



Systematic Double–Stent for Distal LM Bifurcation lesions

-----Current Indications and Technical Issues

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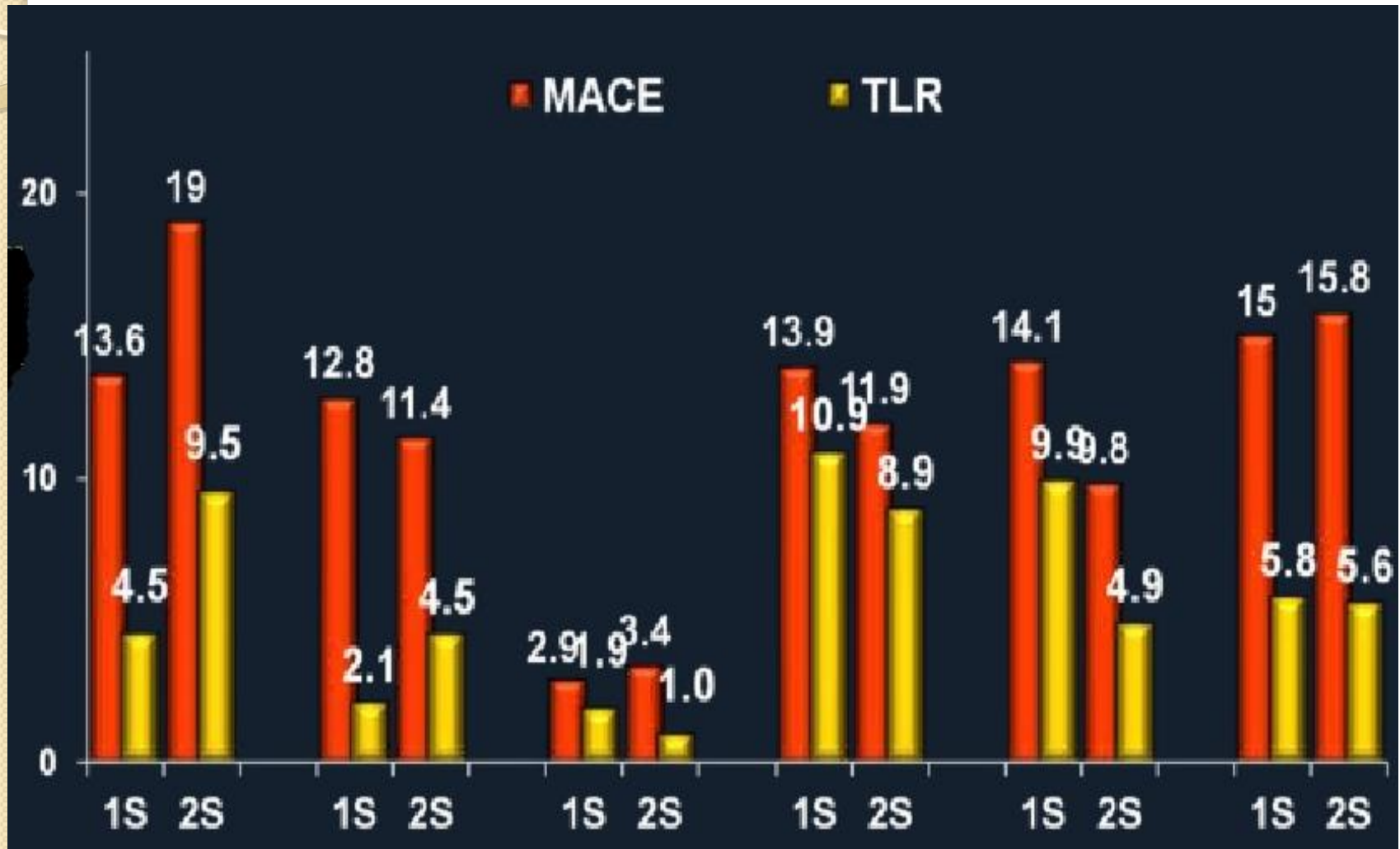
Disclosure

- I have no disclosure to clarify

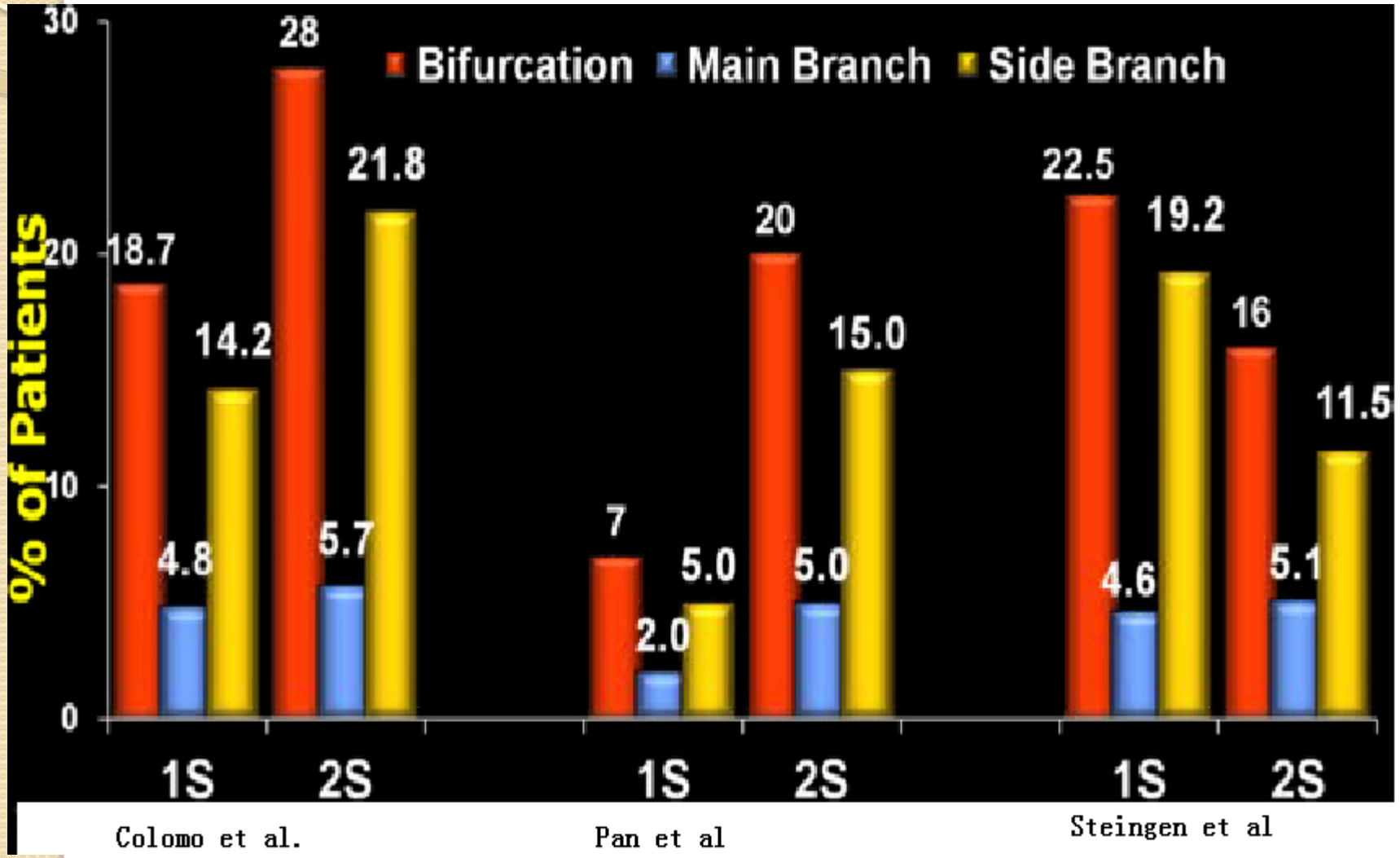
Current Status of stenting bifurcation lesion-----What are the clinical data

- Account for 15–20% of PCI
- No two bifurcations are identical
- Variations in Anatomy
 - Calcification, SB lesion length
 - SB size, distal angle, lesion location
- Dynamic change during stenting
 - Plaque/carina shift
 - Dissection

