



***“Tratamiento percutáneo del TCI y Bifurcaciones.
Indicación Clínica del tratamiento”.***



- Conferencista*
Abbot, Boston Scientific, Biosensors, Terumo
- Research Grants*
Abbot, Boston Scientific
- Training and Education Programs*
Biosensors, Terumo

Decisión de revascularización

- ✓ Edad
- ✓ FE%
- ✓ EPOC
- ✓ IR

**Presentación
Clínica**

**Riesgo
de sangrado**

**COMPLEJIDAD
ANATÓMICA
(SYNTAX)**

**RIESGO CLÍNICO
(EuroScore-STS)**

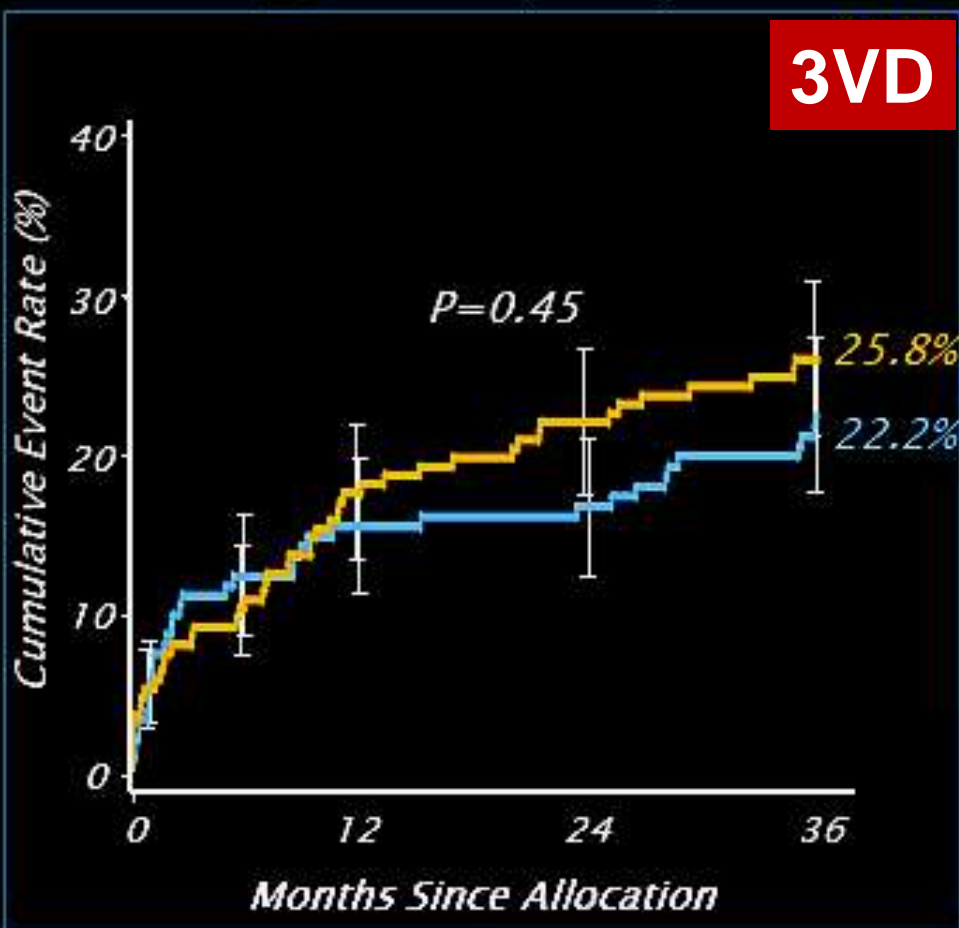
- ✓ CTO
- ✓ Ca+
- ✓ Tortuosidad extrema
- ✓ Enfermedad difusa

MACCE to 3 Years by SYNTAX Score Tercile *Low Scores (0-22)*



- CABG (N=171)
- TAXUS (N=181)

3VD



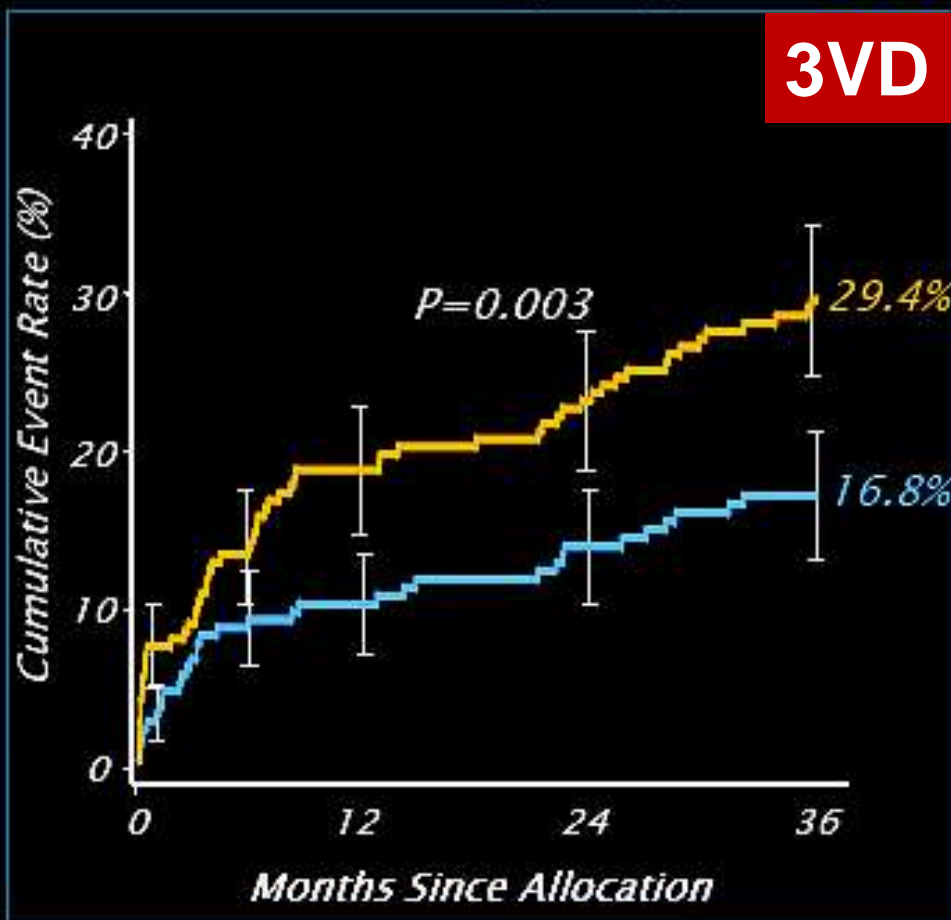
	CABG	PCI	P value
Death	6.8%	7.3%	0.86
CVA	3.2%	1.2%	0.20
MI	4.9%	5.1%	0.93
Death, CVA or MI	12.3%	11.2%	0.75
Revasc.	11.6%	18.8%	0.06

Site-reported Data; ITT population

MACCE to 3 Years by SYNTAX Score Tercile *Intermediate Scores (23-32)*

SYNTAX

■ CABG (N=208)
 ■ TAXUS (N=207)



	CABG	PCI	P value
Death	5.7%	< 10.3%	0.09
CVA	3.6%	> 2.5%	0.53
MI	3.1%	< 8.9%	0.01
Death, CVA or MI	11.3%	16.1%	0.16
Revasc.	8.4%	< 18.2%	0.004

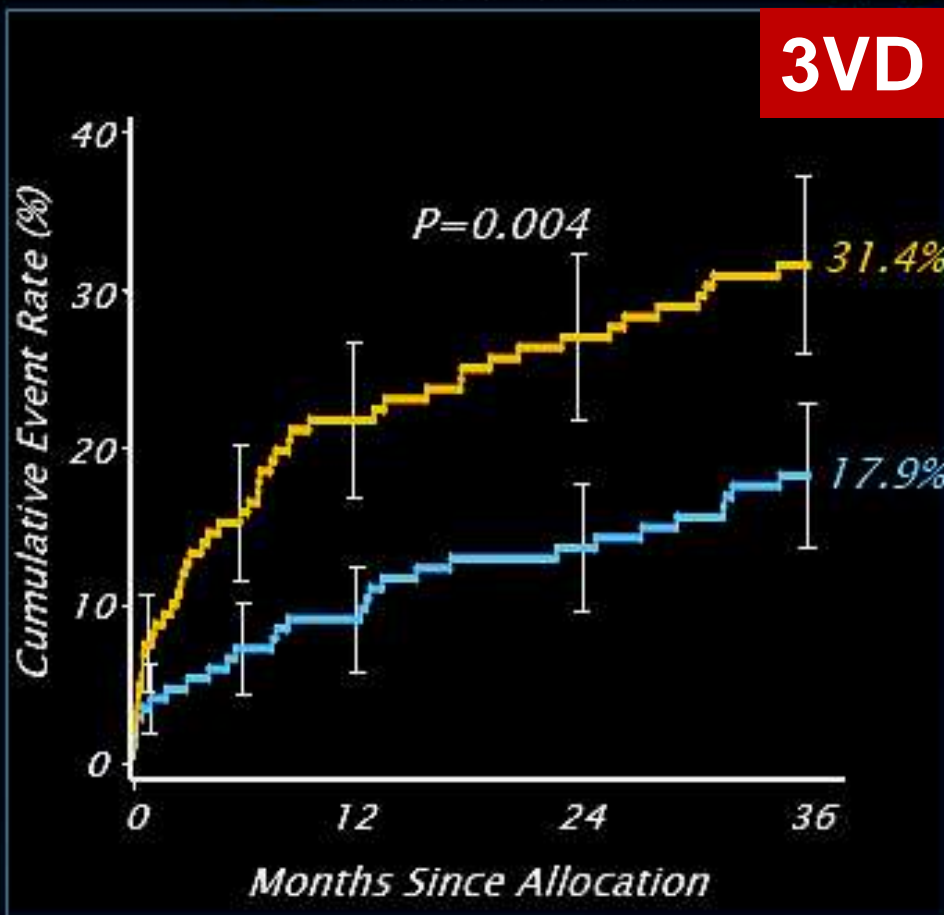
Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

Site-reported Data; ITT population

MACCE to 3 Years by SYNTAX Score Tercile *High Scores (≥ 33)*



■ CABG (N=166)
■ TAXUS (N=155)



	CABG	PCI	Pvalue
Death	4.5%	< 11.1%	0.03
CVA	1.9%	> 4.3%	0.28
MI	1.9%	< 7.2%	0.02
Death, CVA or MI	8.3%	< 17.7%	0.01
Revasc.	10.5%	< 21.5%	0.006

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

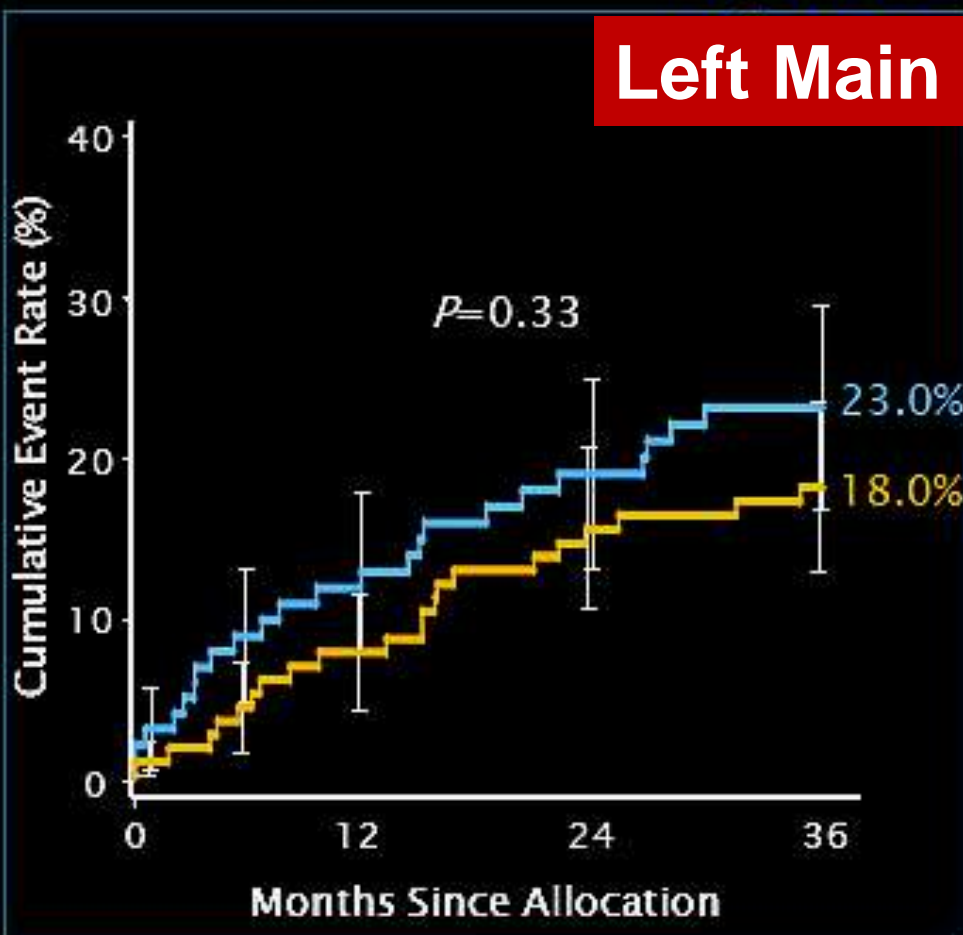
Site-reported Data; ITT population

MACCE to 3 Years by SYNTAX Score Tercile *Low Scores (0-22)*



■ CABG (N=104)
■ TAXUS (N=118)

Left Main



	CABG	PCI	P value
Death	6.0%	> 2.6%	0.21
CVA	4.1%	> 0.9%	0.12
MI	2.0%	< 4.3%	0.36
Death, CVA or MI	11.0%	> 6.9%	0.26
Revasc.	13.4%	< 15.4%	0.69

