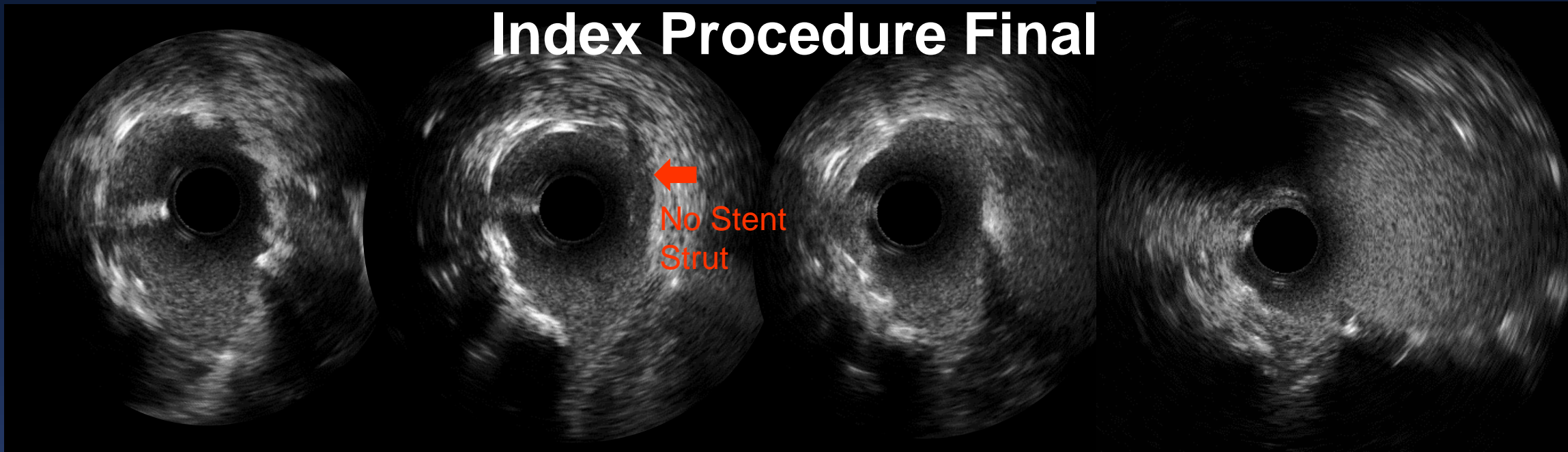


Final LCX at Index Procedure

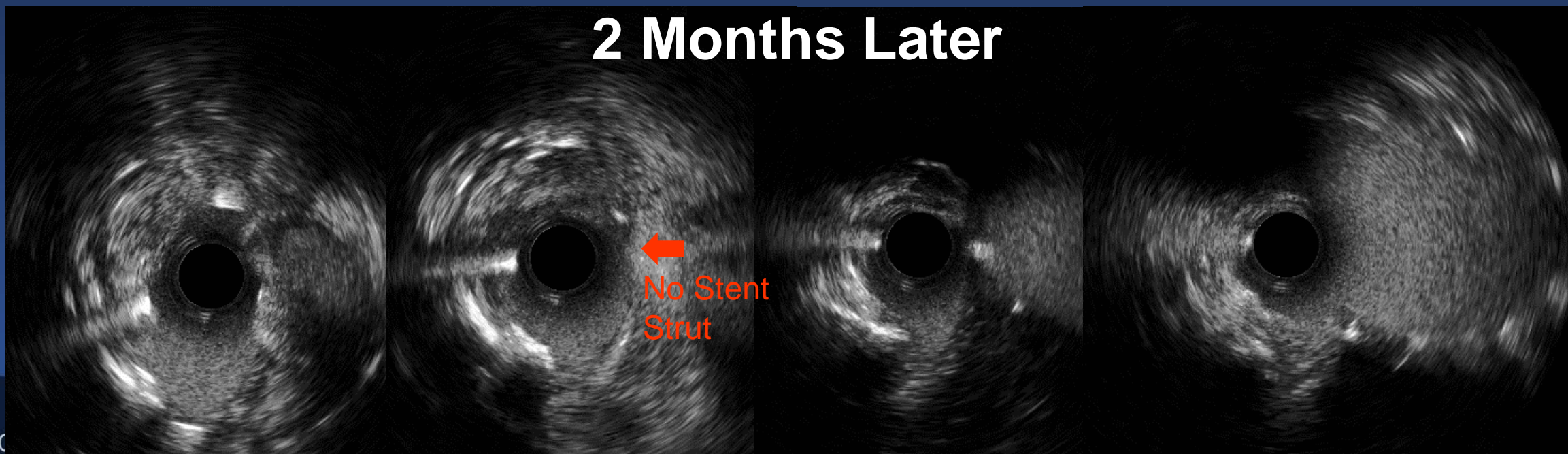
Frame 894



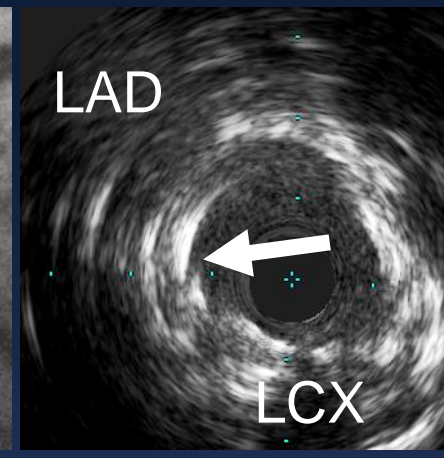
