



CardioSUC
2025 41º Congreso Uruguayo
de Cardiología
El paciente en el corazón de cada decisión

ABC de la angioplastia en bifurcaciones.

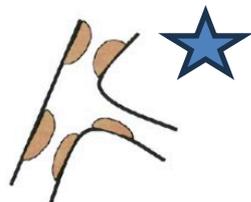
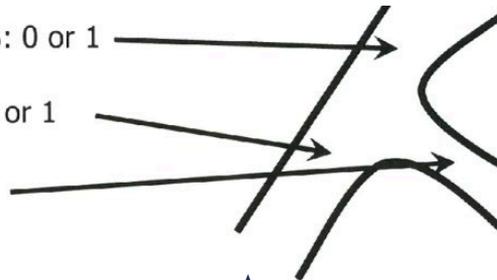
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Instituto Nacional de Cardiología Ignacio Chavez, México.



1. Main Branch proximal lesion > 50%: 0 or 1

2. Main Branch distal lesion > 50%: 0 or 1

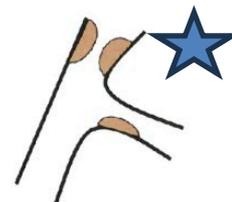
3. Side Branch lesion > 50%: 0 or 1



1,1,1



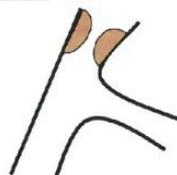
1,1,0



1,0,1



0,1,1



1,0,0



0,1,0

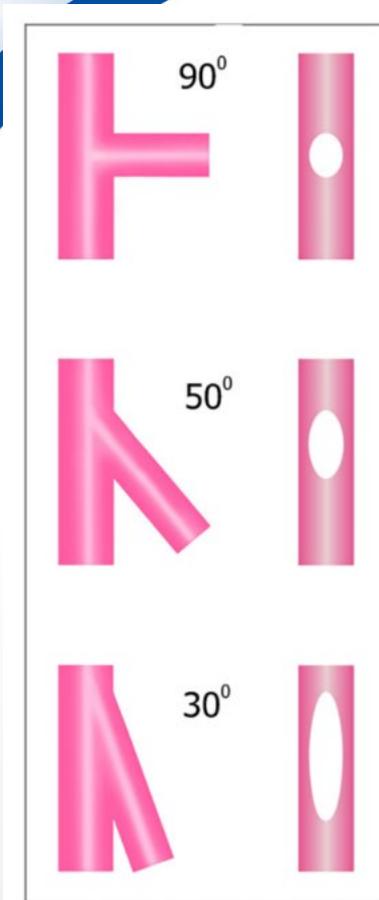


0,0,1



Table 1 DEFINITION criteria for a complex coronary bifurcation lesion[40]

Major criteria	Complex lesion definition	Minor criteria
<p>For left main bifurcation (Major 1)</p> <p>SB lesion length ≥ 10 mm and SB diameter stenosis $\geq 70\%$</p>	<p>Major 1 or Major 2 + any 2 minor criteria</p>	<p>> Mild calcification</p> <p>Multiple lesions</p> <p>Bifurcation angle $< 45^\circ$ or $> 70^\circ$</p>
<p>For non-left main bifurcation (Major 2)</p> <p>SB lesion length ≥ 10 mm and SB diameter stenosis $\geq 90\%$</p>		<p>MV-RVD < 2.5 mm</p> <p>MV lesion length ≥ 25 mm</p> <p>Thrombus-containing lesions</p>