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

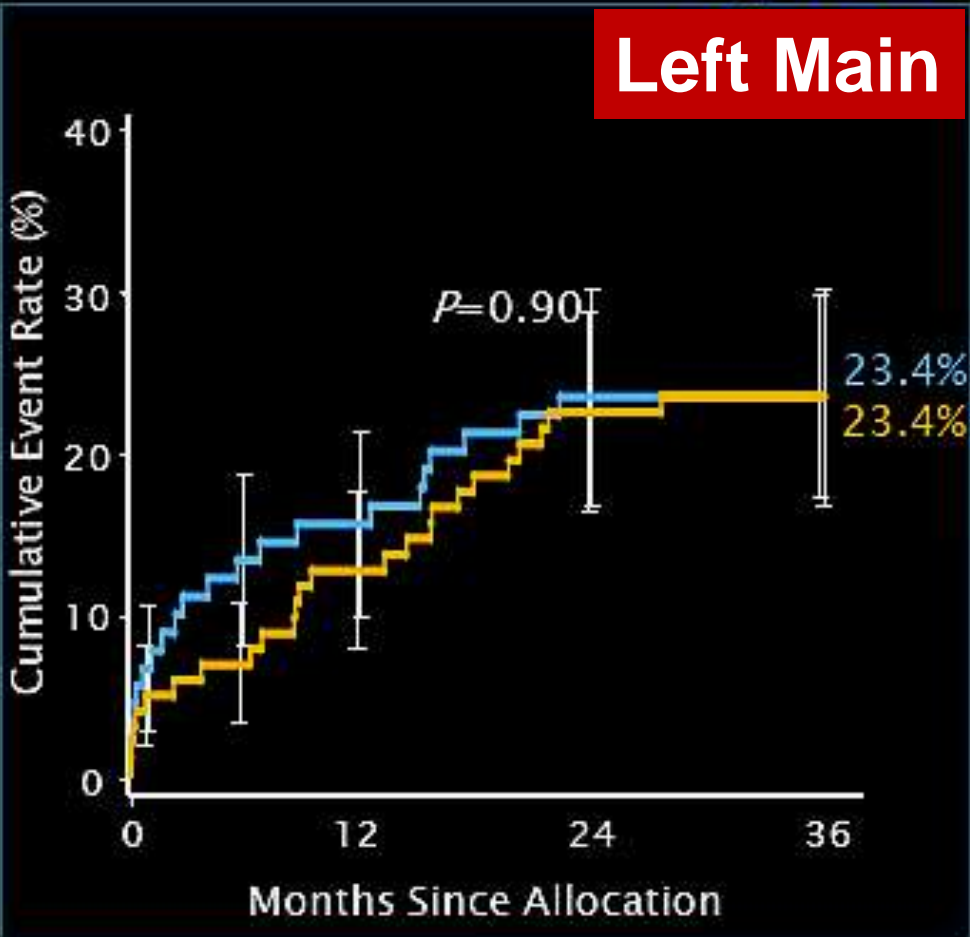
Site-reported Data; ITT population

MACCE to 3 Years by SYNTAX Score Tercile *Intermediate Scores (23-32)*



- CABG (N=92)
- TAXUS (N=103)

Left Main



	CABG	PCI	P value
Death	12.4%	> 4.9%	0.06
CVA	2.3%	> 1.0%	0.46
MI	3.3%	< 5.0%	0.63
Death, CVA or MI	15.6%	> 10.8%	0.29
Revasc.	14.0%	< 15.9%	0.75

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

Site-reported Data; ITT population

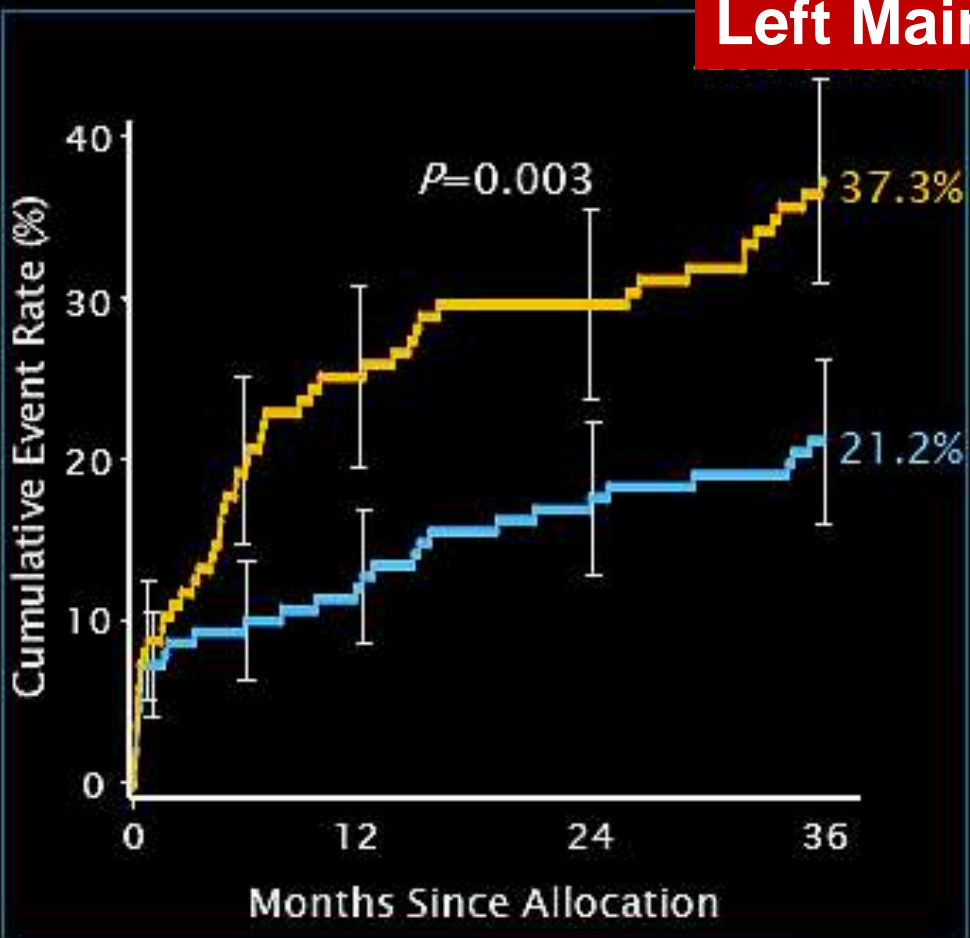
MACCE to 3 Years by SYNTAX Score Tercile

Left Main SYNTAX Score ≥ 33



■ CABG (N=149)
■ TAXUS (N=135)

Left Main



	CABG	PCI	P value
Death	7.6%	< 13.4%	0.10
CVA	4.9%	> 1.6%	0.13
MI	6.1%	< 10.9%	0.18
Death, CVA or MI	15.7%	< 20.1%	0.34
Revasc.	9.2%	< 27.7%	<0.001

Cumulative KM Event Rate \pm 1.5 SE; log-rank P value

Site-reported Data; ITT population

347 J.S.

♂ 87 años

SIA con isquemia posterolateral

7 días de internación en UCI

EUROscore 24%

STS 13%

Syntax 29



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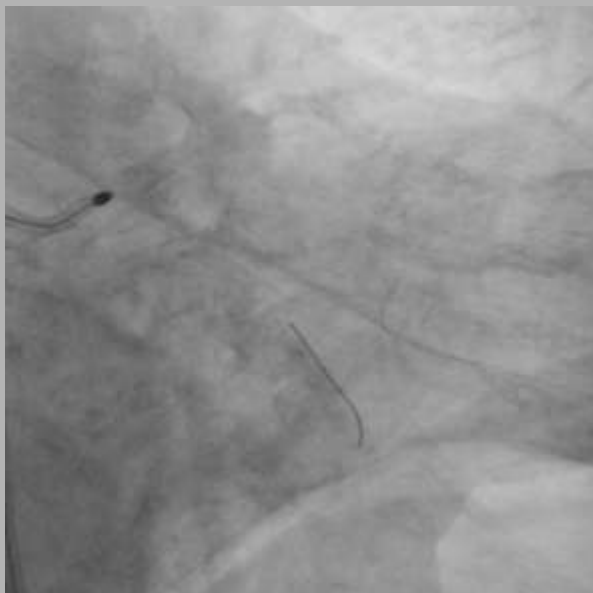


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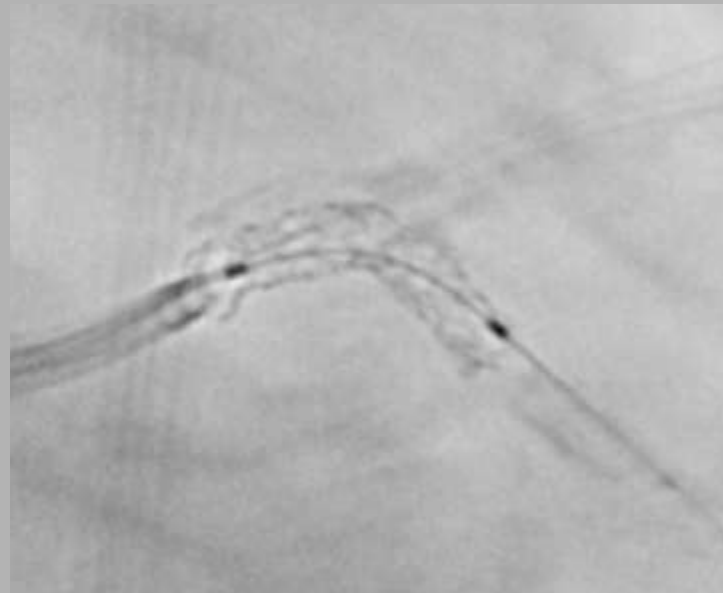
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Bivalirudina

