

# Wire Externalization: Hurdles and Solutions



WELLINGTON  
CARDIOLOGY



Scott Harding  
Department of Cardiology  
Wellington Hospital

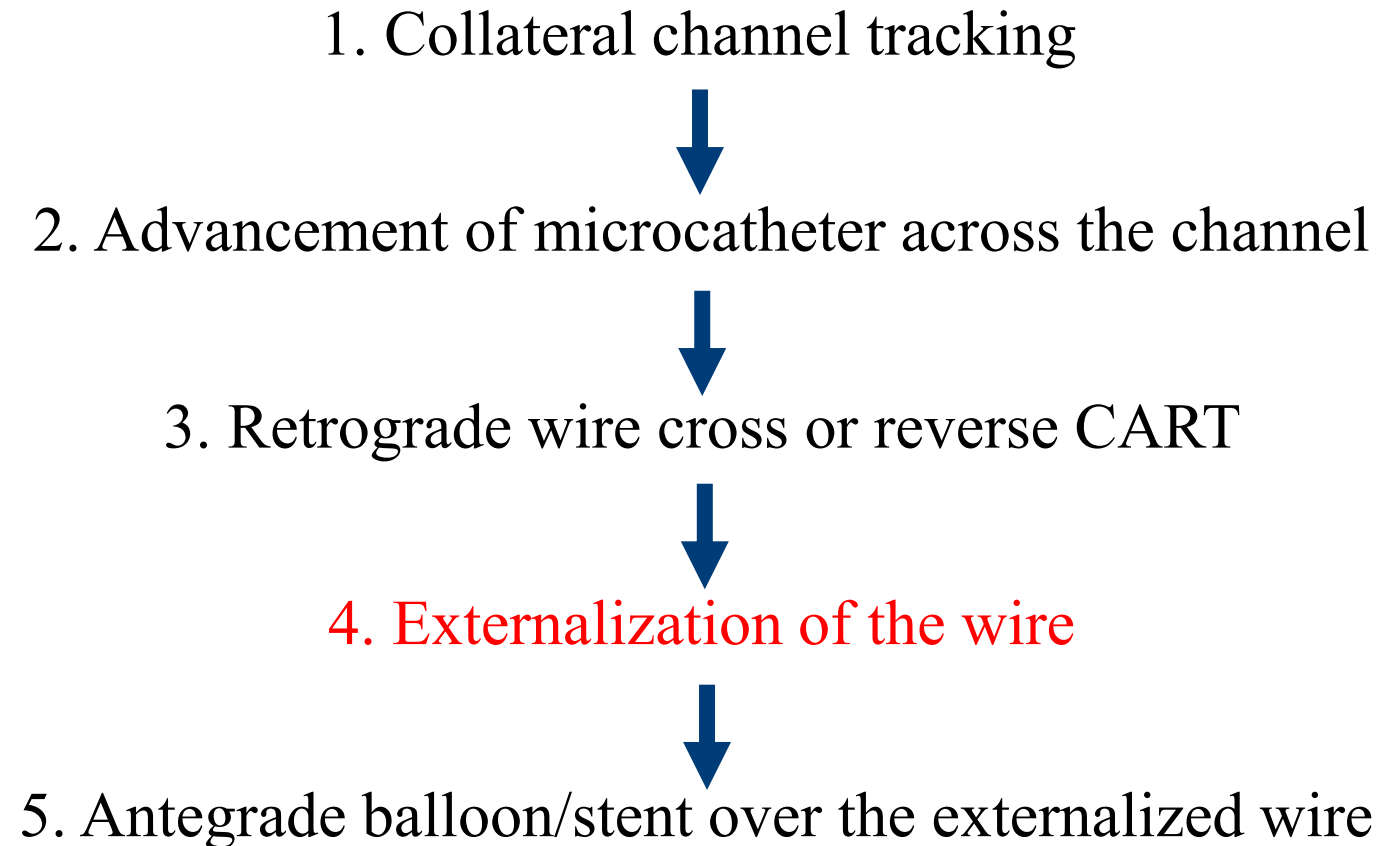
