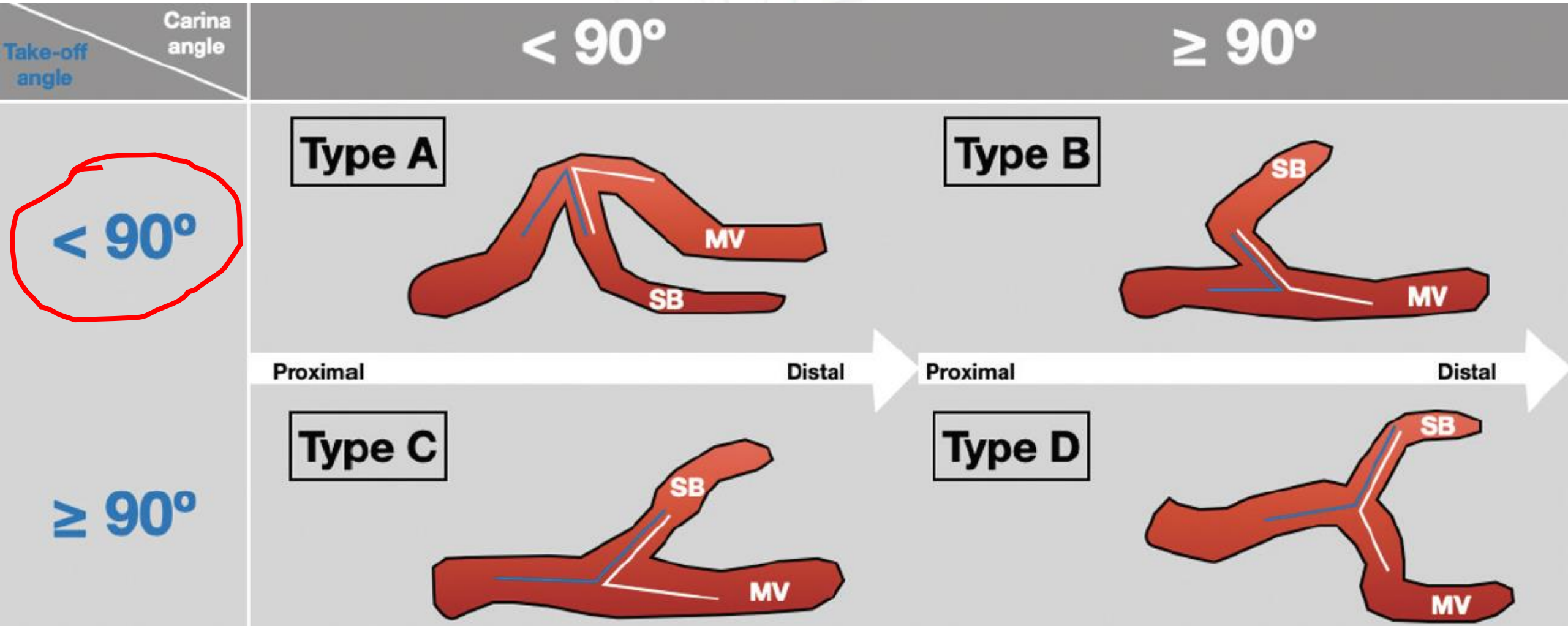




Kỹ thuật Reverse wire Cứu cánh trong PCI chỗ chia phức tạp

Ths.Bs Nguyễn Hữu Đức
Bệnh viện Đa khoa tỉnh Quảng Trị

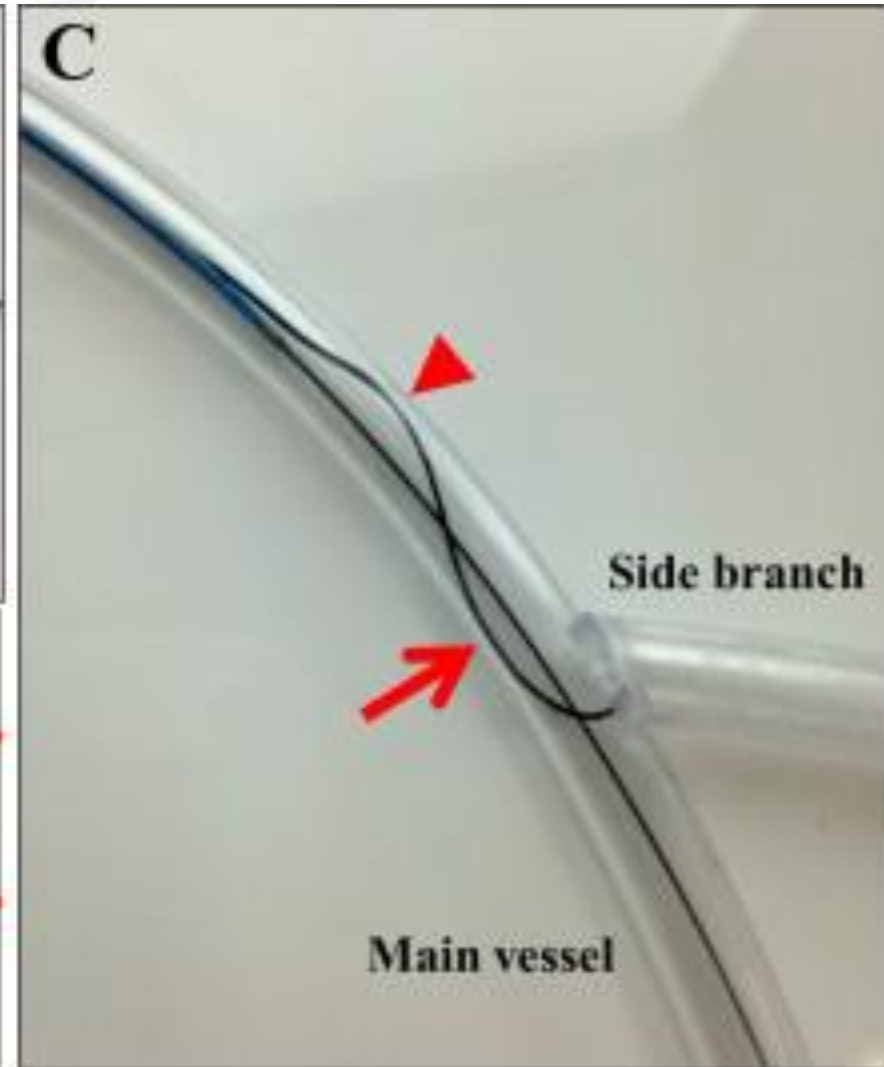
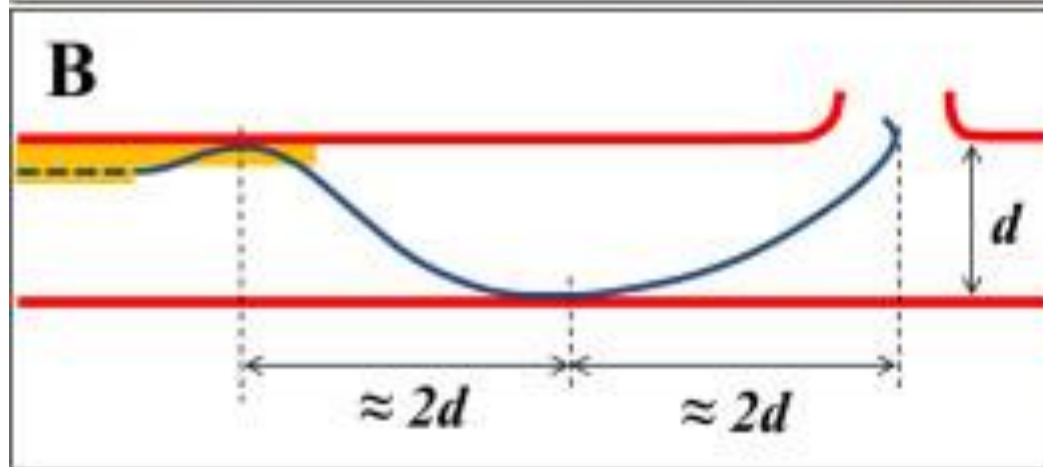
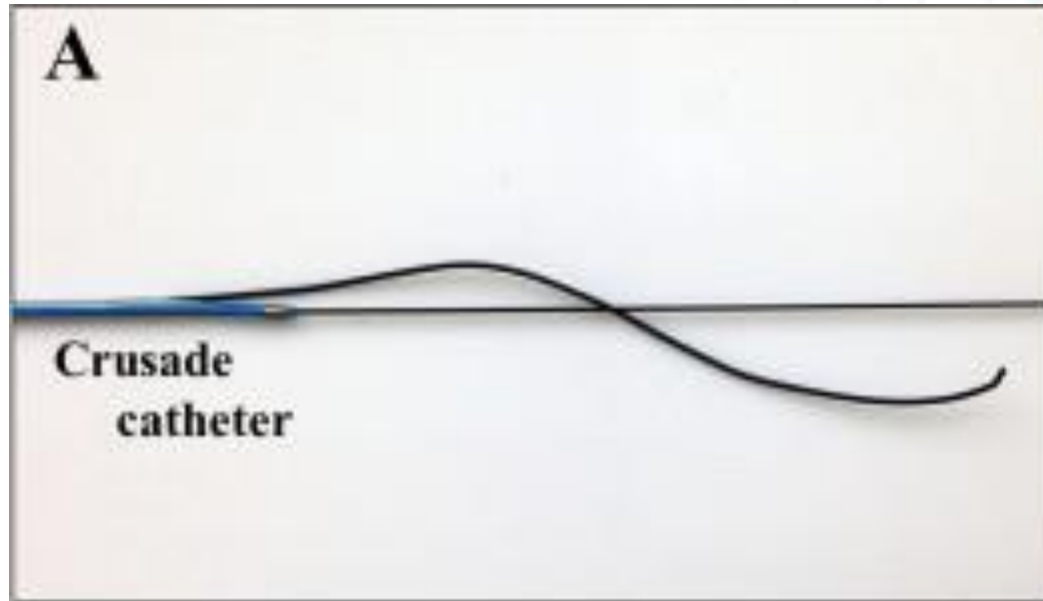
Classification of bifurcations