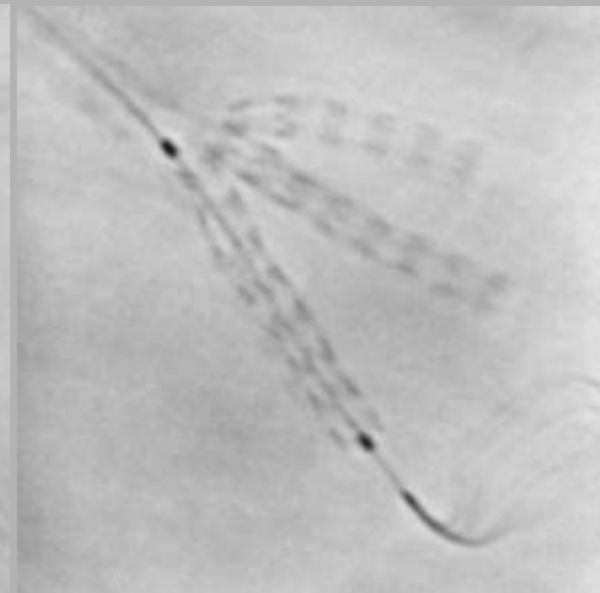
Rotablator



DES a Tronco
DES a ostium de CX



3 DES a trifurcacion de CX





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PRE



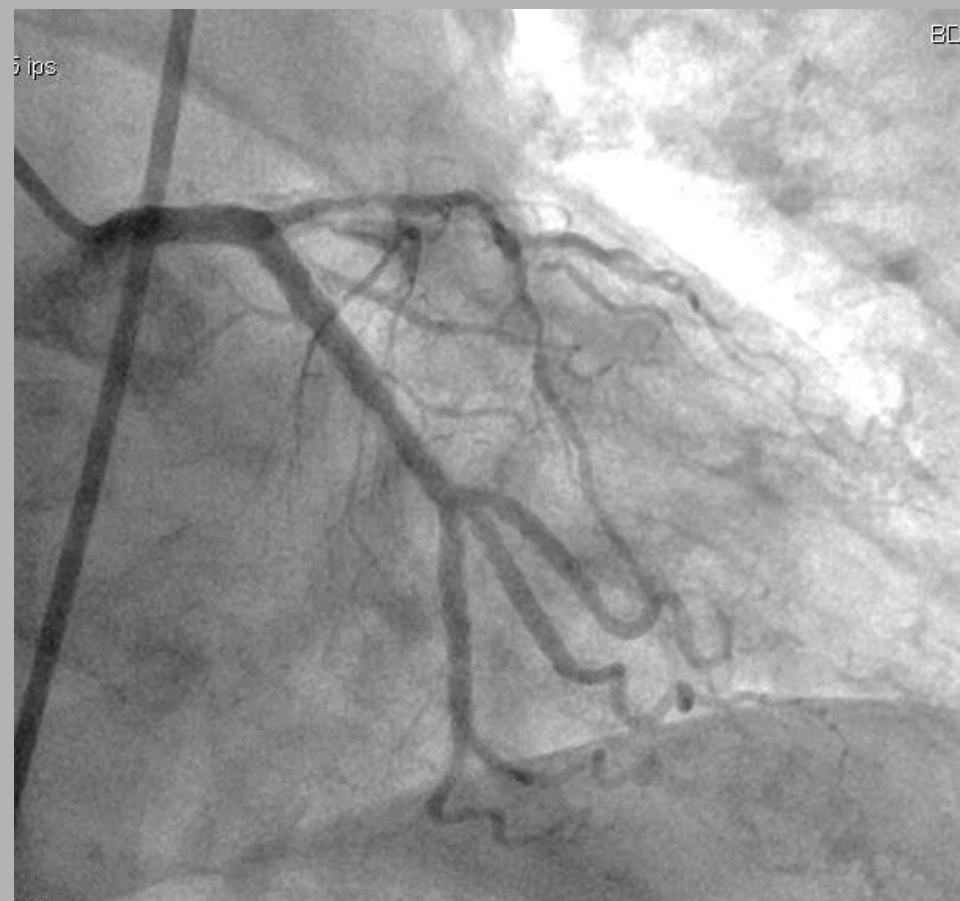
POST



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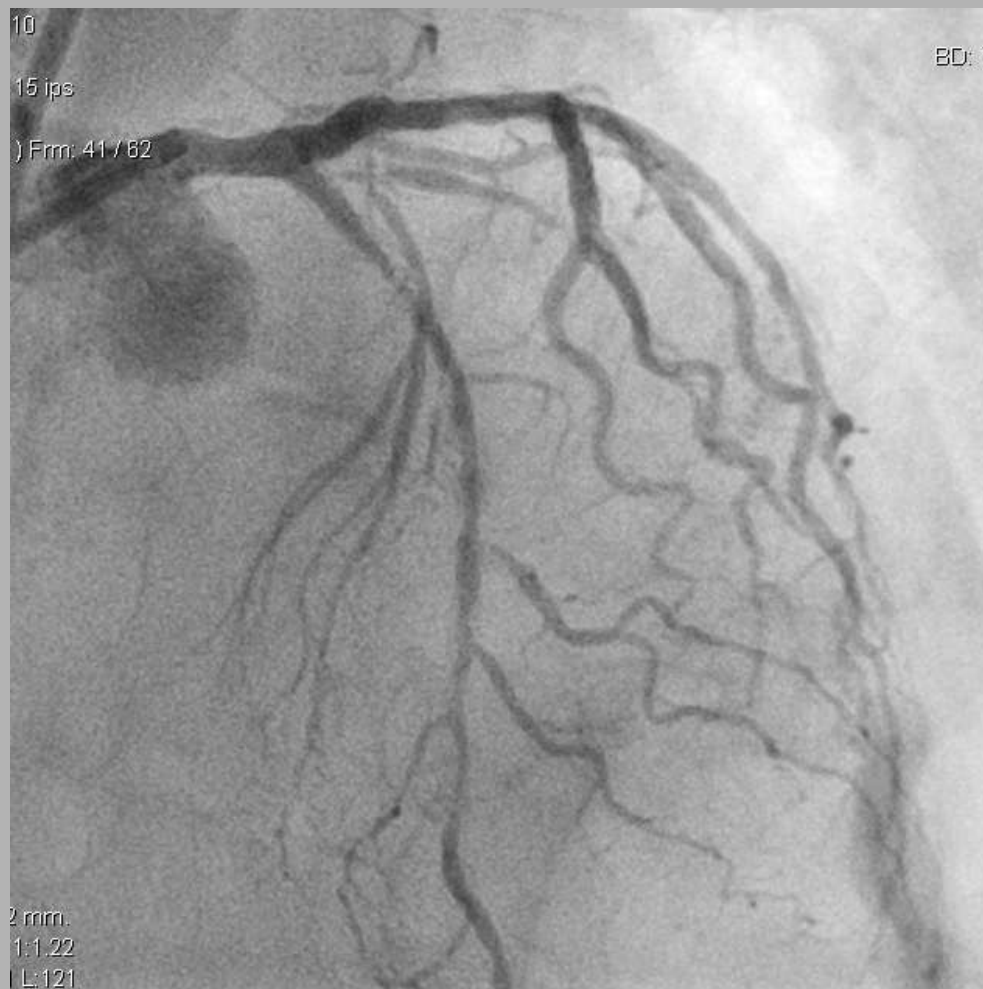
7 Meses después
SIA con cambios laterales
Trop I= 0.9





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10

15 ips

Frm: 41 / 82

BD: 19

2 mm.

1:1.22

L:121

Bivalirudina



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Rotablator



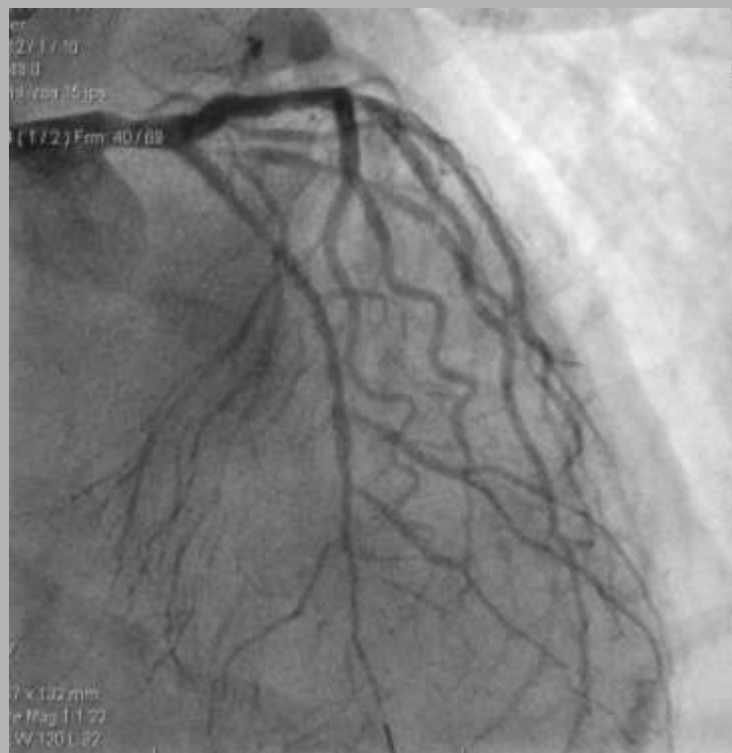
3 DES a DA
("full metal jacket")





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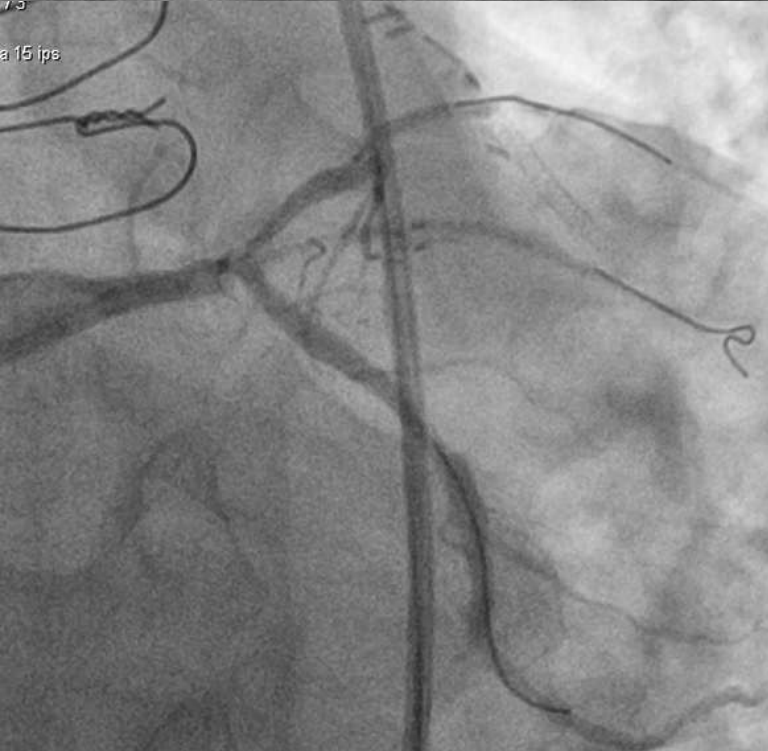
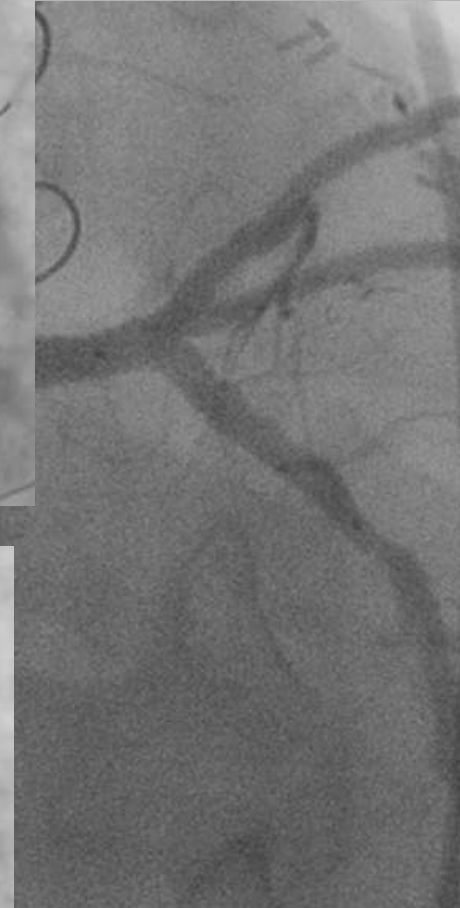
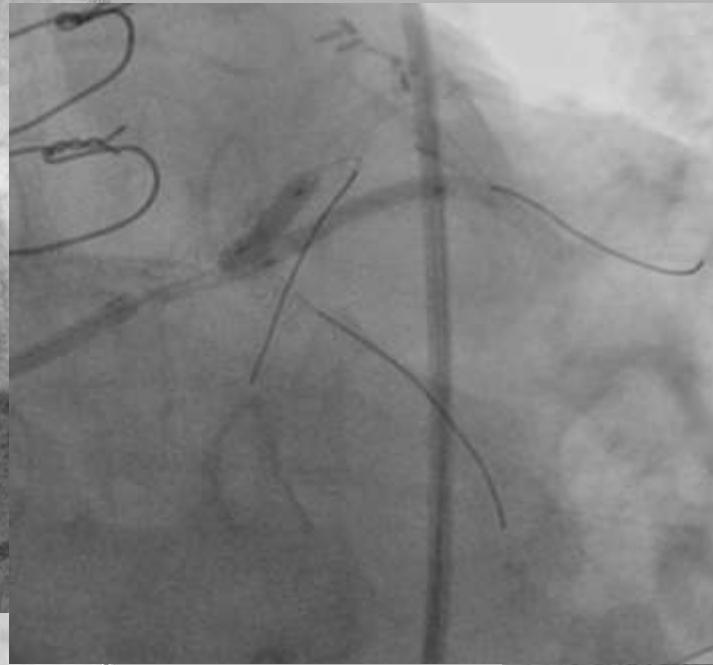
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PRE

