Left main bifurcation PCI: Similarity and difference between DKCRUSH-V vs. EBC Main
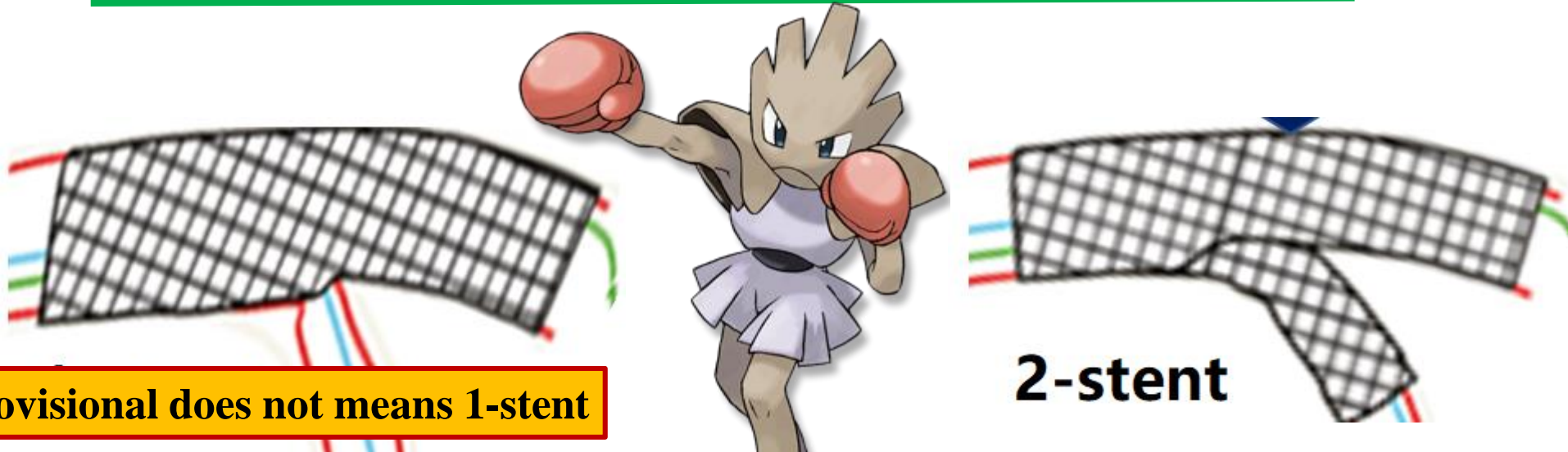
Shao-Liang Chen, MD

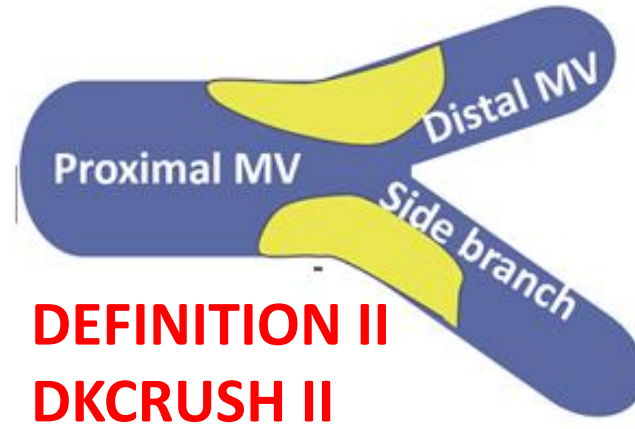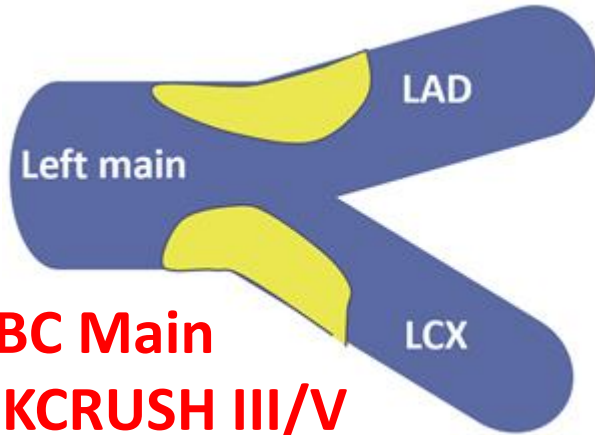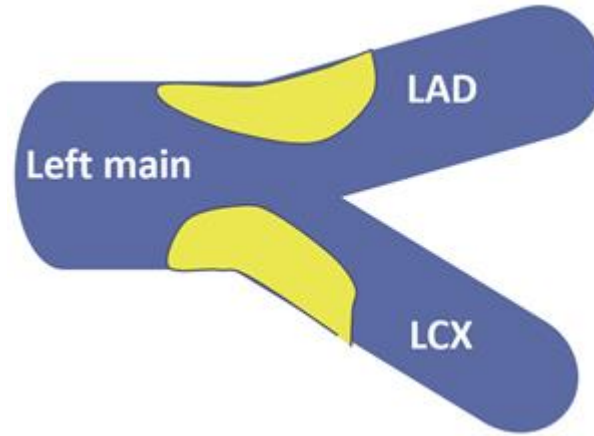Nanjing First Hospital

