Taiwan BVS Registry 1-Year Result and BVS for Bifurcation Lesions

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Contributing Centers

- *Chang Gung Memorial Hospital, Linkou*
- *Chang Gung Memorial Hospital, Kaohsiung*
- *Cheng Hsin General Hospital*
- *National Taiwan University Hospital*

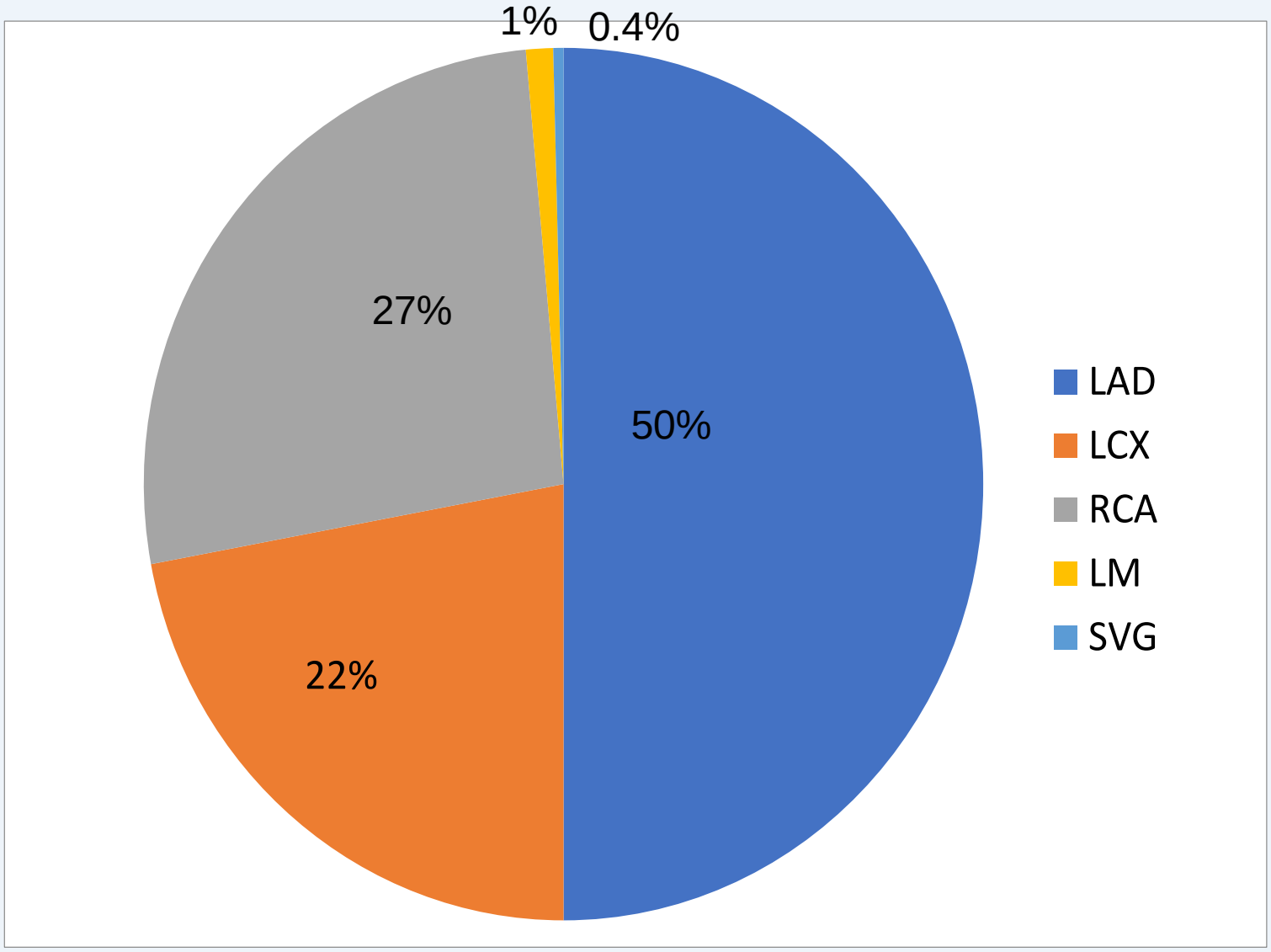
Taiwan BVS Real World Data

- From the start to June 2016
- 762 cases with BVS implantation for at least one vessel
- 860 vessels (lesions) treated
- 1117 BVS implanted

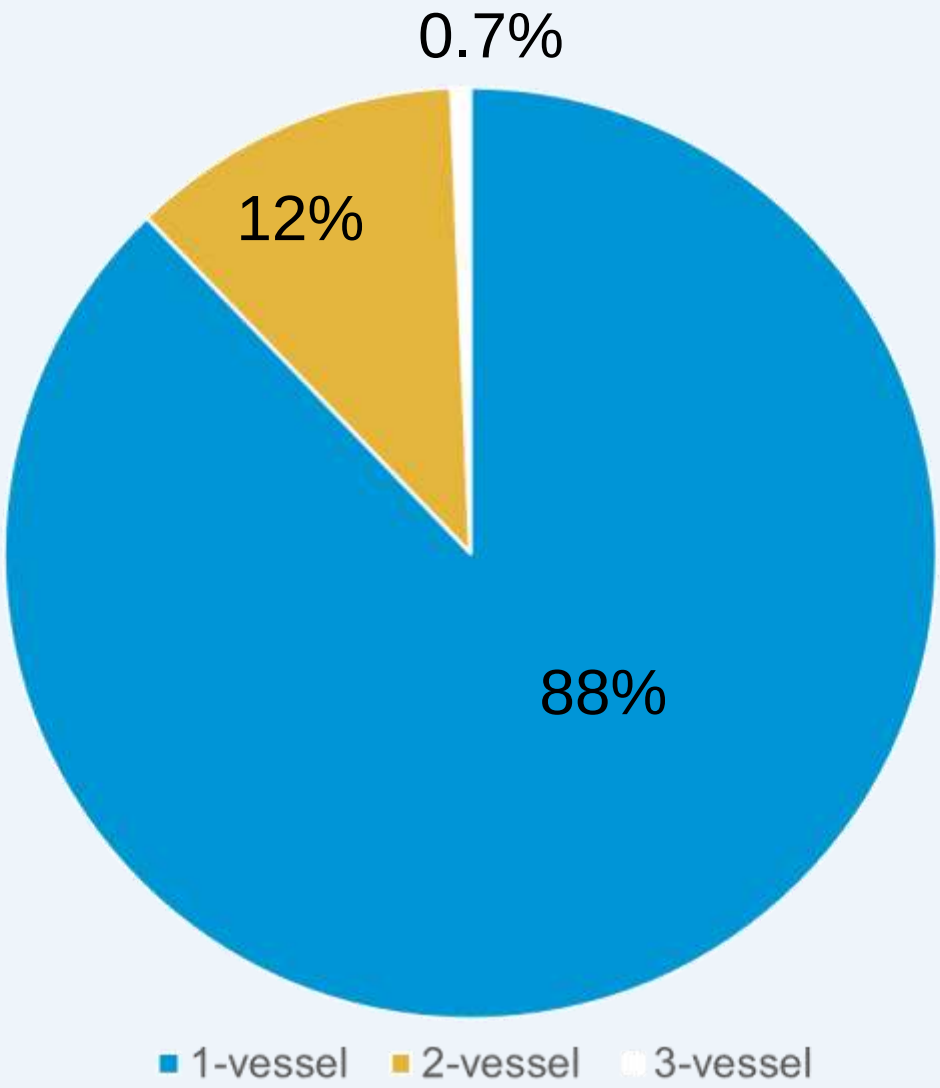
Baseline Clinical Caracteristics

	N= 762
Age (yrs)	60±11, (27-91)
Male (%)	86%
Hypertension (%)	69%
Diabetes (%)	31%
Dyslipidemia (%)	68%
Smoking (%)	34%
Old MI (%)	7%
CABG (%)	1%
CHF (%)	5%
Creatinine>1.5 mg/dl or ESRD (%)	5%
Stroke (%)	5%