Wiring in angulated side branch

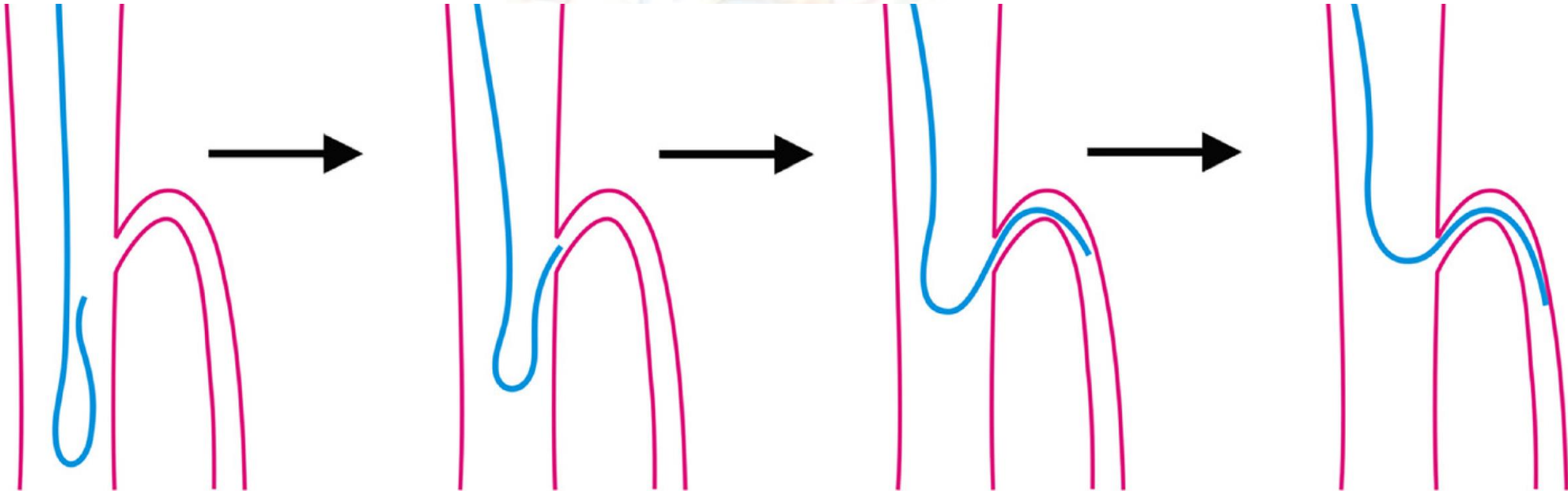
- ✓ Antegrade wiring with double bend
- ✓ Pullback wiring
- ✓ Venture wire control catheter
- ✓ Reverse wire technique
- ✓ Plaque modification in main vessel