Nanjing Medical University

China

I, Dr. Shao-Liang Chen, have nothing to disclose

Objectives of clinical trials

EBC Main
DKCRUSH III/V

DEFINITION II
DKCRUSH II

Provisional does not means 1-stent

2-stent

Objectives of clinical trials

Study inclusion criteria

	EBC Main	DKCRUSH V
Sample size	Estimated 450, Finally 467	Estimated 484; finally 482
SYNTAX scores	<32 scores	No limit
AMI	>72 h	>24 h
CTO	Excluded	Included after opened
Two-stent	T/TAP, culotte, or DK crush	DK crush
Exact two-stent	Culotte: 53%; TAP: 33% DK crush:5%	DK crush: 100%
Primary endpoint at 1-year	Death, MI, TLR; Superiority design	Cardiac death, TVMI, TLR; Superiority design

EBC MAIN, Eur Heart J 2021; DKCRUSH V, JACC 2017

Assumption and lesions specificities

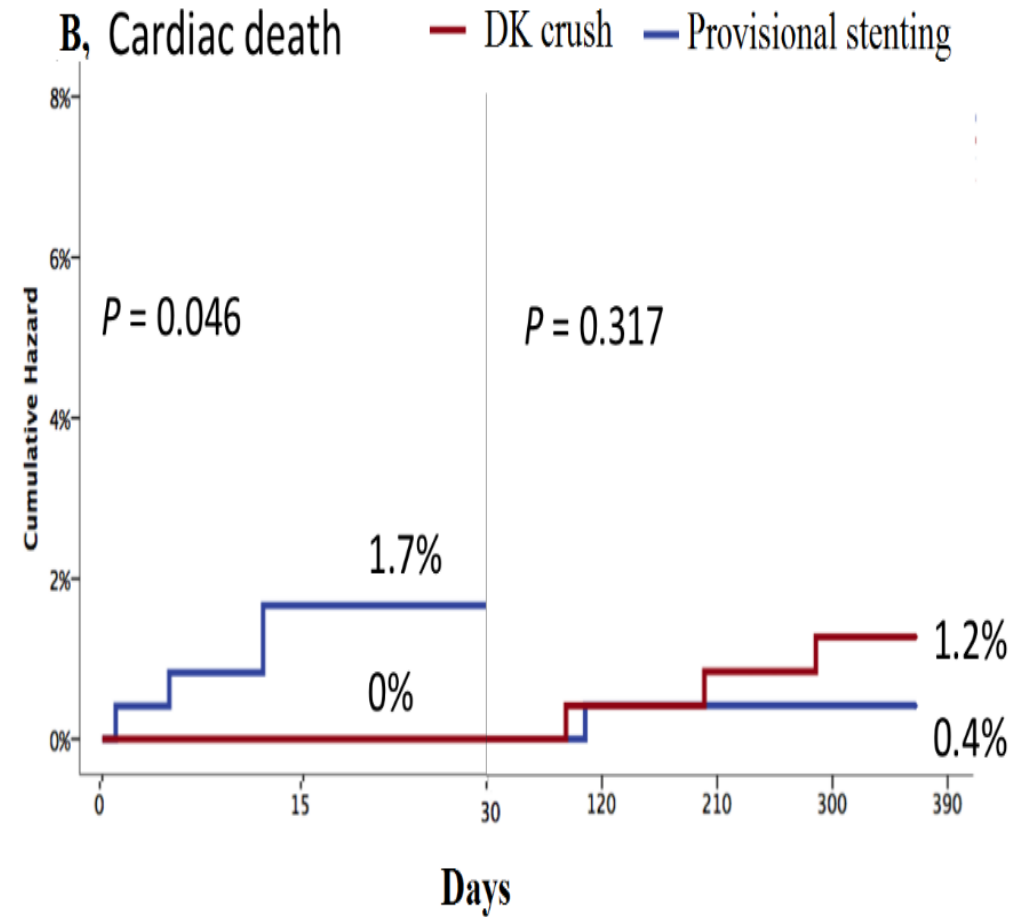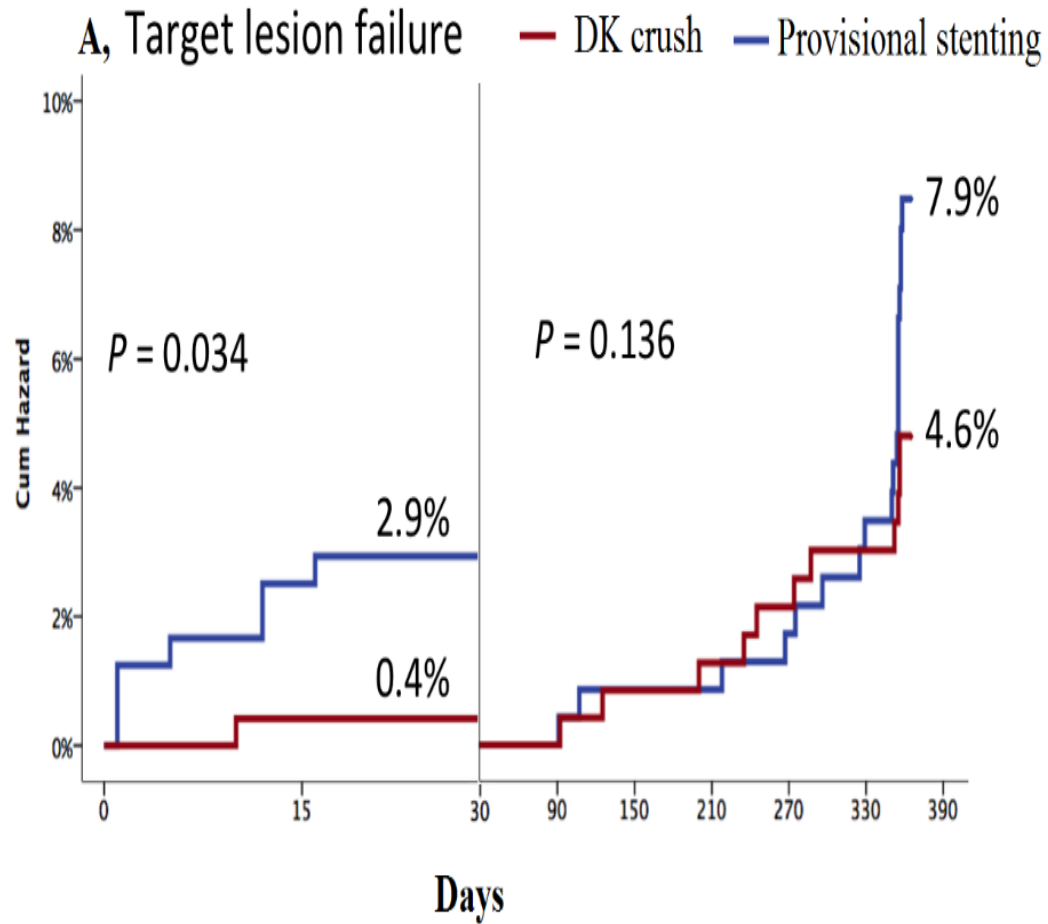|	EBC Main	DKCRUSH V
Primary endpoint at 1-year	**25% in two-stent group** 14% in provisional group	14% in provisional group 7% in DK crush group
SYNTAX scores	23 scores	31 scores
No.PCI yearly/PI	>150/per operator	>300/per operator, ≥20 LM-PCI
SB lesion length	7 mm	16 mm
Lesion types	Medina 111/011	Medina 111/011
Complexity	Not classified	Complex bifurcations in 31.5%

✓ SCAI definition of PMI was used in EBC MAIN, but CK-MB increase >5-10 times was applied in the DKCRUSH V study

Procedures and outcome

	EBC Main		DKCRUSH V	
Cross-over to 2-stent	22%		41%	
Reasons for treating SB	TIMI<3, >A dissection, >90% compromise		TIMI <3, >A dissection, >75% compromise	
IVUS use	40%		41%	
Endpoints	**Provisional**	**Two-stent**	**Provisional**	**DK crush**
Primary	14.7%	17.7%	10.7%	5.0%
Secondary	Death	3%	4.2%	CD: 2.1%	1.2%
	MI	10%	10.1%	TVMI:2.9%	0.4%
	TLR	6.1%	9.3%	7.9%	3.8%
	ST	1.7%	1.3%	3.3%	0.4%

