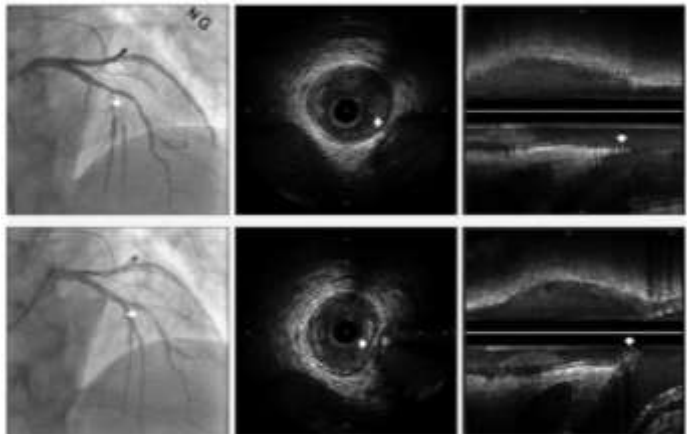


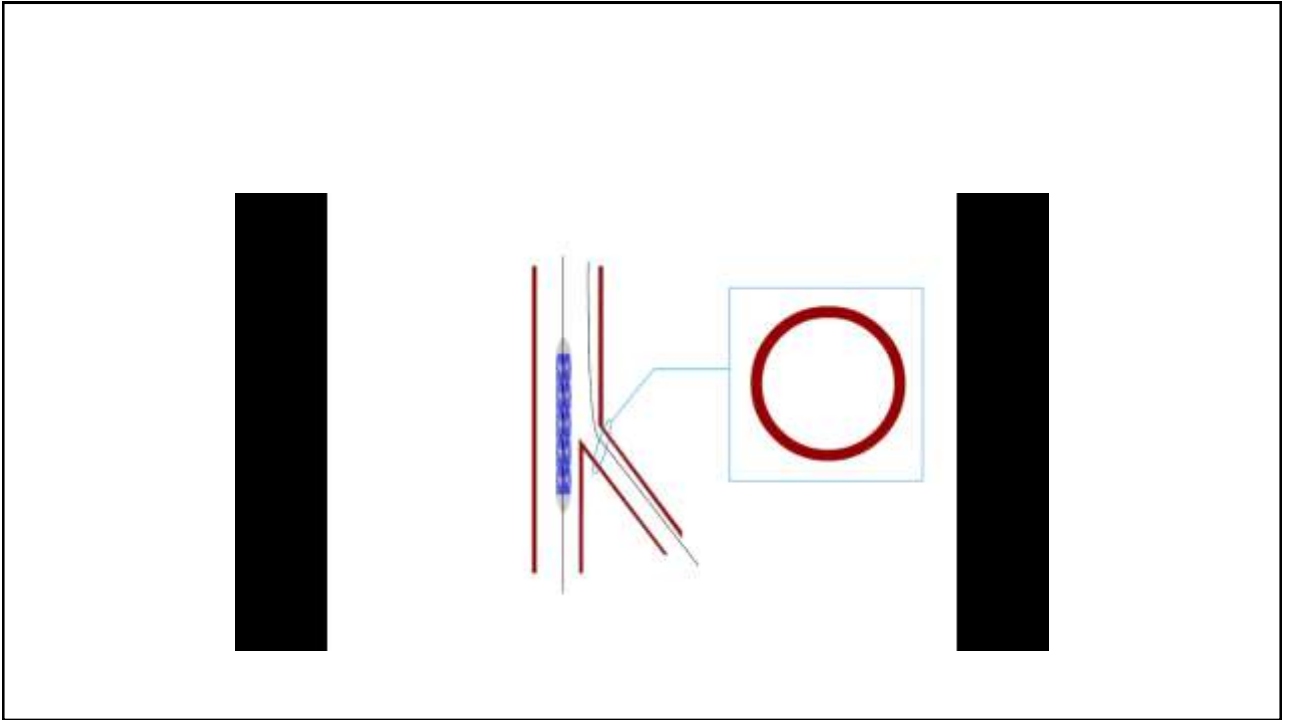
Osama Shoeib

SB protection and rescue in provisional strategy

SB jailing

SB ostial size reduction after MV stent





SB jailing

Is not always hemodynamically
significance

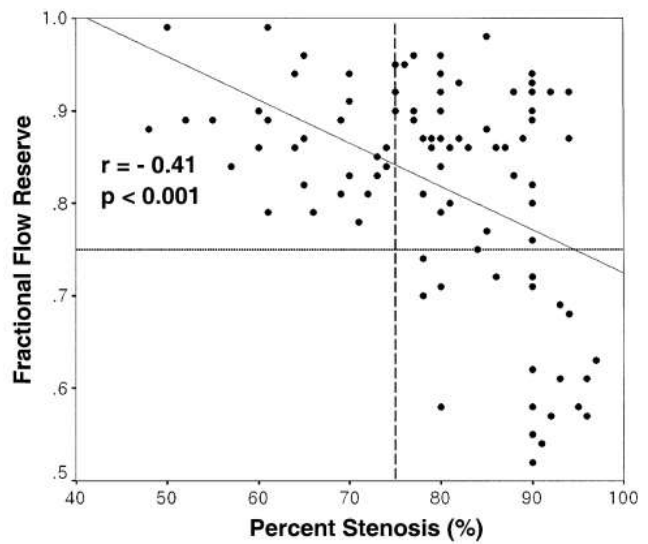
