Provisional SB stenting

The big misunderstanding

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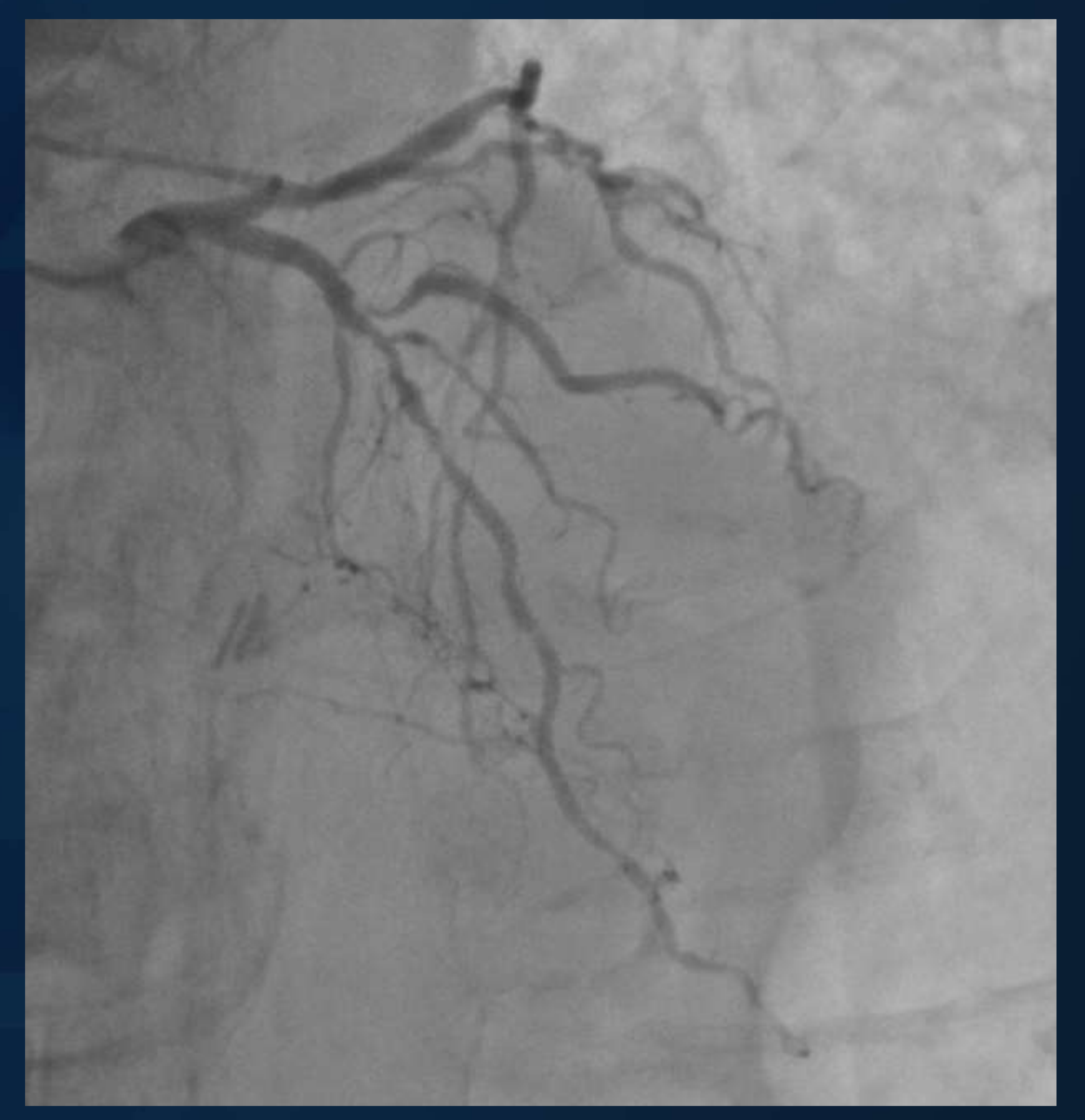
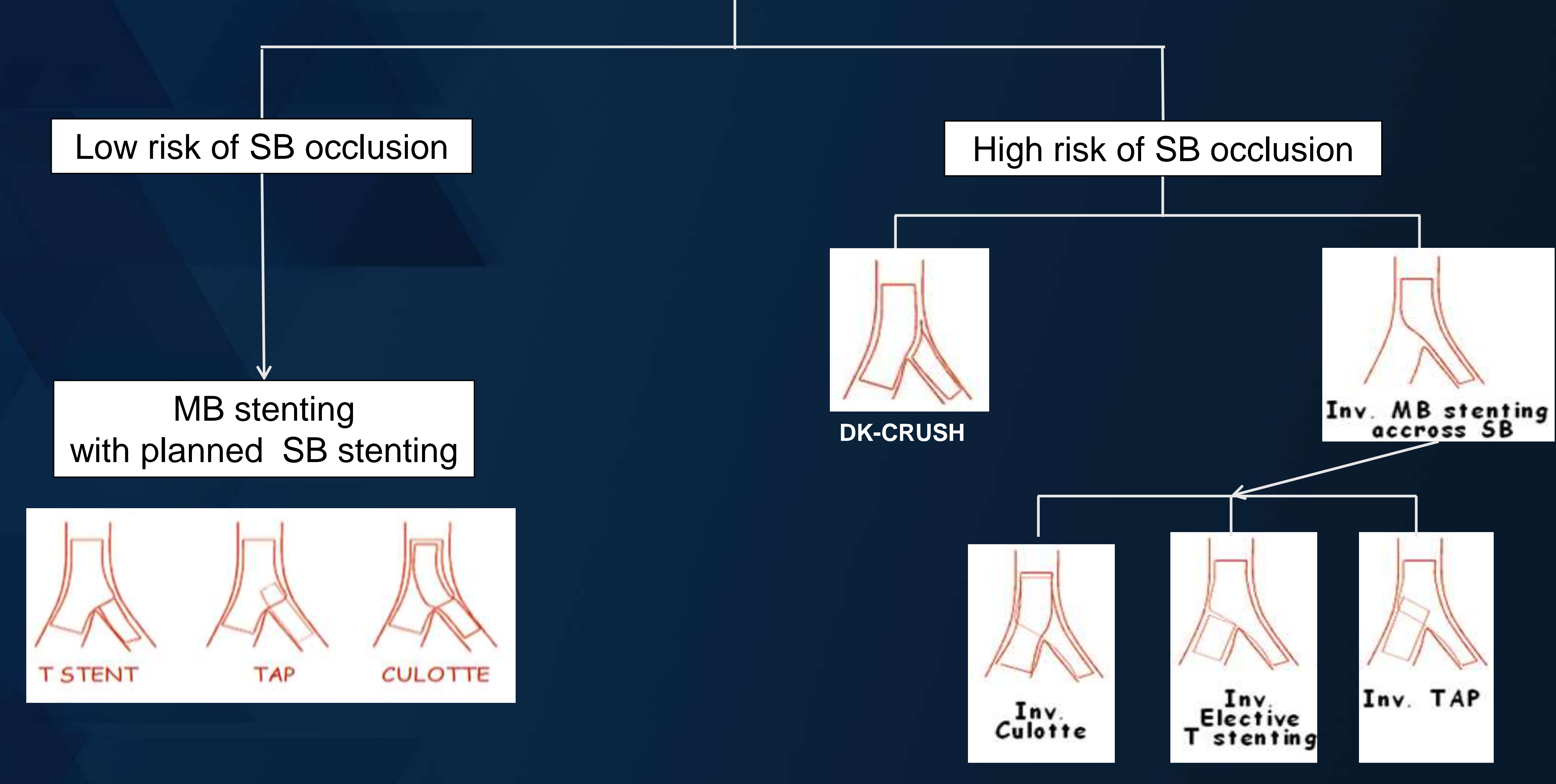
Disclosure

