



The Role of Atherectomy Devices in the Real DES Era

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Toyohashi Heart Center, Japan



Atherectomy Devices in DES Era

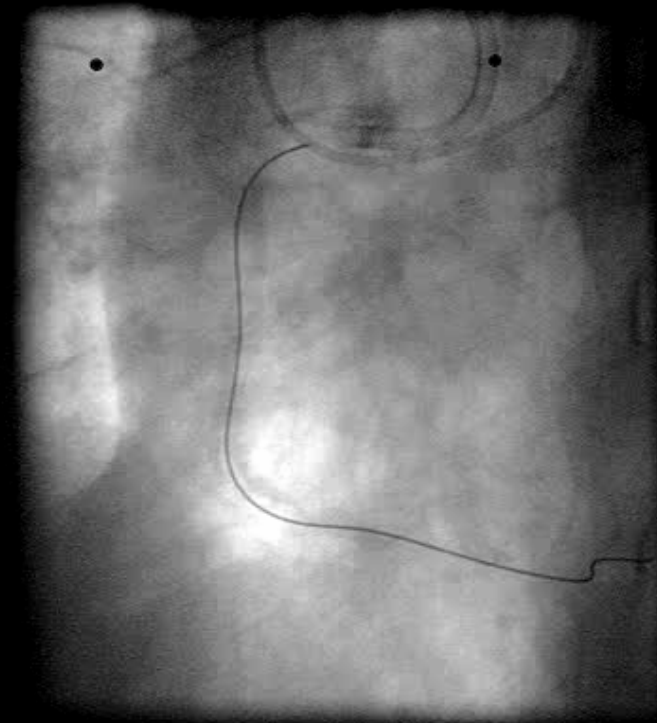
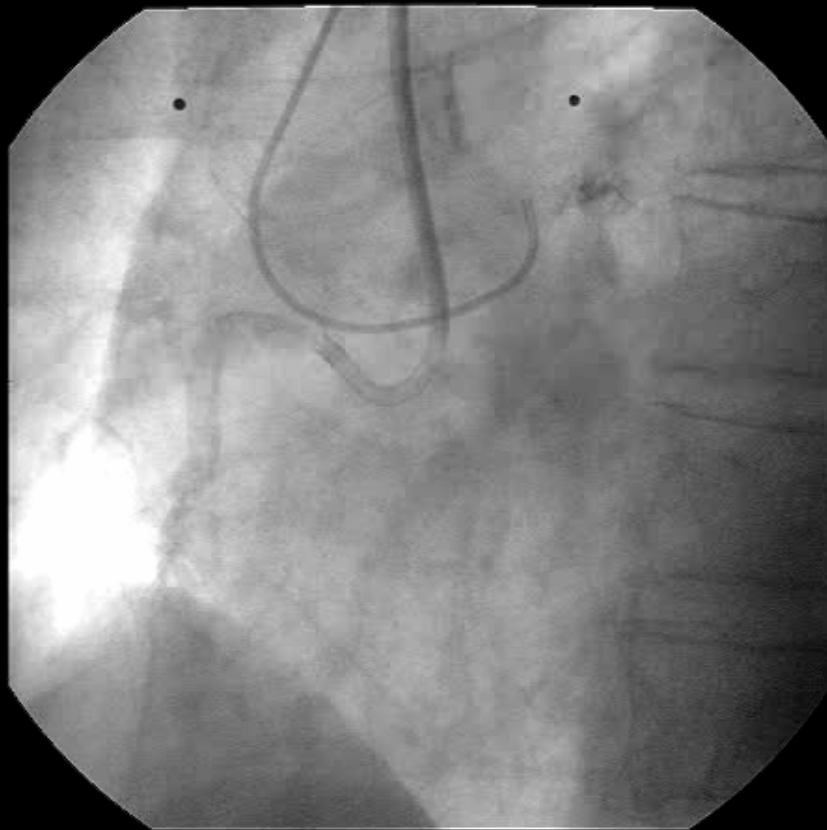
- **Rotablator**
- **DCA (Flexi-Cut)**
- **Fox Hollow atherectomy**



Atherectomy Devices in DES Era

- **Rotablator**
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RCA-CTO



Miracle 12g

Atherectomy in DES era



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Rotablator 1.25mm

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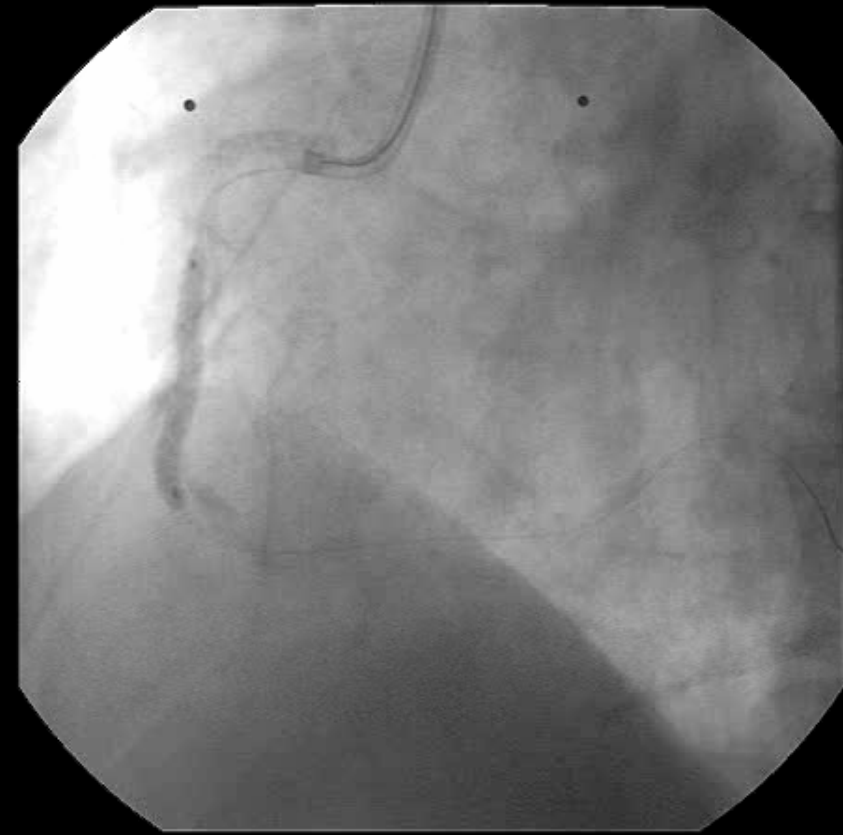
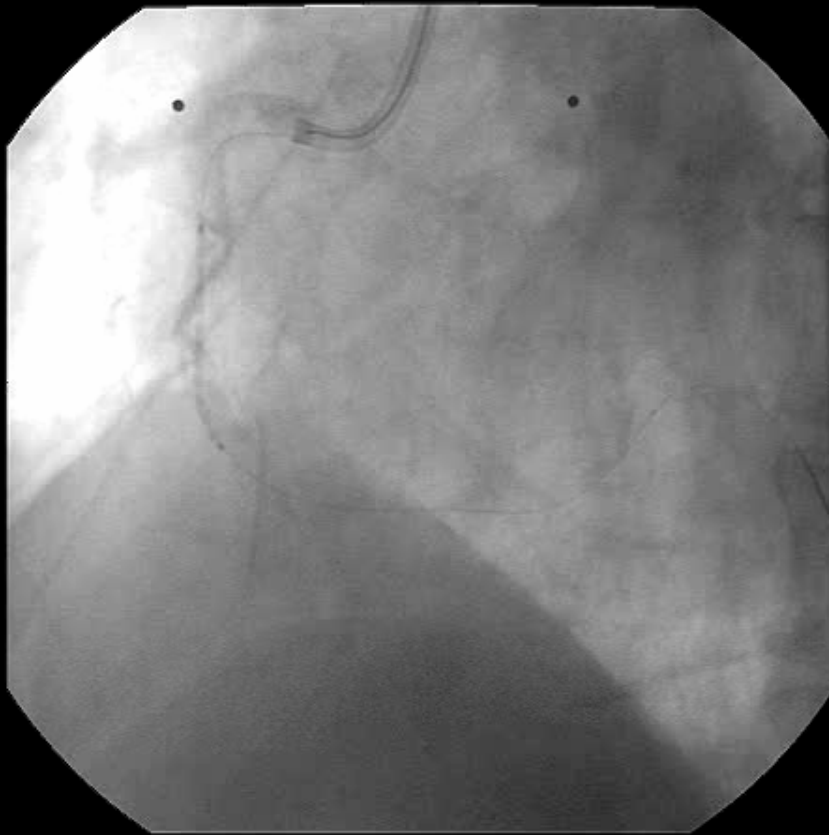


Rotablator 1.75mm

Atherectomy in DES era



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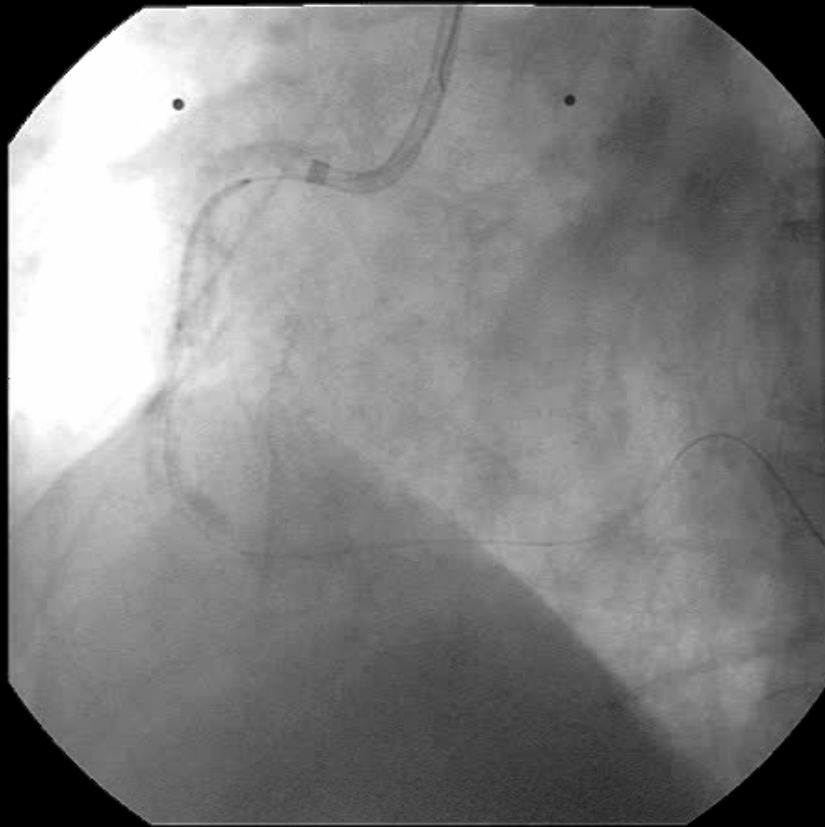
Cypher

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Atherectomy in DES era



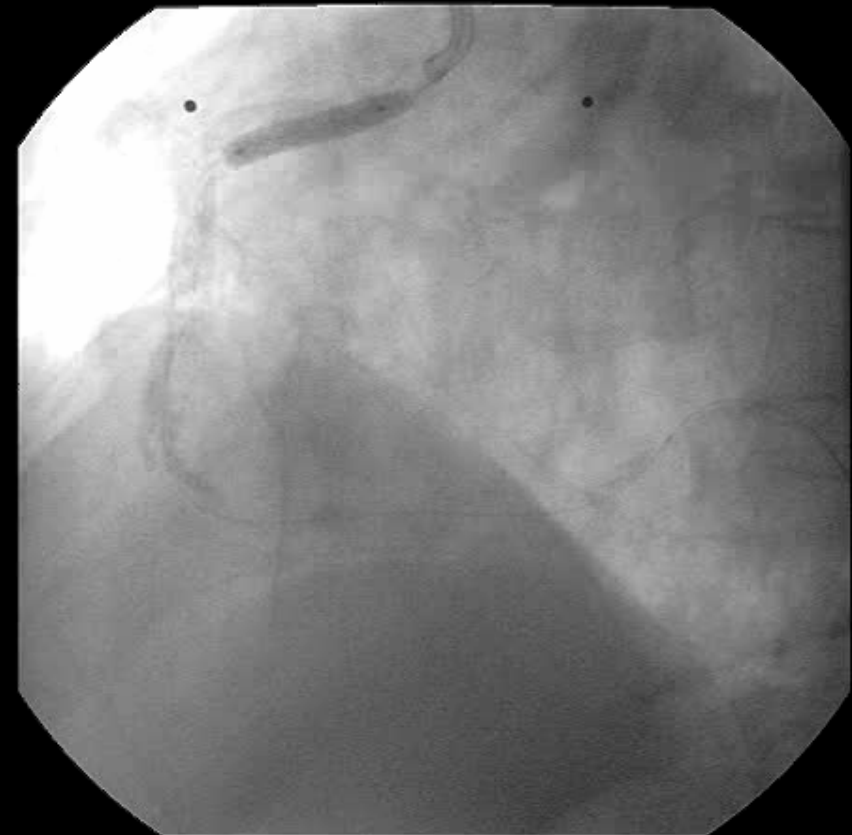
Toyohashi Heart Center



Cypher

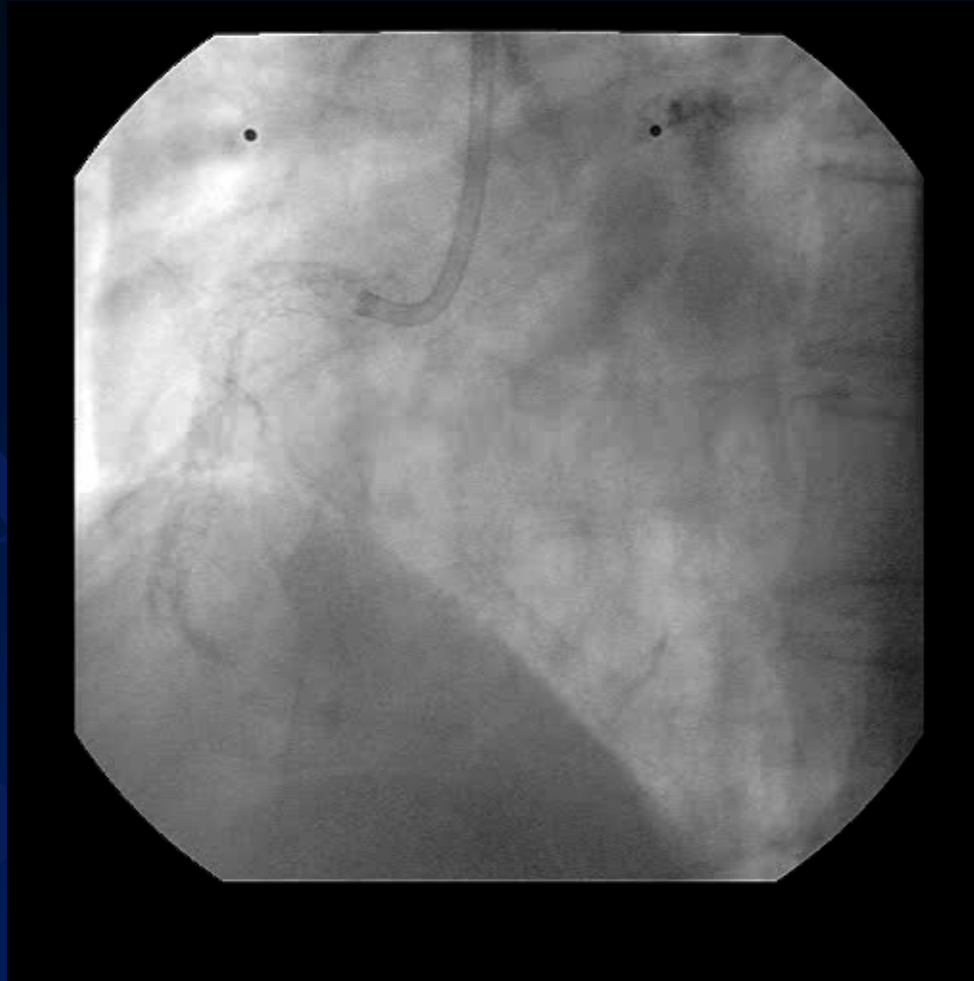
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Atherectomy in DES era



Cypher

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Final Angiogram



Atherectomy Devices in DES Era

➤ **Rotablator**

is still required in severe calcified lesions for successful DES delivery and full DES expansion.

