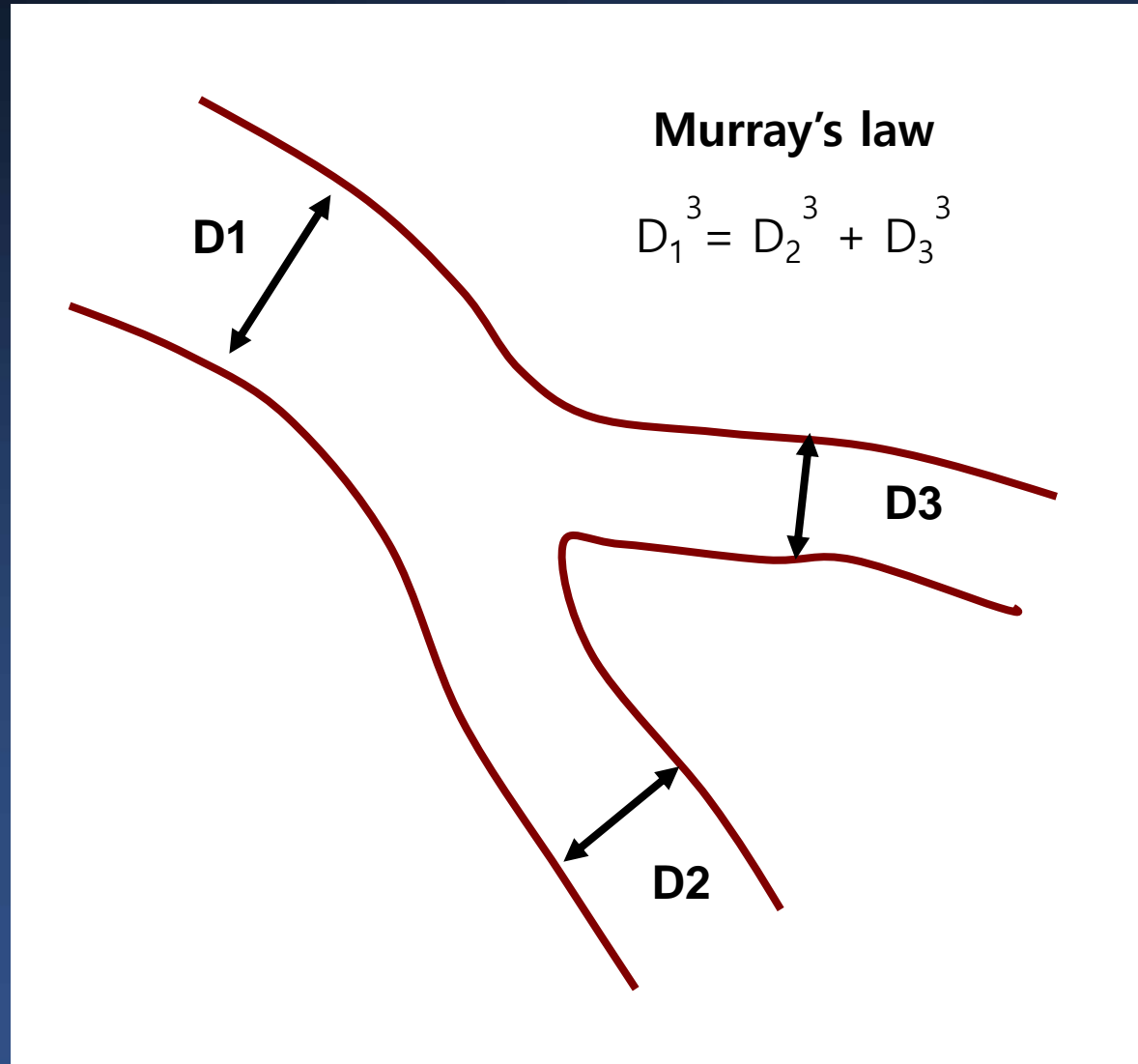


# Hand Down a Secret of Bifurcation PCI

*T. Lefèvre, ICPS, Massy, France*

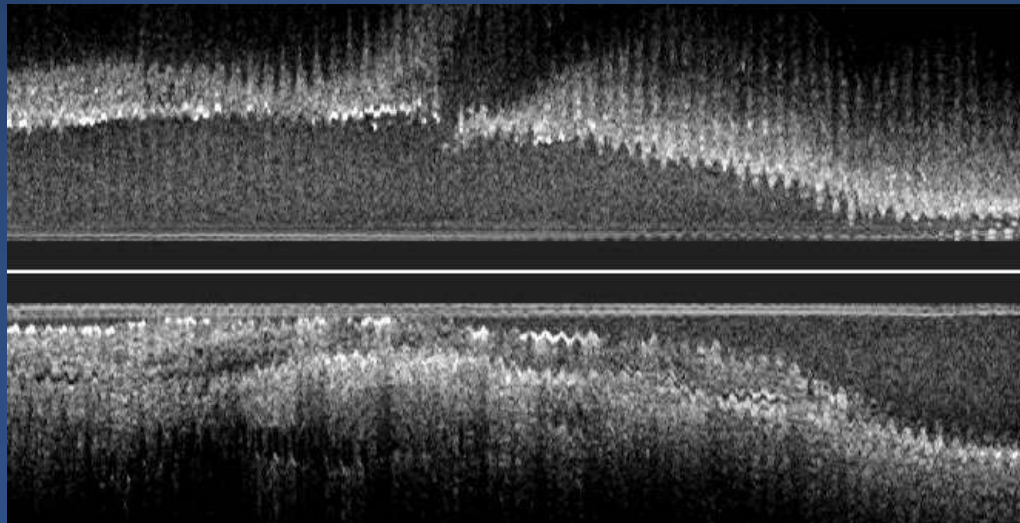
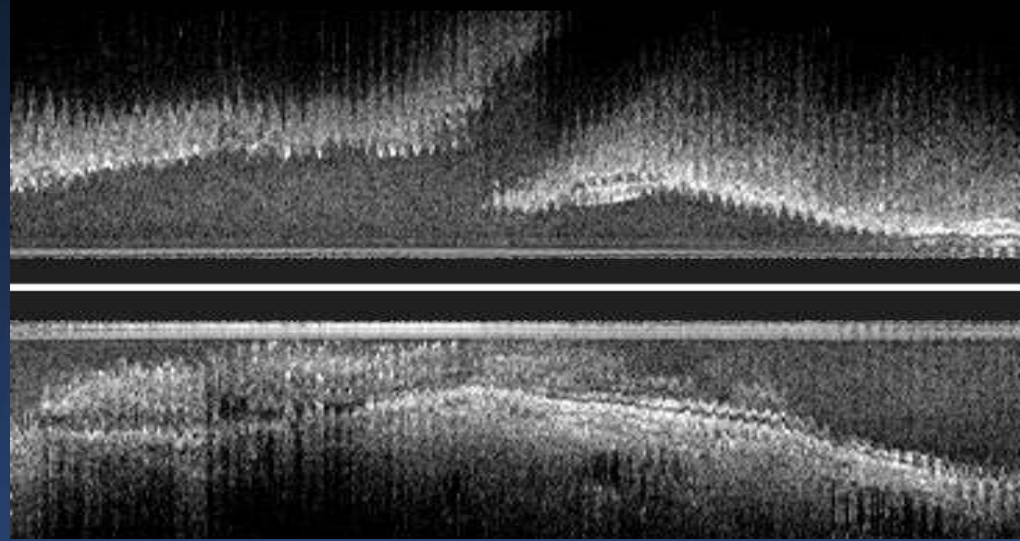
# Bifurcation: a «fractal» object