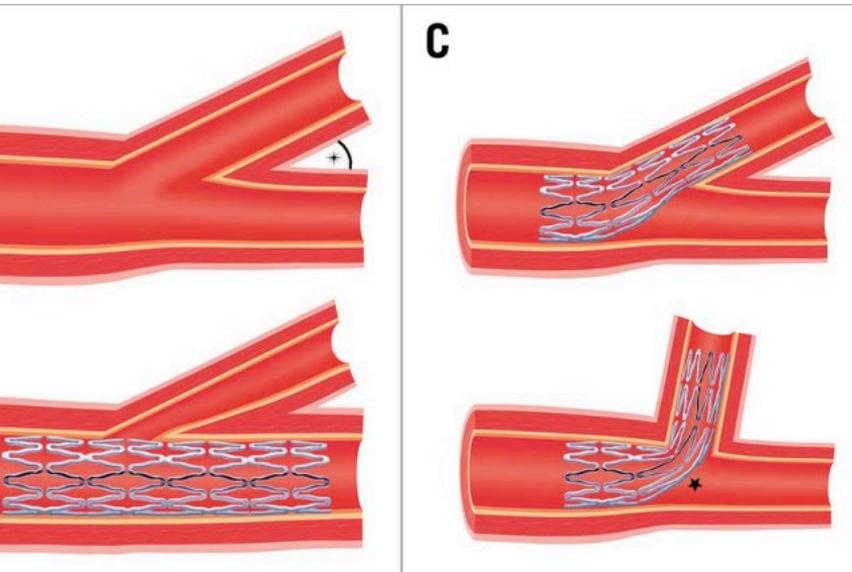


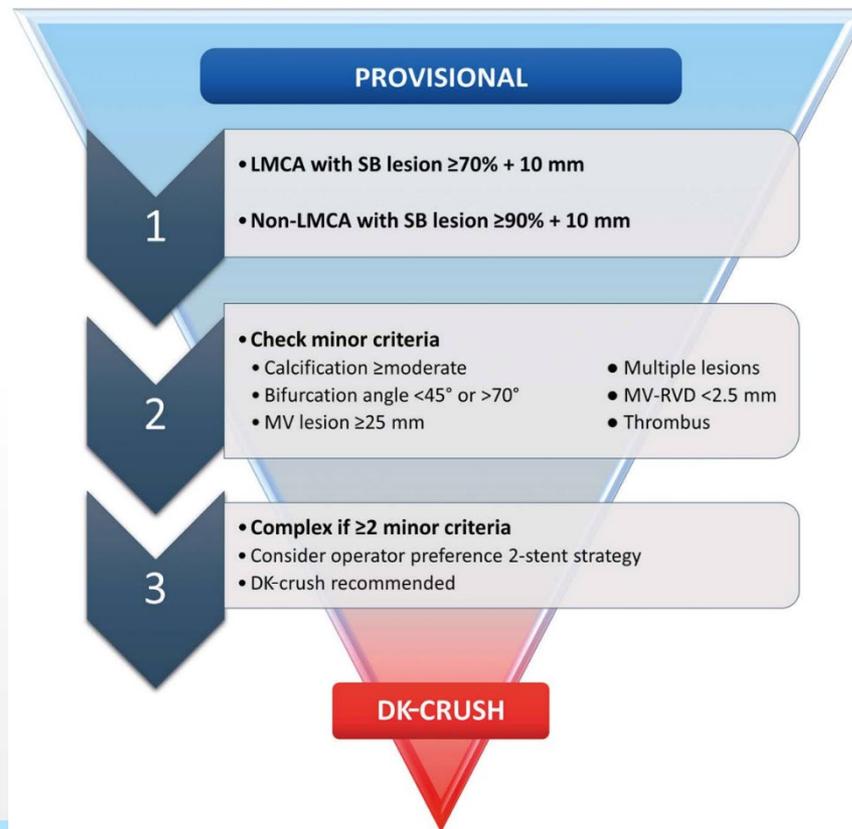
Relevancia de identificar la angulación de la lesión del side branch *SD



Intervención en BIFURCACIONES

- El grado de complejidad es variable.
- Caracterizar la lesiones en multiples proyecciones.
- Planear la intervención.
- De sencillo a complejo.
- Material listo.
- Técnica **mejor dominada** por el operador.