➤ **DCA (Flexi-Cut)**

➤ **Fox Hollow atherectomy**



Atherectomy Devices in DES Era

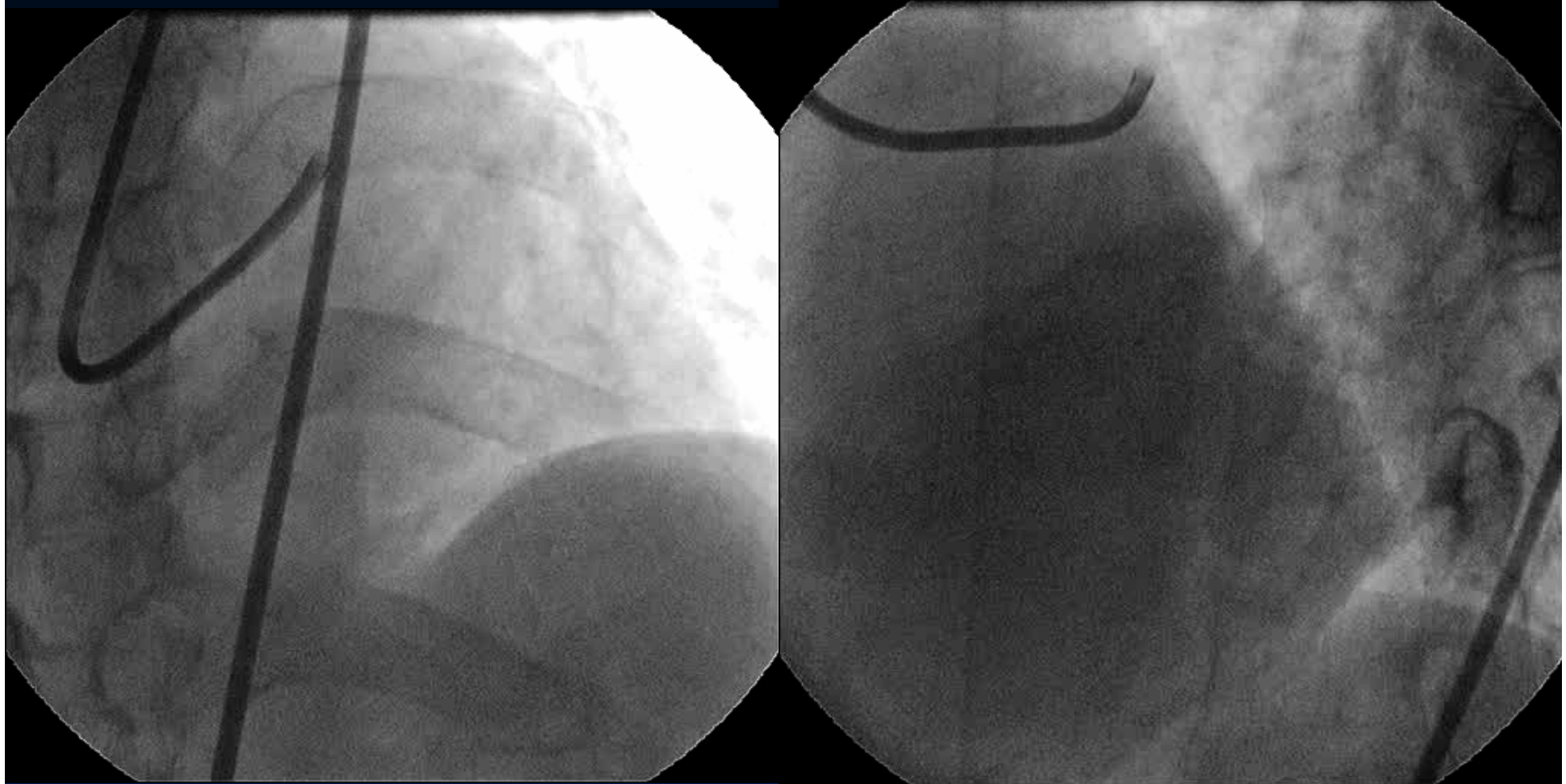
➤ **Rotablator**

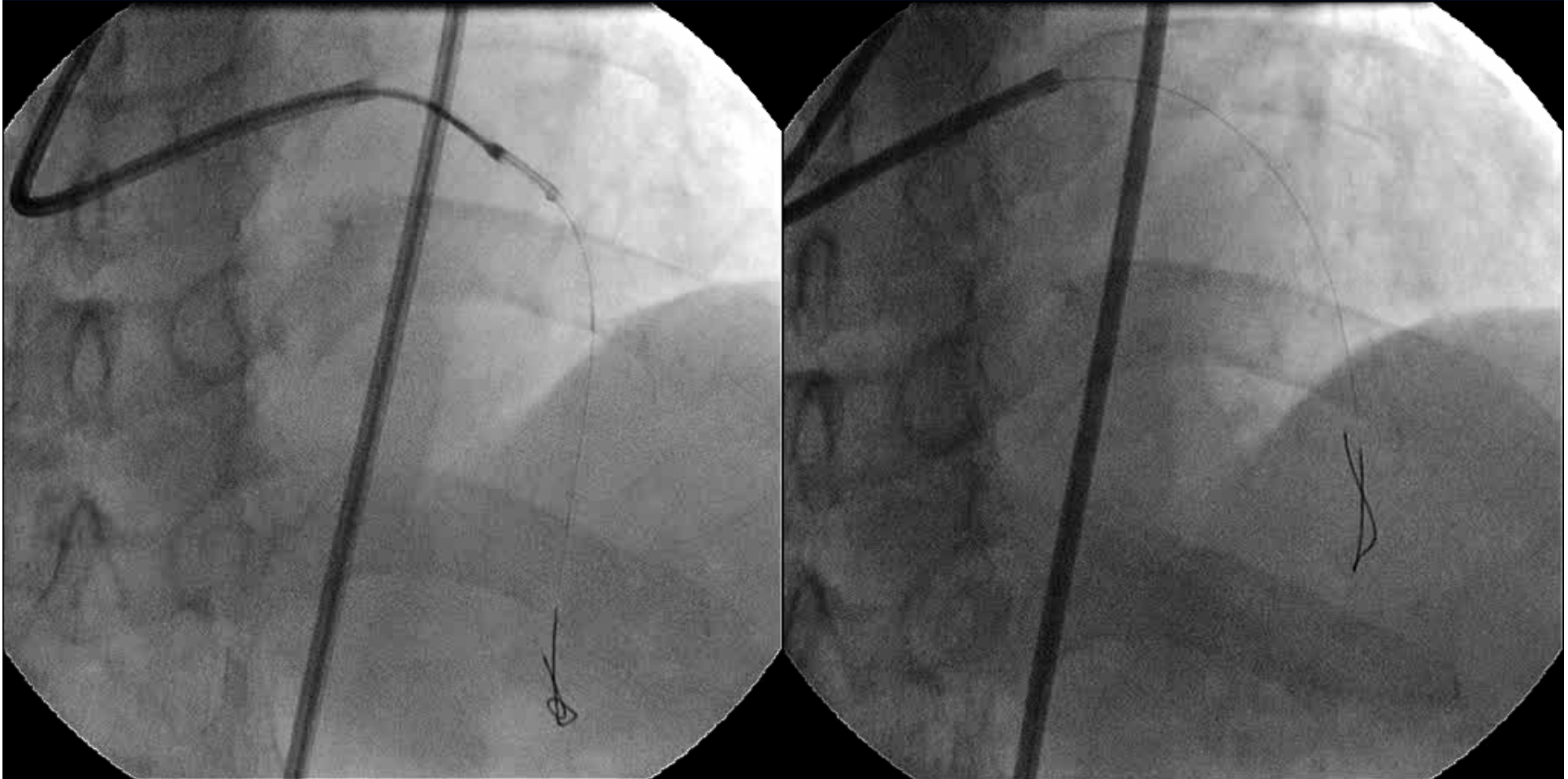
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➤ **DCA (Flexi-Cut)**