- Proctoring for Abbott, Terumo and Boston



“True” bifurcation with severe SB stenosis > 5-10 mm length



2018 ESC Guidelines

Recommendations on specific lesion subsets

Recommendations	Class[a]	Level[b]
Stent implantation in the main vessel only, followed by provisional balloon angioplasty with or without stenting of the side branch, is recommended for PCI of bifurcation lesions.[654–658]	I	A
In true bifurcation lesions of the left main, the double-kissing crush technique may be preferred over provisional T-stenting.[620]	IIb	B

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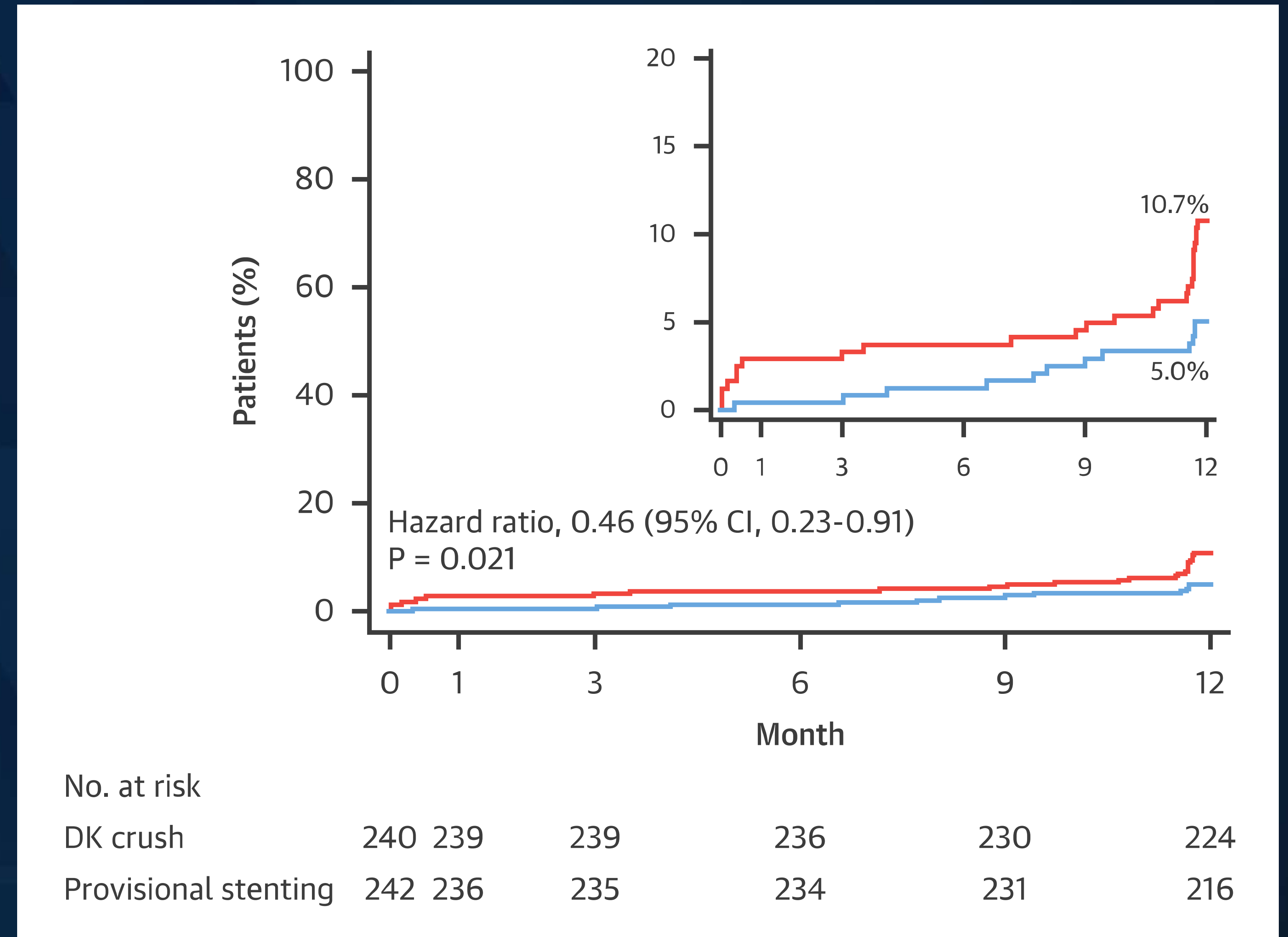
DK Crush-V: TLF



TCTAP 2021 VIRTUAL

Chen et al. JACC 2017; 70(21):2605-17

Definition II

Jun-Jie Zhang[1†], Fei Ye[1†], Kai Xu[2†], Jing Kan[1†], Ling Tao[3], Teguh Santoso[4], Muhammad Munawar[5], Damras Tresukosol[6], Li Li[7], Imad Sheiban[8], Feng Li[9], Nai-Liang Tian[10], Alfredo E. Rodríguez[11], Chotnoparatpat Paiboon[12], Francesco Lavarra[13], Shu Lu[14], Kitigon Vichairuangthum[15], Hesong Zeng[16], Lianglong Chen[17], Ruiyan Zhang[18], Shiqin Ding[19], Fengtang Gao[20], Zening Jin[21], Lang Hong[22], Likun Ma[23], Shangyu Wen[24], Xueming Wu[25], Song Yang[26], Wei-Hsian Yin[27], Jun Zhang[28], Yan Wang[29], Yonghong Zheng[30], Lei Zhou[31], Limin Zhou[32], Yuansheng Zhu[33], Tan Xu[34], Xin Wang[35], Hong Qu[36], Yulong Tian[37], Song Lin[38], Lijun Liu[39], Qinghua Lu[40], Qihua Li[41], Bo Li[42], Qing Jiang[43], Leng Han[44], Guojun Gan[45], Mengyue Yu[46], Defeng Pan[47], Zhenglu Shang[48], Yanfang Zhao[49], Zhizhong Liu[50], Ye Yuan[51], Cynthia Chen[52], Gregg W. Stone[53], Yaling Han[2], and Shao-Liang Chen[1,54]*

Zang et al. EHJ 2020; 70(21):2605-17

Definition II

De novo coronary bifurcation lesions Medina 111 or 011

SB ≥2.5mm with at least one major criterion of complex bifurcations

- ≥ 10 mm
- ≥ 70% for LM or ≥ 90% for non LM

And 2 minor criteria:

- Moderate-to-severe calcification
- Multiple lesions
- Bifurcation angle <45 or >70
- Main vessel <2.5mm
- Thrombus-containing lesions
- MV lesion length ≥ 25mm by visual