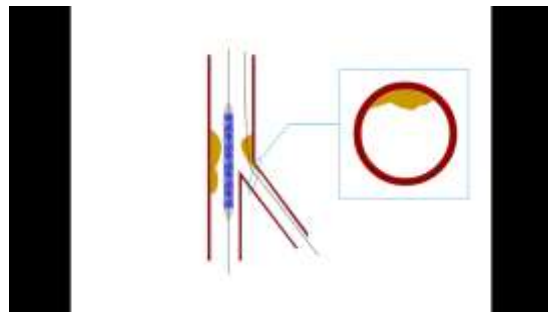
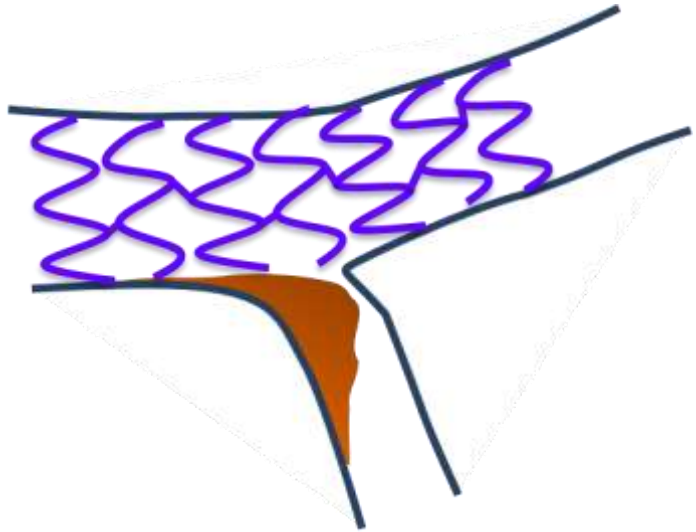


Figure 1. Correlation between fractional flow reserve and percent stenosis.

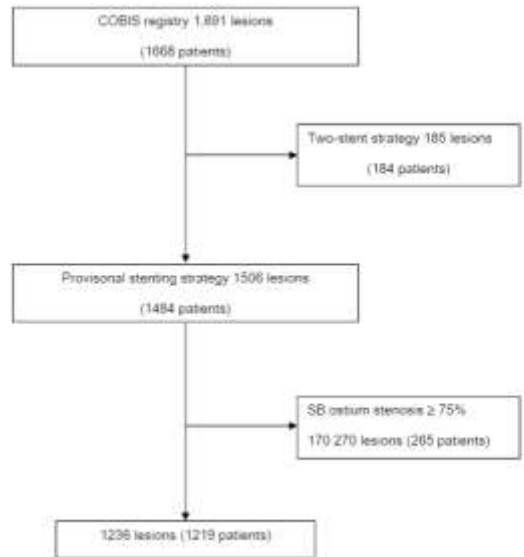
Plaque shift

Combined with carina shift is the main determinant of SB occlusion



How common in clinical practice?