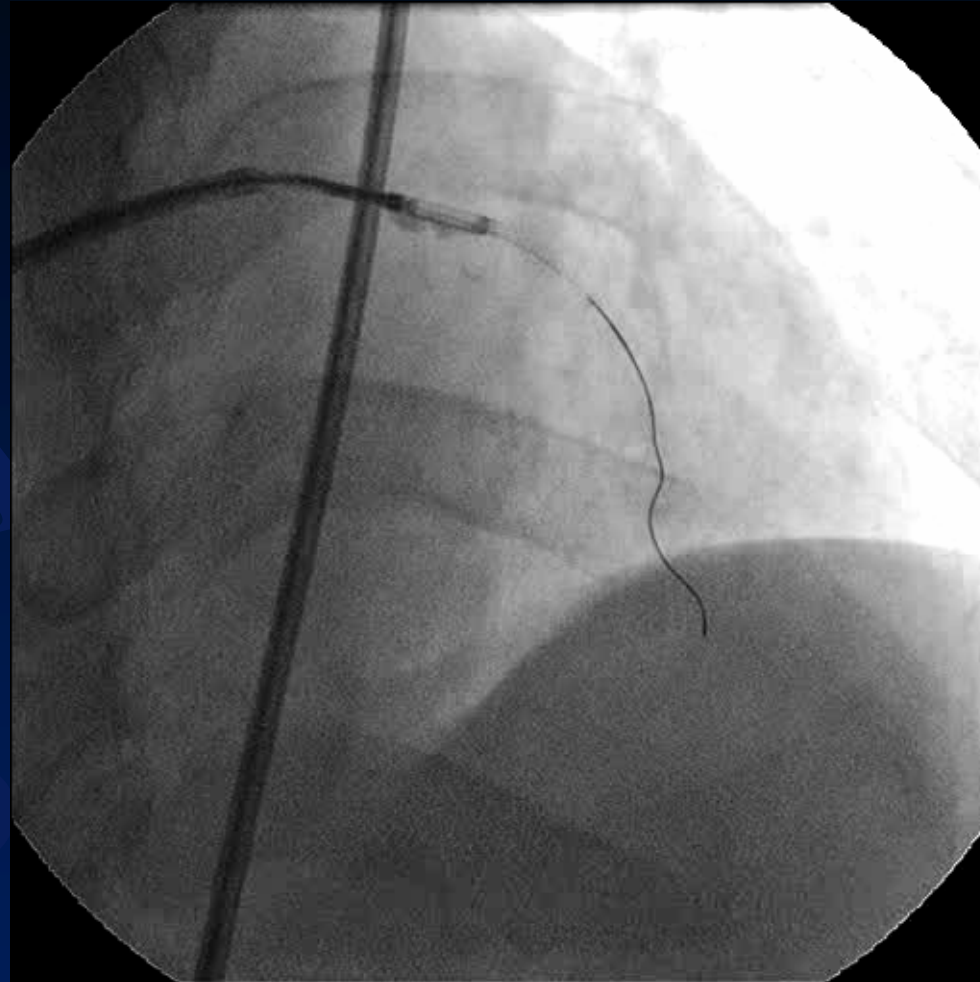
➤ **Fox Hollow atherectomy**

LAD-Dx Bifurcation

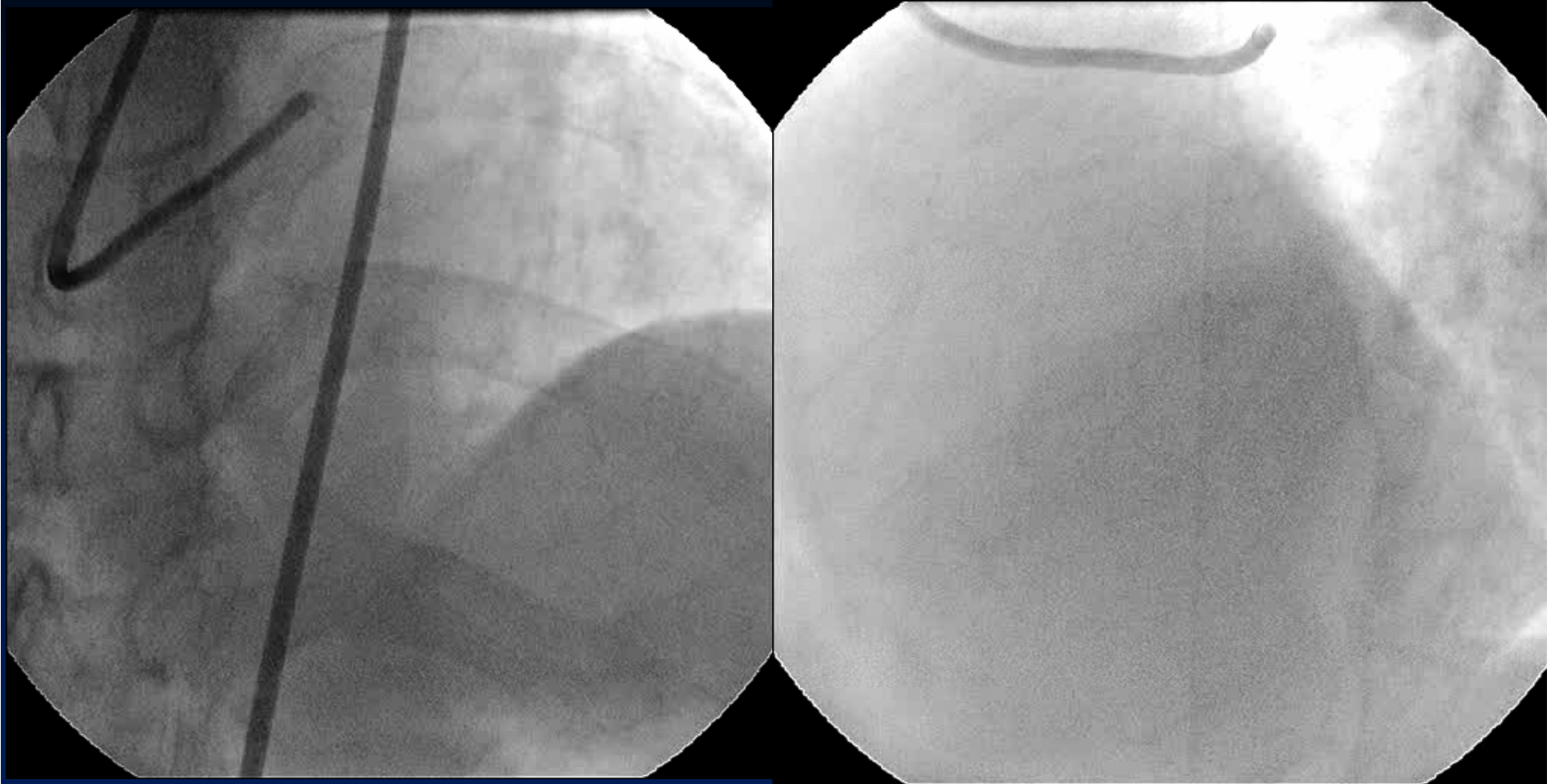




FlexiCut for LAD

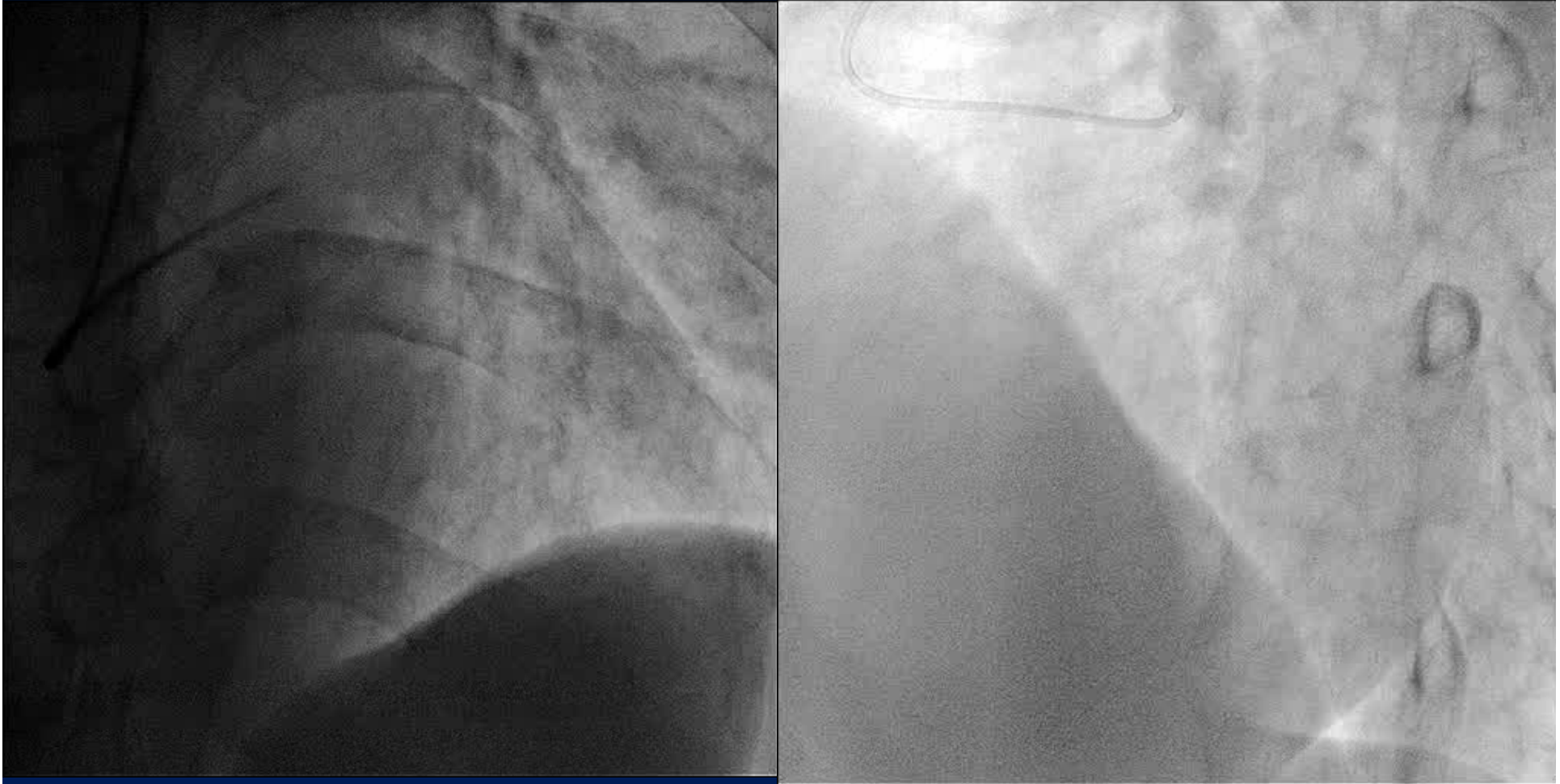


FlexiCut for Dx



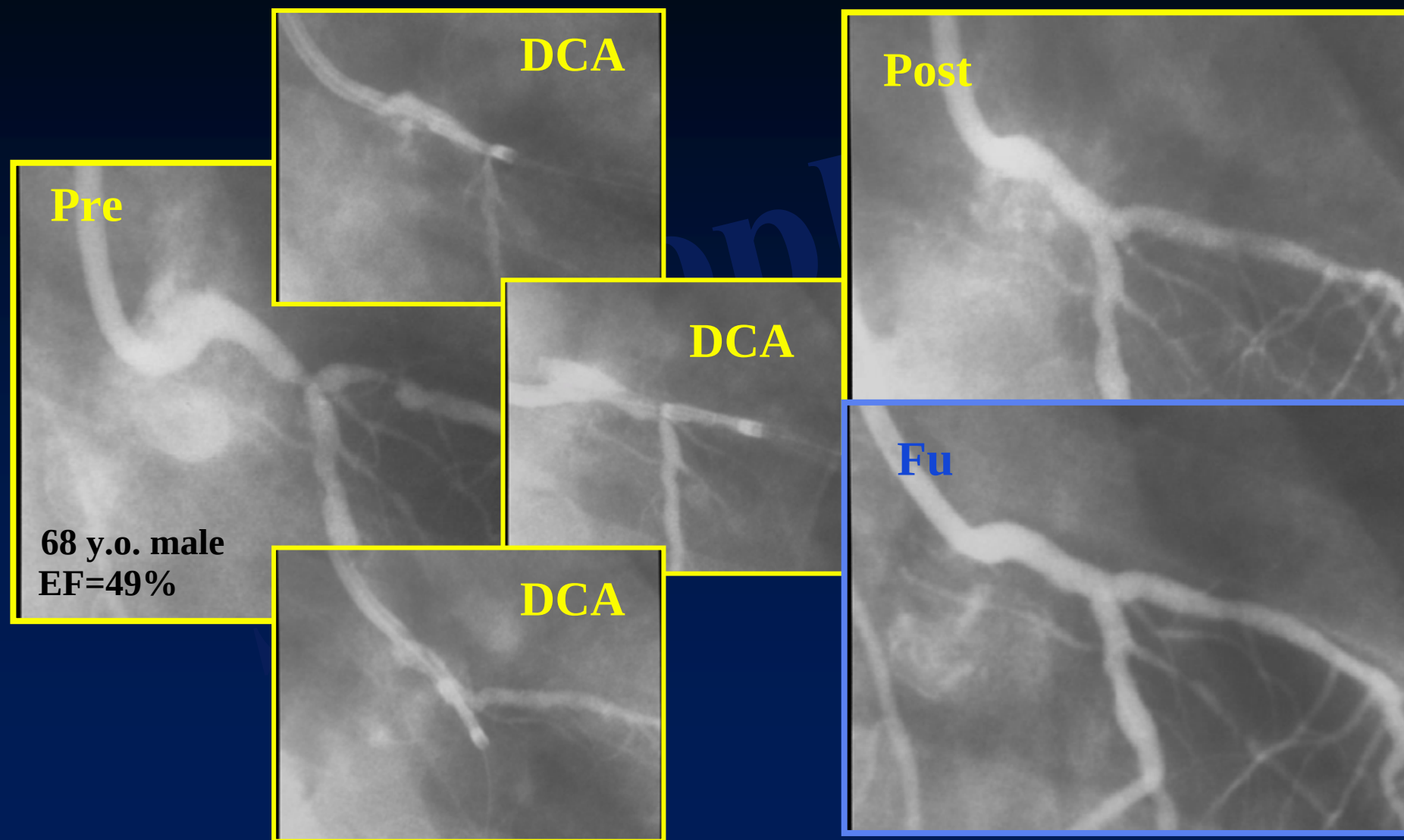
Final Angiogram

12Mo Follow-up



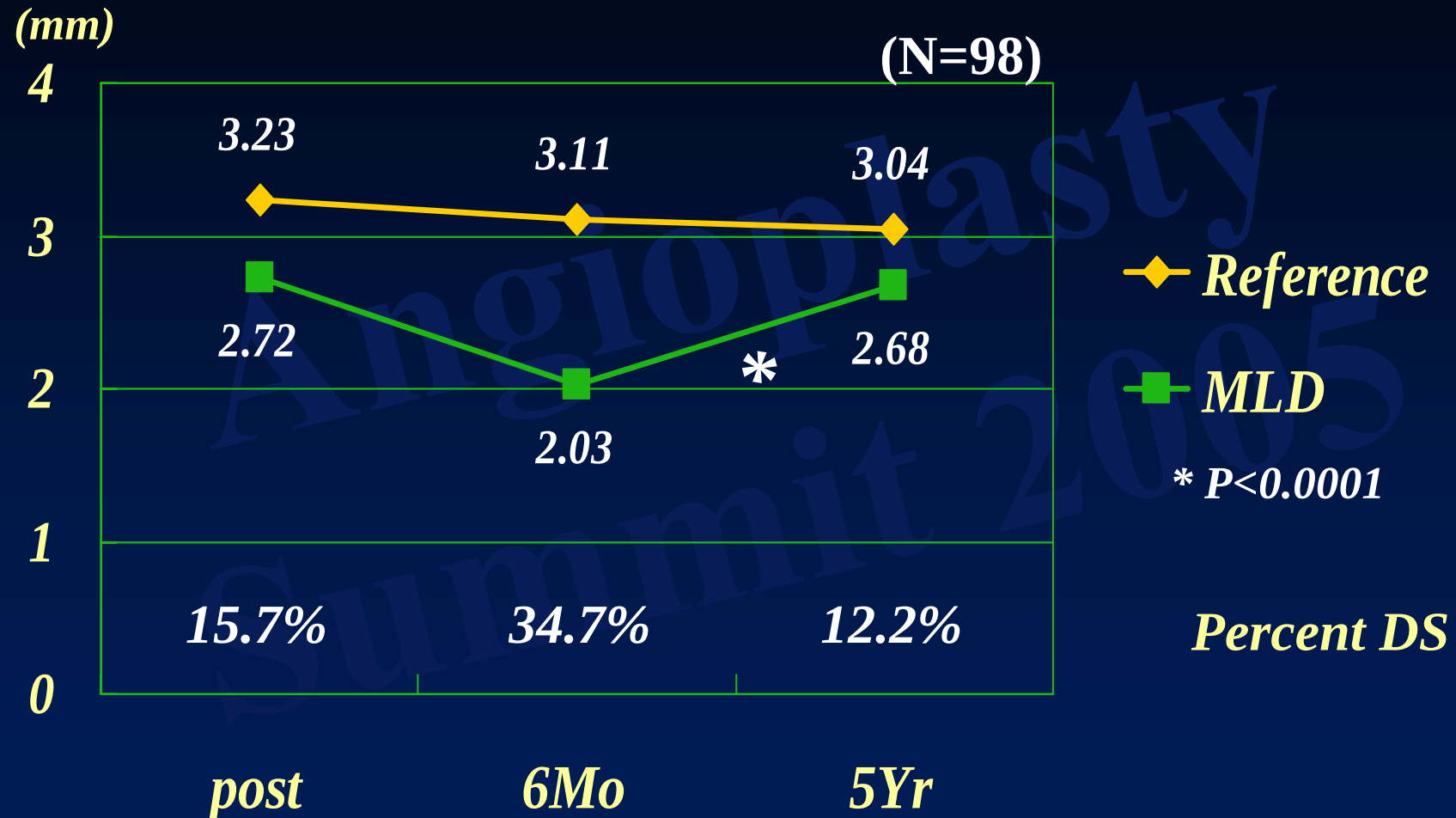


LMT Bifurcation



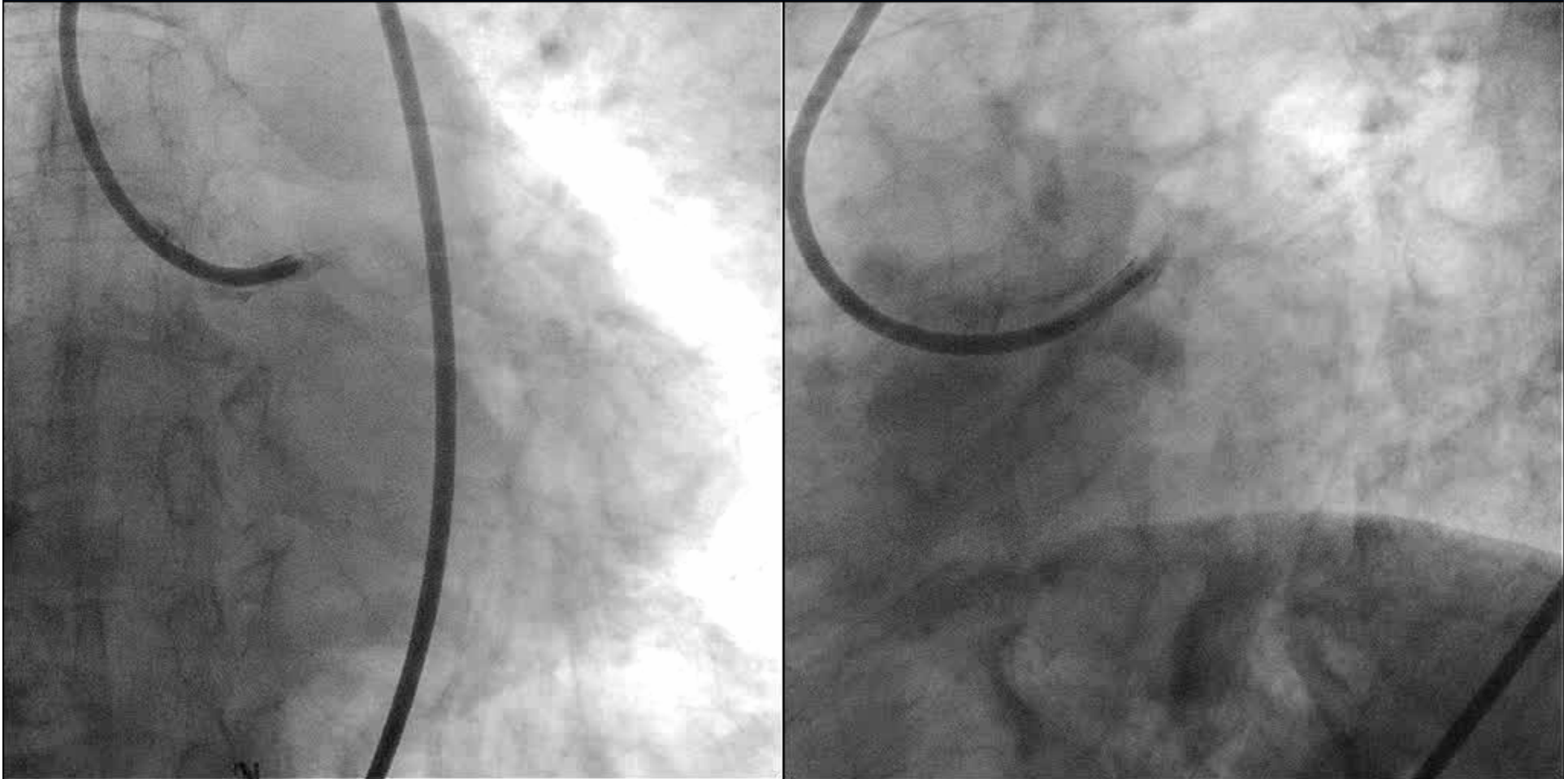


Long-term Regression after DCA



(Nasu K, Tsuchikane E, et al. *Am J Cardiol* 2004;93:543-8)