Antegrade wiring with double bend



Reverse wire technique

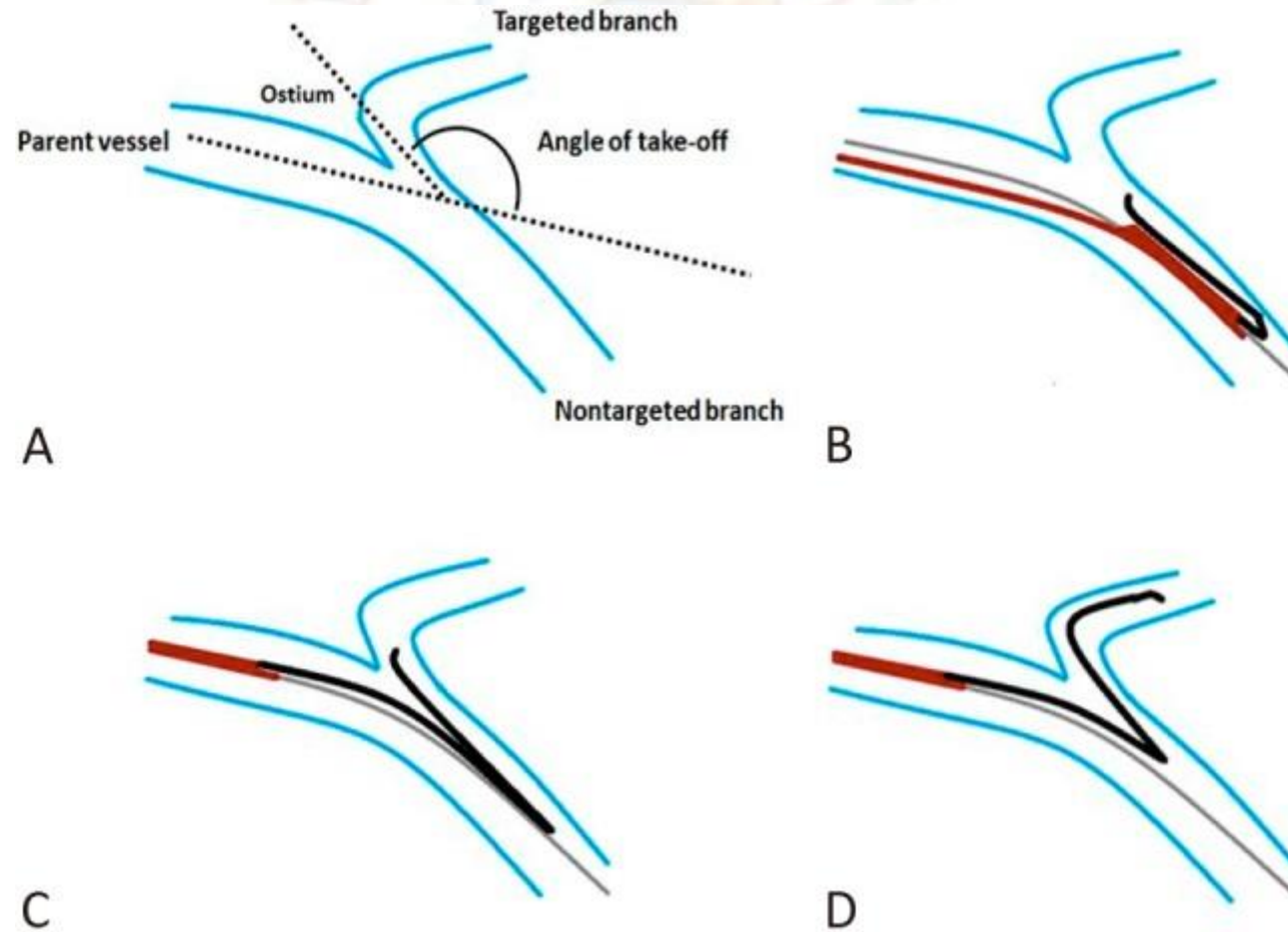
KAWASAKI 2008: HAIRPIN



Reverse wire technique

Reverse bent wiring with the dual lumen catheter

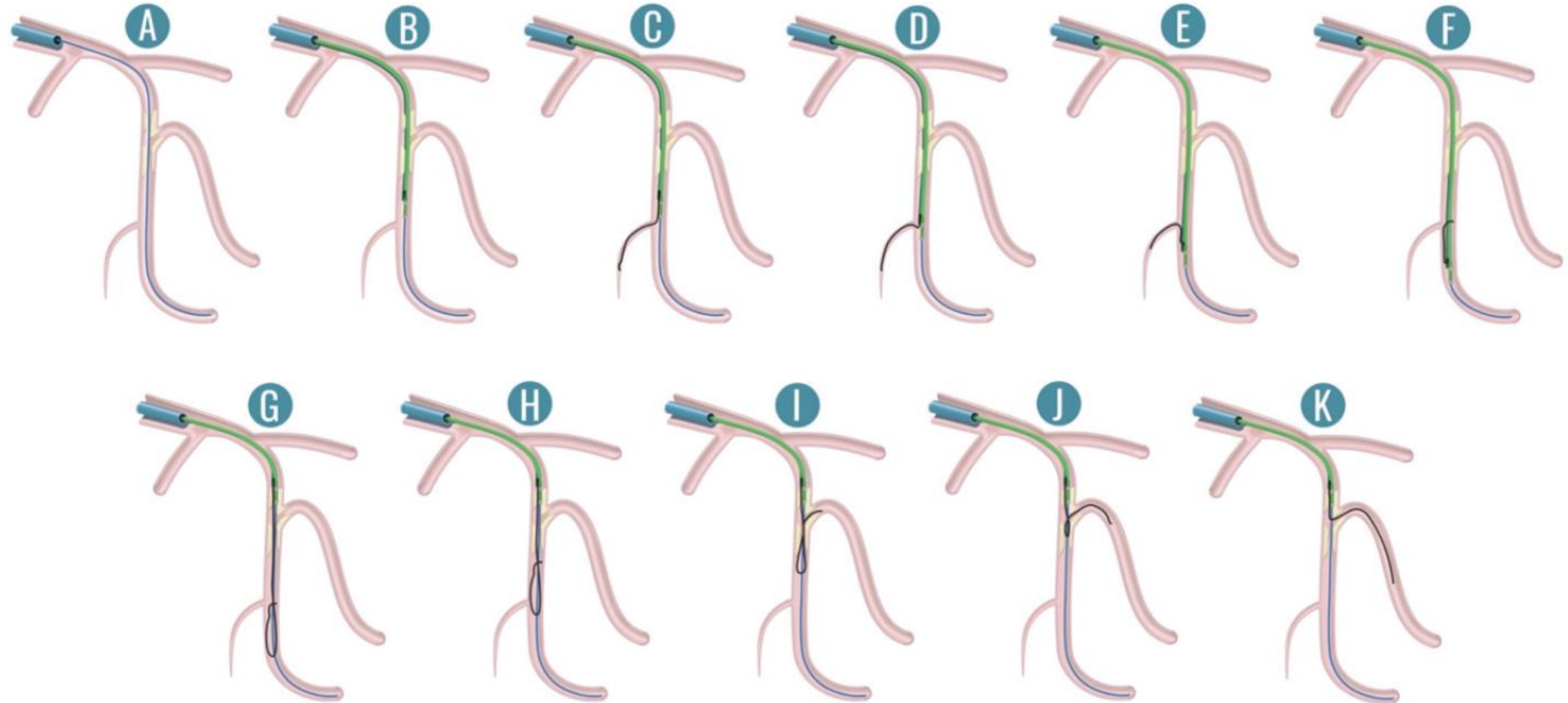
Wantanable et al, 2013: HAIRPIN + DLC



Reverse wire technique

“Streamlined” Reverse Wire with the dual lumen catheter

