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SoS DPT Diagnostica Cardiovascolare
ed Interventistica Endoluminale
ULSS 5 Polesana
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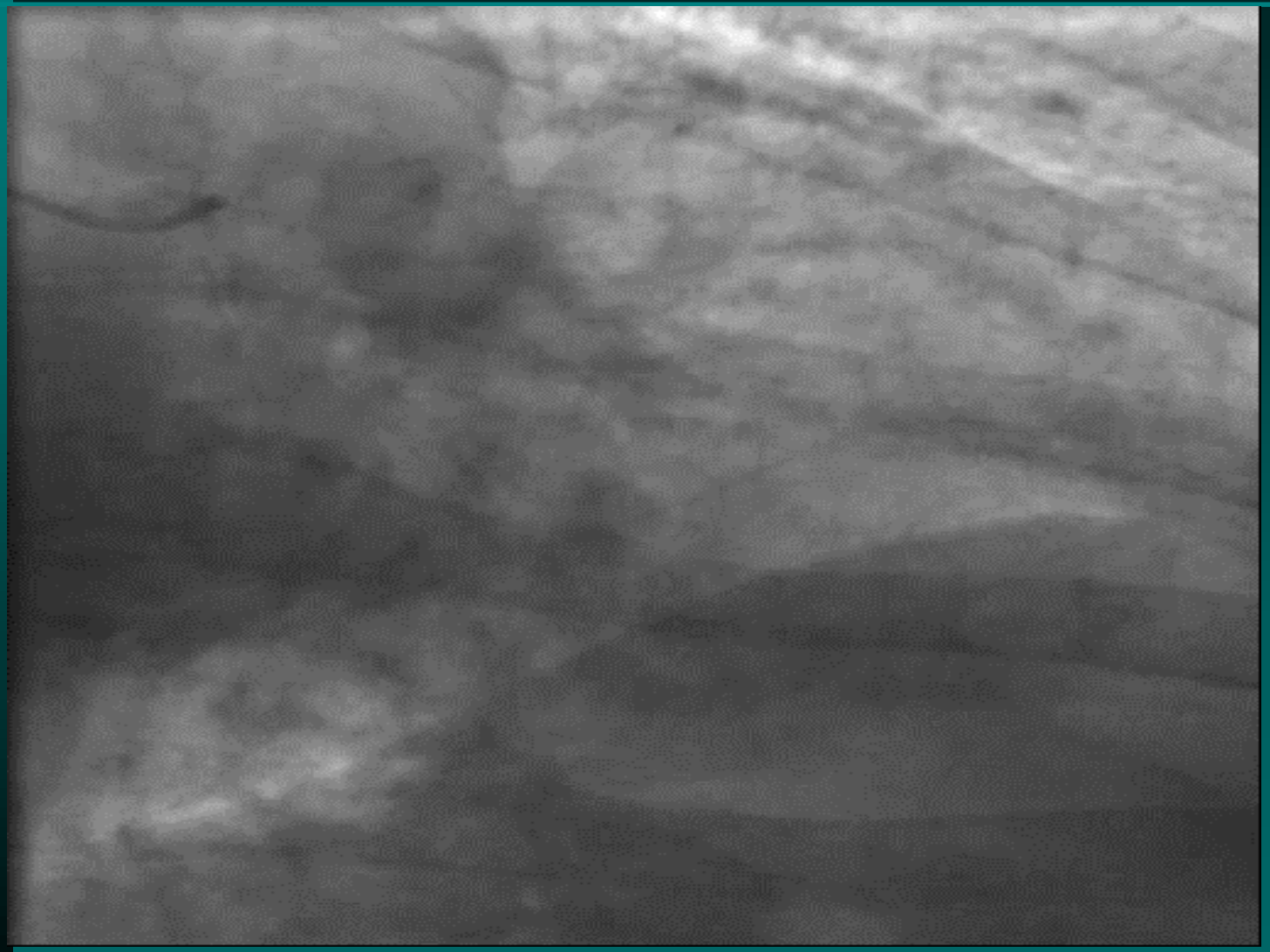
Left Main stenting state of the art

Prof Gianluca Rigatelli has not conflict of interest to disclose

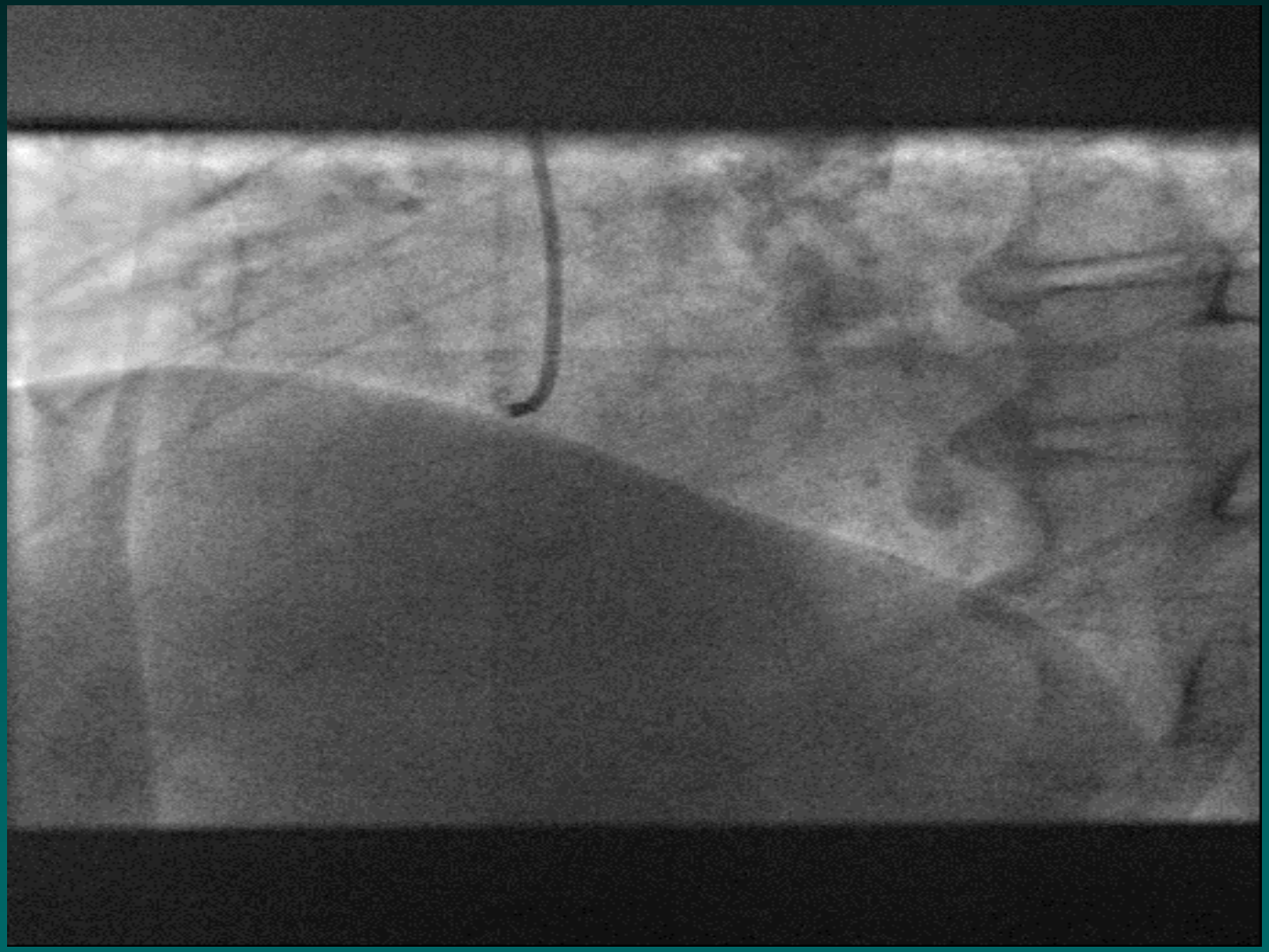
- Male
- 78 years-old, 59 kg, 168 cm
- Risk factors: Hypertension, Hypercholesterolemy, Diabetes
- Previous ictus cerebri
- NSTEMI
- EF 31%
- Peripheral artery disease (previous aorto-bifemoral bypass)
- OCPD
- GfR 61

Coronary angiography: left



Coronary angiography: left

Coronary angiography: Right



LM stenting : state of the art

COMPLEXITY DEFINITION

CLINICAL INDICATIONS

IMAGING GUIDANCE

TECHNIQUES NOMENCLATURE

OPEN QUESTION:
1 VS 2 STENT

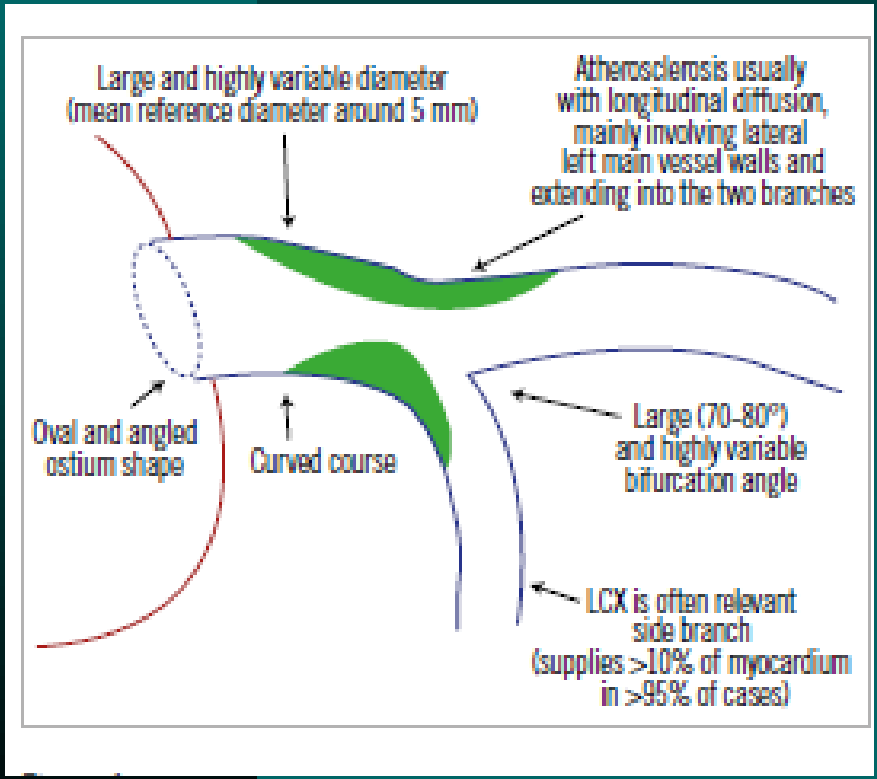
OPEN QUESTION:
LONG VS SHORT DAPT:

OPEN QUESTION:
THIN VS THICK STRUTS

OPEN QUESTION:
CHEAP PATIENTS:

Complexity definition

MEDINA CLASSIFICATION



DEFINITION CRITERIA

1 major risk factor:

a-SB diameter stenosis ≥ 70%
b-SB lesion length ≥ 10 mm

or any 2 minor risk factors:

a-moderate to severe calcification
b-multiple lesions
c-bifurcation angle < 45°
d-MV reference vessel diameter < 2.5
e-thrombus-containing lesions
f-MV lesion length ≥ 25 mm.

