

After LM stenting with 2 stents  
we should prolong  
DAPT up to 2 years!

Yes

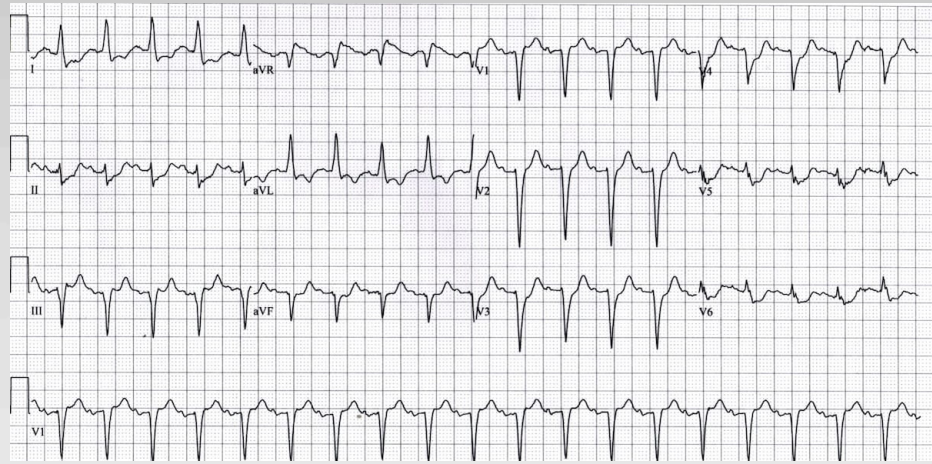


**Marco Zimarino, MD, PhD**

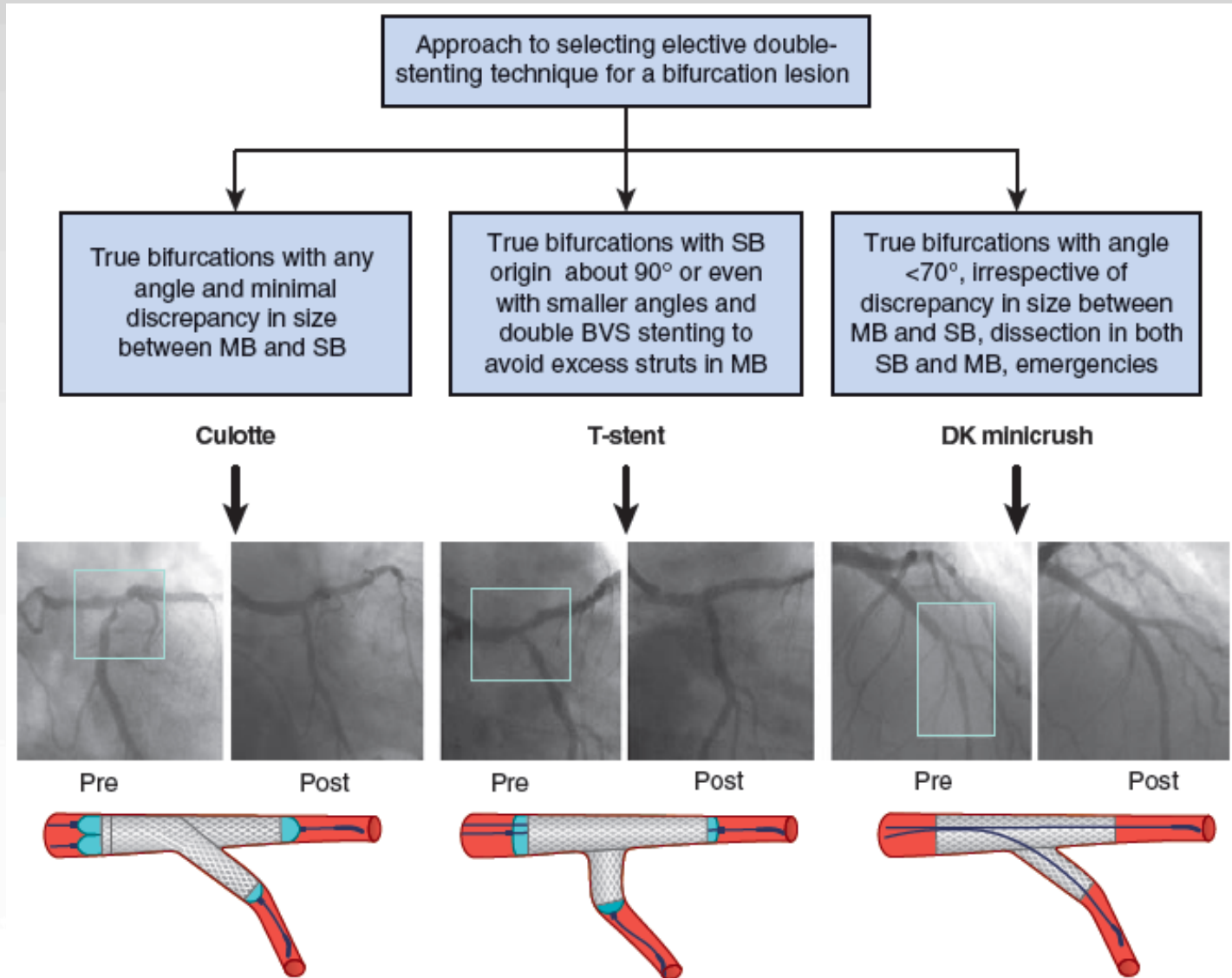
**UOC Emodinamica diagnostica e interventistica – ASL Abruzzo 2  
Istituto di Cardiologia, Università G. d’Annunzio – Chieti Pescara**