Hasegawa et al, 2020: DLC + Distal branche => Hairpin



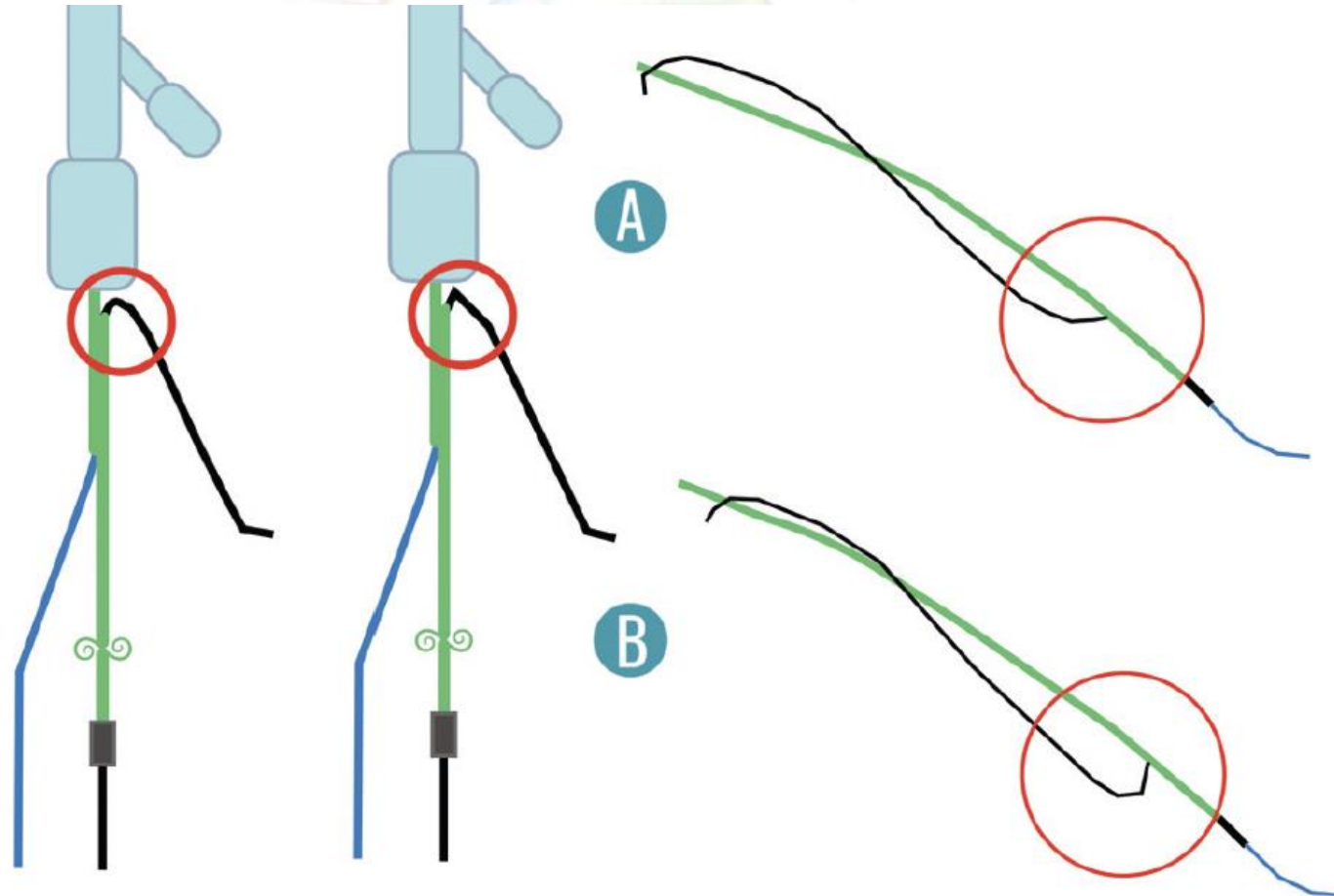
Reverse wire technique



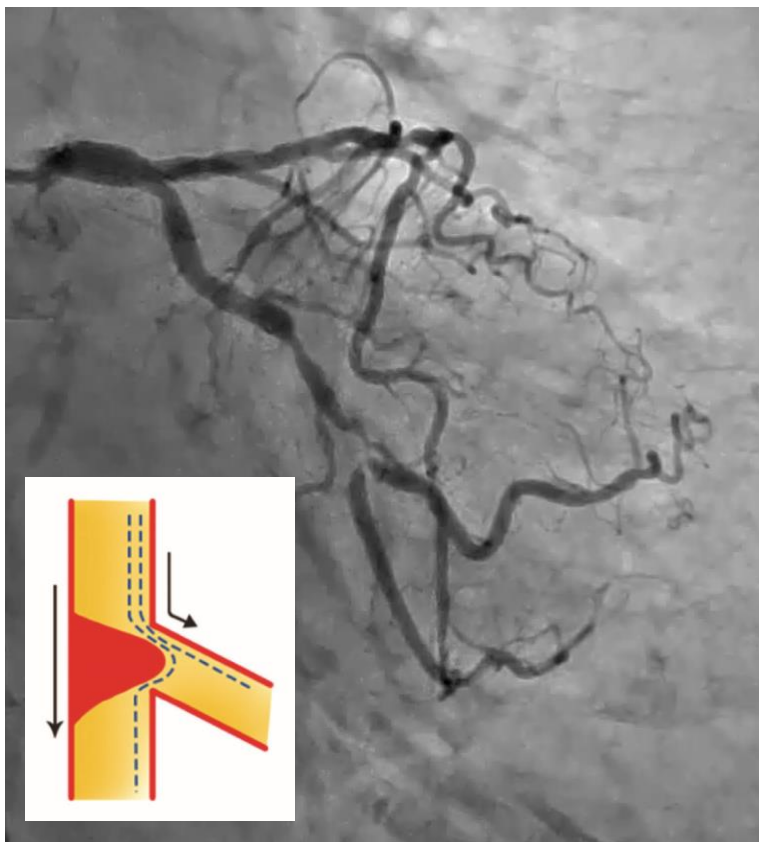
Reverse wire technique

Reverse bent wiring with the dual lumen catheter

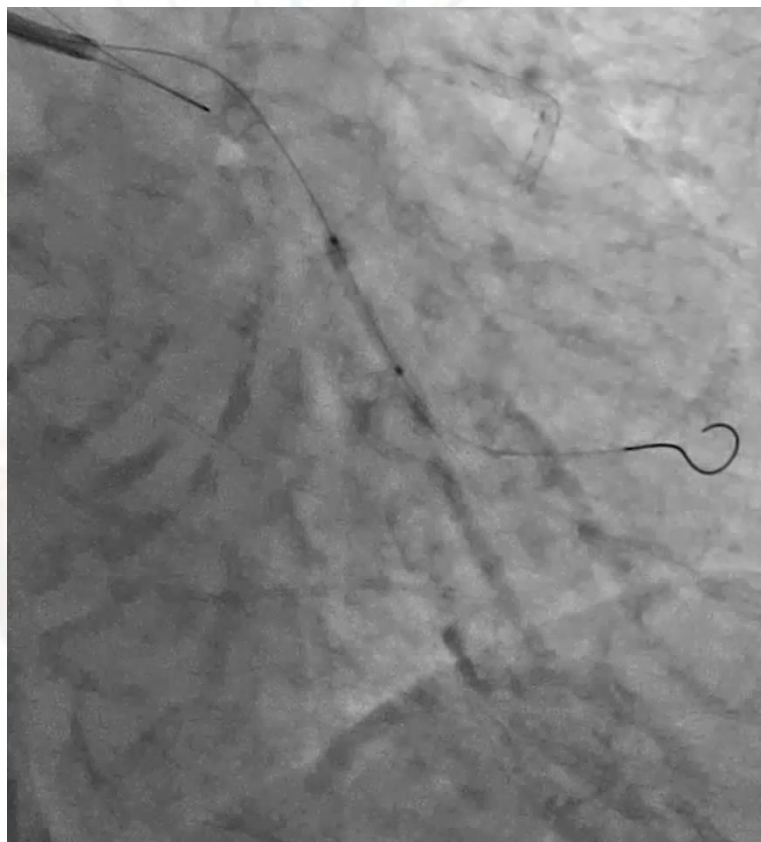
Sharp curve or round curve?