EBC MAIN, Eur Heart J 2021; DKCRUSH V, JACC 2017

Landmark analysis of DKCRUSH V trial

DKCRUSH V, JACC 2017

Landmark analysis of DKCRUSH V trial

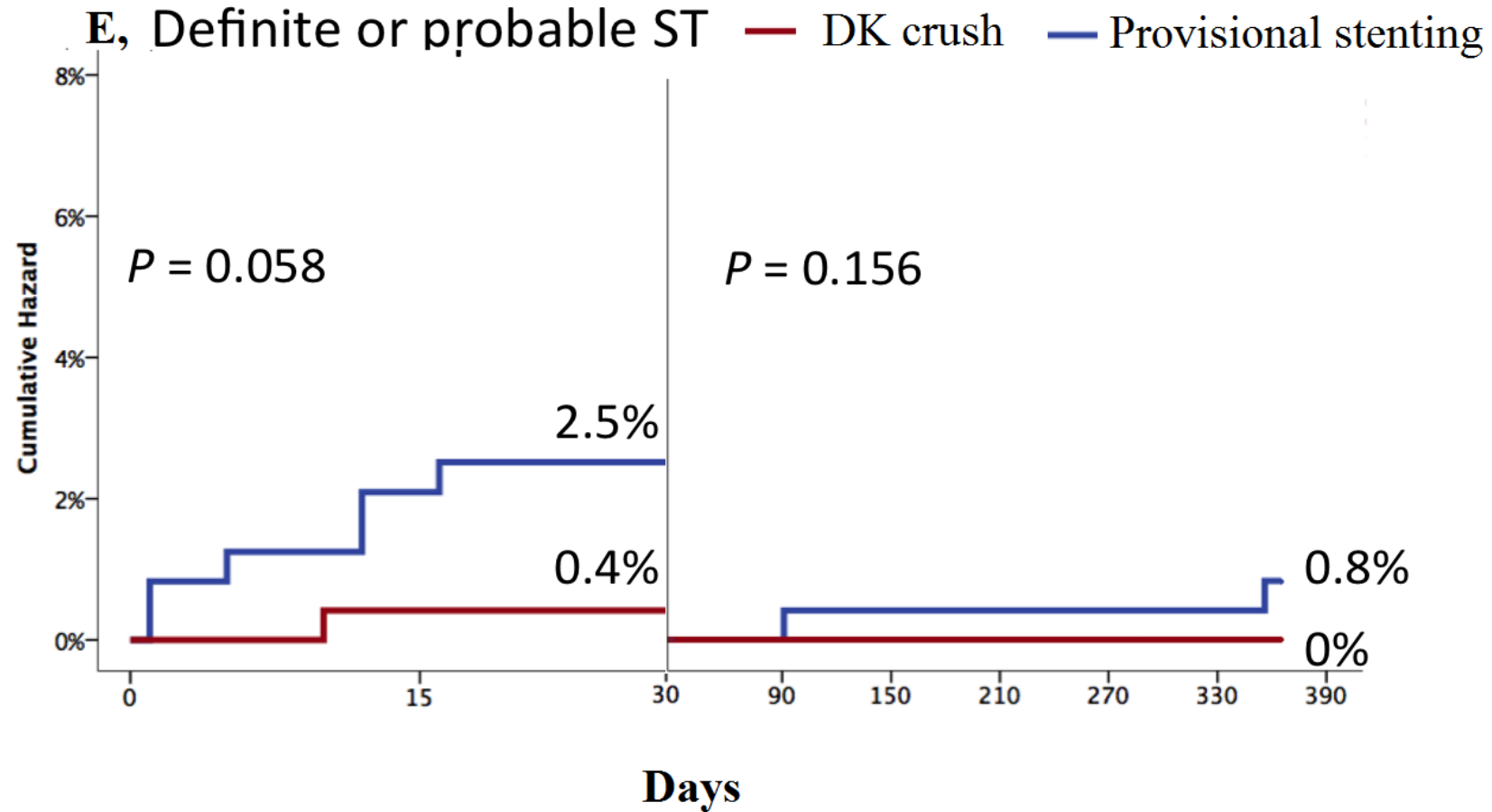*DKCRUSH V, JACC 2017*
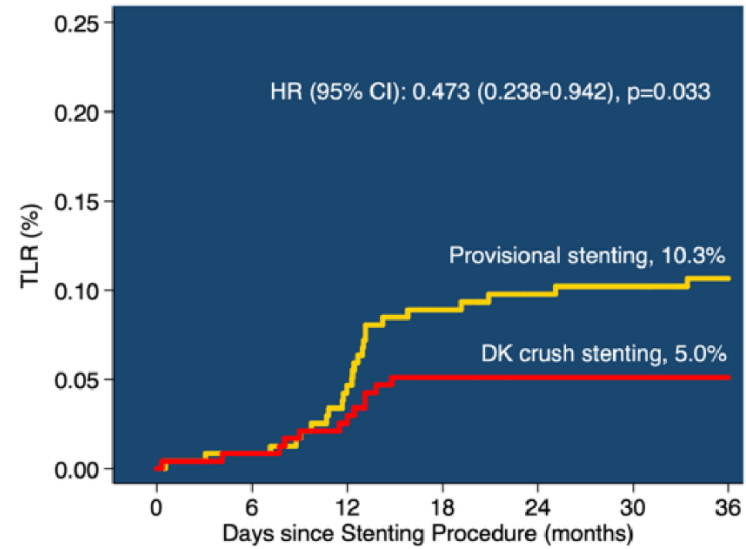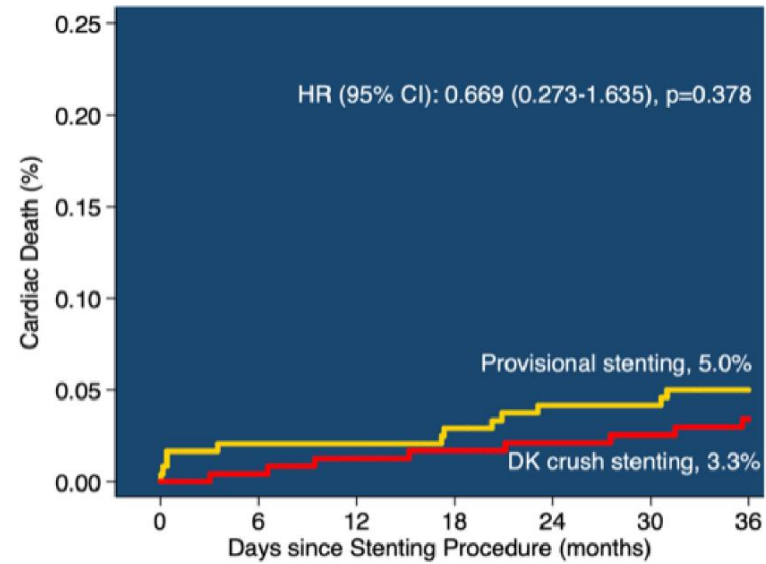
Landmark analysis of DKCRUSH V trial