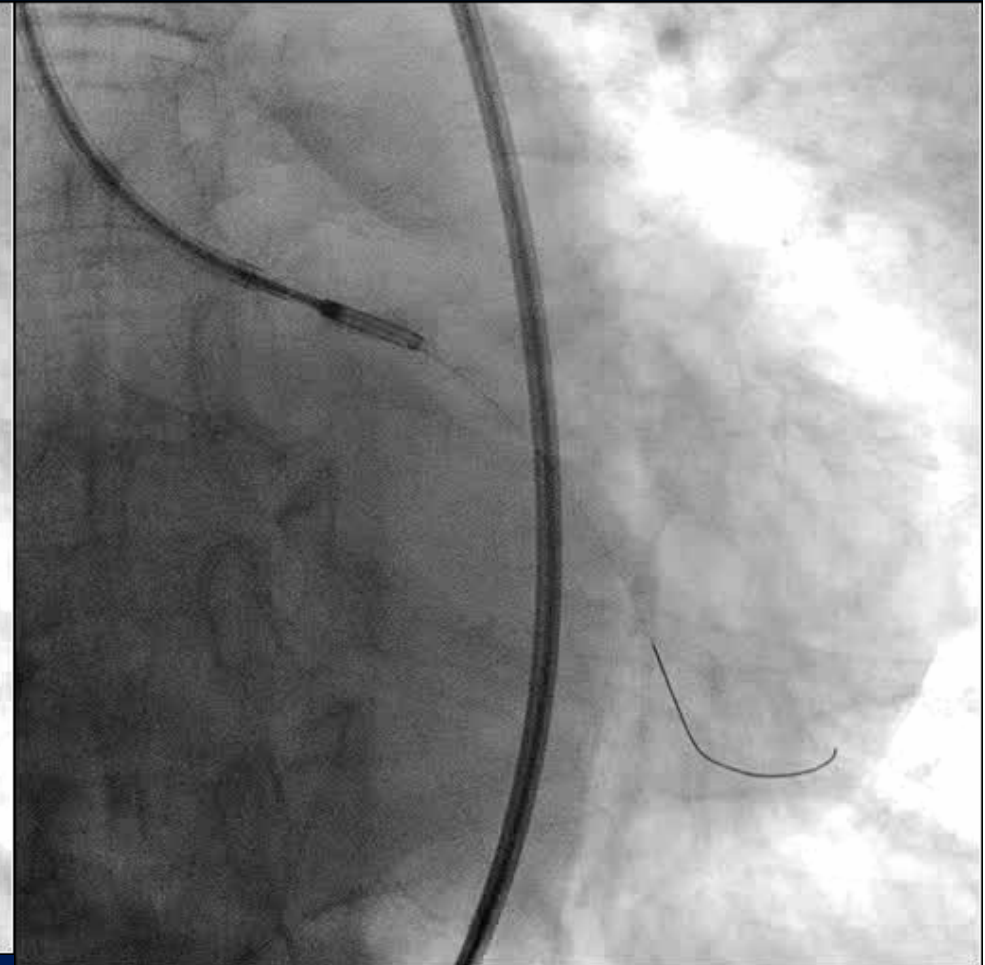
Ostial LCx Stenosis



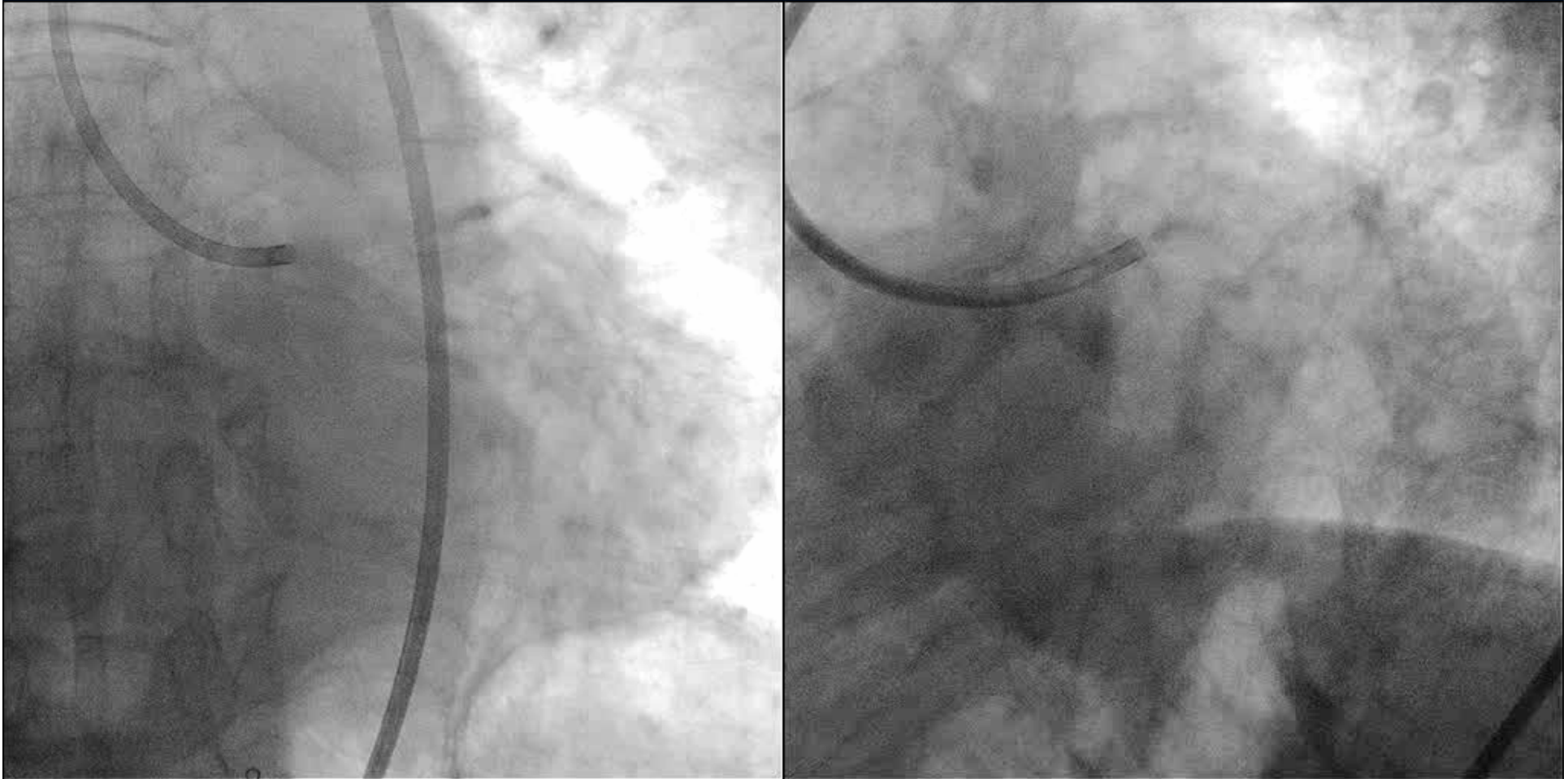
Atherectomy in DES era



Rotablator 2.0mm



FlexiCut

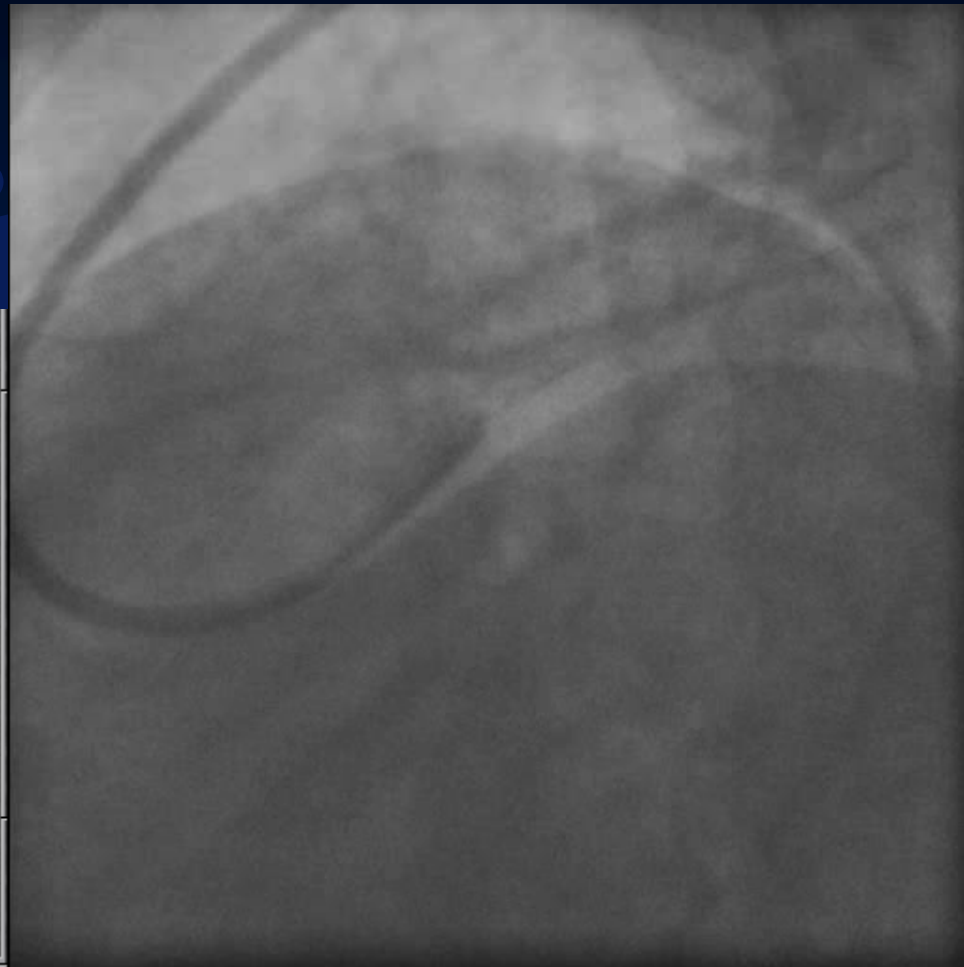
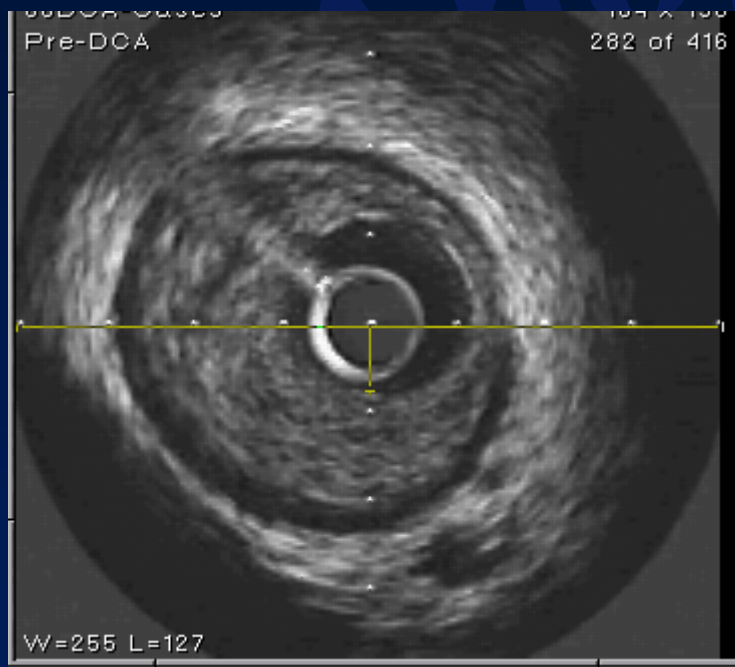


Final Angiogram

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Ostial LAD Stenosis



Atherectomy in DES era

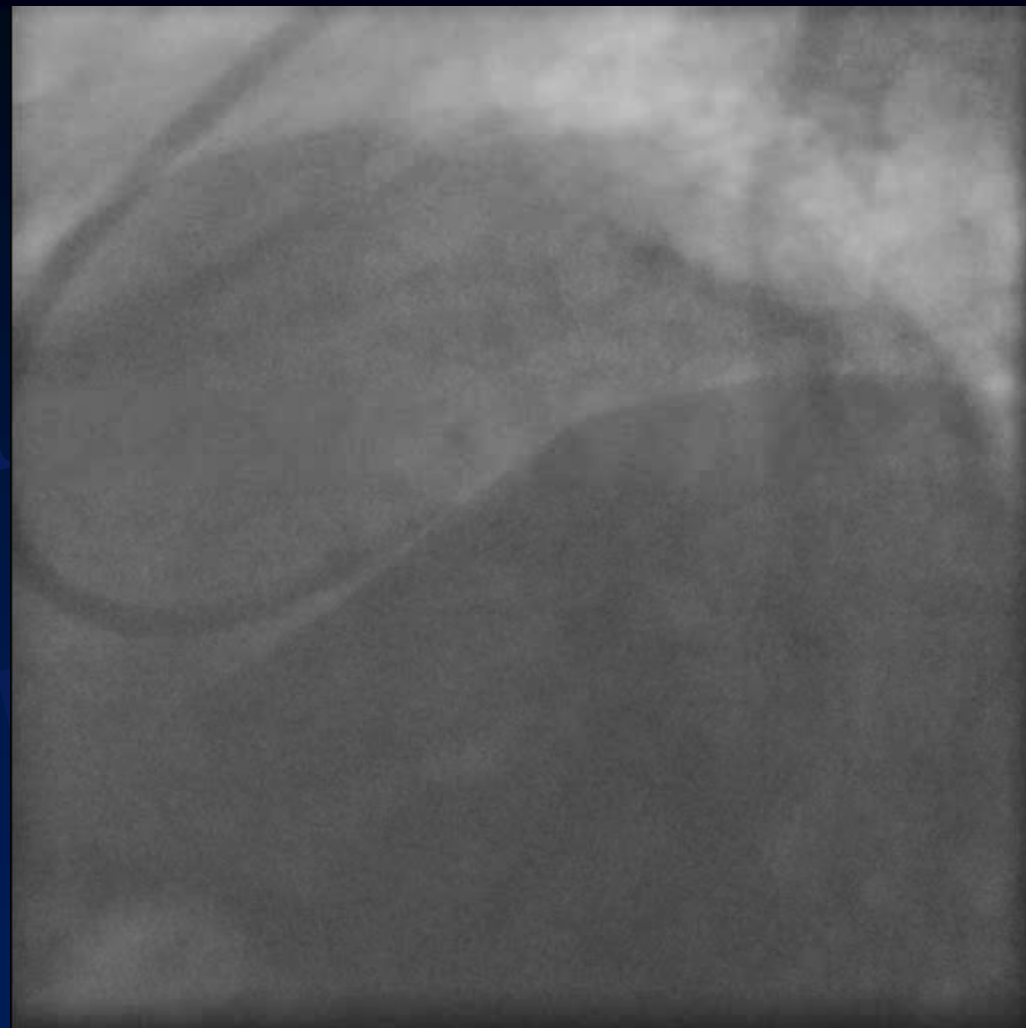
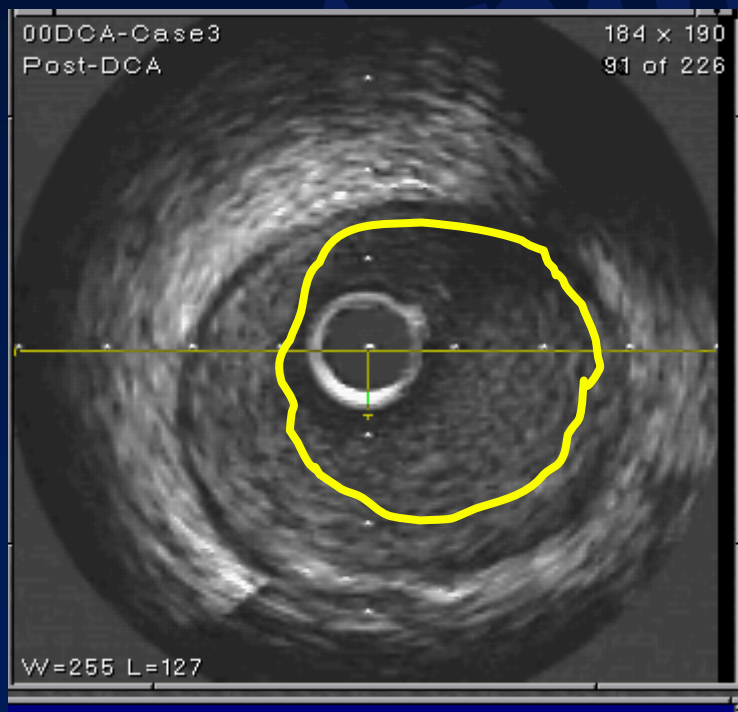