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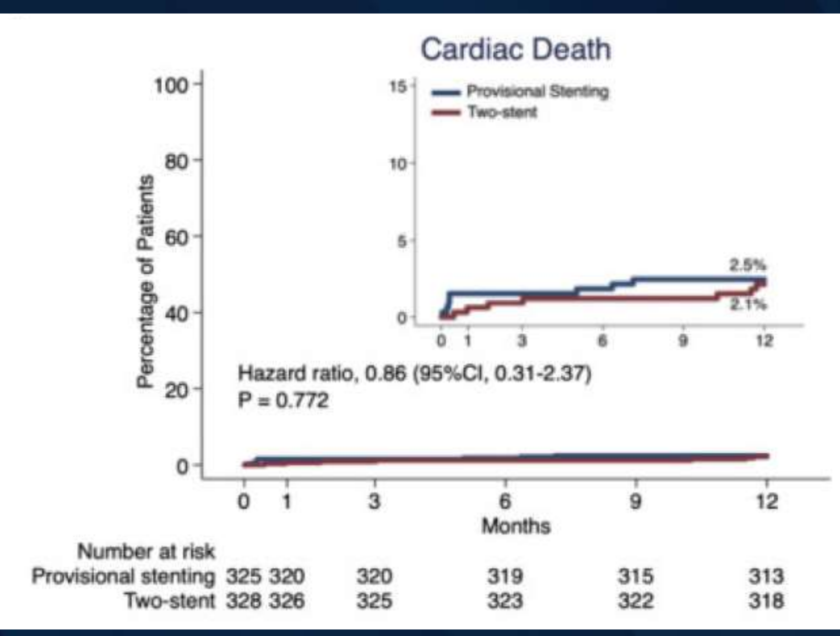
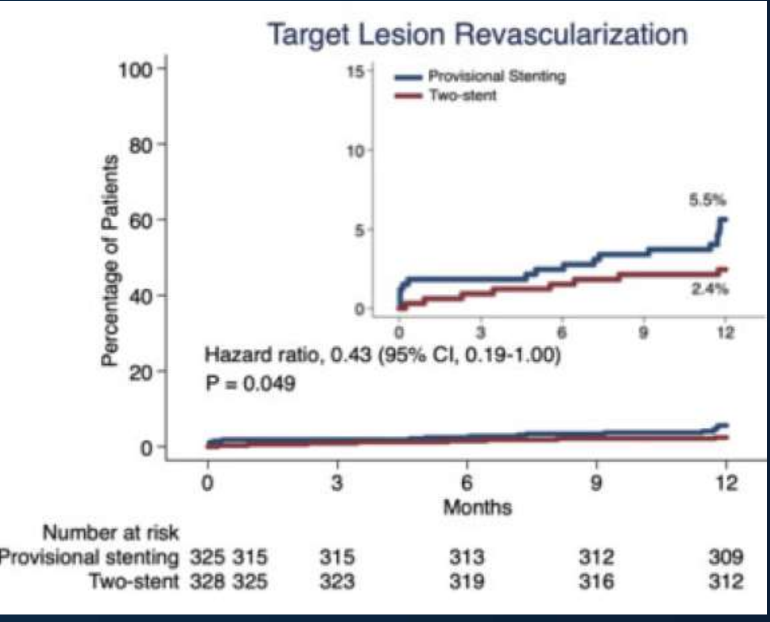
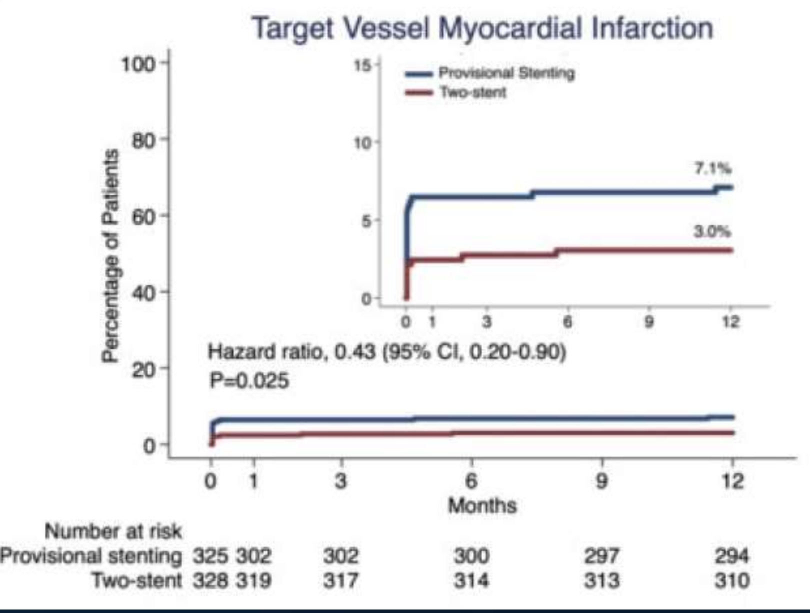
Definition II







Zang et al. EHJ 2020; 70(21):2605-17

Why is DK-Crush becoming more popular ?

- ✓ DK Crush is better than Crush
- ✓ Recent studies: DK Crush, Definition II, Metanalysis
- ✓ Good angiographic results
- ✓ People like to perform complex procedures ?
- ✓ Misunderstanding of provisional approach ?