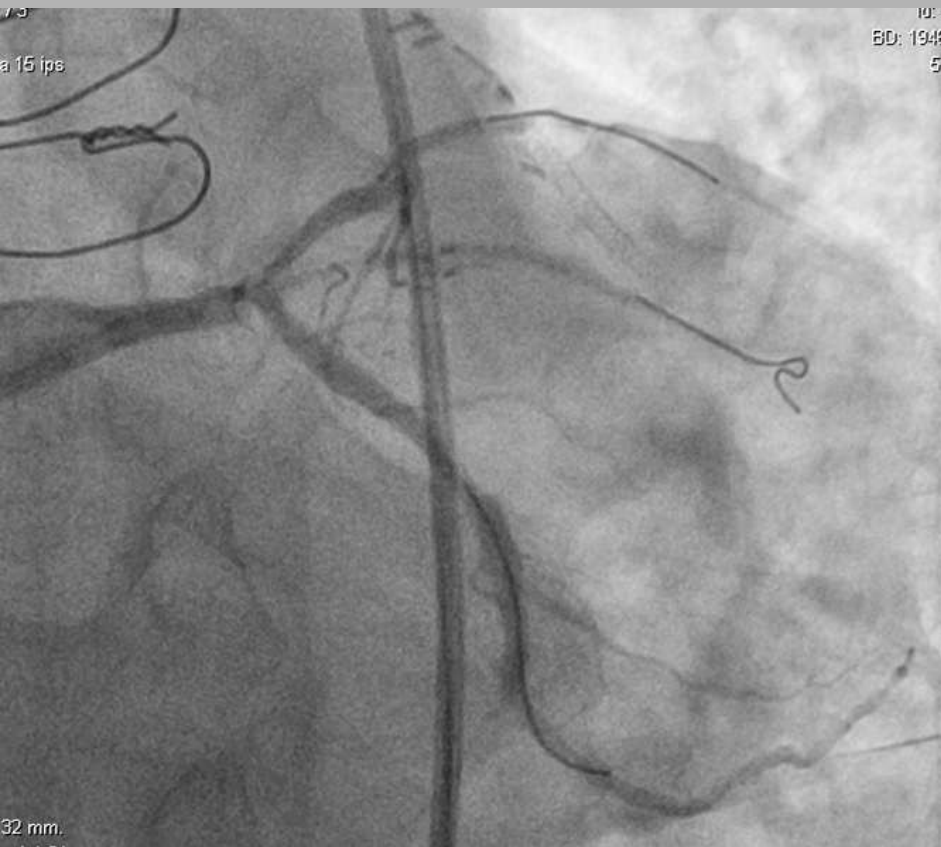


POST



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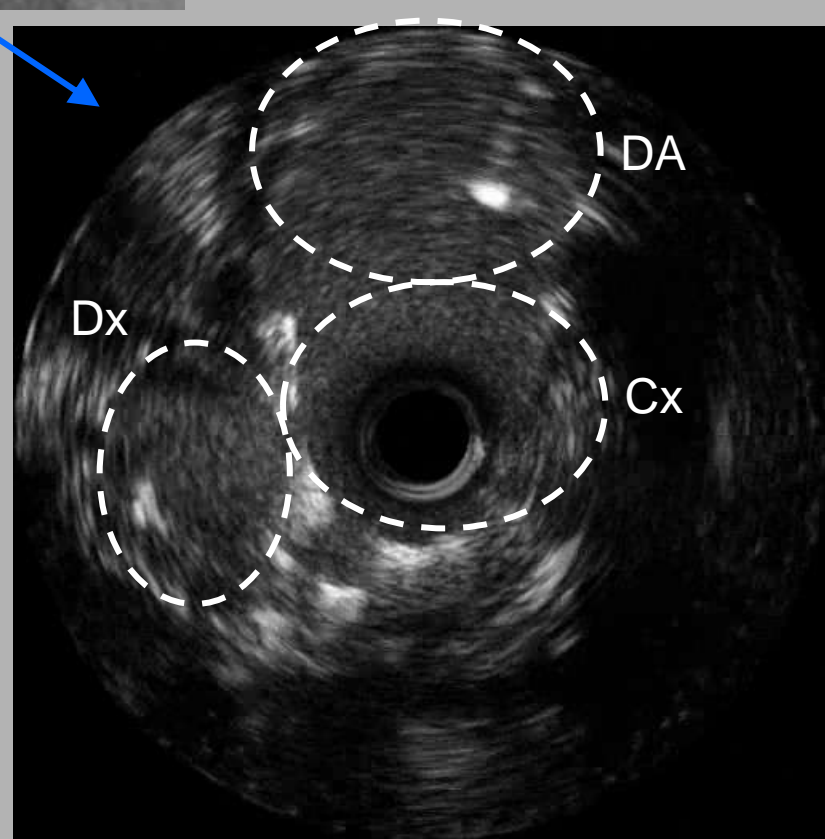
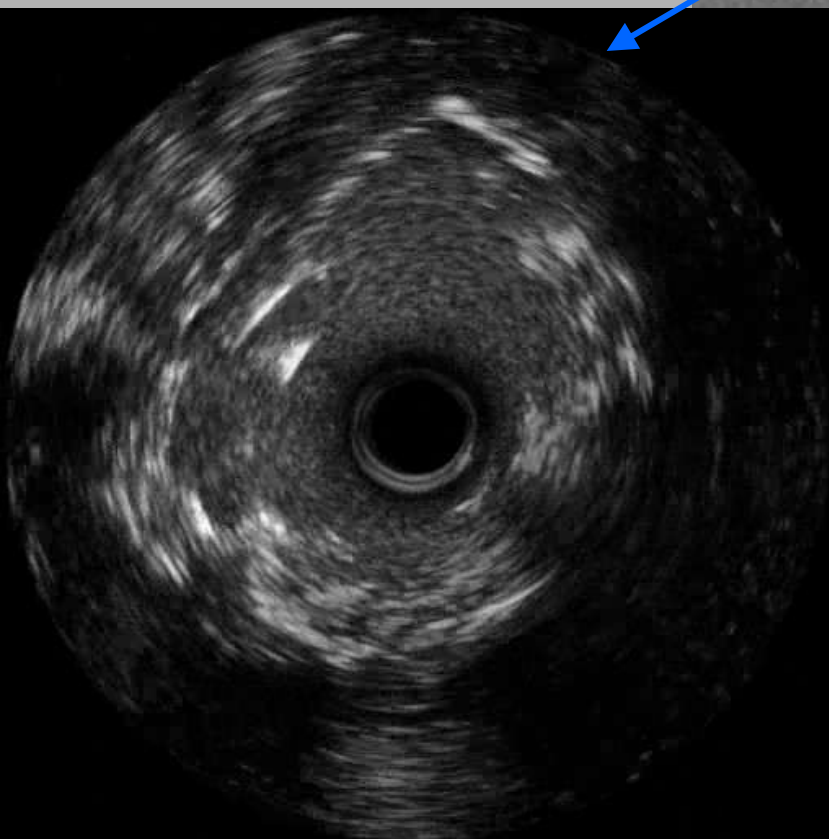
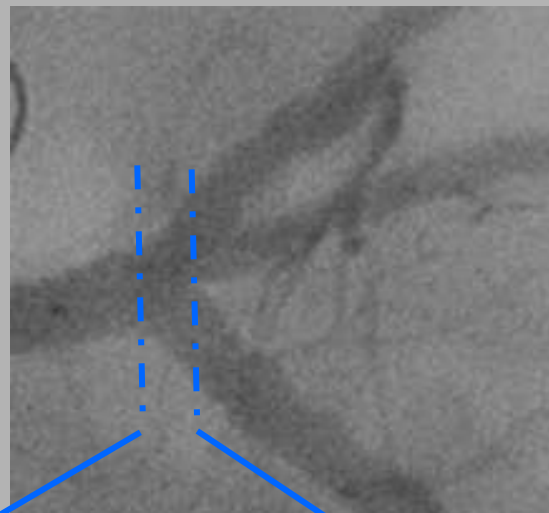
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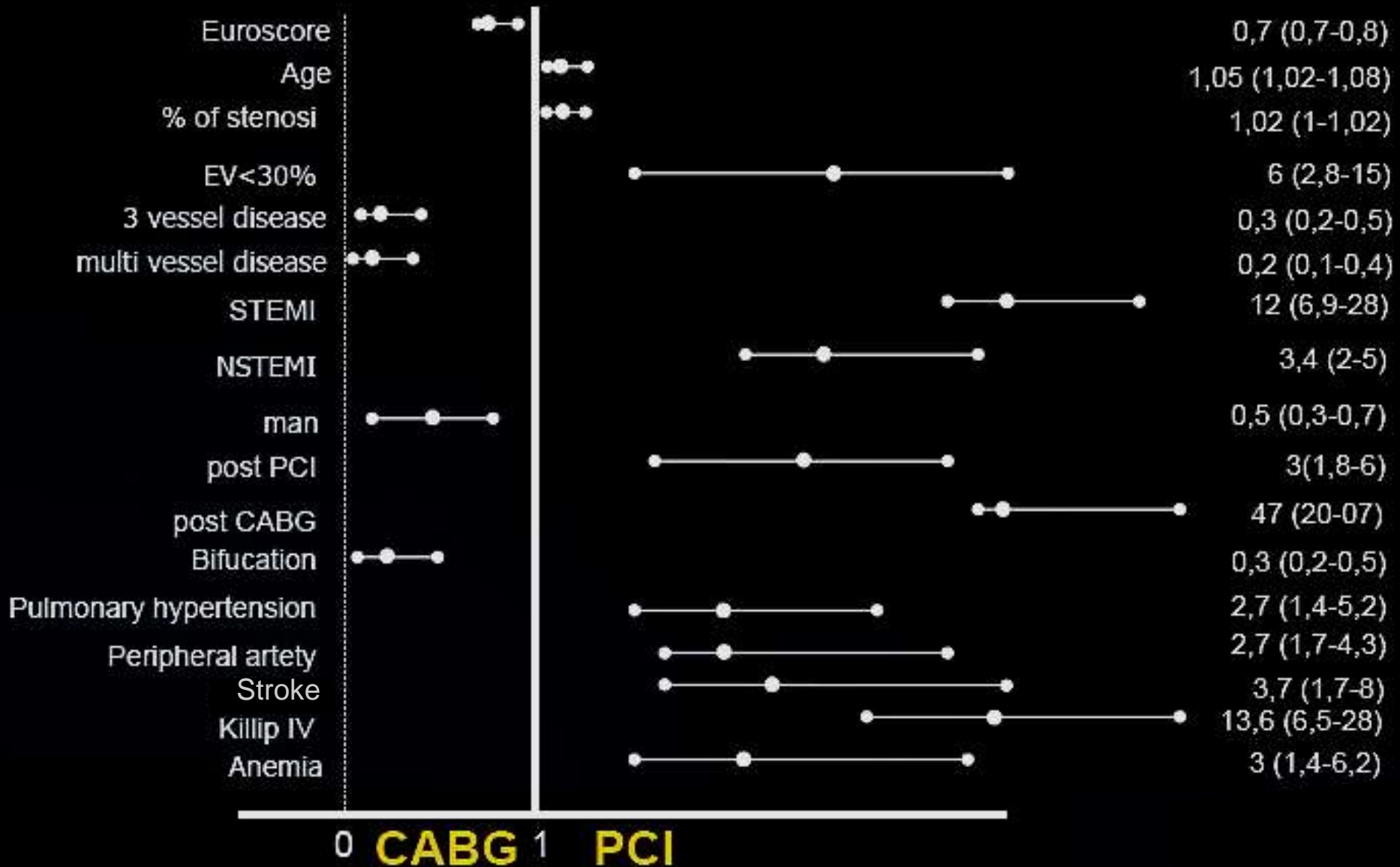
SYNTAX Trial: Pre-procedure Predictors of MACE at 12 months

	Variable	Odds Ratio [95% CI]	Pvalue†
CABG	COPD	2.45 [1.25, 4.80]	0.009
	Unstable Angina	1.88 [1.14, 3.09]	0.01
	Moderate or Poor LVEF	1.98 [1.13, 3.47]	0.02
	SYNTAX Score	0.97 [0.95, 1.00]	0.02
	Race	0.33 [0.14, 0.82]	0.02
	Emergent Revasc.	2.78 [1.08, 7.17]	0.03
	Prior MI	0.57 [0.33, 0.99]	0.045
	Age	1.03 [1.00, 1.05]	0.047
TAXUS	Medically Treated Diabetes	2.07 [1.40, 3.05]	<0.001
	SYNTAX Score	1.02 [1.00, 1.04]	0.02
	Age	1.02 [1.00, 1.04]	0.03

Factors influencing treatment selection

Index procedure : PCI vs CABG

OR (95% CI)



Decisión de revascularización

Híbridos

- ✓ Edad
- ✓ FE%
- ✓ EPOC
- ✓ IR

Presentación
Clínica

Riesgo
de sangrado

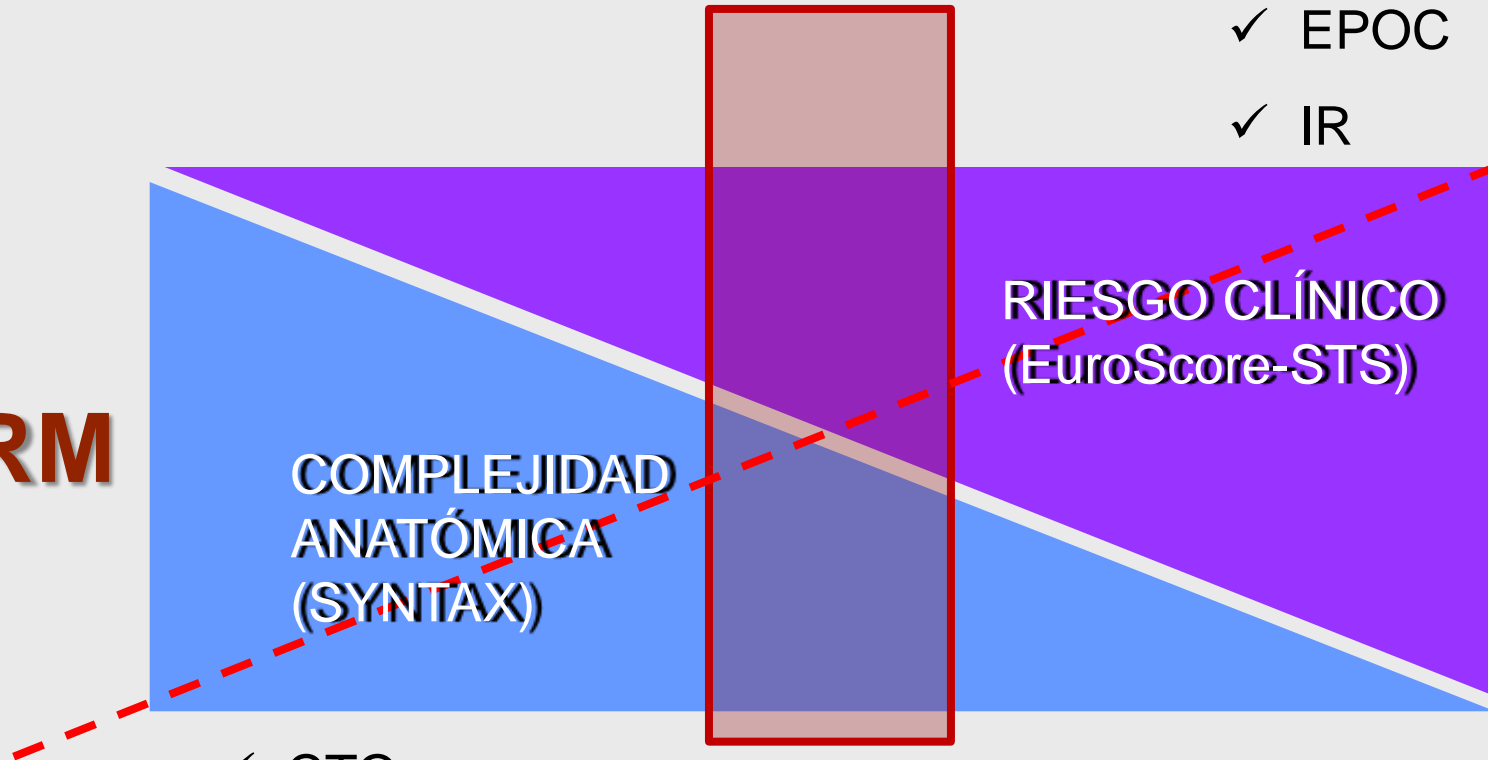
CRM

COMPLEJIDAD
ANATÓMICA
(SYNTAX)

RIESGO CLÍNICO
(EuroScore-STS)

ATC

- ✓ CTO
- ✓ Ca+
- ✓ Tortuosidad extrema
- ✓ Enfermedad difusa





La interacción entre la dificultad clínica y la complejidad anatómica, considerando el riesgo de sangrado y cuadro clínico de presentación (riesgo trombótico), son esenciales a la hora de indicar el modo de revascularización

El tronco constituye un escenario clínicamente complejo y anatómicamente sencillo

Los pacientes con alto riesgo clínico y complejidad anatómica, deberían considerarse para estrategias híbridas

Los scores clínicos y anatómicos deben emplearse en forma combinada



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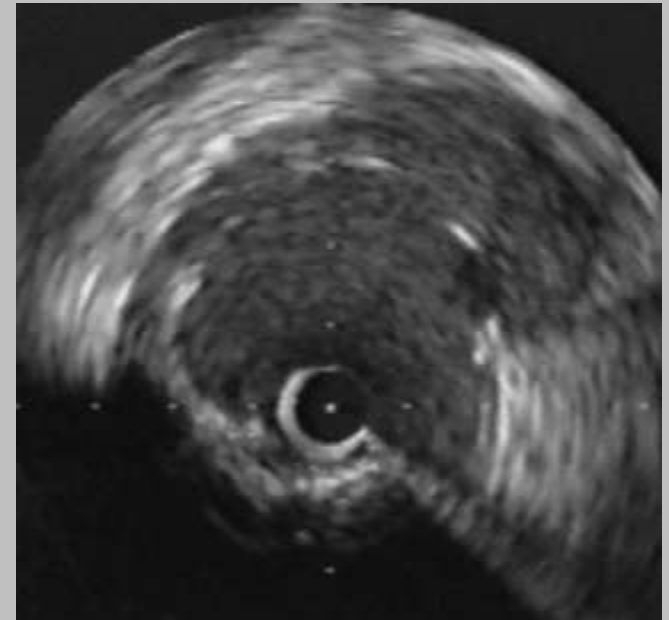
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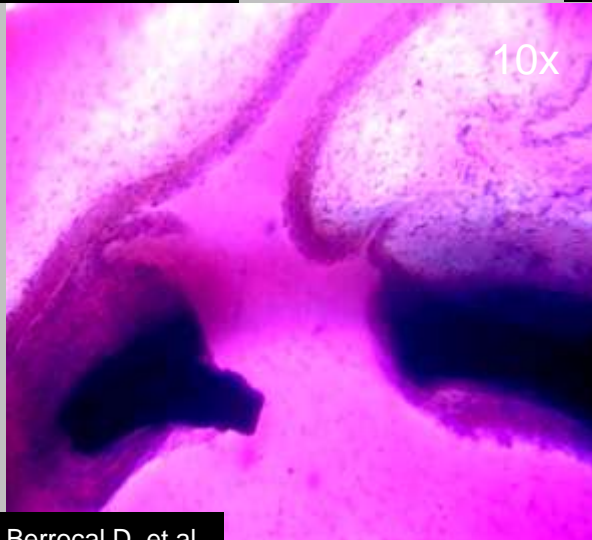
Berrocal D, et al.