Case 1 - Reverse bent wiring with the DL catheter



Subtotal occlusion
Type A bifurcation

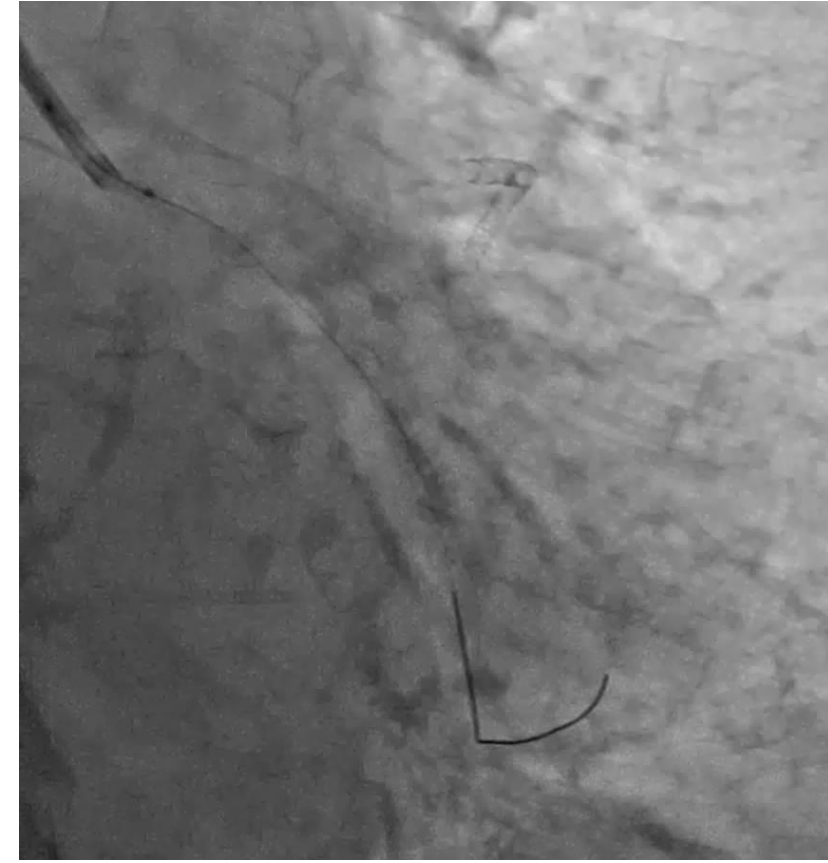


BL 2.0



sharp curve
GW: **Fielder FC**
DL: **Sasuke**

Case 1 - Reverse bent wiring with the DL catheter

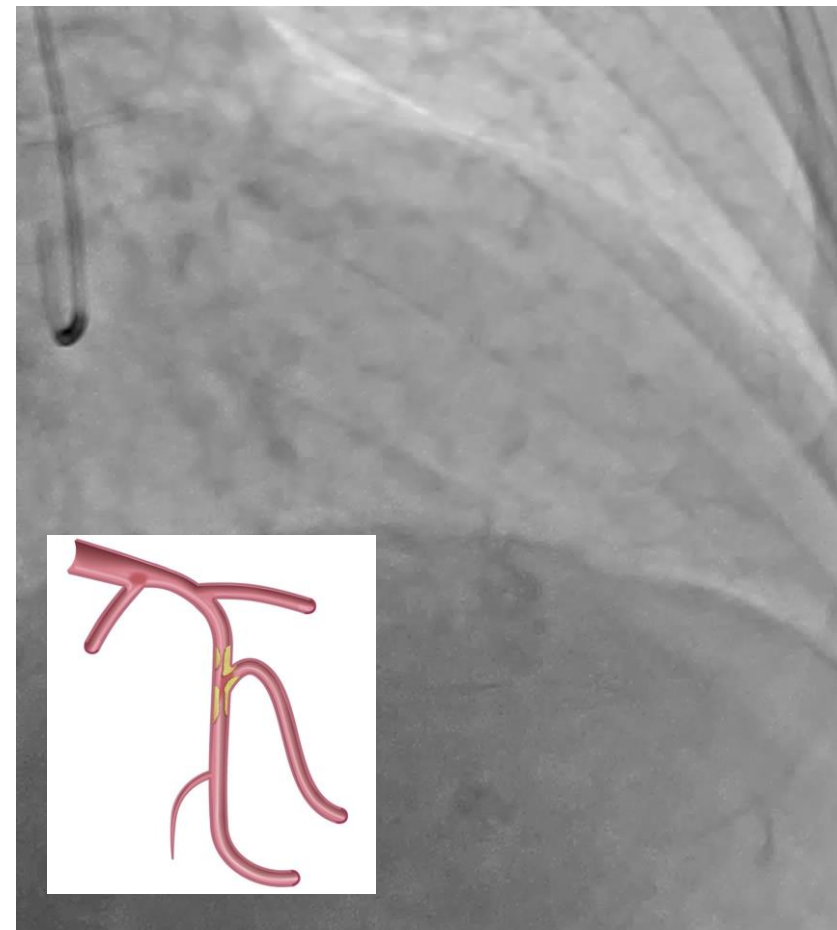


Sharp curve
GW: **Fielder FC**
DL: **Sasuke**

BL 2.5

Stent LCx

Case 2 - Reverse bent wiring with the DL catheter



Type B bifurcation



Sharp curve
GW: **Whisper**
DL: **Crusade**



Reverse wire

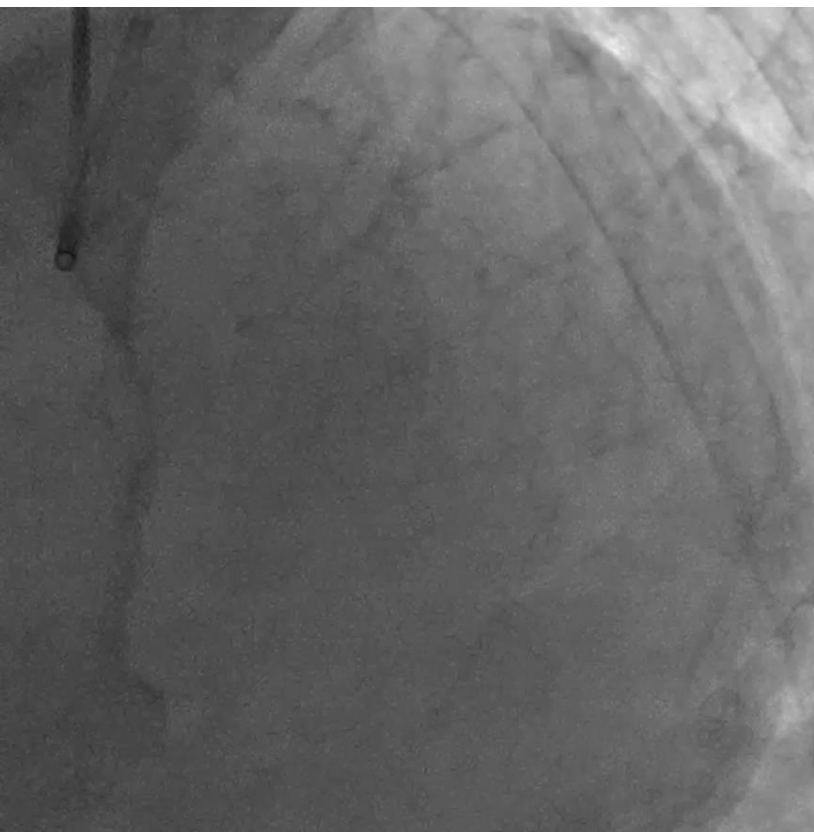
Case 2 - Reverse bent wiring with the DL catheter



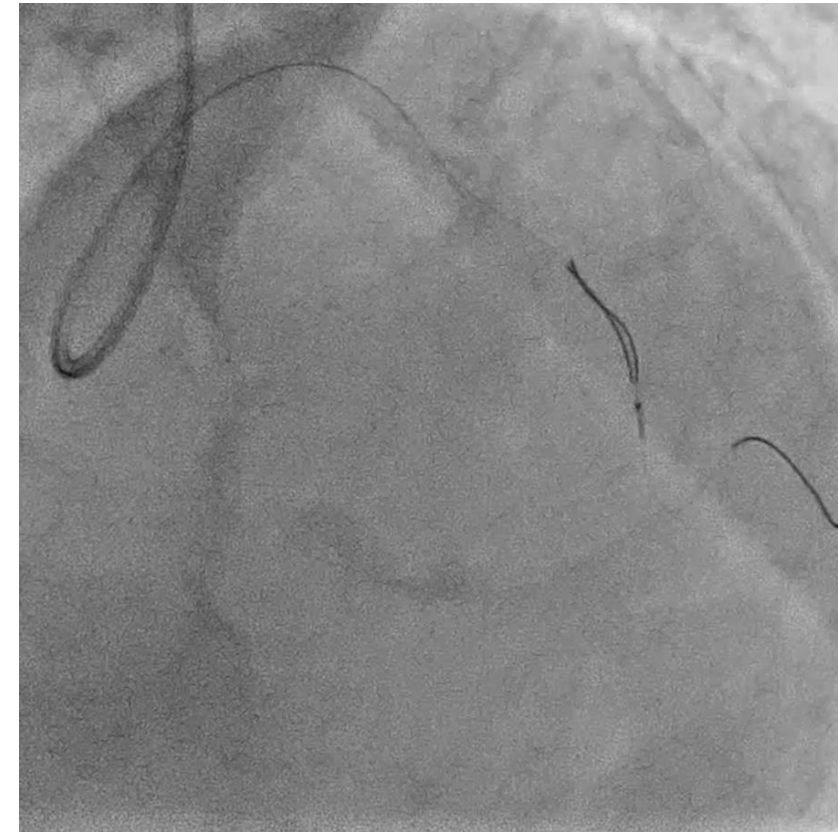
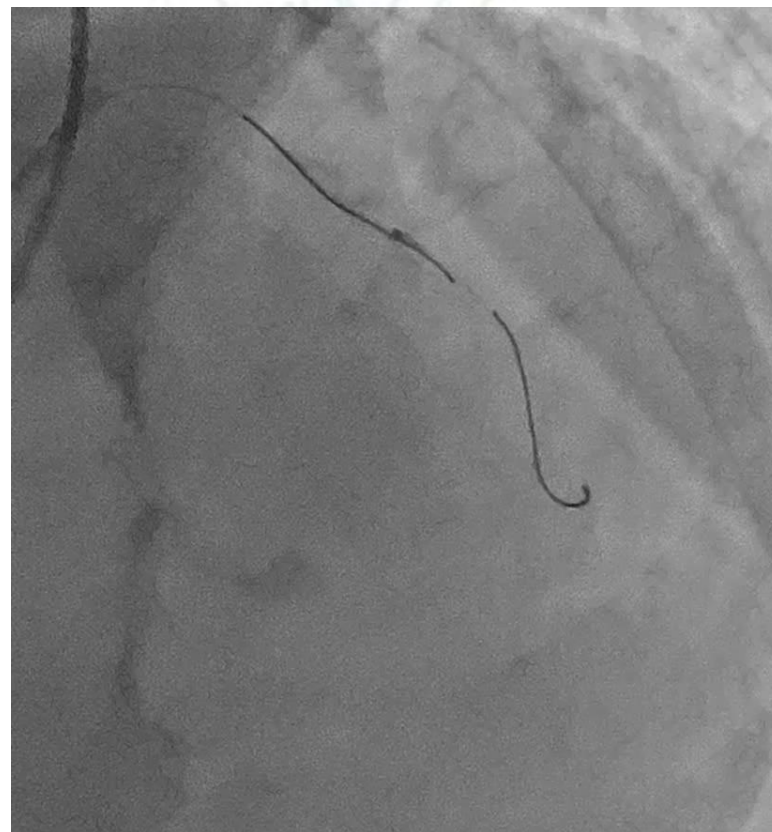
Round curve
GW: **runthrough**
DL: **Crusade**