Clinical outcomes in Randomized Trials: 1- vs. 2-stent



Restenosis rates in Randomized Trials: 1- vs. 2-stent

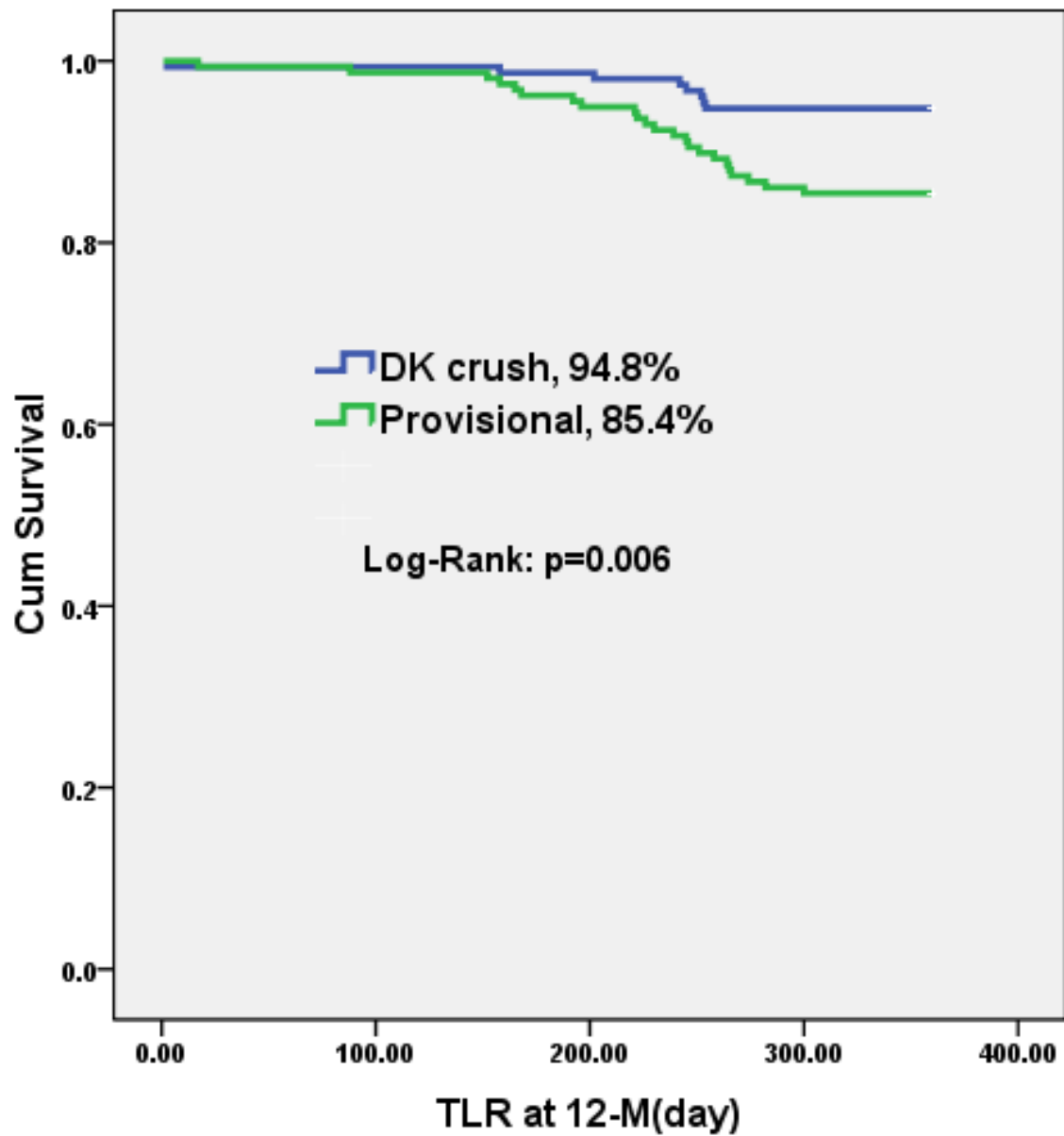


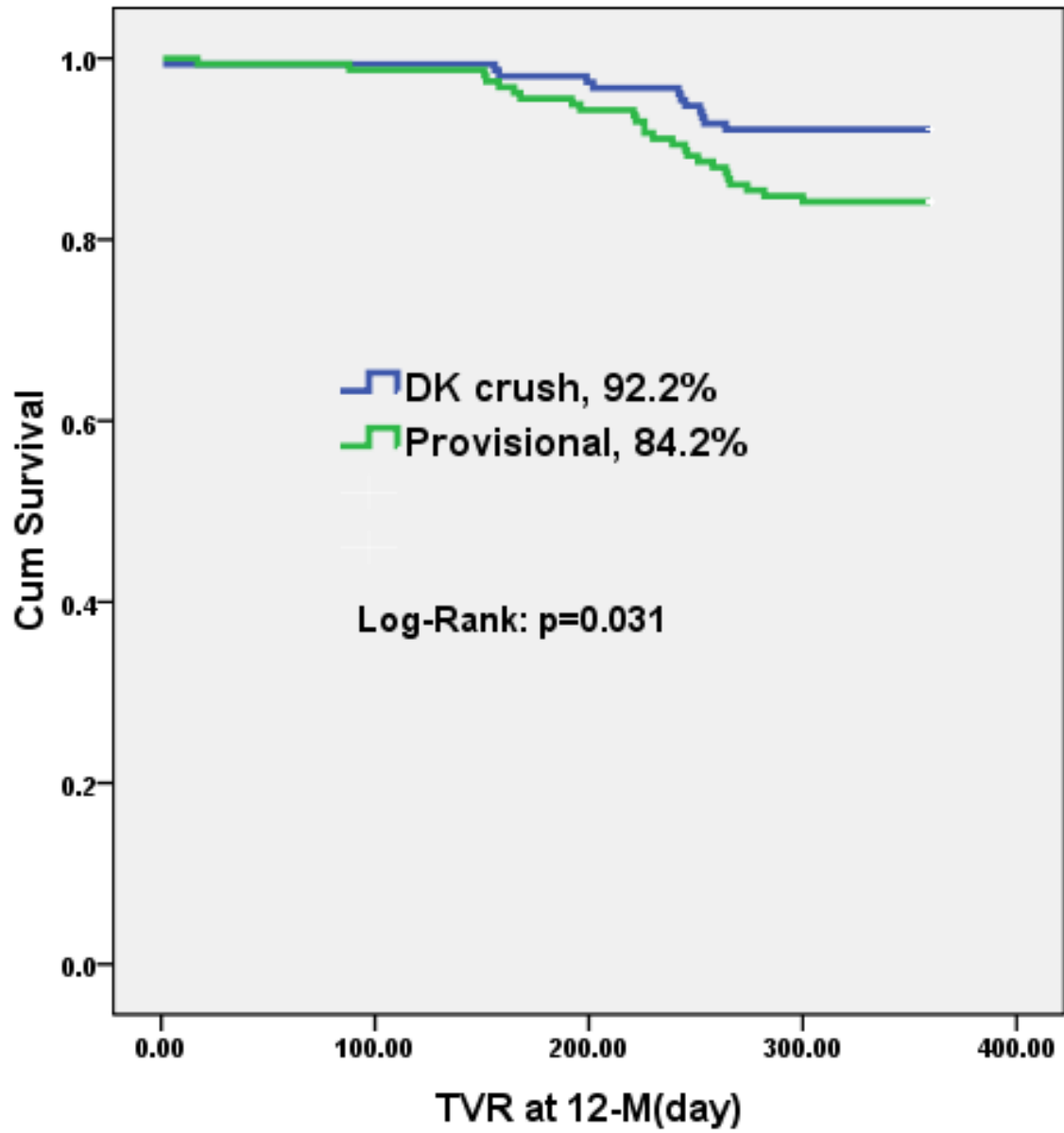
A Randomized Clinical Study Comparing Double Kissing Crush With Provisional Stenting for Treatment Of Coronary Bifurcation Lesions