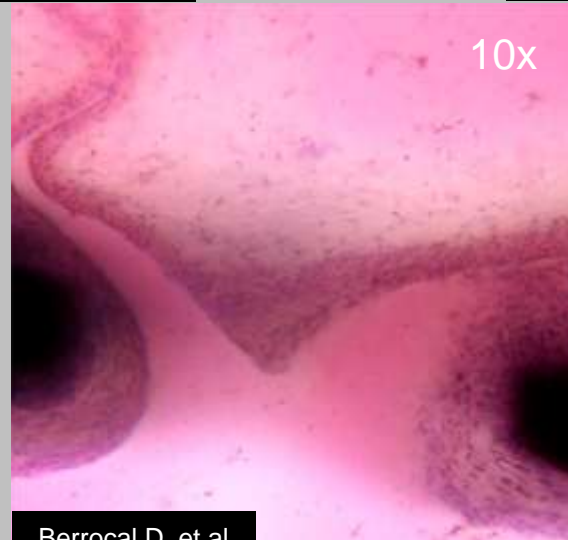
Berrocal D, et al.



Berrocal D, et al.



Berrocal D, et al.



Berrocal D, et al.



Courtesy Dr. A Abizaid

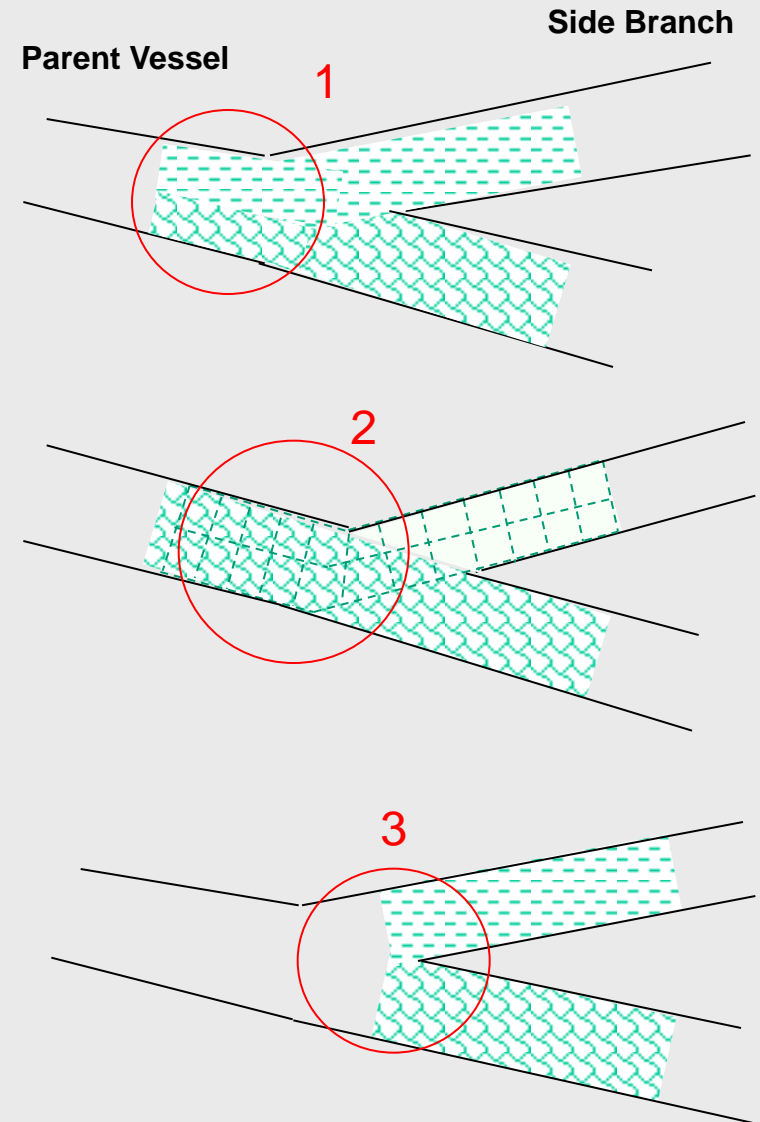
Bifurcation stenting rationale

Existing techniques have several drawbacks

- SKS creates a new carina, hard to recross with a lot of metal overlap floating in parent vessel lumen (1)

- “Culotte” allows optimal carina and side branch scaffold but still, two metal layers in the whole circumference of parent vessel and still crushed metal in vessel lumen (2)

- V stent becomes, most of the time, a sort of “mini SKS”. If not, the proximal portion of parent vessel, the carina and side branch ostium, usually remain uncovered (3)



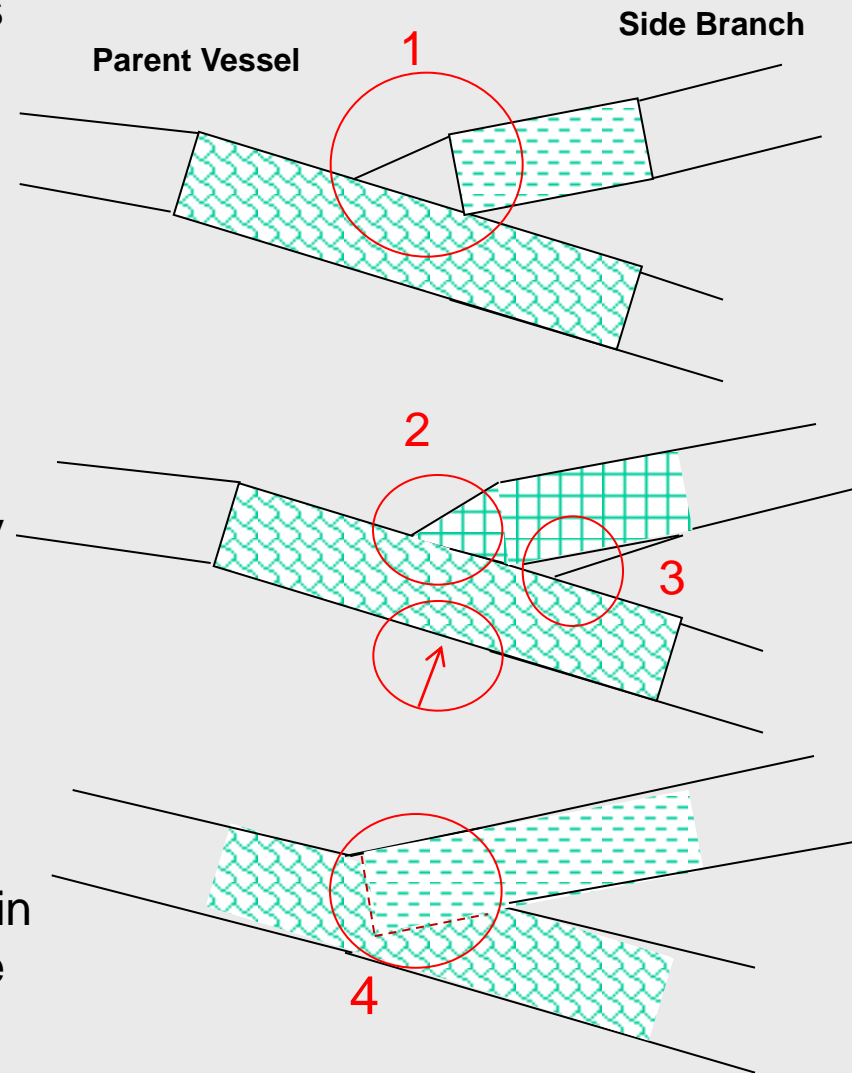
Bifurcation stenting rationale

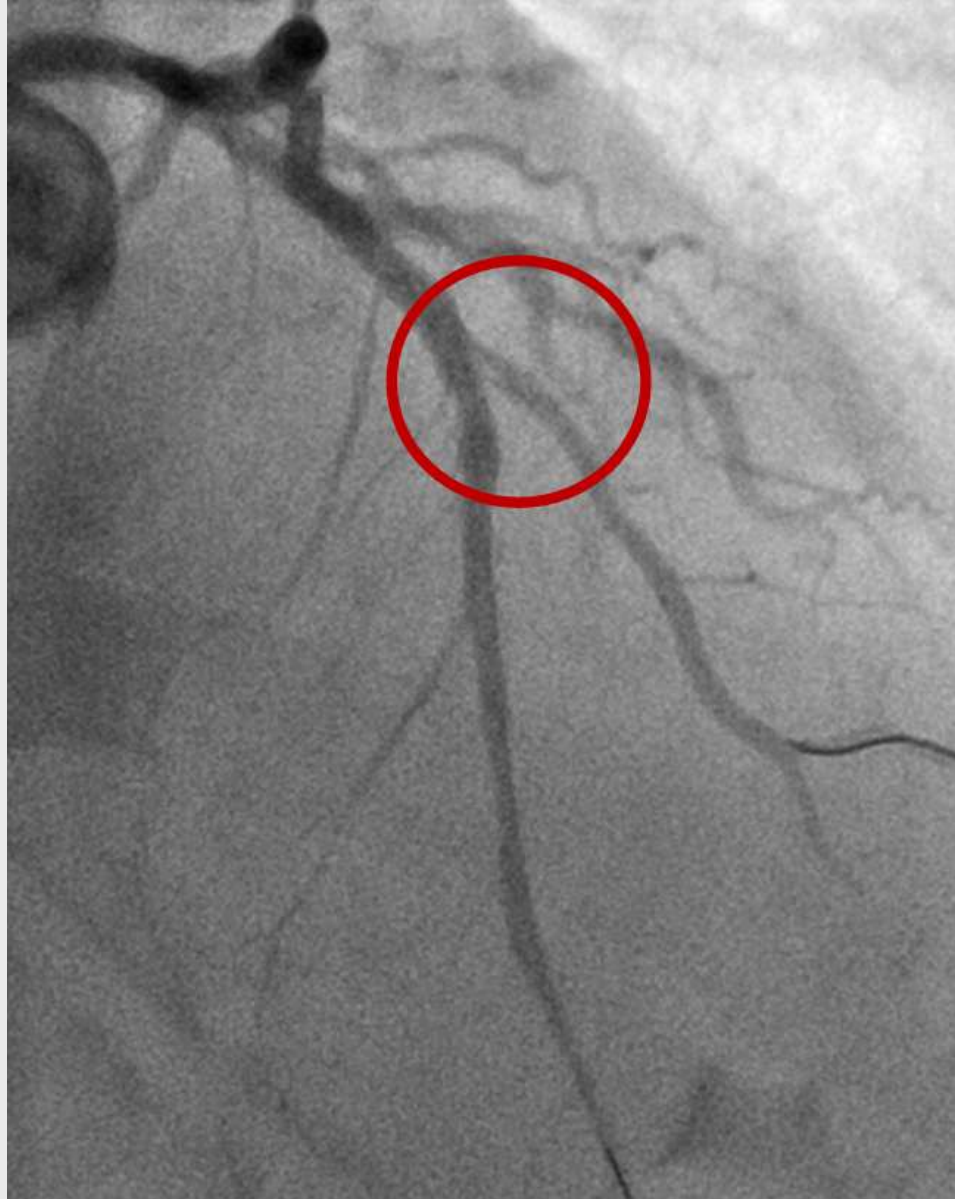
Existing techniques have several drawbacks

- T-stenting can leave a gap in coverage at the SB ostium (1)

- If “crushed” to cover the ostium, 2 or 3 stent layers are left to block side branch flow (2). The crushing action may pull the stent away from the carina (3)