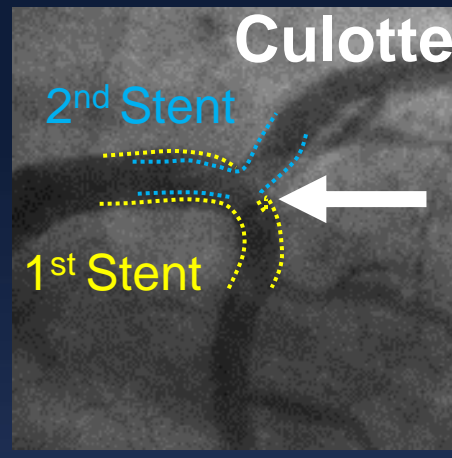
Index Procedure Final



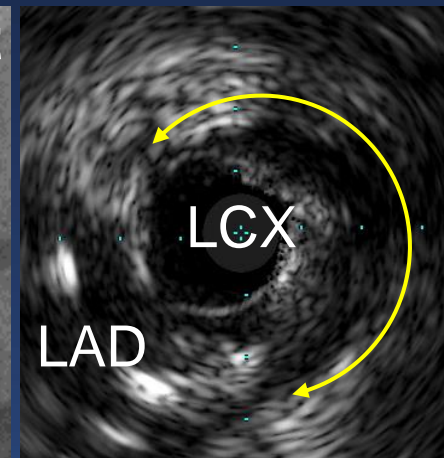
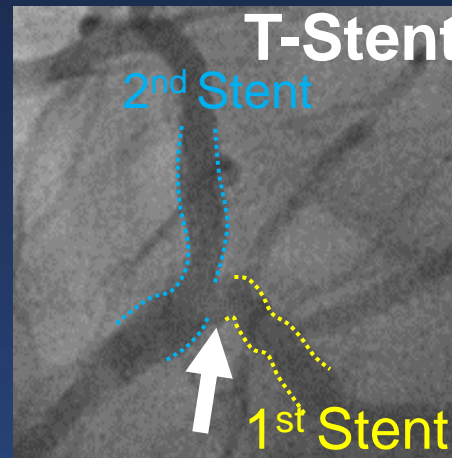
2 Months Later