para

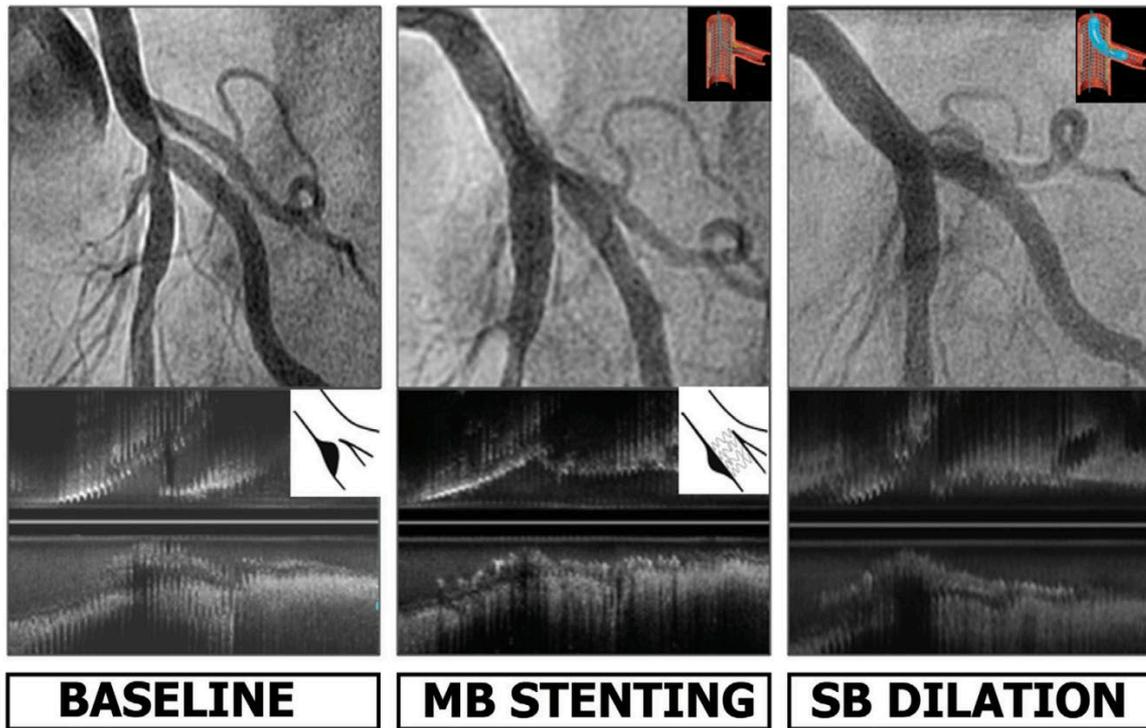
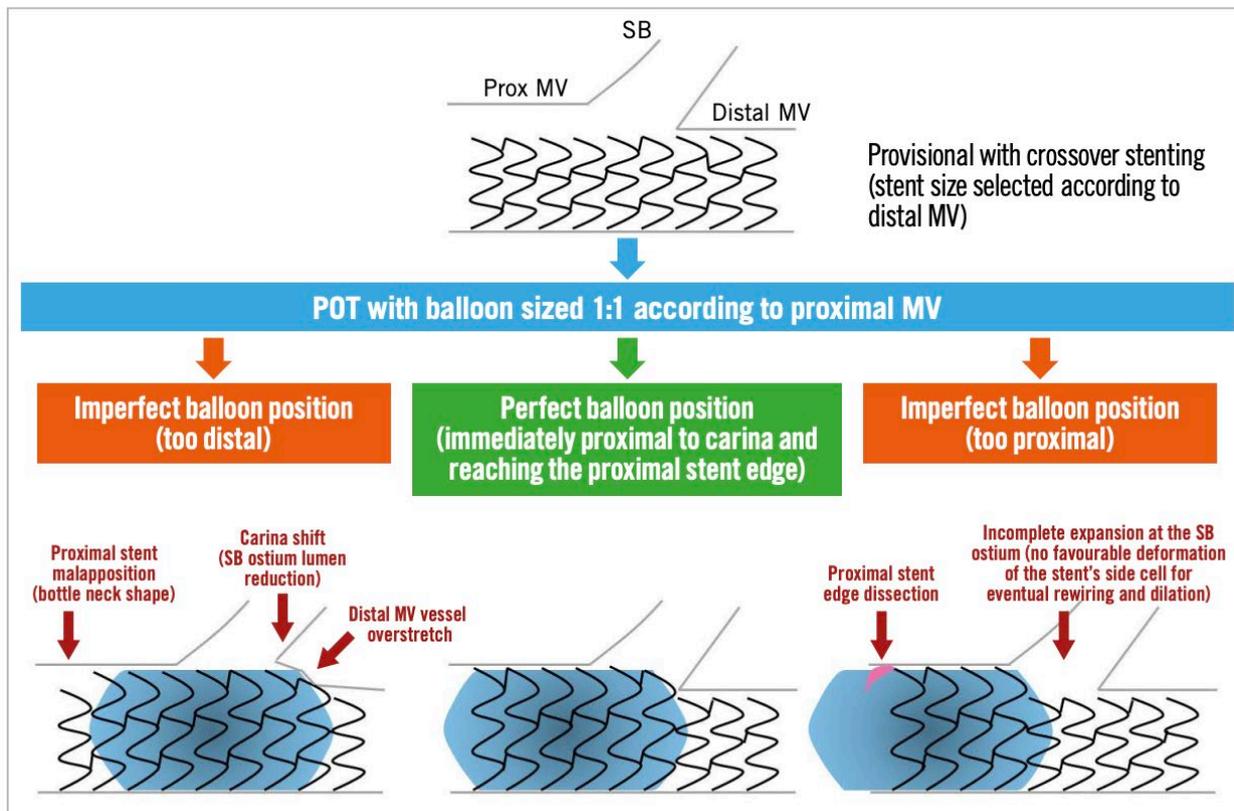