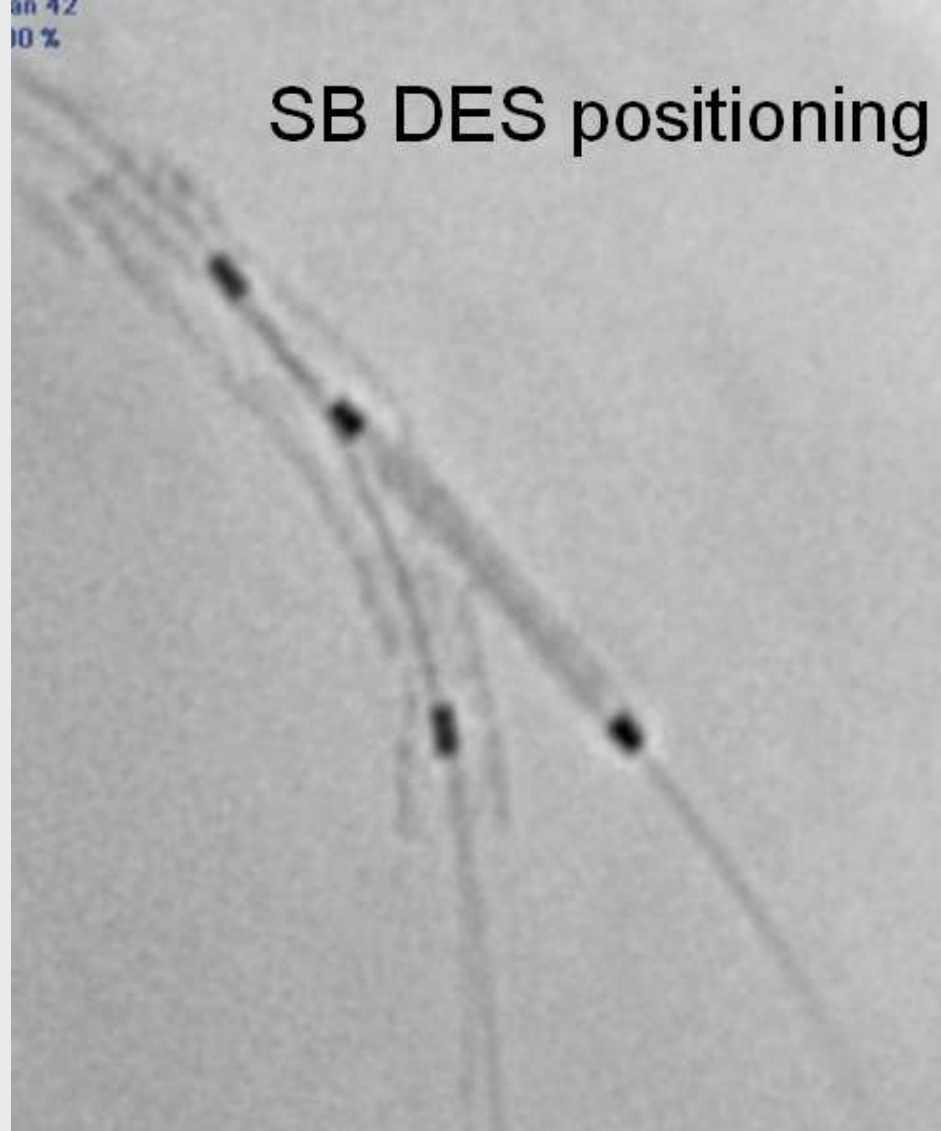
- Provisional side branch technique seems to be the most accepted and with good results but, if side branch bail out stent is needed, protrusion in parent vessel is a main concern (TAP technique or bail out mini crush) (4)





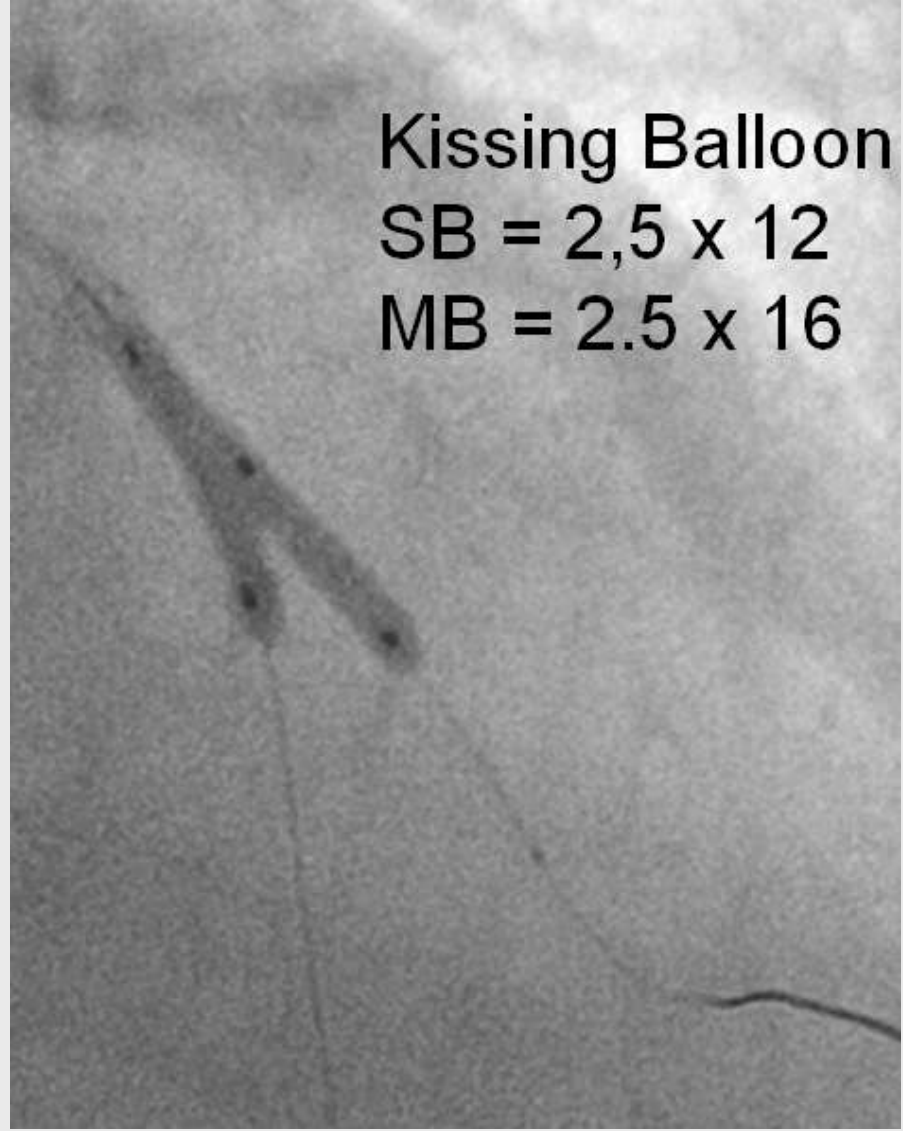
an 42
10 %

SB DES positioning

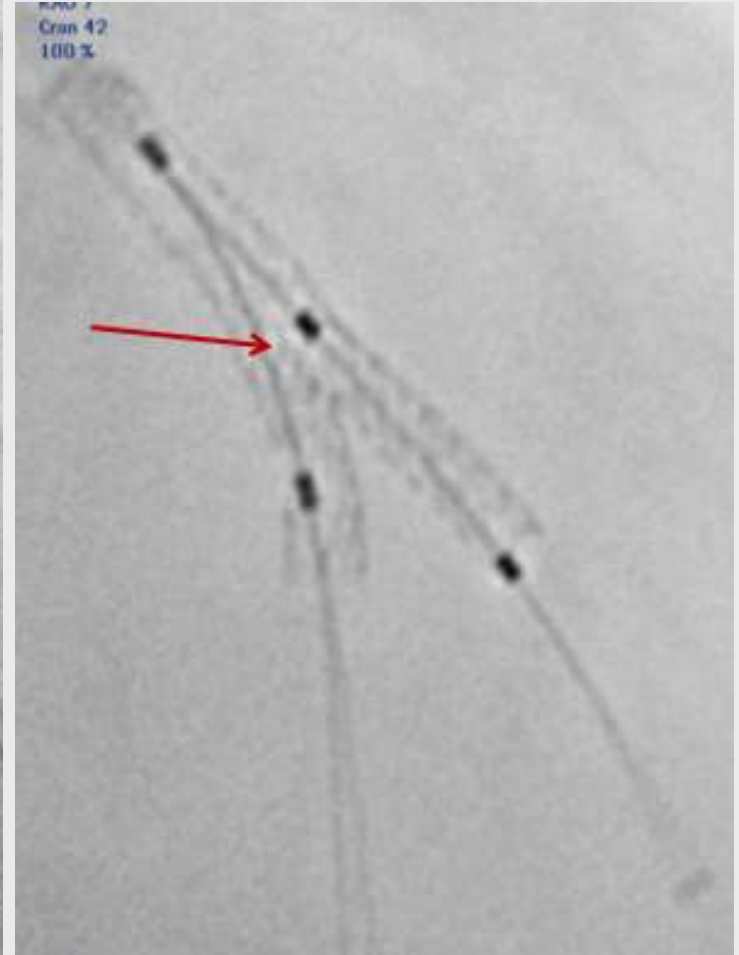


This fluoroscopic image shows a stent-balloon device (SB DES) being positioned in a coronary artery. The device consists of a long, thin catheter with a stent at the distal end. The stent is currently in a partially deployed state, with its struts visible as dark, radiopaque lines. The catheter is angled downwards from the top left towards the bottom right of the frame.

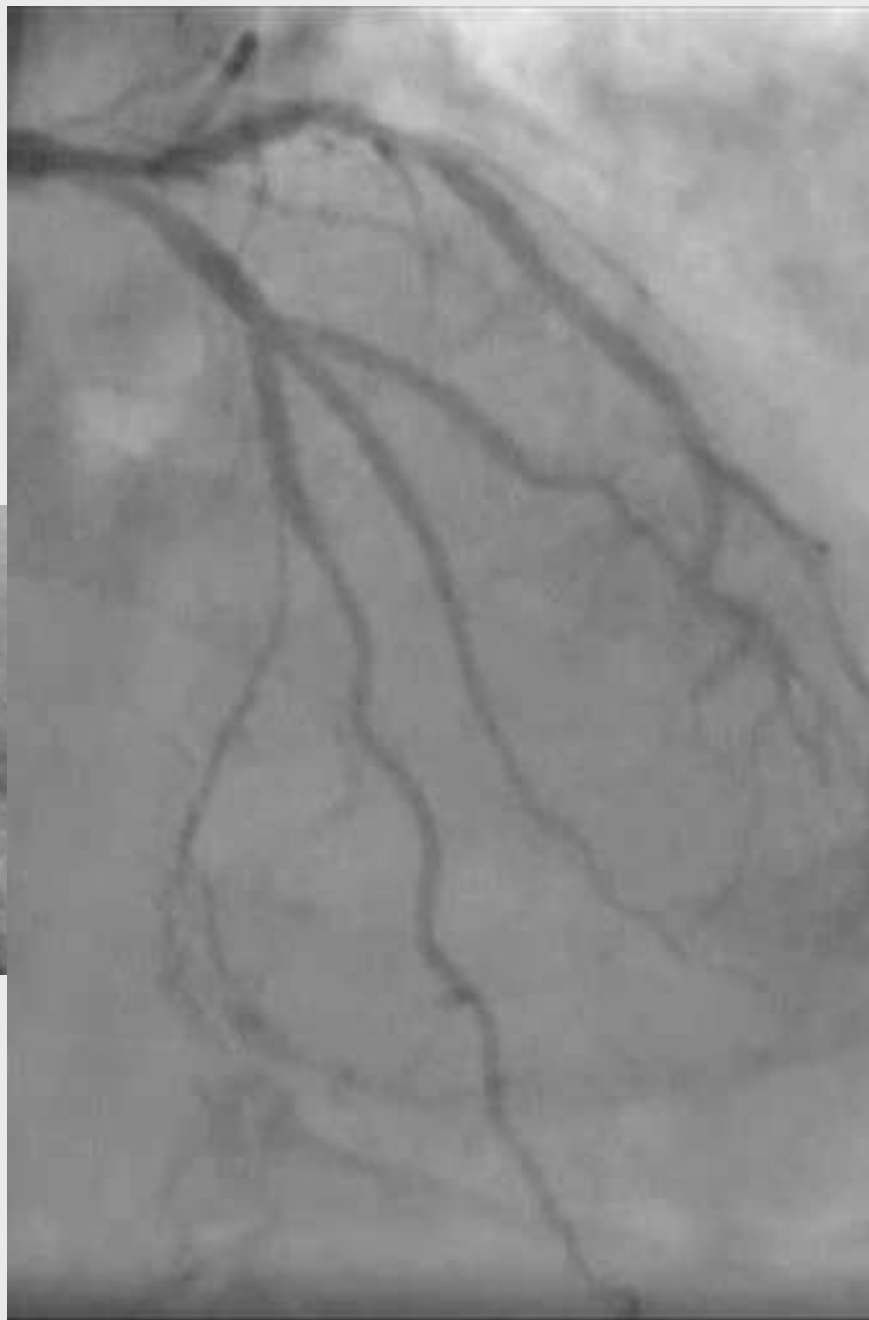
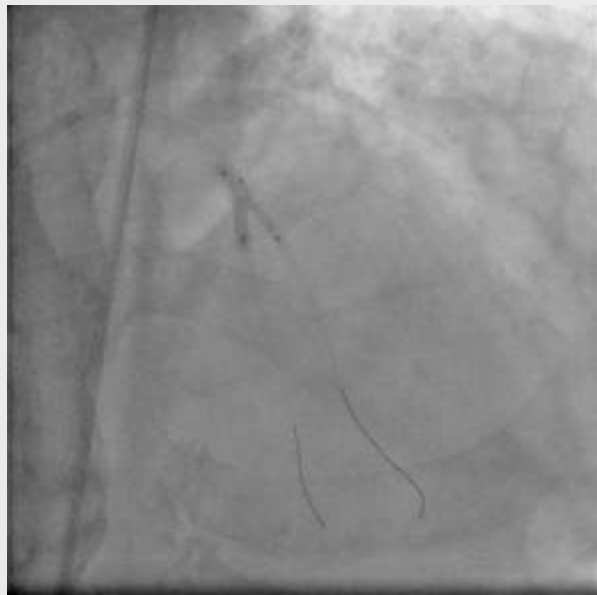
Kissing Balloon
SB = 2,5 x 12
MB = 2.5 x 16