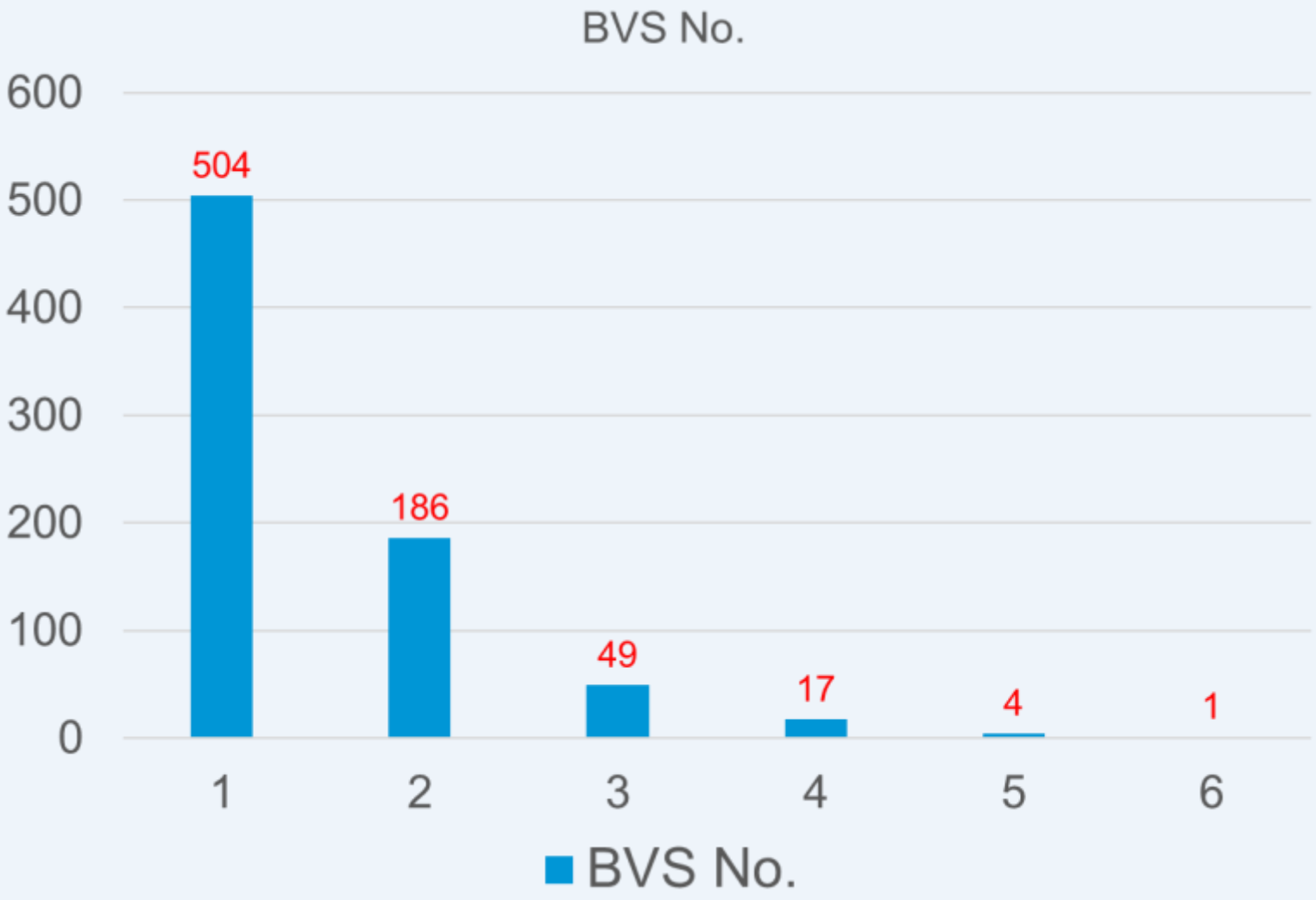
Vessel treated



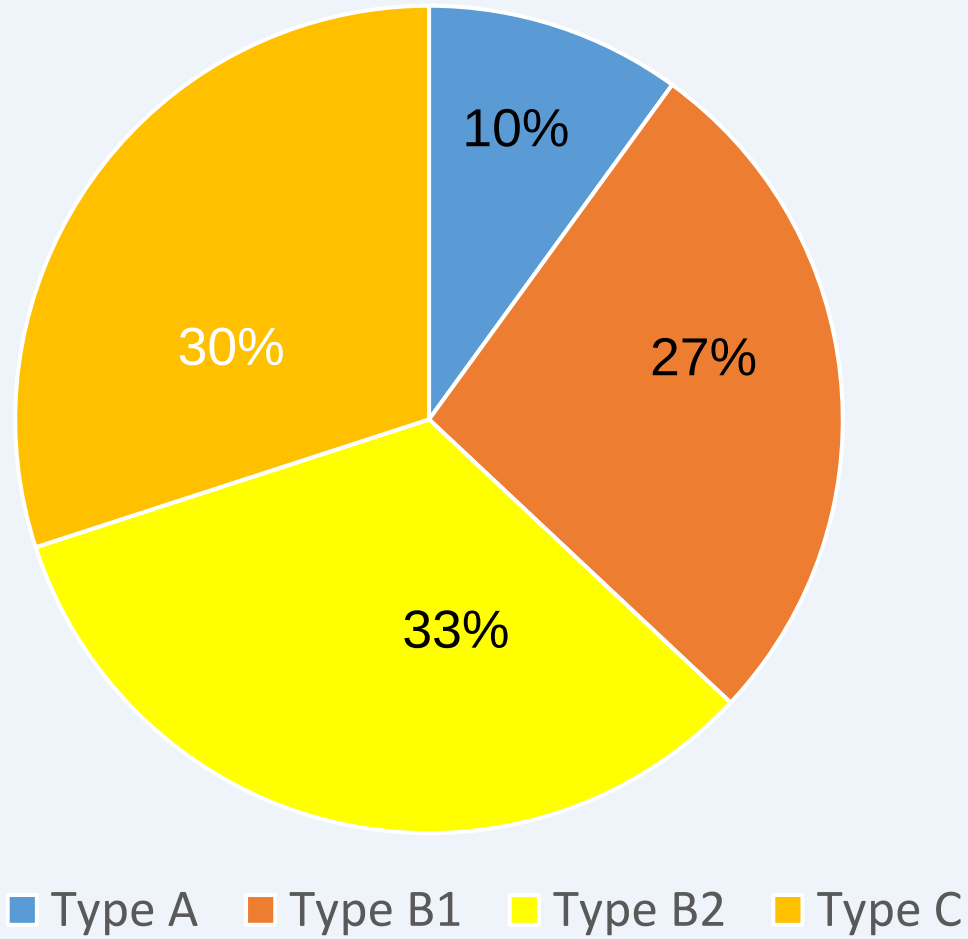
Vessels treated with BVS per procedure



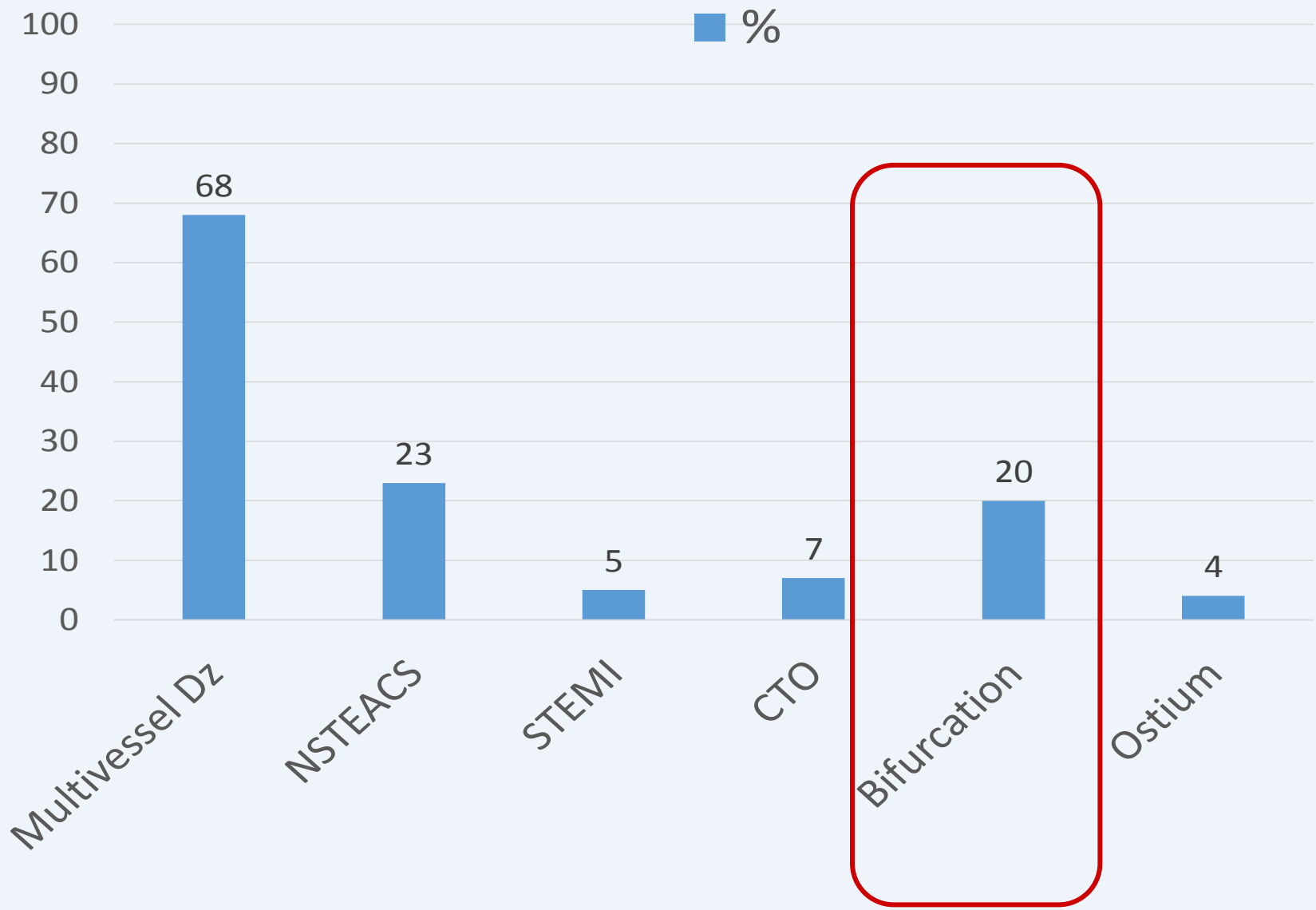
BVS implanted per procedure



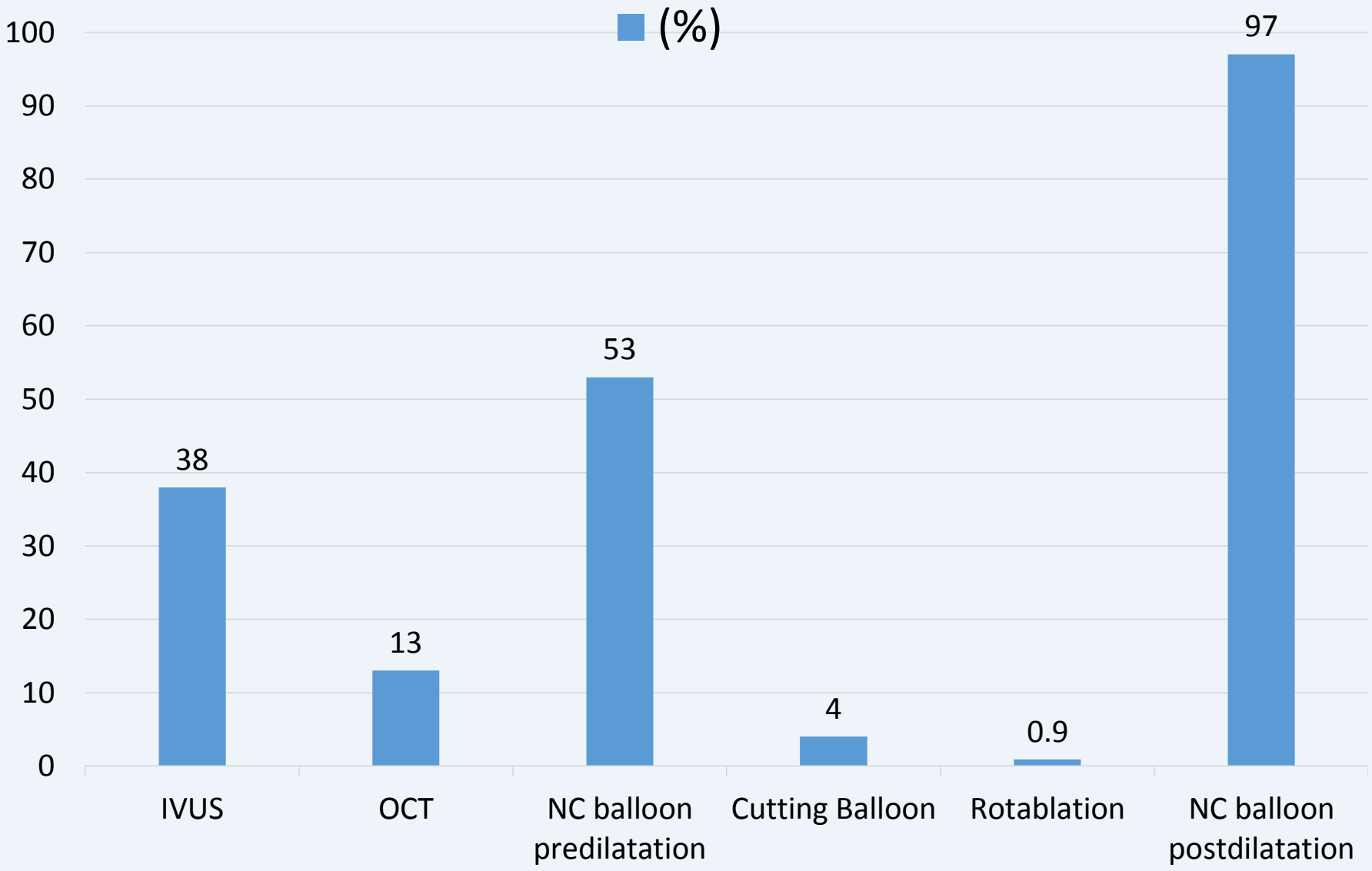
Lesion Types



Lesion Characteristics



Procedure Characteristics



Taiwan:
30 Days Results

Clinical outcomes	762 patients
Cardiac death	0.1%
Myocardial infarction	0.1%
ID-TLR	0.3%
Def/pro scaffold thrombsis	0.1%