E, Definite or probable ST — DK crush — Provisional stenting

DKCRUSH V, JACC 2017
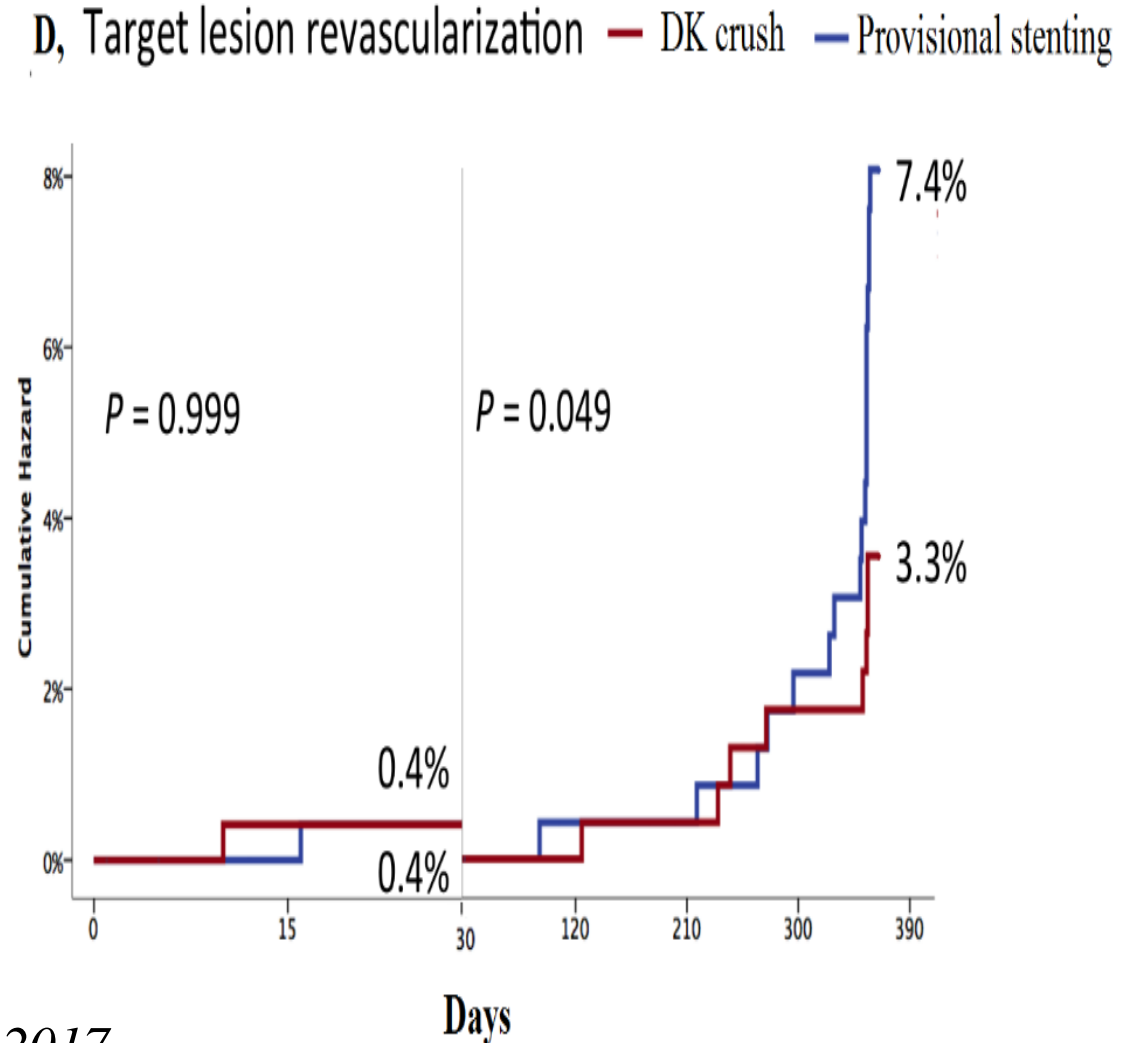