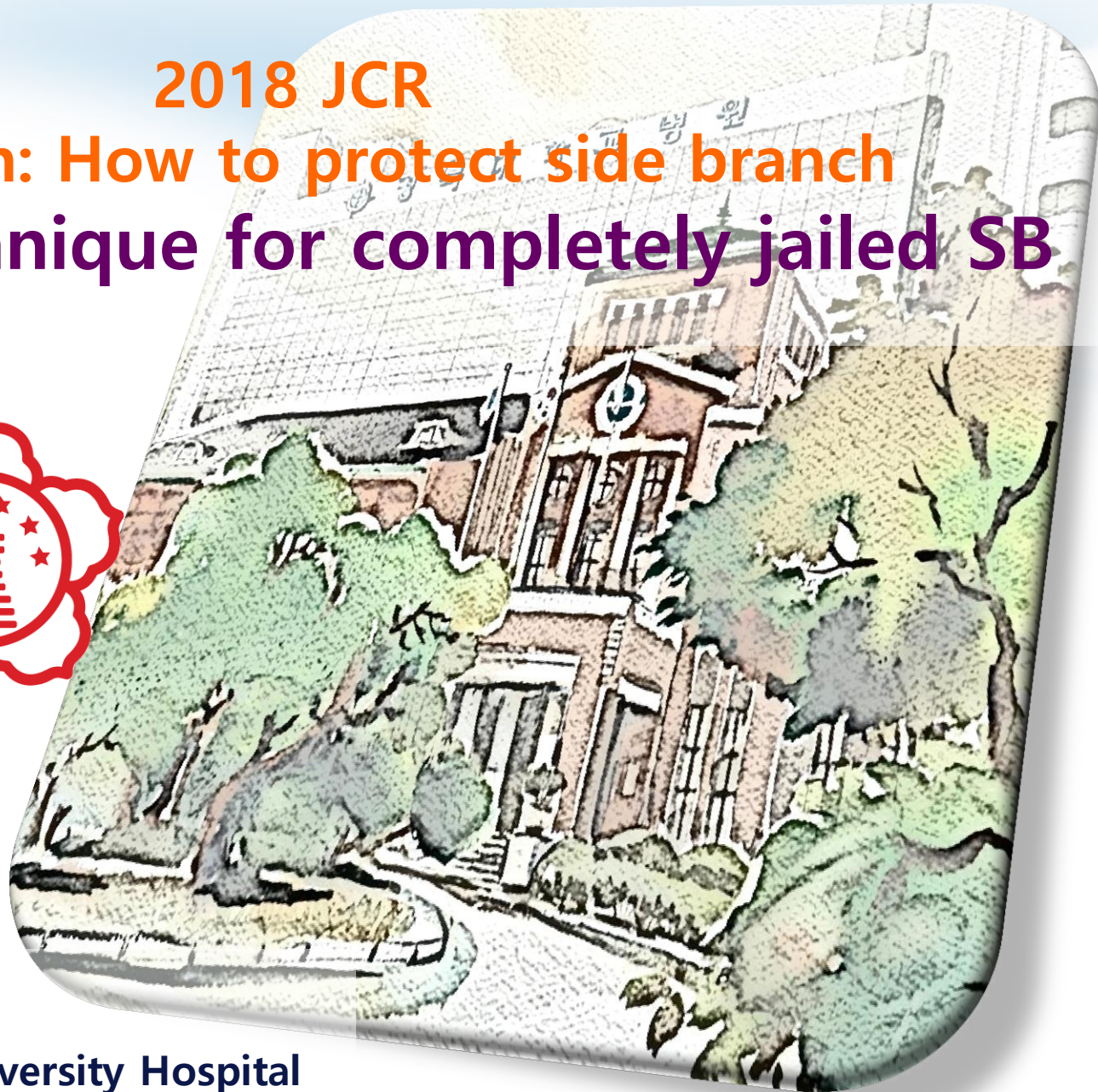


2018 JCR

Bifurcation: How to protect side branch

Rewiring technique for completely jailed SB



Jang Hoon Lee, MD

Kyungpook National University Hospital



## Rationale of the session

- In complex bifurcation interventions...
    - First (“Primary”) wiring
    - Rewiring after stent implantation
- are critical steps for successful procedures.

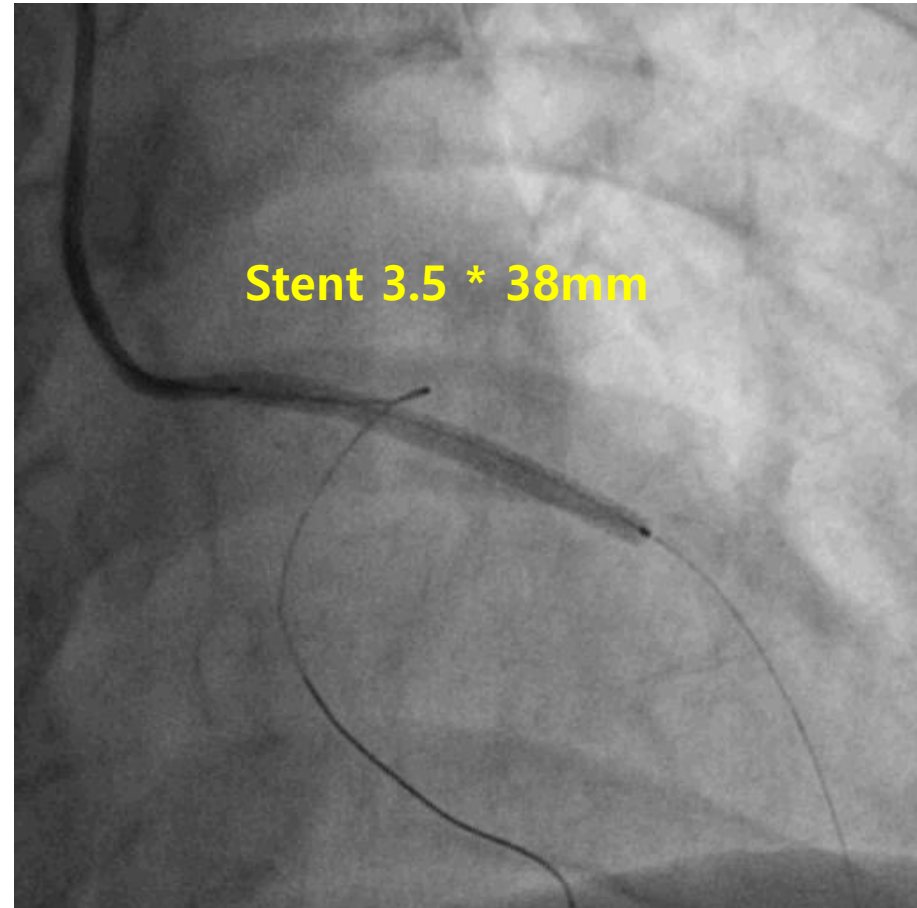


# Technical challenges

- Unable to wire SB
  - “pull-back technique”



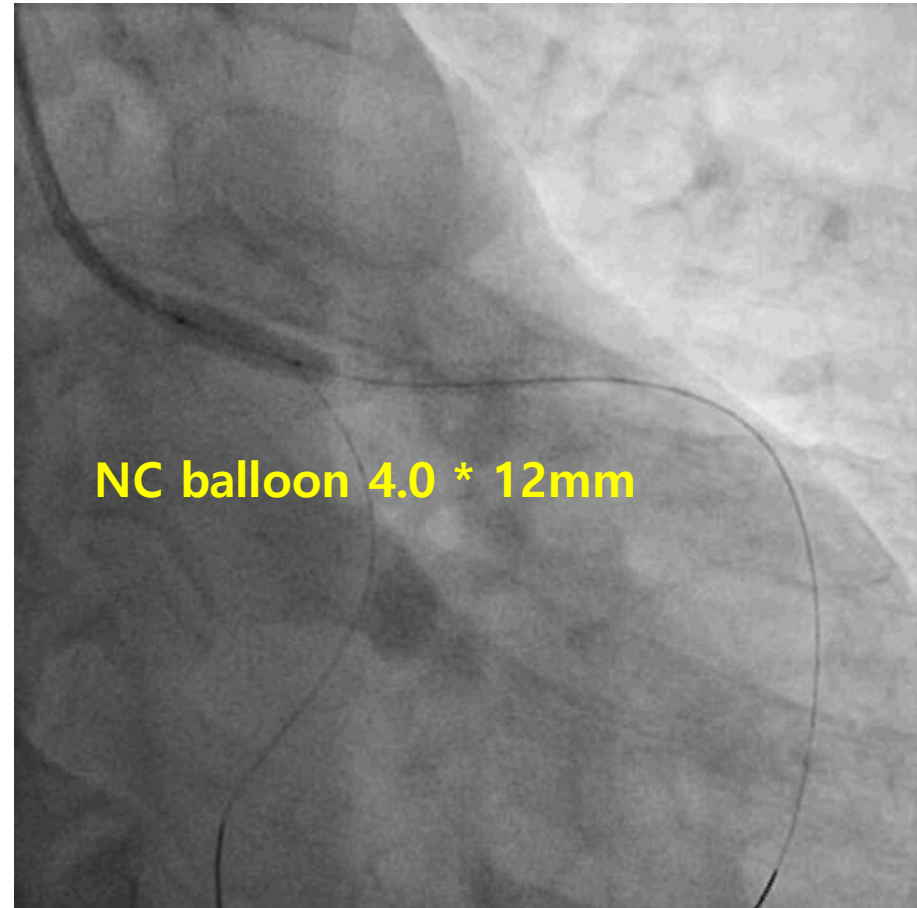
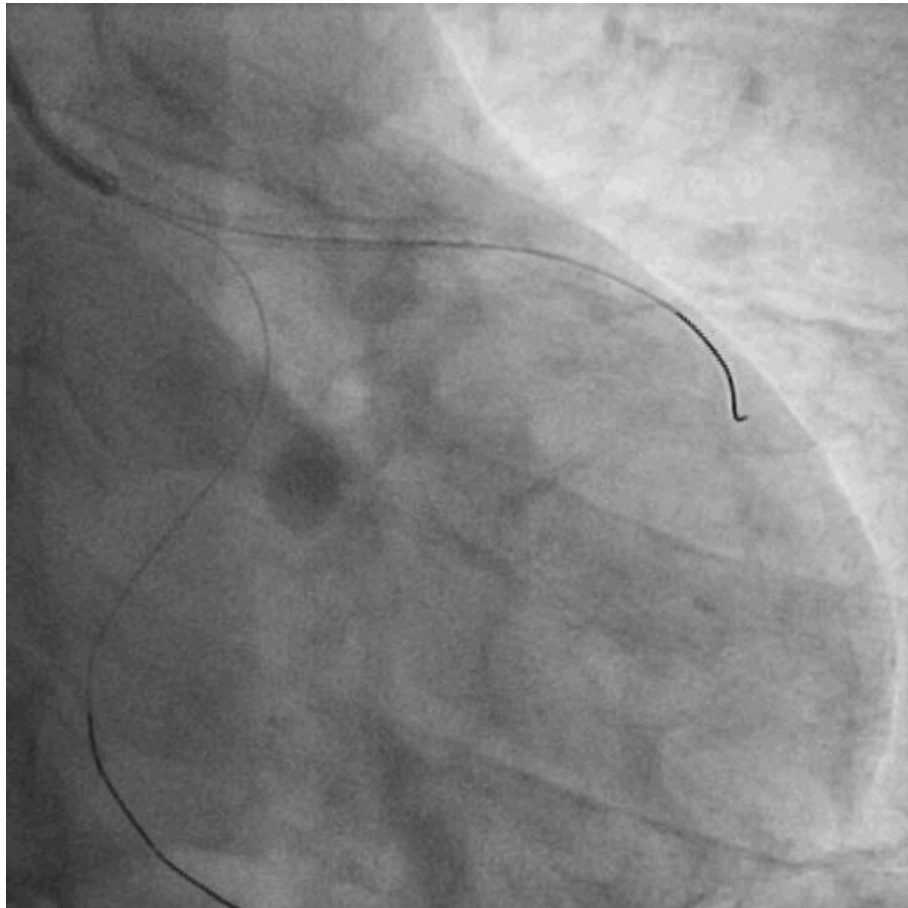
# Stent implantation in CBL