- 92 yo male; former Smoker
- Transient ST elevation aVR



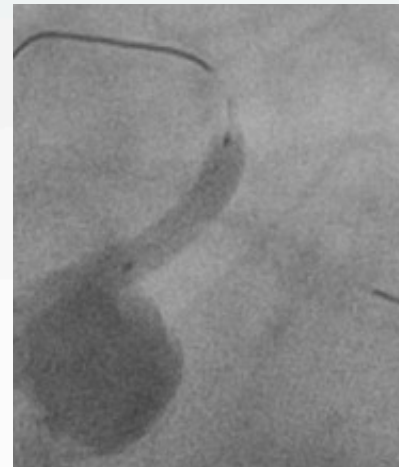
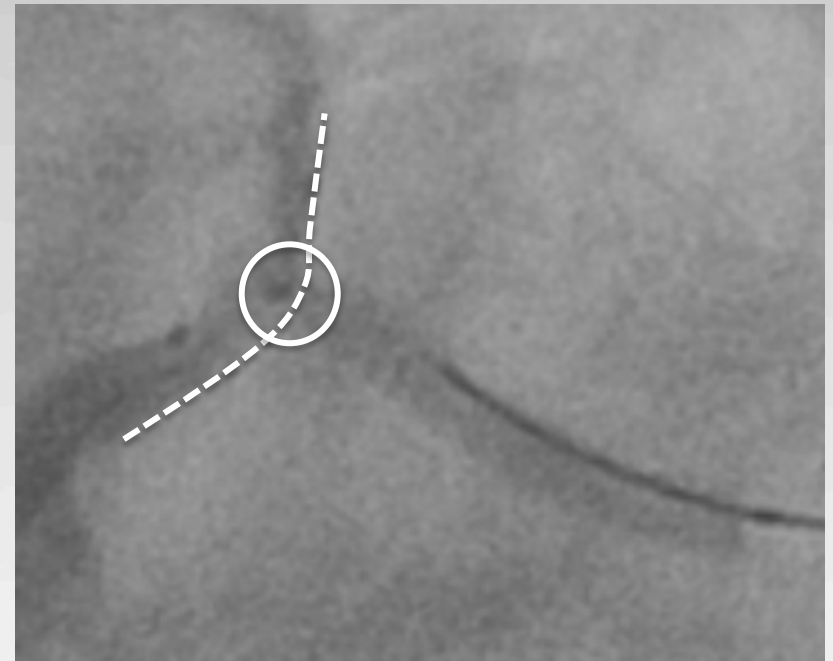
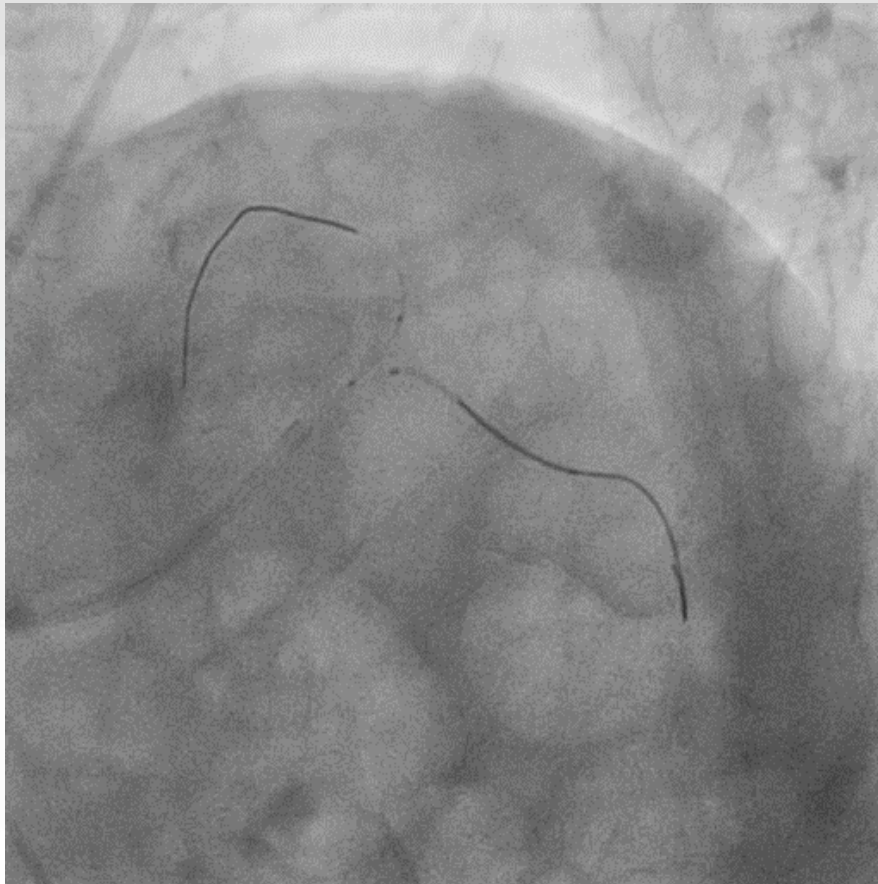
# Strategy for true bifurcation treatment



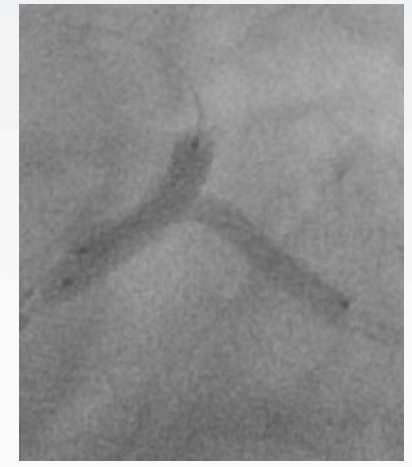
from Colombo A et Latib A in "Bifurcations"

as part of Bhatt DL ed: Cardiovascular Intervention: A Companion to Braunwald's Heart Disease (2016)