Figure 4. Angiography and IVUS at baseline, after MB stenting and after SB angioplasty. Carina shift induces ostial stenosis in the SB. Angioplasty provides endoluminal displacement of the carina, correcting the angiographic stenosis.



Stent provisional

1. Diametro DISTAL.
2. POT NC (min 8mm).
3. Considerar Rewiring.





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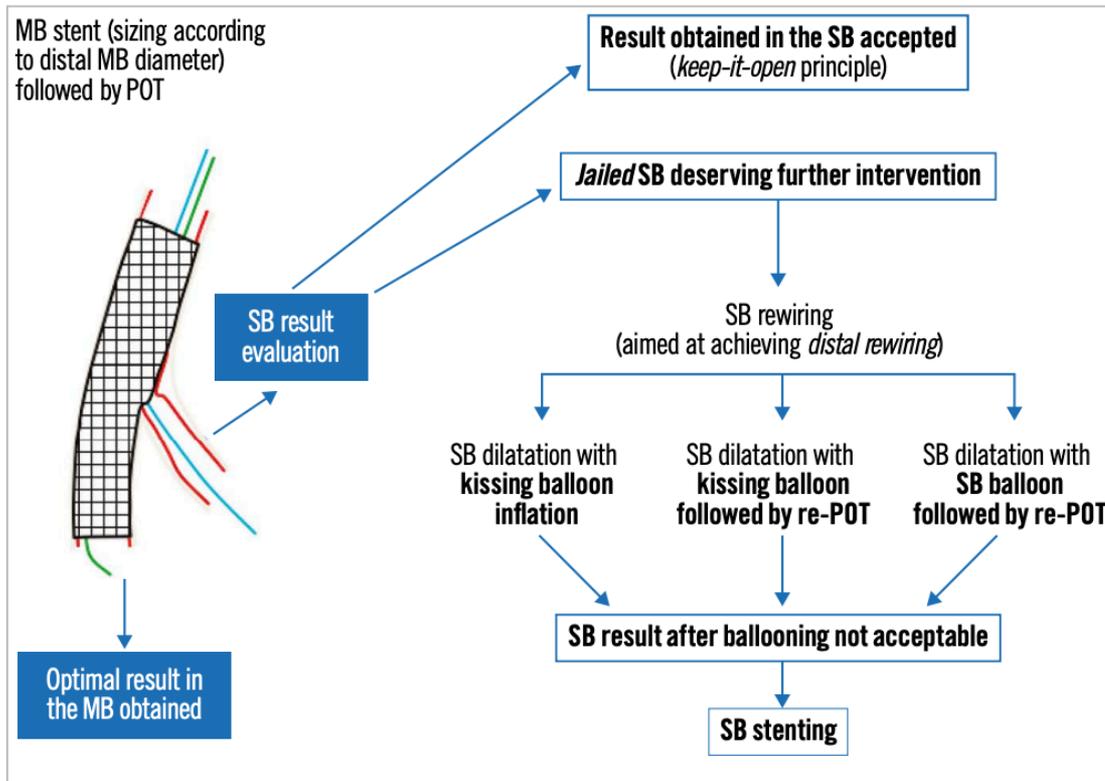