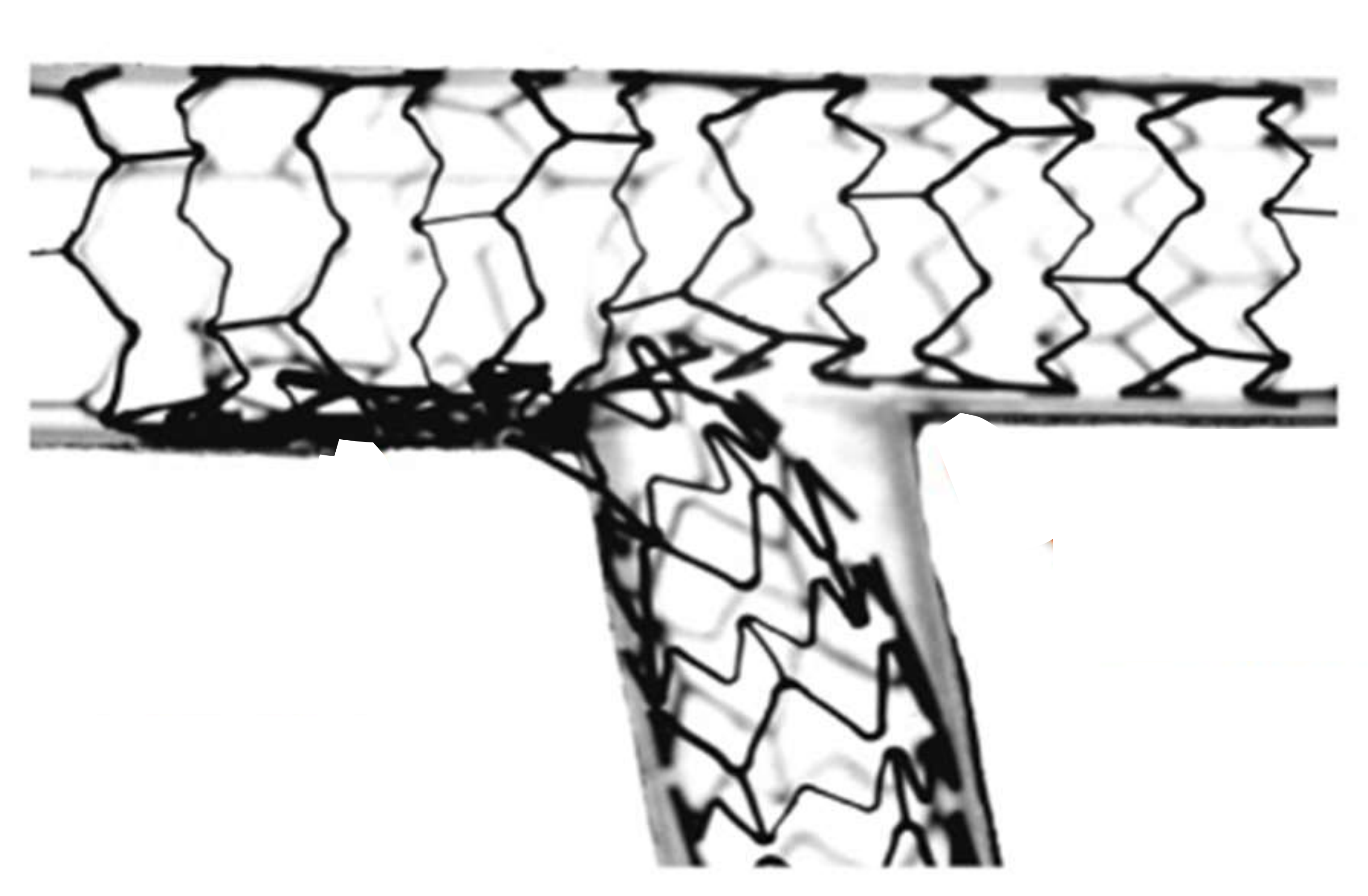
What is Provisional ?

- ✓ A wire in each branch
- ✓ A Stent in the MB sized according to distal reference, POT
- ✓ *Should we do more?*
- ✓ Open the distal strut and Kiss or RePOT
- ✓ *Should we do more?*
- ✓ SB stenting (T, TAP, Culotte), kiss, RePOT
- ✓ Inverted provisional can be an option

What is DK Crush ?

- ✓ A fixed approach using 2 stents systematically
- ✓ Many steps including 3 POTs and 3 Kiss (may increase the risk of mistakes)
- ✓ 3 layers of stents in the crushed zone
- ✓ Not well adapted to a T shape angulation

Technical Limitations of DK Crush ?



Limitations of the DK Crush V study

1. Control of 5 DK-Crush cases for each centre by the steering committee before starting the study. No control and no recommendation for the provisional approach.
2. SB lesion length 17±12mm in the provisional group.
   SB stenting in 47%.
3. No POT in the provisional group.
4. Angiographic F-up before 1 year clinical endpoint in > 70%.