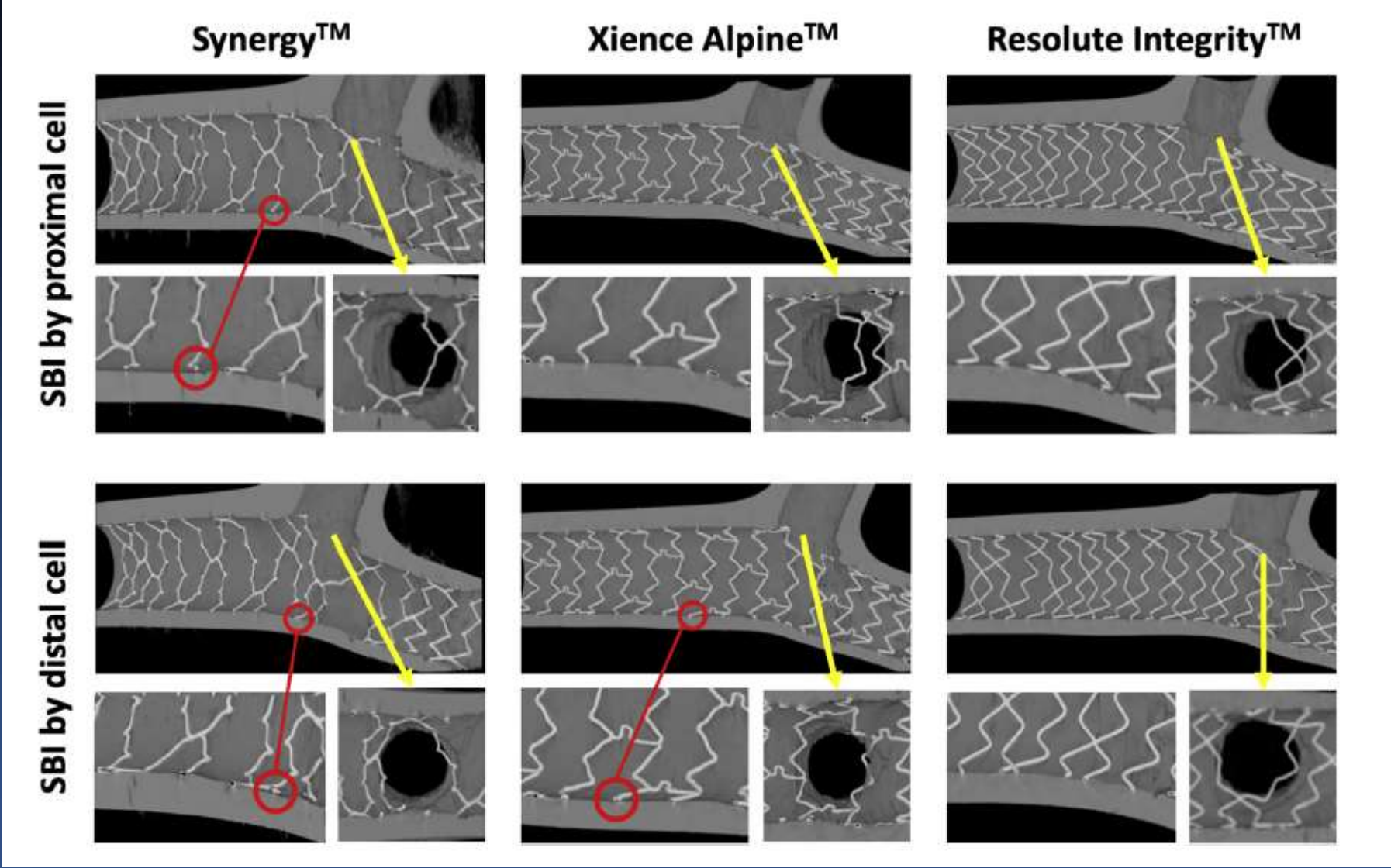
**Finet's formula**

$$D_1 = (D_2 + D_3) \times 0.678$$

# Bifurcation: a «fractal» object



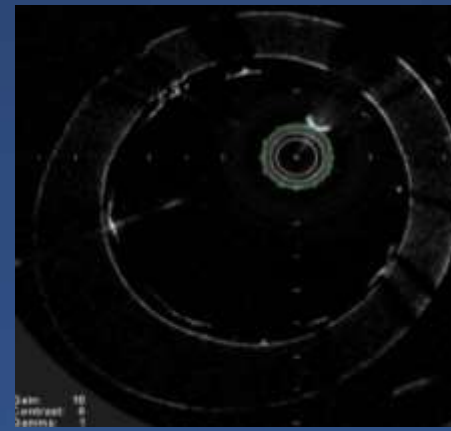
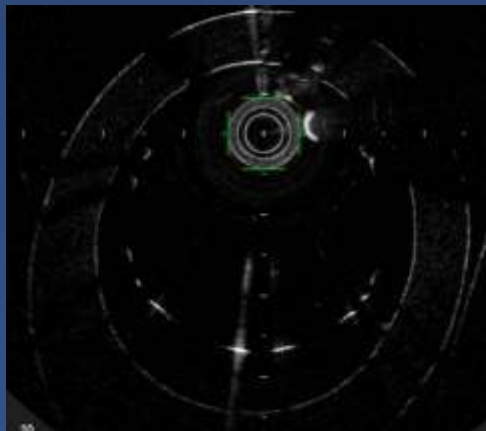
# Distal vs Proximal strut