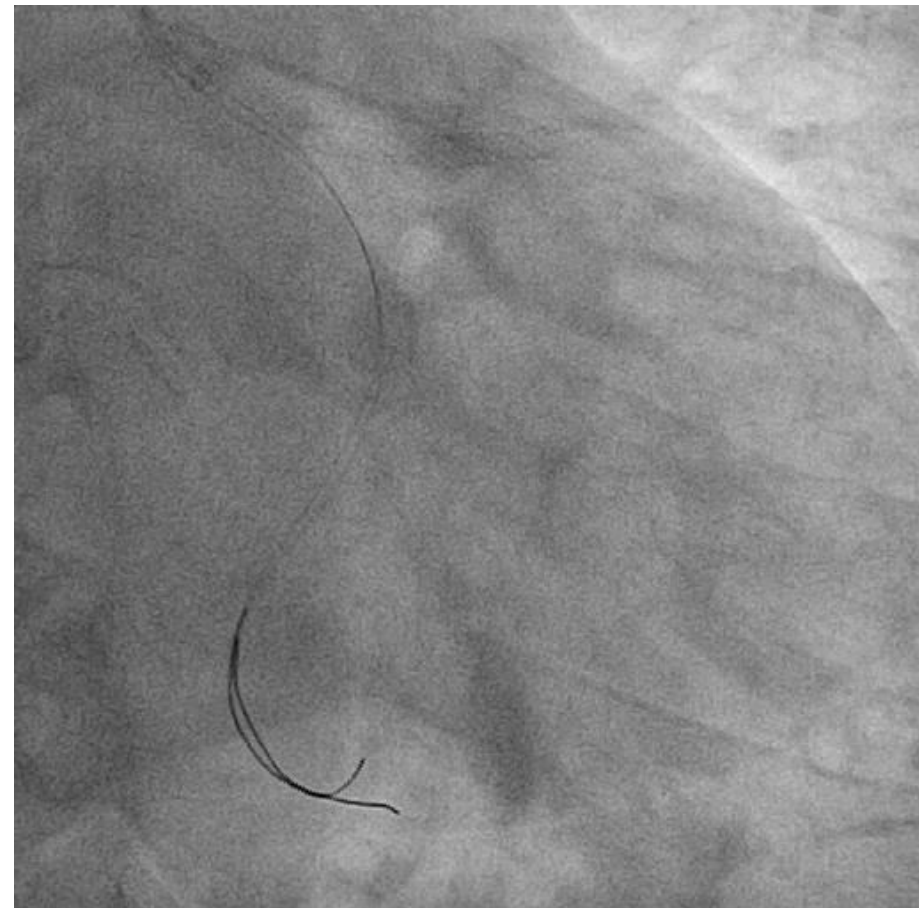
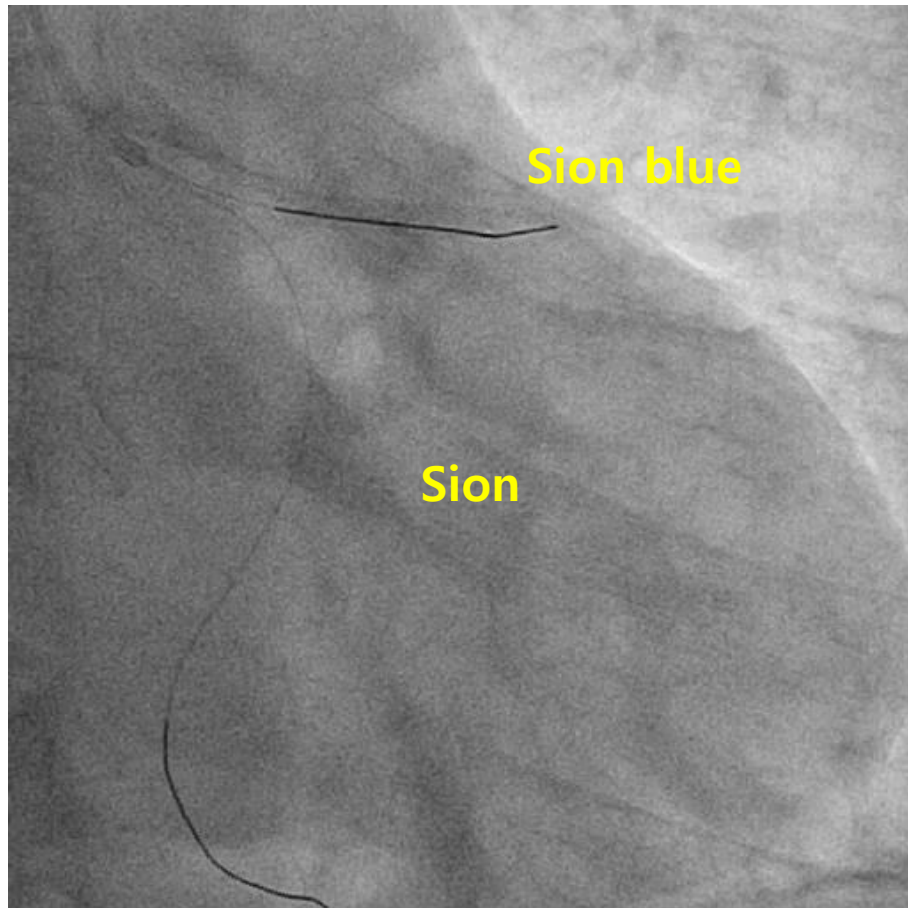


# Proximal optimization technique (POT)



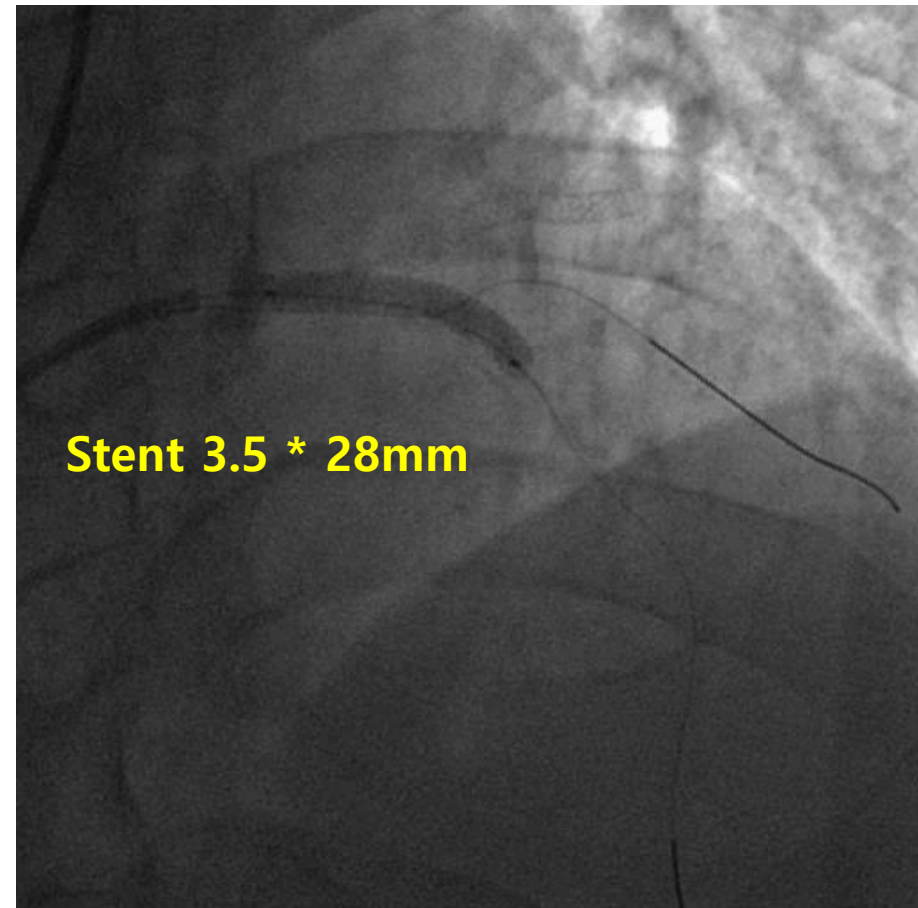
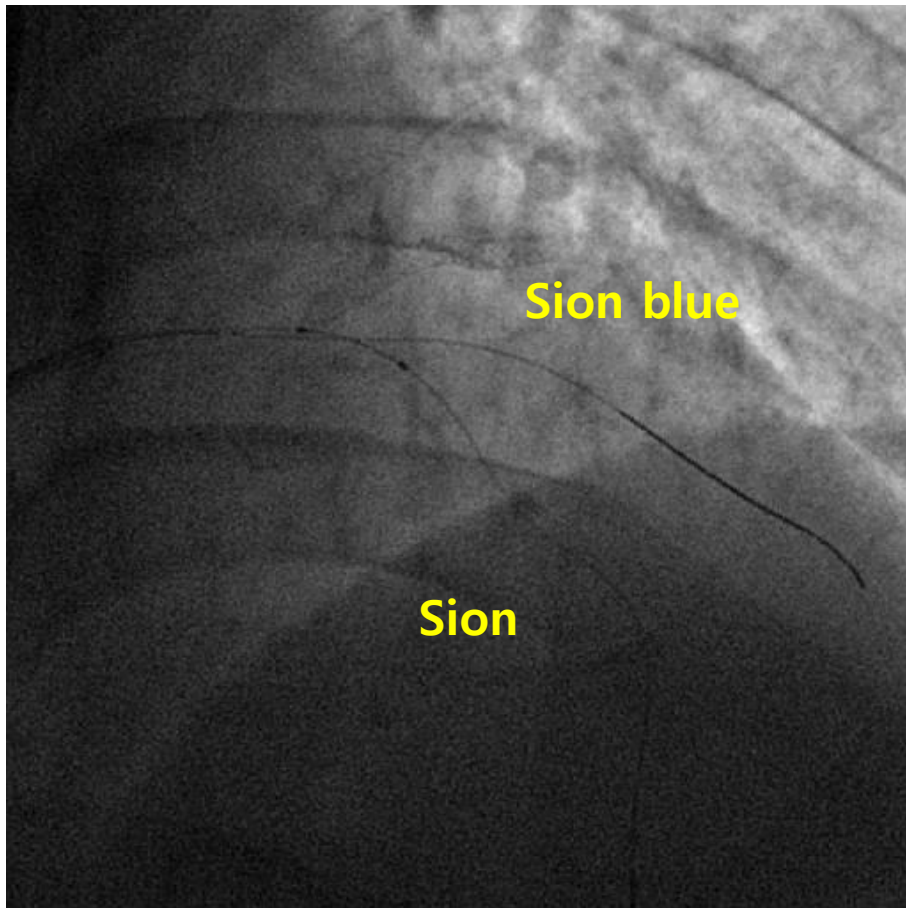


# “Pull-back technique”





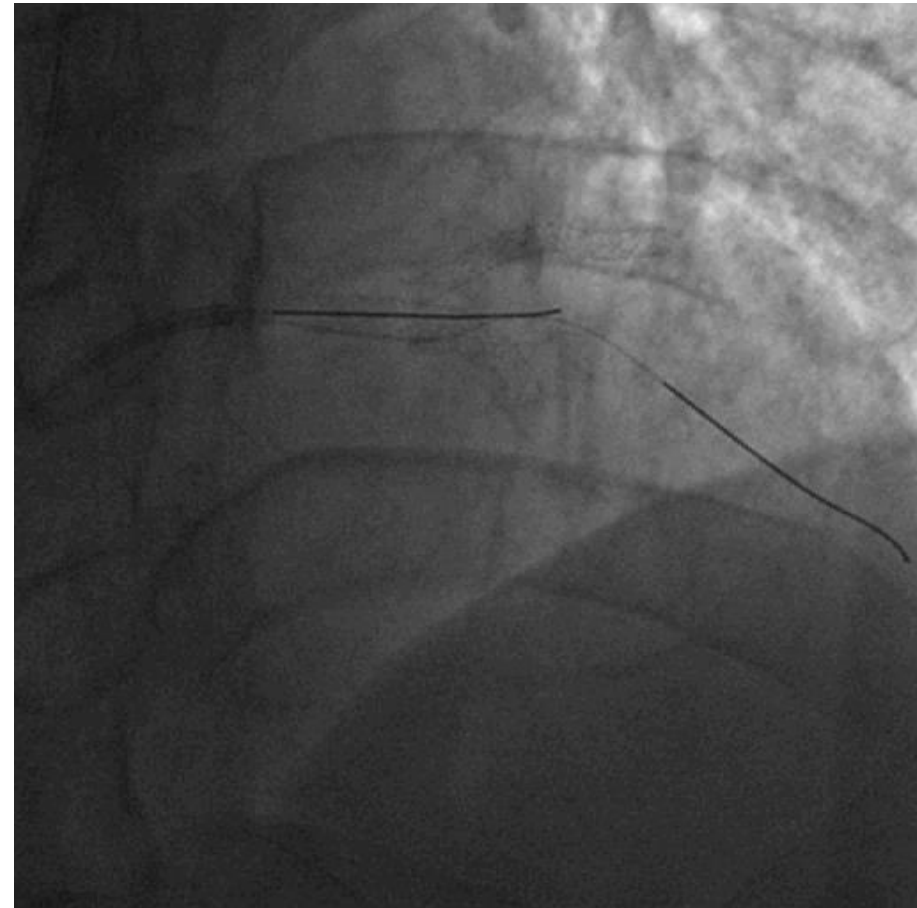
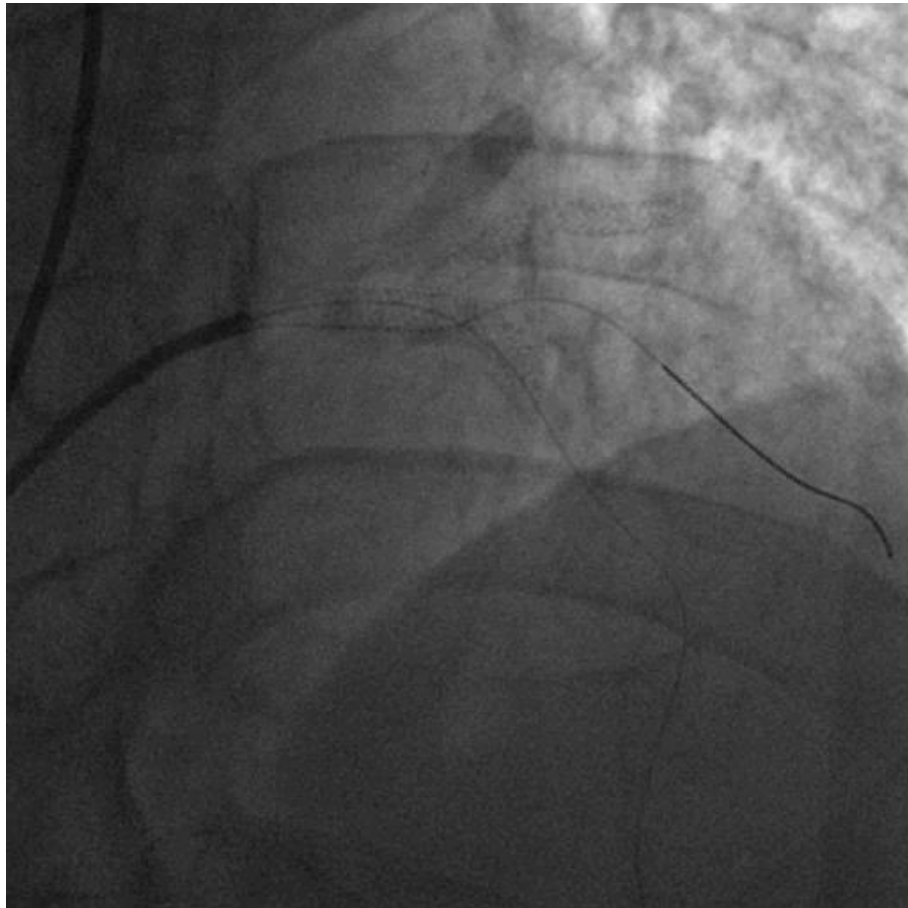
# Stent implantation in CBL