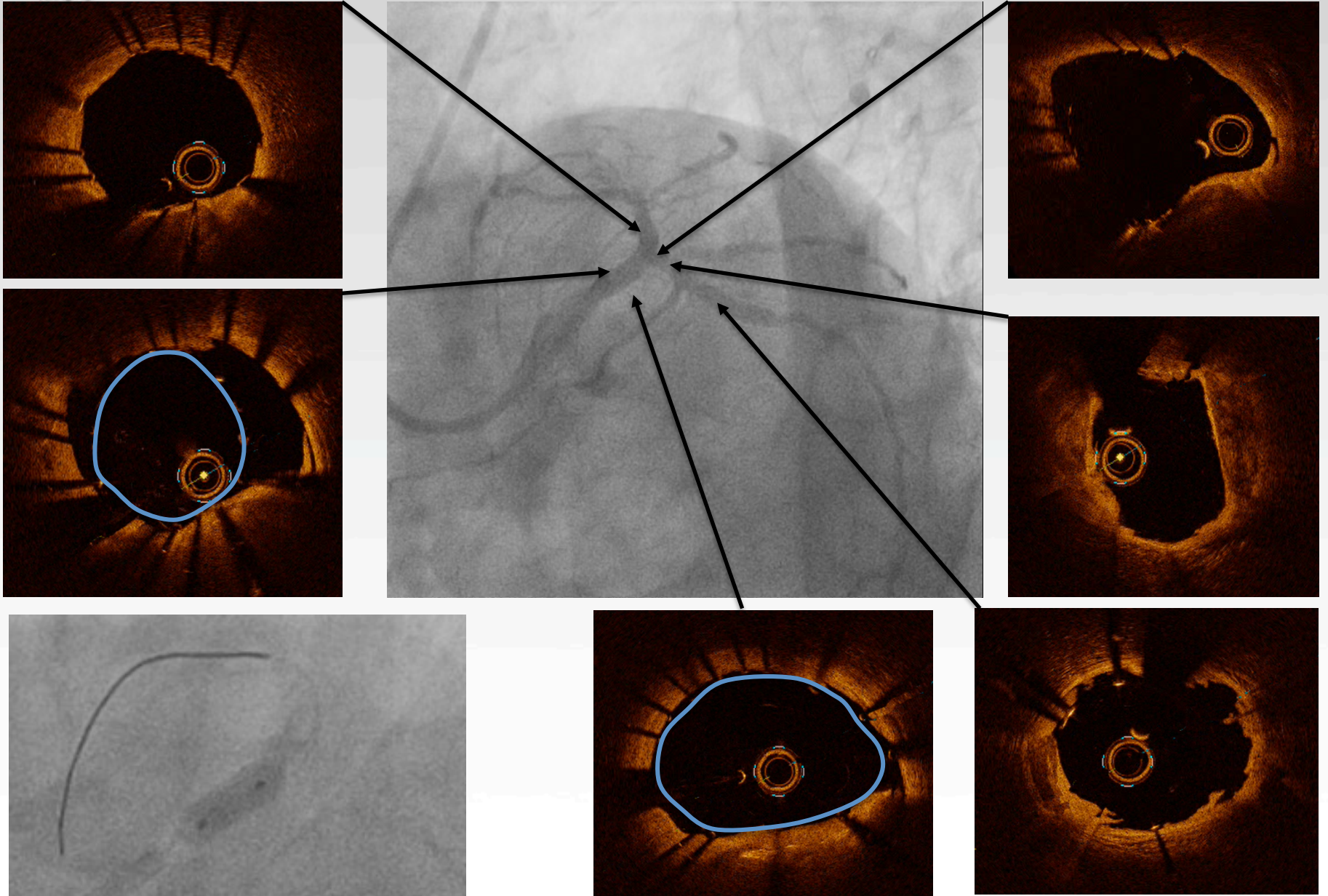
# T-stenting



**MV stenting**



**KB**





# Studies assessing the impact of DAPT duration after PCI in bifurcations

	Giustino et al.	Yeh et al.	Jang et al.	Rhee et al.	Limarino et al.	Costa et al.
Year	2016	2017	2018	2018	2019	2019
Type of study	Pooled analysis from 6 RCT	Substudy	nROS	Pooled analysis from 5 nROS	nROS	
Original study	-	DAPT	COBIS II	GRAND-DES	EBC registry	Precise DAPT
Study population	n=9,577	n=11,554	n=2,082	n=700	n=5,036	n=14,963
Bifurcation lesions	6.8%	6.2%	100%	100%	100%	NA
2-stent	100%	100%	26%	19%	10%	100%
Follow-up	13 months	30 months	4 years	3 years	18 months	2 years
DAPT duration						
Short-term	3-6 months	12 months	<12 months	<12 months	<5/12 m SCAD/ACS	3-6 months
Long-term	≥12 months	30 months	≥12 months	≥12 months	≥5/12 m SCAD/ACS	12-24 months
Efficacy endpoint	MACE (cardiac death, MI, or ST)	MI or ST	Death or MI	MACE (cardiac death, MI, or ST)	MACE (cardiac death, MI, or ST)	MI, ST, stroke, TVR
Safety endpoint	Major bleeding	Moderate/severe bleeding	NA	NA	NA	Major and minor bleeding
Main findings	Long-term DAPT reduces the risk of MACE in the complex PCI group, increases major bleedings in both groups	Long-term DAPT increases risk of bleeding and reduces MI or ST, most evident among complex PCI with DAPT score ≥2	After PS matching risk of death or MI was higher in the long- vs short-term DAPT group	After PS matching, risk of MACE was higher in the 2-stent group with short-term, not with long-term DAPT	Long-term DAPT was associated with a reduced risk of MACE.	Long-term DAPT reduces risk of efficacy + primary endpoint only in complex PCI group with PRECISE-DAPT score <25.

# Clinical Outcomes according to treatment strategy in LM

	2 Stents (n = 133)	1 Stent (n = 567)	Unadjusted		MV Adjusted		PS Matched	
			HR (95% CI)	p Value	HR (95% CI)	p Value	HR (95% CI)	p Value