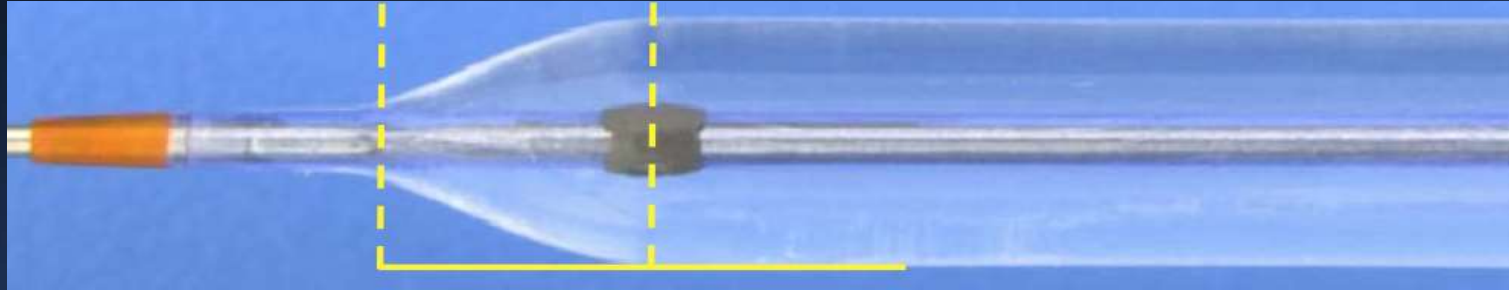
# The secret of POT



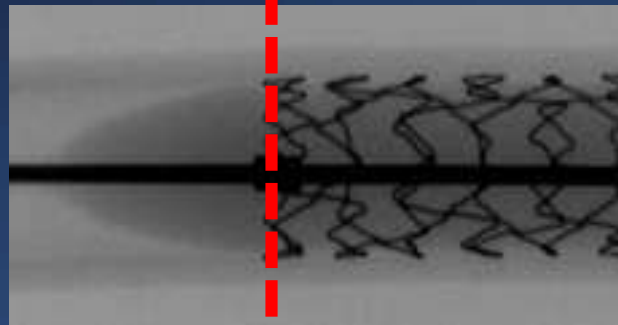
# The secret of POT



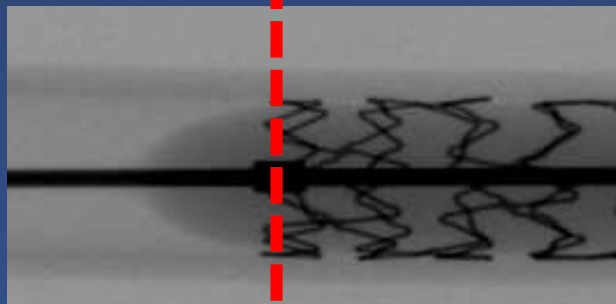
# The secret of POT



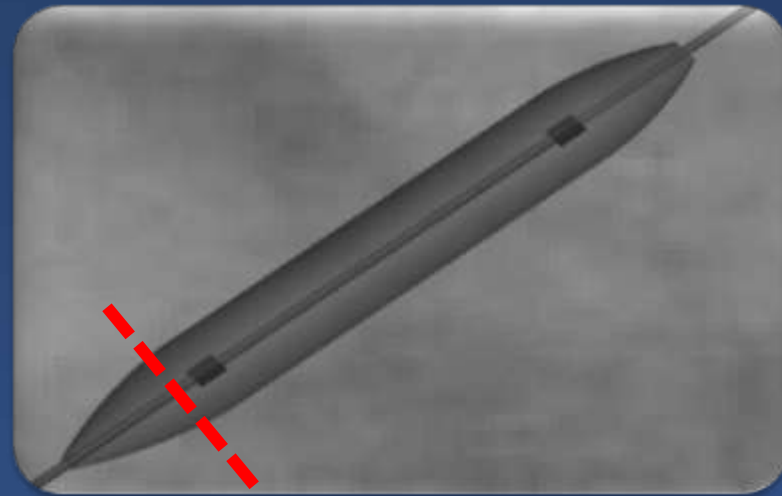
TREK NC



HYRIU

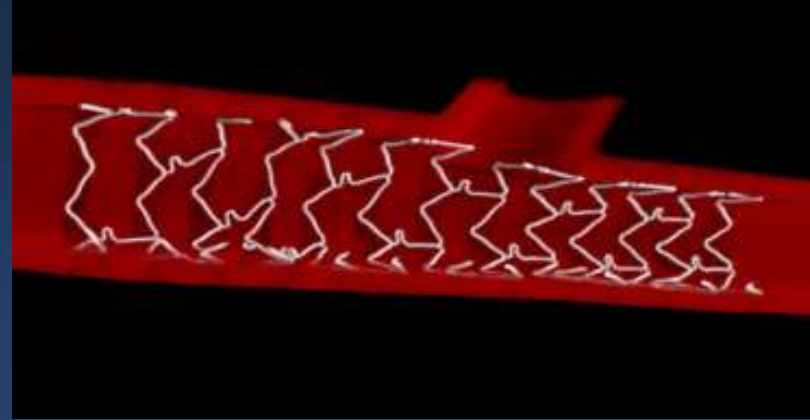
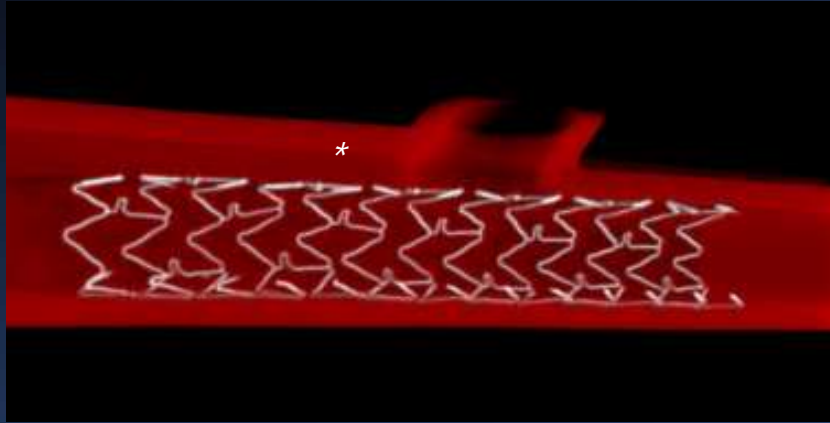


ACCUFORCE



NC EMERGE

# The secret of POT

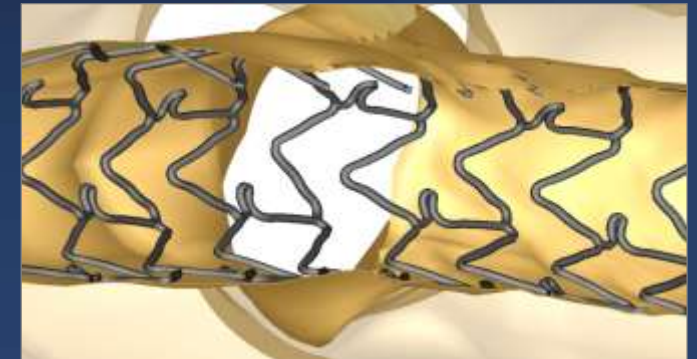




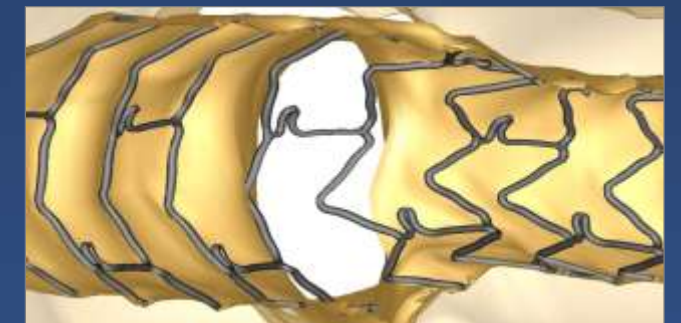
# Significant benefits of POT

**TABLE 1** Quantitative Analysis of the Mechanical Effects of POT

Pooled Results (Promus Premier and Ultimaster Stents)	Before POT (n = 40)	After POT (n = 40)
Mean MoV <sub>ref</sub> D, mm	4.08 ± 0.03*	4.23 ± 0.08
Proximal mean stent D, mm	3.32 ± 0.08*	4.23 ± 0.08
Expected stepwise difference in diameter between MoV <sub>ref</sub> -MB <sub>ref</sub> according to fractal geometry	0.83 ± 0.03	NA
Measured diameter difference between MoV <sub>ref</sub> and stent, mm	0.76 ± 0.06*	0
Ellipticity ratio of reference MoV	1.03 ± 0.02	1.03 ± 0.01
Ellipticity ratio of stent in MoV	1.04 ± 0.02	1.03 ± 0.02
Stent strut obstruction in SBO, %	34.0 ± 7.4*	26.0 ± 4.2
Distal cell area ratio in SBO, %	22.1 ± 15.9*	28.7 ± 19.6