Jailed BL

Case 3 - Reverse bent wiring with the DL catheter



Bifucation type A
Calcified

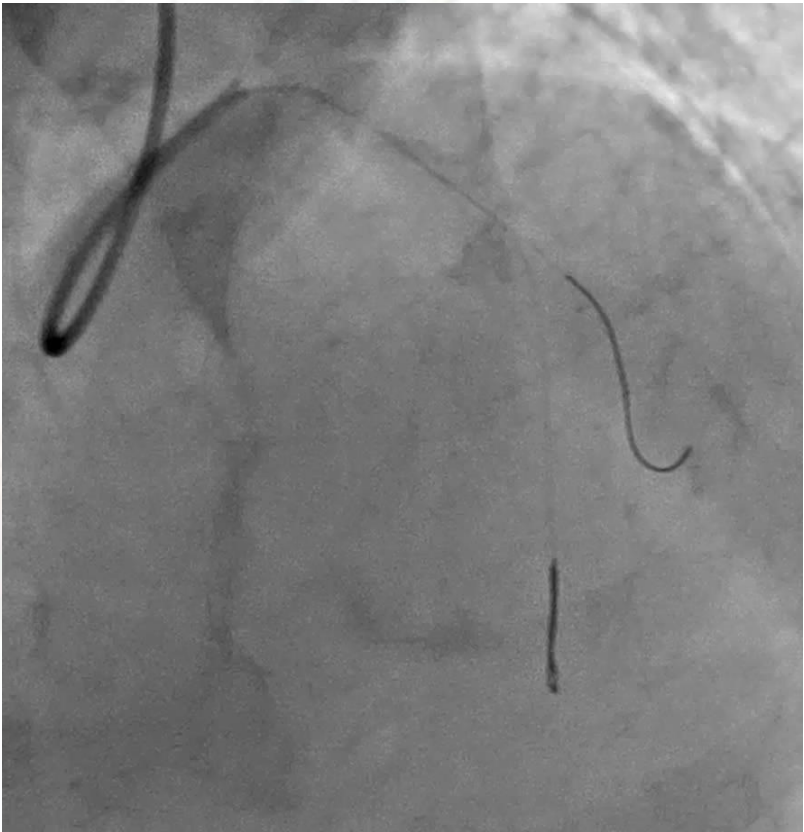


Round curve
GW: Sion
DL: Crusade

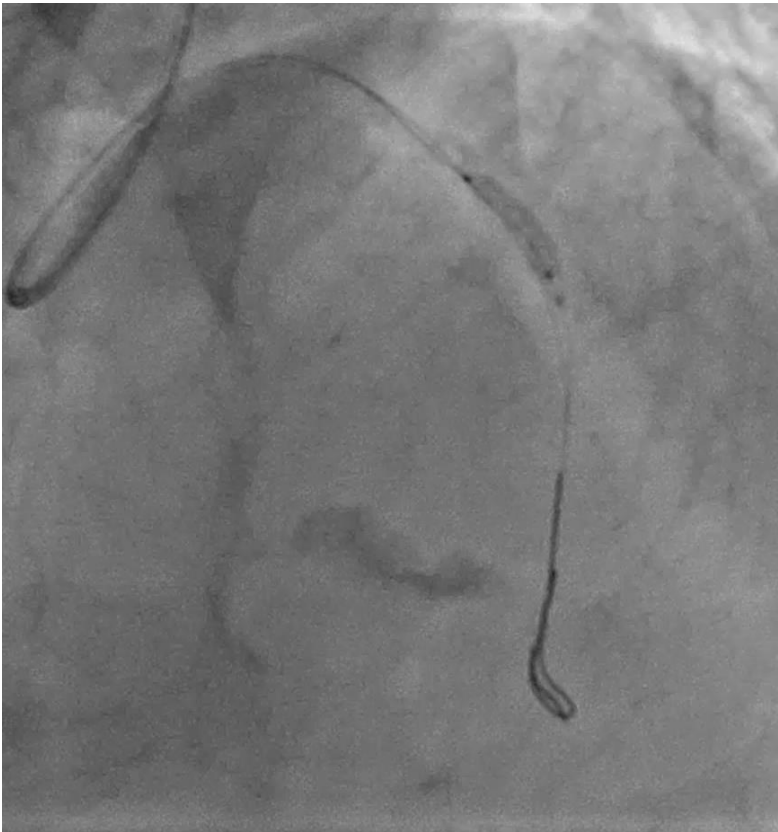
Case 3 - Reverse bent wiring with the DL catheter



NC 2.5

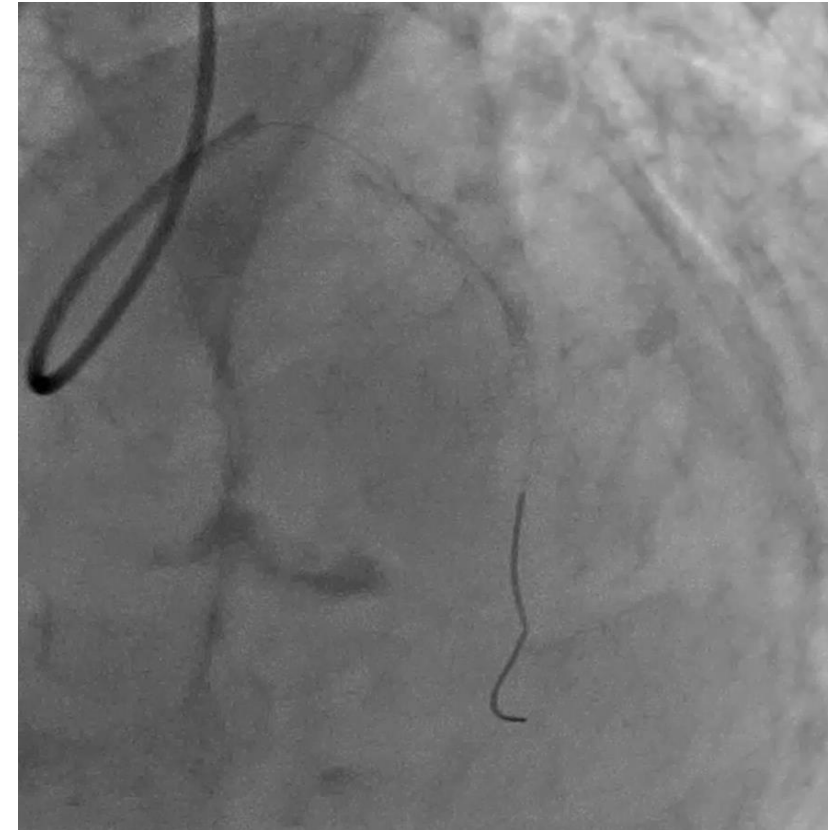
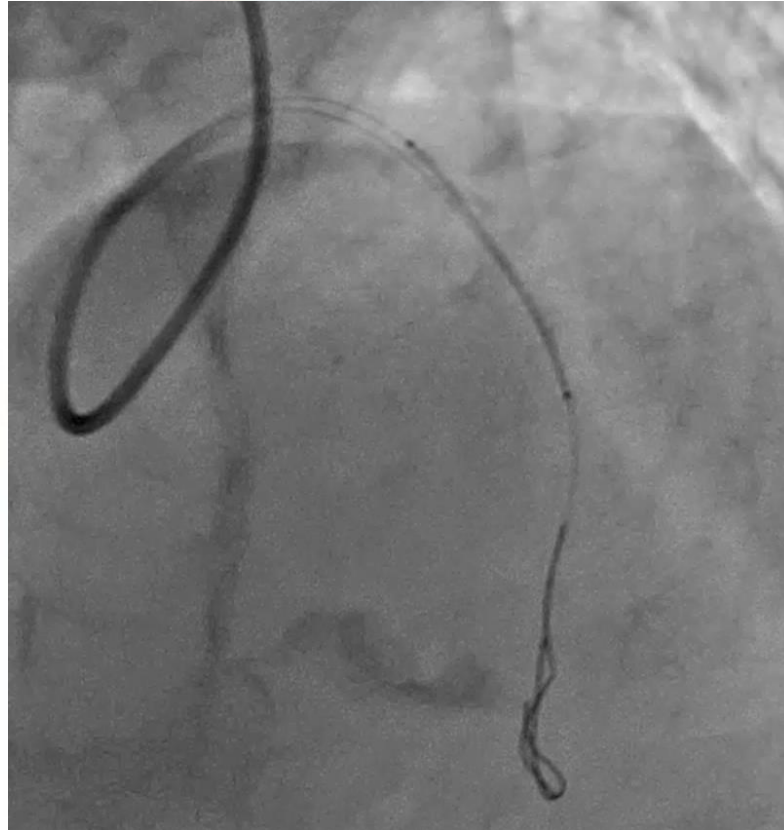
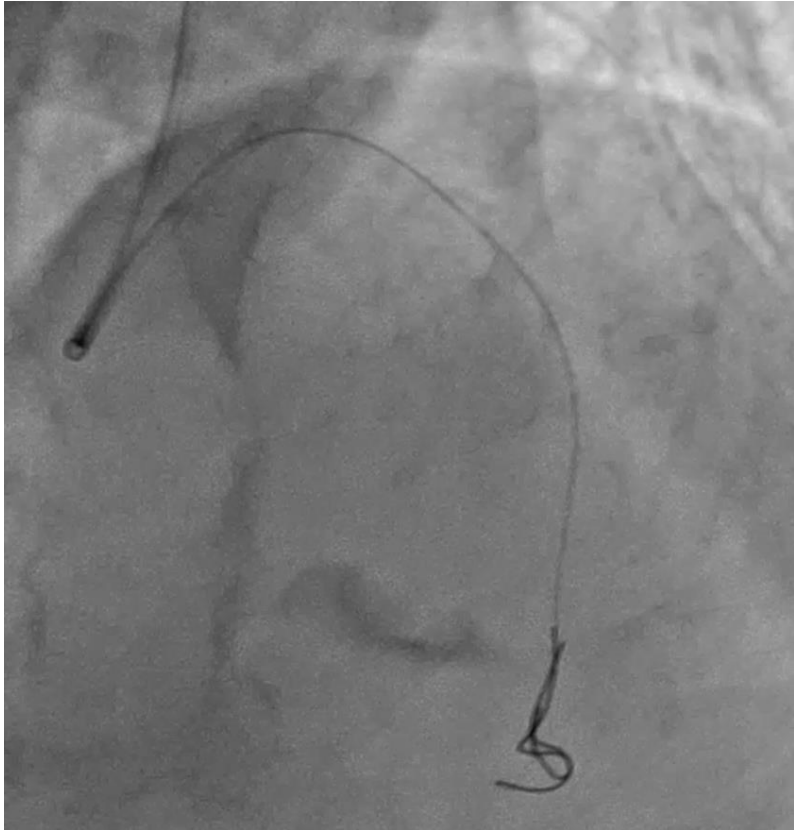