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Limitations of the Definition II study

1. The 2 stents tehnique was a Crush in the majority of cases.

2. SB lesion length 20±9 mm in the provisional group, but stenting performed in only 23% of cases.

3. No POT before Kiss in the provisional group, 27% final kiss (vs 3 POT and 2 Kiss in the DK crush group).

4. Angiographic follow-up scheduled 1 month after clinical endpoint, but performed earlier.

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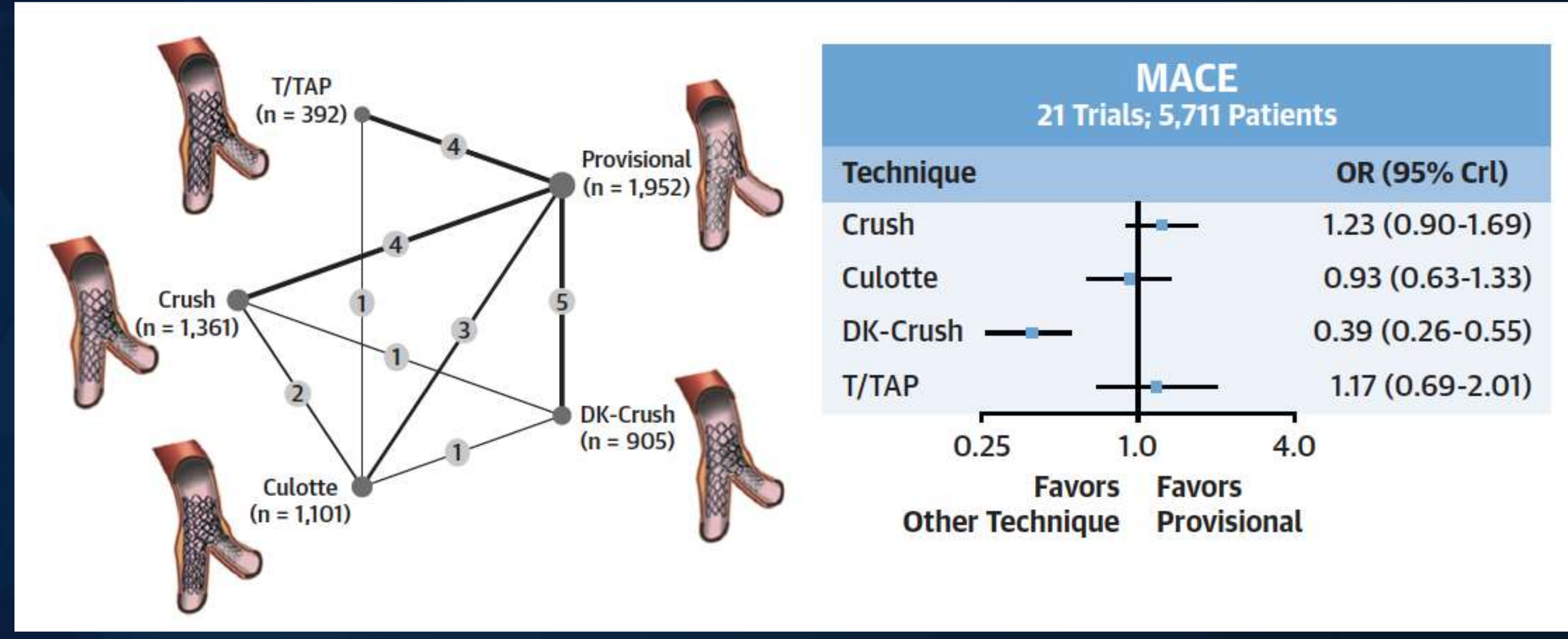
Impact of the technique (Network Metanalysis)



