# Critical Analysis of DK Crush V

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# 2018 ESC Guidelines

## 16.3.1 Bifurcation stenosis

No benefit for systematic two-stent approach vs. MB-only stenting with provisional SB stenting in terms of clinical outcomes (Gao metanalysis, Nordic, EBC II).

MB-only stenting with provisional stenting of the SB should be the preferred approach for most bifurcation lesions.

Upfront SB stenting may be preferable in case of a large SB (≥2.75 mm) with a long lesion (>5 mm), or anticipated difficulty in accessing an important SB after MB branch stenting, and ...

true distal LM bifurcations.

# 2018 ESC Guidelines

When a two-stent strategy is necessary in non-LM bifurcation lesions, there is no compelling evidence that one technique is superior to the others (T, Culotte, Crush)

In LM true bifurcation lesions, double-kissing crush has the most favourable outcome data.

# 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 |

# Critical analysis of DK crush V

482 patients with true bifurcation LM disease (111 or 011)

DK crush vs provisional SB stenting

Mainly 2nd generation stent Xience

Systematic angiographic follow up at 13 months

Primary endpoint at 12 months: TLF (cardiac death, Target Vessel MI, target vessel revascularisation)

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

# Critical analysis of DK crush V

« Participating primary operators were required to have performed 300 PCIs/year for 5 years, including at least 30 LM PCIs/year. In addition, each operator performed 3 to 5 DK crush cases, which were reviewed by the steering committee to ensure appropriate technique before randomization commencing ».

Optimal DK crush vs suboptimal provisonal approach ?

In the provisional group, an additional SB stent was implanted if suboptimal results (including a residual DS >75%, dissection type B, TIMI flow grade 3) were still present after KBI.

SB predilatation 40%, SB stenting 47%, Technique ? kissing 79.9 vs 99.6%, p<0.001