ABSORB FIRST
30 Day Results on All Patients

Clinical Outcomes	1,801Patients 2,251 Lesions
Cardiac Death	0.0%
MI	0.8%
MACE	0.9%
TLF	0.7%
ID-TLR	0.4%
Def/Prob Scaffold Thrombosis	0.44%

Taiwan:
12 Months Results

Clinical outcomes	344 patients
Cardiac death	0.9%
Myocardial infarction	0.9%
TLR	3.8%
Def/pro scaffold thrombsis	0.6%

ABSORB FIRST
Interim One Year Results on 1702 Patients

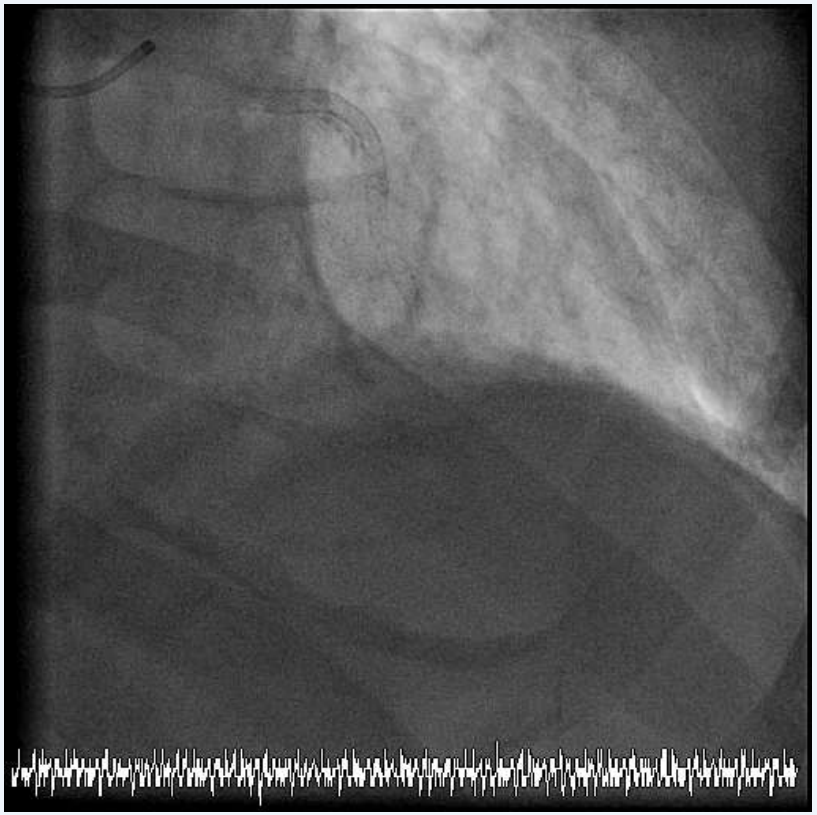
Interim Clinical Outcomes	1702 Patients
Cardiac Death	0.6%
MI	1.4%
MACE	2.7%
TLF	2.4%
ID-TLR	1.5%
Def/Prob Scaffold Thrombosis	0.9%

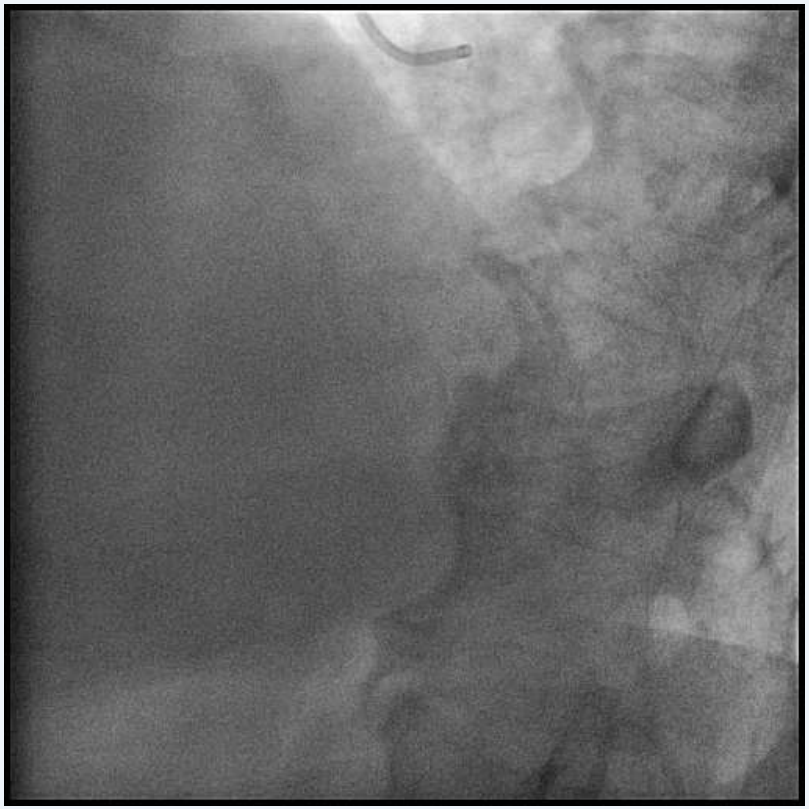
BVS for bifurcation lesions:

1. Bifurcation concept

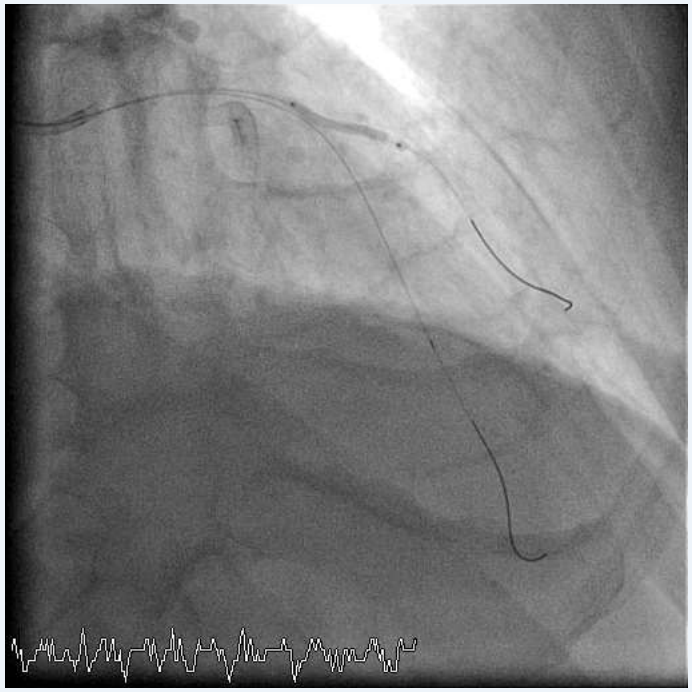
2. BVS limitations

Case 1 (*wire protection/SB predilatation*)

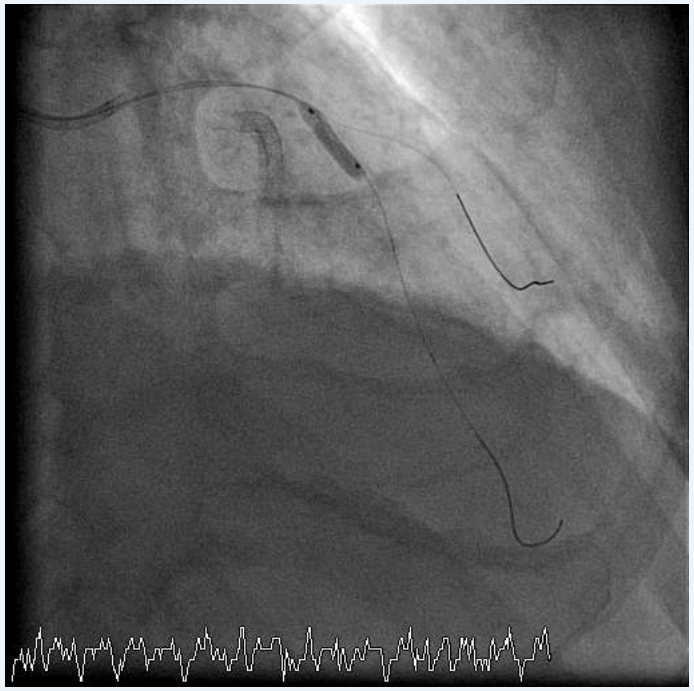




Dx and LAD predilatation: 6F JL4 GC, BMW ELITE GW in LAD, Runthough floppy GW in Dx