All-cause death	12.8 (17)	8.1 (45)	1.66 (0.95-2.90)	0.076	1.82 (0.94-3.54)	0.078	2.07 (0.89-4.85)	0.092
Cardiac death	7.7 (10)	5.5 (30)	1.46 (0.72-3.00)	0.296	1.38 (0.60-3.18)	0.450	1.87 (0.63-5.57)	0.263
All-cause MI	0.9 (1)	2.0 (11)	0.40 (0.05-3.08)	0.378	0.30 (0.03-2.62)	0.274	0.26 (0.03-2.34)	0.230
Target vessel MI	0.0 (0)	0.9 (5)	–	–	–	–	–	–
Any repeat revascularization	19.3 (25)	11.8 (65)	1.75 (1.11-2.78)	0.017	1.67 (0.97-2.86)	0.064	1.57 (0.80-3.09)	0.190
Clinically driven TVR	14.7 (19)	6.7 (41)	2.14 (1.24-3.68)	0.006	1.84 (0.95-3.57)	0.072	1.84 (0.80-4.22)	0.150
Clinically driven TLR	13.8 (18)	6.0 (33)	2.48 (1.40-4.40)	0.002	1.95 (0.97-3.96)	0.063	2.09 (0.85-5.19)	0.111
Definite or probable ST	0.8 (1)	0.7 (4)	1.08 (0.12-9.70)	0.943	0.63 (0.04-9.45)	0.736	1.01 (0.06-16.20)	0.993
Target lesion failure*	20.2 (27)	11.4 (63)	1.94 (1.24-3.05)	0.004	1.67 (0.98-2.82)	0.055	1.93 (0.96-3.91)	0.067
Thrombotic adverse cardiovascular event†	9.5 (12)	7.9 (42)	1.25 (0.66-2.38)	0.490	1.11 (0.54-2.29)	0.776	1.25 (0.52-3.03)	0.614

Values are % (n). The cumulative incidences of clinical outcomes are presented as Kaplan-Meier estimates 1,125.0 days after the index procedure. The numbers of patients with specific events are also presented in parentheses. MV Cox proportional hazard regression model and PS matching were used to adjust for baseline differences between comparative groups. \*Target lesion failure was defined as a composite of cardiac death, target vessel MI, or clinically driven TLR. †Thrombotic adverse cardiovascular events were defined as a composite of cardiac death, any MI, or definite or probable ST.

CI = confidence interval; HR = hazard ratio; MI = myocardial infarction; MV = multivariate; PS = propensity score; ST = stent thrombosis; TLR = target lesion revascularization; TVR = target vessel revascularization.