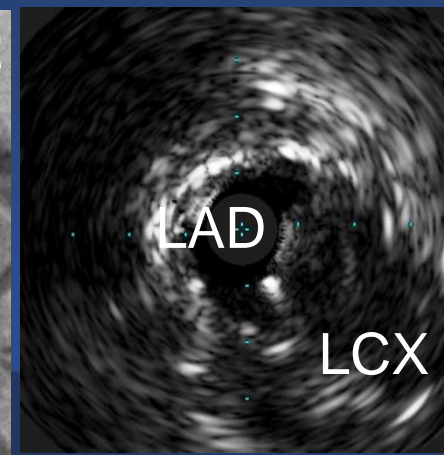
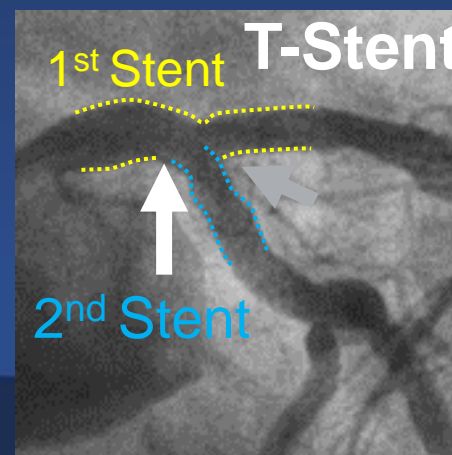
Incompletely crushed or deformed stent struts



Stent Gap



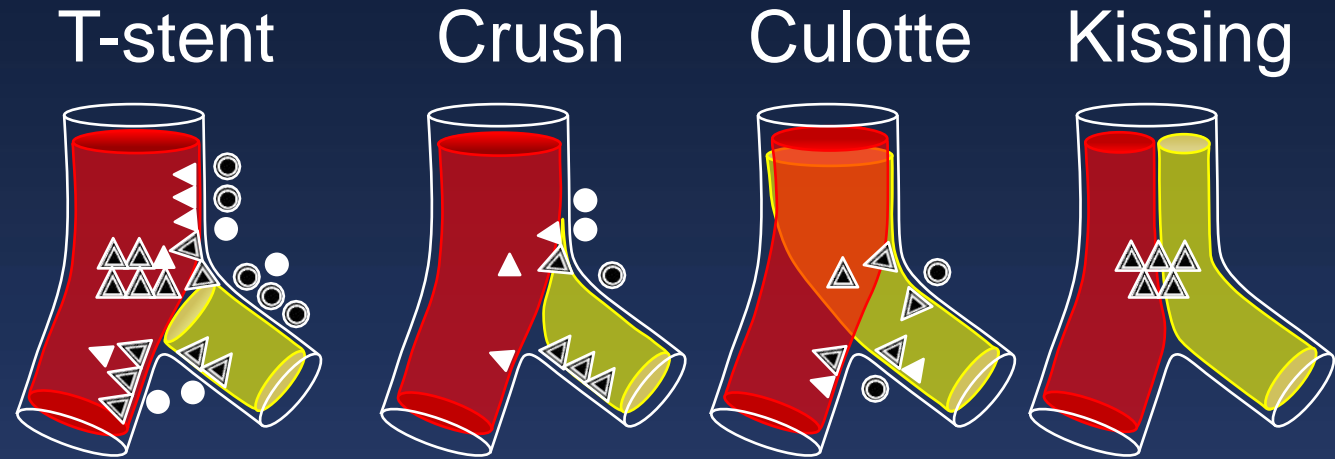
Floating stent struts



Frequency and Location of Technical Issues

● Gap
▲ ICS

◎ Gap at MLA
△ ICS at MSA



All (n=127)

(n=62)

(n=25)

(n=35)

(n=5)

Incomplete crushed stent (ICS)

28.3% (36)

27.4% (17)

28.0% (7)

20.0% (7)

100% (5)

Gap

11.0% (14)

14.5% (9)

12.0% (3)

5.7% (2)

0% (0)

Floating struts

54.3% (69)

59.7% (37)

36.0% (9)

51.4% (18)

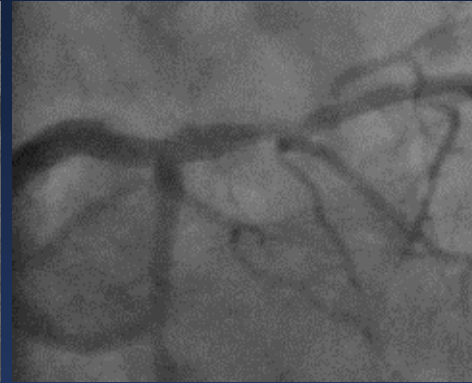
100% (5)