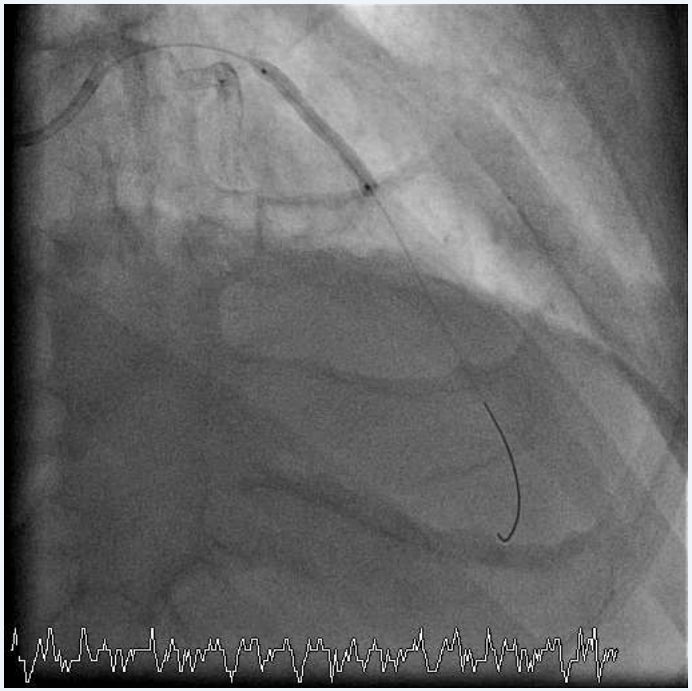


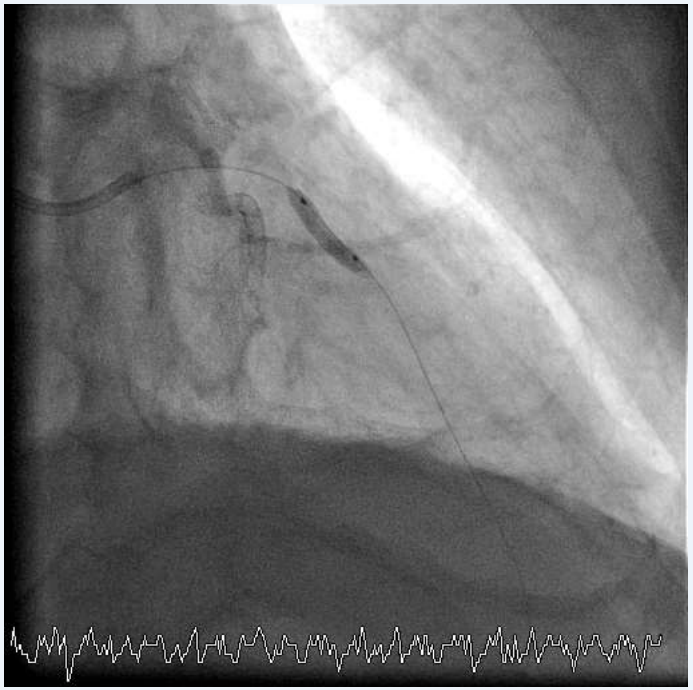
Boston Emerge 2.5X20mm



Terumo Hiryu 3X15mm

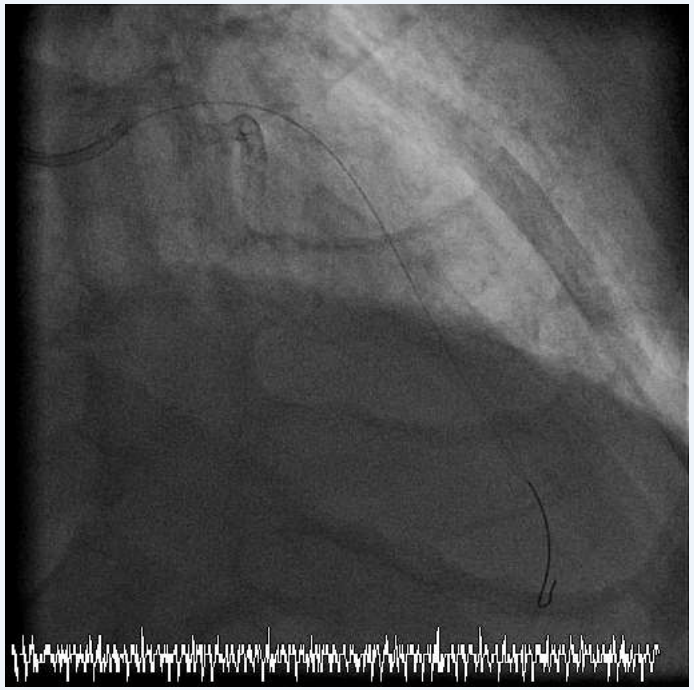
BVS (3X28mm) implantation by ST01 and postdilatation

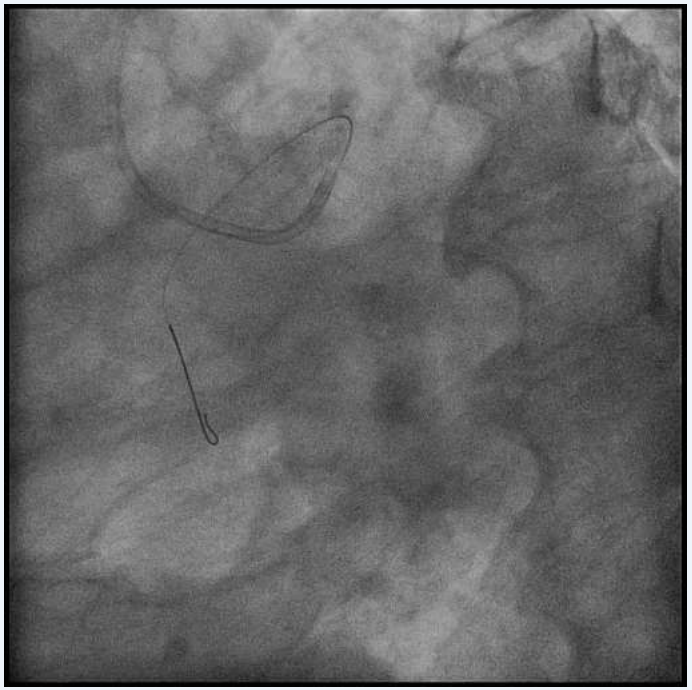




Terumo Hiryu 3X15mm (24 atm)

Final LAD





BVS and Bifurcation

Method : Stenting

- **Slow BVS deployment, different strategies**

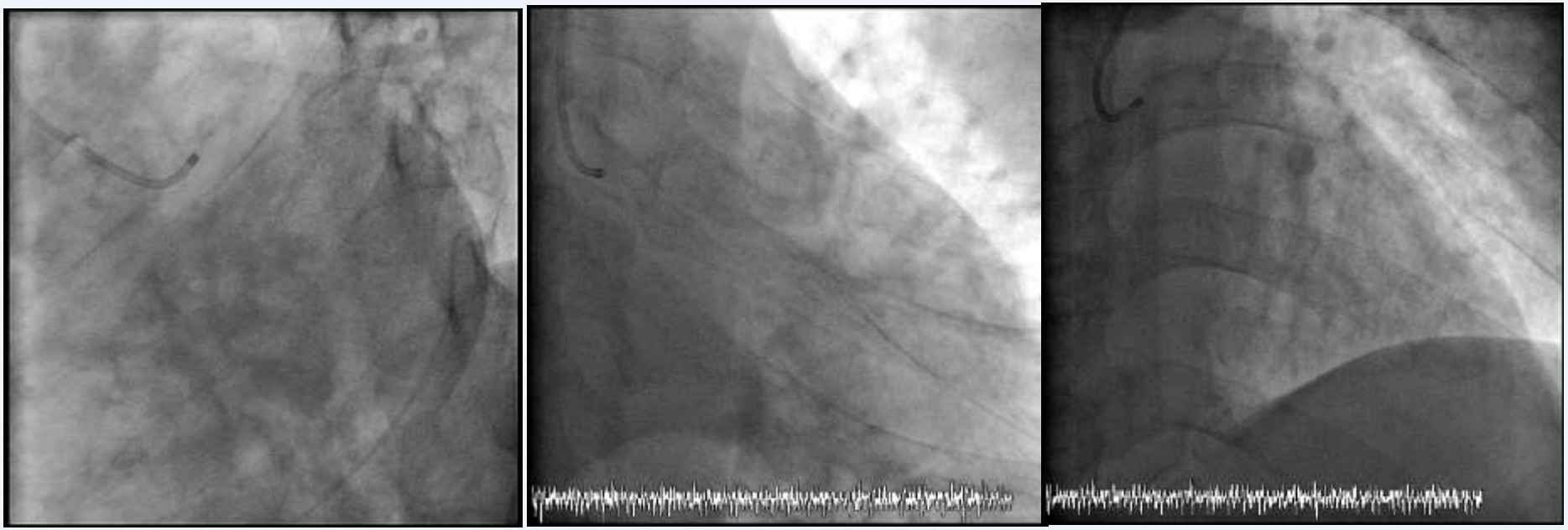
One Stent

Strategy 1 : BVS + POT + Side Opening + Final POT = **PSP**
Strategy 2 : BVS + POT + **Snuggle Kissing** + Final POT = **PKP**

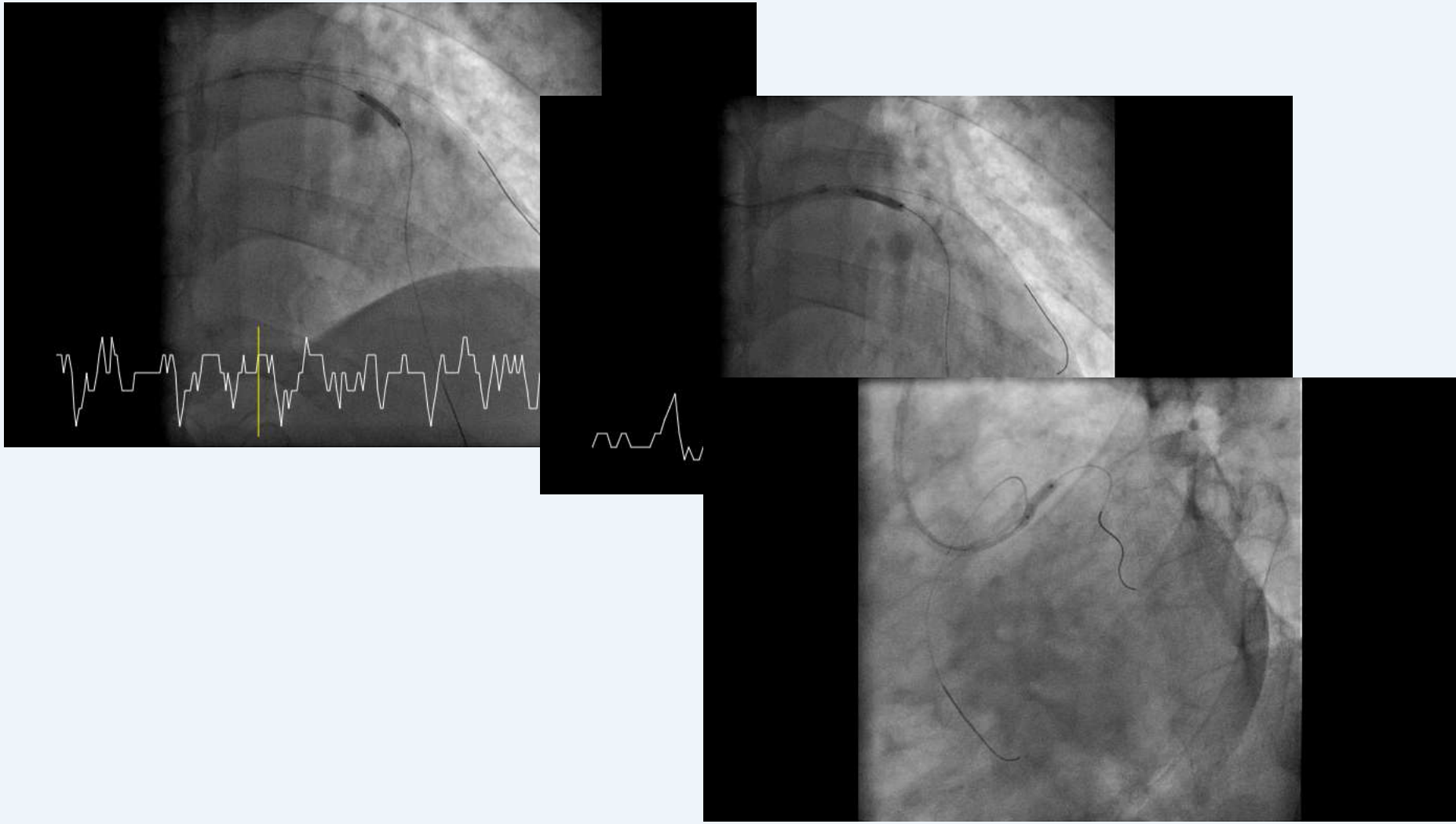
Two Stents

Strategy 3 : BVS + POT + **Snuggle Kissing** + T stenting = **PKP+T**
Strategy 4 : BVS side + BVS main + POT + **Snuggle Kissing** = **MiniCrush**
Strategy 5 : BVS side + BVS Main + **Snuggle Kissing** + POT = **Culotte**