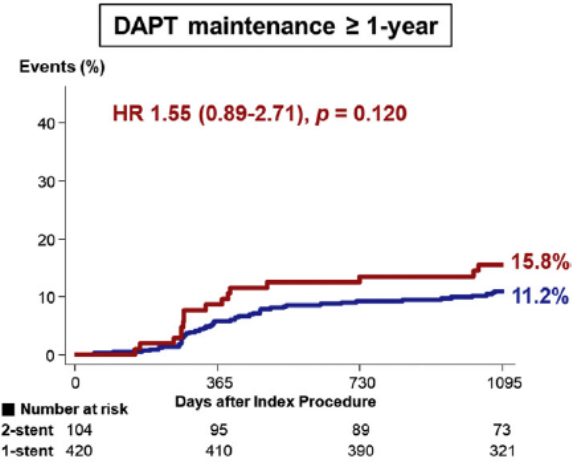
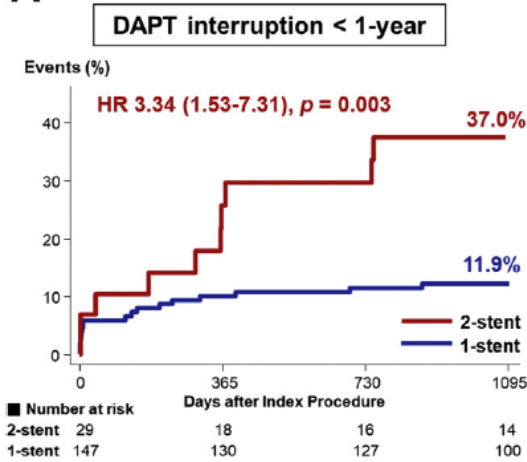
Rhee et al. on behalf of GRAND-DES; *JACC Intv* 2018; 11: 2453-63



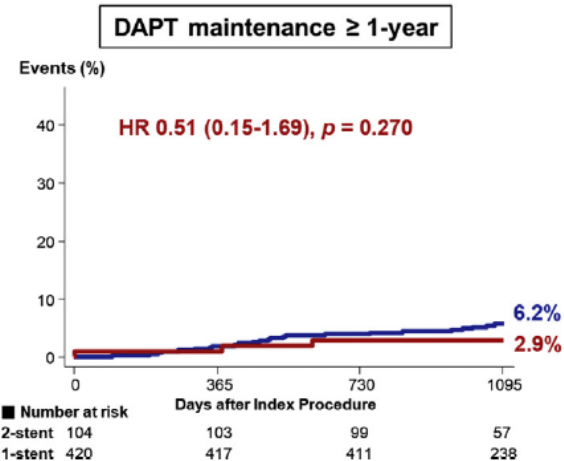
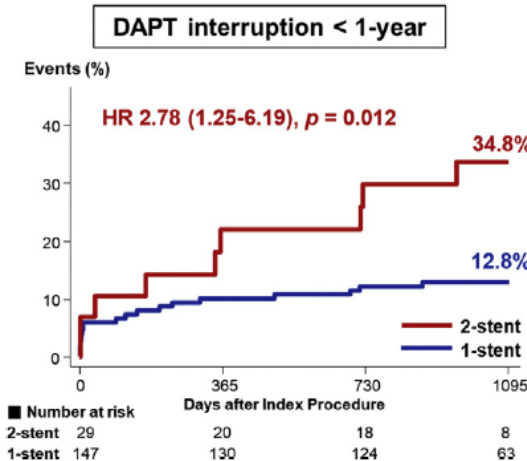
# Clinical Outcomes according to Treatment Strategy Stratified by DAPT Duration

**TLF**  
Cardiac death,  
target MI, TLR

## A Target lesion failure



## B Thrombotic adverse cardiovascular event



**TACE**  
Cardiac Death,  
overall MI,  
Stent  
thrombosis

Rhee et al. on behalf of GRAND-DES; *JACC Intv* 2018; 11: 2453-63

# Algorithm proposal for DAPT duration