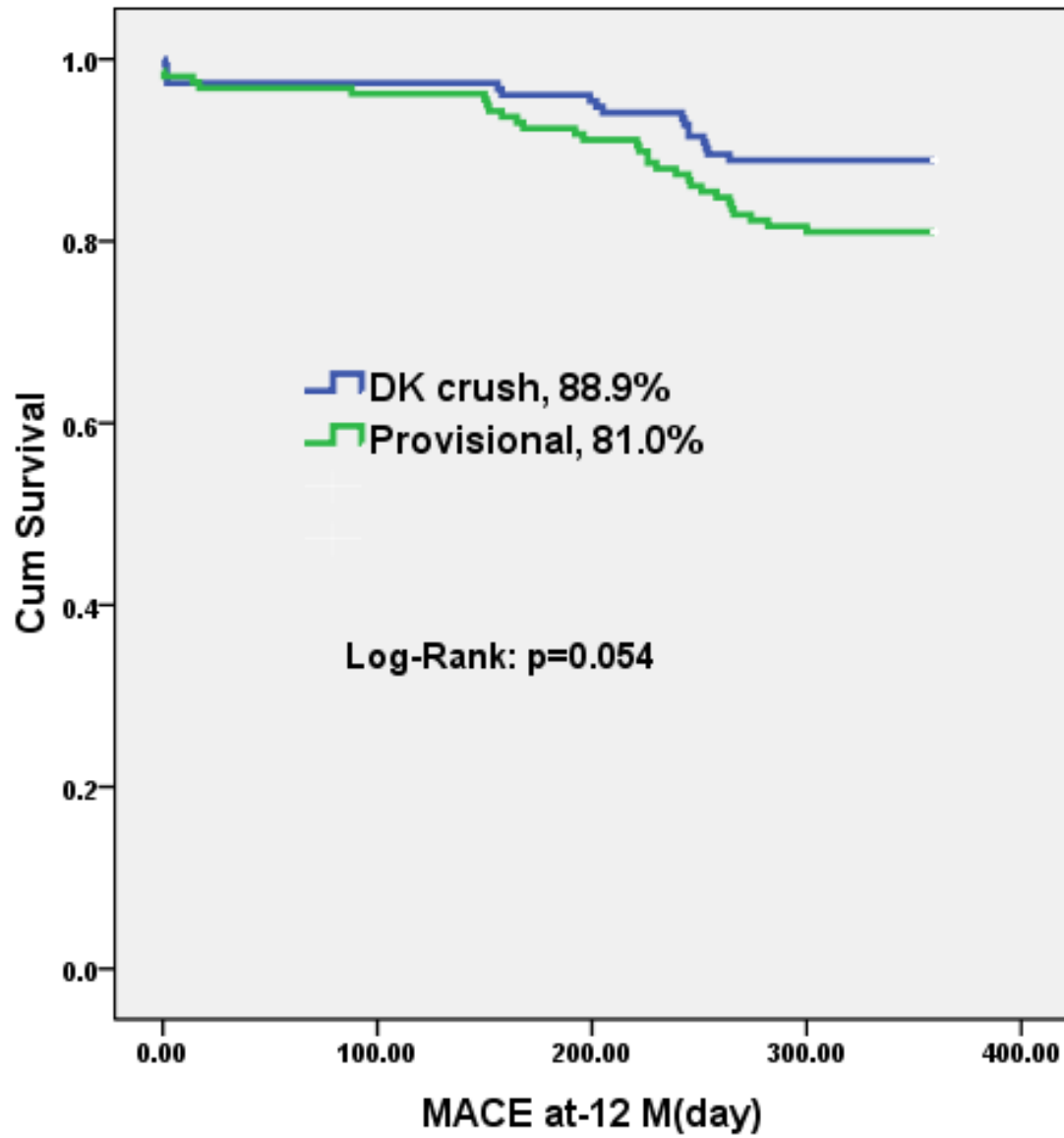
Results From the DKCRUSH-II (Double
Kissing Crush versus Provisional Stenting Technique
for Treatment of Coronary Bifurcation Lesions) Trial

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Clinical relevance of stenting Bif. RCT

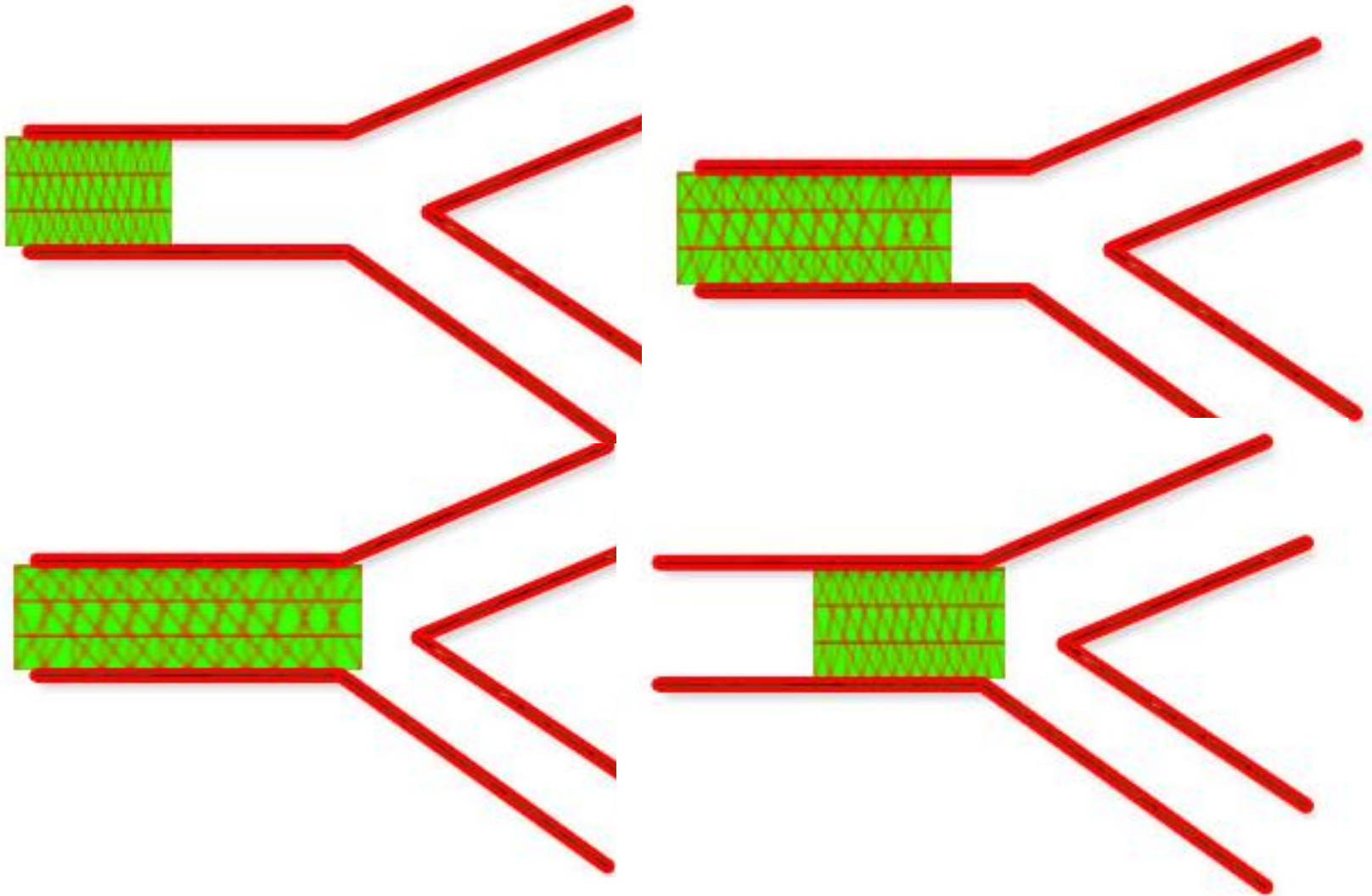
- Different Inclusion/Exclusion Criteria
- QCA methodology
- Threshold for stenting SB
- “simple” and “complex Bifurcation lesions