JL3.5 6Fr



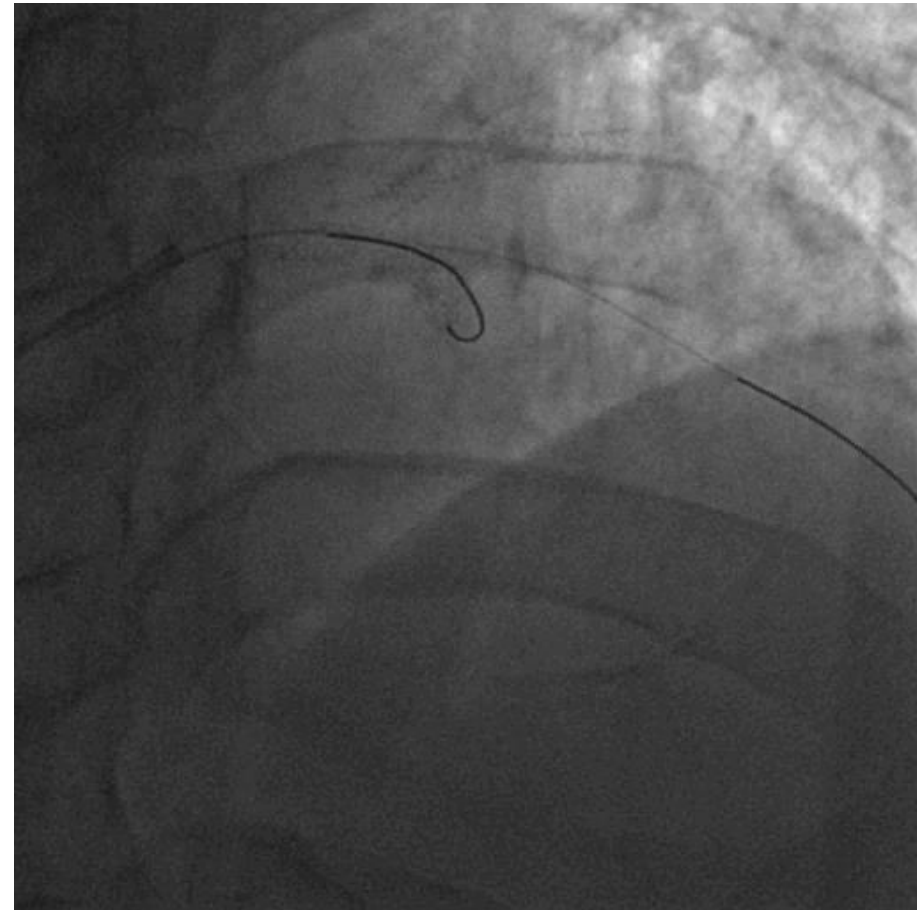
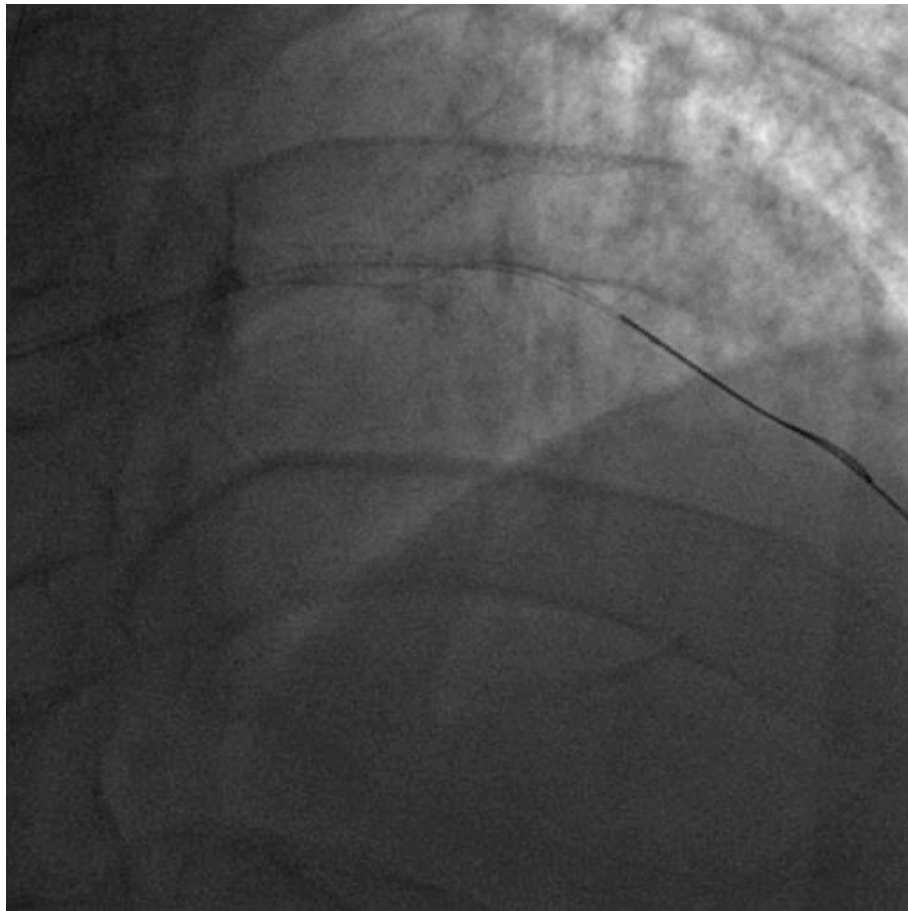
# Guidewire exchange







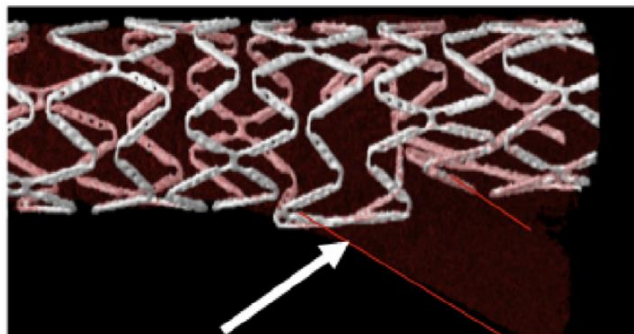
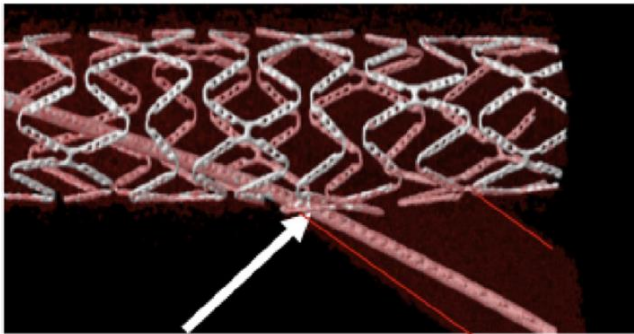
**The “jailed” wire in the SB will be used to rewire the MB during guidewire exchange.**



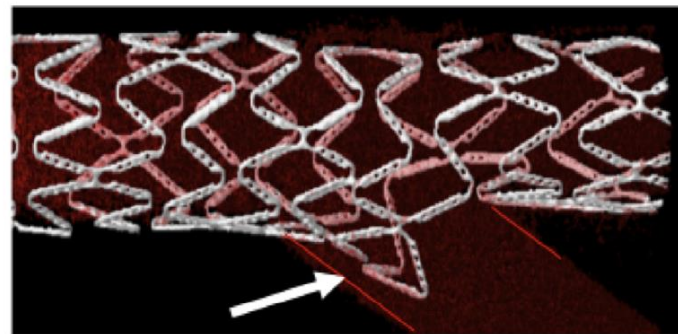
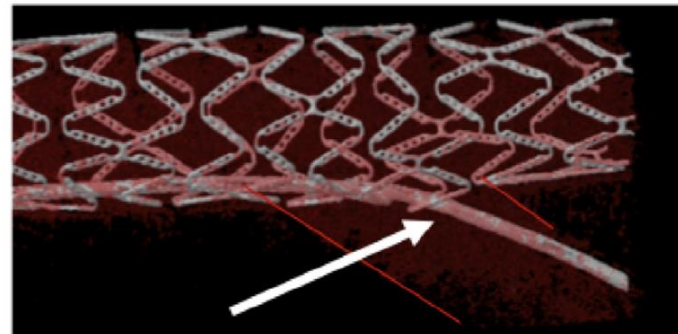
# The shape of the MB wire

- The tip of the MB wire must be relatively long and angulated to reach the SB ostium from the MB through the most distal cell of the MB stent

**Proximal crossing**

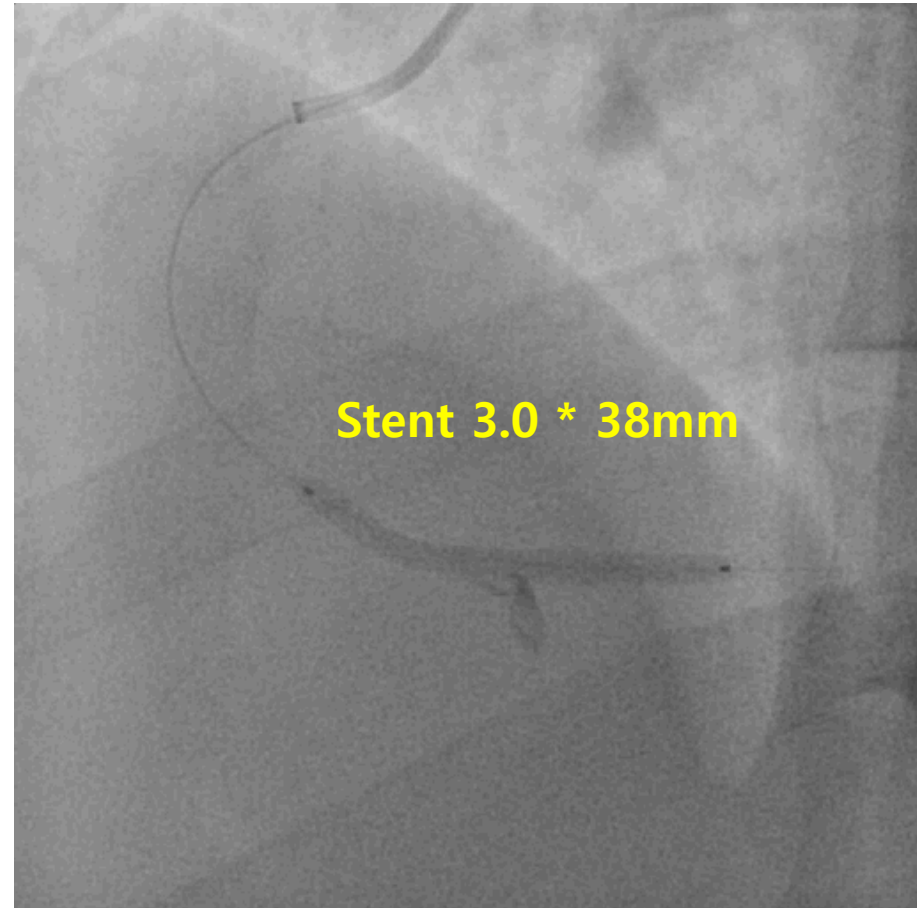
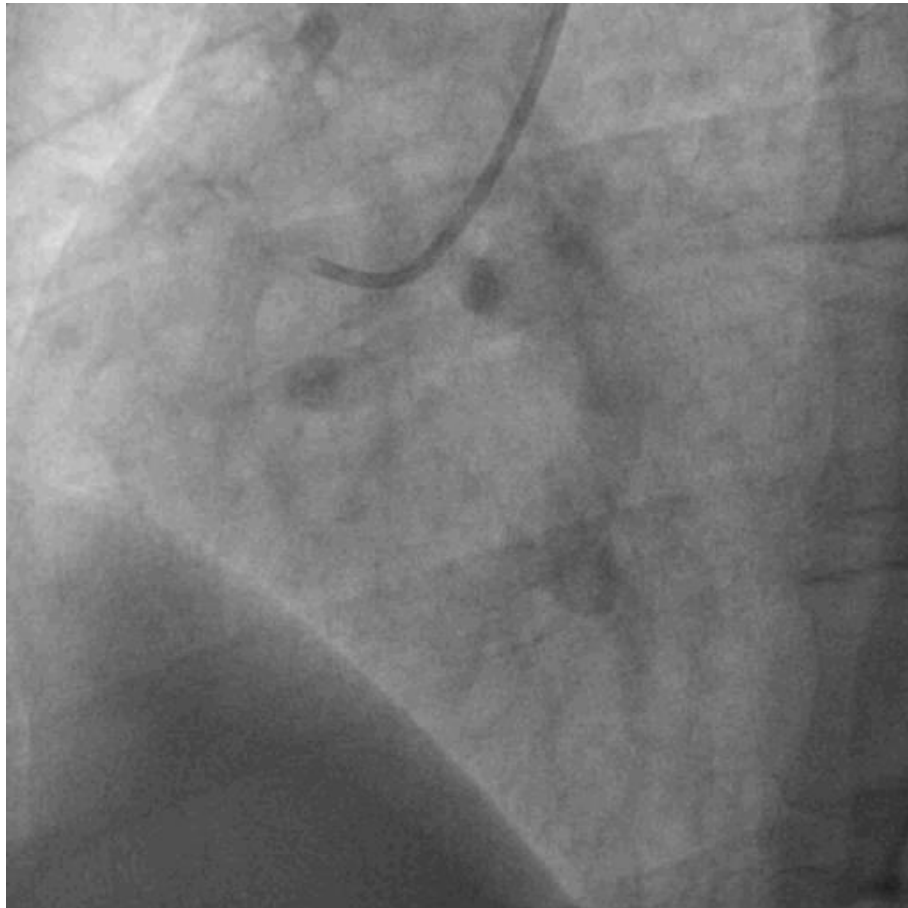