Complication of LMCA Stenting

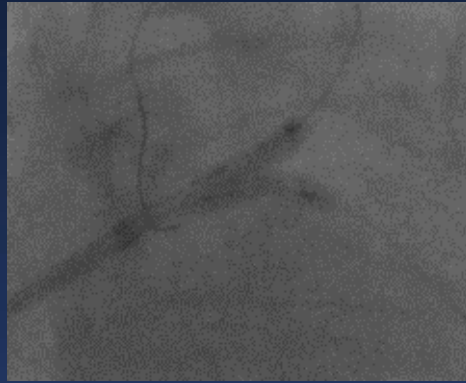
Pre



Post-Stent LAD-LMCA



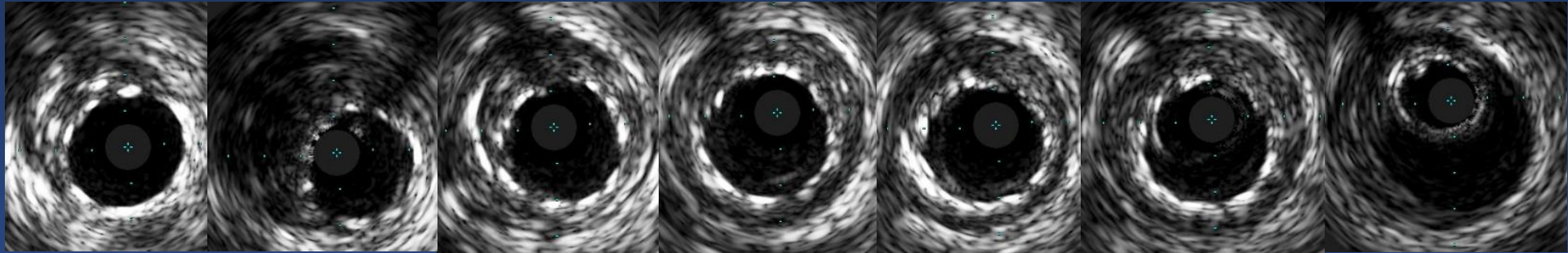
KBT



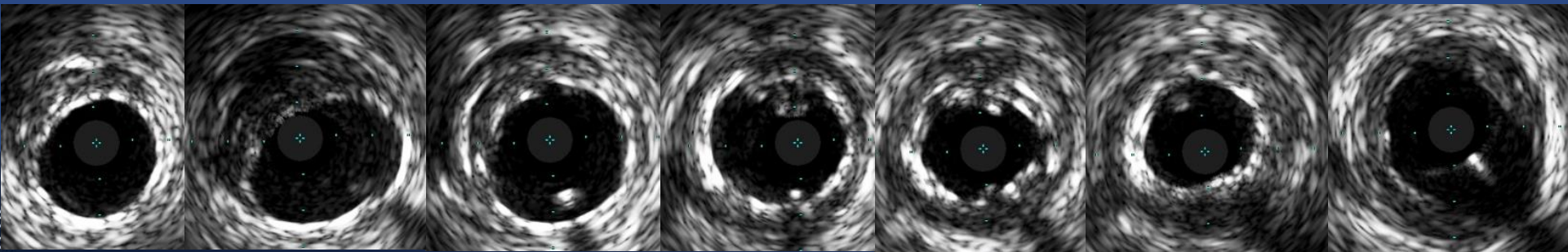