SCIENTIFIC REPORTS
nature research
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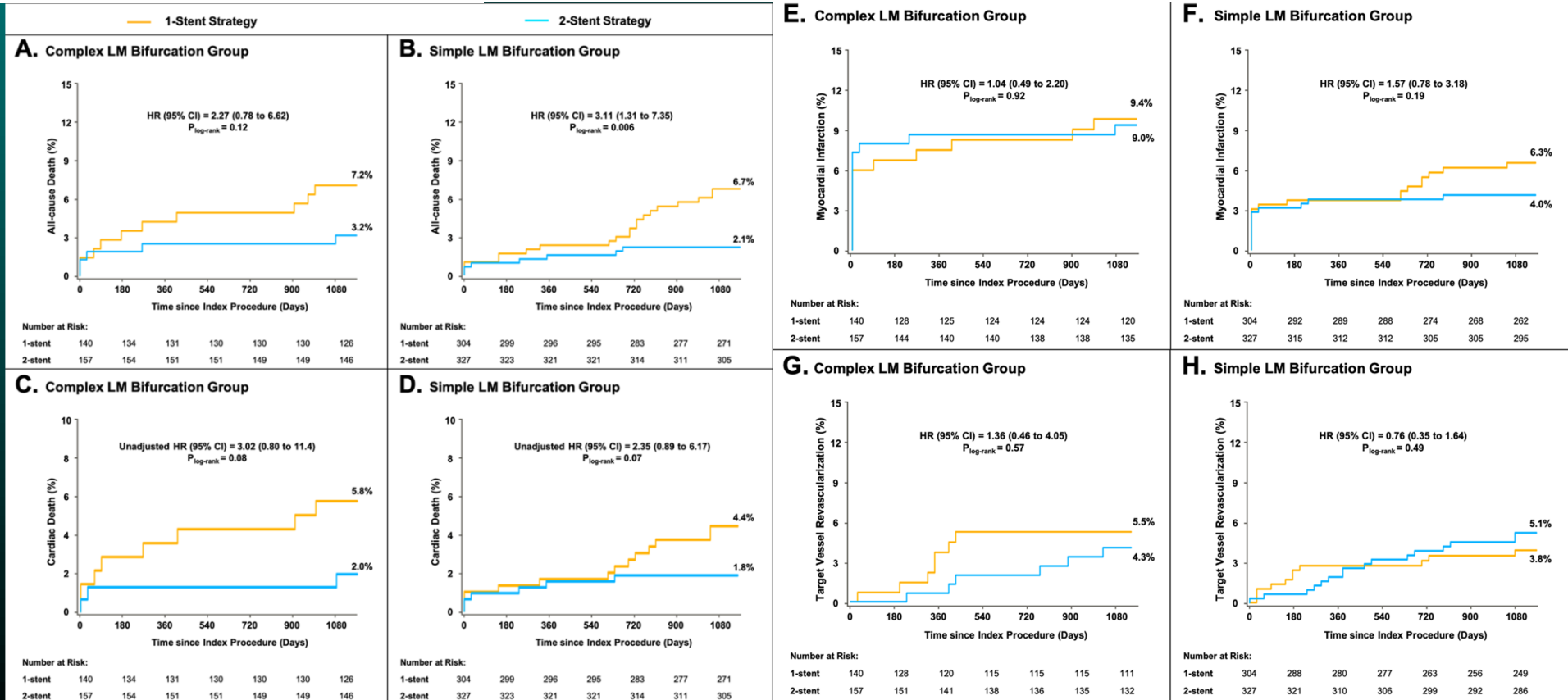
OPEN

Validation of bifurcation DEFINITION criteria and comparison of stenting strategies in true left main bifurcation lesions

Juan Wang[1,5], Changdong Guan[2,5], Jue Chen[1], Kefei Dou[1,3], Yida Tang[1,3], Weixian Yang[1,3], Yanpu Shi[1], Fenghuan Hu[1], Lei Song[1], Jiansong Yuan[1], Jingang Cui[1], Min Zhang[4], Shuang Hou[4], Yongjian Wu[1,3], Yuejin Yang[1,3], Shubin Qiao[1,3]✉ & Bo Xu[2,3]✉



Clinical indications

Recommendation for the type of revascularization (CABG or PCI) in patients with SCAD with suitable coronary anatomy for both procedures and low predicted surgical mortality

Recommendations according to extent of CAD	CABG		PCI		
	Class[a]	Level[b]	Class[a]	Level[b]	Ref[c]
One or two-vessel disease without proximal LAD stenosis.	IIb	C	I	C	
One-vessel disease with proximal LAD stenosis.	I	A	I	A	107,108,160, 161,178,179
Two-vessel disease with proximal LAD stenosis.	I	B	I	C	108,135,137
Left main disease with a SYNTAX score ≤ 22.	I	B	I	B	17,134,170
Left main disease with a SYNTAX score 23–32.	I	B	IIa	B	17
Left main disease with a SYNTAX score >32.	I	B	III	B	17
Three-vessel disease with a SYNTAX score ≤ 22.	I	A	I	B	17,157,175,176
Three-vessel disease with a SYNTAX score 23–32.	I	A	III	B	17,157,175,176
Three-vessel disease with a SYNTAX score >32.	I	A	III	B	17,157,175,176

CABG = coronary artery bypass grafting; LAD = left anterior descending coronary artery; PCI = percutaneous coronary intervention; SCAD = stable coronary artery disease.
[a]Class of recommendation.
[b]Level of evidence.

IN OSTIAL ISOLATED LEFT MAIN PCI SHOULD BE PREFERRED, IN BIFURCATION LEFT MAIN PCI IS MORE DEBATABLE DEPENDING ON SYNTAX SCORE AND PATIENTS PREFERENCES AS WELL.

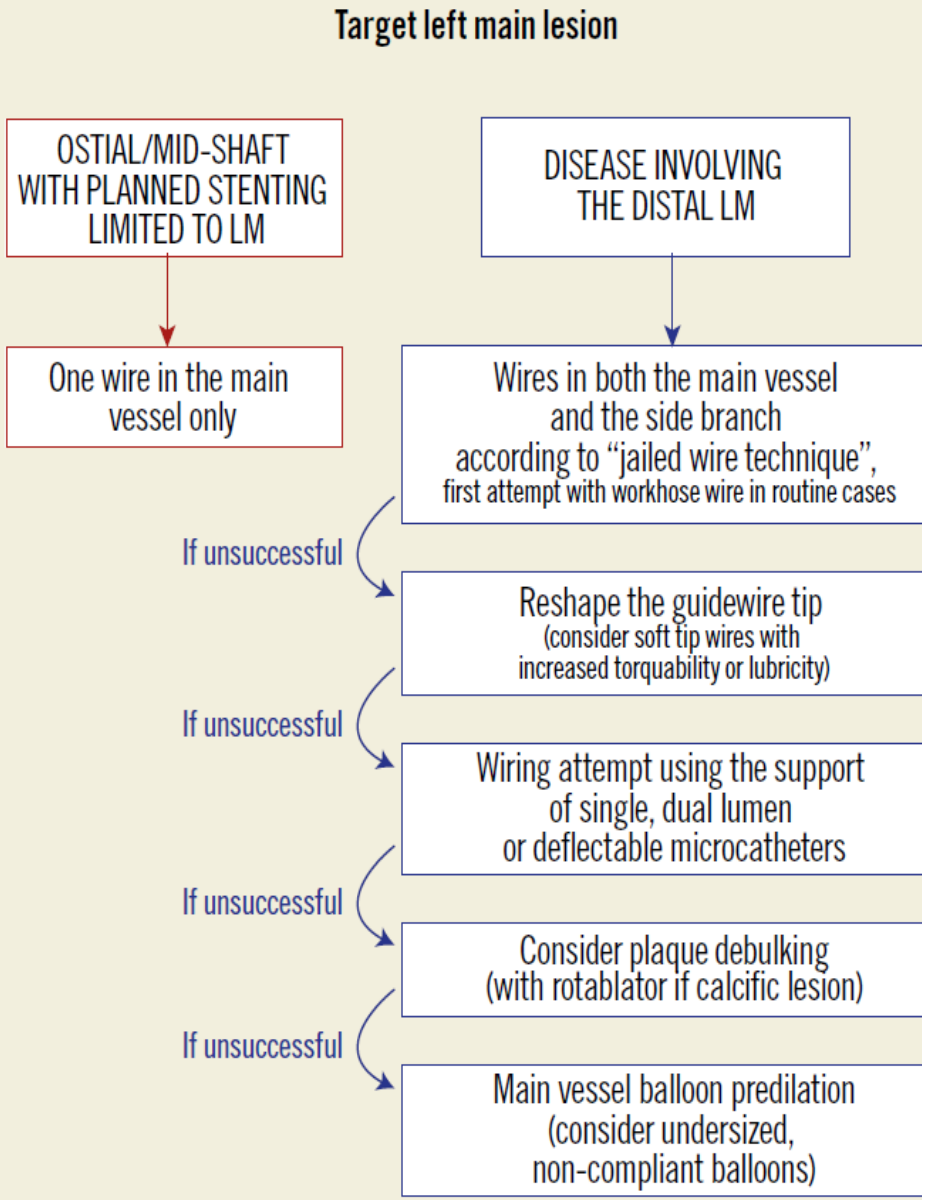
IN ACUTE SETTING INDICATION TO PCI SHOULD BETTER SELECTED BY THE HEART TEAM. HOWEVER IN STEMI OR UNSTABLE NSTEMI WHEN REFERRAL IS UNLIKELY, PCI REMAIN THE BEST OPTION

IMAGING GUIDANCE

Table 1 (continued). Overview on EBC recommendations.

Topic	Previously established (and confirmed) recommendations	New recommendations
Quantitative coronary analysis General issues. Details on QCA use in bifurcations reported in a specific consensus paper[12].	– QCA is an important standard analysis in scientific reporting and for regulatory assessment – Contemporary 3D QCA systems further provide the optimal projection angle in bifurcations and in some systems form the backbone for co-registration with OCT and IVUS	
Intracoronary imaging General issues. Details regarding IVUS use and OCT use in bifurcations reported in specific consensus papers[16,17].	– Intracoronary imaging is a valuable tool in PCI on bifurcation lesion and LM since it facilitates technical planning and optimisation of the final result. – Selection of a preferred imaging modality should reflect operator experience and the primary objective of assessment – IVUS is gold standard for LM – OCT is feasible for distal LM lesions – OCT provides superior evaluation of stent and wire positions – Pullback in both MV & SB is recommended for 2-stent procedures	– OCT combined with angio co-registration and sophisticated real-time analysis software provides real advantages for a stepwise bifurcation approach, especially 3D reconstruction to facilitate guidewire re-crossing towards the SB – Intracoronary imaging should be available in the cath lab and it is recommended that it is used when faced with procedural complications or unexpected technical challenges.
Fractional flow reserve	– FFR should be used in MV before treatment when ischaemia was not confirmed – SB FFR reflects proximal main vessel and SB disease/plaque burden – Pressure wires should not be routinely jailed in SB – After MV stenting, FFR in the SB is feasible (but some risk of SB dissection during wiring does exist) and more accurate than angiographic stenosis to establish SB ostial lesion severity	

TECHNIQUES NOMENCLATURE



Percutaneous coronary intervention in left main coronary artery disease: the 13th consensus document from the European Bifurcation Club

Francesco Burzotta[1]*, MD, PhD; Jens Flensted Lassen[2], MD, PhD; Adrian P. Banning[3], MD, PhD; Thierry Lefèvre[4], MD; David Hildick-Smith[5], MD; Alaide Chieffo[6], MD; Olivier Darremont[7], MD; Manuel Pan[8], MD; Yiannis S. Chatzizisis[9], MD, PhD; Remo Albiero[10], MD; Yves Louvard[4], MD; Goran Stankovic[11], MD, PhD

Table 2. Maximal stent expansion of some contemporary DES according to the manufacturers' instructions for use (IFU).