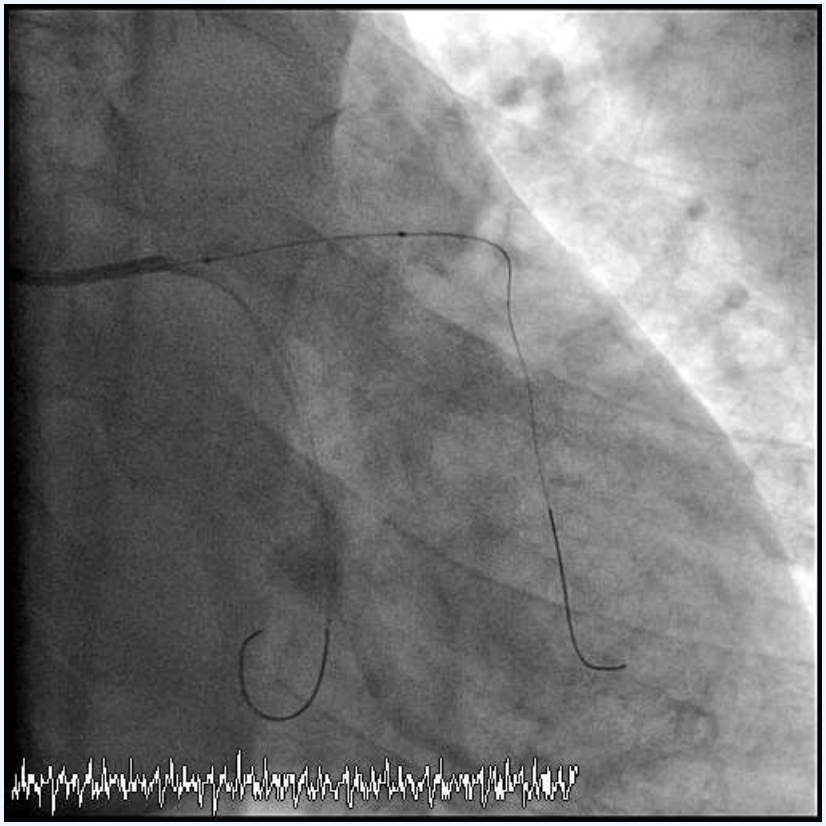
Case 2 (***PSP***/*PKP*)

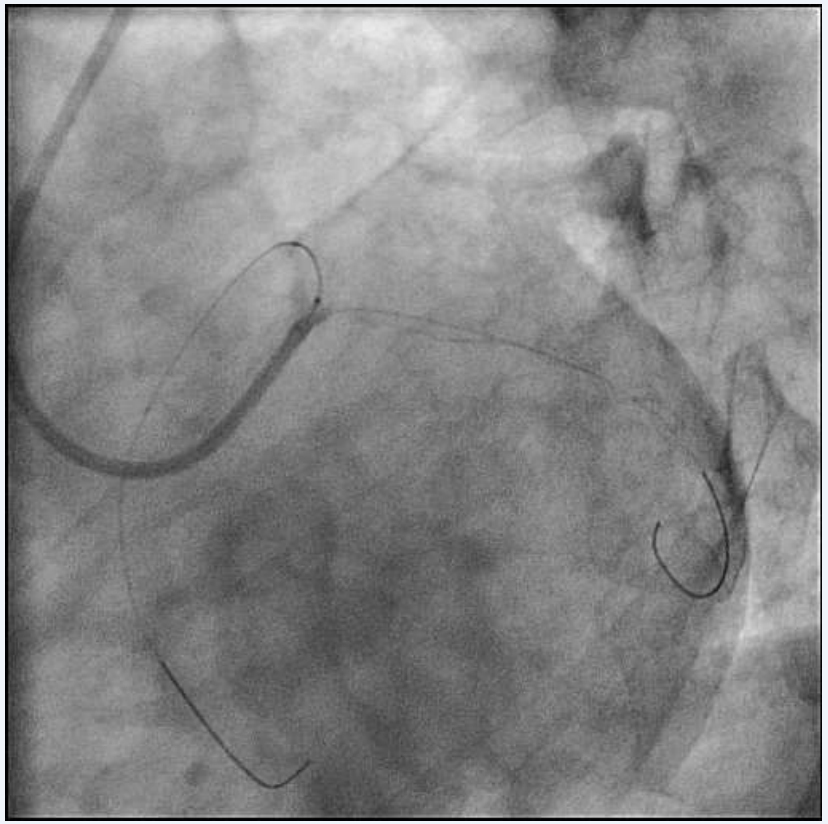


Predilatation

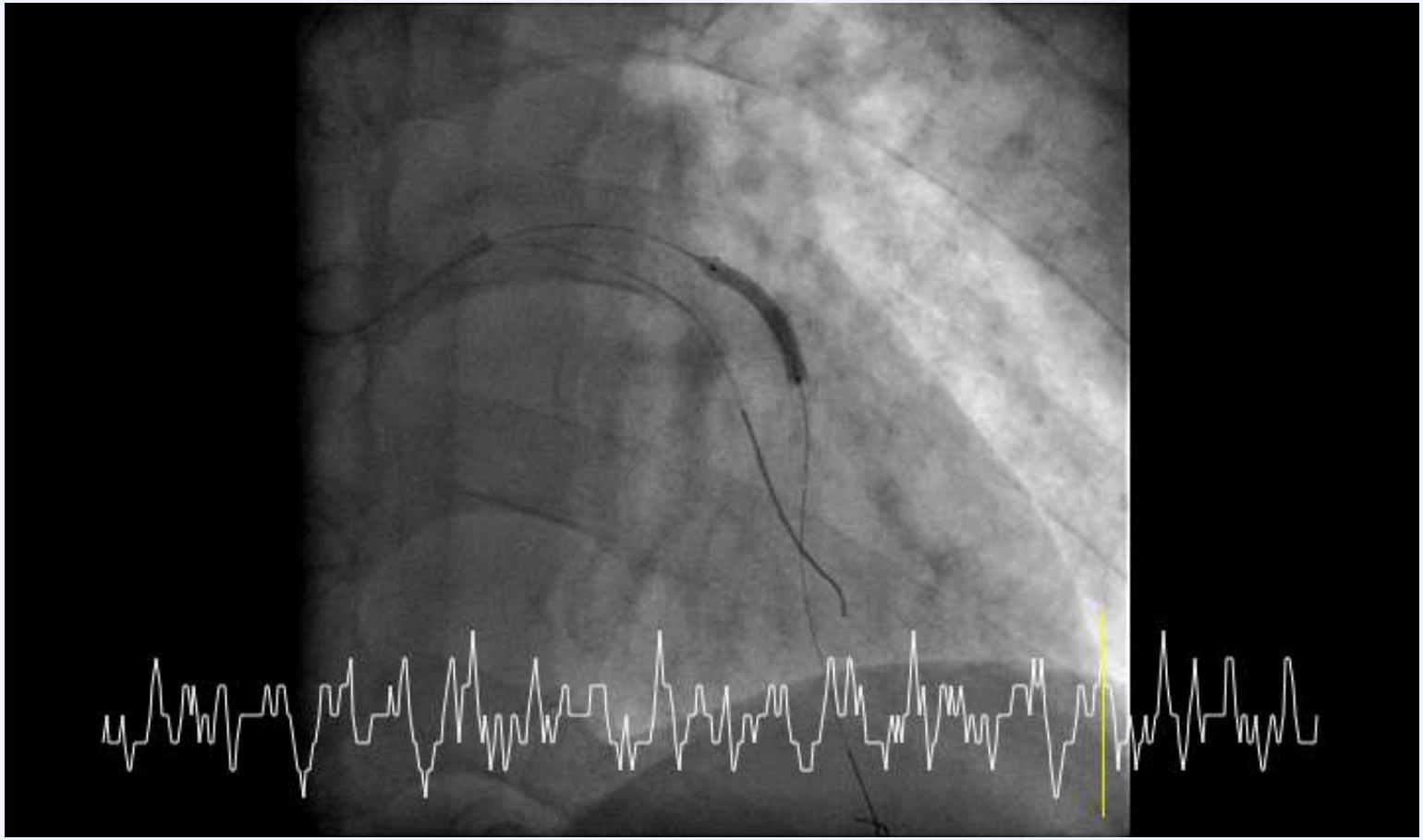


BVS1 (3X28mm)



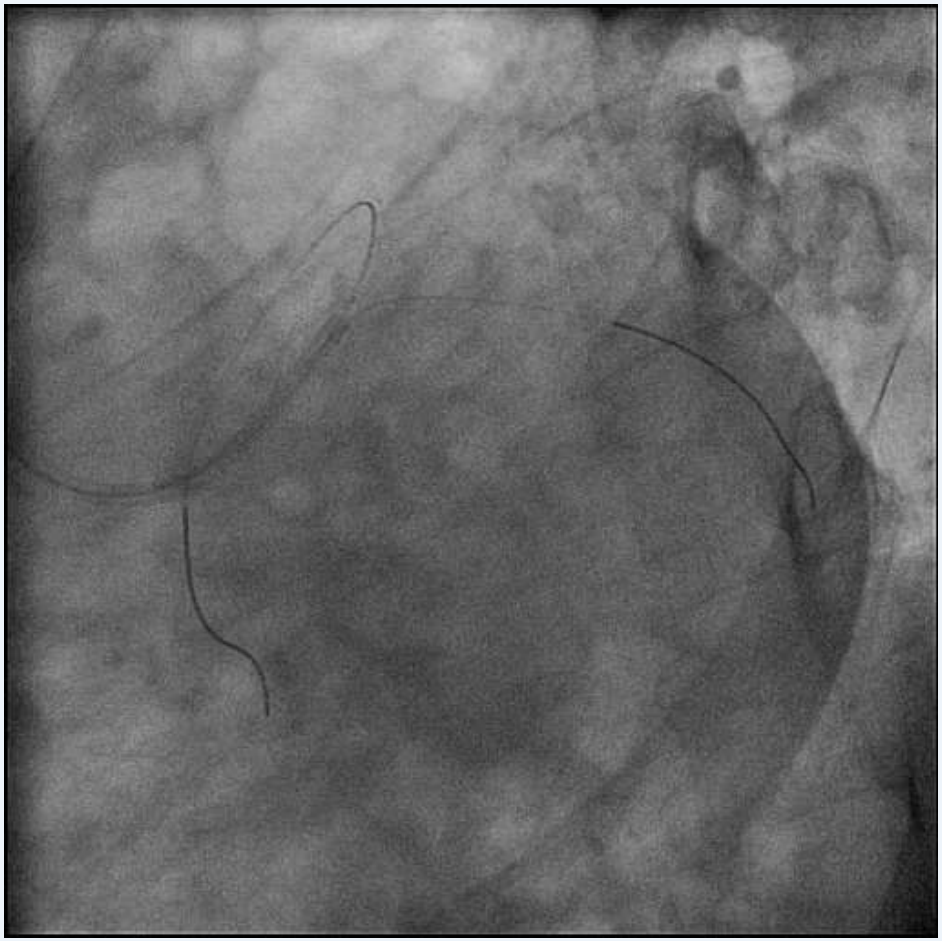


BVS2 (3X23mm)