Toyohashi Heart Center



FlexiCut

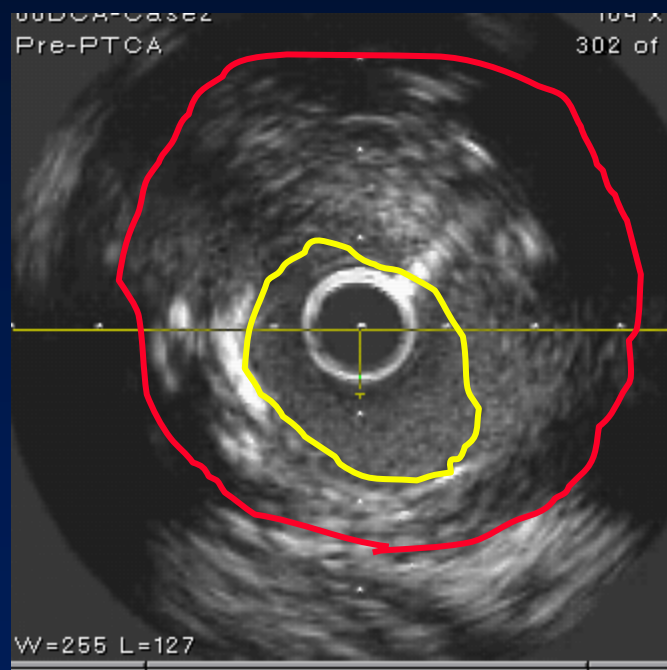
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Final Angiogram



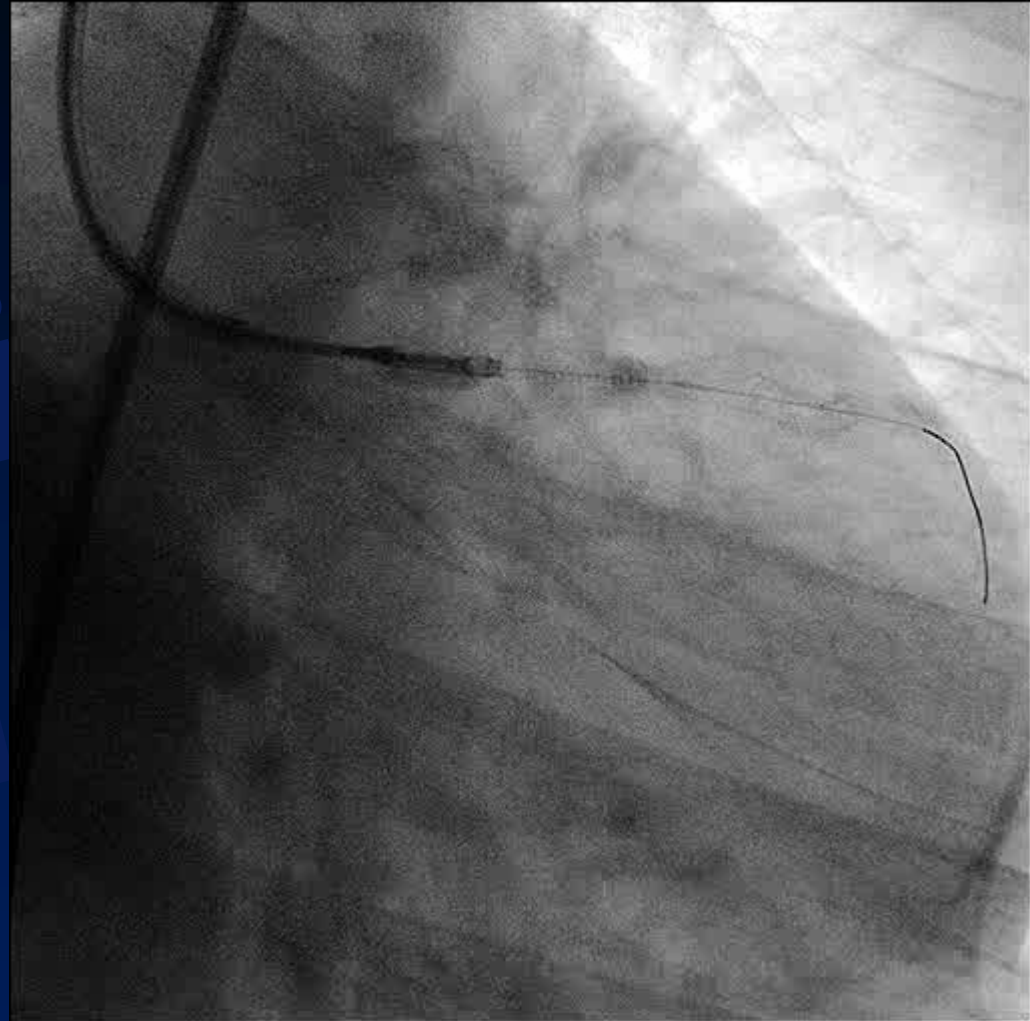
Focal LMT Stenosis



Atherectomy in DES era

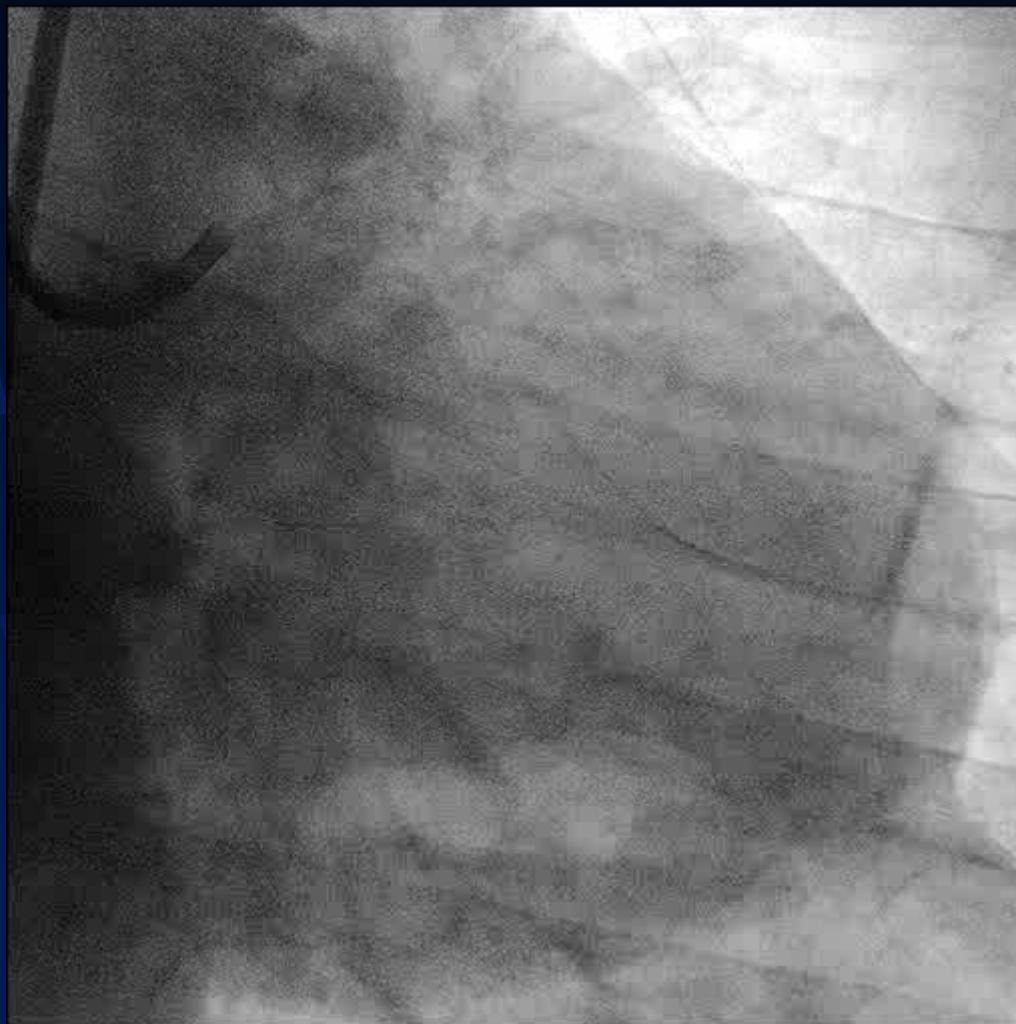
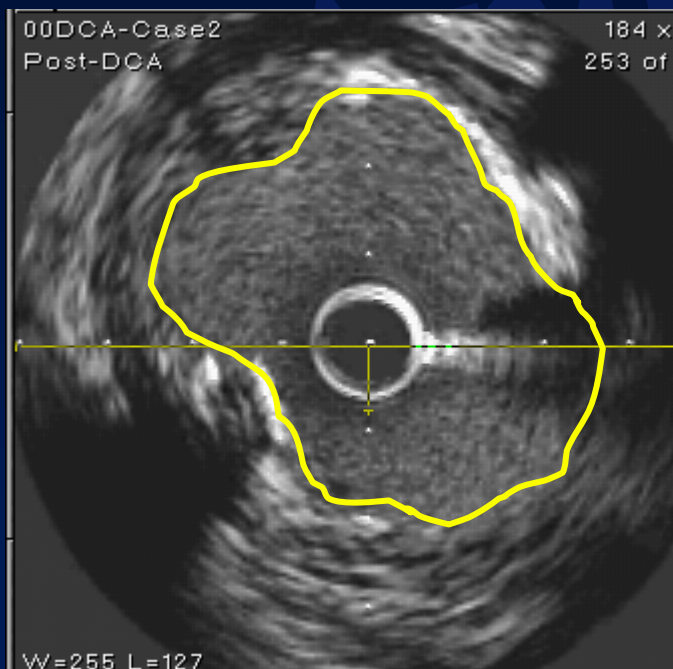


Toyohashi Heart Center



FlexiCut

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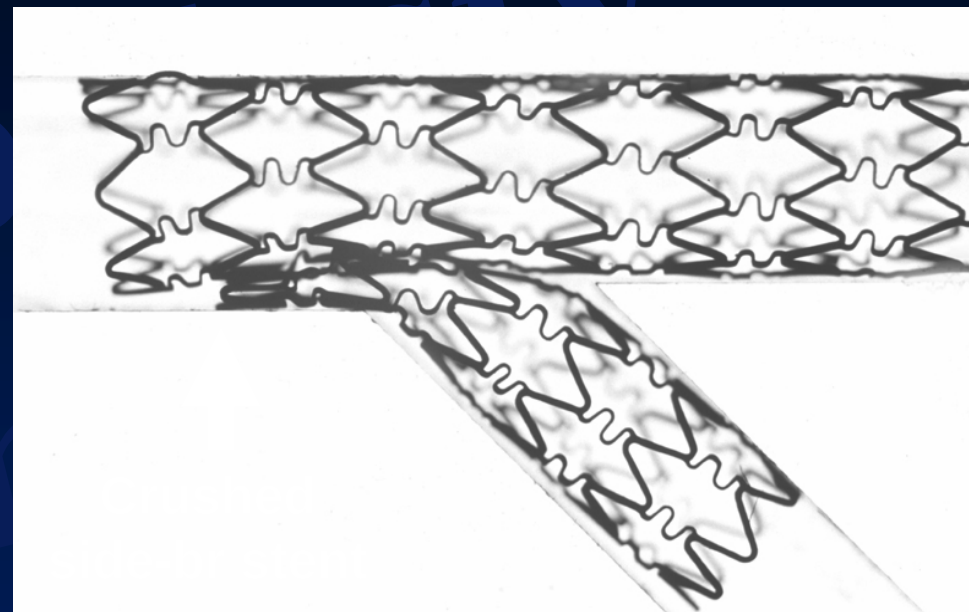
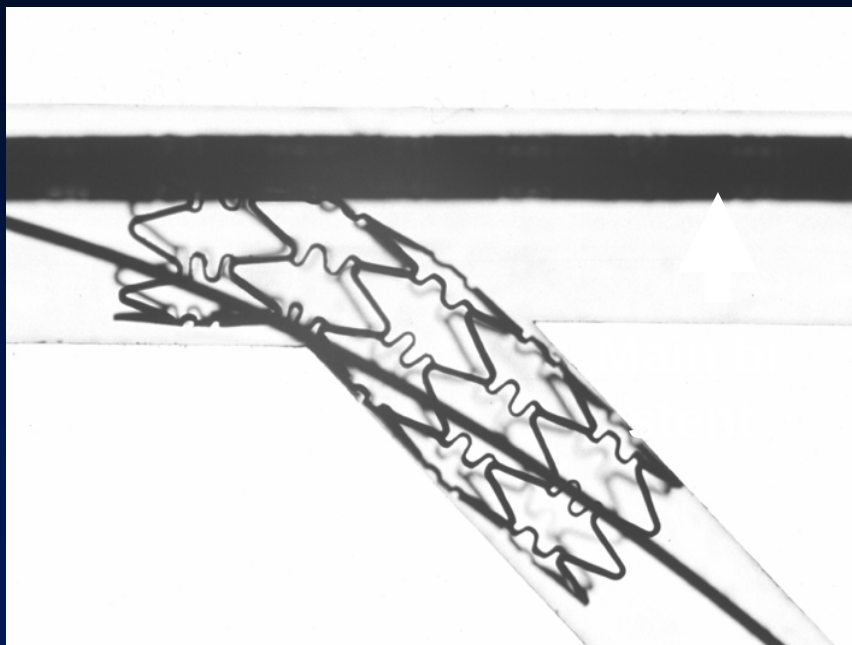
Final Angiogram