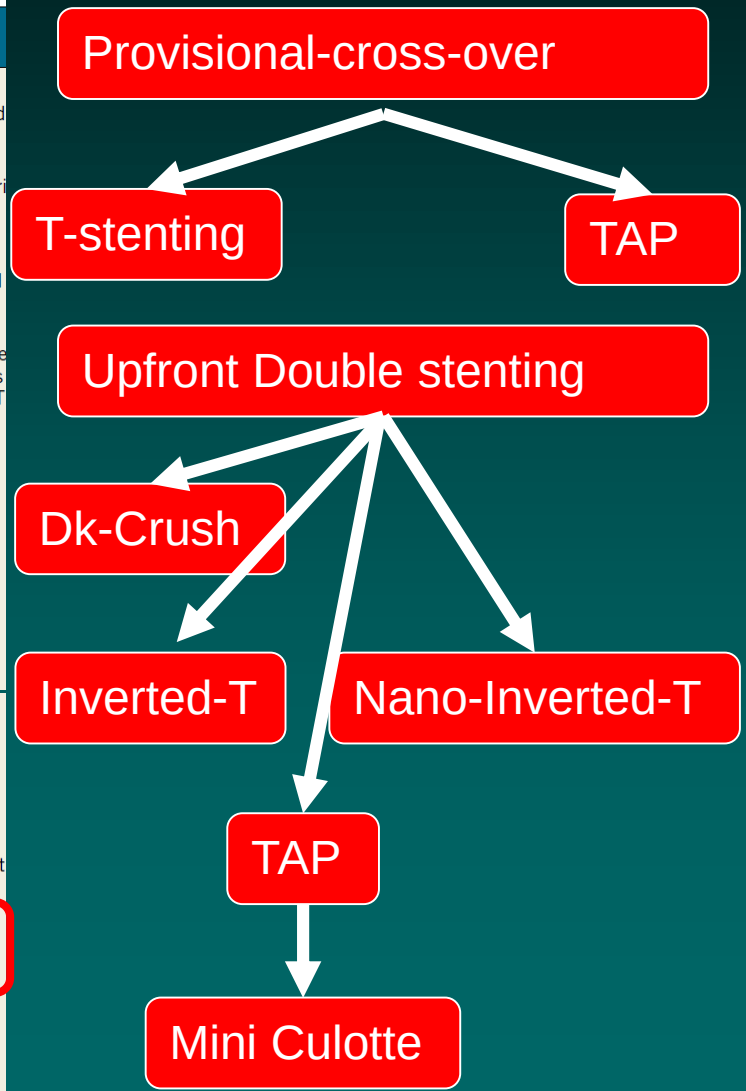
DES type	DES sizes	Maximal expansion according to IFU
XIENCE Sierra	2.25-3.25 mm	3.75 mm
	3.5-4.0 mm	5.50 mm
Resolute Onyx	2.25-2.5 mm	3.25 mm
	2.75-3.0 mm	3.75 mm
	3.5-4.0 mm	4.75 mm
	4.5-5.0 mm	5.75 mm
SYNERGY	2.25-2.75 mm	3.50 mm
	3.0-3.5 mm	4.25 mm
	4.0 mm	5.75 mm
Ultimaster	2.25-3.0 mm	3.50 mm*
	3.5-4.0 mm	4.50 mm*
Orsiro	2.25-3.0 mm	3.50 mm
	3.5-4.0 mm	4.50 mm

*manufacturer's advice, not in IFU.

TECHNIQUES NOMENCLATURE

Table 1 (continued). Overview on EBC recommendations.

Topic	Previously established (and confirmed) recommendations	New recommendations
One-stent strategy General issues. Details regarding one-stent strategy reported in a specific techniques consensus paper[21].	– One-stent strategy is recommended for the vast majority of bifurcated lesions and is based on a "provisional SB stenting philosophy" (stent implantation in the MV eventually followed by SB intervention and stenting if needed) – MV predilation should be liberally performed – Stent implantation in the MV (selected 1:1 according to the distal MV size) followed by systematic POT (post-dilation of the stent at the level of proximal MV with a balloon diameter sized 1:1 according to the proximal MV) is the recommended way to perform one-stent strategy – When SB intervention is required, the following steps are advised: 1. pullback rewiring technique to aim at "distal re-wiring" 2. kissing balloon inflation using short balloons (and MV balloon sized 1:1 according to the distal MV diameter, consider non-compliant balloons). 3. final POT (also called repeat POT or re-POT). – When SB stenting is needed, T/TAP and culotte are valuable options – In selected anatomic conditions, the provisional 1-stent technique may be practised according to the "inverted provisional" approach (stent implanted in SB-proximal MV, across distal MV).	– When treating complex bifurcations with tight SB ostial stenosis, SB dilation may be considered before MV stenting. – POT efficacy is dependent on correct balloon placement (best position: just proximal to the cari and reaching up to the proximal edge of the MV stent) – Kissing balloon effect is highly dependent on SB wire re-cross site and balloon selection (distal re-cross and short balloon overlaps are strongly recommended). – POT-side-POT may simplify the procedure (no nee to advance 2 balloons together) but its efficacy is strongly dependent on optimal positioning of POT balloon during each step. – The definition of optimal SB result has yet to be established
Two-stent strategy General issues. Details regarding two-stent strategy reported in a specific techniques consensus paper[21].	– An intentional (up-front) two-stent approach represents optimal practice in selected patients with complex lesions involving large and diseased SB (especially in LM location) – Meticulous lesion preparation is recommended – When there is no concern about SB occlusion/ re-access, techniques based on MV stenting first can be used (T, TAP and culotte stenting) – When there is major concern regarding SB occlusion/ re-access, SB stenting first techniques have to be selected. Among these, best options are inverted T/TAP, inverted culotte or DK-crush. – Final kissing inflation (sequential high-pressure inflation followed by simultaneous inflation) is mandatory – Repeat POT recommended (being careful not to reach neocarina in the case of TAP)	– The use of a 2-stent technique should be selected according to bifurcation anatomy and the operator's experience. – Extensive understanding of the 2-stent technical steps is pivotal since adherence to best practice (sequences of ballooning, etc.) impacts on the efficacy of all 2-stent techniques. – The use of POT (one, two or even three times) is part of an optimal 2-stent technique. – In 2-stent techniques, final kissing might be regarded as a measure of procedural quality since failure in its performance continues to be strongly associated with adverse late clinical outcome.



LM stenting 1 vs 2 stent strategy

Clinical Research in Cardiology
https://doi.org/10.1007/s00392-020-01679-w

REVIEW

One- and 3-year outcomes of percutaneous bifurcation left main revascularization with modern drug-eluting stents: a systematic review and meta-analysis

Gianluca Rigatelli[1] · Marco Zuin[1,2] · Pavel Nikolov[3] · Nyha Mileva[3] · Dobrin Vassilev[3]

Received: 13 April 2020 / Accepted: 26 May 2020

Abstract

Aims Optimal percutaneous coronary intervention (PCI) strategy for coronary left main (LM) bifurcation lesions remains controversial. We performed systematic review and meta-analysis comparing one and 3-year clinical outcomes of 1- and 2- stent strategies using modern drug eluting stents (DESs) for revascularization of LM bifurcation disease.

Methods We systematically identified all investigations published between January 2015 and February 2020 comparing the use of single versus double-stent strategies for the revascularization of LM bifurcation lesions. The primary endpoint was 1- and 3-years all-cause mortality. Secondary outcomes included target lesion revascularization (TLR), target lesion failure (TLF), major adverse cardiovascular vents (MACEs) and cardiovascular (CV) mortality while the tertiary outcome was overall occurrence of stent thrombosis (ST) at 1- and 3-years.

Results No significant differences were observed between the two groups in terms of all-cause mortality rate both at 1 and 3-year follow-up. Single stent strategy was associated with a significantly lower risk of TLR (OR 0.78, 95% CI 0.62- 0.97, $p=0.03$, $I^2=61\%$) as well as of MACEs (OR 0.78, 95% CI 0.63–0.97, $I^2=24\%$) compared to 2-stent strategy. Conversely no significant differences between the two groups were observed in terms of TLF, CV mortality and ST during the same follow-up period.

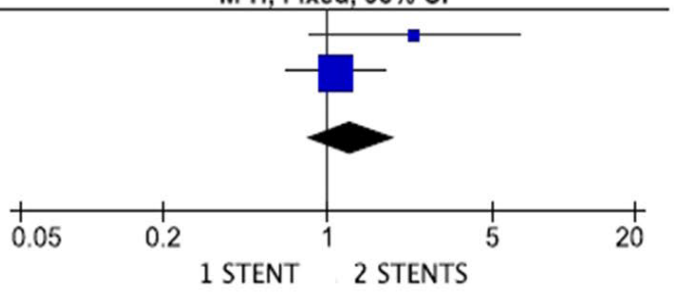
Conclusions In patients with LM bifurcation disease, single stent strategy demonstrated lower rate of MACEs and TLR but was not superior to 2-stent strategy in terms of CV mortality, TLF and ST at 1 and 3-year follow-up.

LM stenting 1 vs 2 stent strategy

A All-cause mortaltiy at 1 year

Study or Subgroup	1 STENT Events	1 STENT Total	2 STENTS Events	2 STENTS Total	Weight	Odds Ratio M-H, Fixed, 95% CI	Year	Odds Ratio M-H, Fixed, 95% CI
Kawamoto 2018	15	216	5	161	14.2%	2.33 [0.83, 6.54]	2018	
Ferenc 2019	42	477	32	390	85.8%	1.08 [0.67, 1.75]	2019	
Total (95% CI)		**693**		**551**	**100.0%**	**1.26 [0.82, 1.94]**		
Total events	57		37					

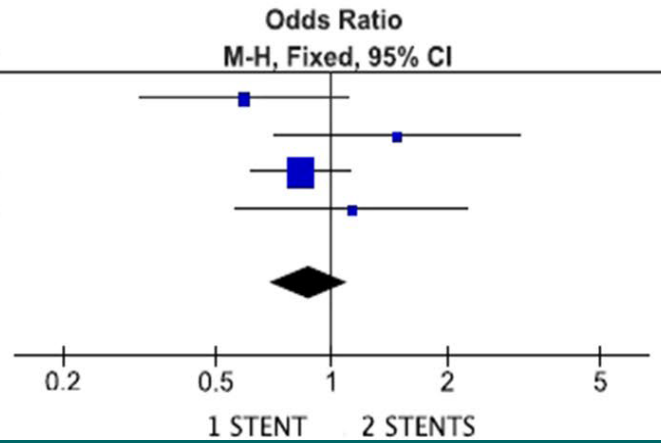
Heterogeneity: Chi² = 1.75, df = 1 (P = 0.19); I² = 43%
Test for overall effect: Z = 1.04 (P = 0.30)



B All-cause mortality at 3 years

Study or Subgroup	1 STENT Events	1 STENT Total	2 STENTS Events	2 STENTS Total	Weight	Odds Ratio M-H, Fixed, 95% CI	Year	Odds Ratio M-H, Fixed, 95% CI
Kandzari 2018	23	344	20	185	16.6%	0.59 [0.32, 1.11]	2018	
Kawamoto 2018	23	216	12	161	8.4%	1.48 [0.71, 3.07]	2018	
Ferenc 2019	125	477	117	390	64.9%	0.83 [0.62, 1.12]	2019	
Chen 2019	18	242	16	240	10.2%	1.13 [0.56, 2.26]	2019	
Total (95% CI)		**1279**		**976**	**100.0%**	**0.87 [0.69, 1.11]**		
Total events	189		165					

Heterogeneity: Chi² = 4.11, df = 3 (P = 0.25); I² = 27%
Test for overall effect: Z = 1.12 (P = 0.26)



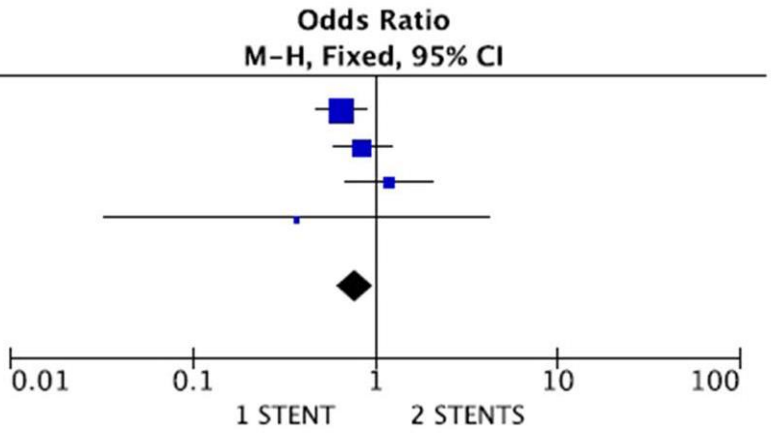
LM stenting 1 vs 2 stent strategy

C MACE

Study or Subgroup	1 STENT Events	Total	2 STENTS Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Ferenc 2019	92	477	105	390	52.2%	0.65 [0.47, 0.89]
Gao 2015	83	661	54	372	33.8%	0.85 [0.58, 1.22]
Kawamoto 2018	37	216	24	161	12.8%	1.18 [0.67, 2.07]
Zhang 2015	1	50	2	38	1.2%	0.37 [0.03, 4.21]
Total (95% CI)		**1404**		**961**	**100.0%**	**0.78 [0.63, 0.97]**
Total events	213		185			