**Distal crossing**



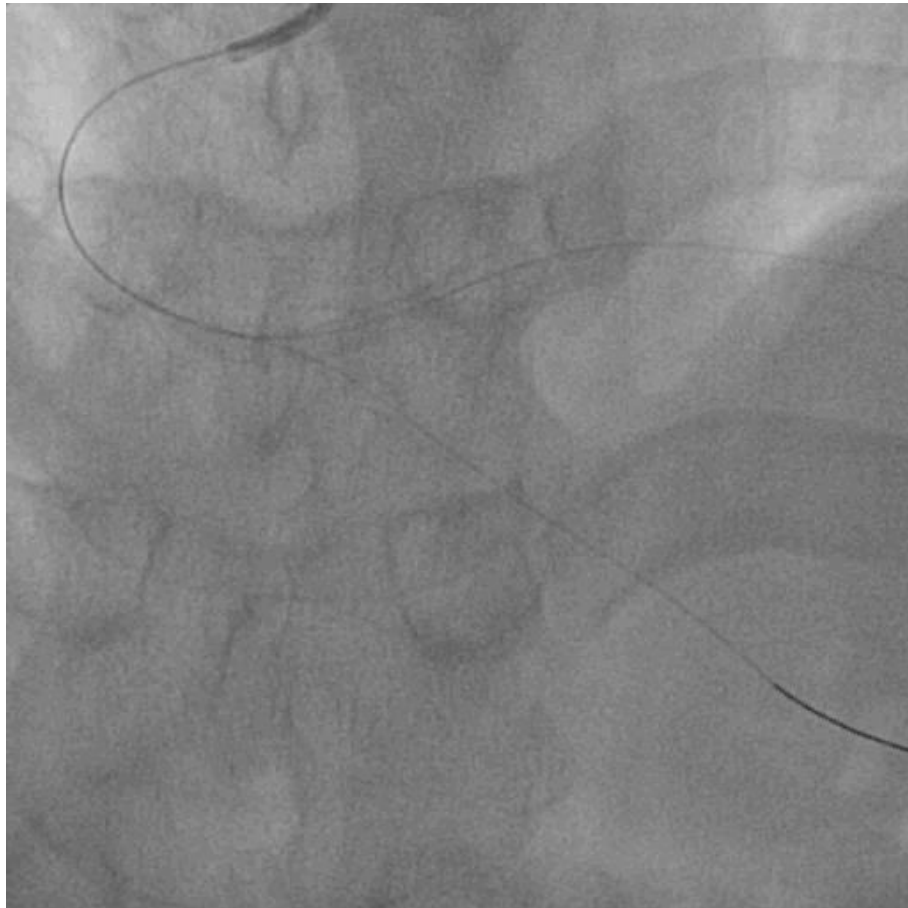


# Completely jailed SB after MV stenting





# OCT-guided rewiring



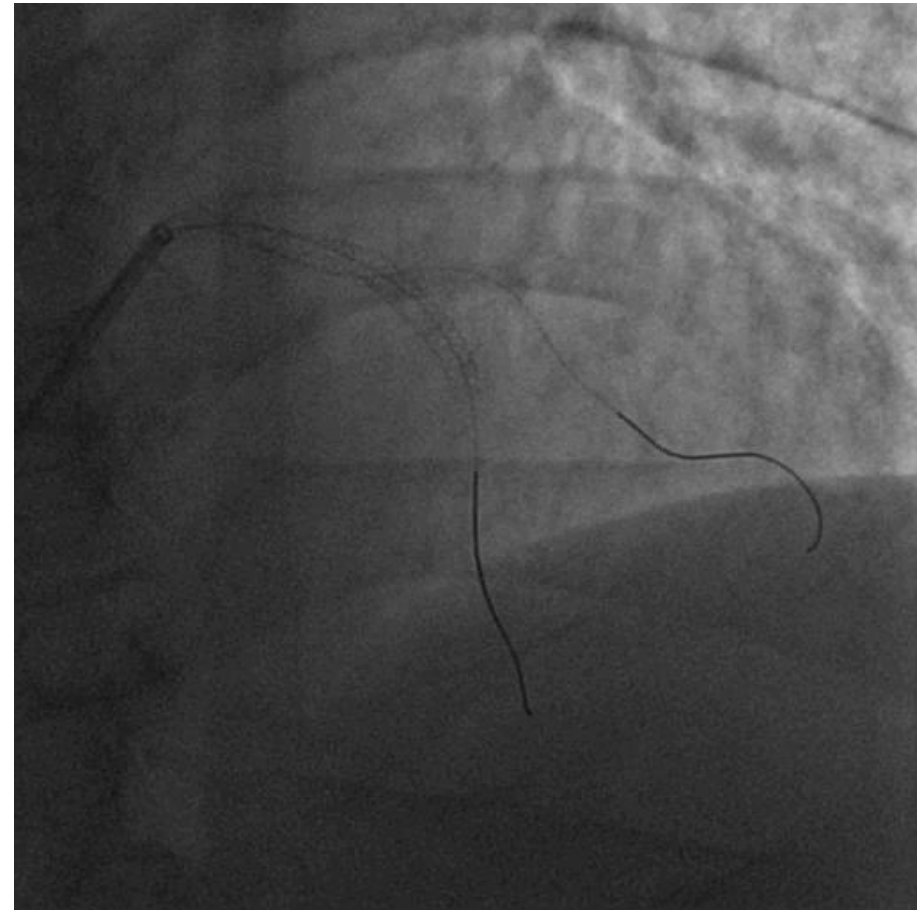
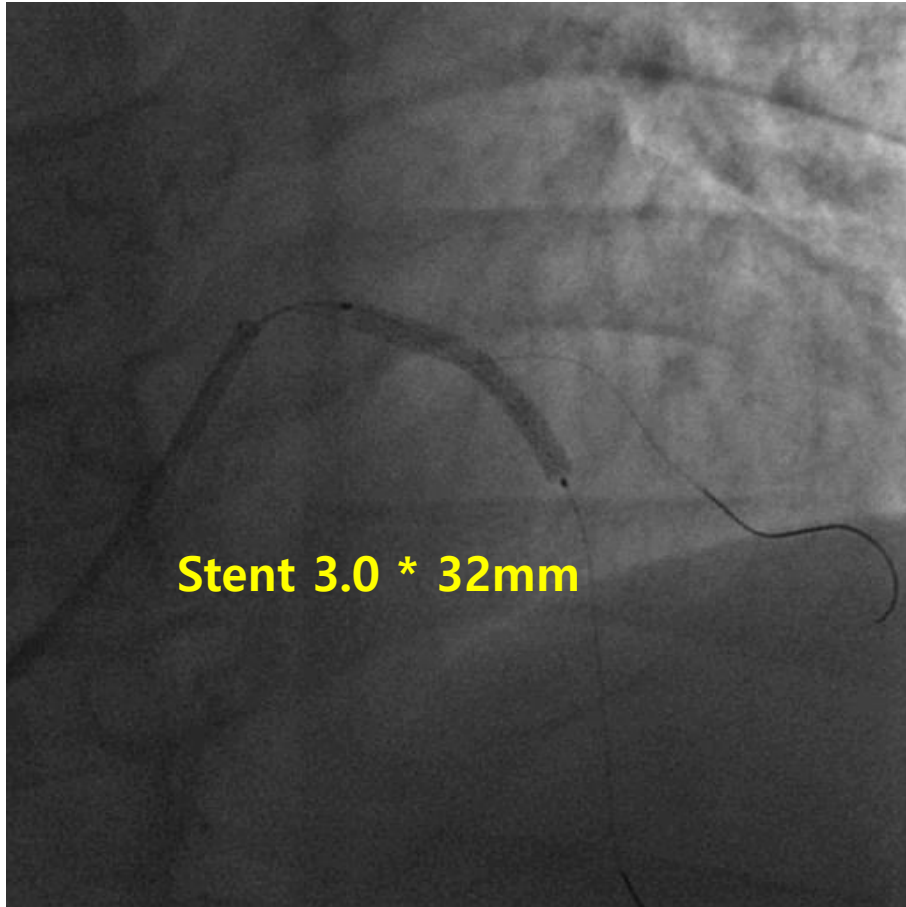




# Technical challenges

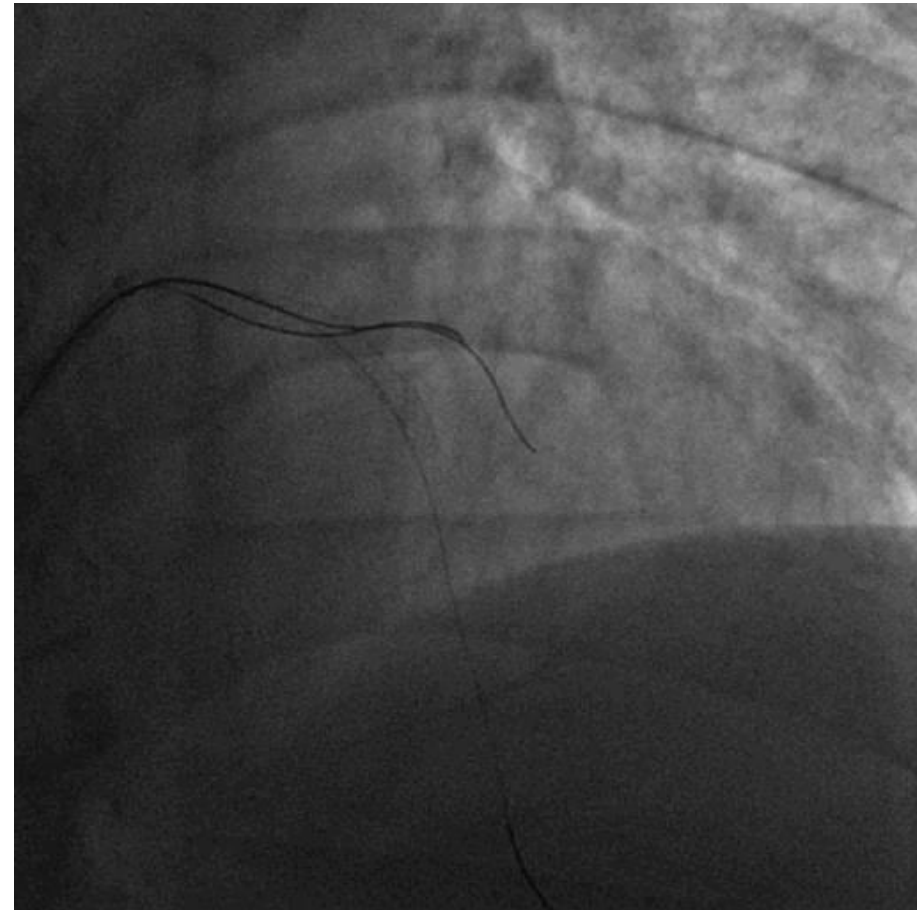
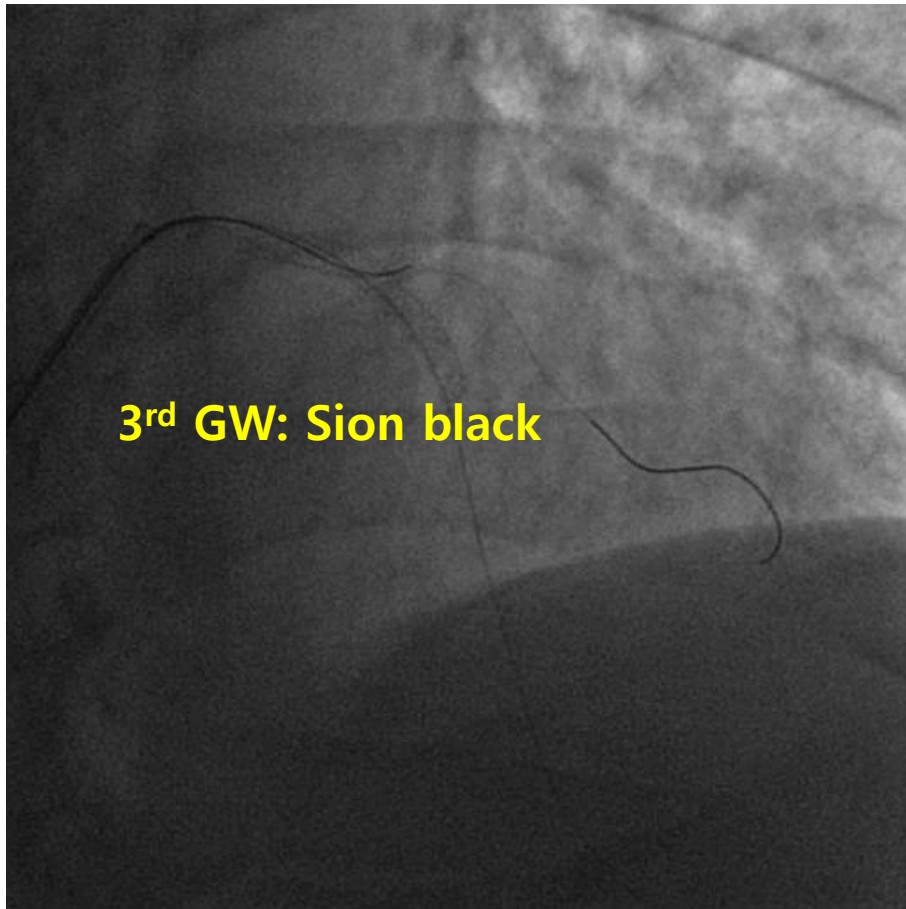
- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission (Fielder FC, Fielder XT, Sion etc)