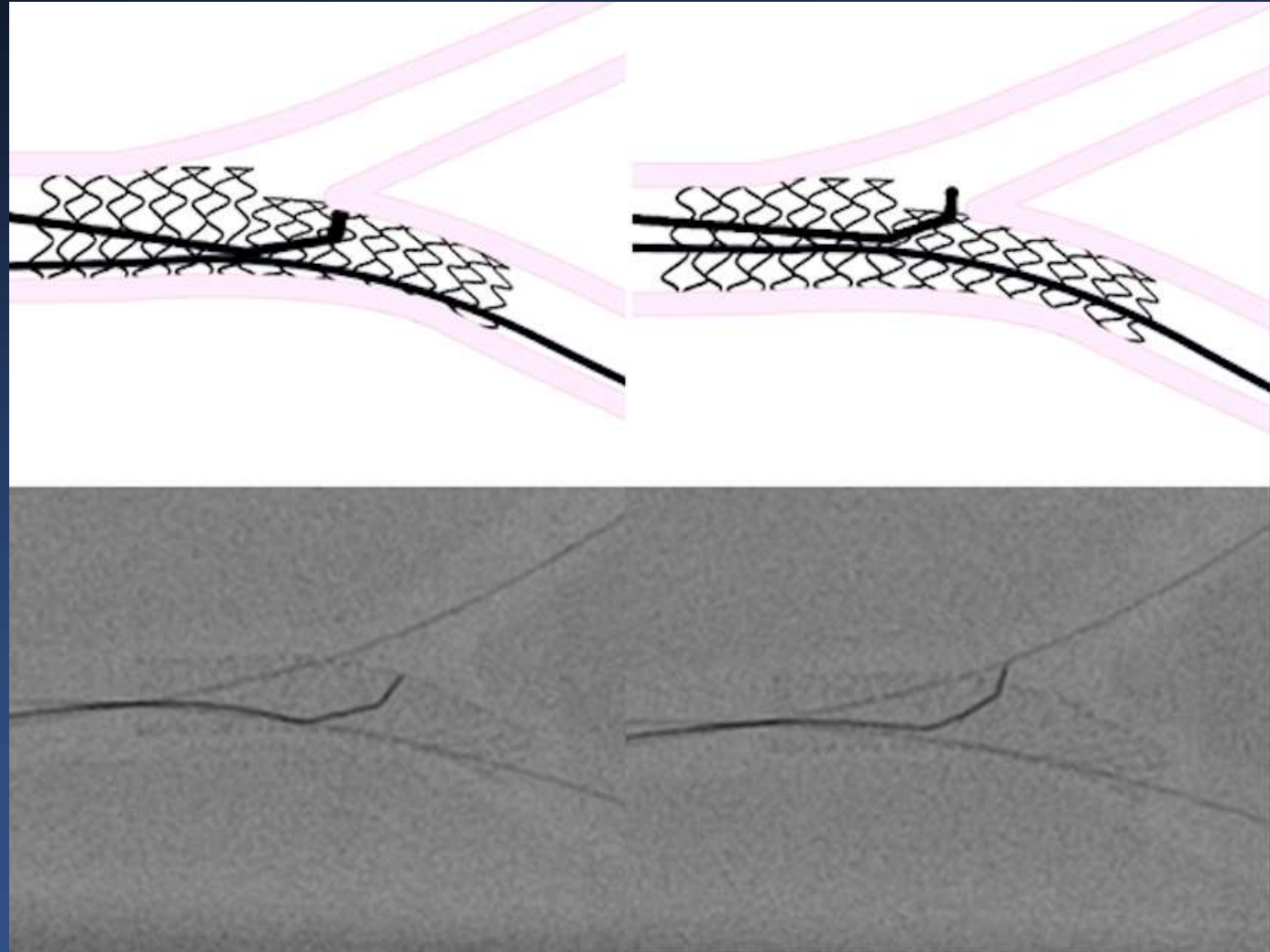
After stenting



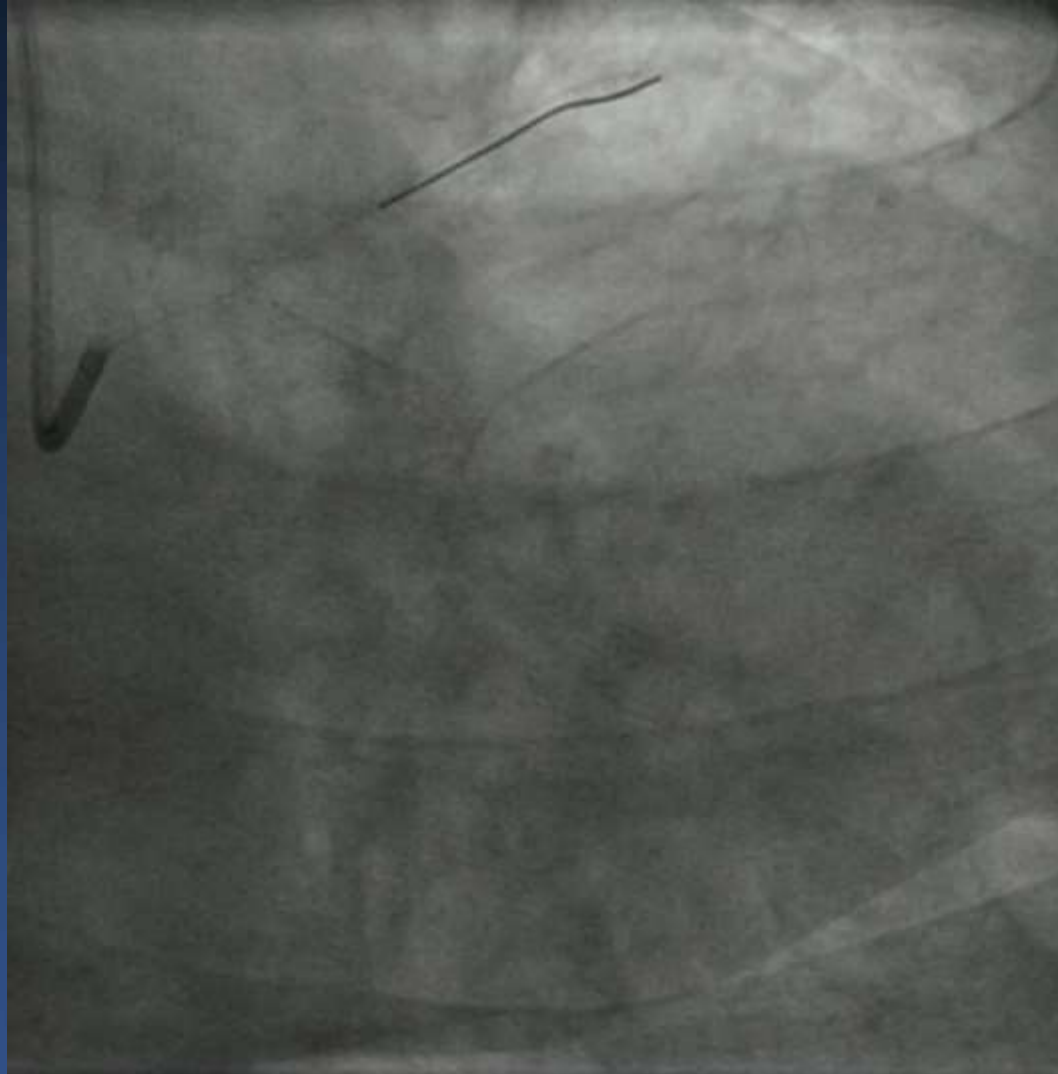
After POT

*Finet et al. JACC Intv 2015;8:1308–17.*