Heterogeneity: $Chi^2 = 3.93$, df = 3 (P = 0.27); $I^2 = 24\%$

Test for overall effect: Z = 2.23 (P = 0.03)

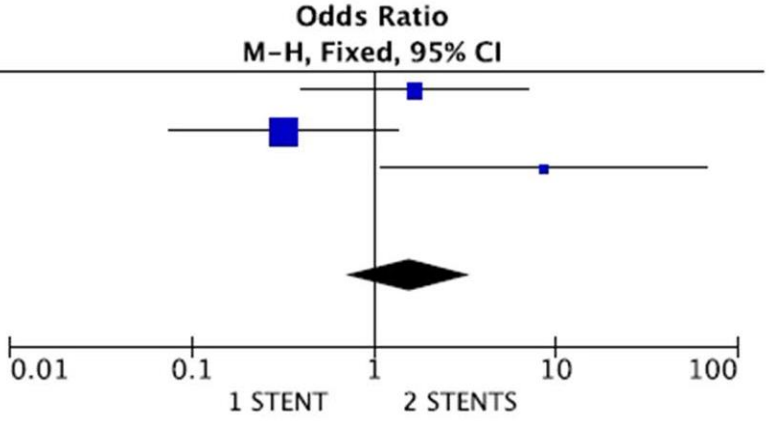


D CV MORTALITY

Study or Subgroup	1 STENT Events	Total	2 STENTS Events	Total	Weight	Odds Ratio M-H, Fixed, 95% CI
Chen 2019	5	242	3	240	28.1%	1.67 [0.39, 7.05]
Kandzari 2019	3	344	5	185	61.5%	0.32 [0.07, 1.34]
Kawamoto 2018	11	216	1	161	10.4%	8.59 [1.10, 67.19]
Total (95% CI)		**852**		**624**	**100.0%**	**1.55 [0.71, 3.42]**
Total events	19		9			

Heterogeneity: $Chi^2 = 7.33$, df = 2 (P = 0.03); $I^2 = 73\%$

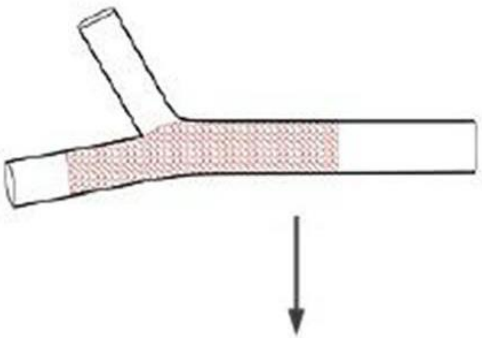
Test for overall effect: Z = 1.10 (P = 0.27)

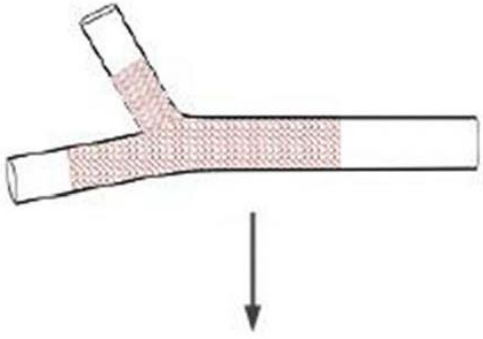


LM stenting 1 vs 2 stent strategy

Stenting for LM Bifurcation

Provisional Strategy **Vs** **Two-stent strategy**





Lower rate of MACEs and TLR in favour of provisional strategy @ 1 and 3 years

No differences in CV mortality, TLF and ST @ 1 and 3 years

LM stenting: short vs long DAPT

Cardiovascular Revascularization Medicine xxx (xxxx) xxx

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Cardiovascular Revascularization Medicine

Outcomes of left main bifurcation stenting depends on both length of dual antiplatelet therapy and stenting strategy

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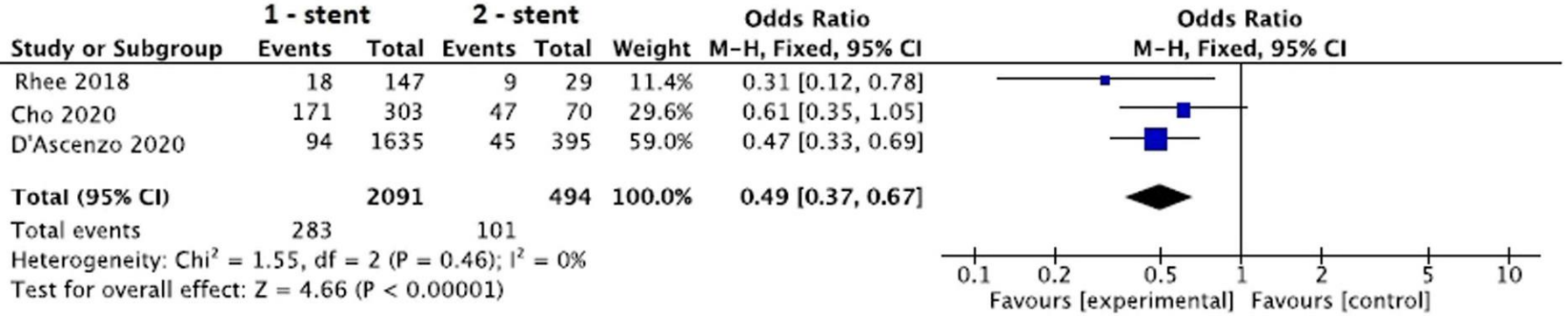
ABSTRACT

Data regarding the optimal dual antiplatelet therapy (DAPT) duration in patients treated with a 1- versus a 2-stent strategy in LM bifurcation PCI are scant. A literature search based on Cochrane Library, Embase, PubMed and Google Scholar was performed to locate articles published between January 2015 and January 2020. The following MeSH terms were used for the search: "Left Main" AND "DAPT Duration" AND "stent" OR "stenting". The analysis was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. Occurrence of major adverse cardiovascular events (MACEs) according to length of DAPT and stenting strategy was analysed. A total of 256 articles were retrieved and after evaluation, 3 articles evaluating the results of 8 large registries were included into the analysis including a final population of 4117 patients [mean age 65.7 years, 3133 (76.0%) males]. A short-term DAPT resulted in a lower risk of MACEs in patients treated with a single stent strategy (OR: 0.49, 95% CI [0.33–0.67], $p < 0.001$, $I2 = 0\%$), whereas a DAPT >12 months resulted in a significant higher risk of MACEs in the same group (OR: 7.30, 95% CI [5.09–10.71], $p < 0.001$, $I2 = 61\%$) compared to double stent strategy. The available data support the use of short DAPT in single cross-over LM stenting whereas a long DAPT seems to be more appropriate after a double stenting strategy in LM bifurcation PCI.

General characteristics of the studies included into the analysis. DAPT: dual antiplatelet therapy. CV: cardiovascular: MI: myocardial infarction; TLR: target lesion revascularization; ST: stent thrombosis.

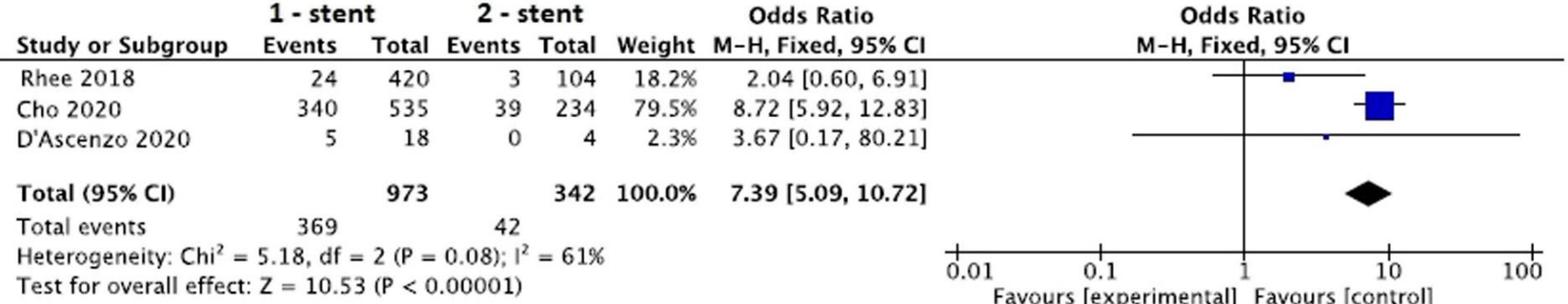
Study	Entire population	Mean age (years)	Males, n (%)	MACE definition	DAPT duration		Stent strategy	
					DAPT ≤ 12 months	DAPT > 12 months	1-Stent	2-Stent
D'Ascenzo et l [4]	2275	68.7 ± 11.1	1761 (77.5)	Composite of CV death, MI, TLR and ST	317 (13.9)	1958 (86.1)	1653 (80.6)	399 (19.4)
Cho et al. [6]	1142	63.0 ± 10.2	852 (76.4)	Composite of cardiac death, fatal or nonfatal MI, stroke, MI	373 (32.6)	769 (67.3)	838 (73.3)	304 (26.6)
Rhee et al. [7]	700	65.3 ± 10.5	520 (74.3)	Composite of cardiac death, all-cause MI, definite or probable ST	176 (25.1)	524 (74.8)	133 (19.5)	567 (80.5)

DAPT ≤ 12 months



A

DAPT >12 months



B

LM stenting: THIN vs THICK struts

Original article

I.F.C. Italian Federation of Cardiology

Impact of the metal-to-artery ratio on clinical outcomes in left main and nonleft main bifurcation: insights the RAIN-CARDIOGROUP VII study (veRy thin stents for patients with left mAIn or bifurcatioN in real life)

Mario Iannaccone[b,*], Fabrizio D'Ascenzo[a,*], Paolo Gatti[a,*], Enrico Cerrato[d], Ivan Nuñez-Gil[g], Wojciech Wojakowski[e], Davide Capodanno[f], Filippo Figini[c], Wojciech Wańha[e], Alaide Chieffo[c], Gaetano Maria De Ferrari[a] and Carlo Di Mario[h]

Introduction The impact on clinical outcomes of the metal coverage on the coronary surface (namely the metal-to-artery ratio) of currently used drug-eluting stents (DESs) has not been defined.

Methods All patients with a left main or bifurcation stenosis treated with percutaneous coronary intervention (PCI) using ultrathin stents (struts thinner than 81 μm) were enrolled with a prospective multicentre fashion. The rate of device-oriented endpoint [DOE, defined as a composite of target lesion revascularization (TLR) and stent thrombosis] was the primary endpoint, while its single components were the secondary ones, evaluated according to the metal-to-artery ratio.

Results After 14 ± 10.4 months 62 (7.5%) of 830 patients undergoing PCI on left main experienced a DOE without differences in the metal-to-artery ratio (14.5 ± 2.1 vs. 14.4 ± 1.9, $P = 0.51$). Fifty out (2.4%) of 2082 patients treated with PCI on a coronary bifurcation other than left main experienced a DOE, with a higher mean metal-to-artery ratio (15.3 ± 2.1 vs. 14.6 ± 2, $P = 0.01$). At multivariate analysis, together with hypertension and diabetes, the metal-to-artery ratio was an independent predictor of DOE (hazard ratio 1.7 : 1.02–1.34, $P = 0.02$) in nonleft main PCI. When analysed for diameter, we found a significant correlation with DOE when the stent diameter was inferior to 3.0 mm (hazard ratio 1.21: 1.06–1.38, $P < 0.01$, all 95% confidence interval); this result was mainly consistent for patients treated with provisional stenting. The metal-to-artery ratio does not impact on outcomes in left main PCI, both in the provisional or two-stent technique, and generally when a drug-eluting stent more than 3.5 mm in diameter is implanted. Regarding nonleft main PCI, it is independently related to DOE and TLR, especially for DES with a diameter of 3.25 mm or less.