# SB reocclusion after MV stenting





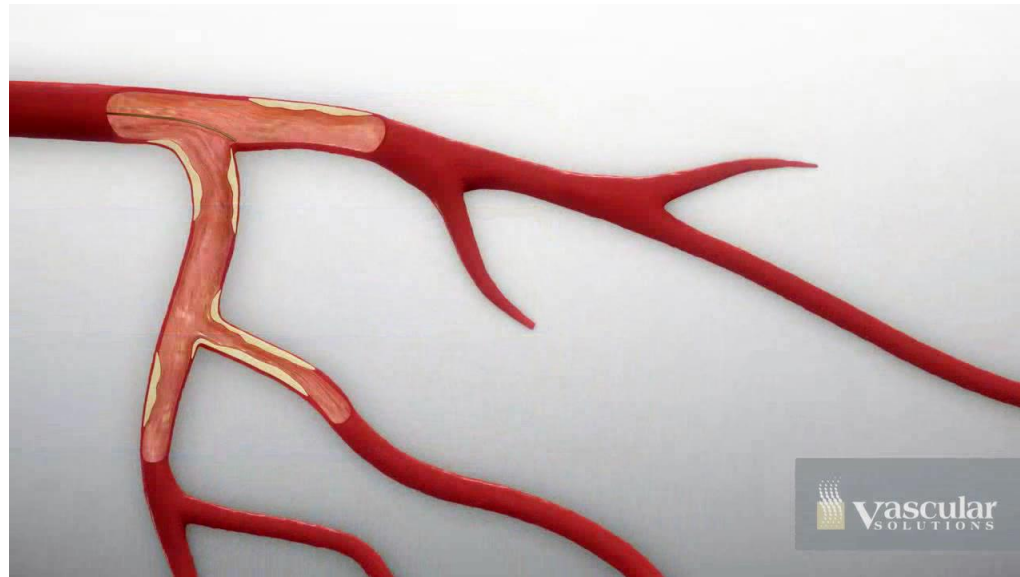
# SB rewiring after MV stenting





# Technical challenges

- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission
  - Venture Catheter





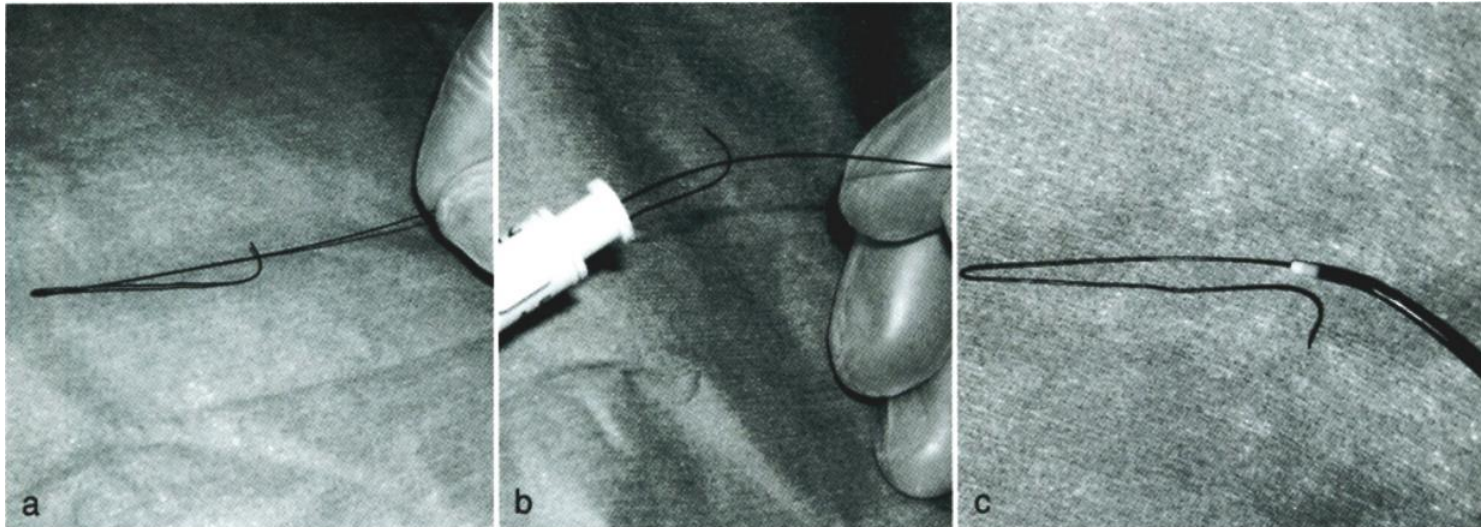


# Technical challenges

- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission
  - Venture Catheter
  - “Reverse wire technique”

# “Reverse wire technique”

- Originally proposed by Dr. Kawasaki T (Shin Koga Hosp)  
Catheterization and Cardiovascular Intervention, 2008



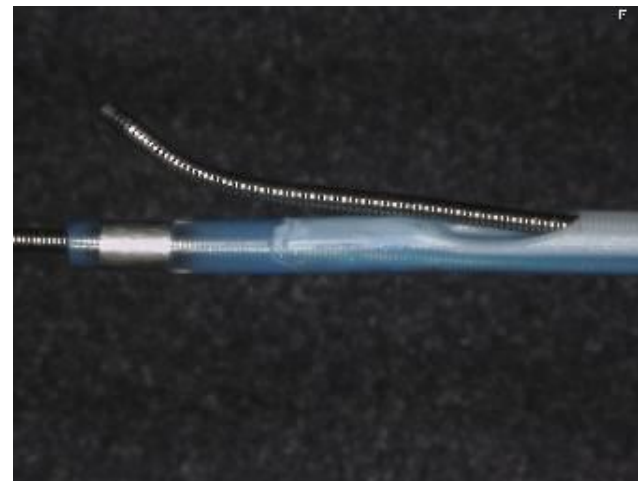
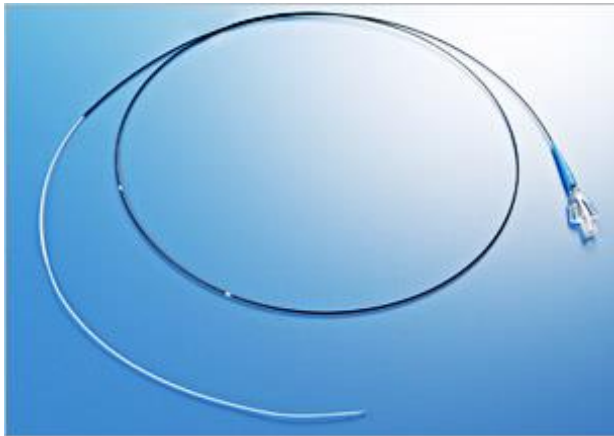
The GW is folded at the site of 2-5cm proximal from the tip.

The Folded GW is inserted directly into the guiding catheter.

The GW advances into the coronary artery while maintaining its folded position.