SB acute closure or TIMI flow ≤ 2
5.7%



Predictors of SB complications



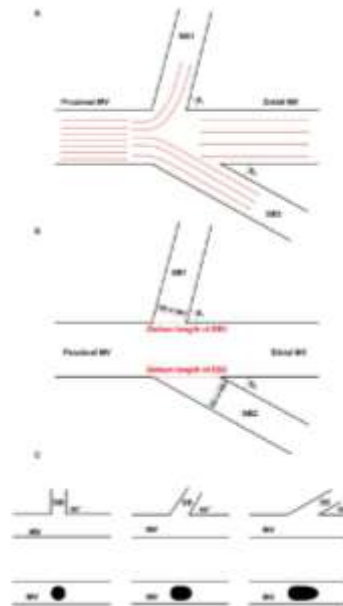
Resolve score

TABLE 4 Scores Attributed to Each Variable

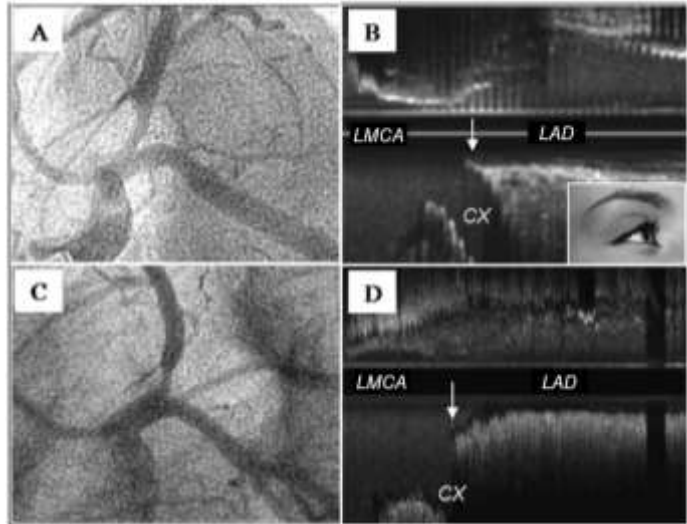
Risk Factor	Level	Point
Plaque distribution	At the opposite side of SB	0
	At the same side of SB	1
MV TIMI flow grade before stenting	TIMI 3	0
	TIMI 2	6
	TIMI 1	11
	TIMI 0	17
Pre-procedural diameter stenosis of bifurcation core (%)	<50	0
	50-70	2
	≥70	3
Bifurcation angle (°)	<70	0
	70-90	4
	≥90	6
Diameter ratio between MV/SB	<1.0	0
	1.0-1.5	2
	1.5-2.0	6
	≥2.0	9
Diameter stenosis of SB before MV stenting (%)	<50	0
	50-70	4
	70-90	6
	≥90	7

Abbreviations as in Table 2.

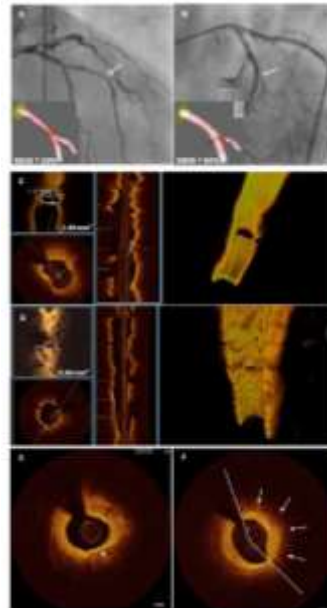
Bifurcation angle



Eye brow sign



Lipid arc



Predictors of SB compromise

ENOCAL SETTING			
Acute coronary syndrome	Joo-yong Hahn et al.	2227	1
ANGIOGRAPHIC FEATURES			
Plaque located at the same side of the SB	RESOLVE kefei dou et al.	1200,1170,1171	3
	Xuhua chen et al, Dong Zhang et al		
Lower TMI flow	RESOLVE kefei dou et al.	1200,1170,1171	3
	Xuhua chen et al, Dong Zhang et al		
Diameter stenosis of the bifurcation core	RESOLVE kefei dou et al.	1200,1170,1171	3
	Xuhua chen et al, Dong Zhang et al		
Diameter stenosis of the SB	RESOLVE kefei dou et al.	1200,1170,2227,1171	4
	Xuhua chen et al, Joo-yong Hahn et al, Dong Zhang et al		
Diameter MV/SB	RESOLVE kefei dou et al.	1170,1601,1171	3
	Xuhua chen et al, Dong Zhang		

Predictors of SB compromise

Wider bifurcation angle	RESOLVE kefei dou et al.	1170,1601,1171	4
	Xuhua chen et al, Dong Zhang et al		
True bifurcation	Jae-bin seo et al	1219	1
Small SB reference diameter	Jae-bin seo et al	1219	1
Proximal MV stenosis	Joo-yong Hahn et al.	2227	1
SB lesion length	Joo-yong Hahn et al.	2227	1
IVUS-FEATURES			
Thickness of the MV plaque	Nobuo Sakamoto et al.	272	1
SB diameter ratio	Nobuo Sakamoto et al.	272	1

When you ask yourself the question, should I protect the side branch?

the answer is YES!