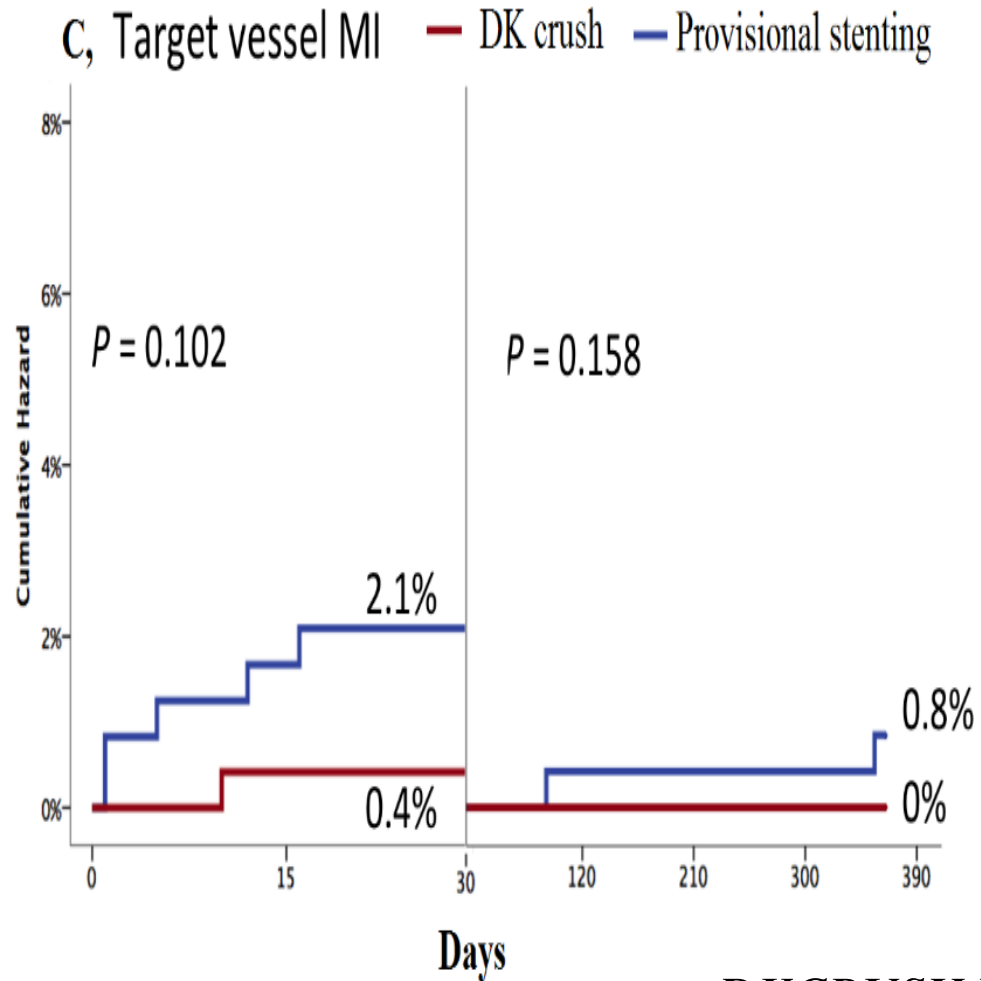
3-year clinical results
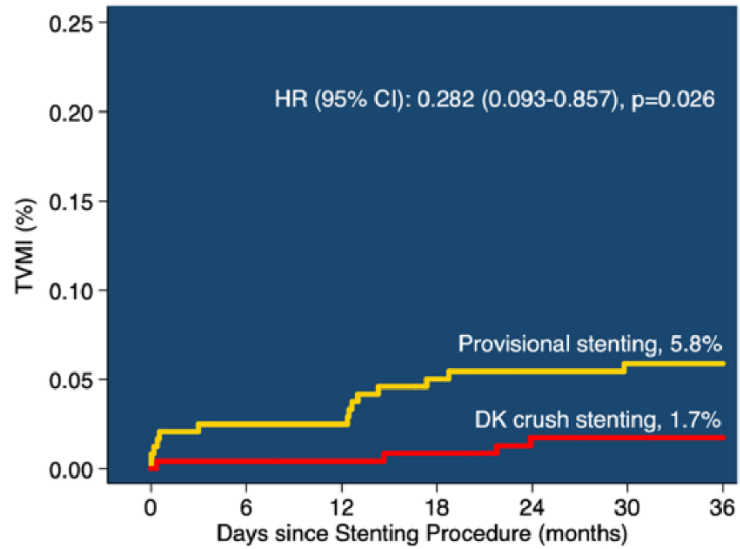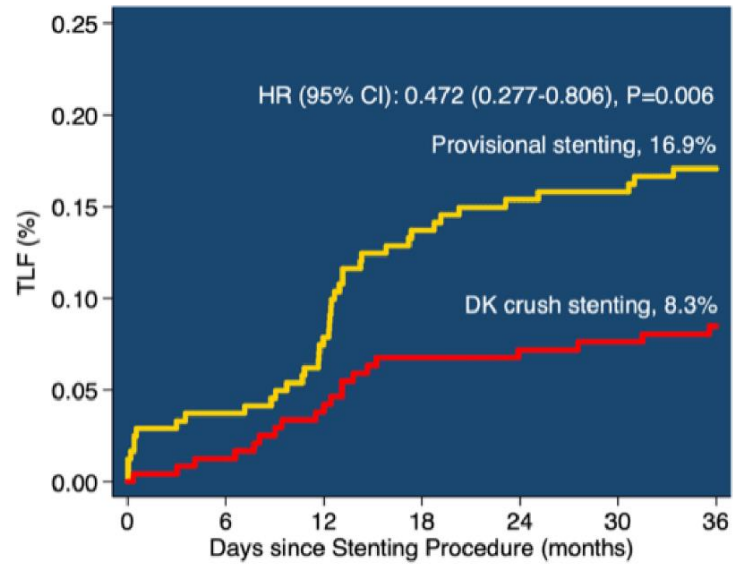