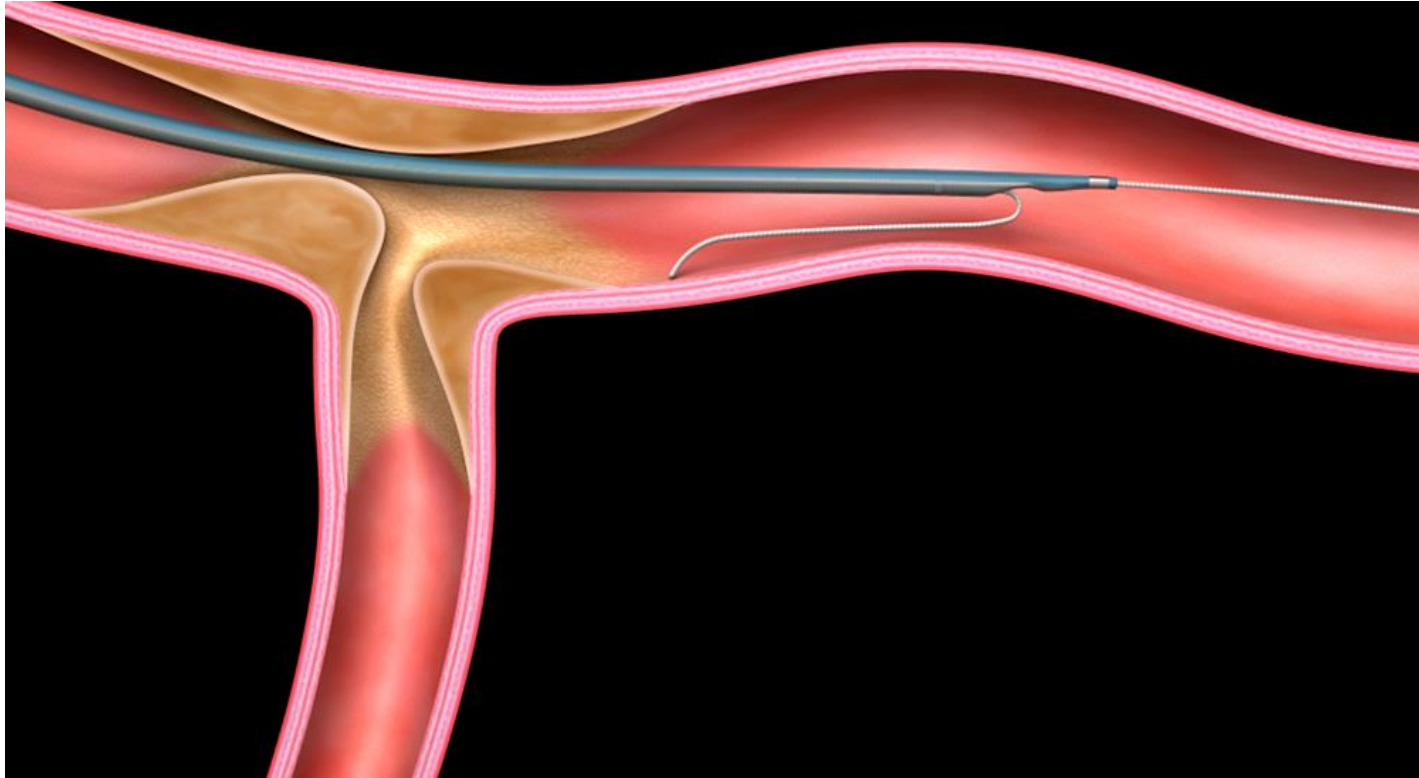
# Double Lumen Catheter

Crusade





## “Reverse wire technique”

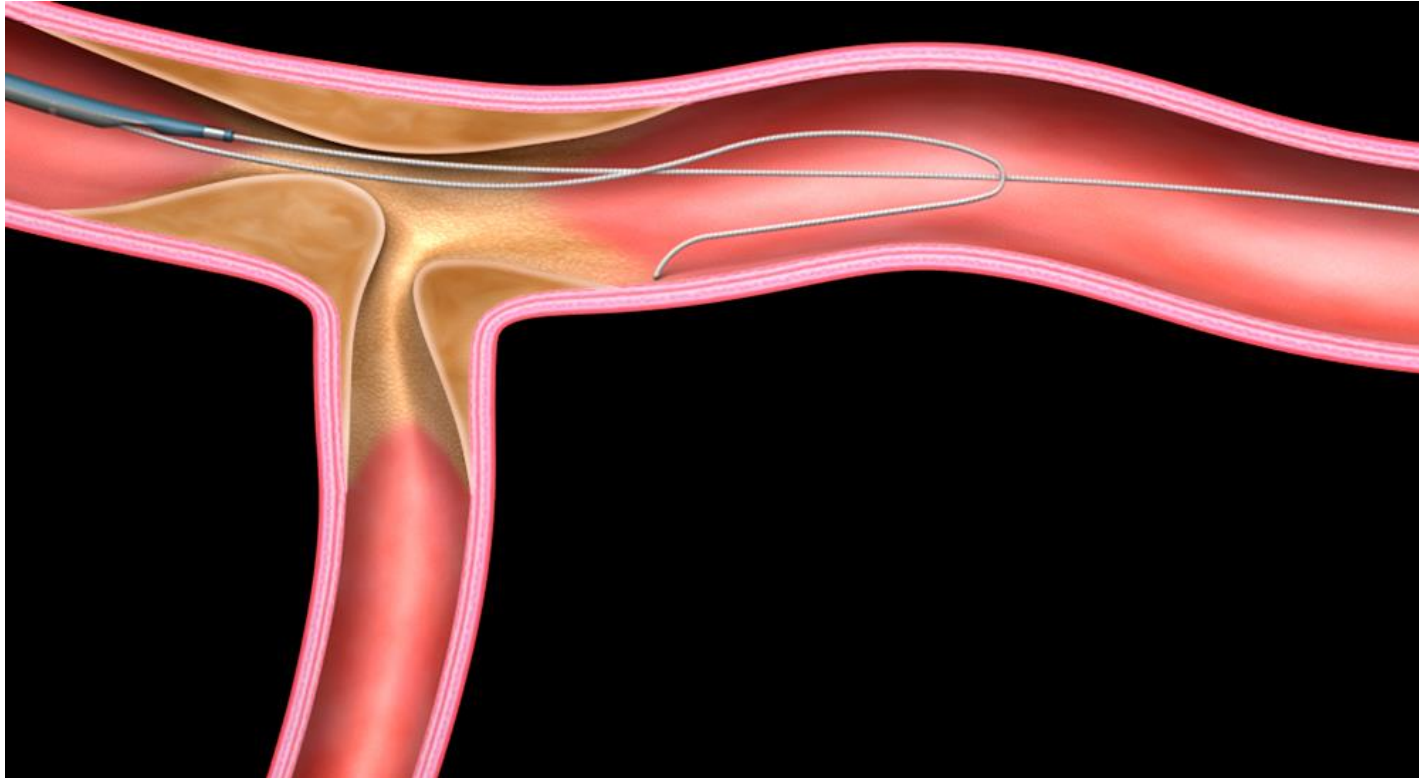


Swan neck GW is introduced the distal unintended vessel across the proximal stenosis with double lumen catheter.





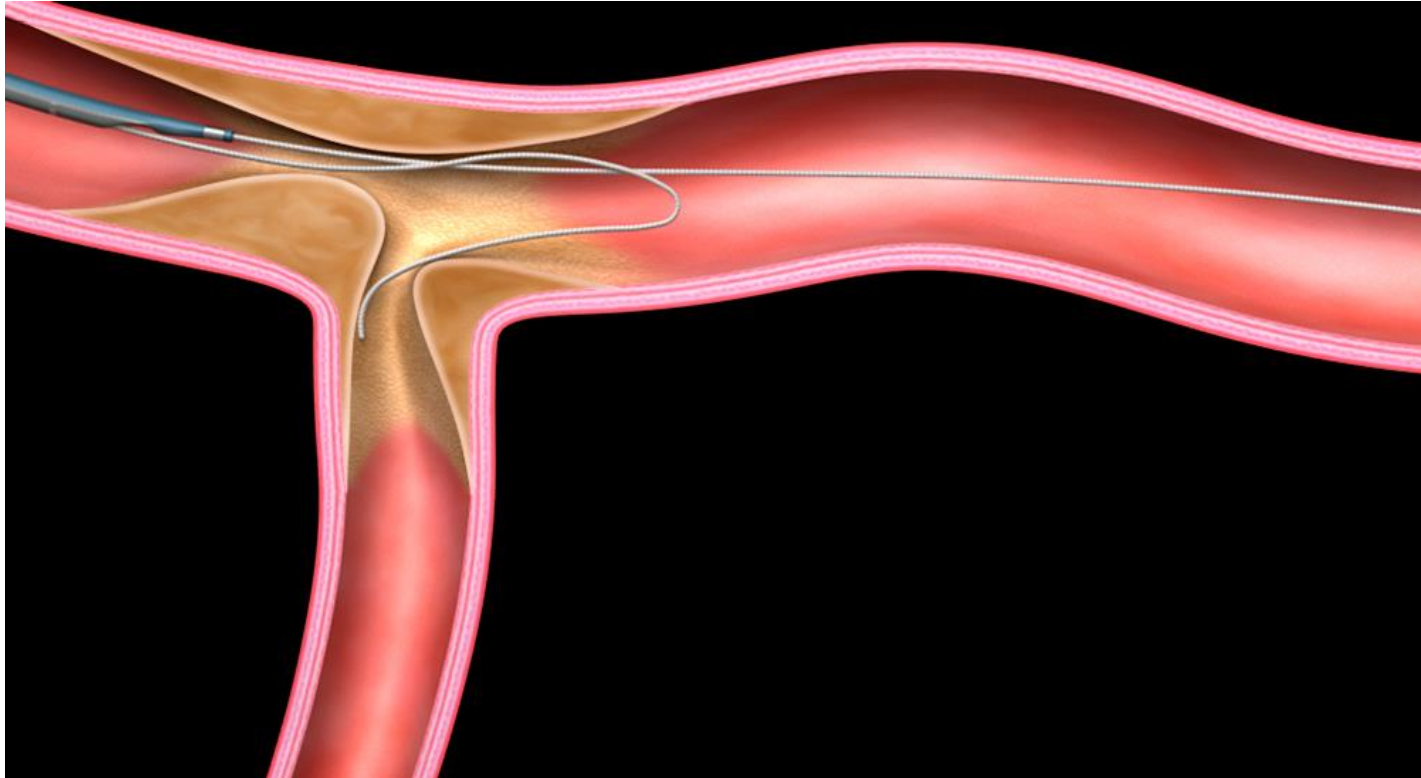
## “Reverse wire technique”



Double lumen catheter is pulled proximally, leaving the swan neck shaped wire in distal.



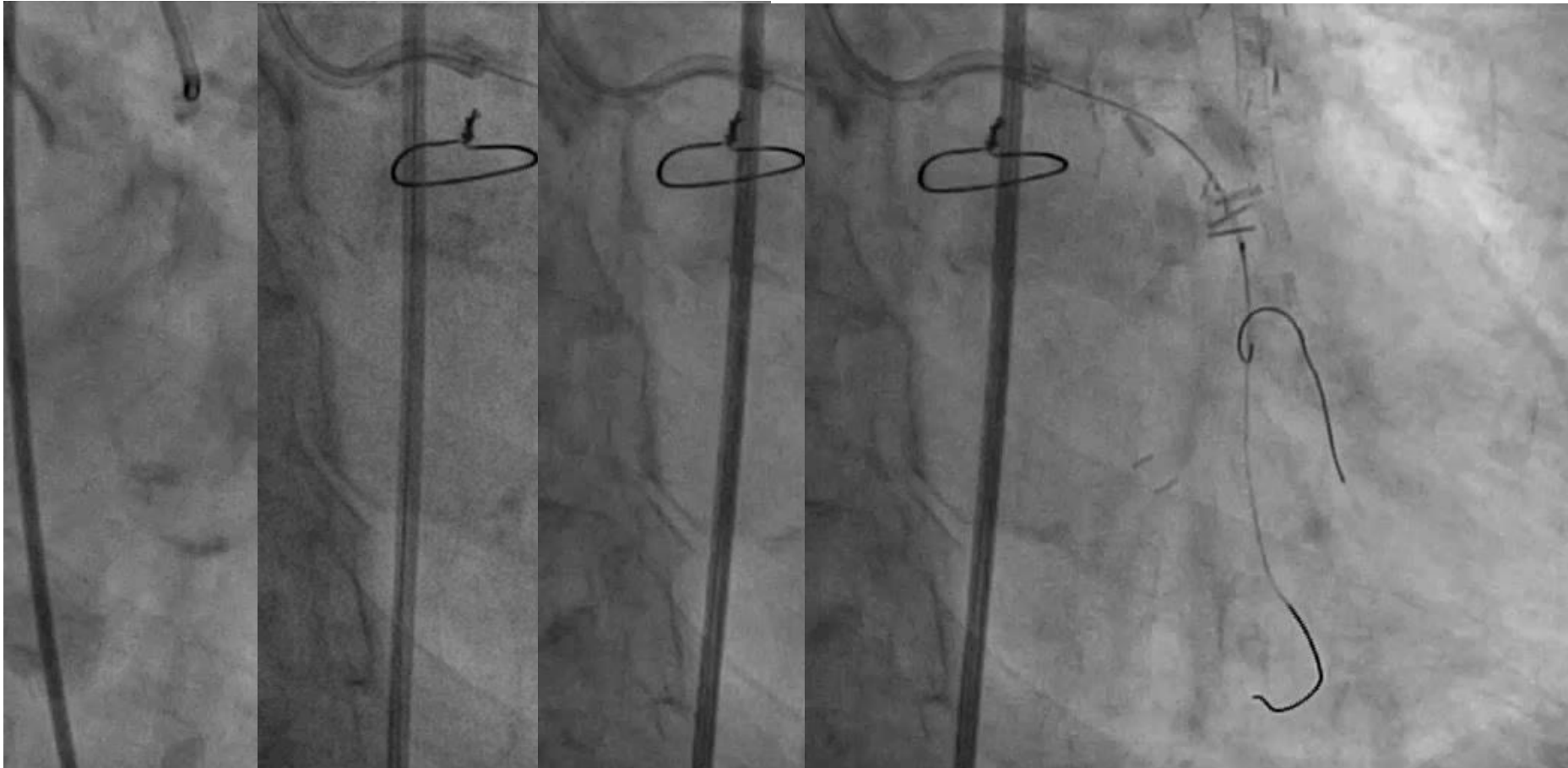
## “Reverse wire technique”



Withdrawing the swan neck shaped wire manipulating the tip to engage the intended branch.



# “Reverse wire technique”





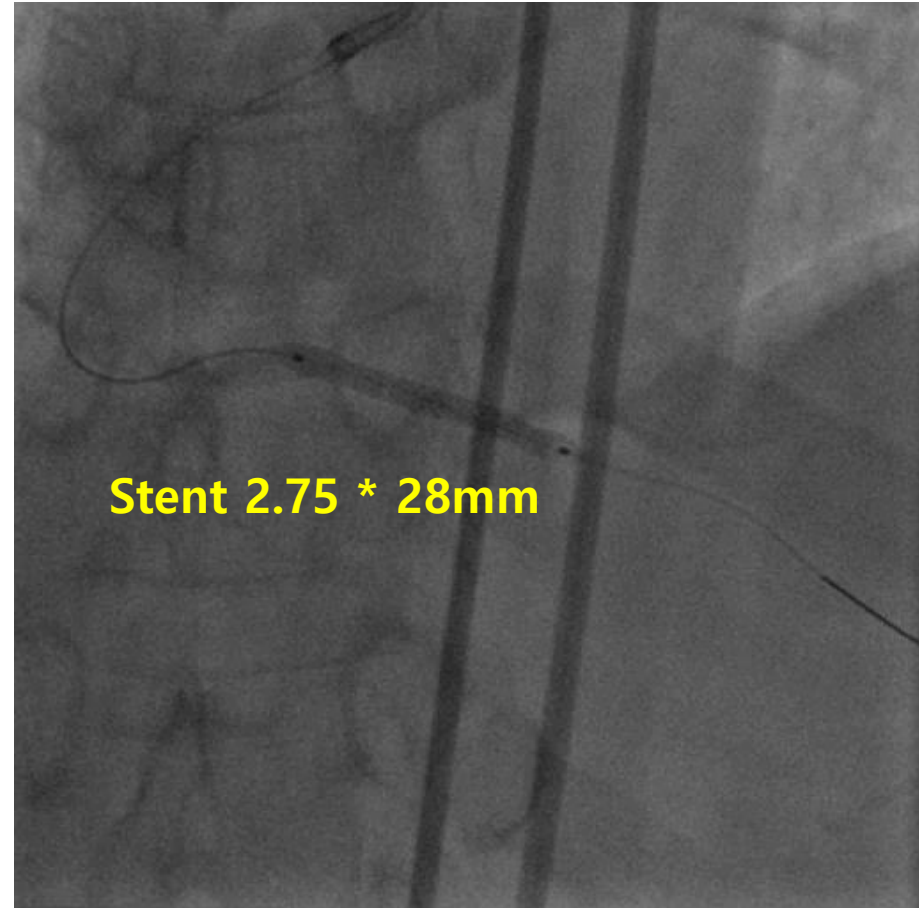
# Technical challenges

- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission
  - Venture Catheter
  - “Reverse wire technique”
  - Dual-lumen catheters