Failure to deliver the stent

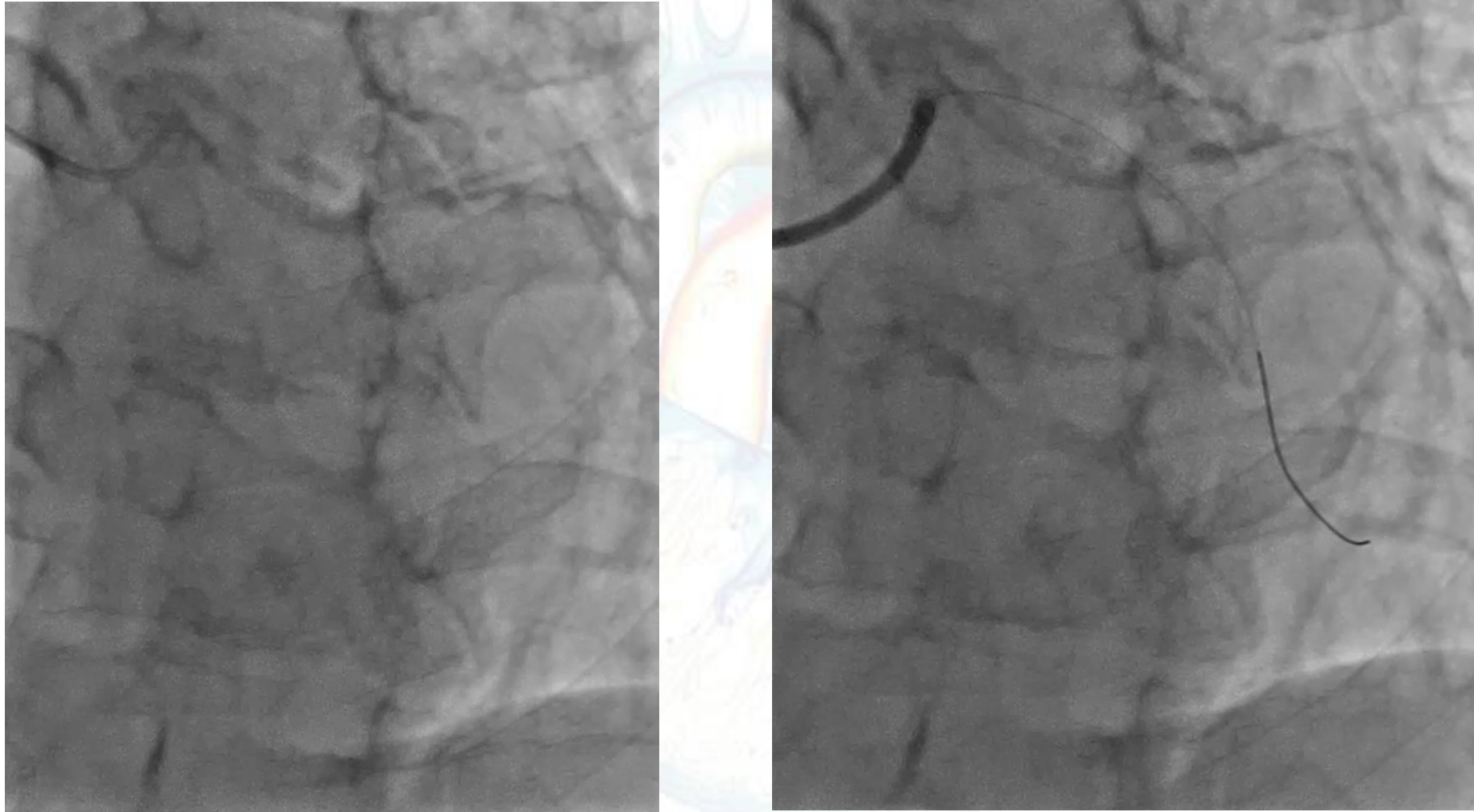


Scoring BL 3.0

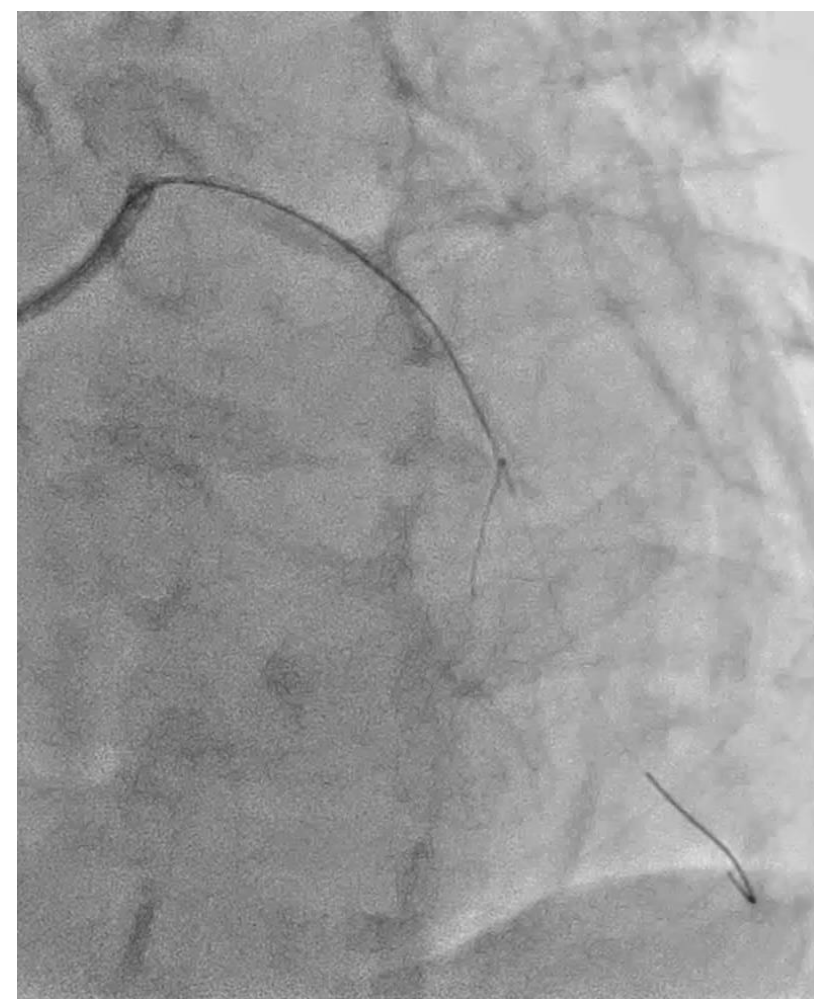
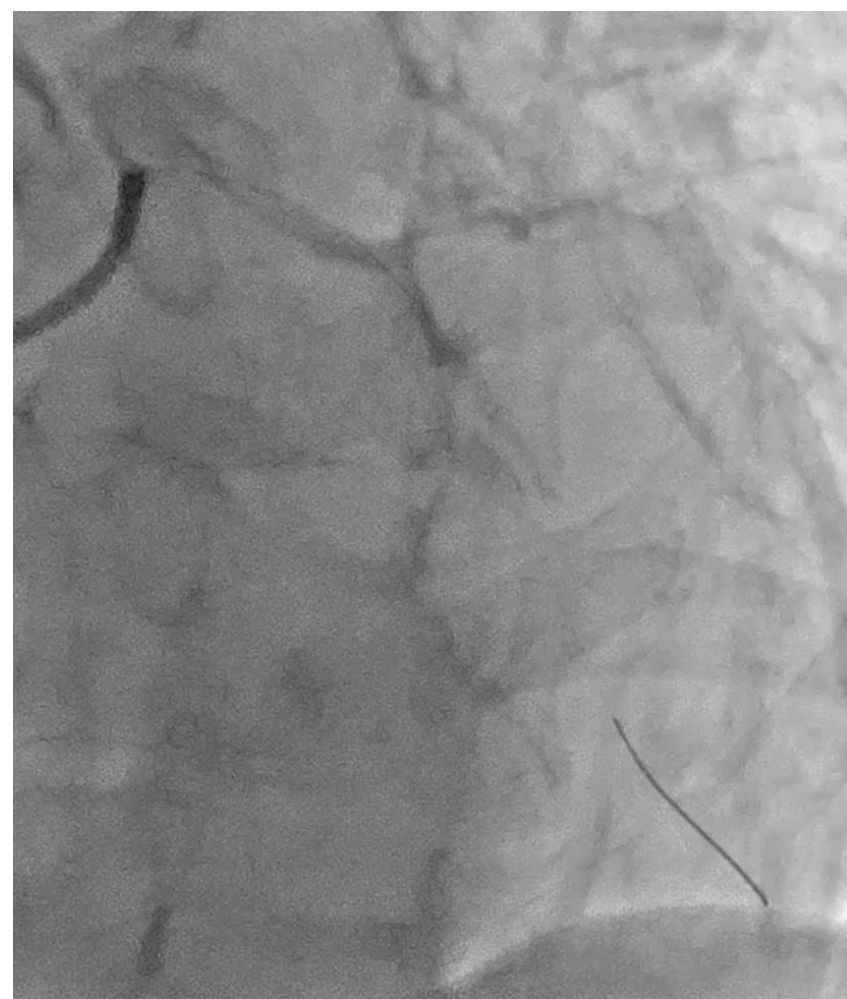
Case 3 - Reverse bent wiring with the DL catheter