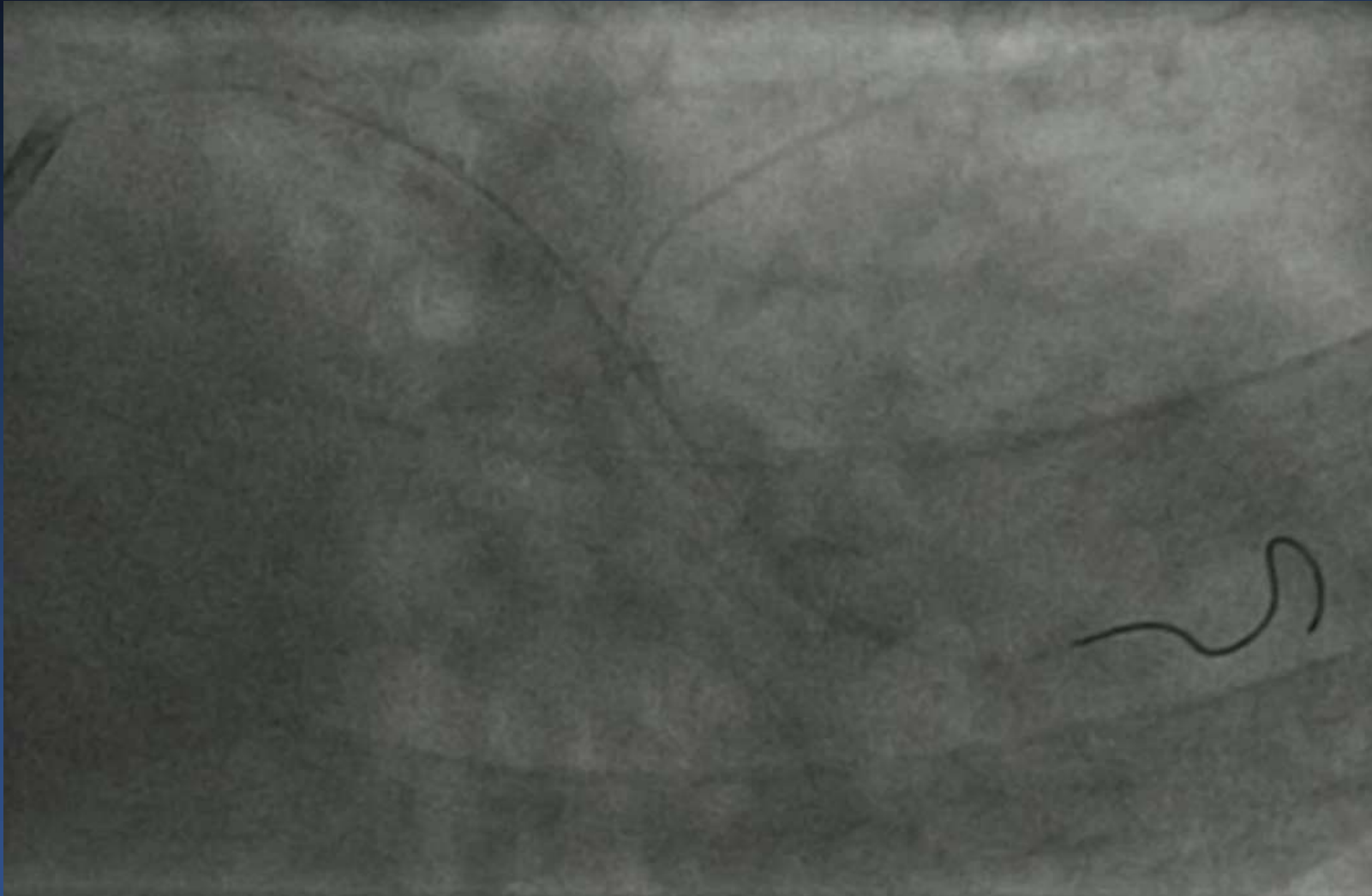
# POT facilitate SB access and distal strut crossing



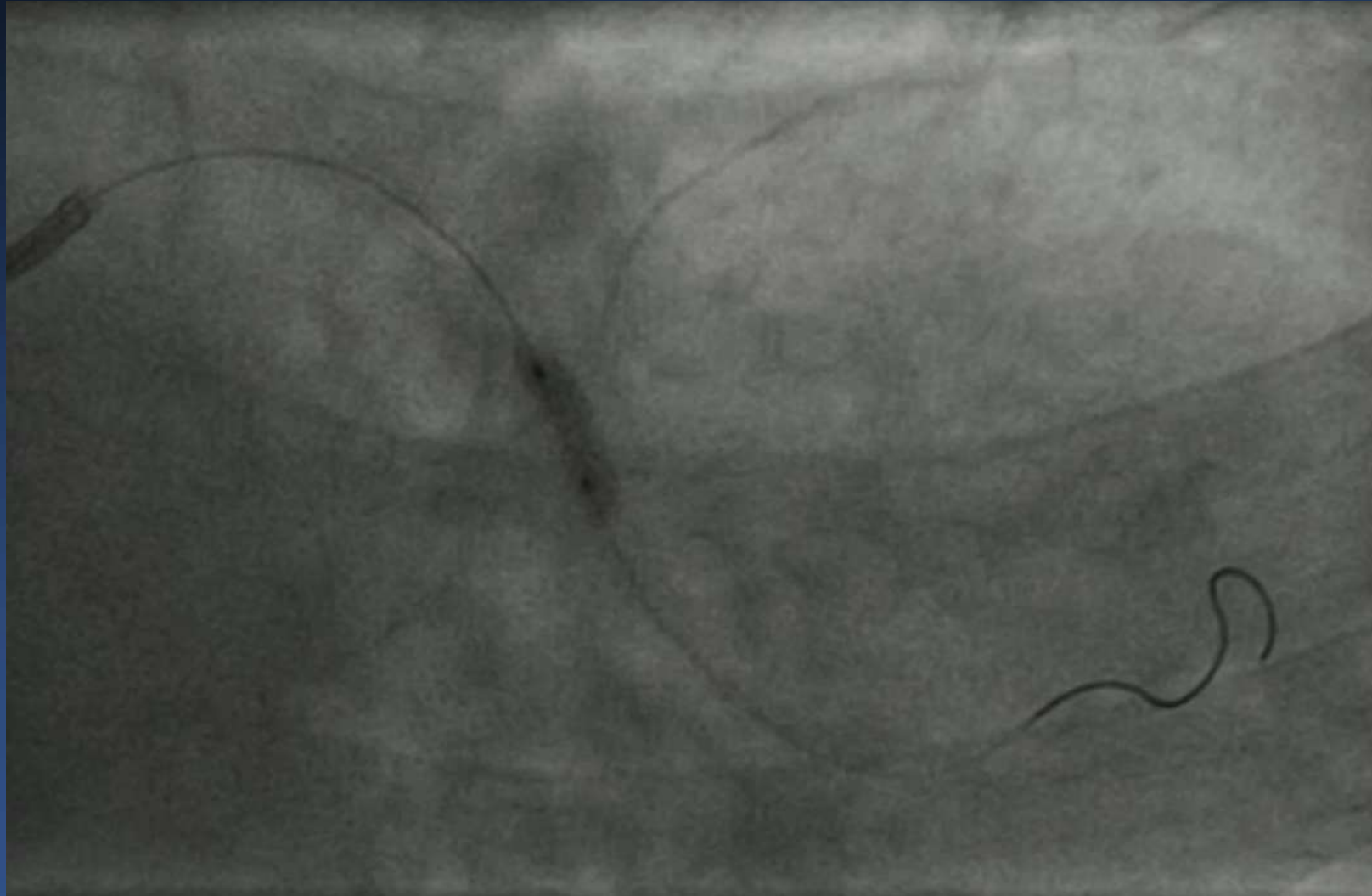
# POT facilitate SB access and distal strut crossing