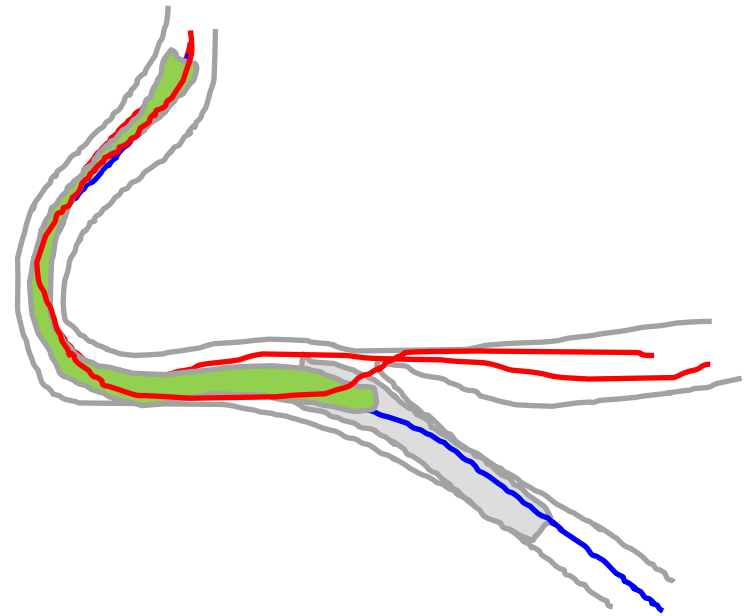
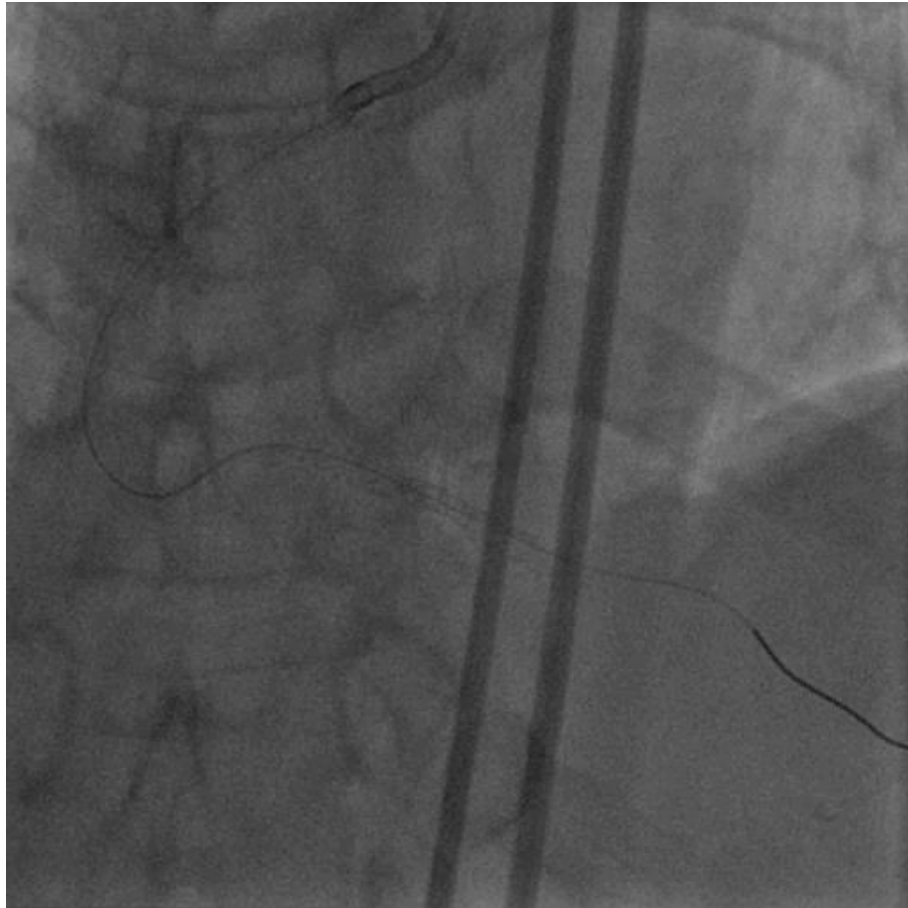




# PCI @ PDA OS

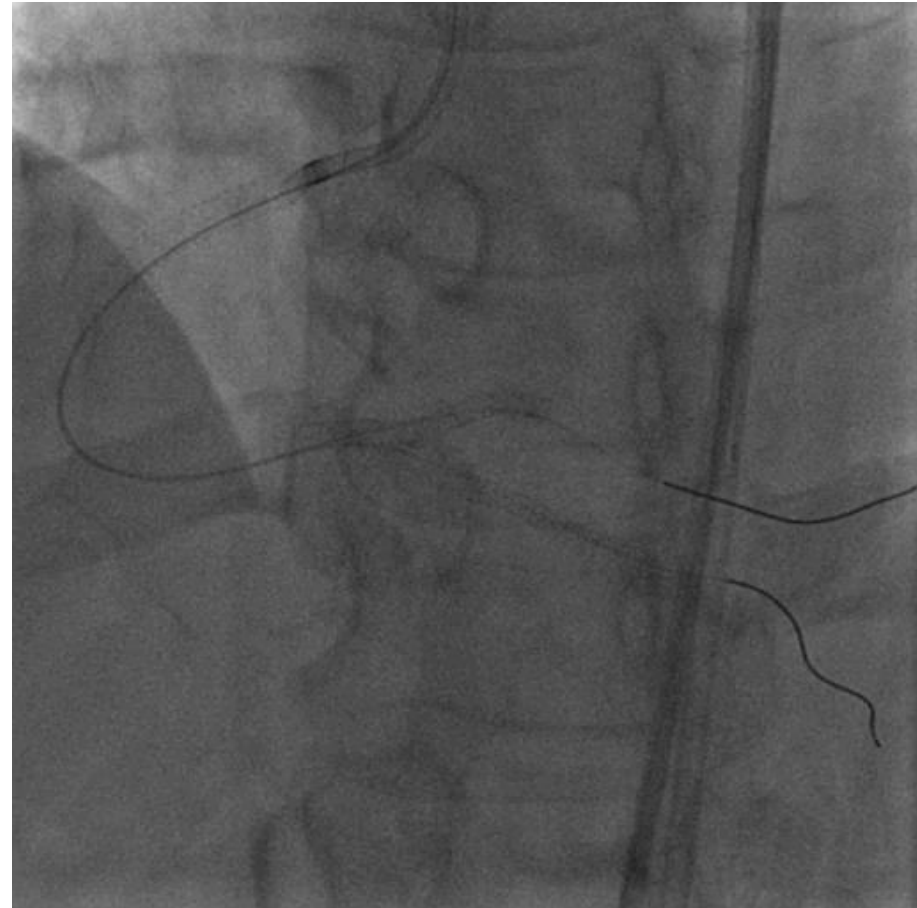
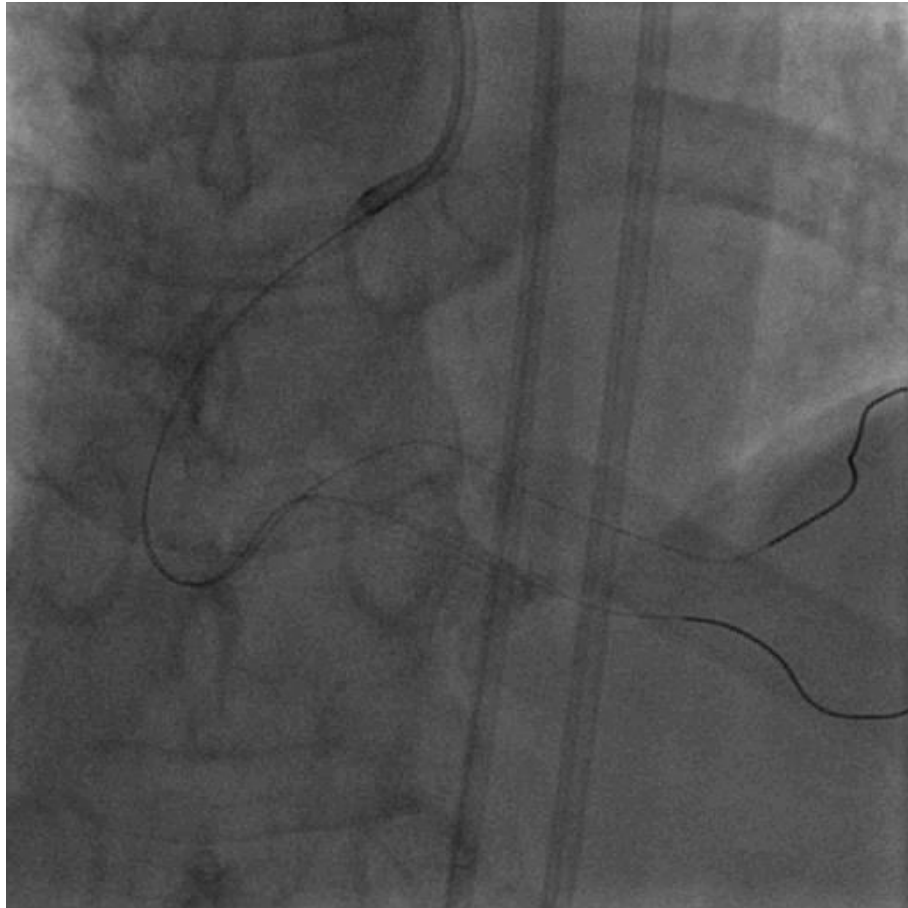


# Unexpected event





# Dual lumen catheter

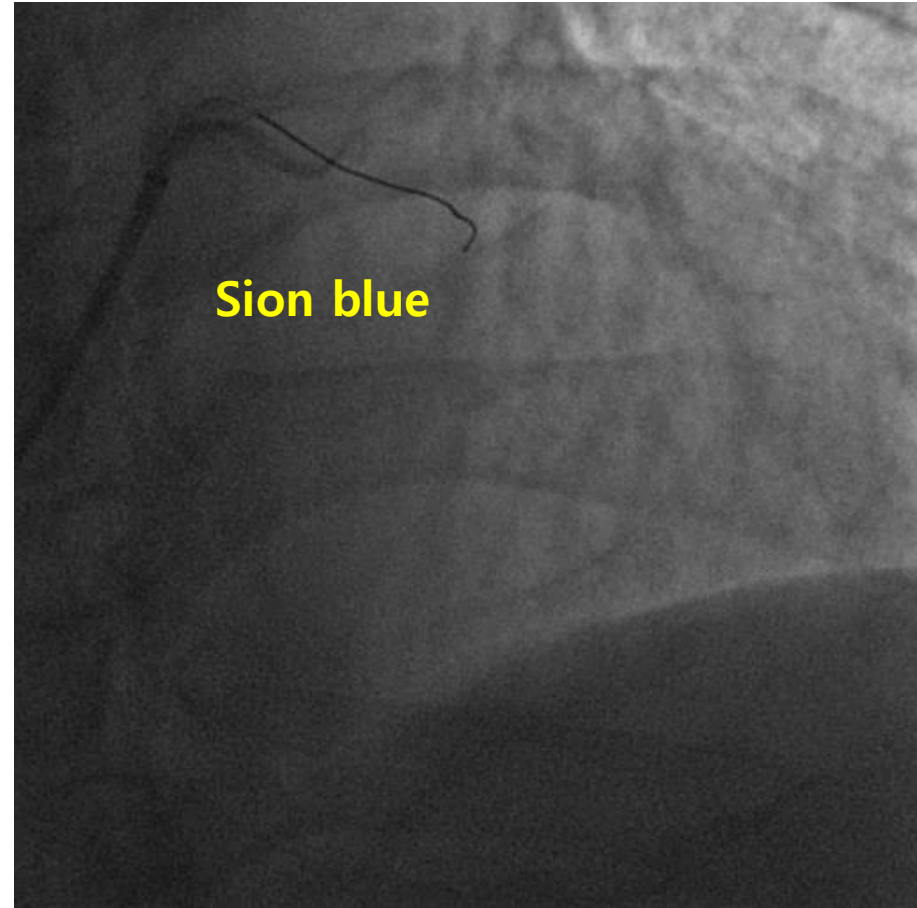




# Technical challenges

- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission
  - Venture Catheter
  - “Reverse wire technique”
  - Dual-lumen catheters
  - Plaque modification through dilatation with an undersized balloon proximal to carina