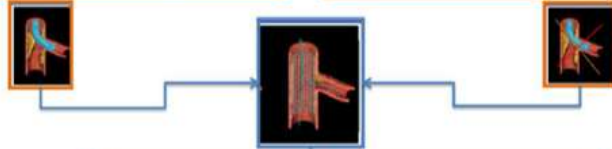
SB predilation

372 patients with bifurcation lesions ({1,1,1}, {0,1,1}, {1,0,1}) treated with provisional stenting - DES (Feb2009-Nov2012)

1:1 Randomization after angiography & baseline side branch wiring

187 patients side branch predilation

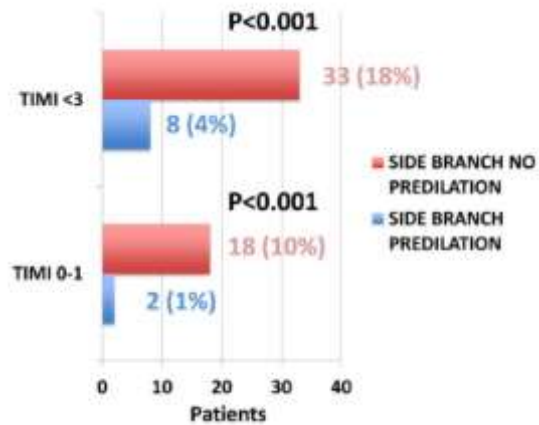
185 patients side branch no predilation



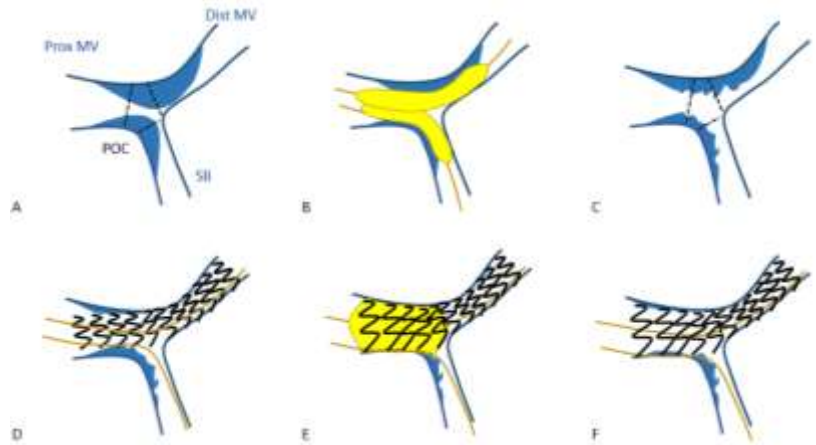
PRIMARY END POINT (TIMI flow at the side branch)

Pan et al. AHJ 2014

SB predilation

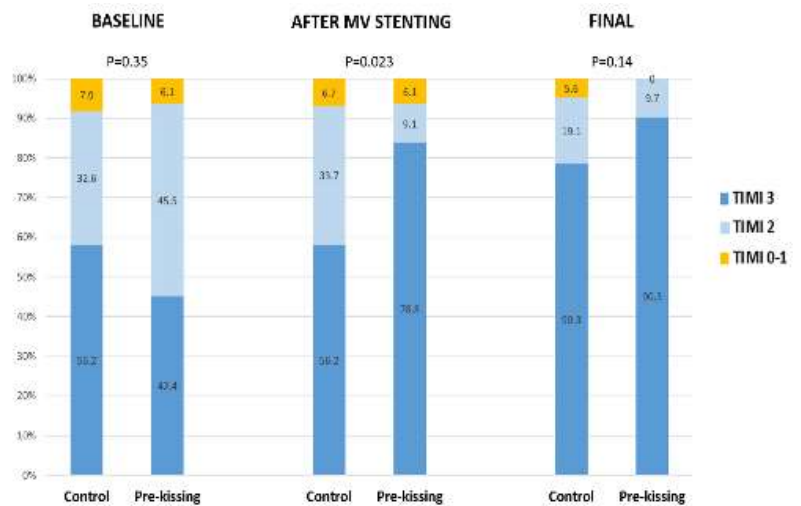


Predilation with kissing?