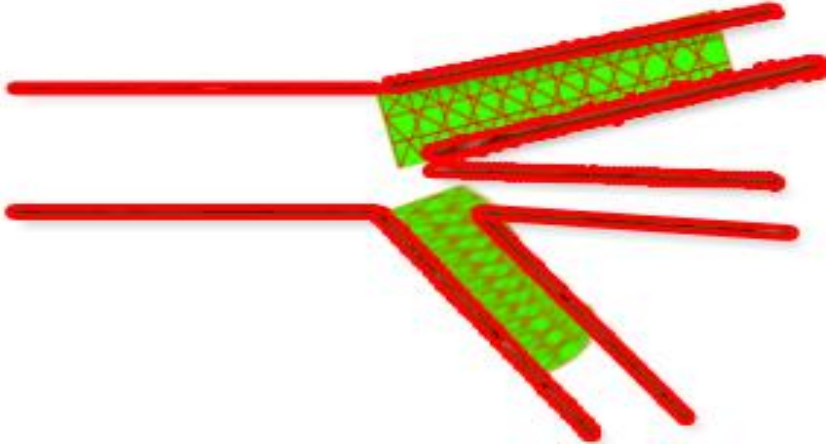
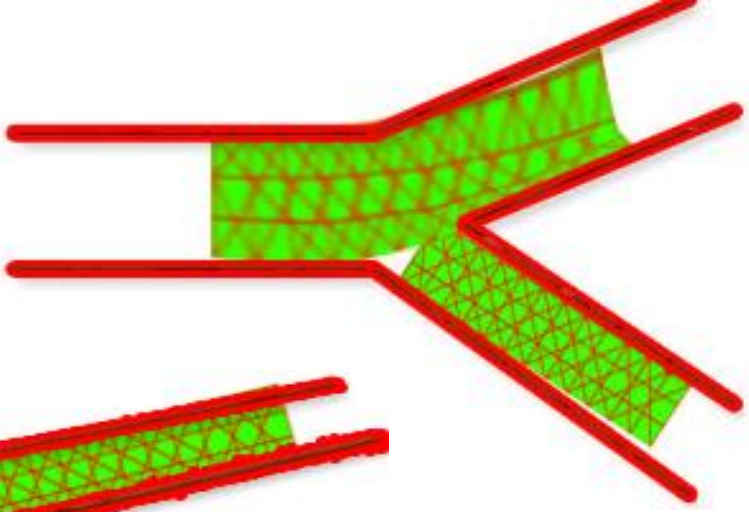
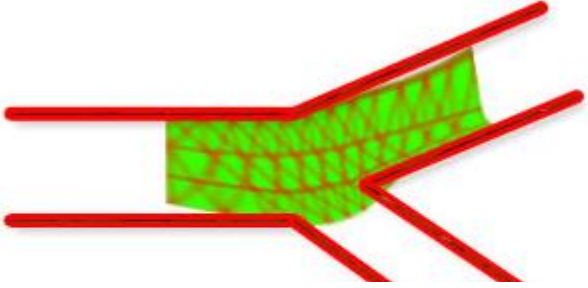
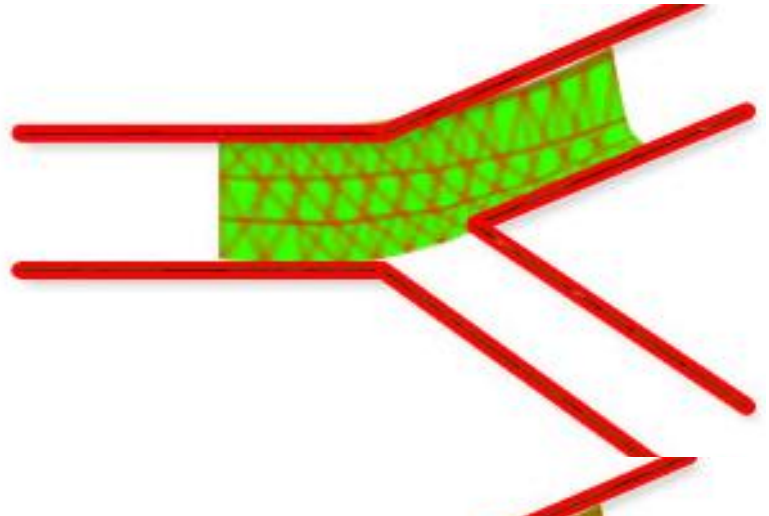
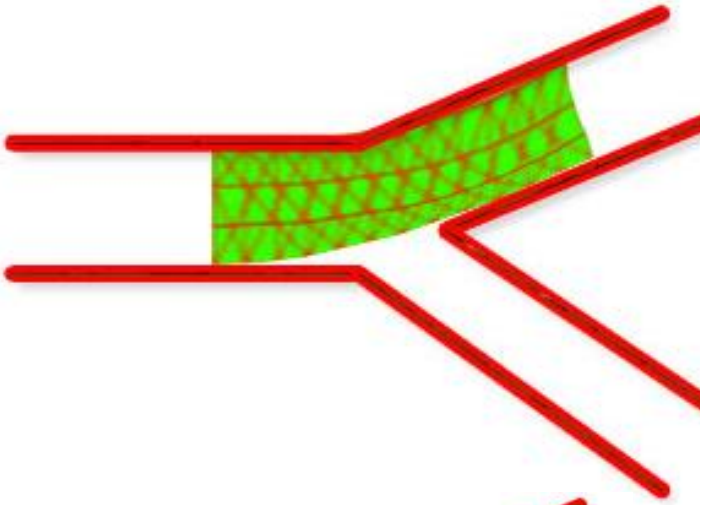
However, “**intention**”=Provisional SB stenting

Features of LM disease

- Wider distal bifurcation angle
- Larger caliber
- Similar vessel diameter of two branches
- more with downstream lesions
- RCA CTO affects outcomes
- more with comorbidities
 - Diabetes
 - peripheral artery disease

Lesion location-oriented strategies



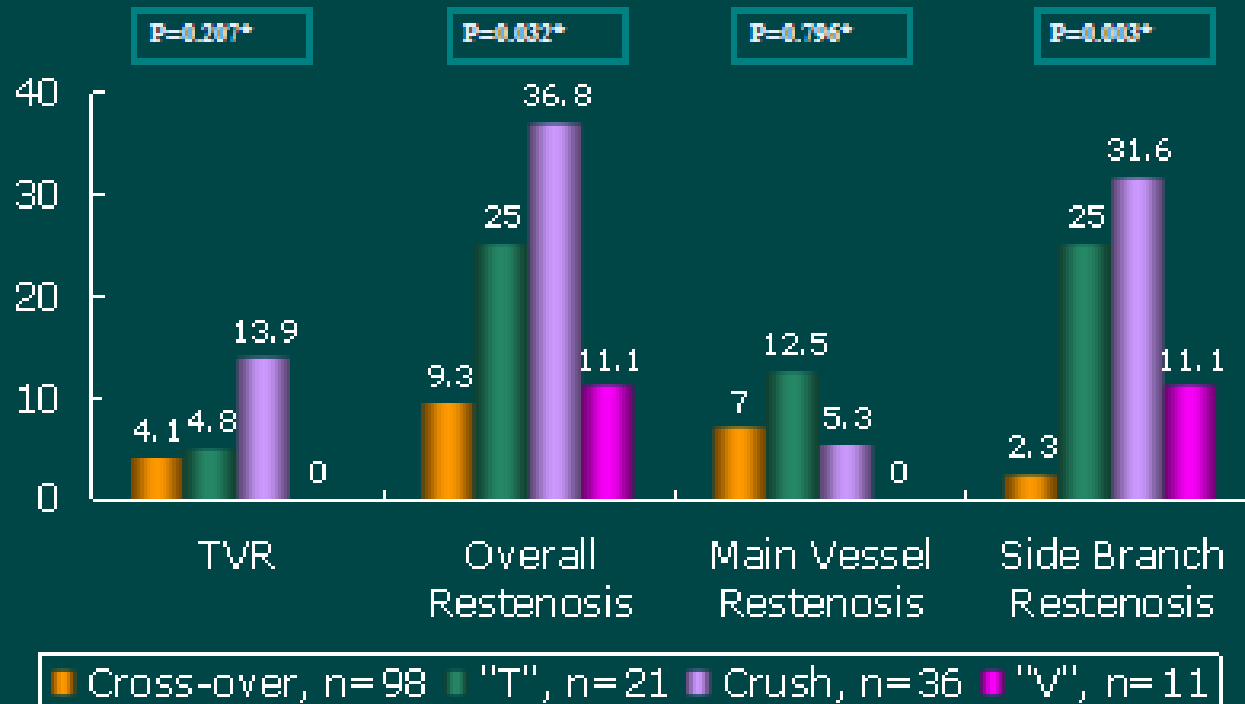


What type of bifurcations are commonly treated?