TABLE 1. COMPARISON OF PROVISIONAL AND TWO-STENT TECHNIQUES

Stent Technique	Guiding Catheter (F)	Provisional SB Stenting	Ideal Bifurcation Angle	Preserved Guidewire Access in SB	Preserved Guidewire Access in MB	Ideal MB and SB Diameters
Provisional	6	-	-	-	-	-
T stent	6	Yes	> 70°	No	Yes	Similar or discrepant
TAP	6	Yes	> 70°	No	Yes	Similar or discrepant
Culotte	6	Yes	> 70°	No	No	Similar
Mini crush	7	No	> 70°	No	Yes	Similar or discrepant
DK crush	7	No	> 70°	No	Yes	Similar or discrepant

Abbreviations: DK, double kissing; MB, main branch, SB, side branch; TAP, T and small protrusion.

4. Zhang JJ, Ye F, Xu K, et al. Multicentre, randomized comparison of two-stent and provisional stenting techniques in patients with complex coronary bifurcation lesions: the DEFINITION II trial. *Eur Heart J.* 2020;41:2523-2536. doi: 10.1093/eurheartj/ehaa543

5. Burzotta F, Lassen JF, Lefèvre T, et al. Percutaneous coronary intervention for bifurcation coronary lesions: the 15(th) consensus document from the European Bifurcation Club. *EuroIntervention.* 2021;16:1307-1317. doi: 10.4244/EIJ-D-20-00169

6. Chen SL, Xu B, Han YL, et al. Clinical outcome after DK crush versus culotte stenting of distal left main bifurcation lesions: the 3-year follow-up results of the DKCRUSH-III study. *JACC Cardiovasc Interv.* 2015;8:1335-1342. doi: 10.1016/j.jcin.2015.05.017

7. Yang JH, Lee JM, Park TK, et al. The proximal optimization technique improves clinical outcomes when treated without

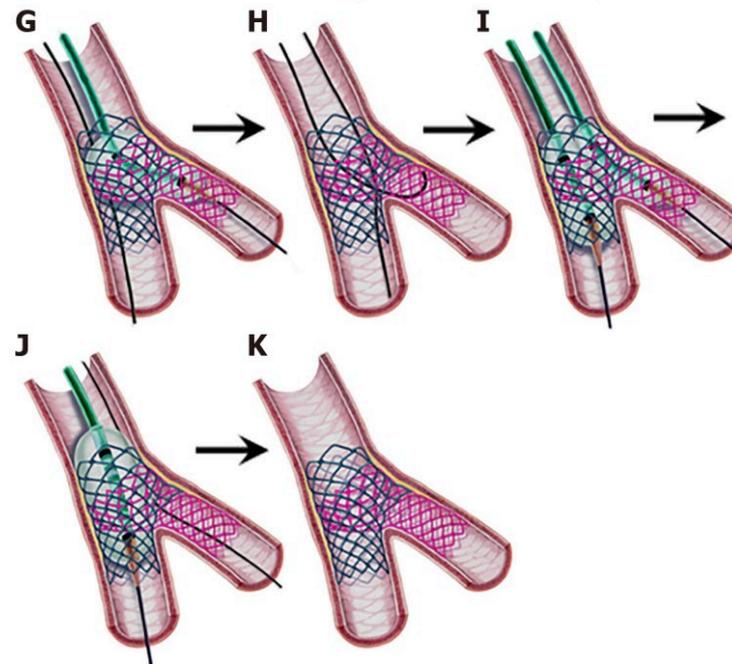
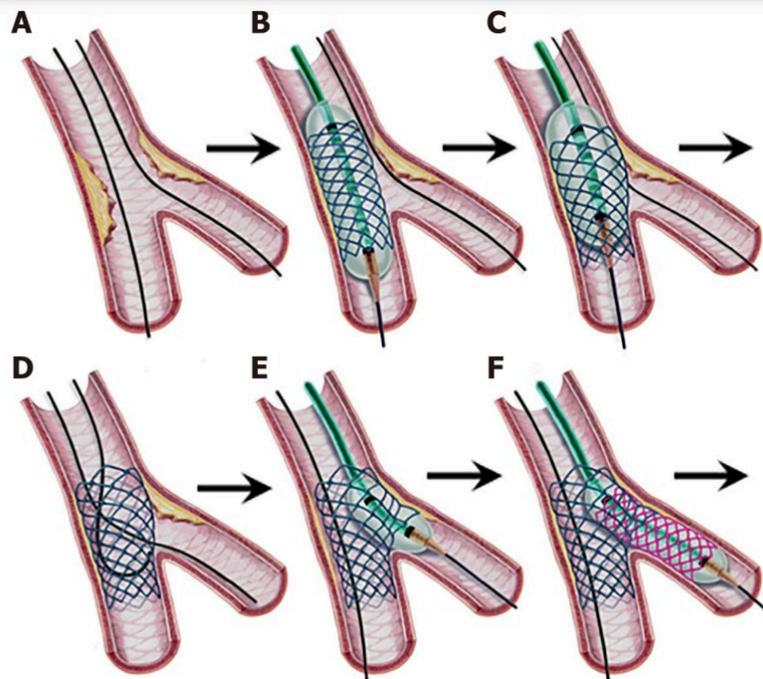
**Table 2 Maximum-expansion capacity of stents**