LMT Bifurcation





Crush Stenting



“Culotte” Stent Technique (Y-stenting)



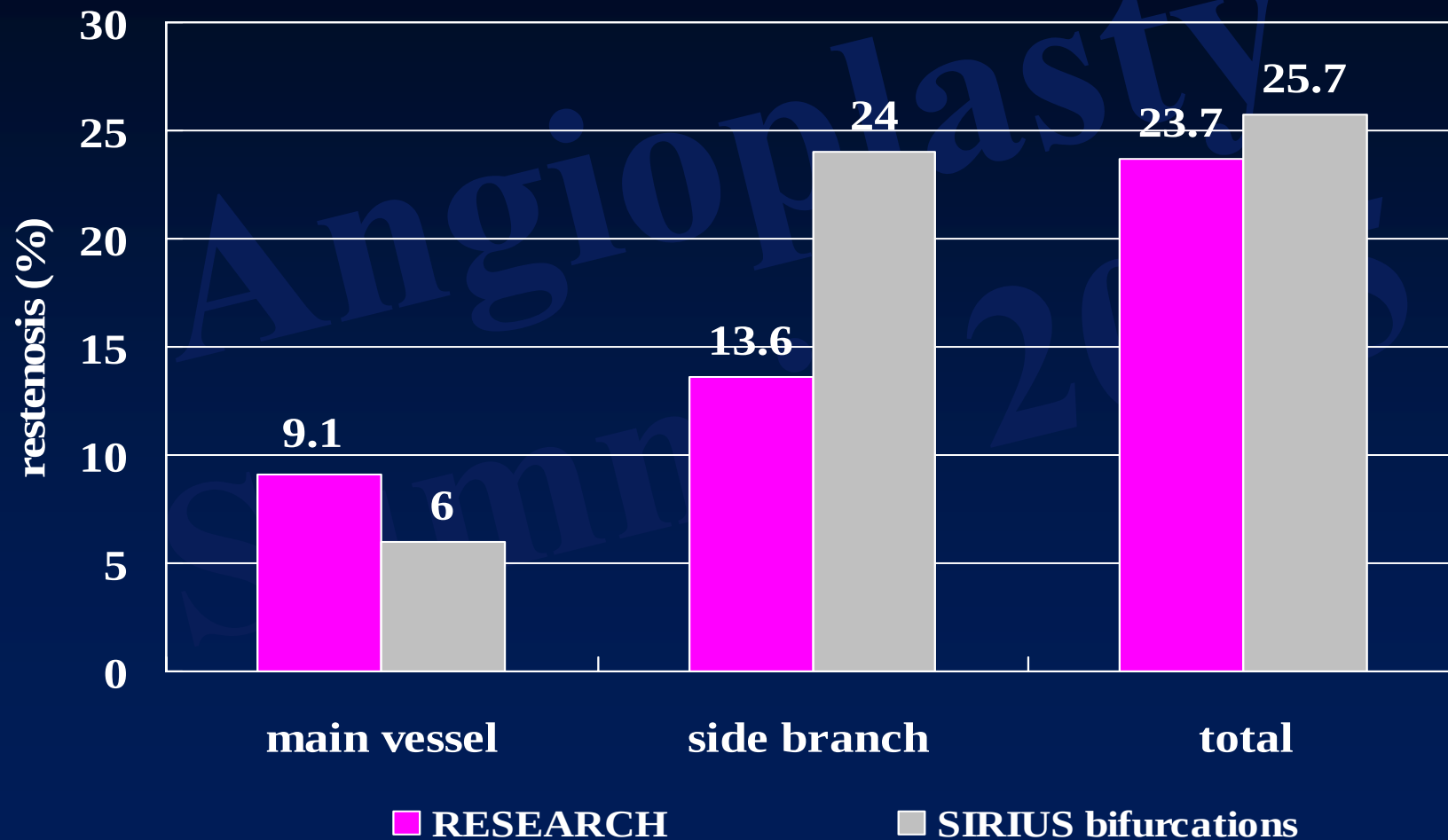


Cypher for Bifurcated Lesion

	Restenosis rate	TLR rate	MACE
RESEARCH Registry (n=58)	Main Branch = 9.1% Side Branch = 13.6% Total 23.7%	6mo = 8.6% T Stent = 18% Crush Stent = 8% Kissing Stent = 0% Culotte Stent = 11%	10.3%
Milan Registry (n=164)	N/A	11.8%	16.3%
SIRIUS Bifurcation Registry (n=55)	Main Branch = 6.0% Side Branch = 24.0% Total 25.7%	N/A	N/A



Restenosis after Cypher[®] for Bifurcation



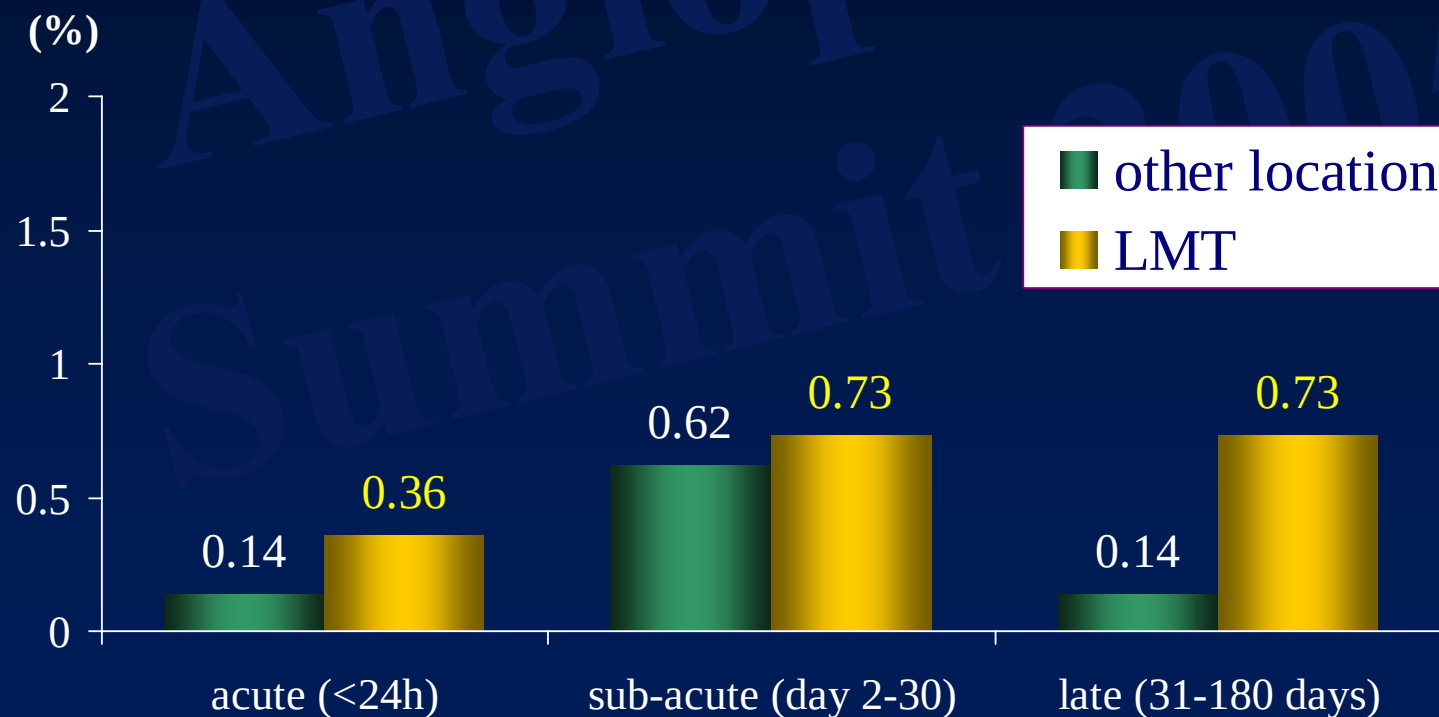


LMT – Cypher: Stent Thrombosis

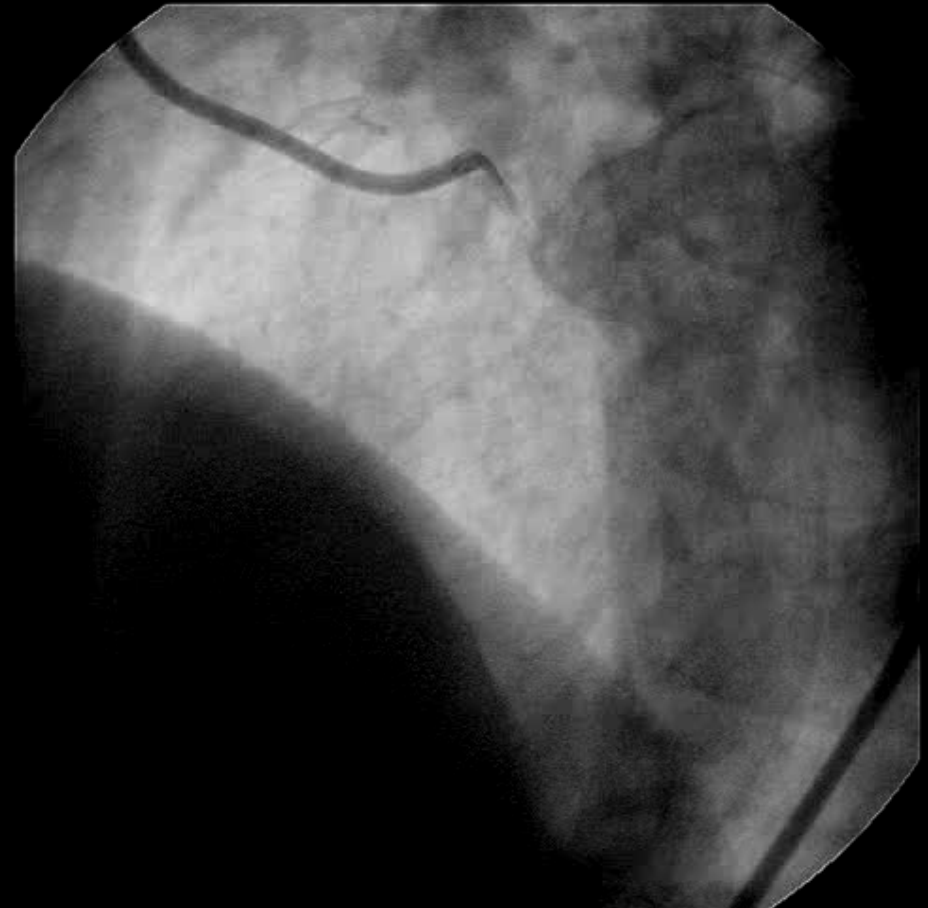
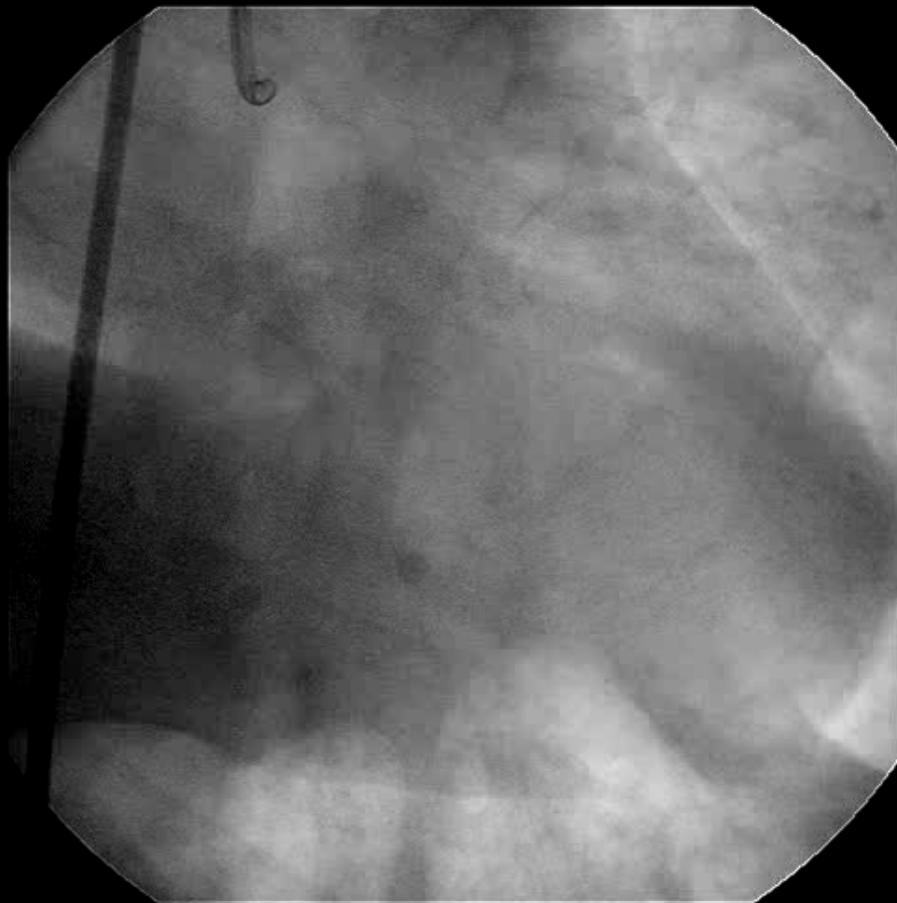
Overall stent thrombosis at 6 months:

LMT 1.82% (5 / 274)

other locations 0.89% (97 / 108859) p=NS



LMT Bifurcation



Atherectomy in DES era



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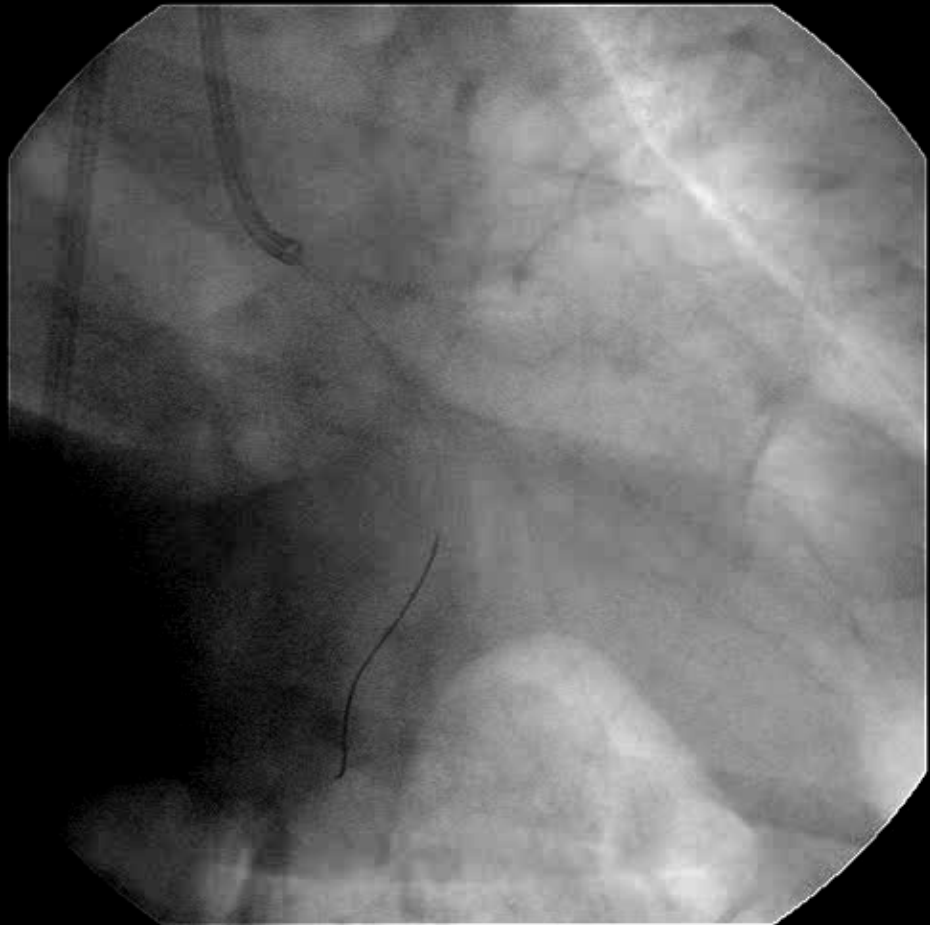
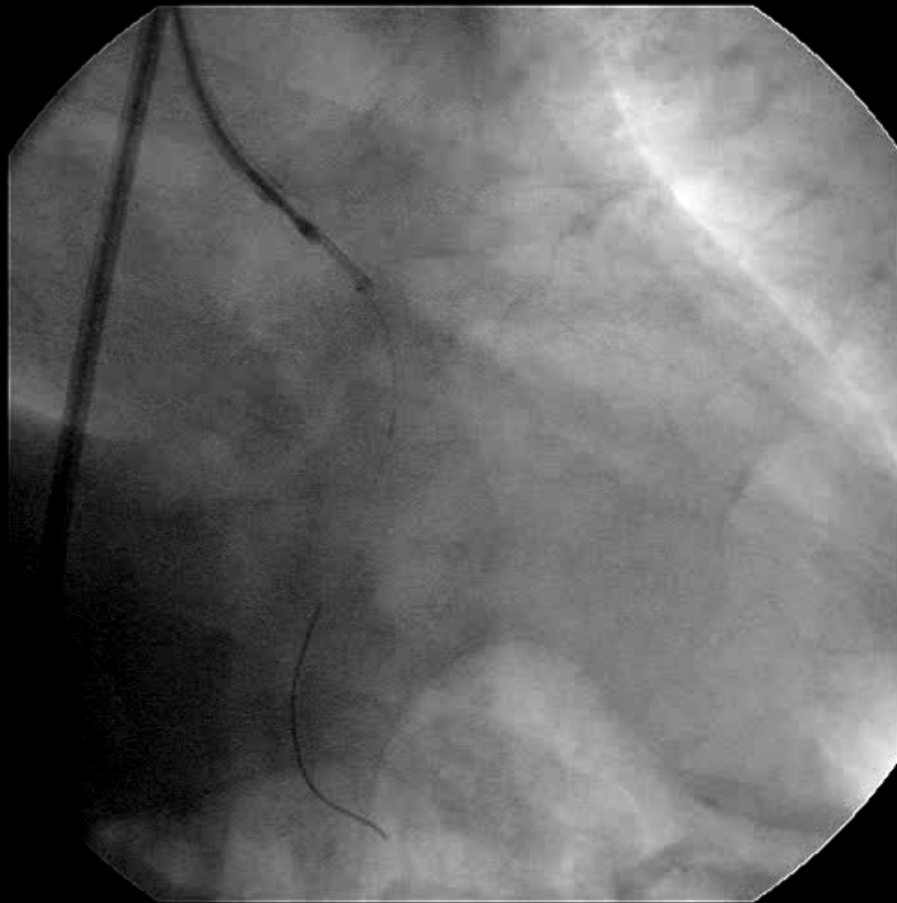
FlexiCut for Ostial LAD

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Atherectomy in DES era



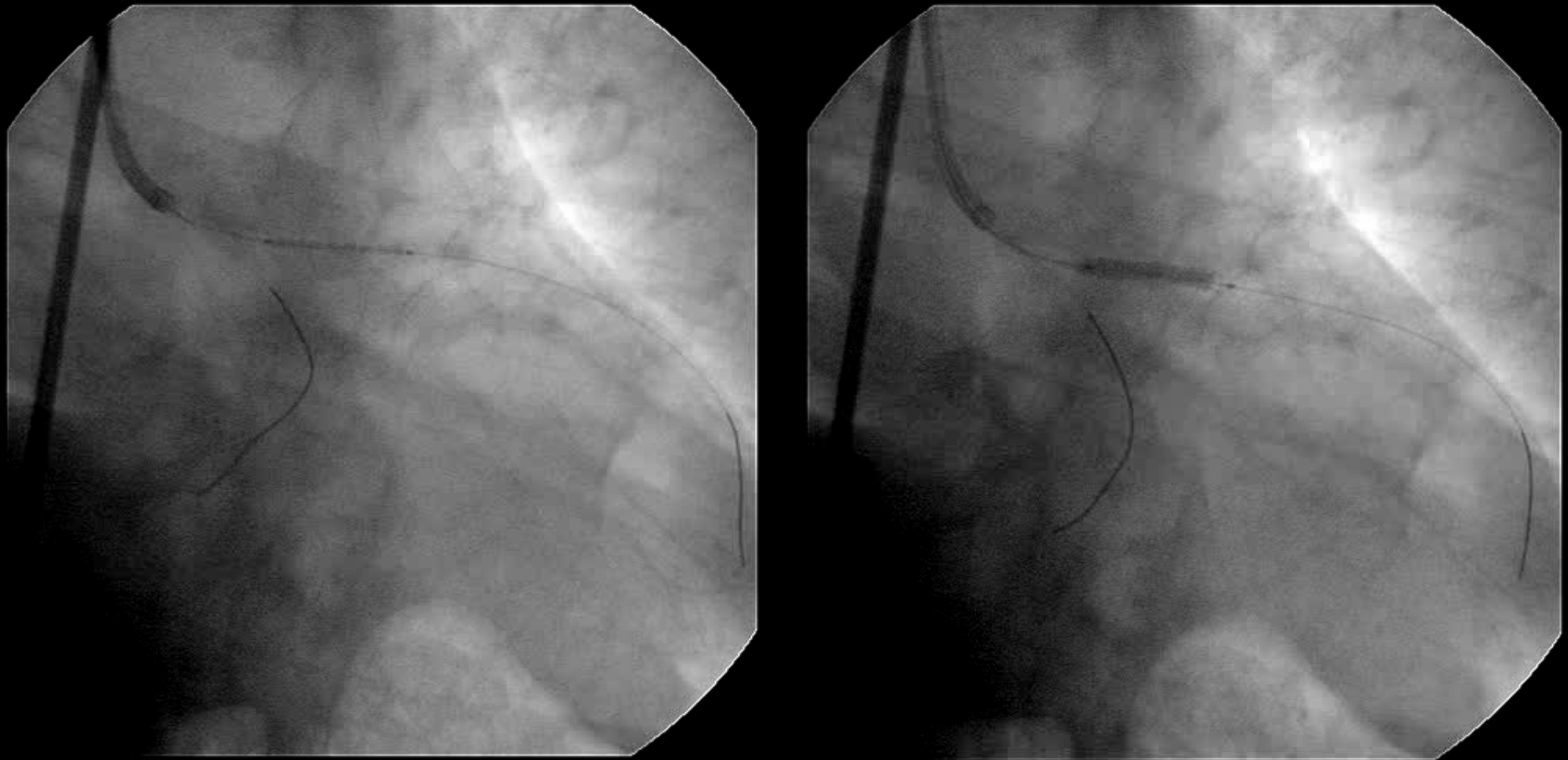
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FlexiCut for Ostial LCx

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Atherectomy in DES era



Cypher

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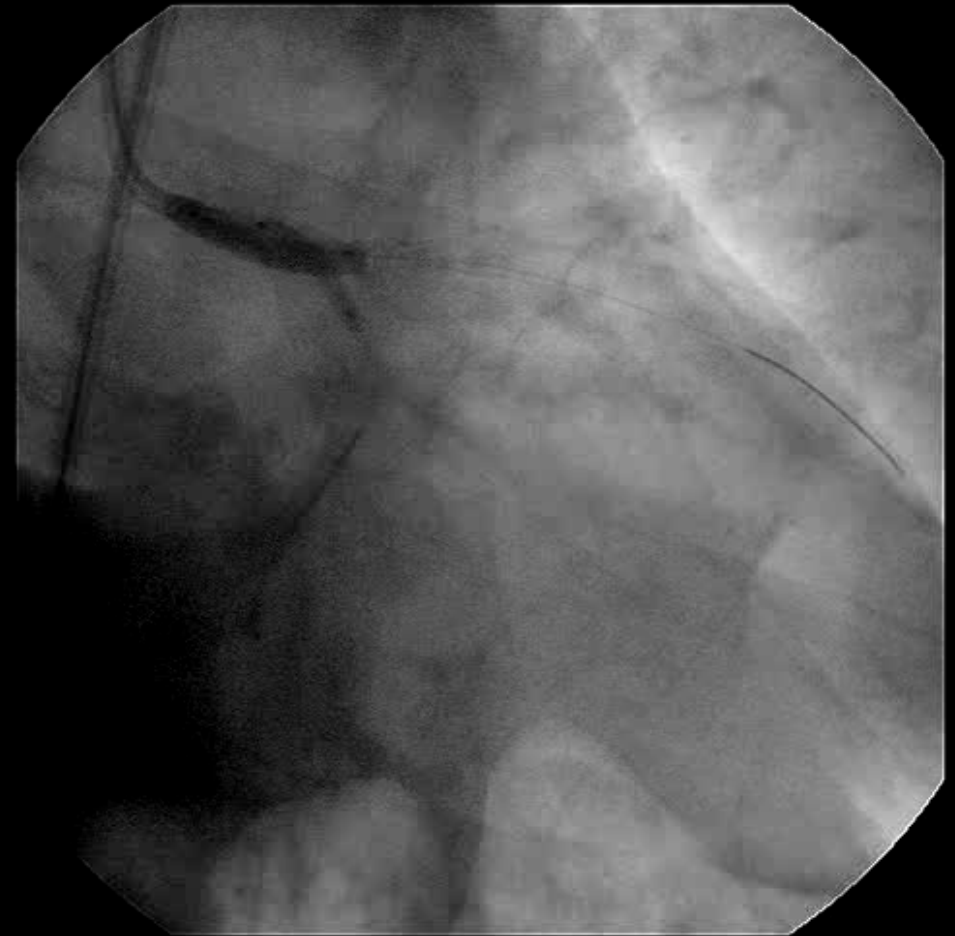
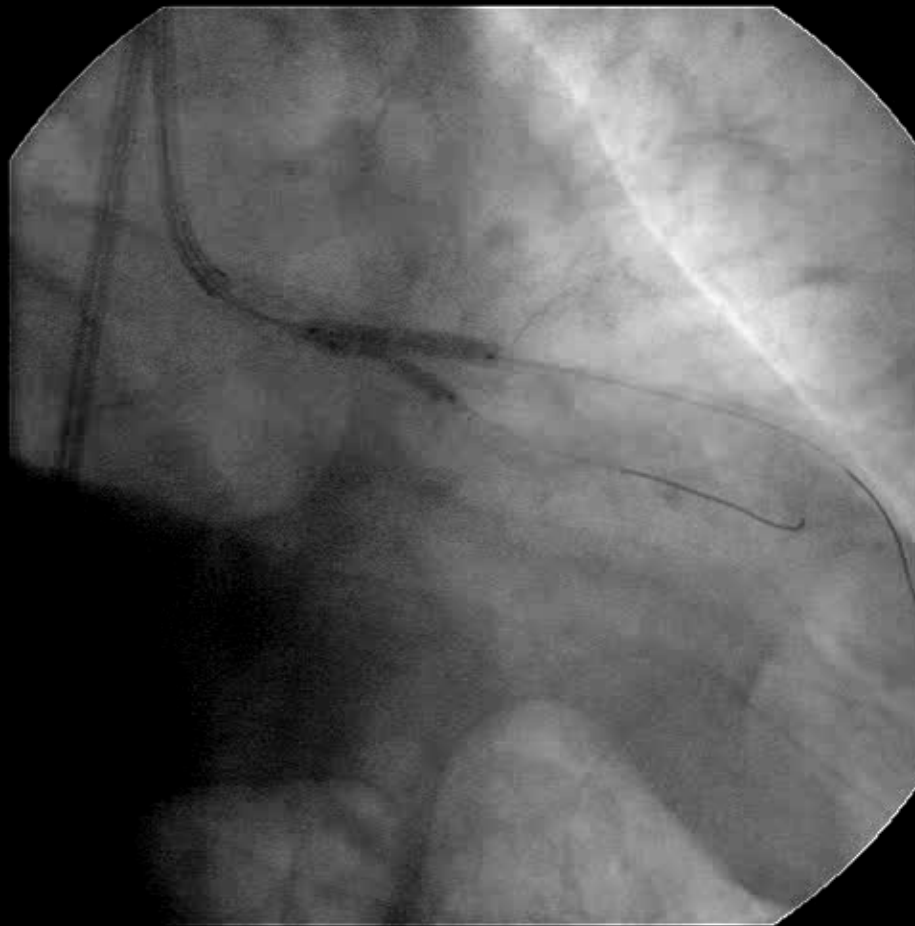
Atherectomy in DES era