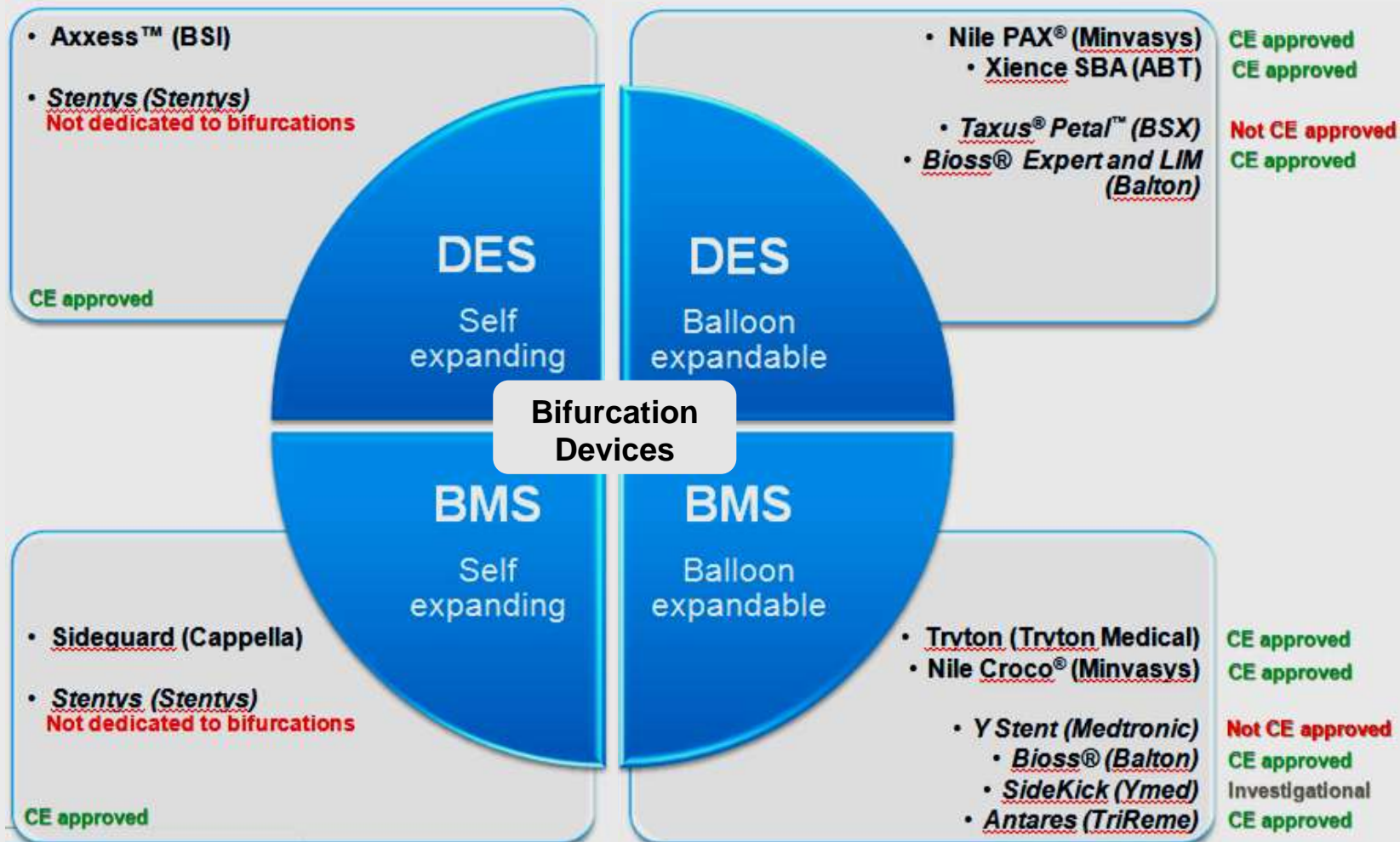


This fluoroscopic image illustrates the kissing balloon technique. Two balloons are inflated simultaneously on either side of a stent. The balloons appear as dark, elongated shapes. The stent is positioned between them, and the balloons are used to dilate the stent and the surrounding vessel wall. The catheters for the balloons are visible extending from the top left towards the bottom right.







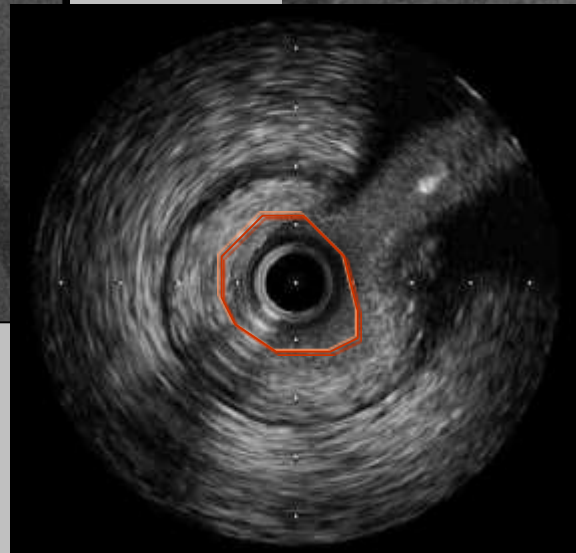
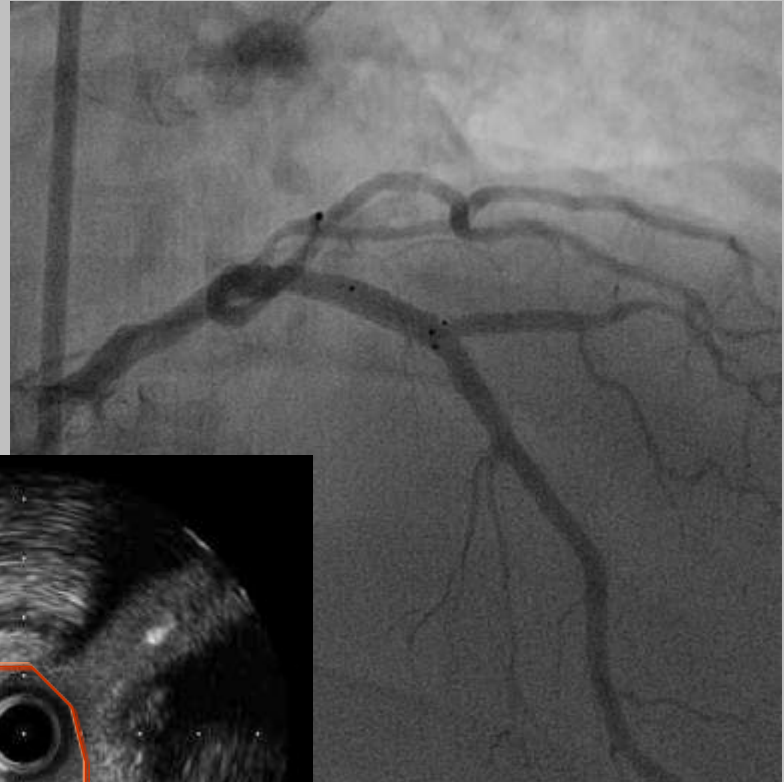
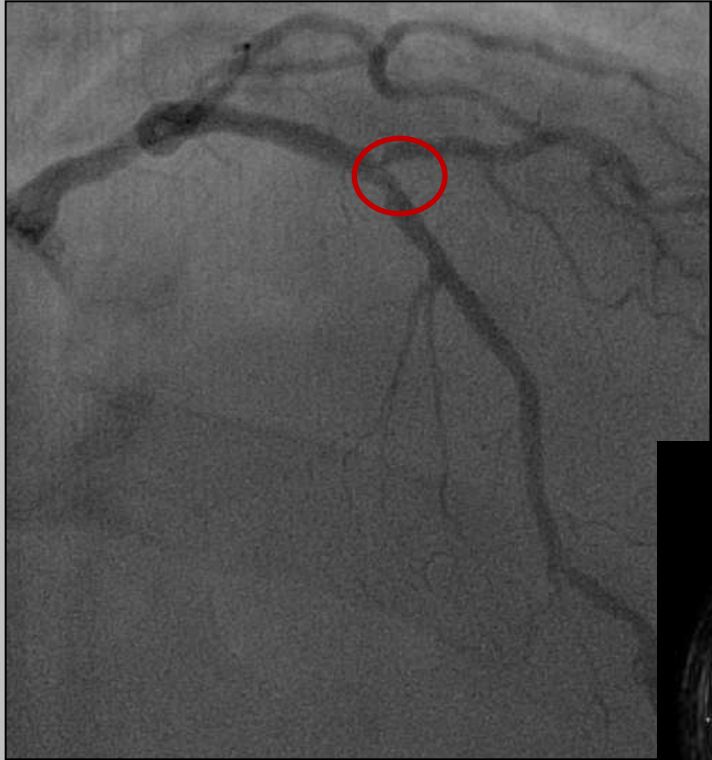


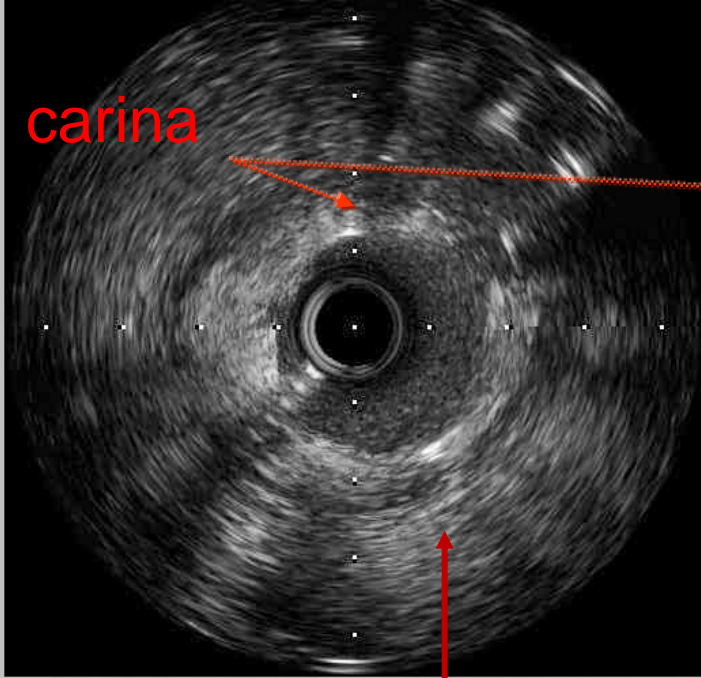


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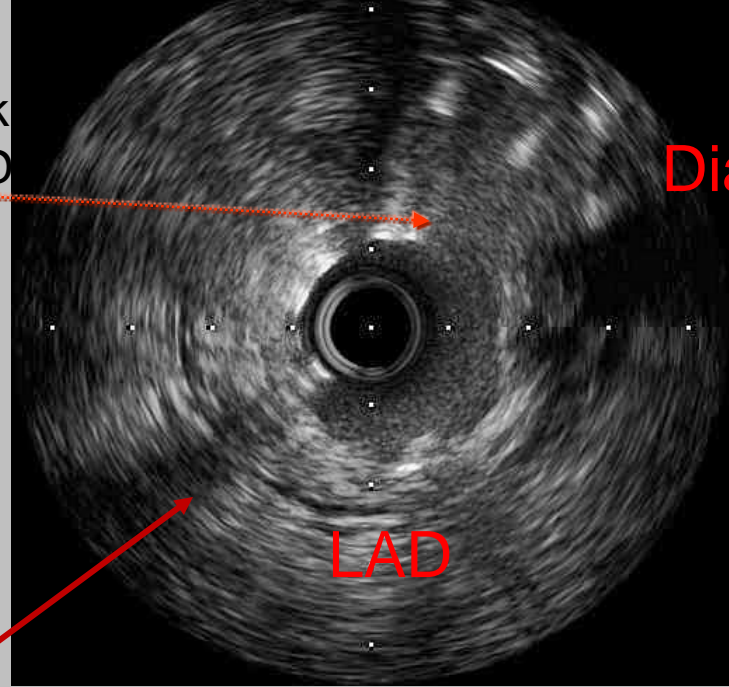
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LAD evaluation with IVUS
shows significant stenosis