Conclusion The metal-to-artery ratio does not impact on outcomes in left main PCI, both in the provisional or two-stent technique, and generally when a drug-eluting stent more than 3.5 mm in diameter is implanted. Regarding nonleft main PCI, it is independently related to DOE and TLR, especially for DES with a diameter of 3.25 mm or less.

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Keywords: coronary bifurcation, coronary percutaneous intervention, drug-eluting stent, left main, metal-to-artery ratio, stent design, ultrathin struts

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- A list of study collaborators can be found in the Appendix.

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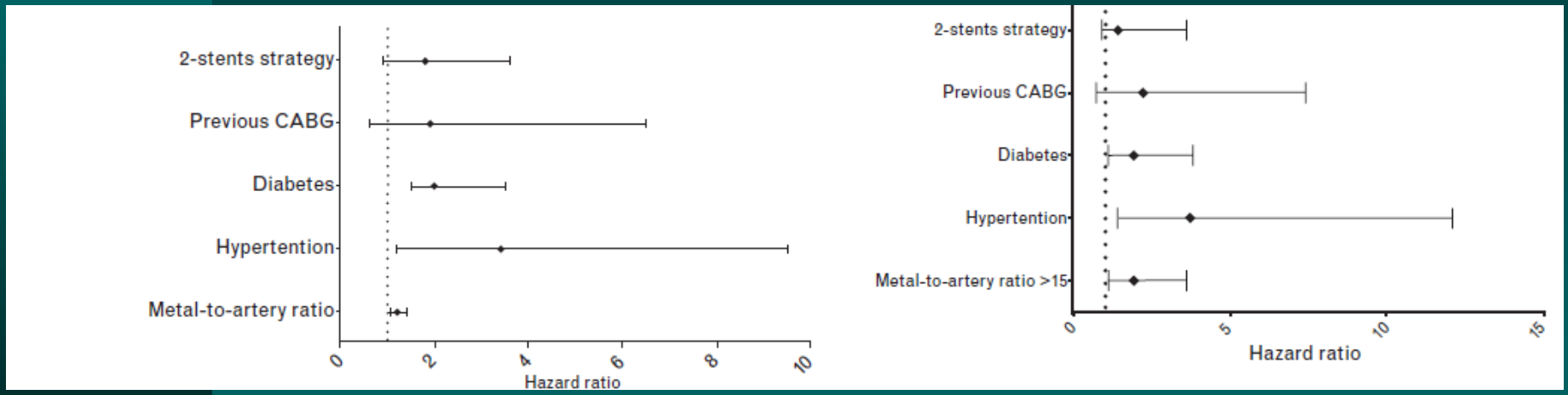
Metal-to-artery ratio:

the ratio between the endoluminal vessel surface and the stent struts surface

LM stenting: THIN vs THICK struts

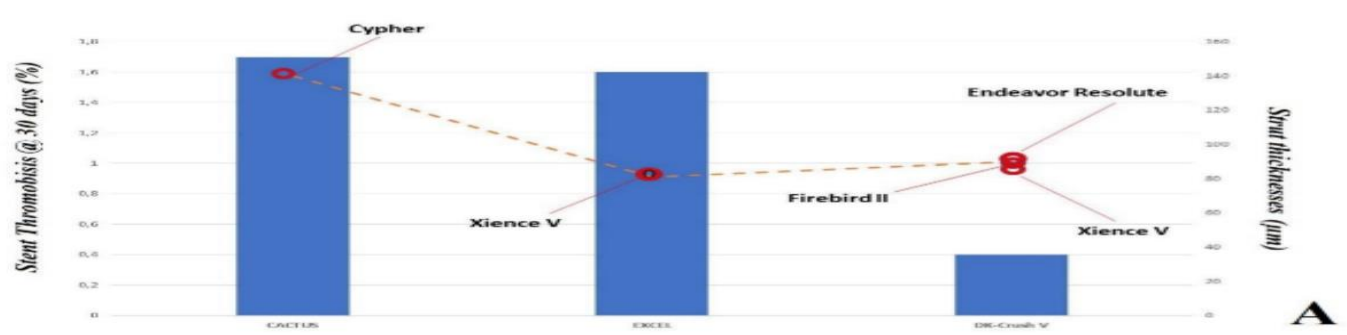
left main bifurcation provisional stenting 5.7% experienced device oriented end points: metal-to-artery 14.3±1.9 vs. 14.6±2.2 P¼0.56

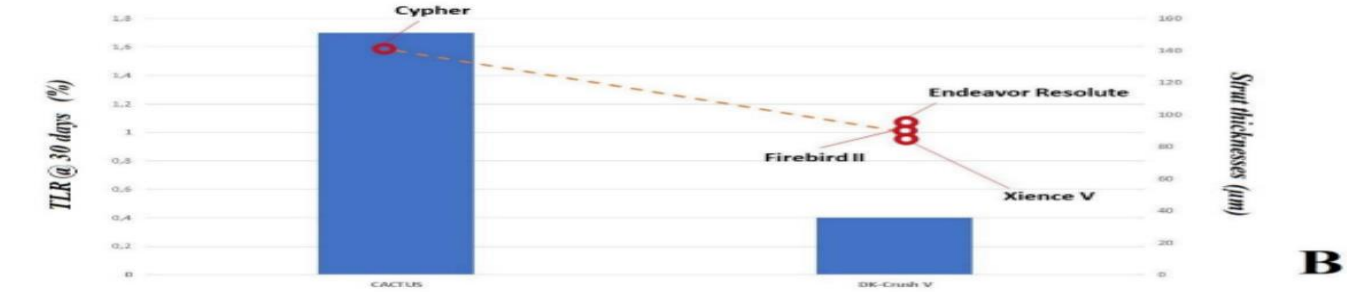
Left main bifurcation with two-stent technique 14.9% experienced device oriented end points, metal-to-artery 14.3 ± 1.9 vs. 14.6± 2.1, P¼0.49



When using ultrathin <80 micron strut stent there is no impact of metal artery/ ratio on outcomes in left main 1 versus 2 stent strategy

Trial	Year	Stent used [strut thickness, (µm)]	Mean age (years)	Males N. (%)	Double stenting techniques (Pts.N)	Technique used	CV death (%)	TLR (%)	ST (%)
CACTUS [2]	2009	Cypher [140]	65±10	142 (80.2)	177	Crush	0	1.7	1.7
DK Crush V [3]	2017	Xience V [81] Endeavor Resolute [90] Firebird II [86]	65±9	199 (82.9)	240	DK crush	0	0.4	0.4
EXCEL [4]	2018	Xience V [81]	66.8±9.3	141 (76.2)	185	T, TAP Culotte Reverse crush	2,7	NR	1,6





PROTECTED PCI ALGORITHM

LVEF < 50%: EVALUATE ALGORITHM

LVEF < 40%: RECOMMEND RHC PRIOR TO PCI

+2 Cardiac index < 2.0 L/min/m^2 or PA sat < 55%

+1 Syntax score ≥ 22

+1 Ejection fraction < 25%

+1 Systolic BP < 100 mm Hg at baseline

+1 ACS presentation

+1 Planned revascularization > 2 territories

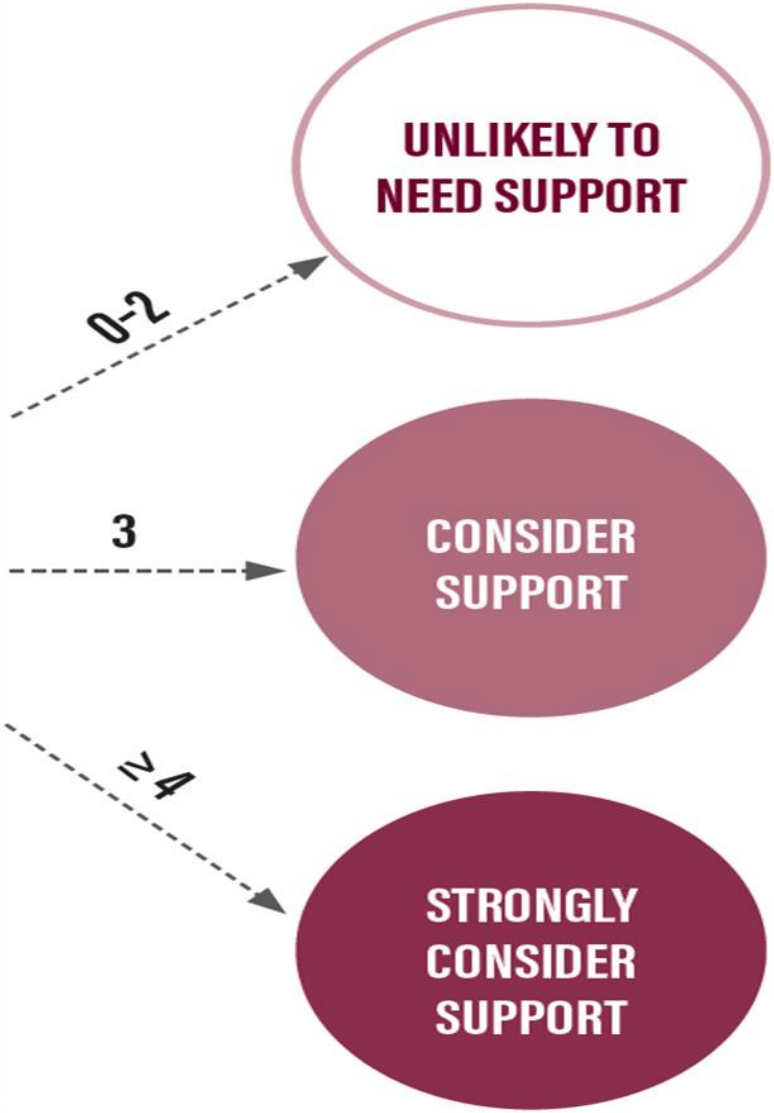
+1 Likely prolonged ischemia
- Retrograde chronic total occlusion
- Atherectomy