Stratified by lesion's complexity—DEFINITION criteria
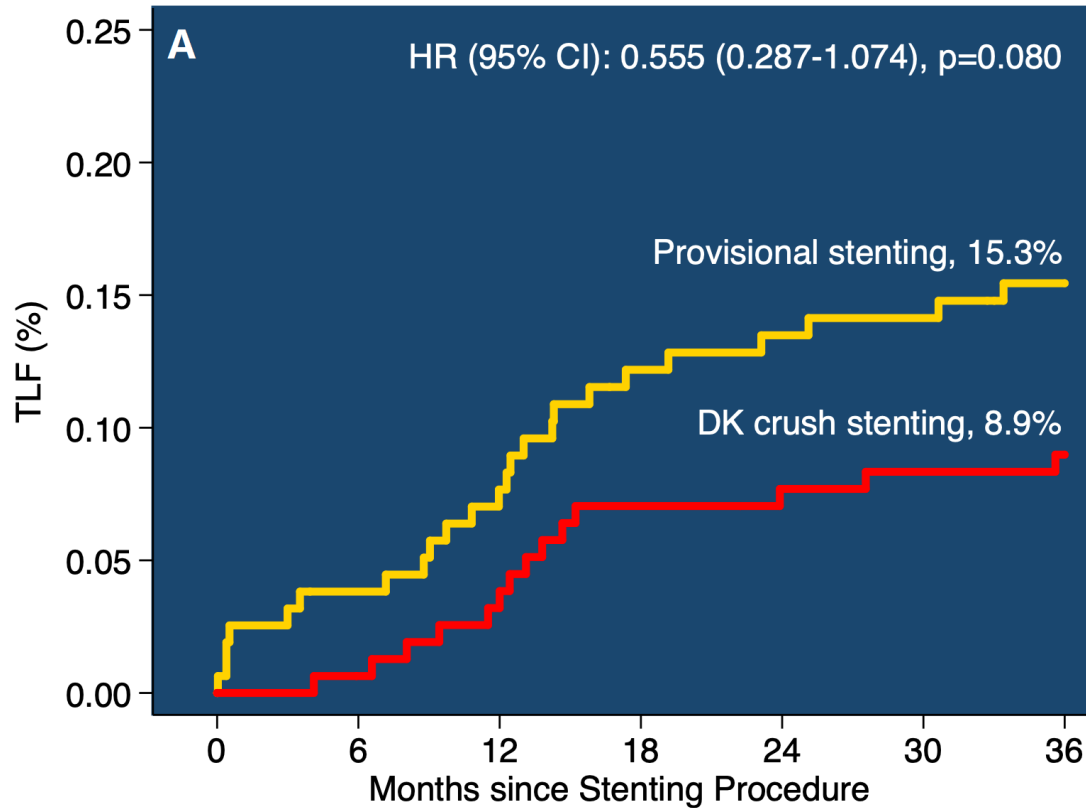
Simple lesions