- >70% is true bifurcation lesions
- Extent of SB plaque might determine strategy
- >40% of SB lesion length > 10 mm
- 2-stent is commonly required

Registry clinical trial

Restenosis in Bifur. Subgroup in DES Era



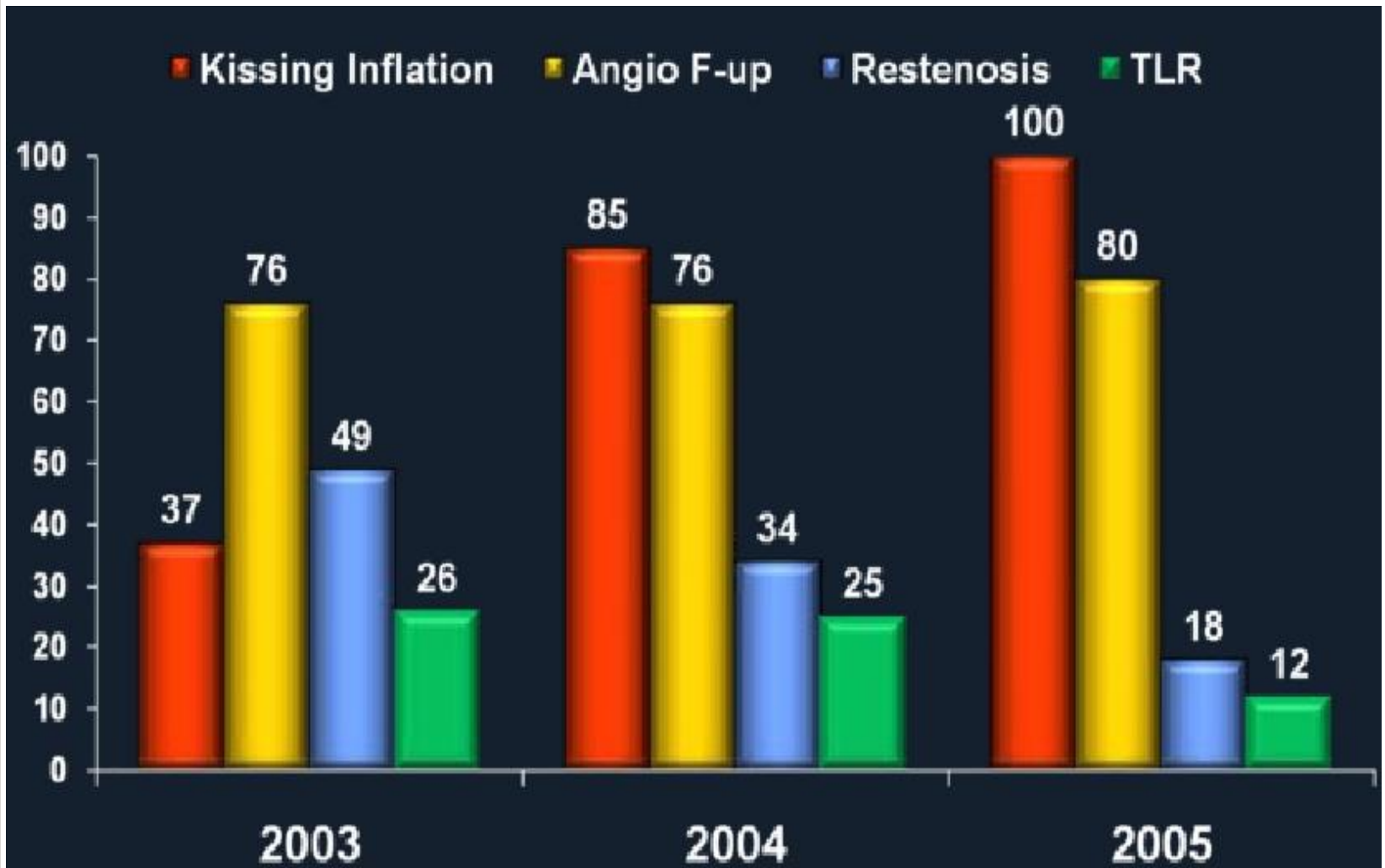
Current Clinical trials for LM Bif.

- No randomized Trial comparing 1- vs. 2 stent for LM Bif.
- No randomized Trial comparing 2A- vs. 2B stent for LM Bif.
- ISAR-Left Main: non-randomized
 - >80% of left main bifurcation treated by culotte stenting,
 - <0.1% stent thrombosis

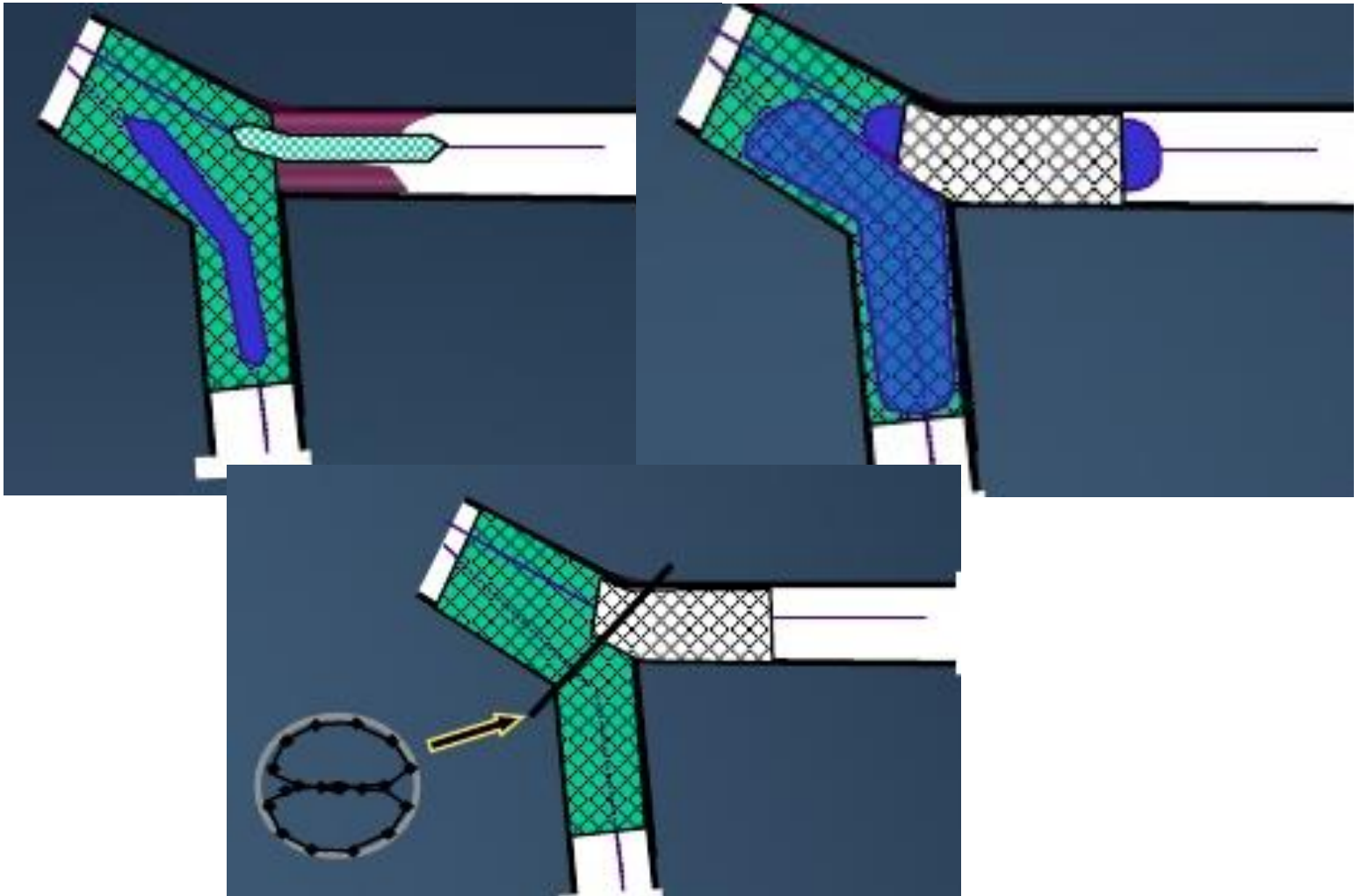
Key issues in stenting LM Bif.