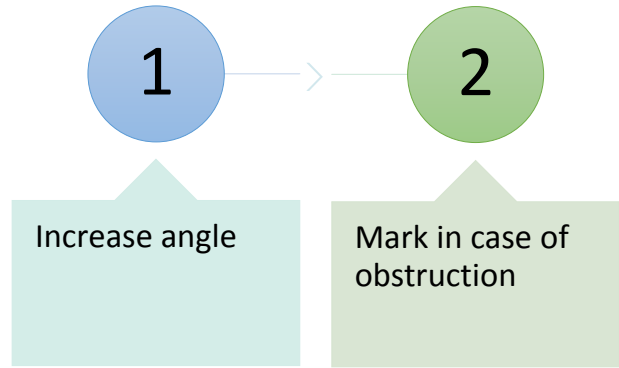
Burzotta, Shoeib et al. PCR 2017 (abstract)

Predilation with kissing?

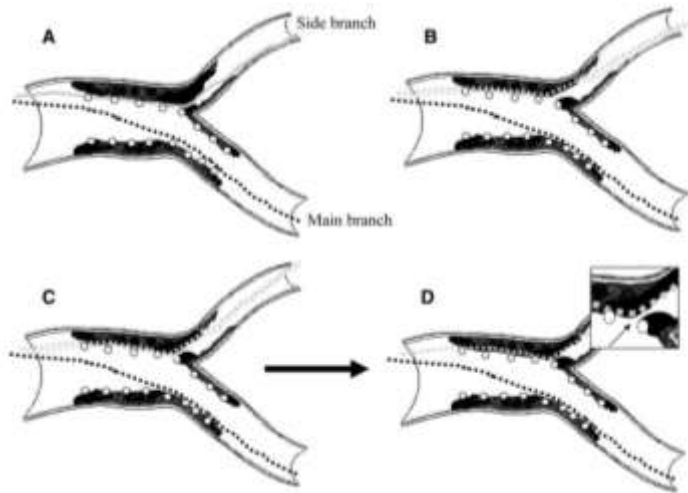


Burzotta, Shoeib et al. PCR 2017 (abstract)

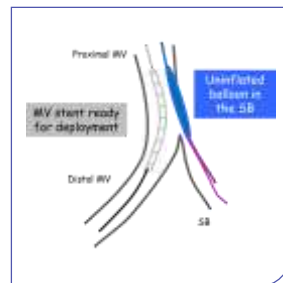
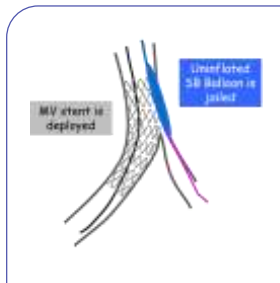
Wire in the SB



More wires?



ODA H et al 2010



Jailed balloon protection

Burzotta, Sianos, Trani. EuroIntv 2010

Jailed balloon protection

Long-Term Clinical Outcomes With the Use of a Modified Provisional Jailed-Balloon Stenting Technique for the Treatment of Nonleft Main Coronary Bifurcation Lesions

Jeremiah P. Depta, MD, Yogesh Patel, MD, Jayendrakumar S. Patel, MD, Eric Novak, MS, Michael Yeung, MD, Alan Zajarias, MD, Howard I. Kurz, MD, John M. Lasala, MD, PhD, Richard G. Bach, MD, and Jasvinder Singh,* MD

Jailed balloon protection

TABLE III. Procedural Outcomes and Unadjusted and Adjusted Odds Ratios (OR) for PCI of Bifurcation Lesions With and Without the Use of JBT

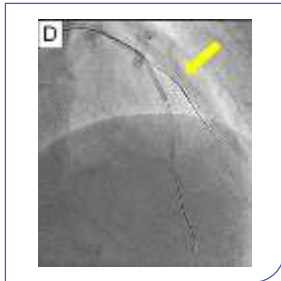
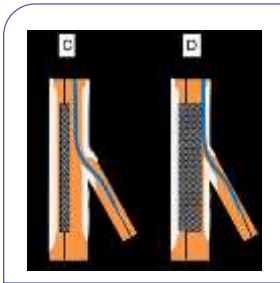
	No JBT (n = 311 patients, 326 lesions)		JBT (n = 95 patients, 98 lesions)		P-value
Periprocedural MI	36 (12)		1 (1)		0.0008
Side branch loss	110 (34)		11 (11)		< 0.0001
Permanent	26 (8)		1 (1)		0.04
Temporary	84 (26)		10 (10)		0.002