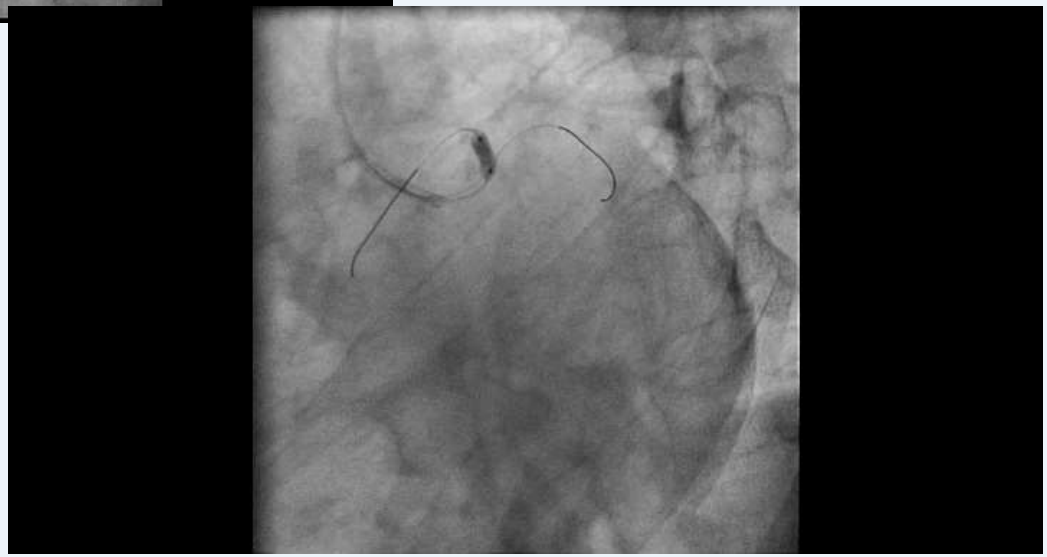
Post-dilatation: NC balloon 3.25X15mm to 14-18 atm

s/p BVS



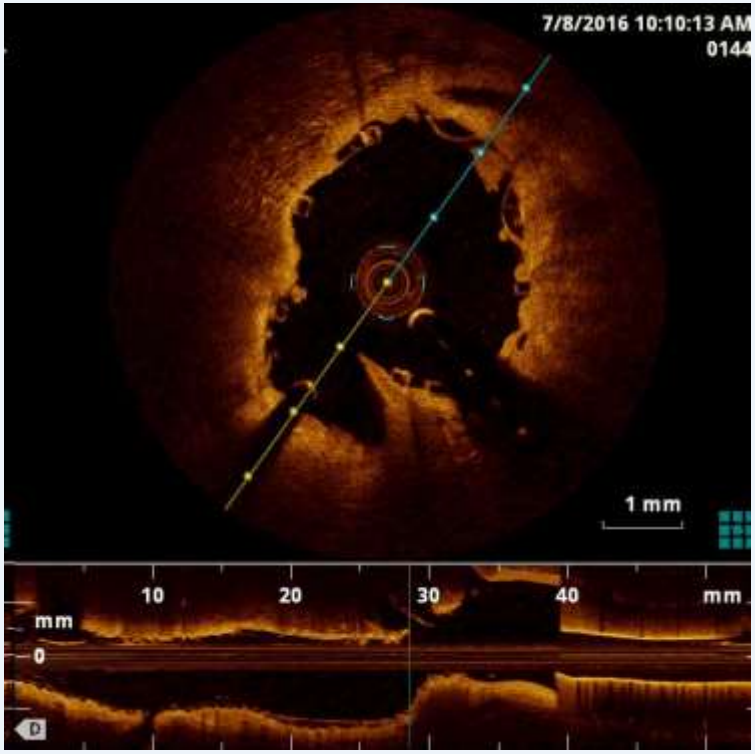
P**S**P: Strut dilatation and LAD postdilatation

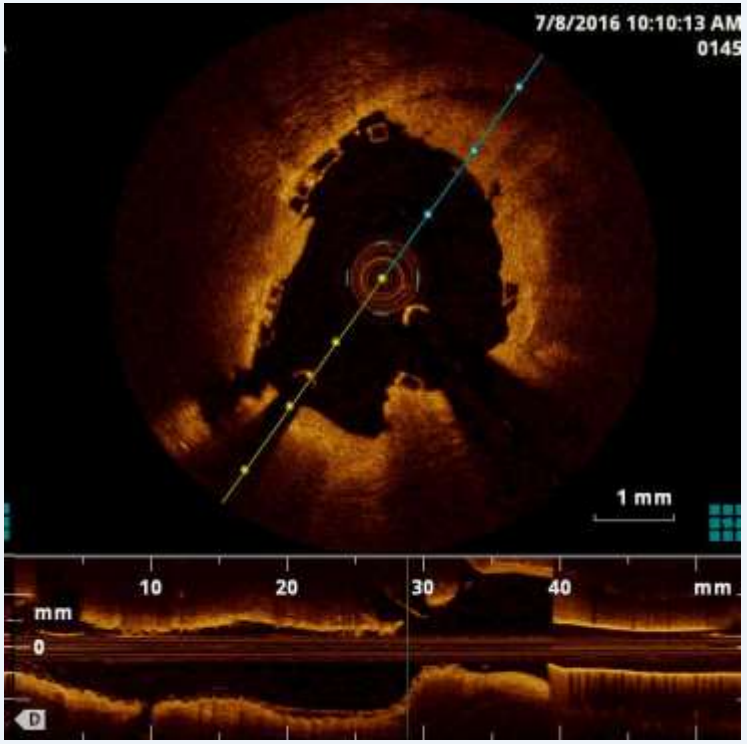
Post-dilatation: NC balloon 2.75X15mm to 10 atm