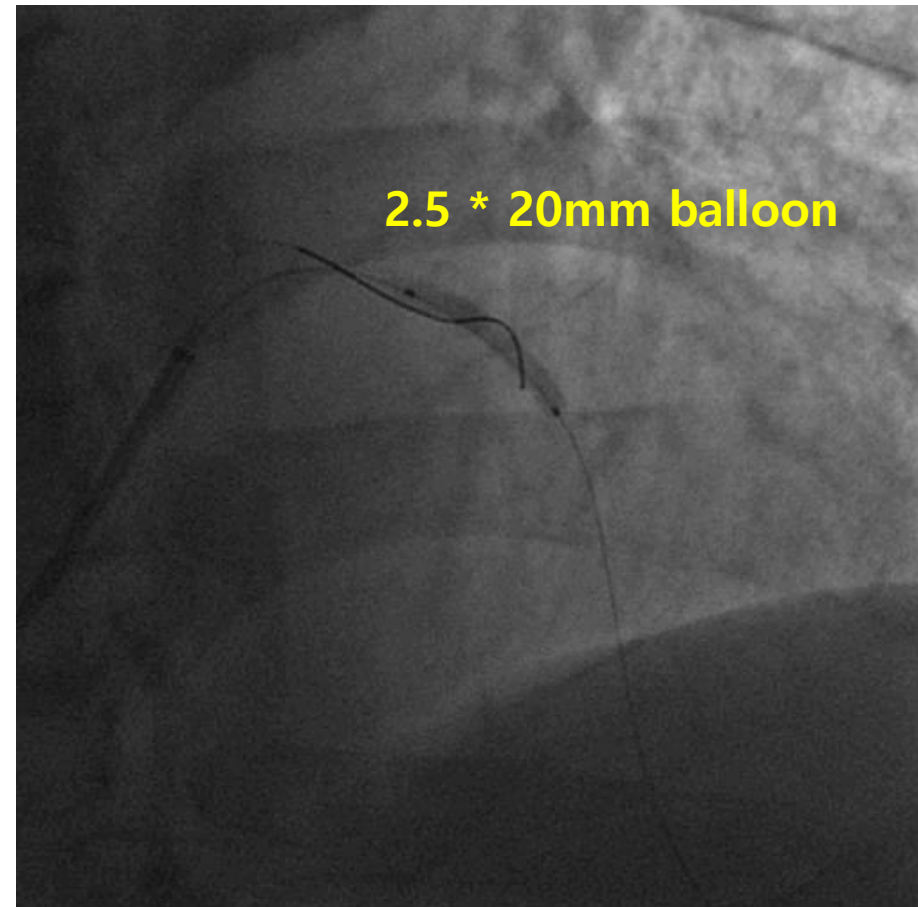
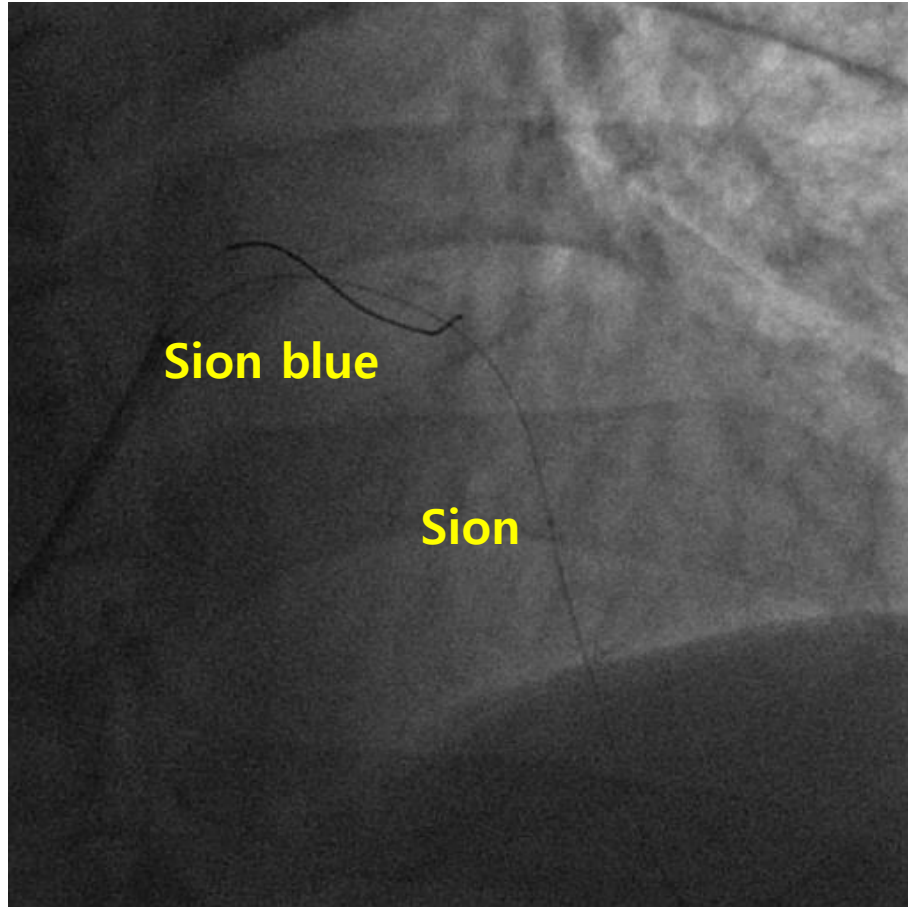
# SB wiring in CBL PCI





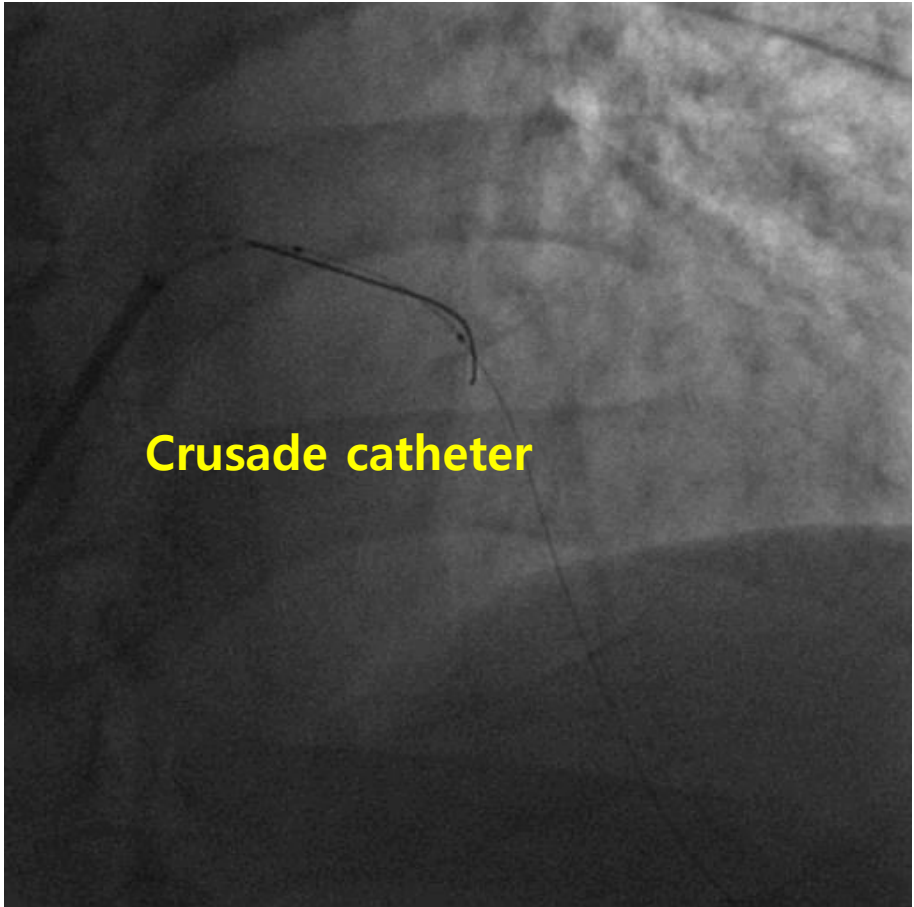


# Plaque modification with undersized balloon

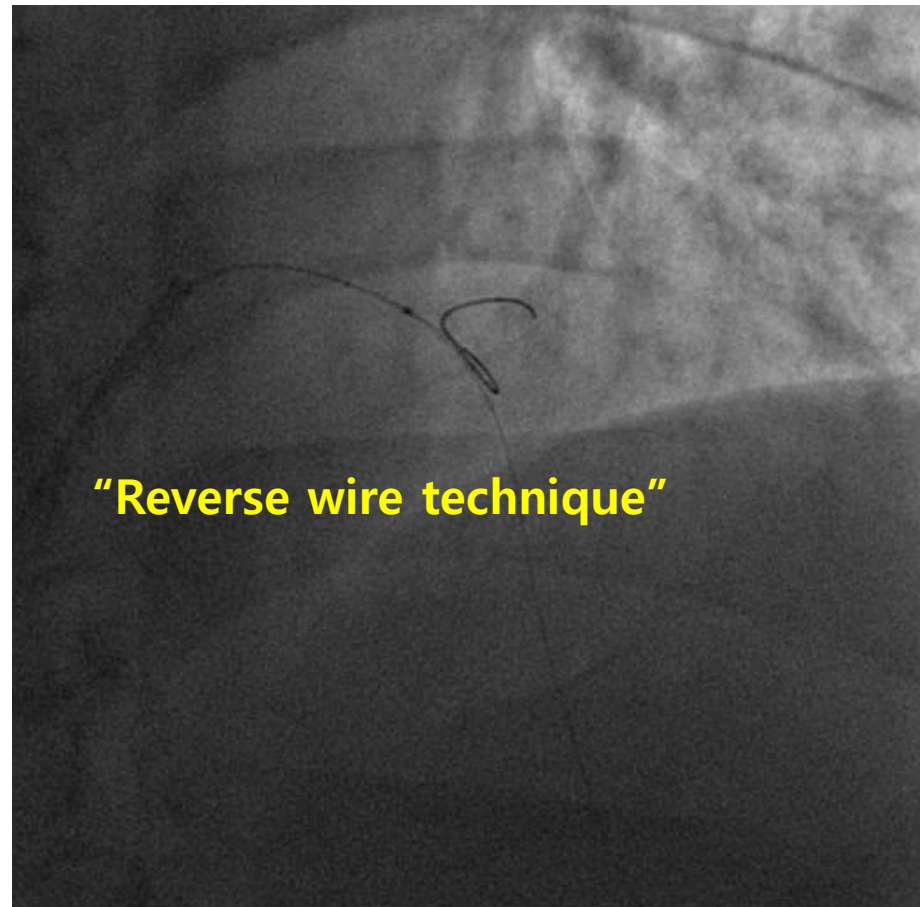




# Difficult SB wiring



Crusade catheter



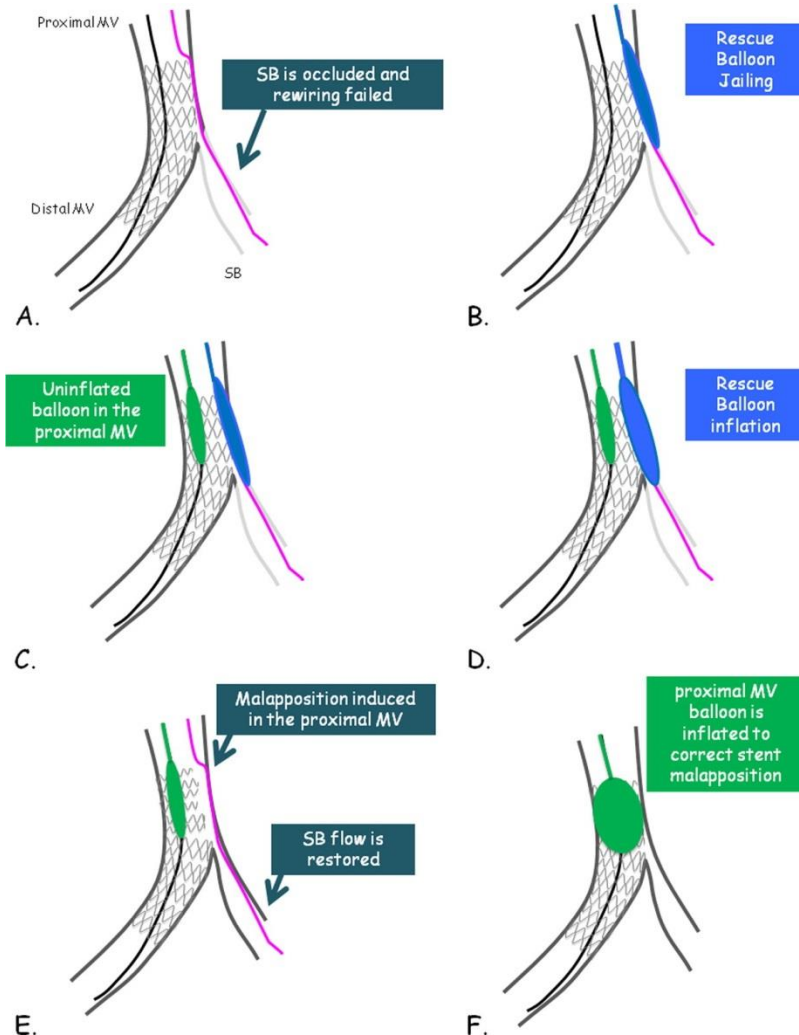
"Reverse wire technique"



# Technical challenges

- Unable to wire SB
  - “pull-back technique”
  - New hydrophilic wires with good torque transmission
  - Venture Catheter
  - “Reverse wire technique”
  - Dual-lumen catheters
  - Plaque modification through dilatation with an undersized balloon proximal to carina
  - “rescue” jailed balloon technique

# “rescue” jailed balloon technique



- After main vessel (MV) stent implantation with jailed wire in the side-branch (SB), SB is occluded and rewiring attempts fail.
- The “rescue” (low-profile, small) balloon is advanced in the SB over the jailed wire.
- A balloon is advanced into the proximal MV and kept uninflated.
- SB “rescue” jailed balloon is inflated to restore flow into the SB.
- SB “rescue” jailed balloon is deflated and removed. As a consequence of jailed balloon dilation, stent struts in the proximal MV are detached from vessel wall.
- The MV balloon is dilated to re-expand the stent struts in the proximal MV.



Thank you for your attention