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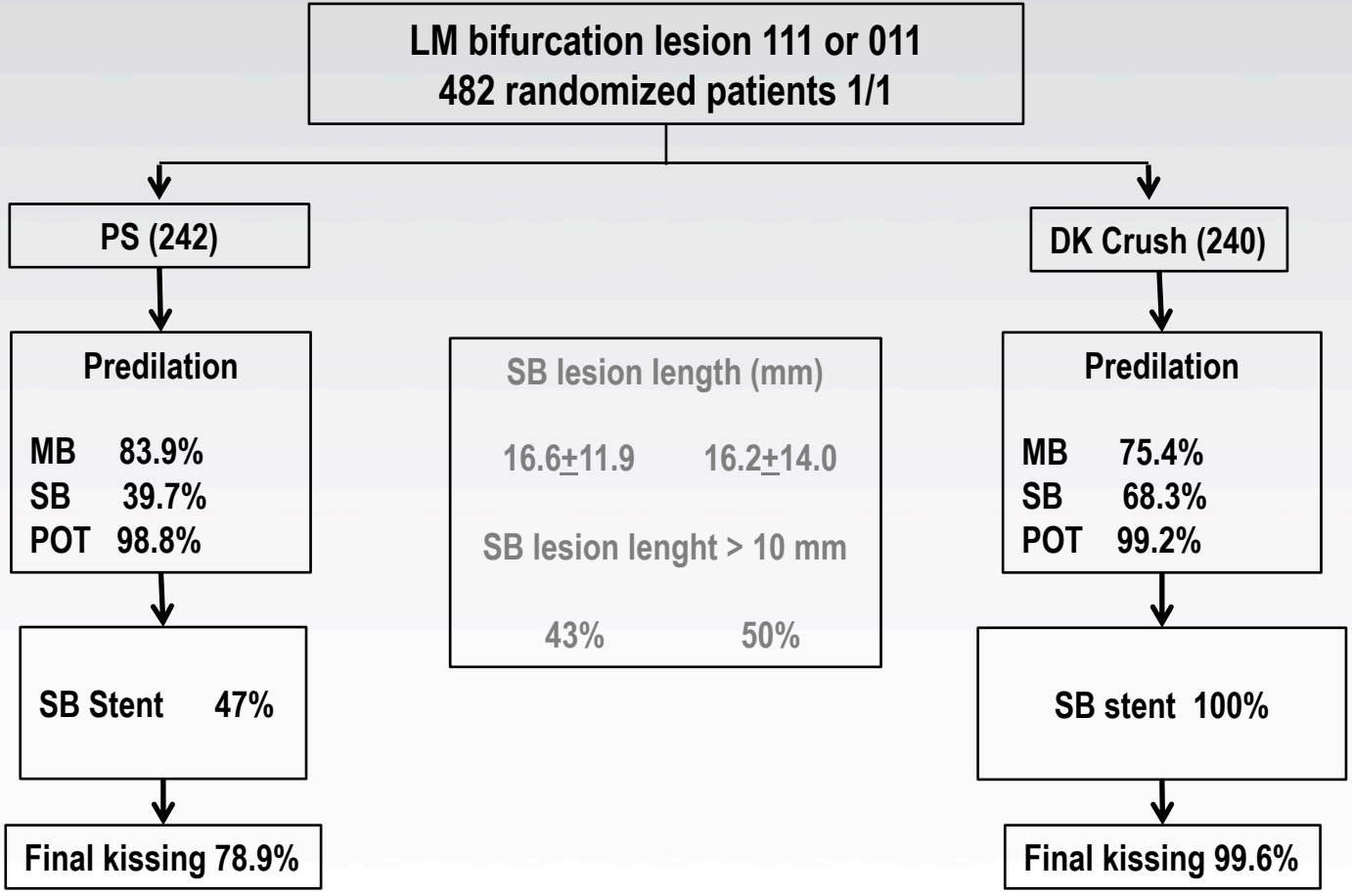
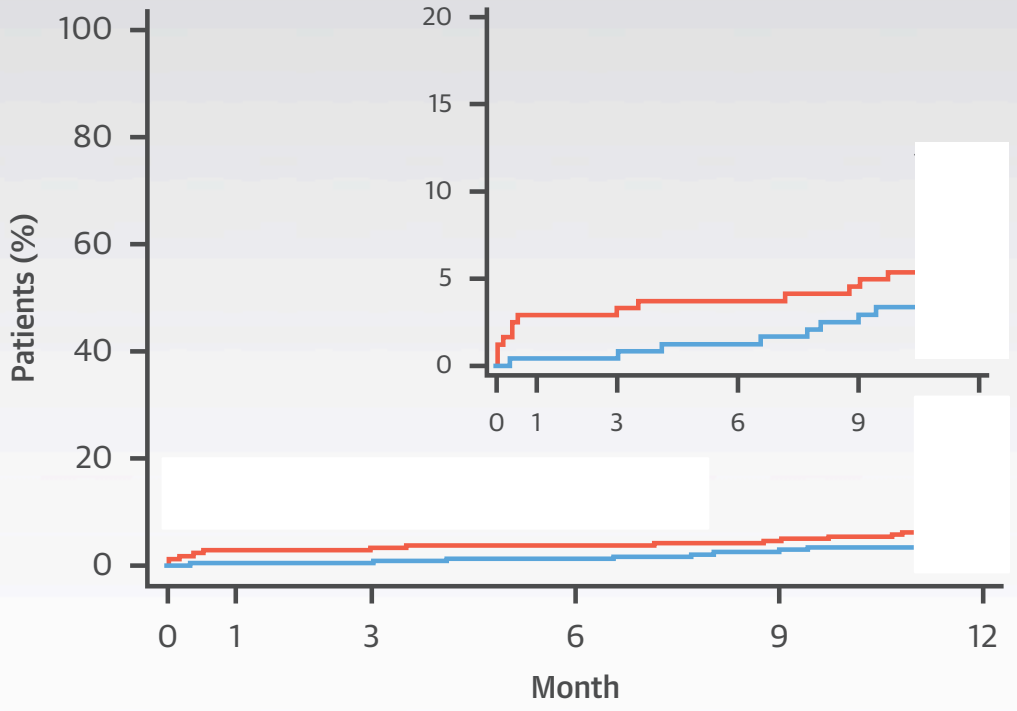
# Critical analysis of DK crush V