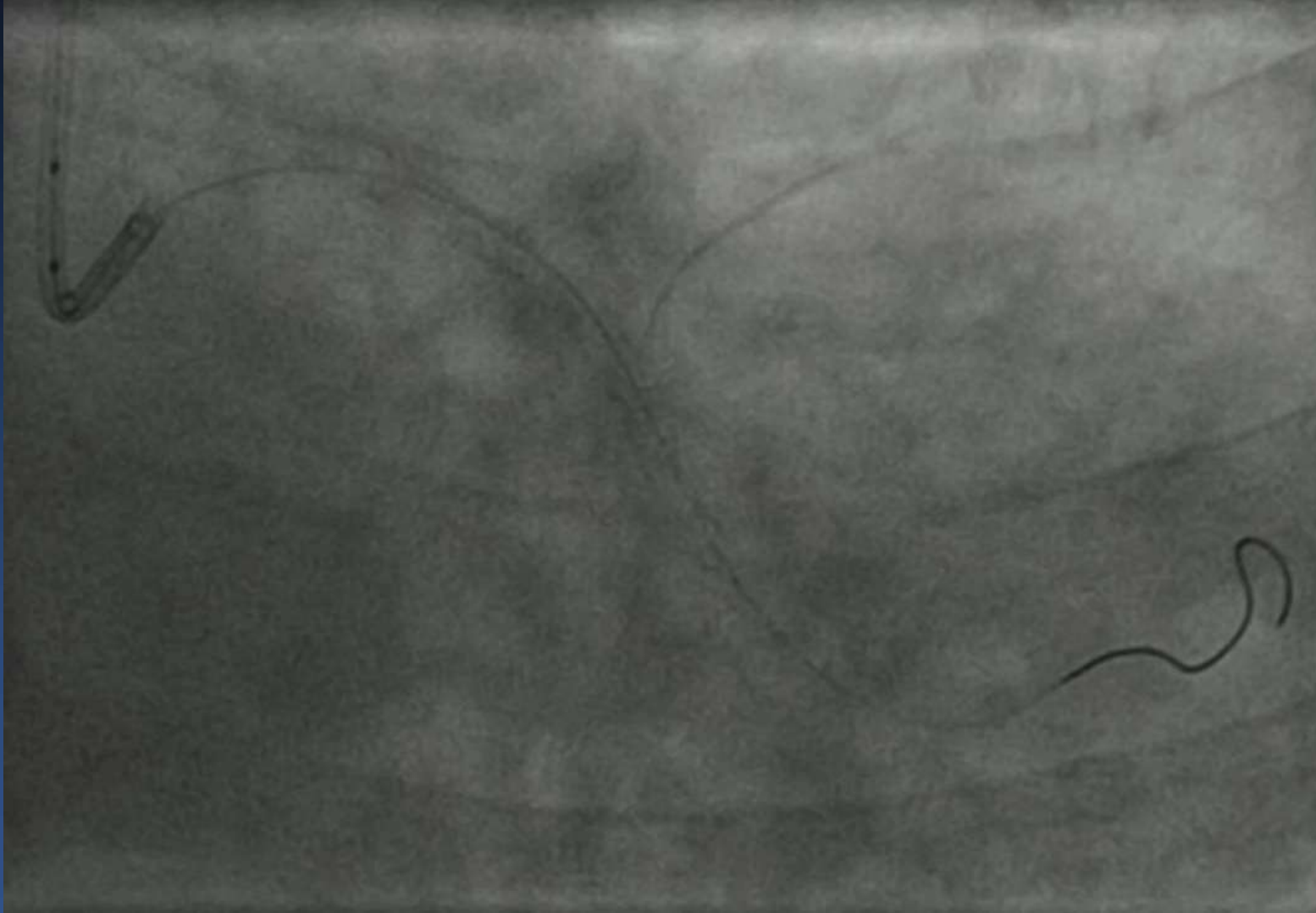
# POT facilitate SB access and distal strut crossing