Di Gioai et al. JACC Cardiovasc intrv 2020;13:1432-44

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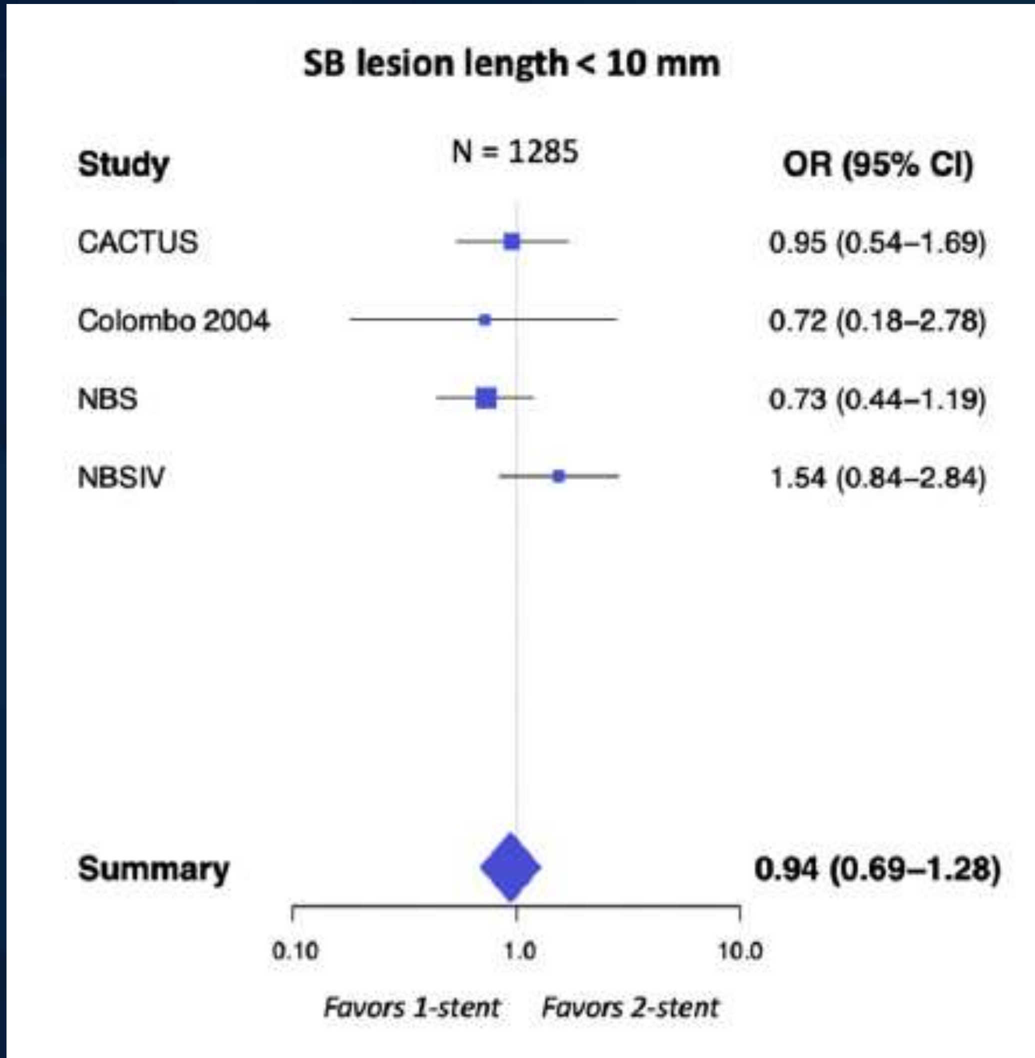