- Which stent to implant?
 - BMS vs. DES
- How to approach a bifurcation?
 - How many wires?
 - Predilate SB or not?
 - How many stents
 - Which 2-stent better
- FFR- or Angio-guided 2nd stent for SB

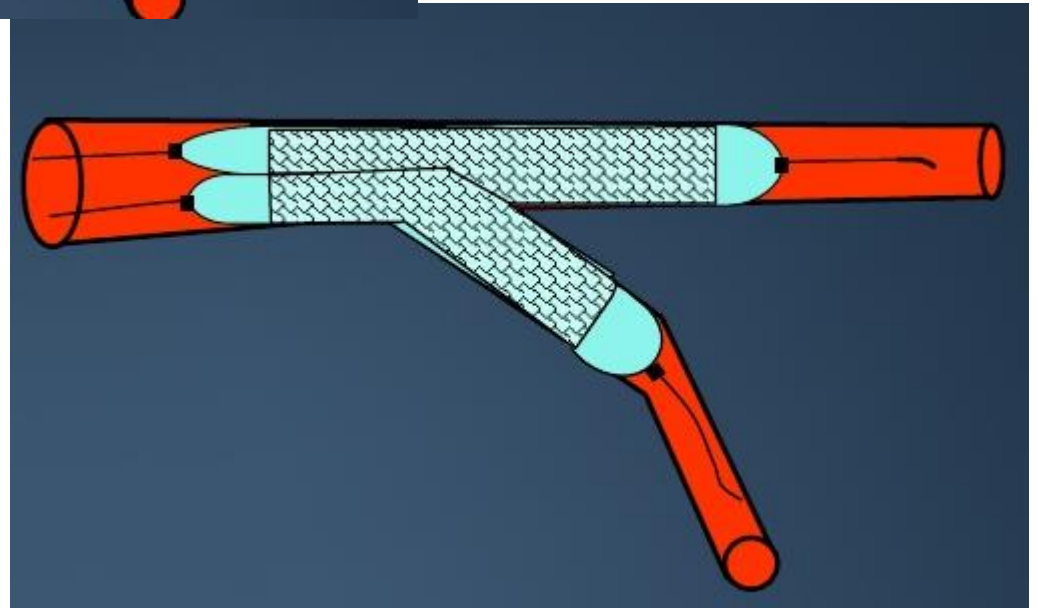
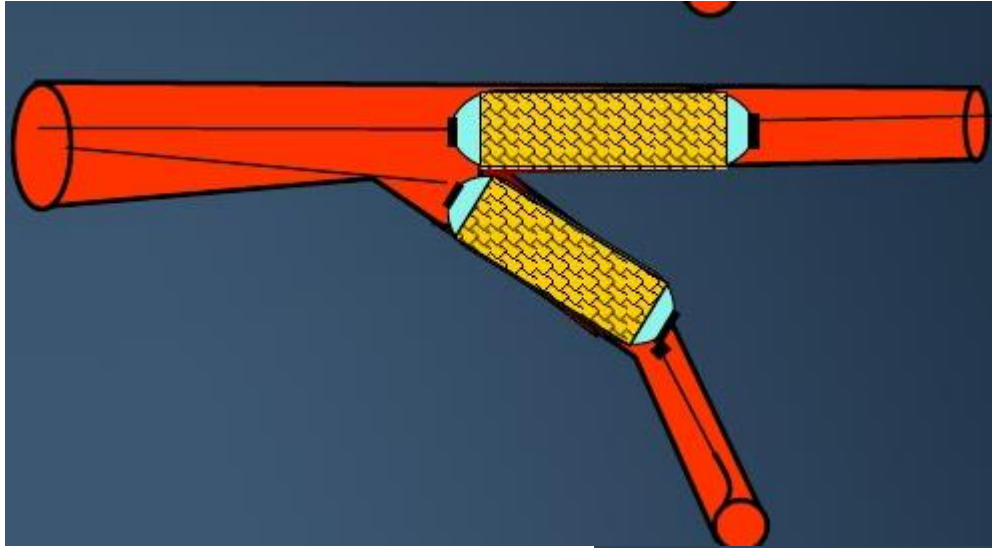
Importance of FKBI after 2-stent