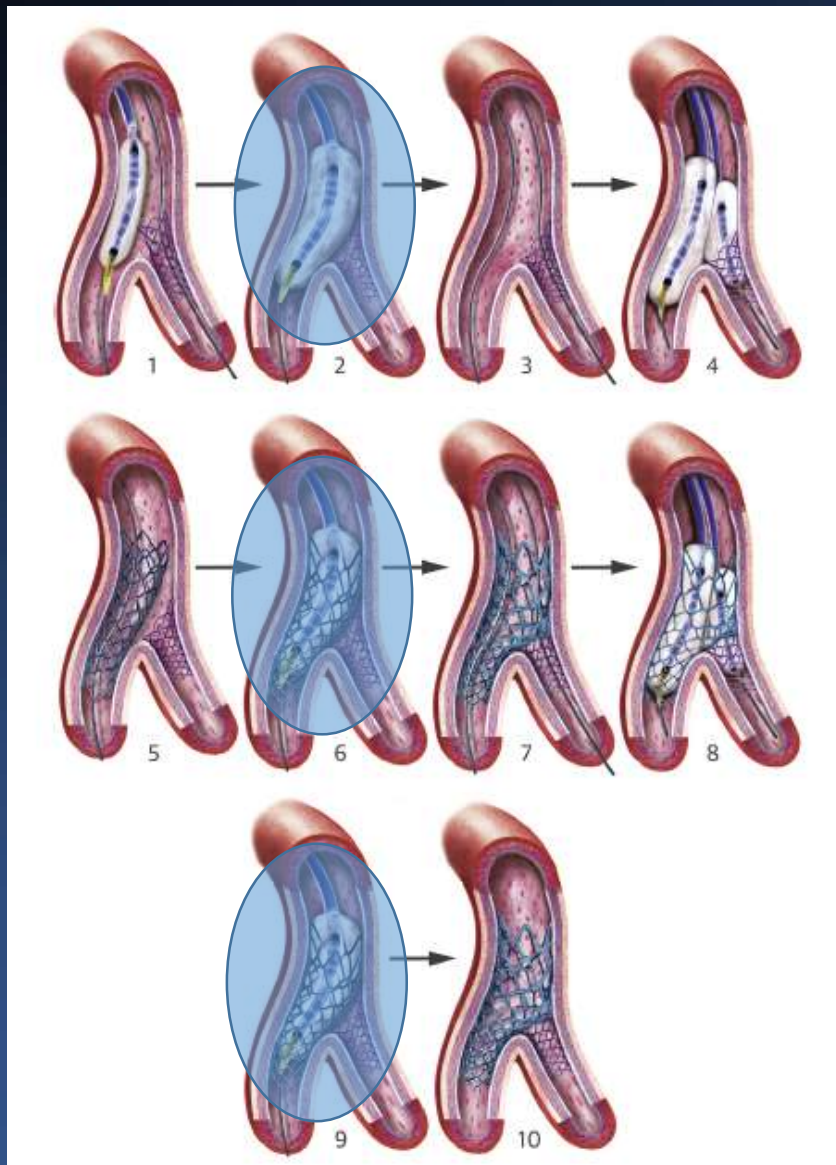
# POT facilitate SB access and distal strut crossing



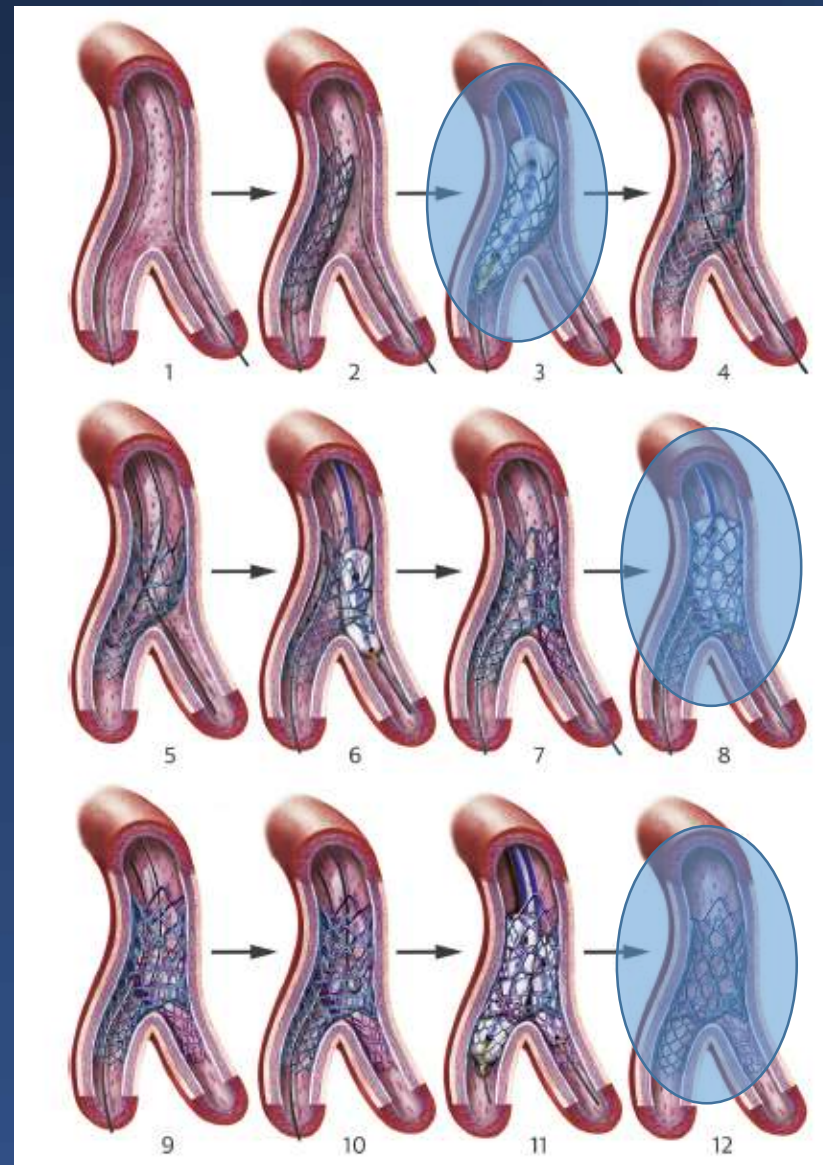
# POT facilitate SB access and distal strut crossing