+1 Severe mitral regurgitation

+1 Decompensated state
- LVEDP > 20 mm Hg
- Significant new orthopnea

-1 High-risk vascular injury/significant bleeding

-1 Hemoglobin < 8 g/dL



General considerations

SYNTAX SCORE: 32 → High risk PCI

EuroSCORE: 12

EuroSCORE II: 6.03

} High risk CABG

DAPT score: 3 → High Thrombotic risk

PRECISE-DAPT: 23 → Moderate bleeding risk

+ 80% long middle-distale disease

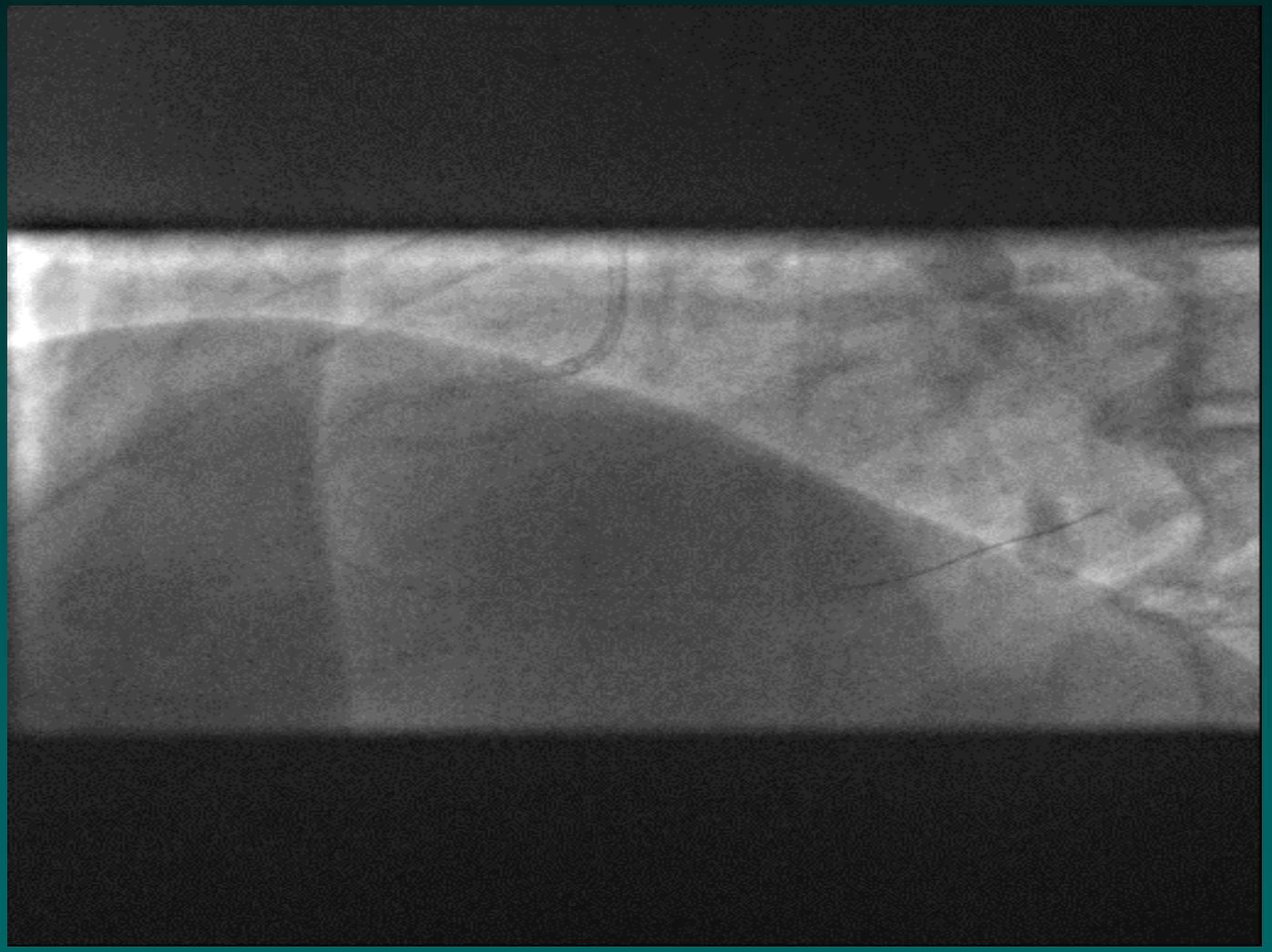
→ However the patient categorically refused any surgical option

PCI planning

The patients is not a real CHIP patient but he can be considered at high risk

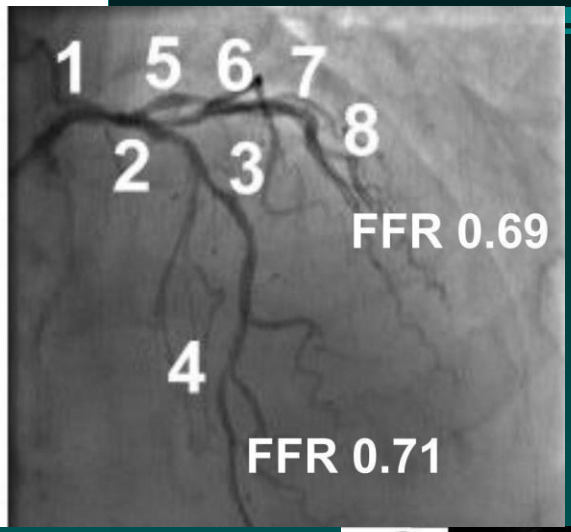
Radial approch	⟺	Femoral approach	⇒	Radial approach 7 IN 6F
STAGED	⟺	SAME SESSION	⇒	SAME SESSION
Circulatory support	⟺	IABP/Impella	⇒	No SUPPORT
IMAGING: IVUS	⟺	NO IMAGING	⇒	IMAGING: IVUS
Technique	⇒	Culotte/DK crush	⟺	Nano-Inverted-T ⇒ Nano-Inverted-T