Final



Post-Stent LAD-LMCA



Final



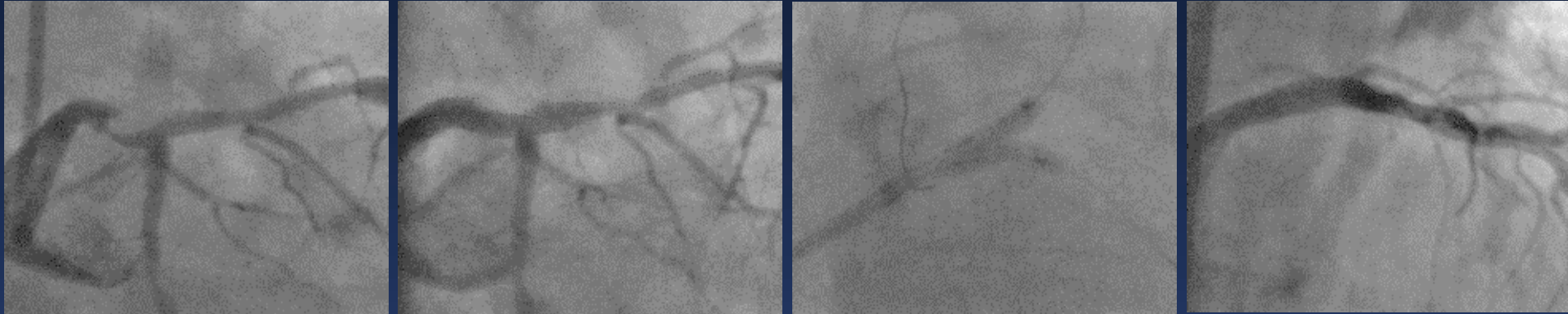
Complication of LMCA Stenting

Pre

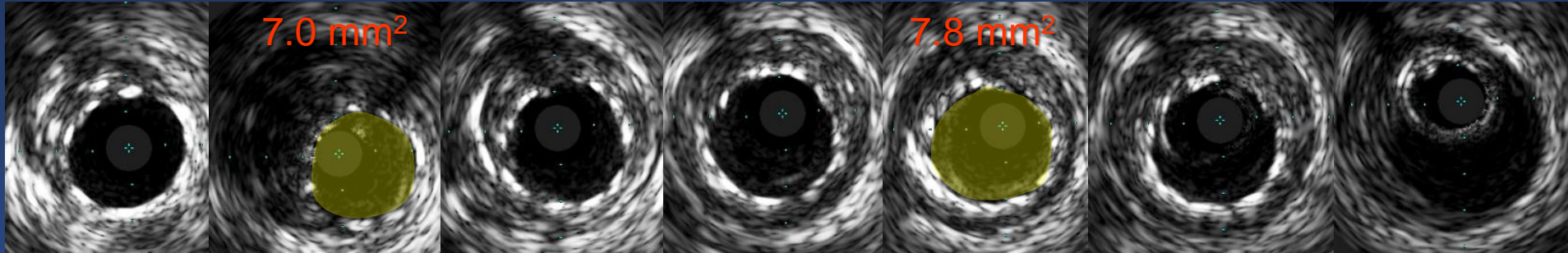
Post-Stent LAD-LMCA

KBT