Cypher

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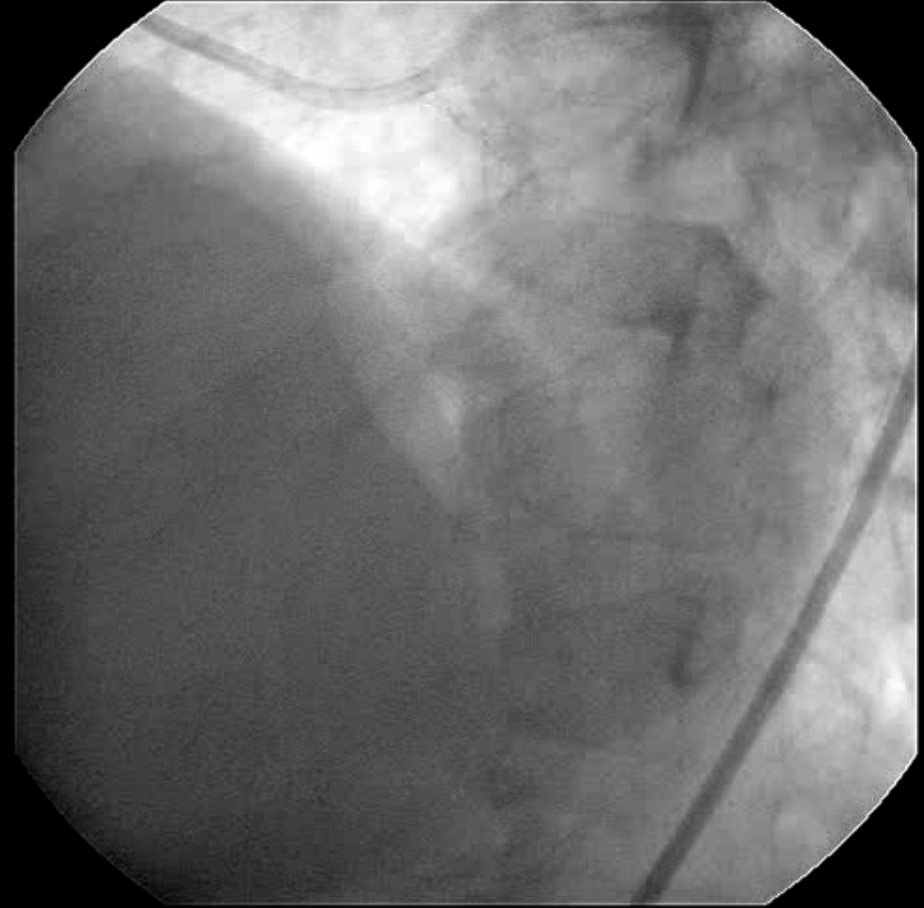
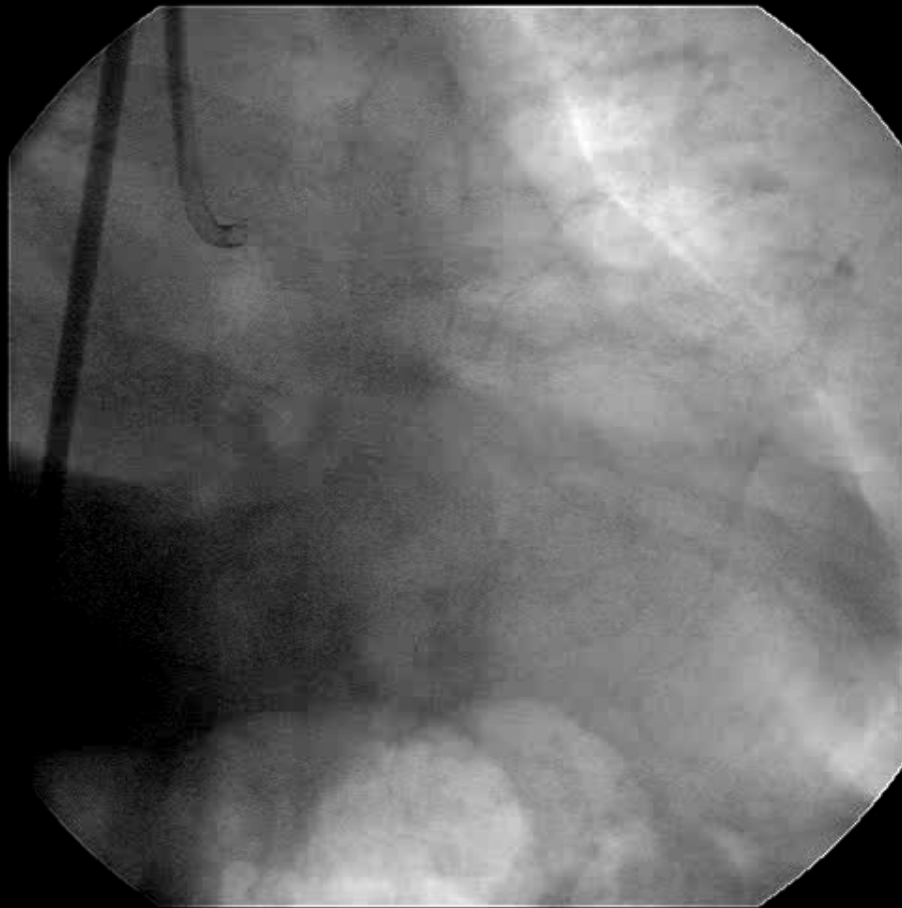
Atherectomy in DES era



High Pressure KBT

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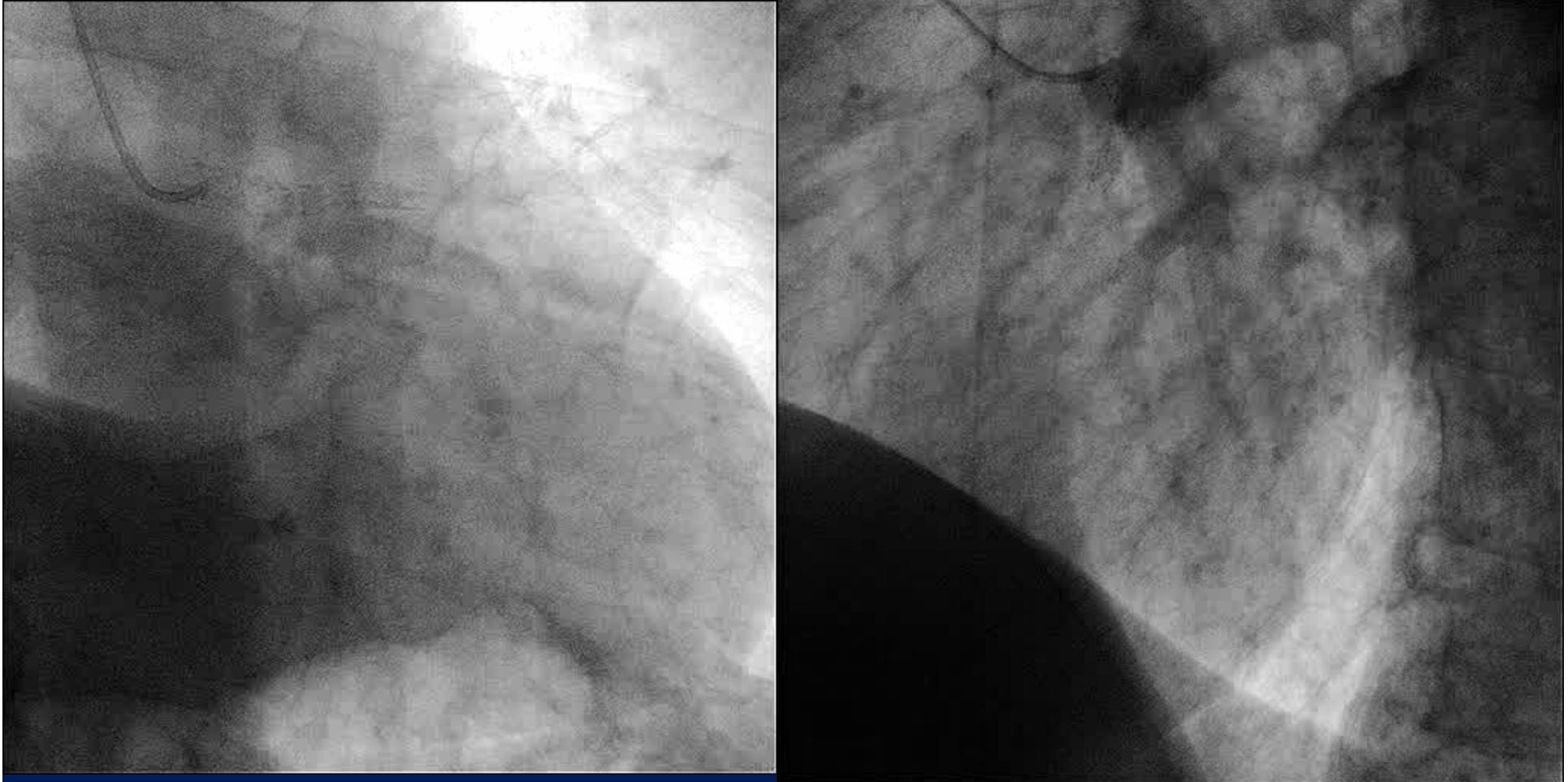
Atherectomy in DES era



Final Angiogram

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8Mo Follow-up





Atherectomy Devices in DES Era

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Stand alone DCA is still efficacious for ostial/bifurcated lesion if an optimal result can be obtained.

Pre DES DCA enables simple stenting for bifurcated lesion, and may reduce restenosis.

➤ **Fox Hollow atherectomy**



**PrE Rapamycin Eluting Stent
Flexi-Cut Registry
(PERFECT Registry)**



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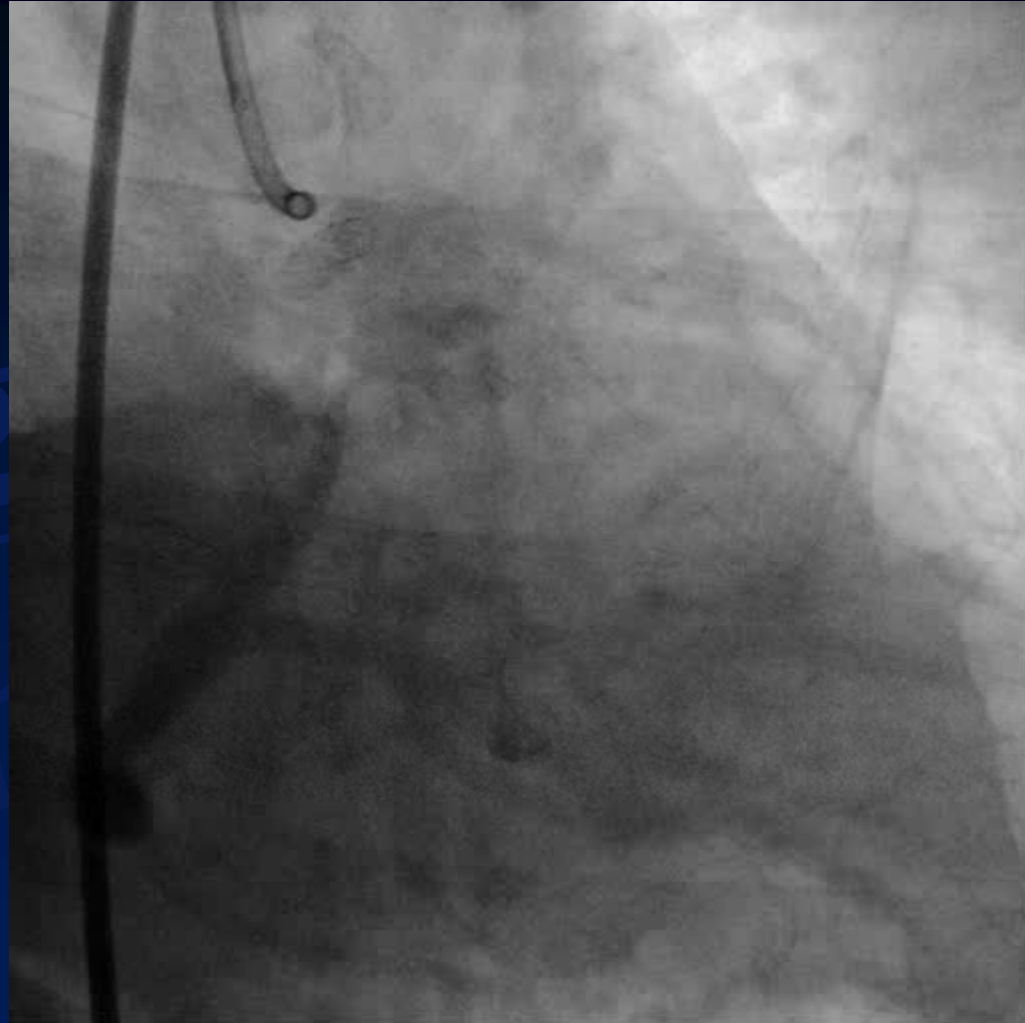
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Atherectomy in DES era



Toyohashi Heart Center

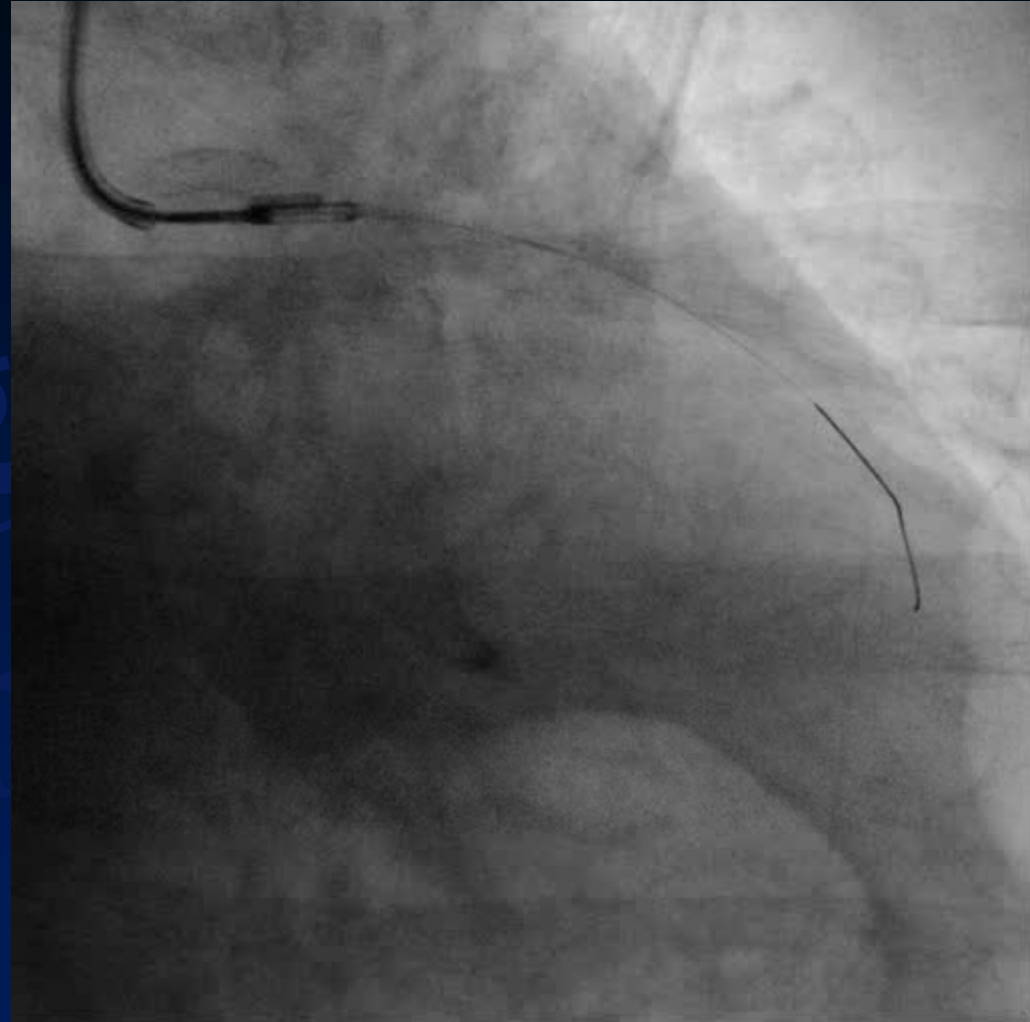


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Atherectomy in DES era



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Atherectomy in DES era



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Pre DES DCA enables simple stenting for bifurcated lesion, and may reduce restenosis.
- **Fox Hollow atherectomy**
may be useful for diffuse lesions to ensure DES expansion.