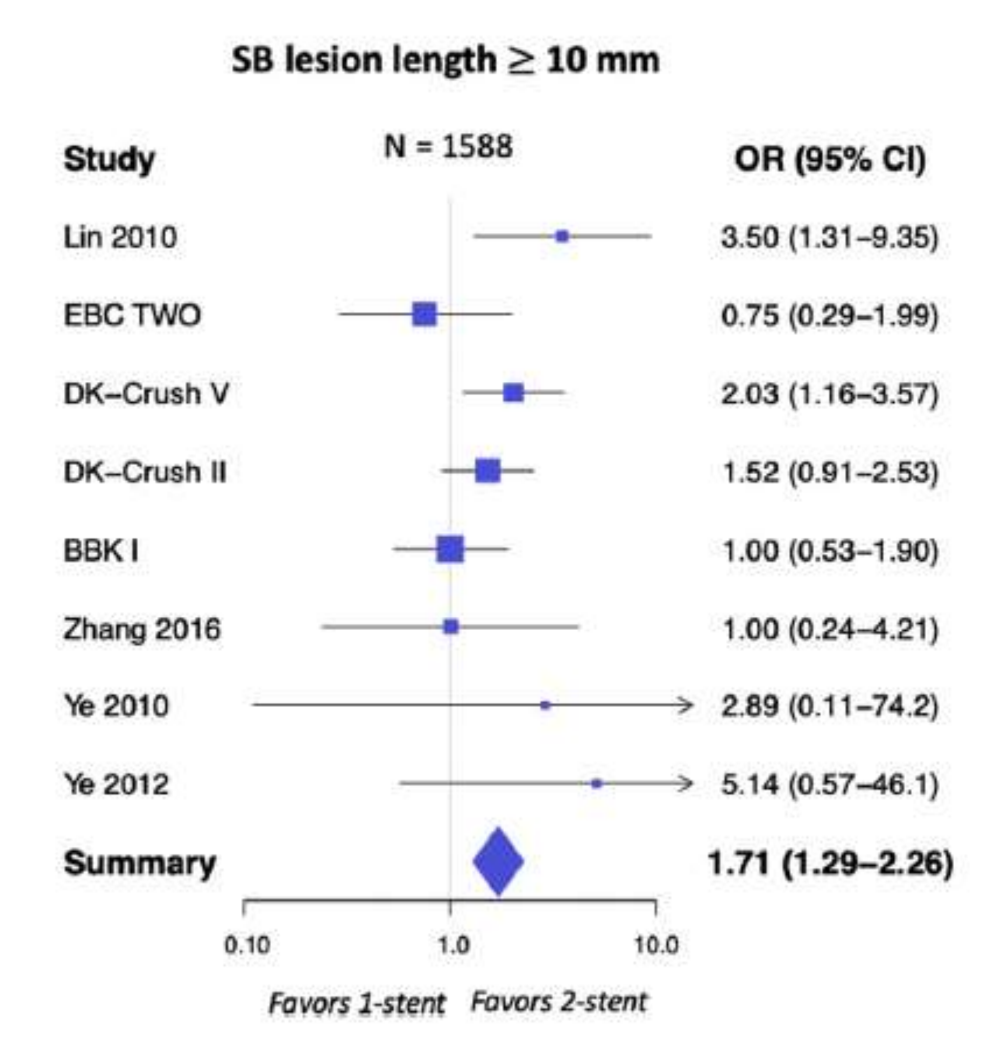

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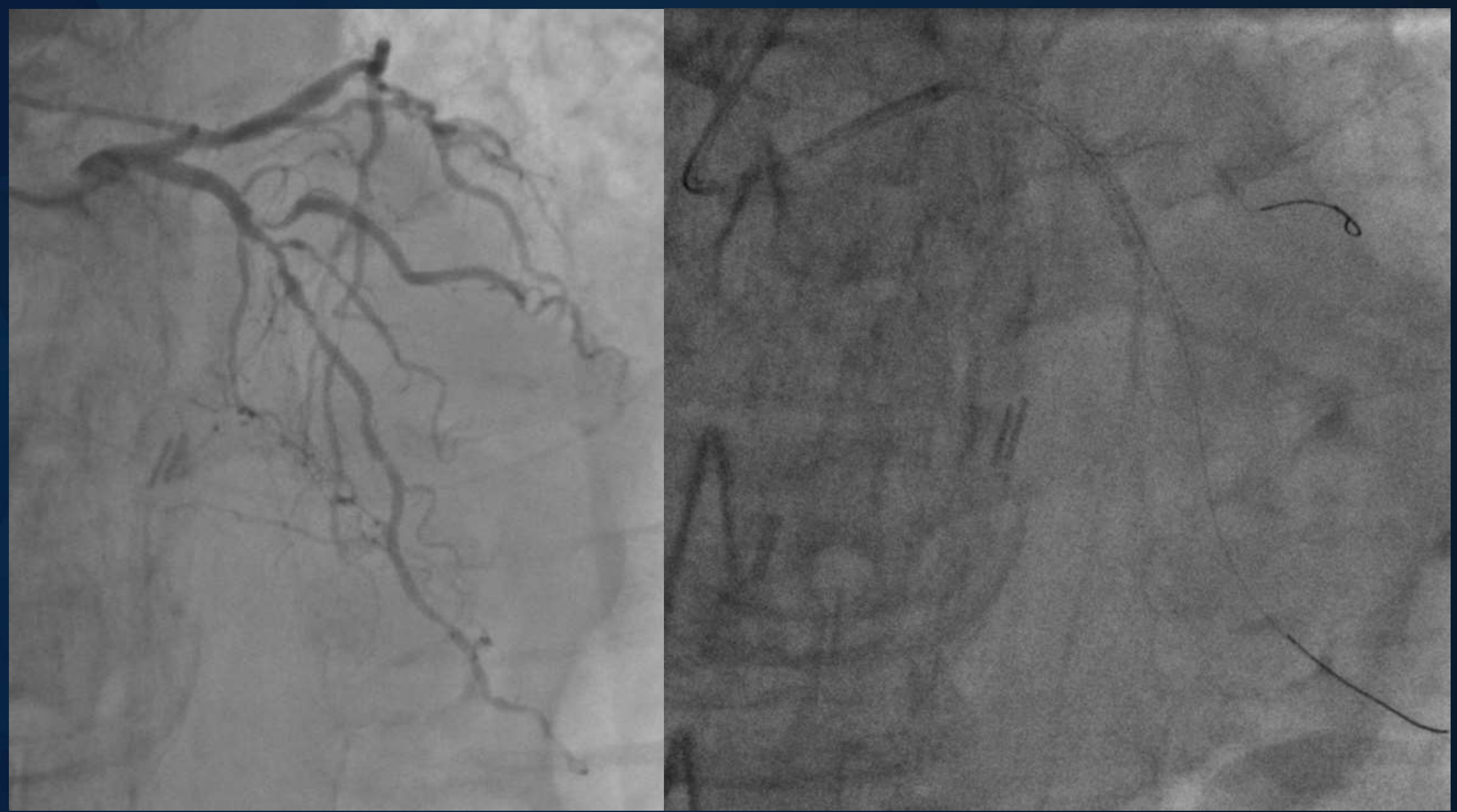

Conclusion / Take-home Message

- ✓ When treating complex bifurcation lesions with a relevant SB and a lesion length > 10 mm, a two-stent technique should be used in the majority of cases !
- ✓ In this type of lesions, the strategy (provisional or inverted provisional vs DK crush) should not be dogmatic and depends on many parameters including the anatomy of the lesion and the operator's experience and knowledge.
- ✓ In all cases, POT and final kissing balloon inflation is a must.