PCI RCA



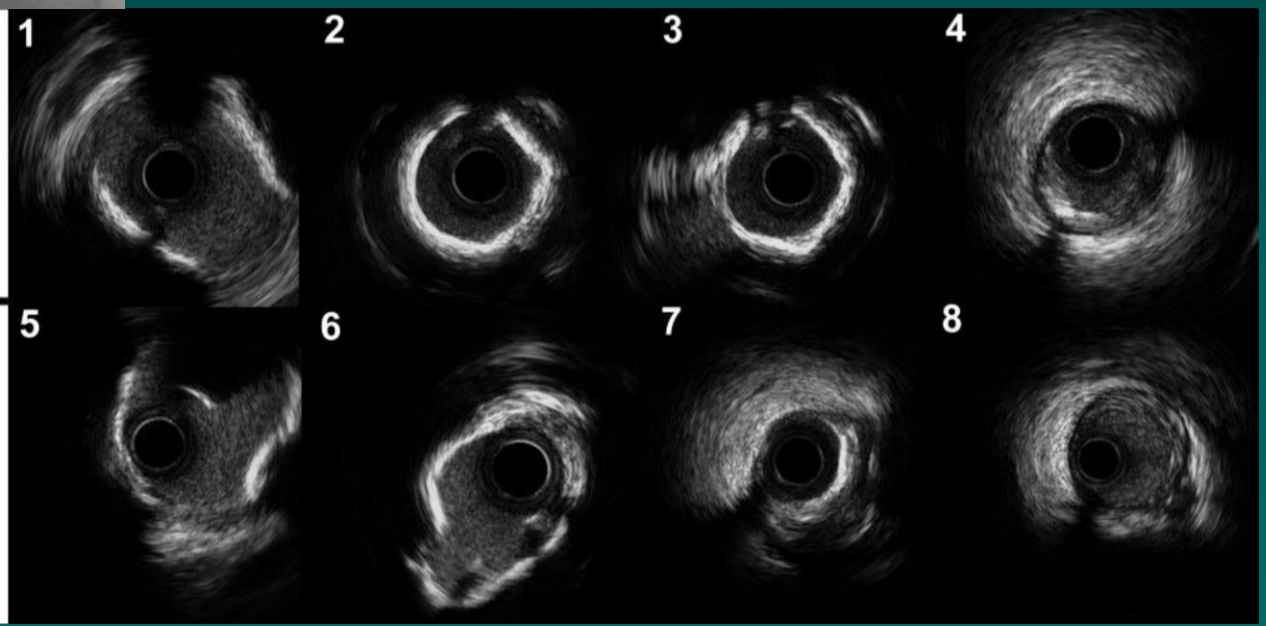
PCI LCA: IVUS

Angiography

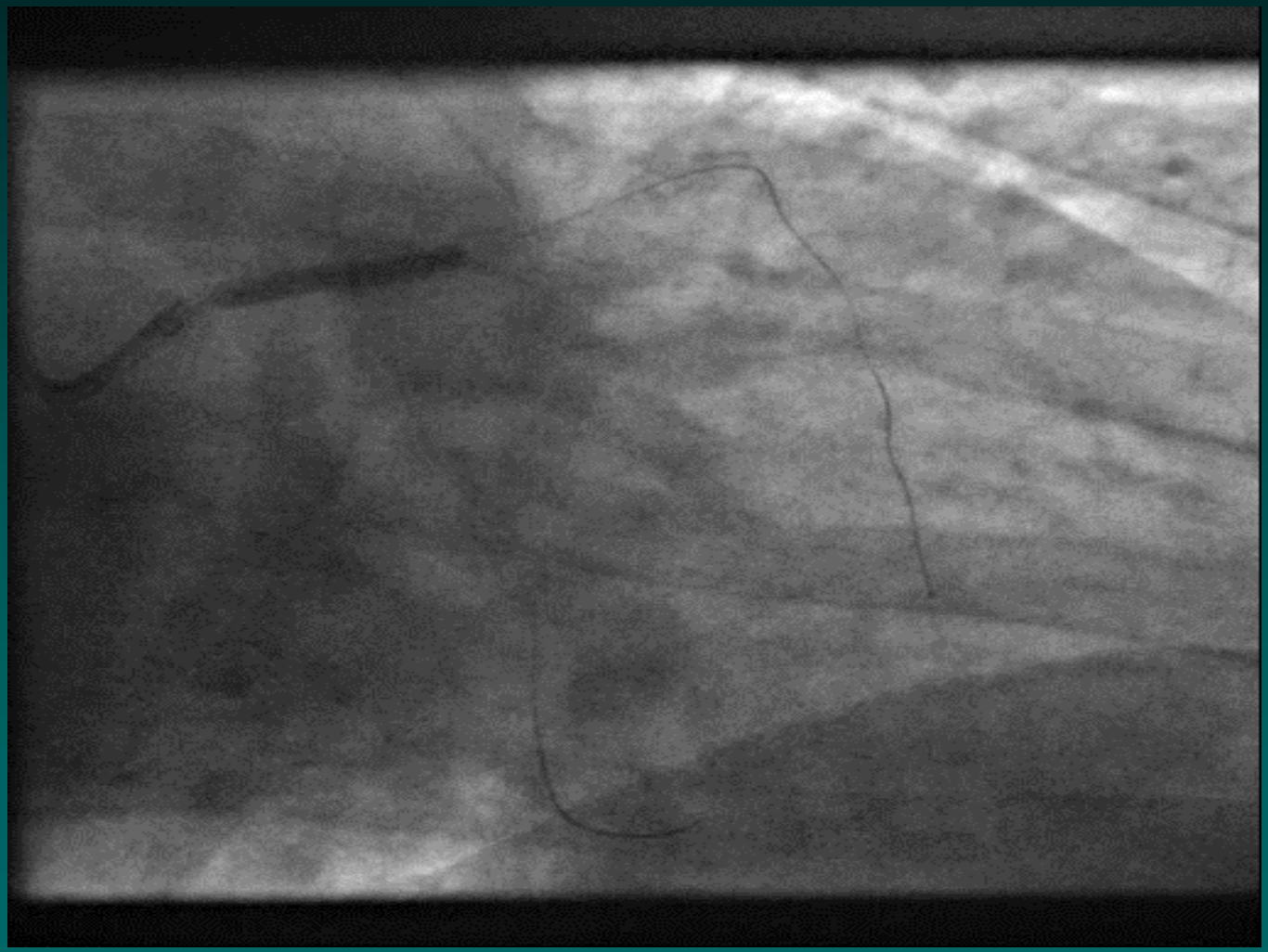


IVUS LM > LAD

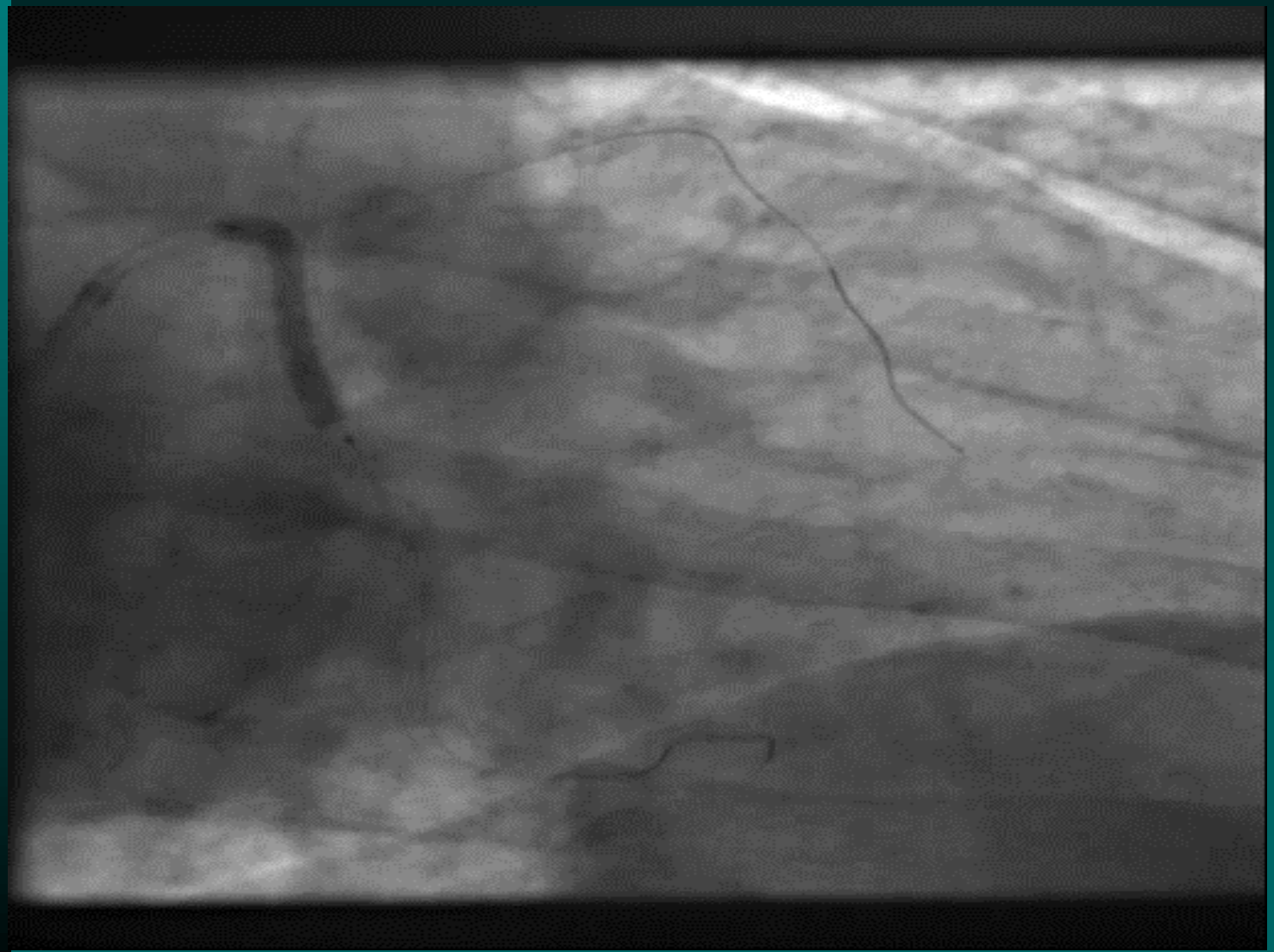
IVUS LM > LCx



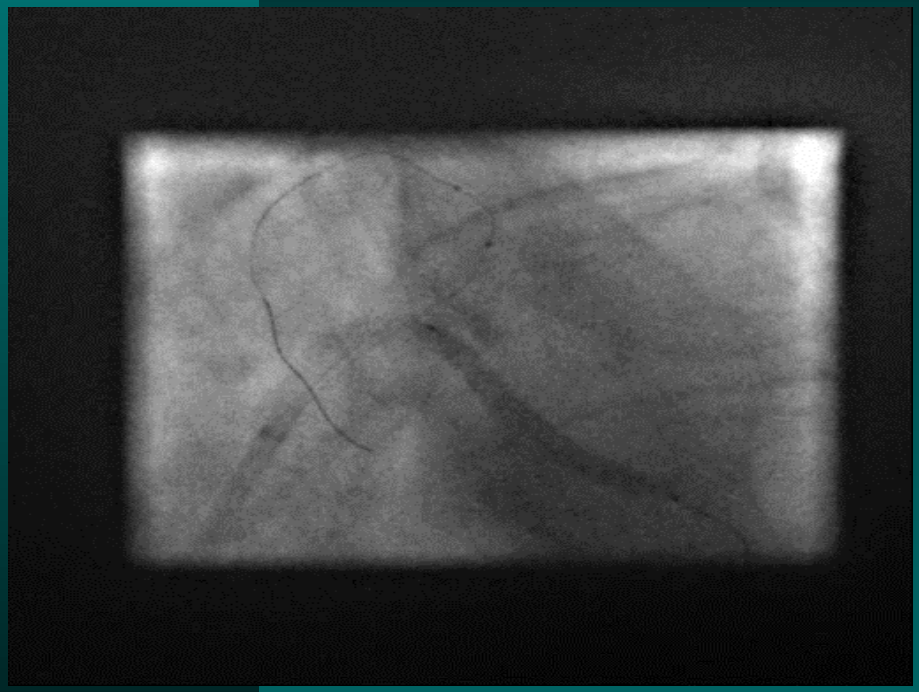
PCI LCA

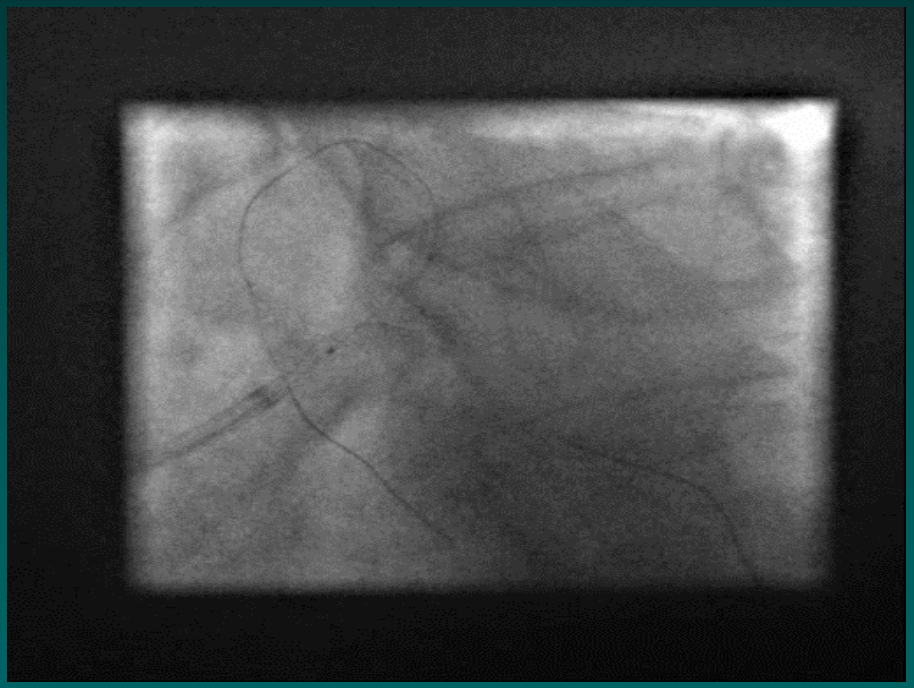


PCI LCA



PCI LCA





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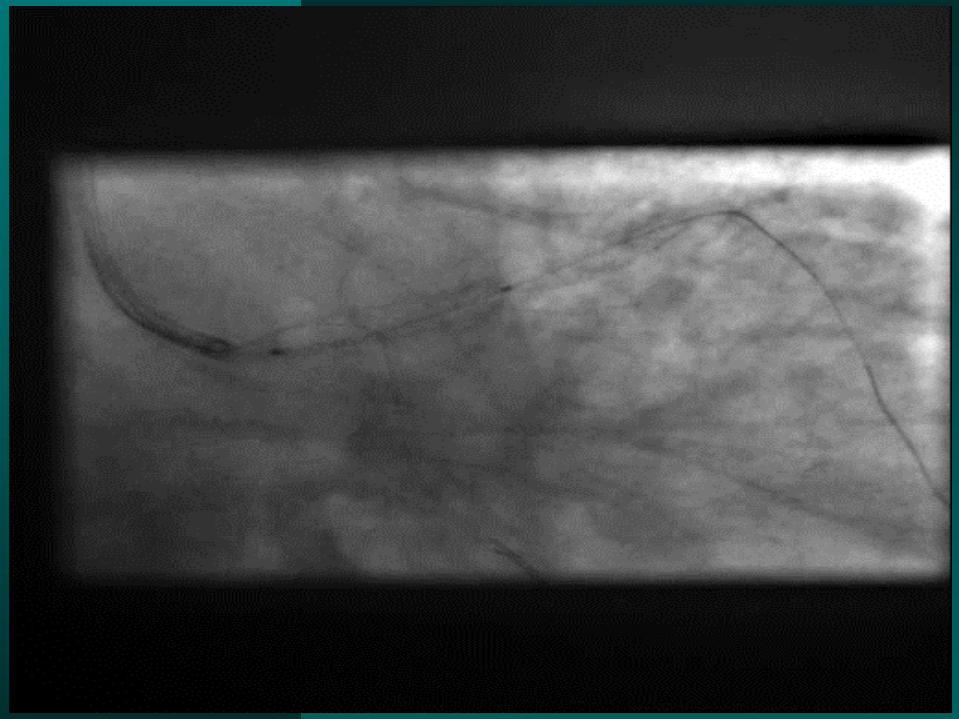
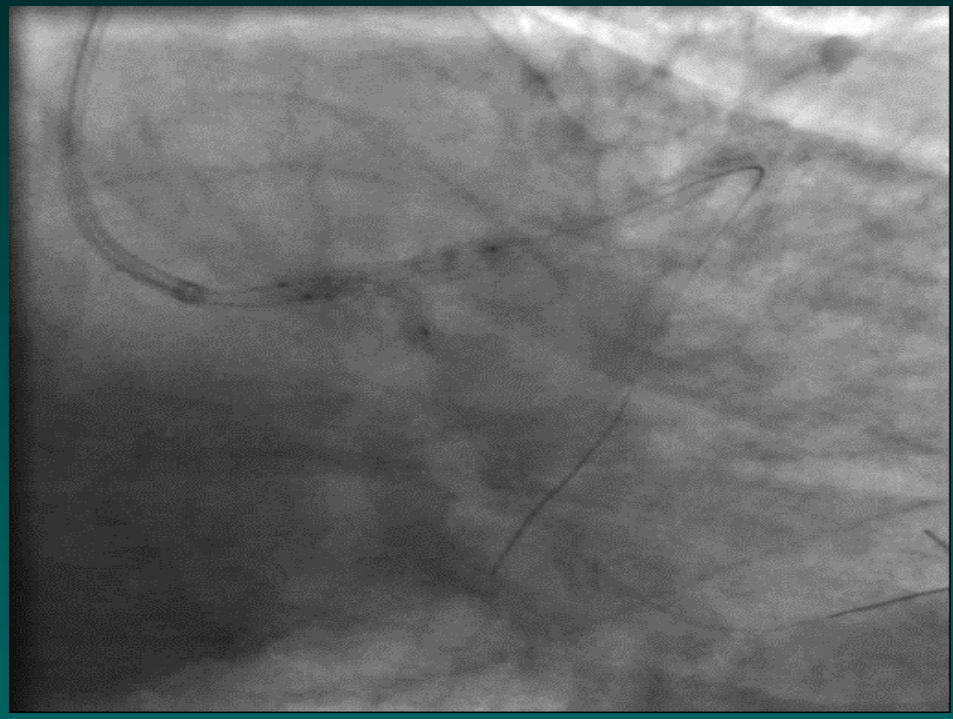
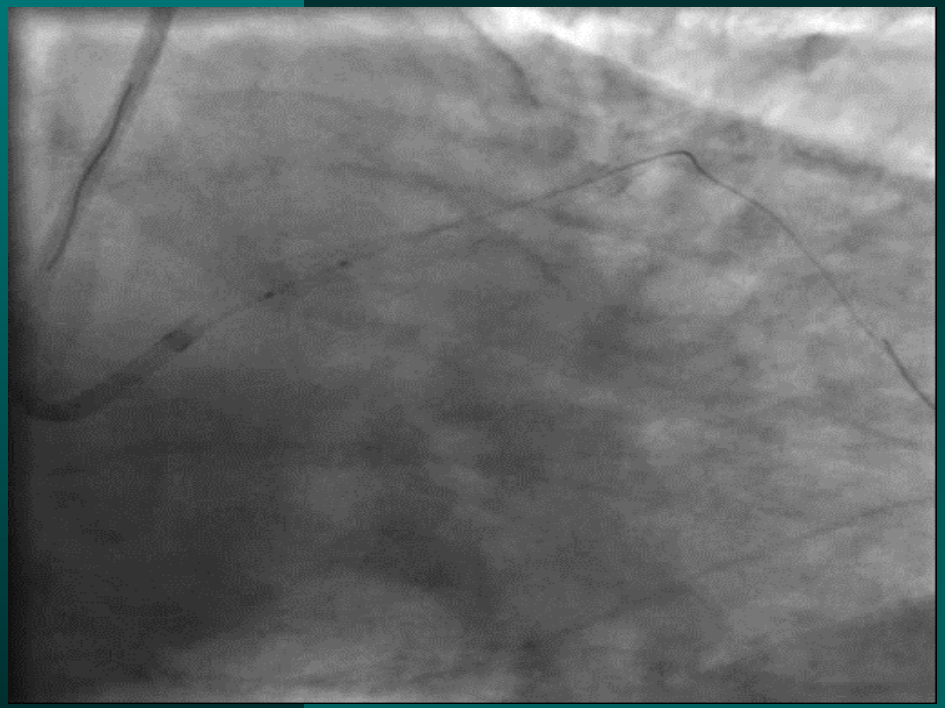
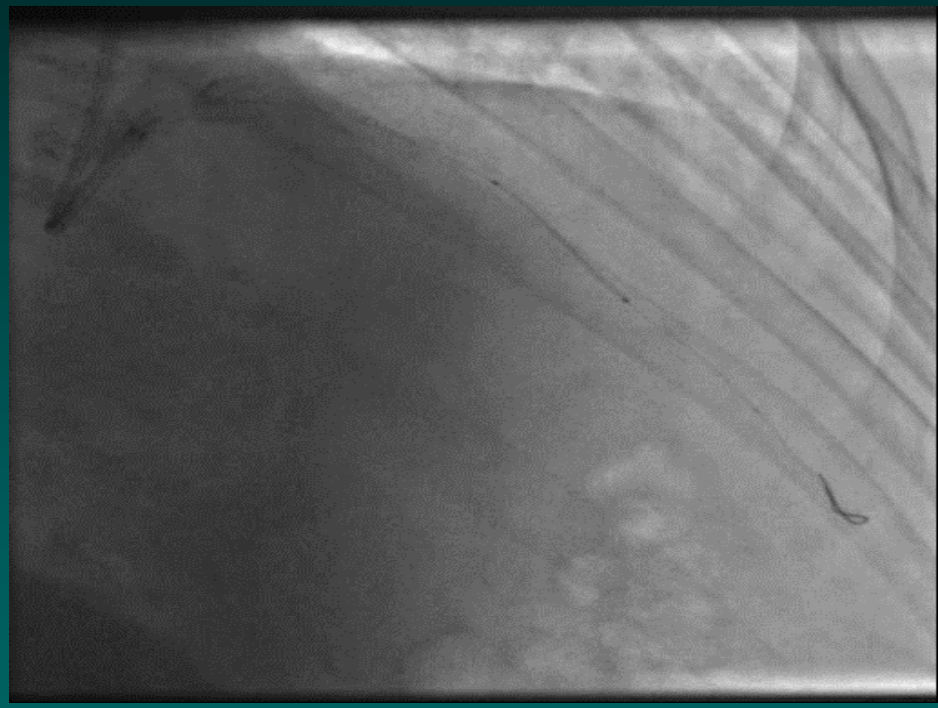