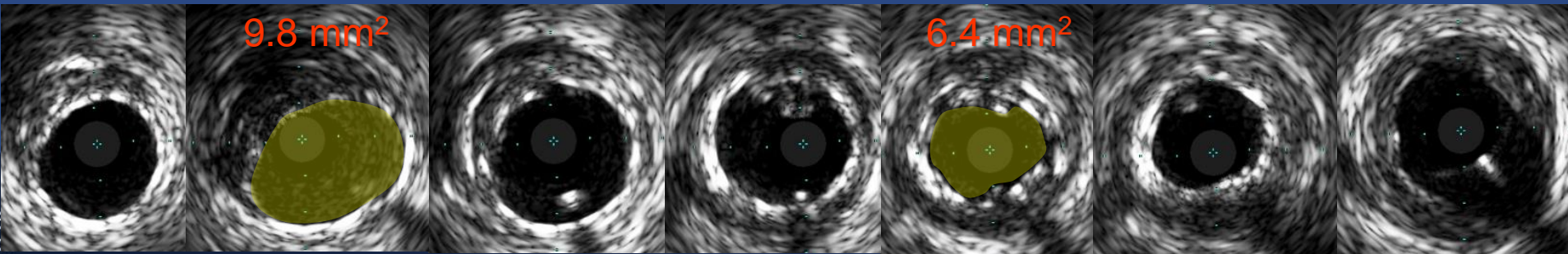
Final



Post-Stent LAD-LMCA

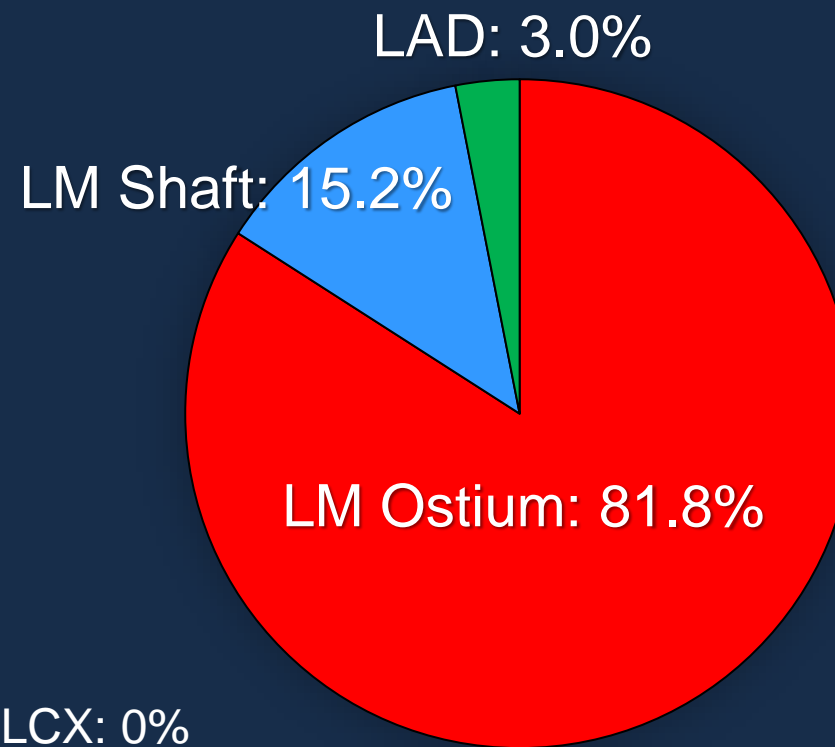


Final



Acute Stent Deformation

- Prevalence: 6.5% (33/506)
- Location*:



*LM bifurcation 0%; LCX: 0%

Angiographic & Procedural Characteristics

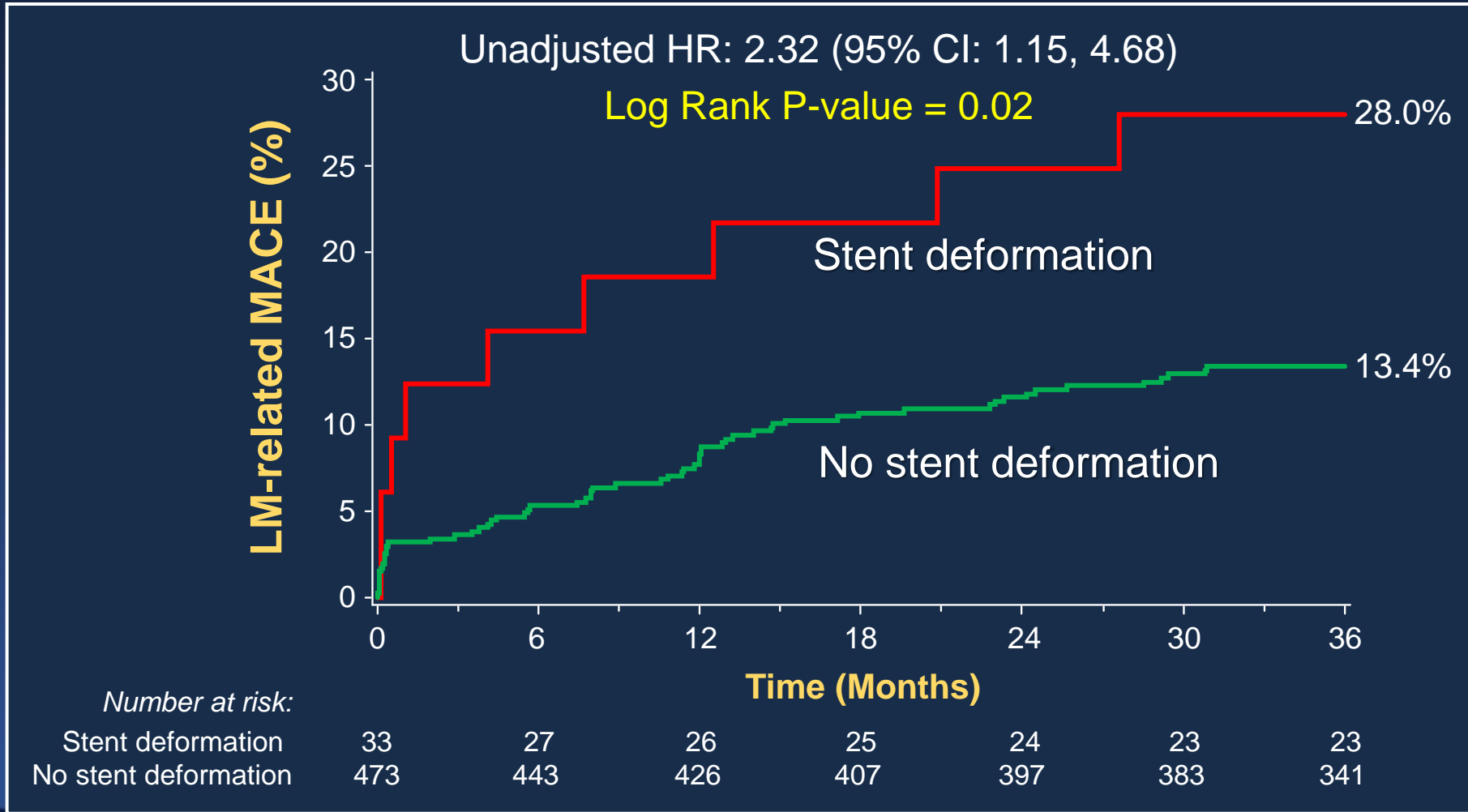
Stent Deformation	Yes (n=33)	No (n=473)	P Value
LM lesion location*			
Ostium	45.5%	34.4%	0.20
Shaft	54.5%	44.2%	0.25
Distal bifurcation	78.8%	79.7%	0.90
Baseline Syntax score*	28.4±9.4	26.7±8.6	0.44
Femoral access	77.1%	69.4%	0.33
8 Fr guiding catheter used	27.3%	12.7%	0.03
Total number of lesion treated	2.9±1.2	2.4±1.2	0.01
Total number of LM stent used	1.9±0.9	1.4±0.7	0.001
Total fluoroscopy time (min)	31.5±17.5	23.5±15.1	0.003
Procedural complications	20.0%	9.1%	0.07

* Angio core lab evaluation; ostial, shaft, and distal bifurcation lesions may co-exist

Final IVUS Findings

Stent Deformation	Yes (n=33)	No (n=473)	P Value
MSA in LM (mm ²)	8.6 (7.1, 10.9)	10.0 (8.3, 11.5)	0.06
Stent struts protruding into aorta	66.0%	54.3%	0.54
Length of protruding stent struts into aorta (mm)	3.4 (2.3, 4.2)	2.7 (1.7, 3.8)	0.35
Stent edge dissection	27.3%	11.8%	0.03
Stent malapposition	27.3%	20.3%	0.34
Stent tissue protrusion	12.1%	9.7%	0.56

3-Year Left Main-Related Major Adverse Cardiac Events*



*Cardiac death, LM-related MI, LM-ischemia-driven TLR, LM-related definite/probable ST

Summary

- 1. After 2 stent technique in distal left main bifurcation, stent gap at carina (11%), incomplete crush struts (28%) were not infrequent.**
- 2. After left main PCI, stent deformation at ostium was observed in 6.5% and were associated with the poor outcome.**