Manufacturer	Stent type	Stent size (mm)	Balloon ¹ (bench test) (mm)	Maximum expansion (bench test) (mm)[72]	Maximum expansion (mm) (manufacturer recommendation)
Biosensors	Biomatrix A	3	5	4.1	-
		4	6	5.9	5.8
Medtronic	Resolute Onyx	2.5	4	3.3	-
		3	5	4.4	-
		4	6	5.6	-
		5	6	6	6
Biotronik	Orsiro	3	5	4	-
		4	6	5.3	4.4
Abbott	Xience	3	5	4.1	3.75
		4	6	5.6	5.5
Terumo	Ultimaster	3	5	4.3	-
		4	6	5.8	5.5
Boston Scientific	Synergy	2.75	5	3.6	3.5
		3.5	5	4.2	4.25
		4	6	5.7	5.75

DOI: [10.4330/wjc.v14.i3.108](https://doi.org/10.4330/wjc.v14.i3.108)

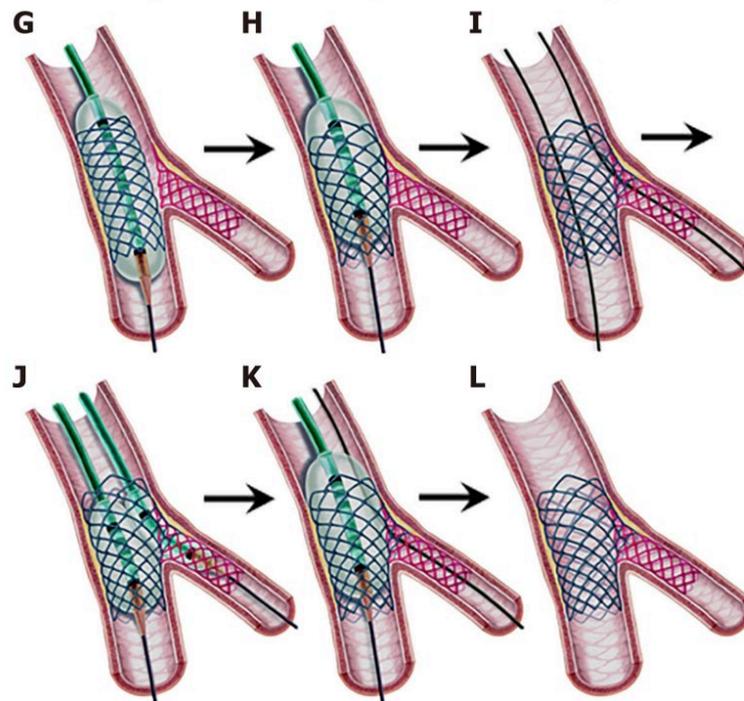
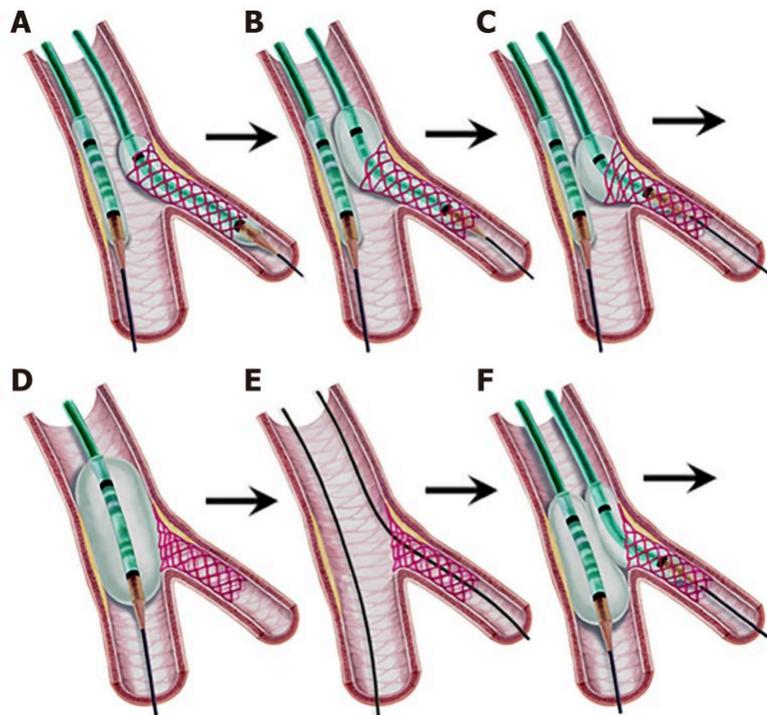