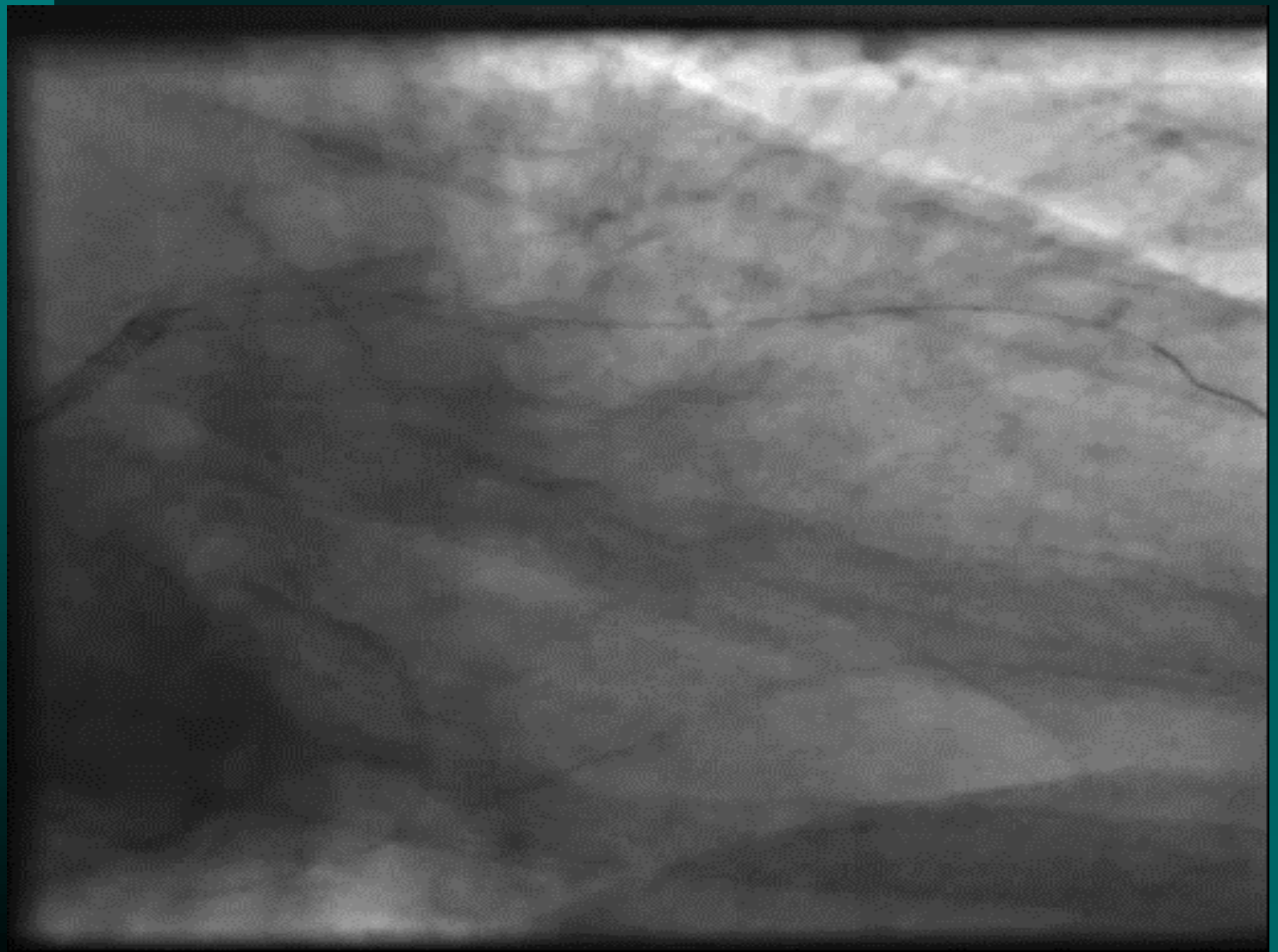


PCI LCA



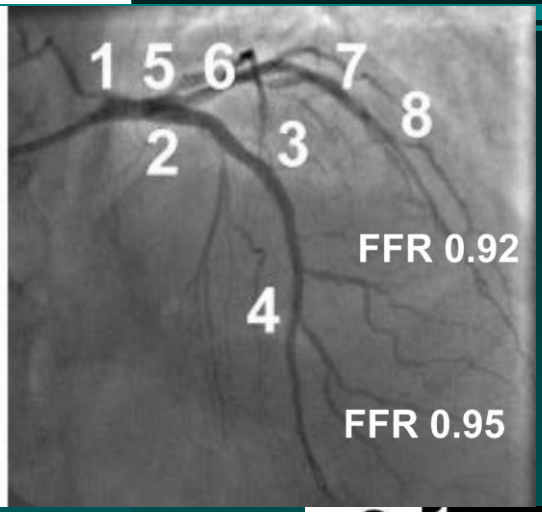


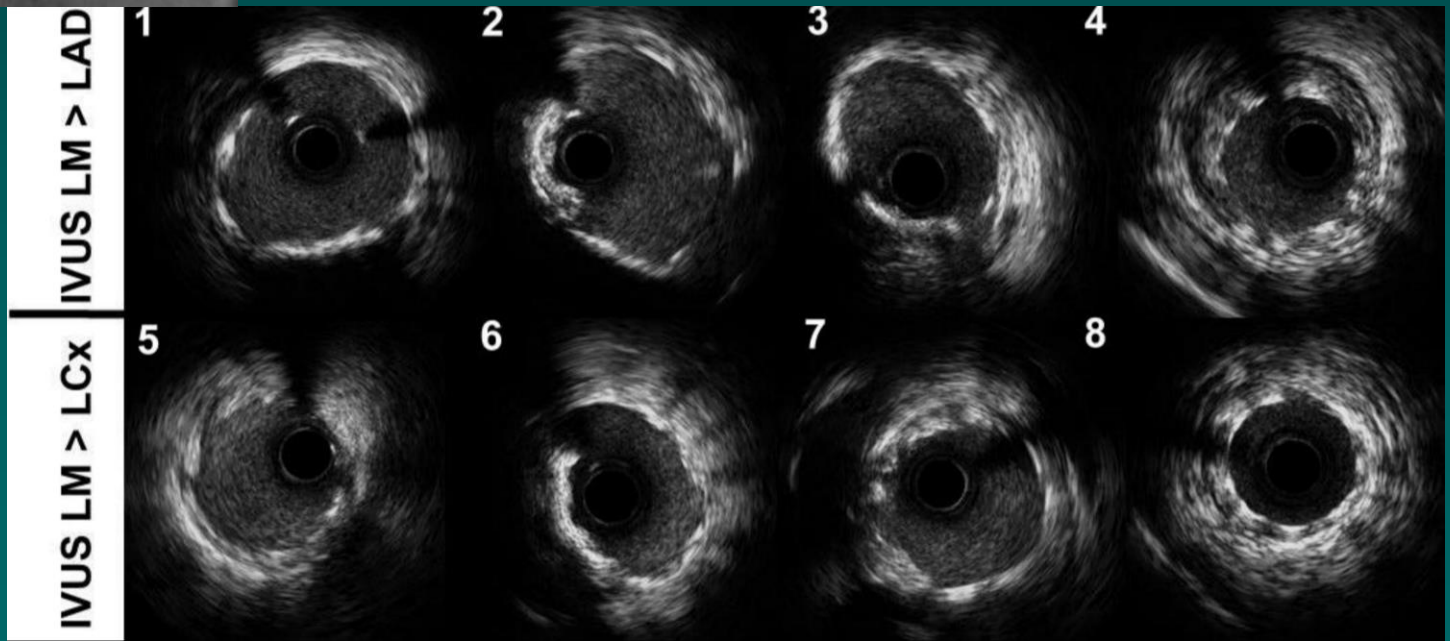
Final Result



Final IVUS

Angiography





DAPT

Age

Risk factors

Thrombotic risk

Bleeding risk

Technique complexity

Ticagrelor 90 mg x 2 x 12 months + Ticagrelor 60 mg x 2 x 6 months

CONCLUSIONS

Stenting is the preferred strategy in isolated LM ostial stenosis. In bifurcation LM disease selection should be driven by clinical presentation, Syntax score, heart team discussion, and patients' preference

Preferrred strategy for LM bifurcation stenting should be driven by Definition criteria: Cross-over provisional or upfront double stenting strategy can be considered as viable option

Imaging tool as IVUS or OCT are reccomanded in particular in bifurcation disease

Type of drug-eluting stent should be tailored on the basis strut thickness and planned technque preferring thin or ultrathin strut stent in particular in double stenting technques

Length od DAPT should be tailored on the type of presentation, thrombotic and bleeding risks, risk factors and technique complexity