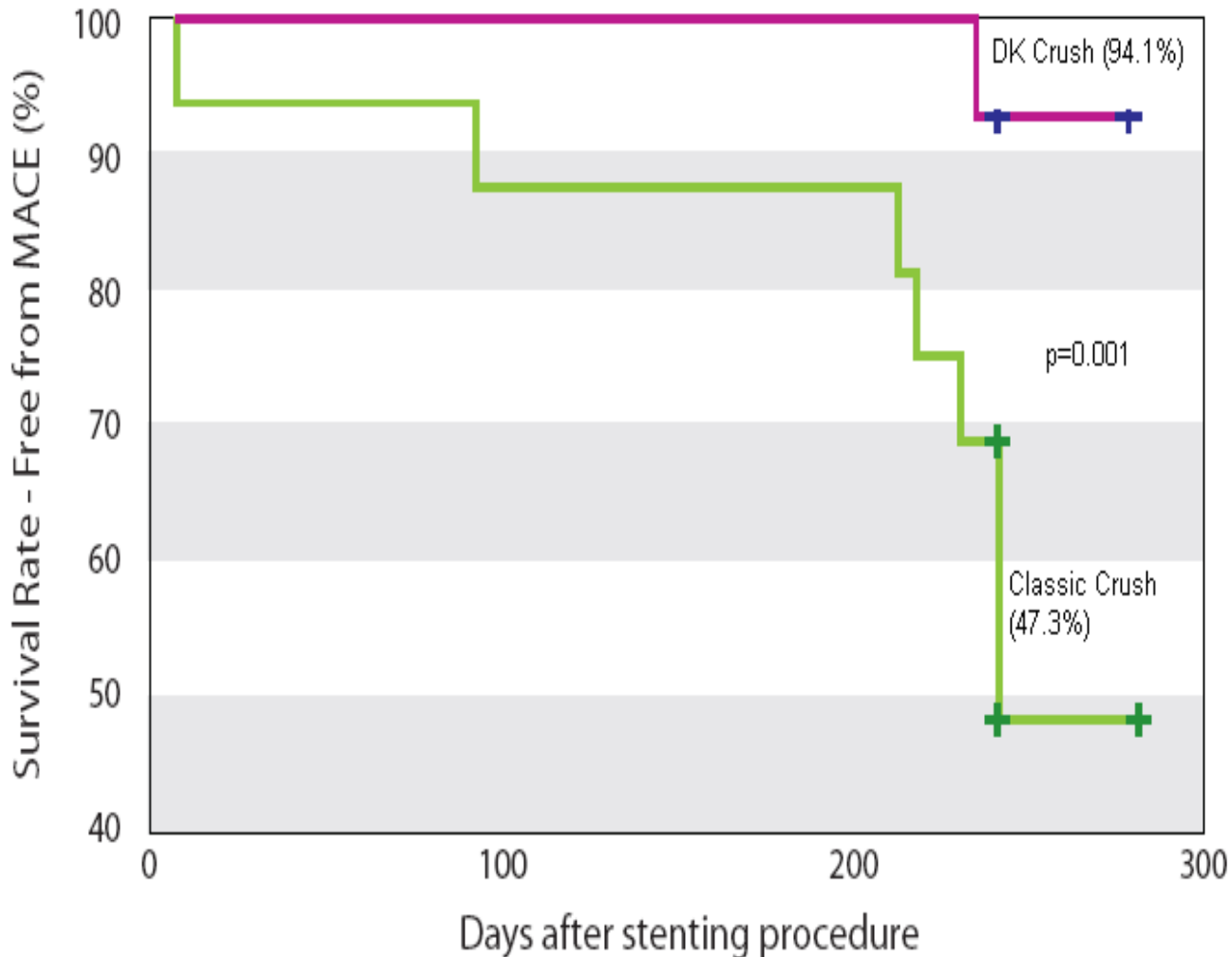
T and TAP: Gap or too longer



V/SKS stenting

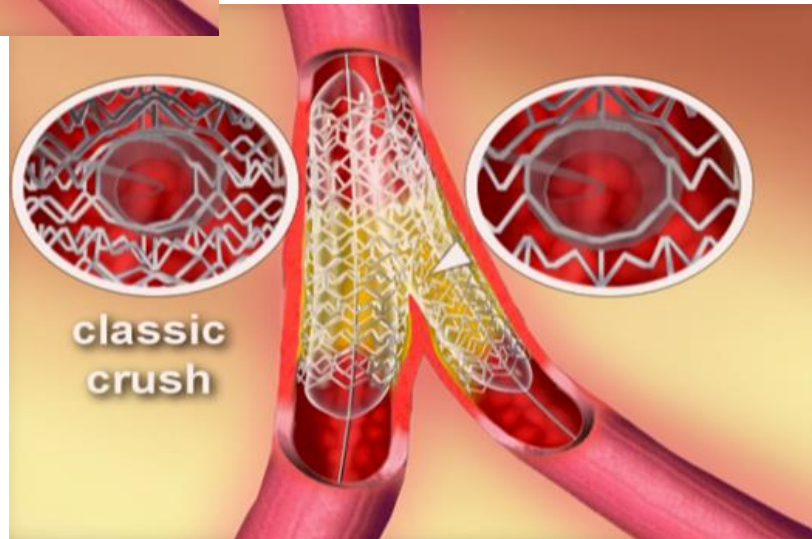
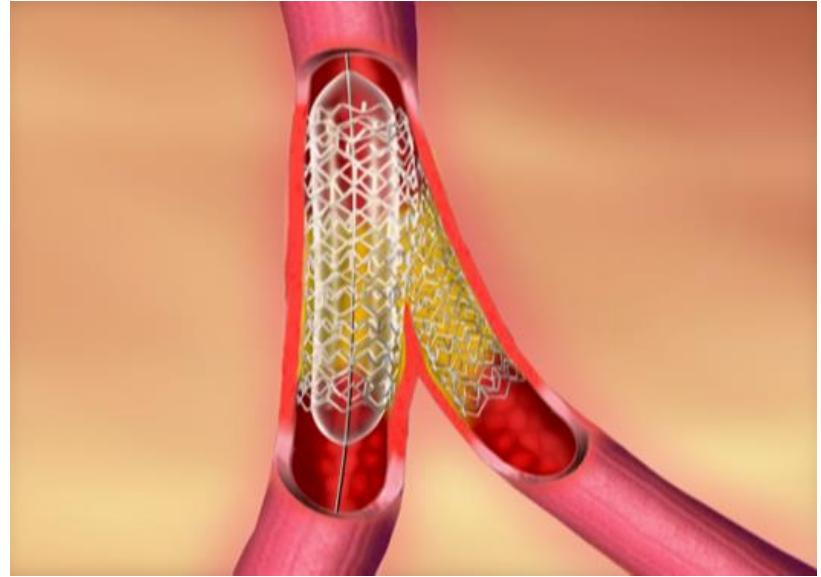
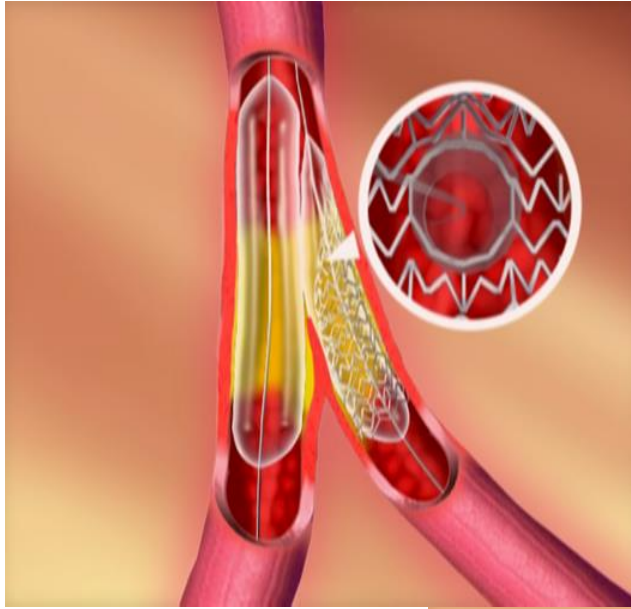


DKCRUSH-I :LM subgroup---DK vs. crush

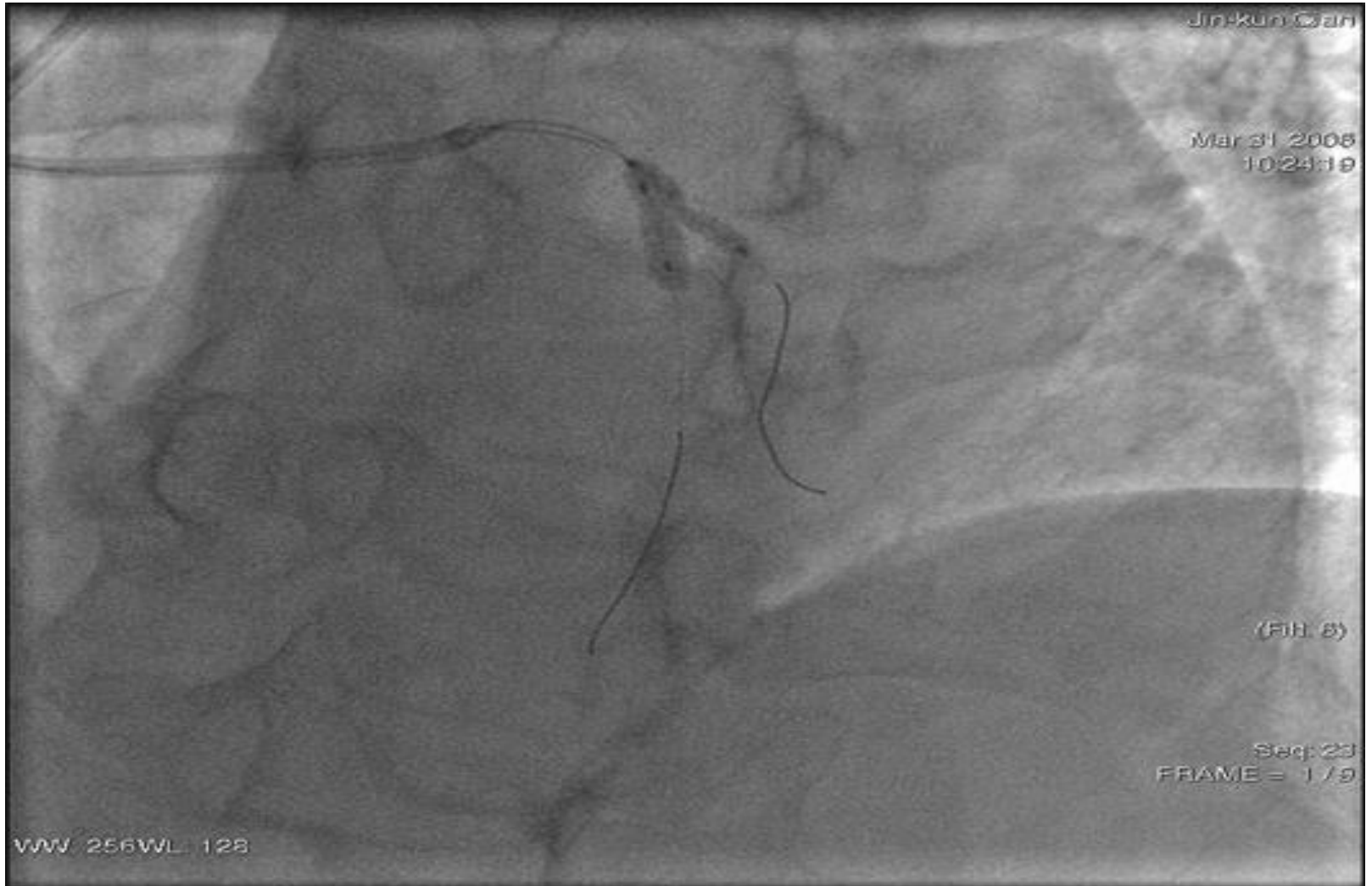


Chen et al. Catheterization and Cardiovascular Interv. 2007

DK crush stenting technique



Unsatisfied kissing inflation



Culotte stenting for LM Bif.--Data

- Adriaenssens et al. Eur Heart J 2008. 29(23): 2868-76.