Complex lesions

DKCRUSH V, JACC: CVINT 2018
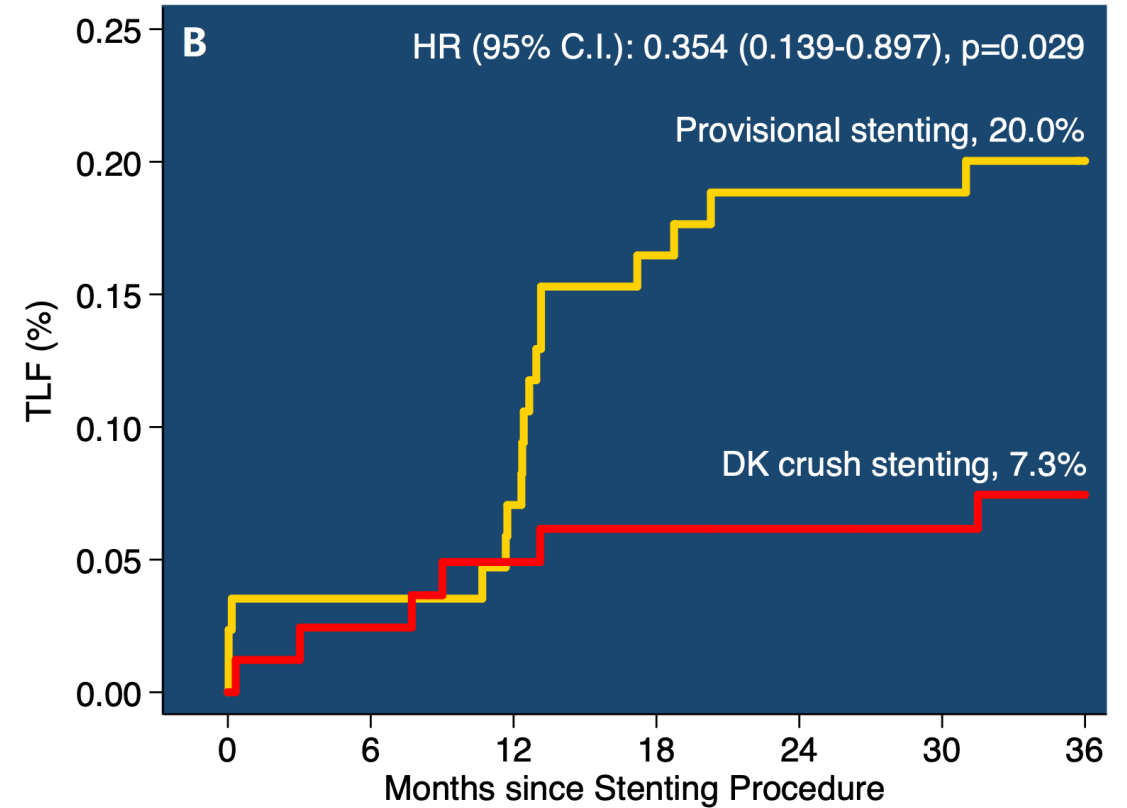
Similarity between EBC Main and DKCRUSH V

CENTRAL ILLUSTRATION

Left main
LAD
LCX
Lesion length < 10-mm
50%<Diameter stenosis<70%

Left main
LAD
LCX
Lesion length ≥10-mm
Diameter stenosis ≥ 70%

Plus any two of :
Multiple bifurcations
Thrombus-containing
MV RVD ≤ 2.5mm
MV lesion length≥25mm
Severe calcification
Bifurcation angle >70⁰ or
Bifurcation angle ≤45⁰

NO — Simple lesions
Yes — Complex lesions

1-year TLF
8.0% Provisional
3.9% DK crush
HR : 0.68
95% CI: 0.31-1.49

p for interaction=0.65

1-year TLF
18.2% Provisional
7.0% DK crush
HR : 0.27
95% CI: 0.05-0.54

DKCRUSH V, JACC 2017

DEFINITION criteria

SB lesion length ≥10mm

SB diameter stenosis ≥70%

+ Plus 2 of

- Multiple lesions
- Thrombus-containing
- MV-RVD ≤ 2.5-mm
- Severe calcification
- MV lesion ≥ 25-mm
- Distal angle >70⁰ or ≤ 45⁰

Complex bifurcation lesions

Thanks for your attention!