Case 4 - Reverse bent wiring with the DL catheter



Case 4 - Reverse bent wiring with the DL catheter



Round curve
GW: **Felder XT**
DL: **Crusade**

Case 4 - Reverse bent wiring with the DL catheter



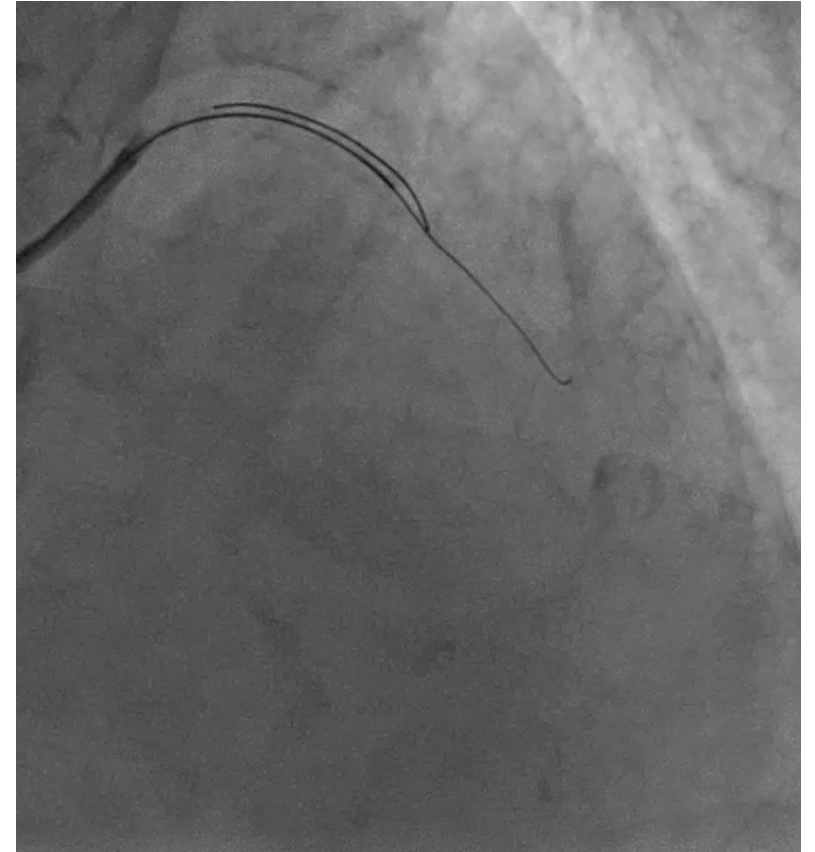
Case5 - Plaque modification in main vessel



Subtotal occlusion
At bifurcation



Runthrough
Subintima



Fielder XT
=> Diagonal

Case 5 - Plaque modification in main vessel



Modified Plaque
BL 1.5

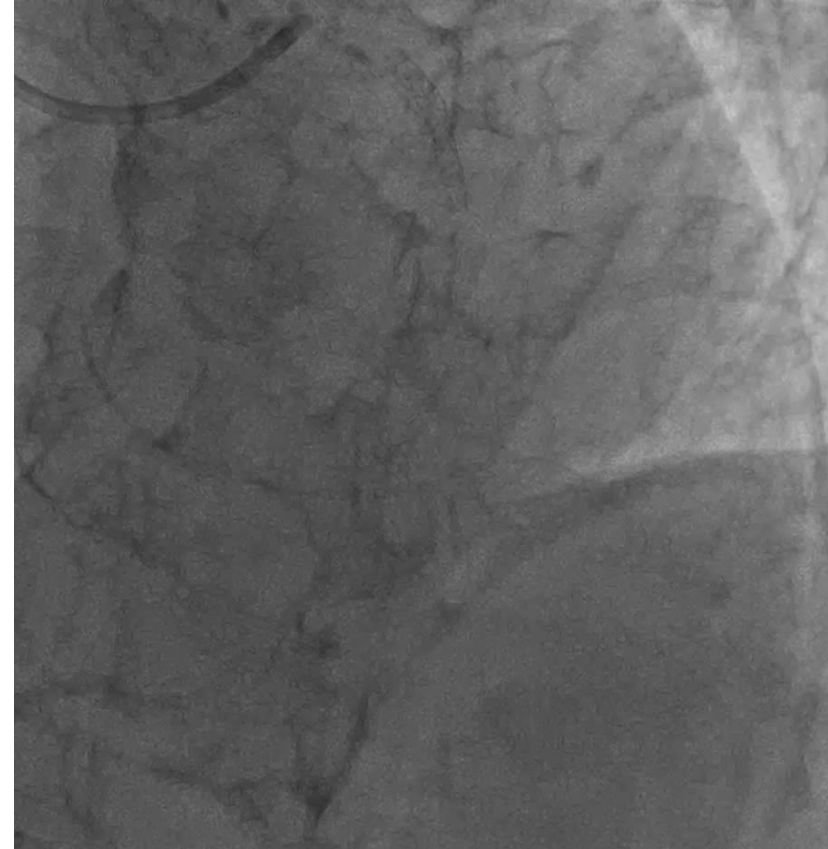
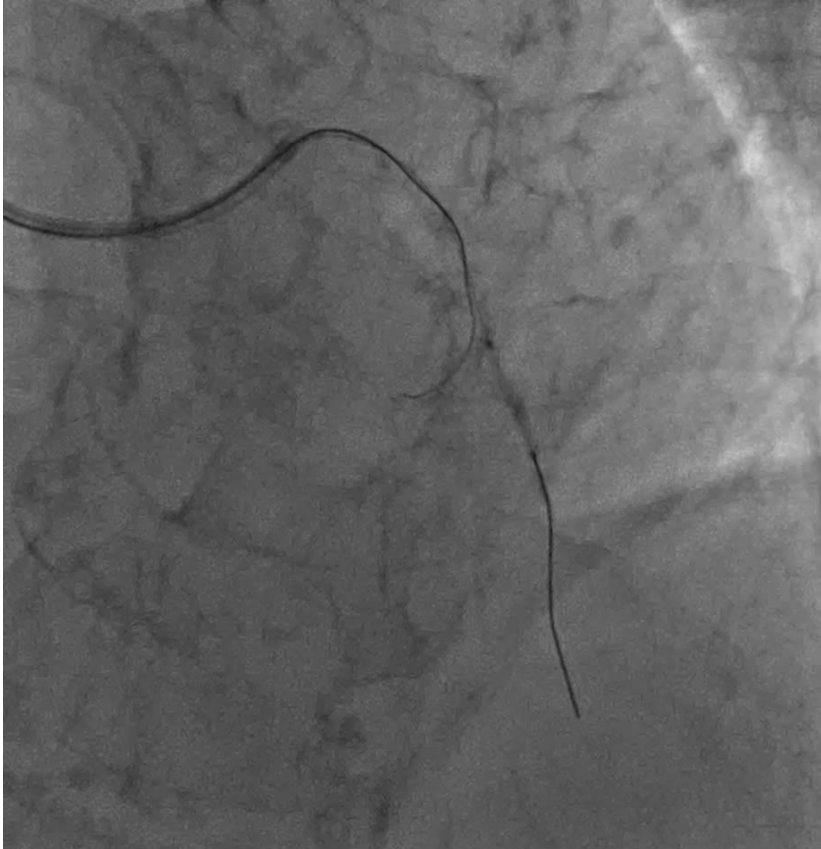


~ Type B bifurcation



Balloon-assisted reverse wiring

Case 5 - Plaque modification in main vessel



Balloon-assisted reverse wiring
Fieldier XT

Final

Conclusions

- ✓ Reverse wiring: bailout for severely angulated bifurcations when SB wiring fails.
- ✓ Dual-lumen microcatheters: better control by stabilizing and defining the exit.
- ✓ Use a soft polymer-jacketed wire first, then swap to a workhorse once SB is secured.
- ✓ Limit trauma: gentle pullback, minimal rotation, smallest loop possible.
- ✓ Decide early: highly angulated SBs may need upfront 2-stent to avoid failed re-wiring.

Control beats force. Build support, shape the wire intelligently, and exchange early for safety.

Q&A

thank you!