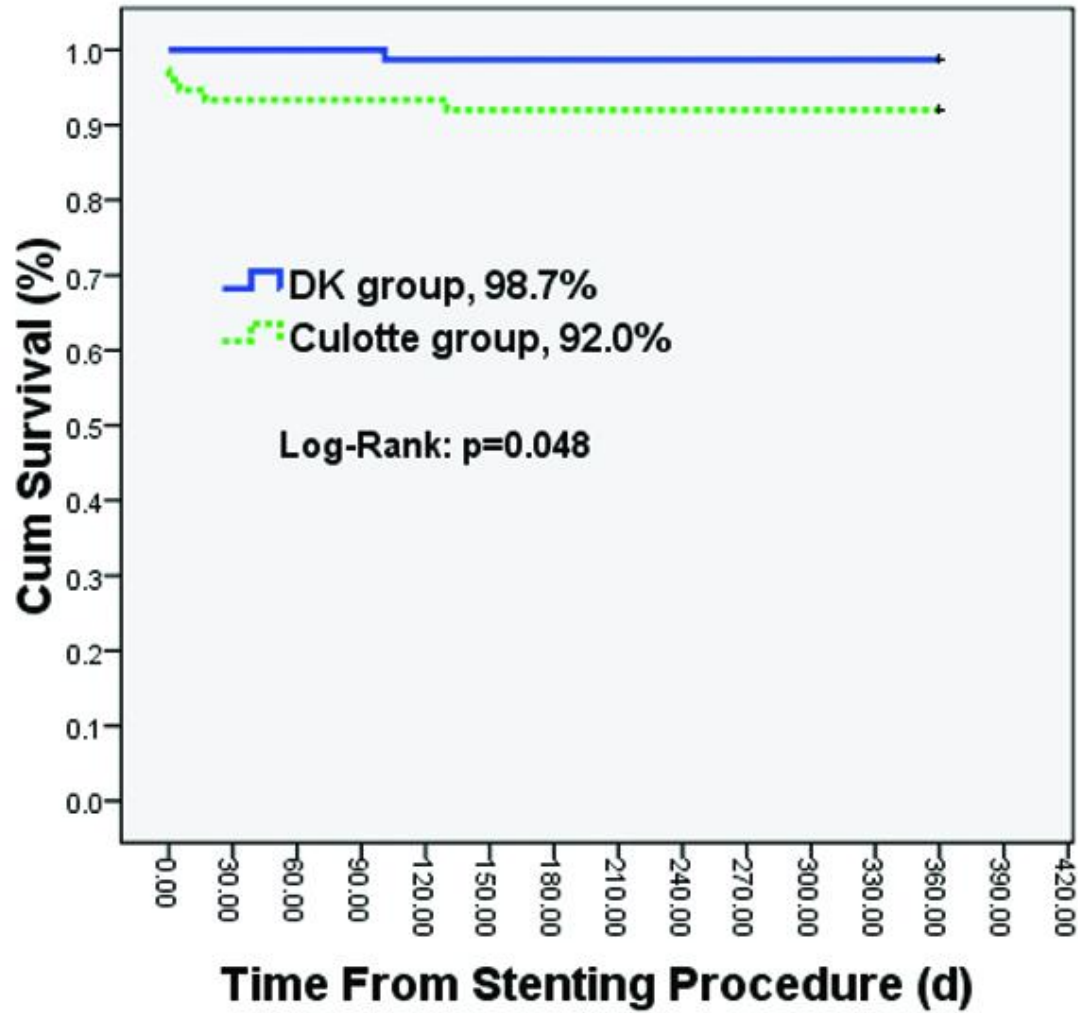
ISR at ostial SB=16%

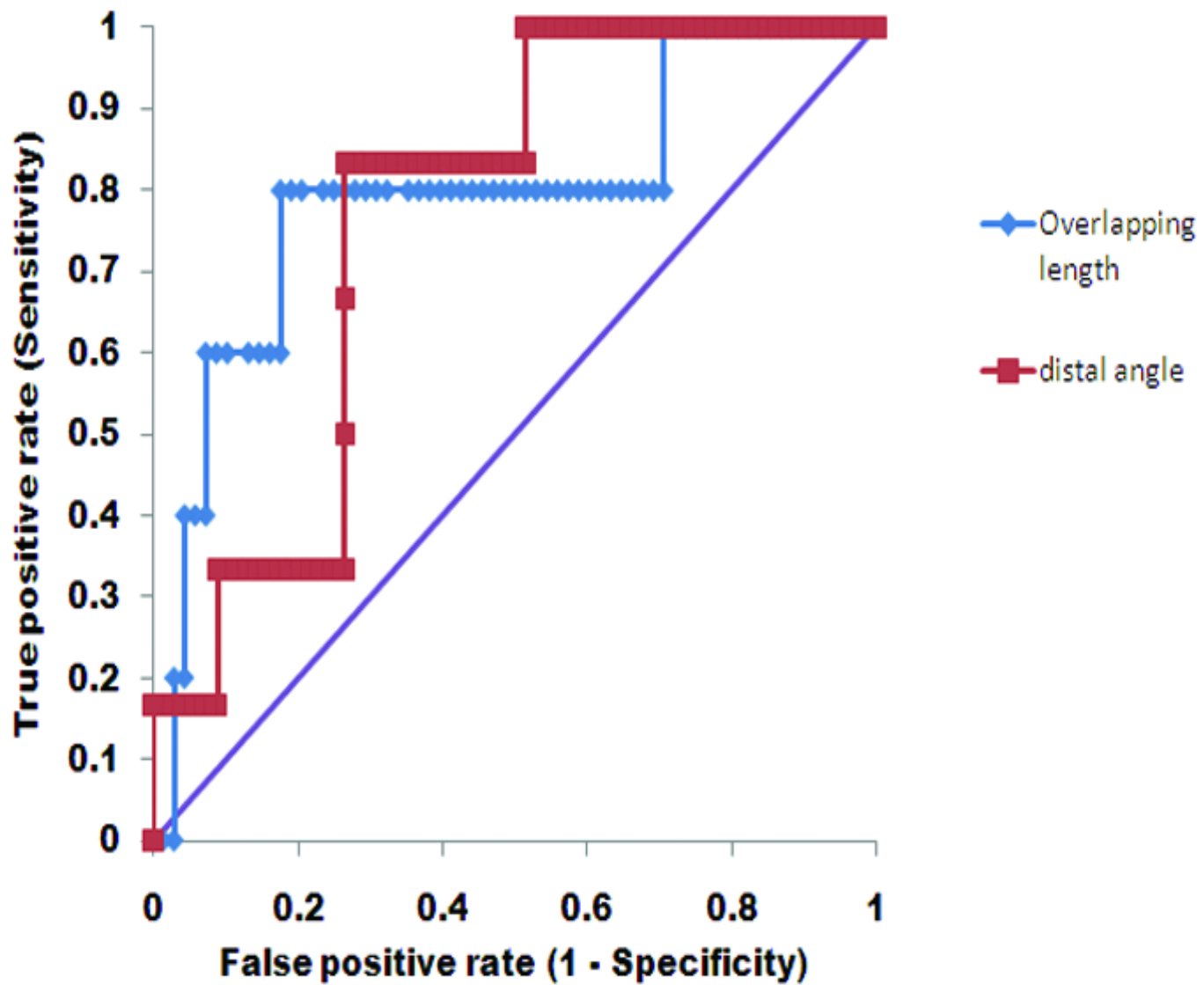
TLR=21%

DKCRUSH-III study

- RCT, multicenter
- 454 patients expected
- 1EP=MACE
- 2EP=ISR and late lumen loss
- Safety EP=stent thrombosis
- It was stopped prematurely because of ST in culotte group >5% at 12-month

Stent Thrombosis-free Rate at 12-month





In conclusion

- Current data from stenting non-LM Bif. is suitable for LM Bif.
- Risk stratification by SYNTAX or NERS score is useful but not routinely used
- 1-stent with FFR guided stenting SB is extensively accepted
- Randomized trials comparing 1- vs. 2-stent and comparing 2A- vs. 2B stent are urgently required



Thanks for your attention!