# DK crush



# Culotte



# COBIS II: Role of POT

Propensity score, SB diameter  $\geq 2.5$  mm by QCA

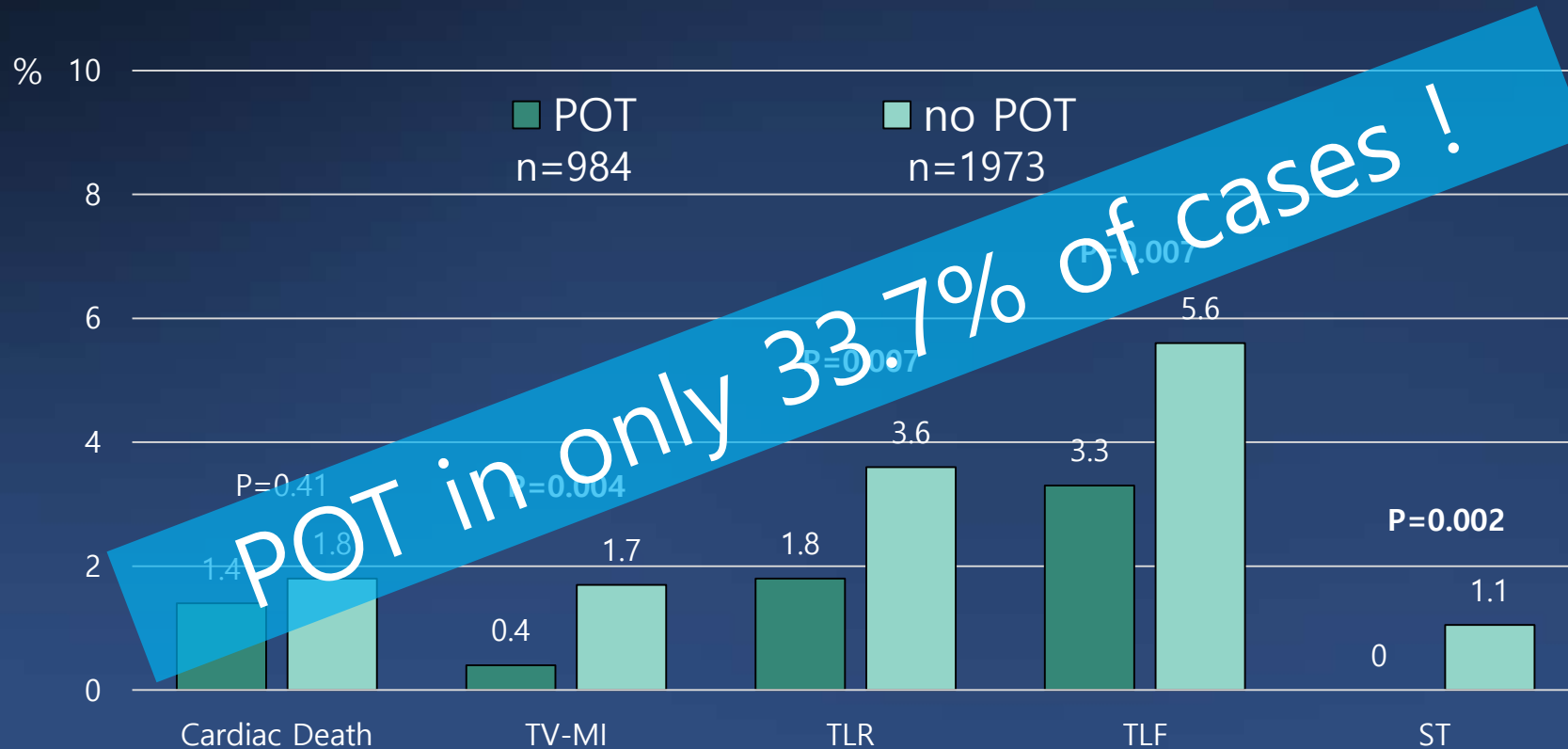
	POT (n=204)	No POT (n=665)	HR (95% CI)	p value
MACE	6 (2.9)	78 (11.7)	0.25 (0.11-0.60)	0.002
All-cause death	7 (3.4)	25 (3.8)	0.97 (0.41-2.33)	0.95
Cardiac death	1 (0.5)	9 (1.4)	0.37 (0.05-2.97)	0.35
Myocardial infarction	0	17 (1.8)	-	-
Stent thrombosis	2 (1.0)	8 (1.2)	0.98 (0.20-4.77)	0.98
TLR	5 (2.5)	61 (9.2)	0.27 (0.10-0.69)	0.006
MV, proximal	3 (1.5)	40 (6.0)	0.25 (0.07-0.82)	0.02
MV, distal	4 (2.0)	47 (7.1)	0.28 (0.10-0.80)	0.02
SB	4 (2.0)	35 (5.3)	0.37 (0.13-1.09)	0.07
Both vessels	5 (2.5)	48 (7.2)	0.34 (0.13-0.88)	0.03

POT in only 23.5% of cases!



# Ultimaster Registry

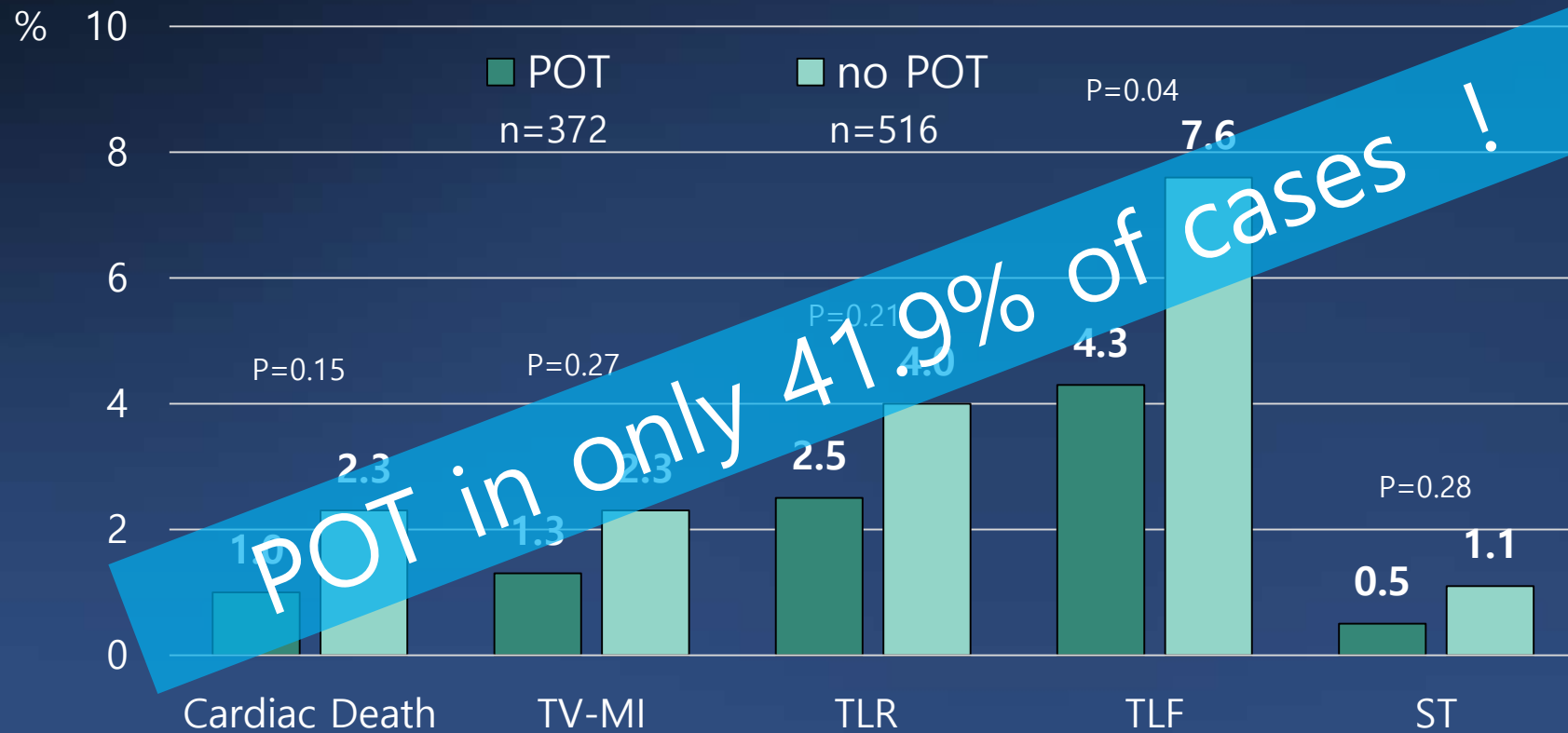
1 year clinical outcomes after one-stent technique propensity matched analysis (n=2921)



*TV-MI: target vessel myocardial infarction, TLR: target lesion revascularization, TLF: target lesion failure (cardiac death, target vessel MI or clinically driven TLR), ST: definite/probable stent thrombosis.*

# Ultimaster Registry

1 year clinical outcomes after two-stent technique propensity matched analysis (n=888)



*TV-MI: target vessel myocardial infarction, TLR: target lesion revascularization, TLF: target lesion failure (cardiac death, target vessel MI or clinically driven TLR), ST: definite/probable stent thrombosis.*



POT is a crucial step in bifurcation PCI

Next time, i will talk about difficult side or main branch access ....