Conocer al menos 2 estrategias
(caballos de batalla). Stent provisiona + Culotte tradicional.



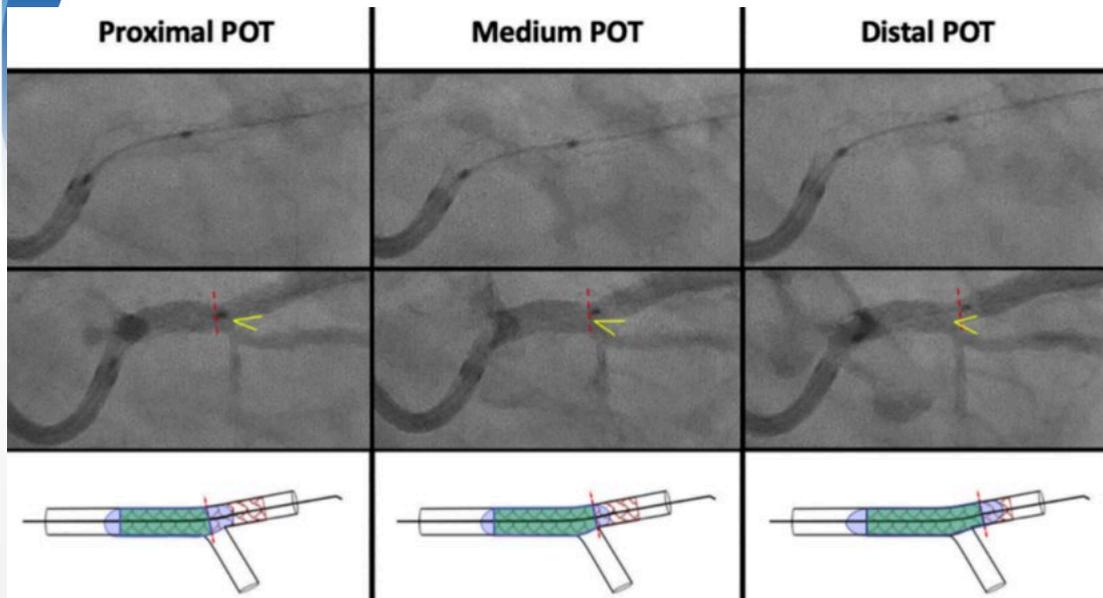


Conocer al menos 2 estrategias
(caballos de batalla). Dk Crush.