Procedural outcome	Unadjusted		Propensity score adjusted		Propensity score matched	
	OR (95% CI)	P-value	OR (95% CI)	P-value	OR (95% CI)	P-value
Periprocedural MI	0.08 (0.00-0.50)	0.0008	0.12 (0.02-0.90)	0.04	0.16 (0.02-1.36)	0.09
Side branch Loss	0.25 (0.11-0.48)	<0.0001	0.20 (0.10-0.40)	<0.0001	0.22 (0.10-0.49)	0.0001
Permanent	0.12 (0.02-0.89)	0.04	0.16 (0.02-1.17)	0.07	0.16 (0.02-1.36)	0.09
Temporary	0.33 (0.16-0.66)	0.002	0.23 (0.11-0.49)	0.0001	0.28 (0.12-0.62)	0.002

MI, myocardial infarction.
 Values are shown as absolute numbers (percentages).

Jailed balloon protection

- Keep it long
- Before inflation insert MV balloon



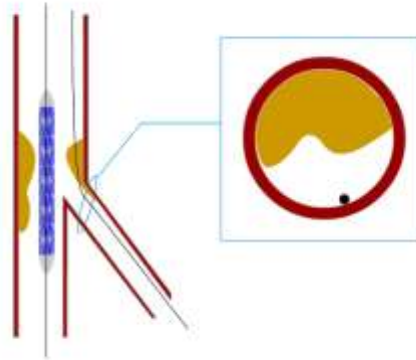
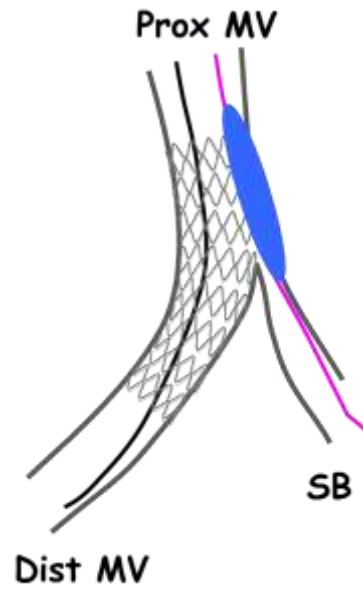
Jailed microcatheter

Nuwasaka et al. Cardiovasc Revasc Medicine 2017

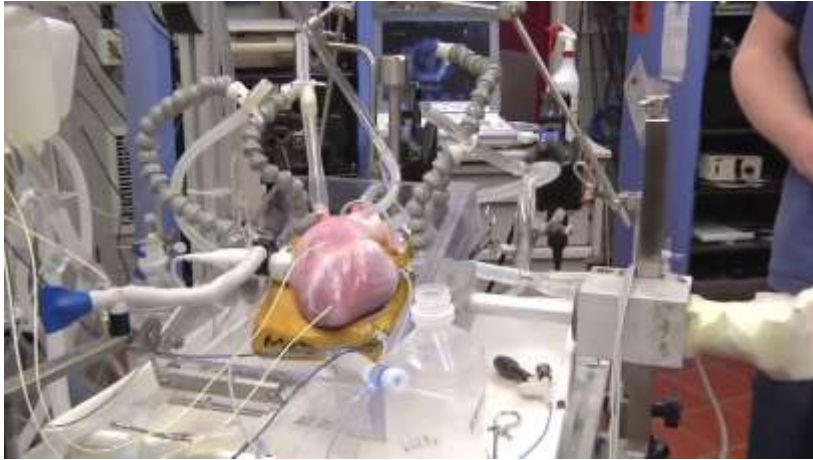
SB Rescue!