Post-dilatation: NC balloon 3.25X15mm to 24 atm

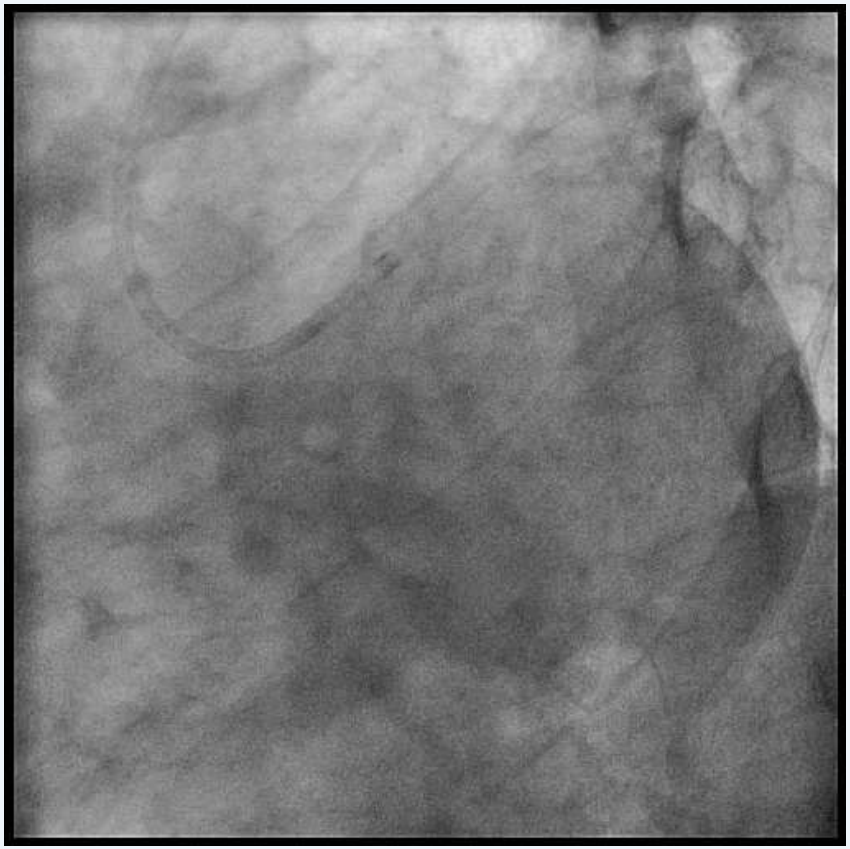
OCT

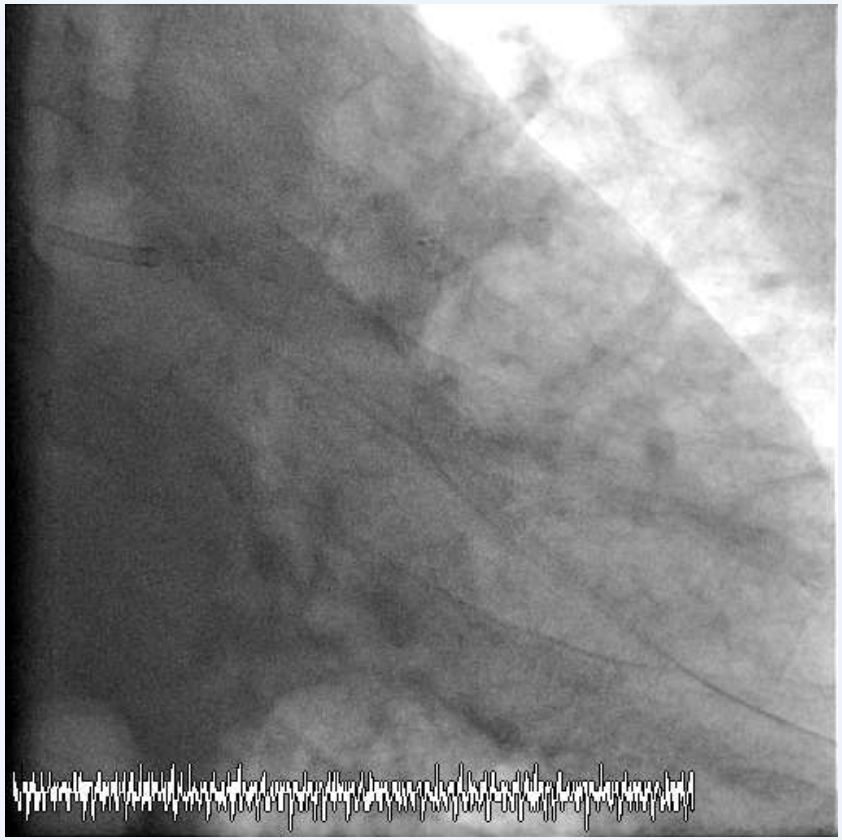




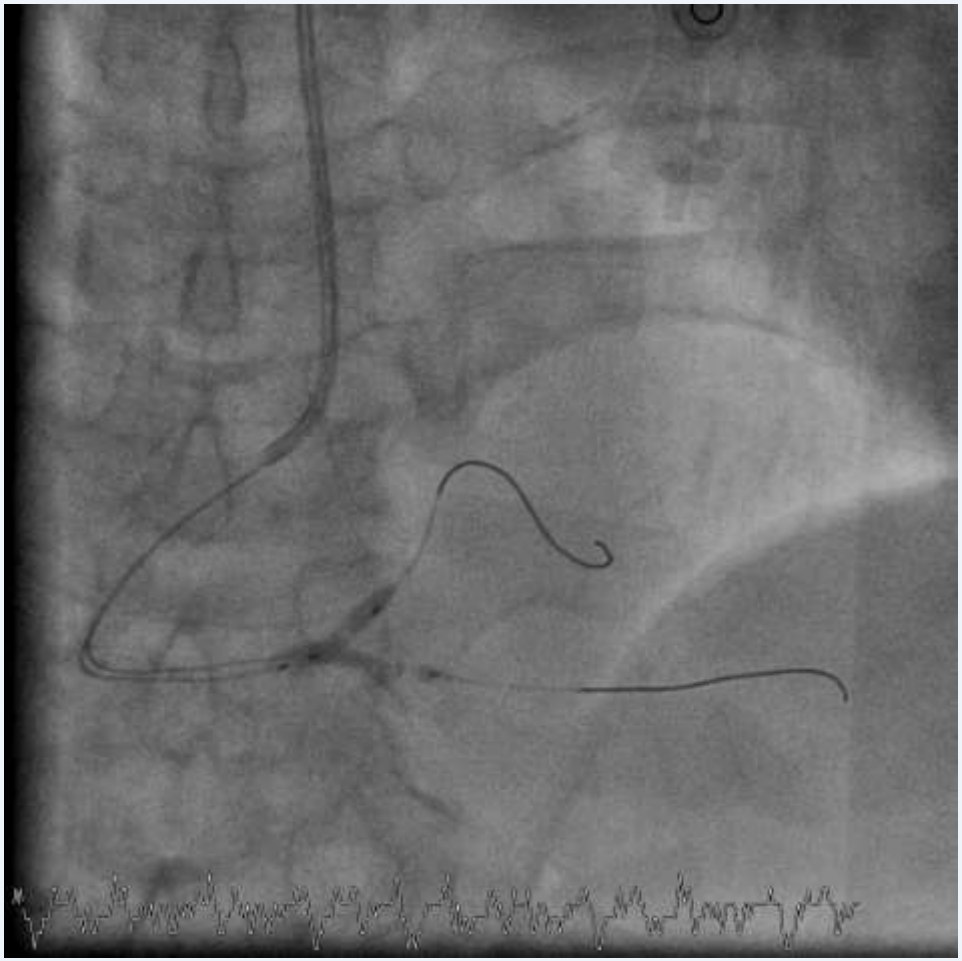
LAD/Dx bifurcation

Final LCA





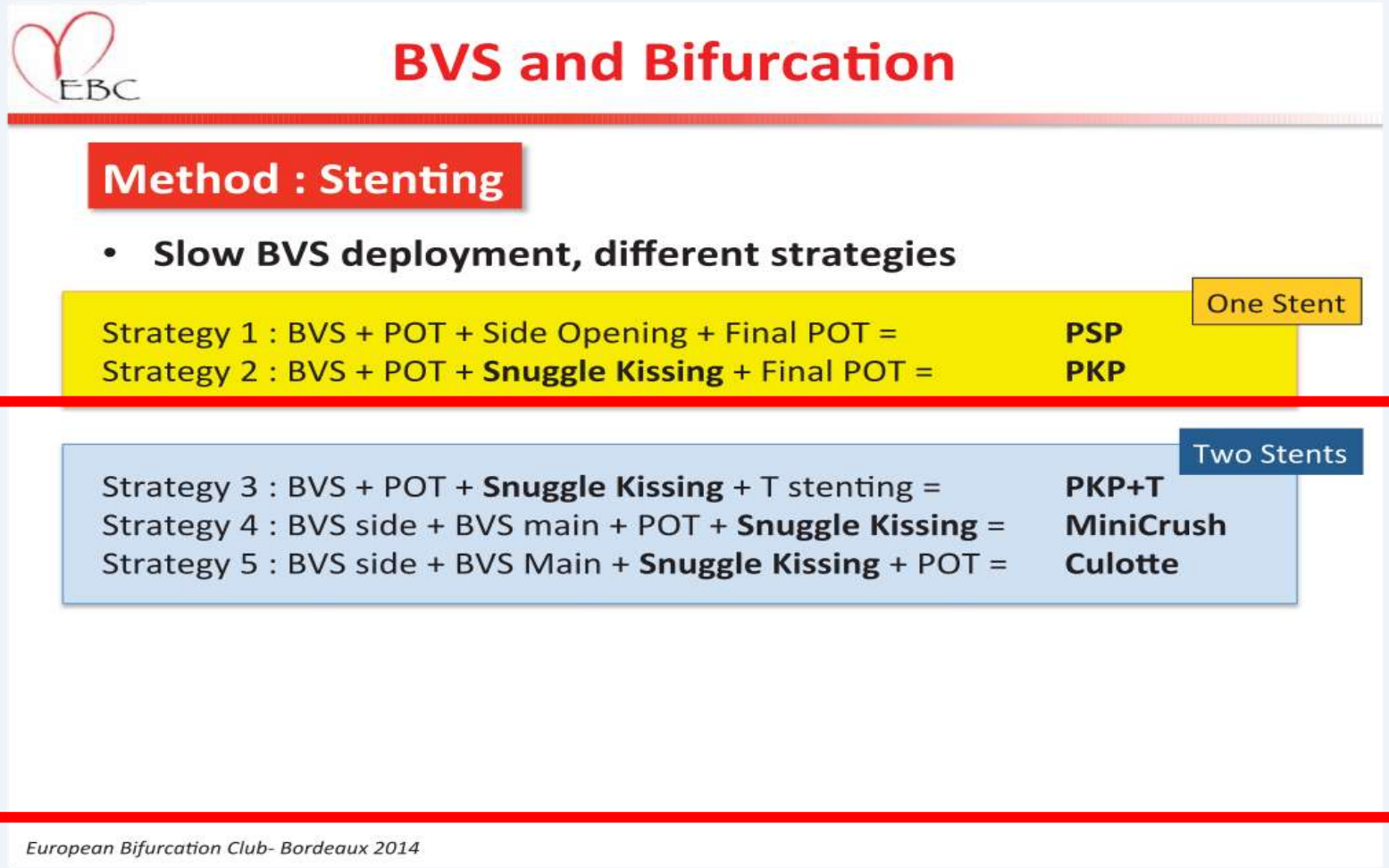
Case 3 (PSP/P***K***P)



BVS3X28mm at dRCA-PL branch

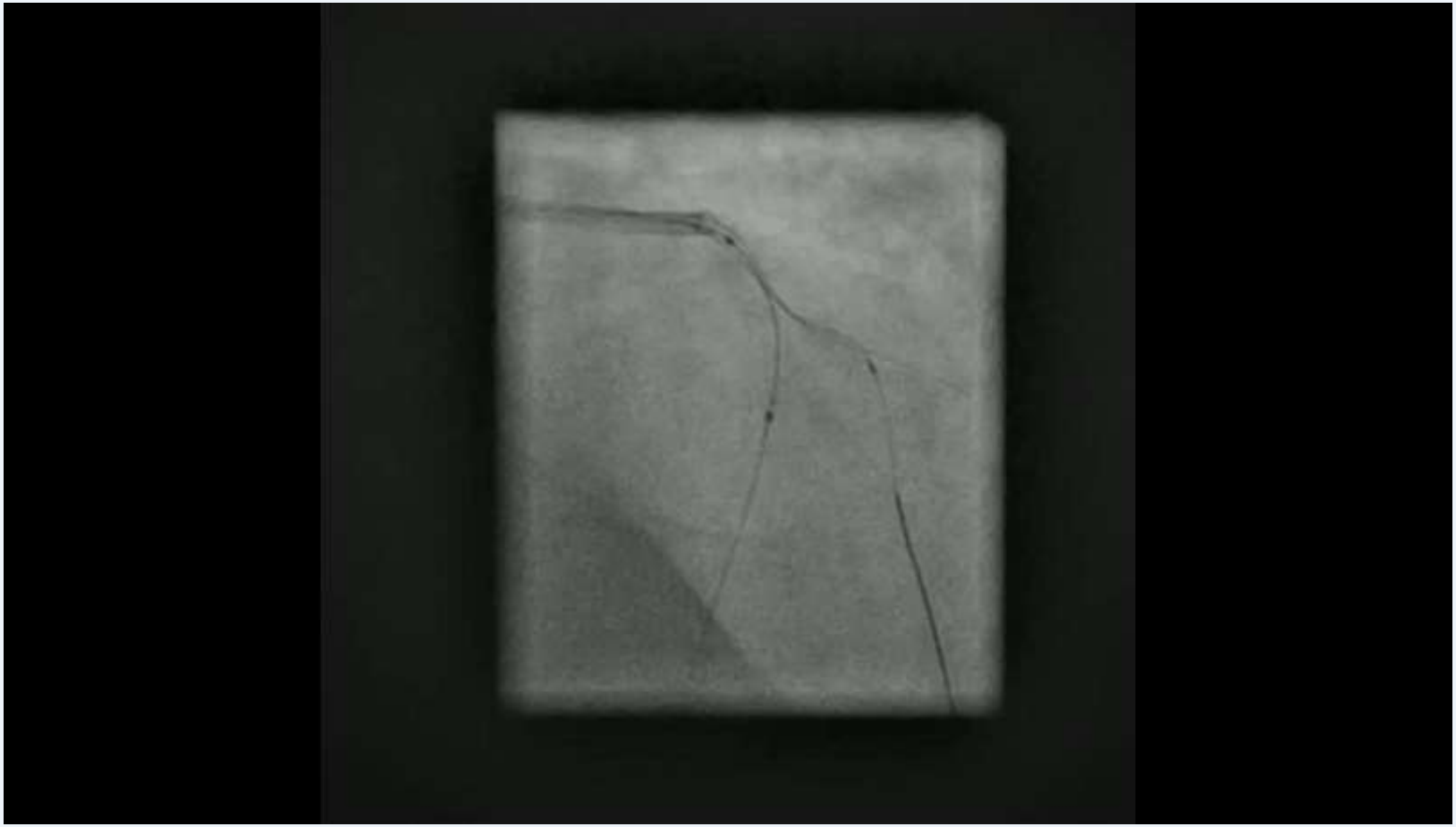
Snuggle kissing (NC TREK 2.5X15mm and Quantum apex 3X15mm at 5 atm)

Case 4 (*2 stents/SB with DES or BVS*)