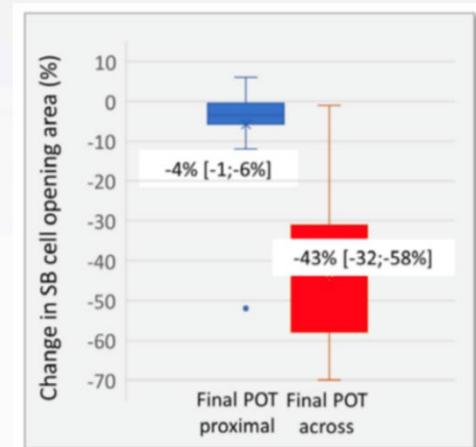


Posición correcta para POT.



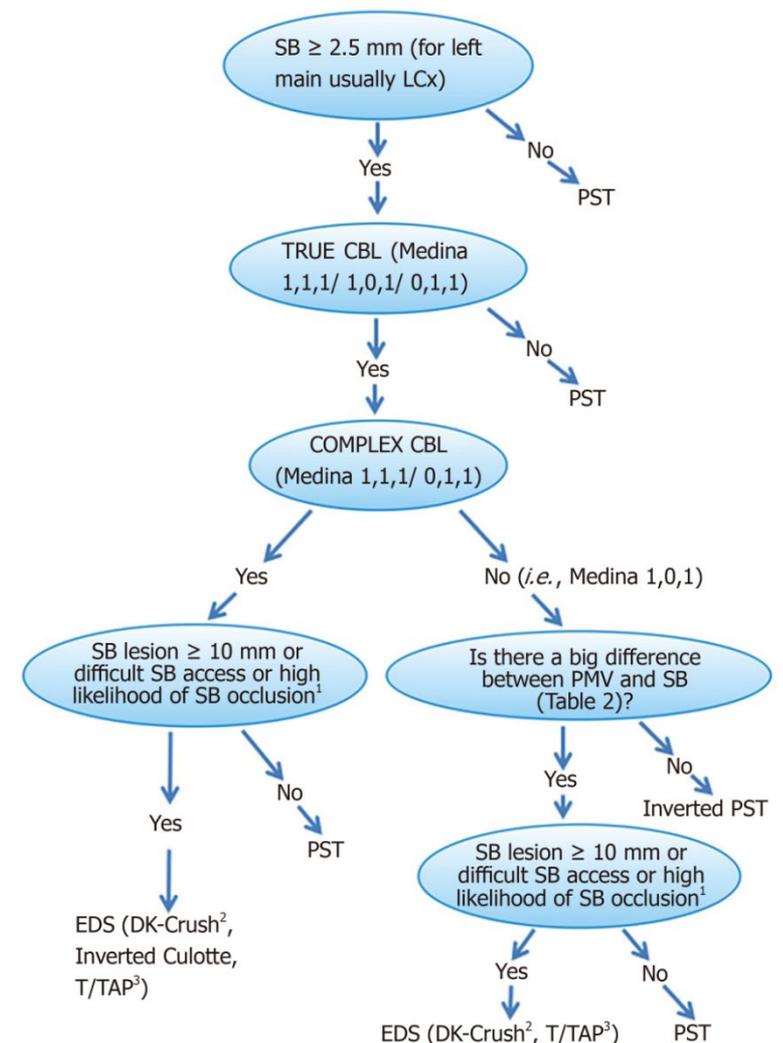
Distal final POT (a) reduces SB orifice by pushing down stent

More proximal final POT – does not



En resumen

1. Bifurcación verdadera.
2. Accesibilidad.
3. Plan (conocer stent a usar)
4. Material en sala.
5. Estrategia de rescate.
6. POT, POT, POT.



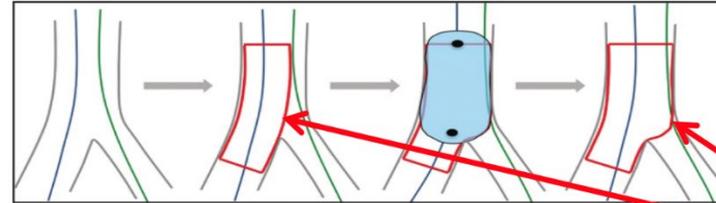


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EuroIntervention

Proximal optimization technique (POT)



EuroIntervention 2018;13:1540-1553

Inflation of an NC balloon *just proximal* to the carina
designed to optimise expansion in the MB
Push struts across the SB orifice

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Move this edge
of the stent to
here