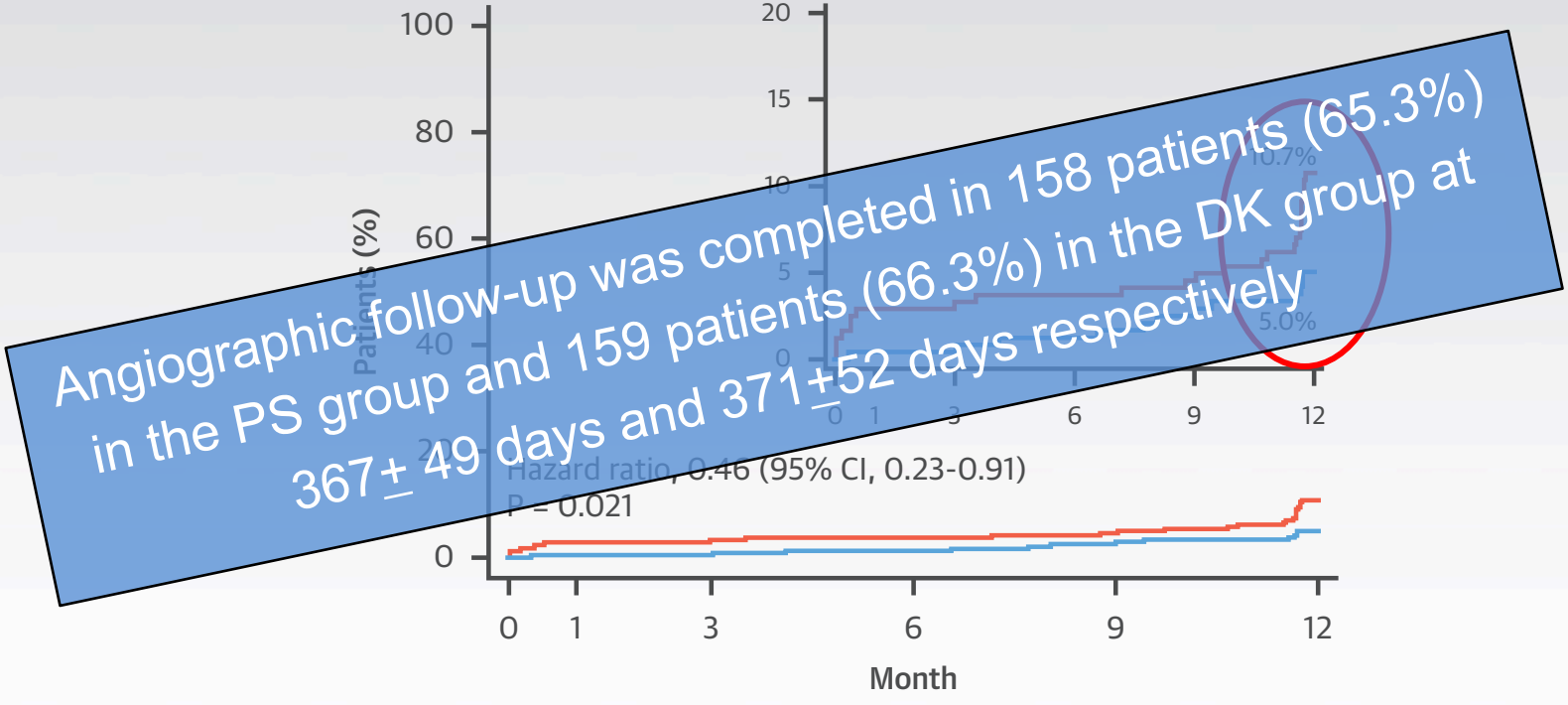
# DK crush V: Primary endpoint-TLF




| No. at risk | | | | | | |
|---|---|---|---|---|---|---|
| DK crush | 240 | 239 | 239 | 236 | 230 | 224 |
| Provisional stenting | 242 | 236 | 235 | 234 | 231 | 216 |

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

# **DK crush V:** Primary endpoint-TLF




| No. at risk | | | | | | |
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# DK crush V: 30-day outcomes

**TABLE 4** Clinical Outcomes at 30 Days and 1 Year

| | Provisional Stent (n = 242) | DK Crush Stent (n = 240) | p Value |
|---|---|---|---|
| 30-day follow-up | | | |
| Target lesion failure | 7 (2.9) | 1 (0.4) | 0.033 |
| Cardiac death | 4 (1.7) | 0 (0.0) | 0.046 |
| Target vessel MI | 4 (1.7) | 1 (0.4) | 0.10 |
| Peri-procedural | 3 (1.2) | 0 (0.0) | 0.33 |
| Non-periprocedural | 2 (0.8) | 1 (0.4) | 0.50 |
| Target lesion revascularization* | 1 (0.4) | 1 (0.4) | 1.00 |
| Stent thrombosis | 6 (2.5) | 1 (0.4) | 0.06 |
| Definite | 1 (0.4) | 1 (0.4) | 1.00 |
| Probable | 5 (2.1) | 0 (0.0) | 0.04 |

Among patients in the PS group in whom ST within 30 days did occur, the SB lesion length was longer (31.9±13.3 mm vs. 12.4±5.6 mm; p=0.004) and the distal bifurcation angle was wider (110±23 vs. 67±3° , p=0.01).

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

# Conclusion

In patients with 111 or 011 LM bifurcation lesions with a long SB lesion, DK Crush is better than provisional approach (TLF at 1 year) in the hands of DK crush experts when doing a quasi systematic angiographic follow-up ….

Ther is no reason for not stenting a lesion > 10 mm in length in a large vessel …