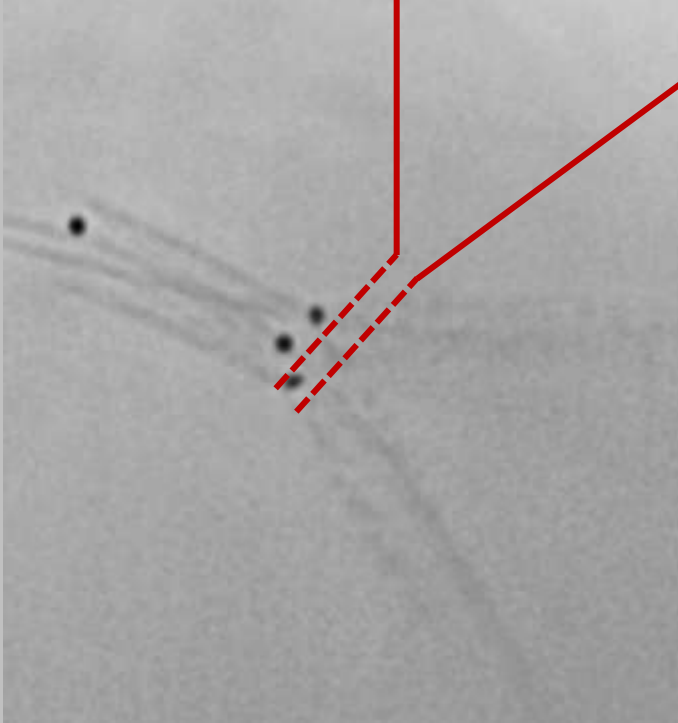




Pull back
from LAD



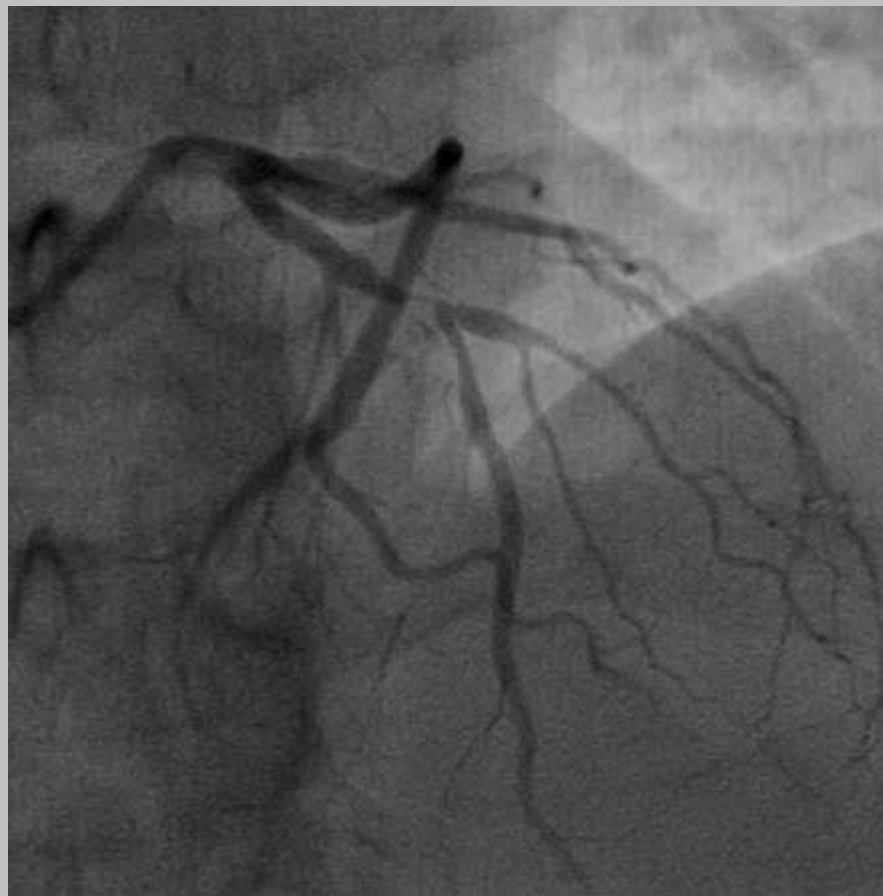
Pull back
from Diagonal





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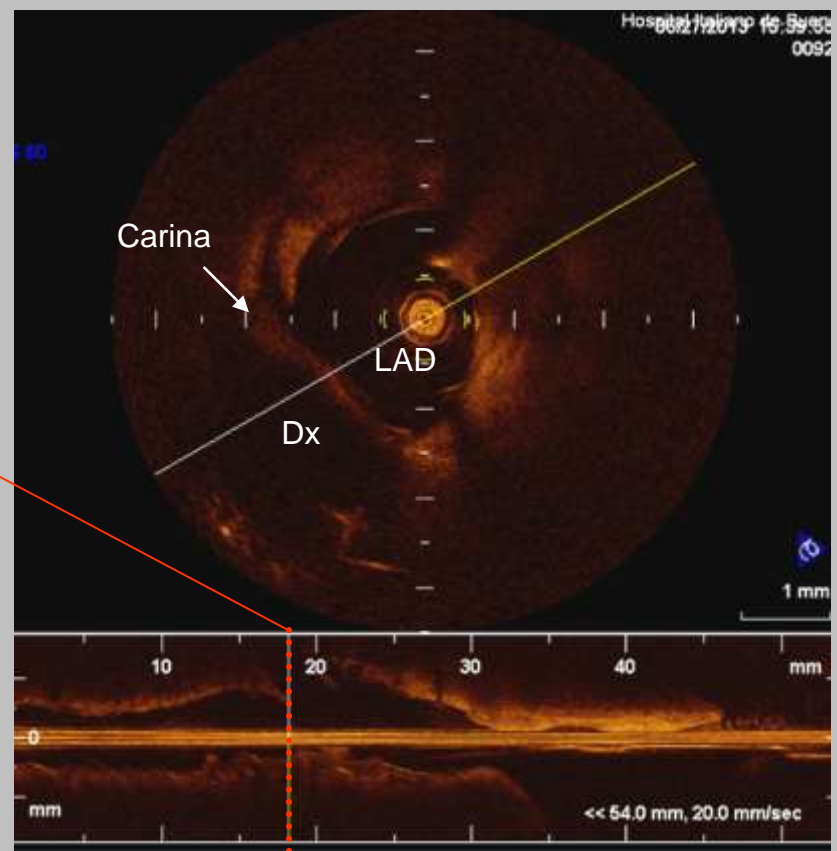
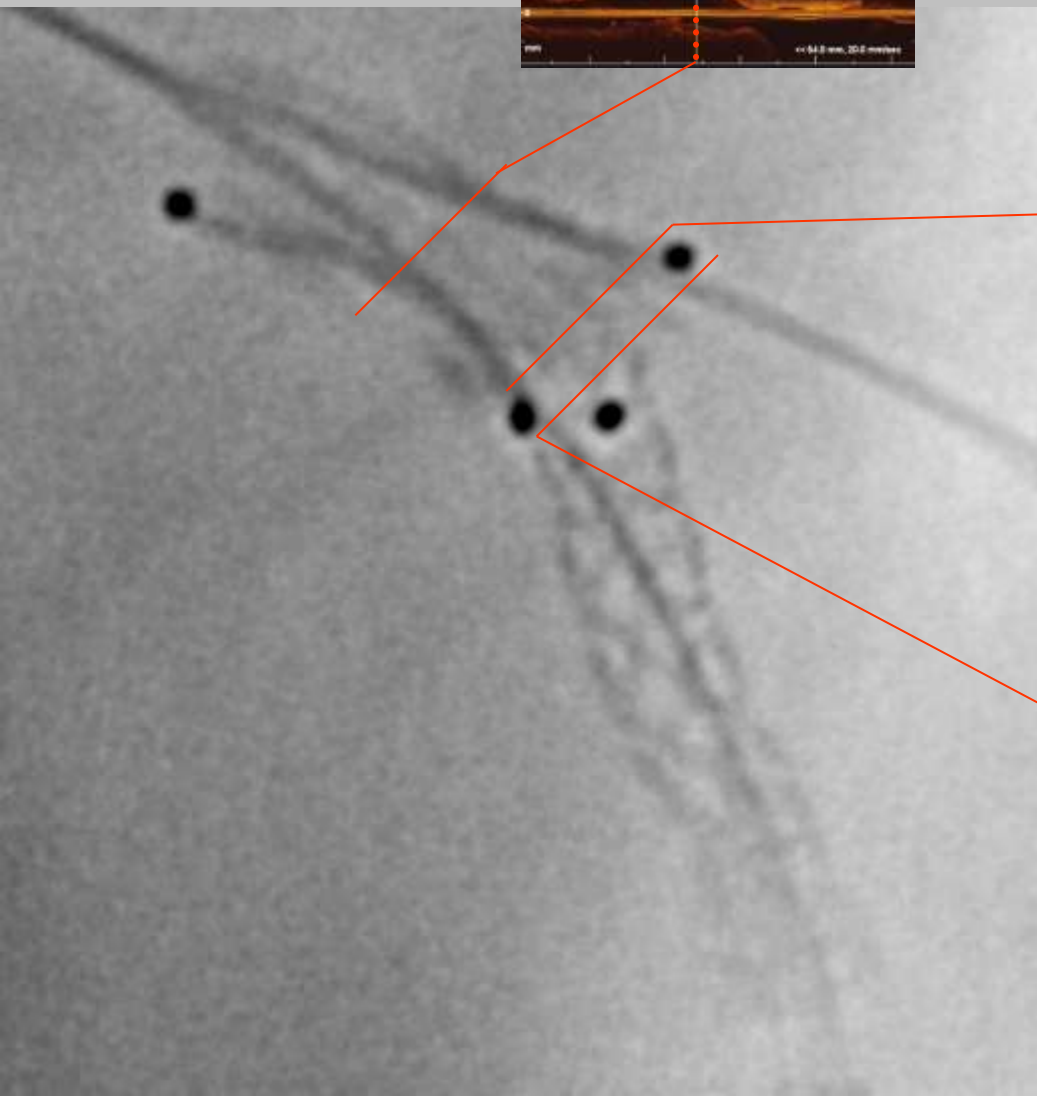
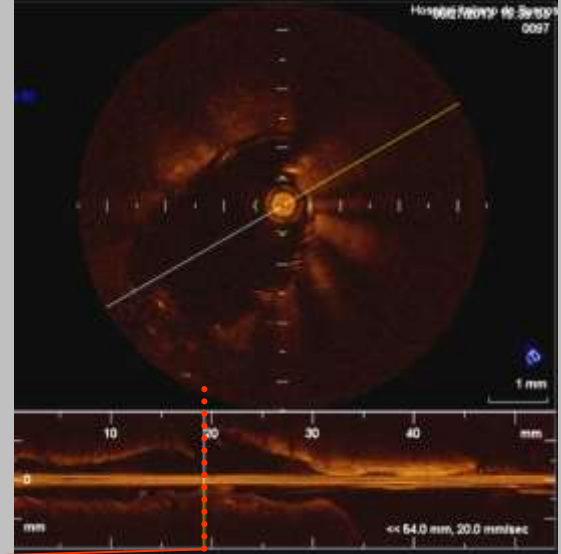
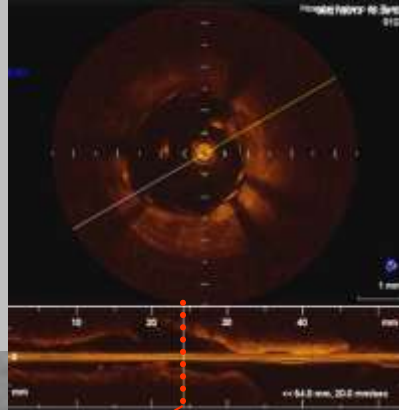
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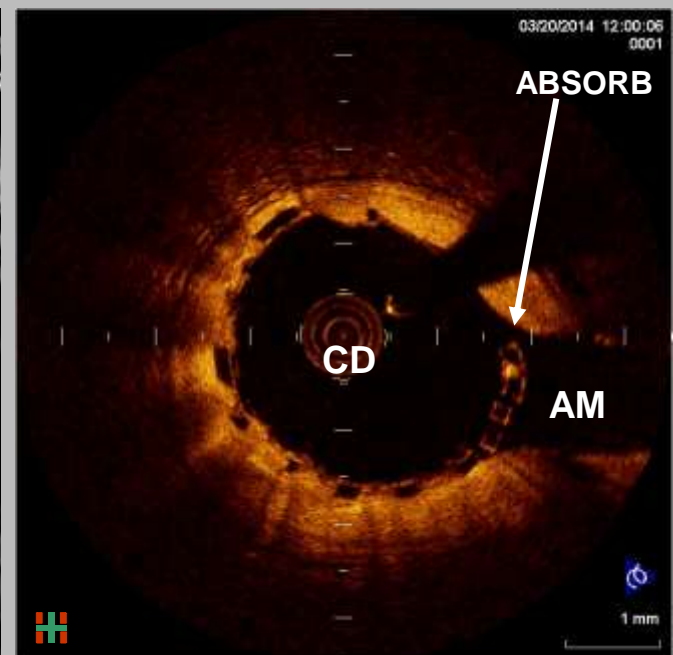
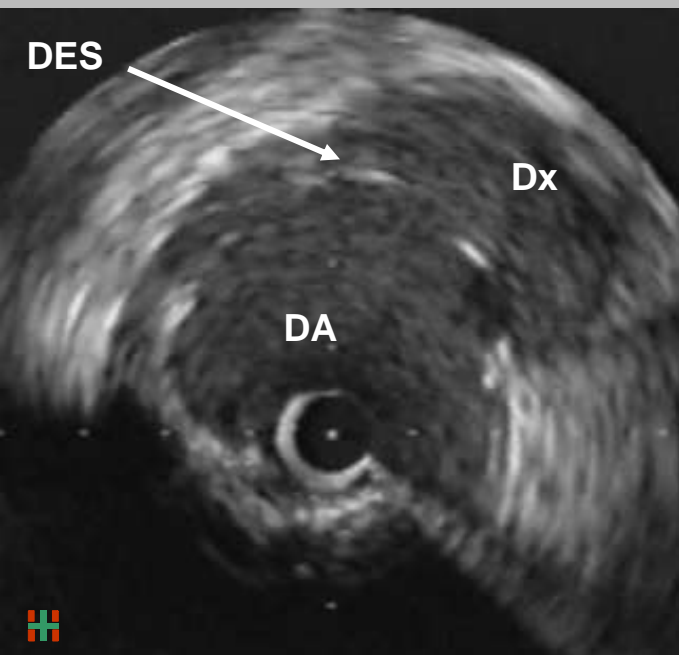
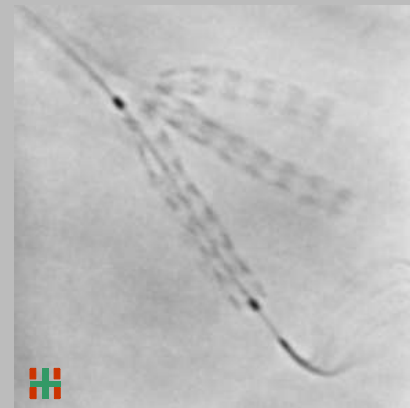
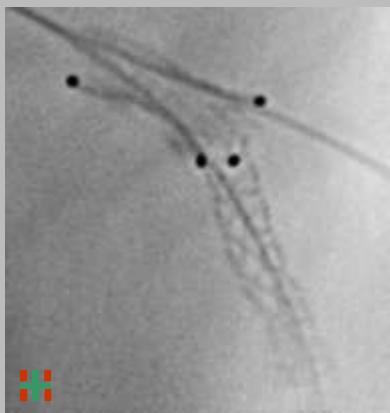
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Las bifurcaciones son escenarios anatómicos complejos

Ninguna técnica es ideal

La interacción de los materiales con el lumen y las paredes vasculares no son totalmente conocidas aunque, no parecen provocar problemas clínicamente relevantes

Será crucial el desarrollo de stents dedicados que se adapten a las distintas características anatómicas