THE ROPE OF HOPE

Rescue balloon technique

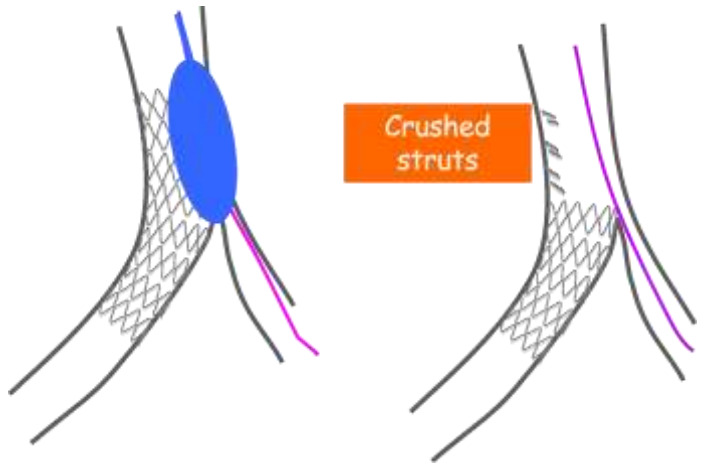


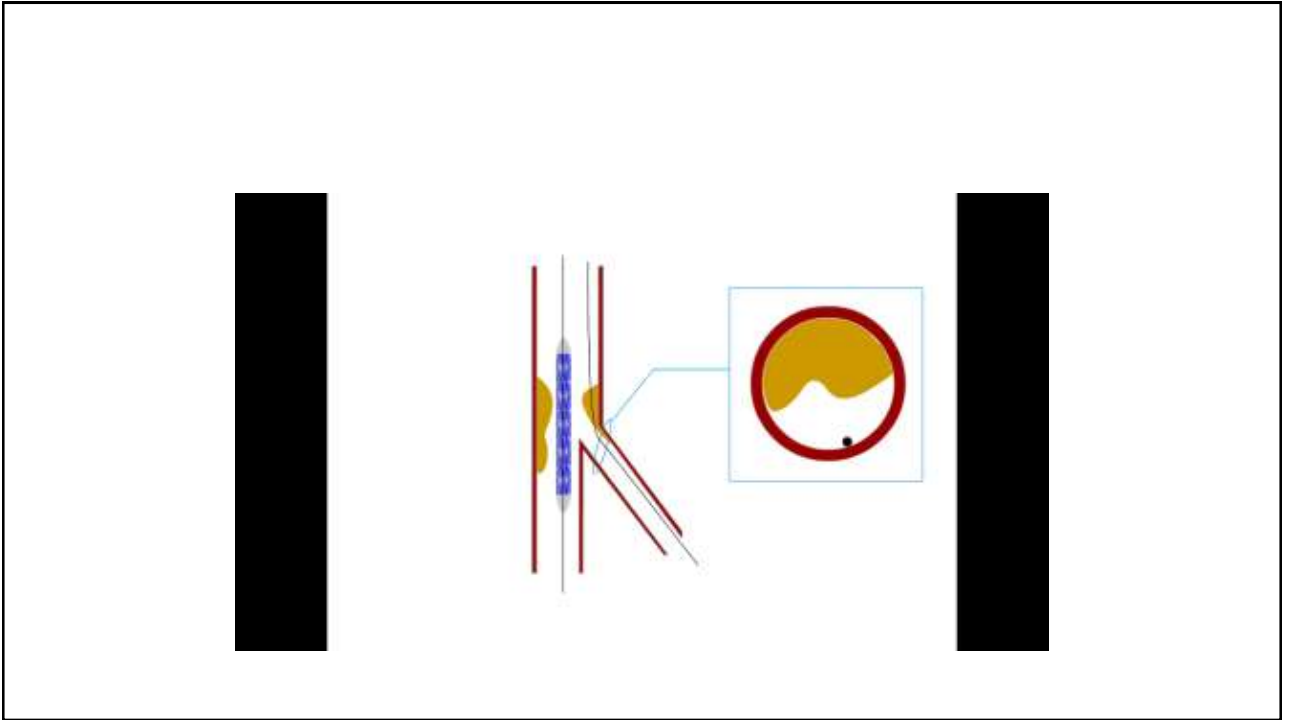
Visible heart LAB





Inverted
crush
technique





Inverted crush technique

Brief report

Inverted Crush Technique for Uncrossable Side Branch Occlusion During Provisional Side Branch Stenting: a New Role for the Jailed Wire

Manuel Pan,^{1*} Miguel Romero,² Soledad Ojeda,³ Jose Segura,⁴ Francisco Mazuelos,⁵ Javier Suárez de Lezo,⁶ Alfonso Medina,⁷ and Jose Suárez de Lezo⁸