Provided by Dr. Tsai from MKMH, Taipei

CASE 4: ABSORB 3.5X28 AT MV

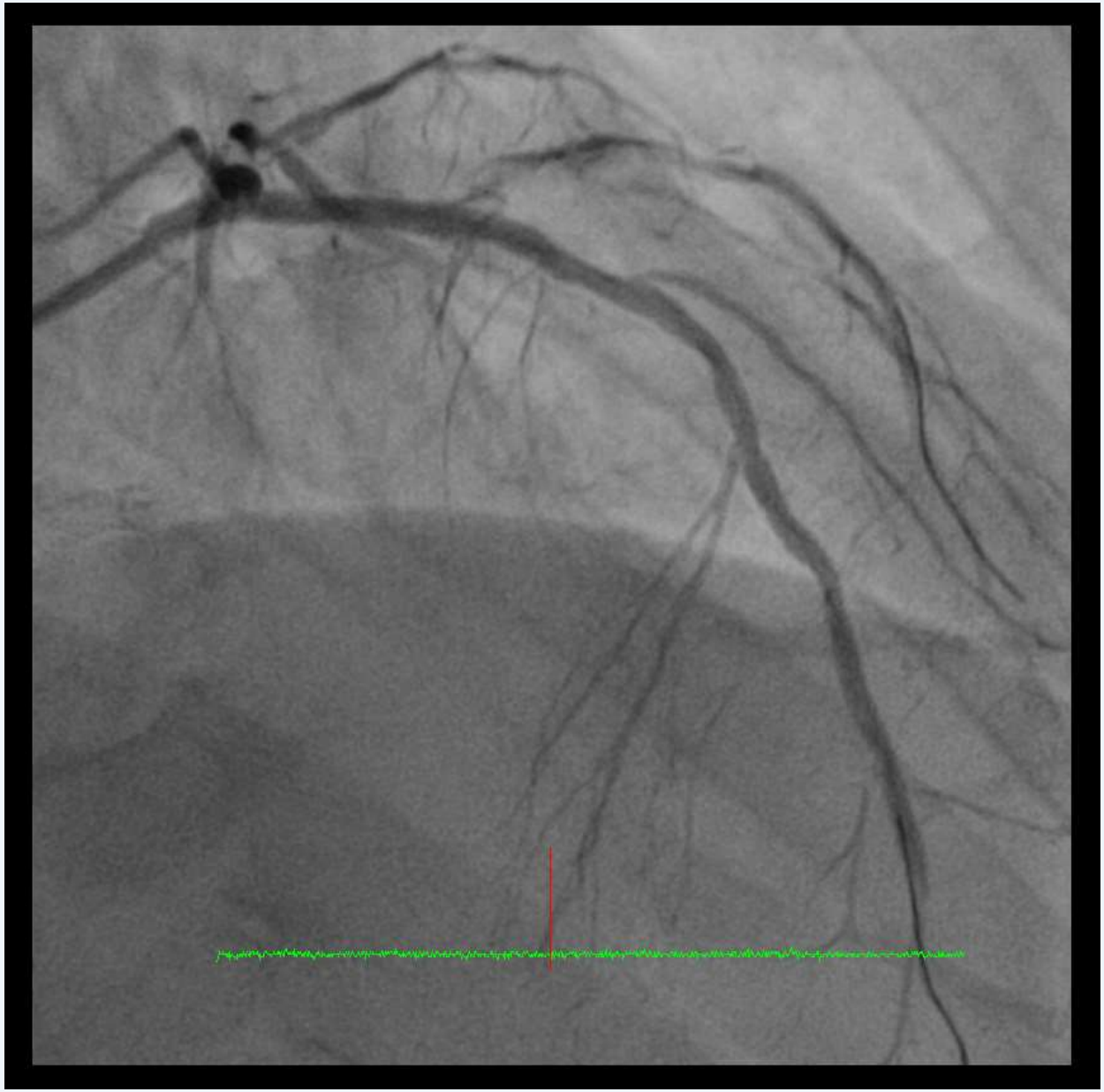


Plan to stenting D1

TAP with DES

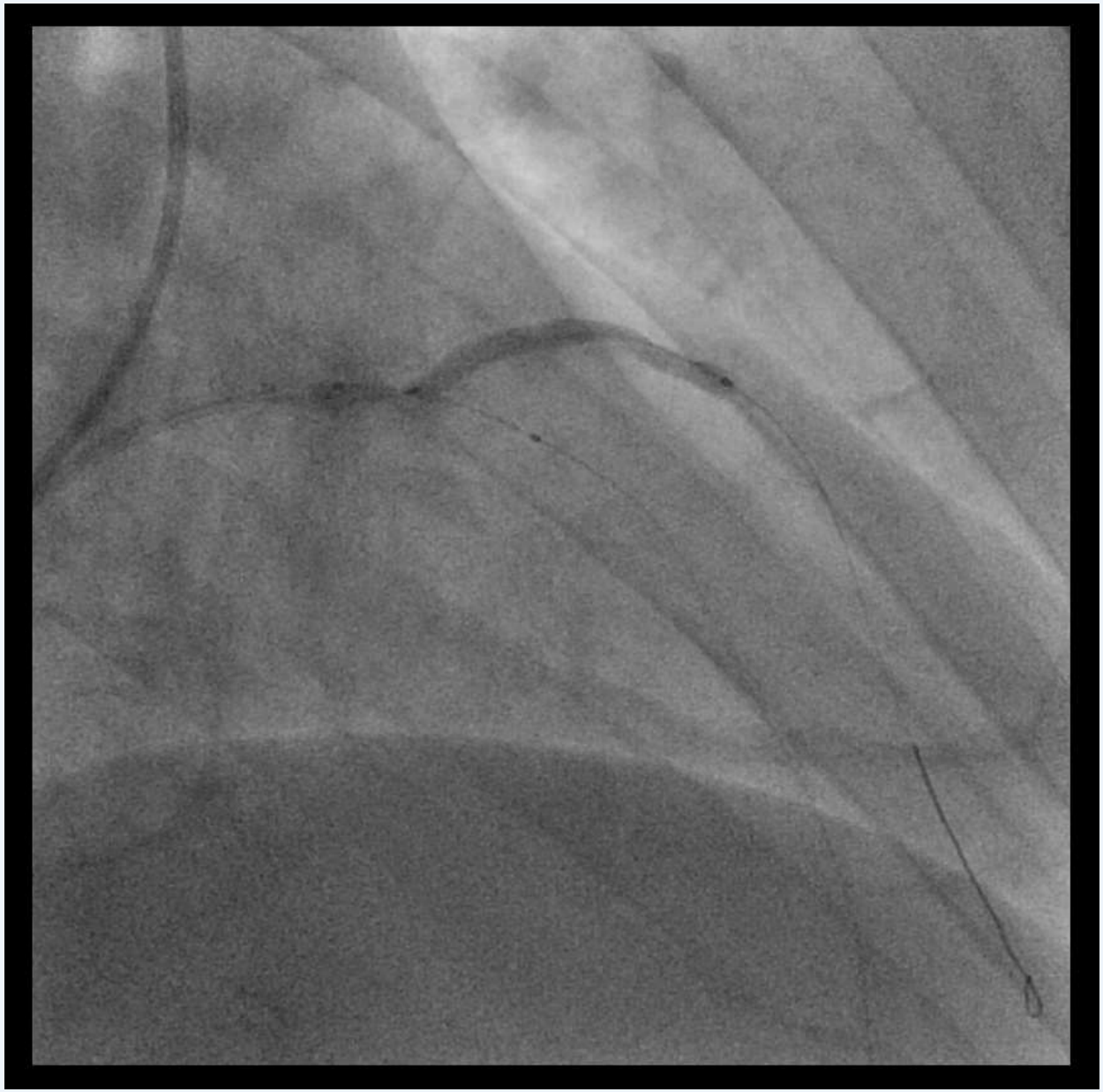
T and small protrude

(TAP)

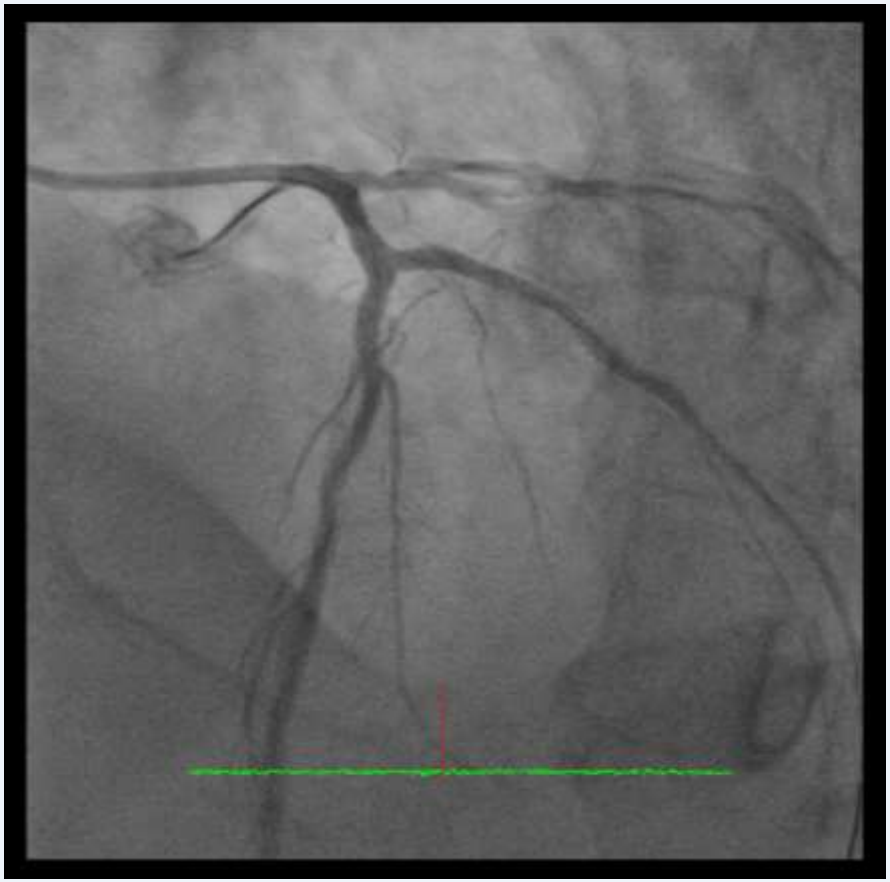


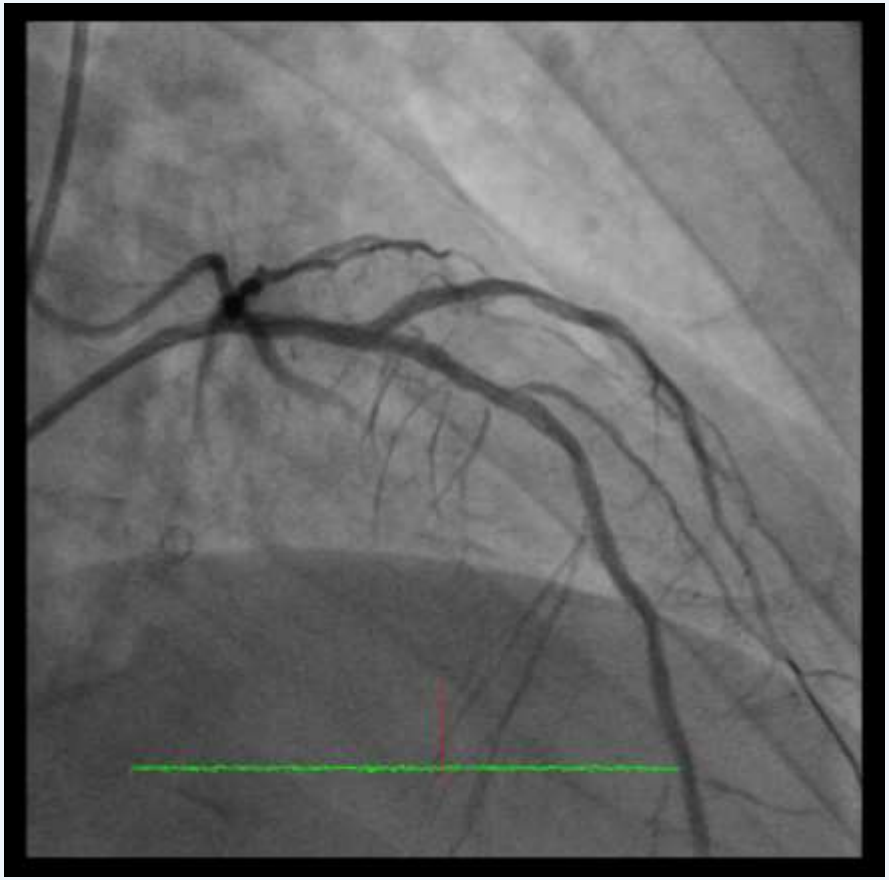
XP 2.5X38

DES can easily cross the dilated strut of Absorb.



FINAL LAD/D1 AFTER ***PKP***





Summary

- From the real world experiences from more than 700 cases, BVS could be used ***effectively and safely*** for patients with variable clinical features and lesions with variable complexity.
- **General principle for BVS: *Well lesion preparation, sizing with good scaffold expansion and apposition, and postdilatation by NC balloons***
- Incorporating the ***recommendations of expansion limits for BVS itself and for strut dilatation into the current concept for treating bifurcations*** *could make BVS feasible for most bifurcation lesions. (**1-year TLR 2%**)*
- Anyway, the goals remains the same: ***1. good flow of the SB. 2. well deployment of the BVS at the main vessels.***

Conclusion

- *With DES, we sometimes treat bifurcations more intensively than what we should do.*
- *With BVS, the relatively conservative strategy could be more close to what we should do for bifurcations.*