# Potential Conflicts of Interest

**I have the following potential conflicts of interest to report:**

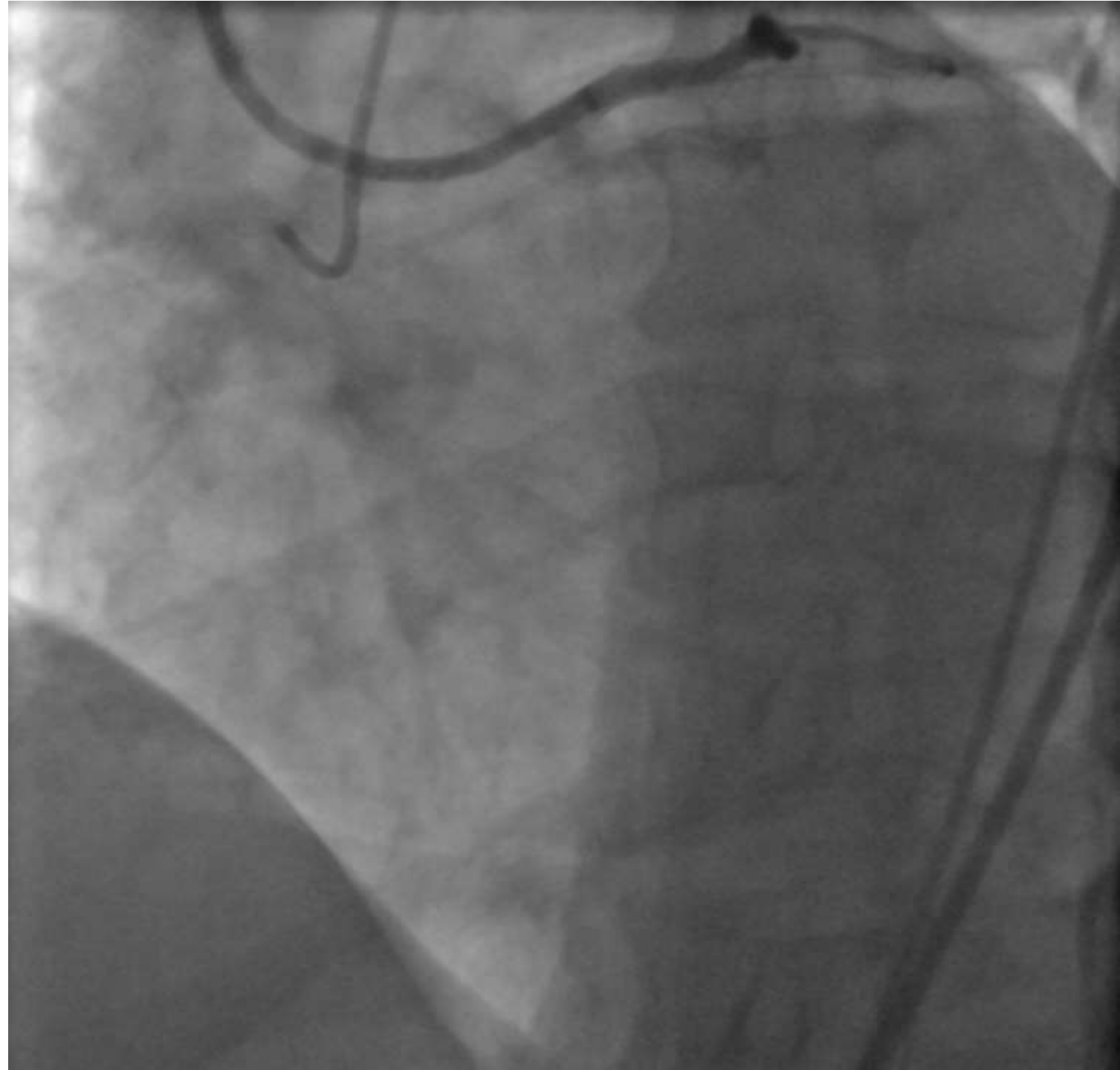
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Kaneka, Bio-Excel, Teleflex Medical

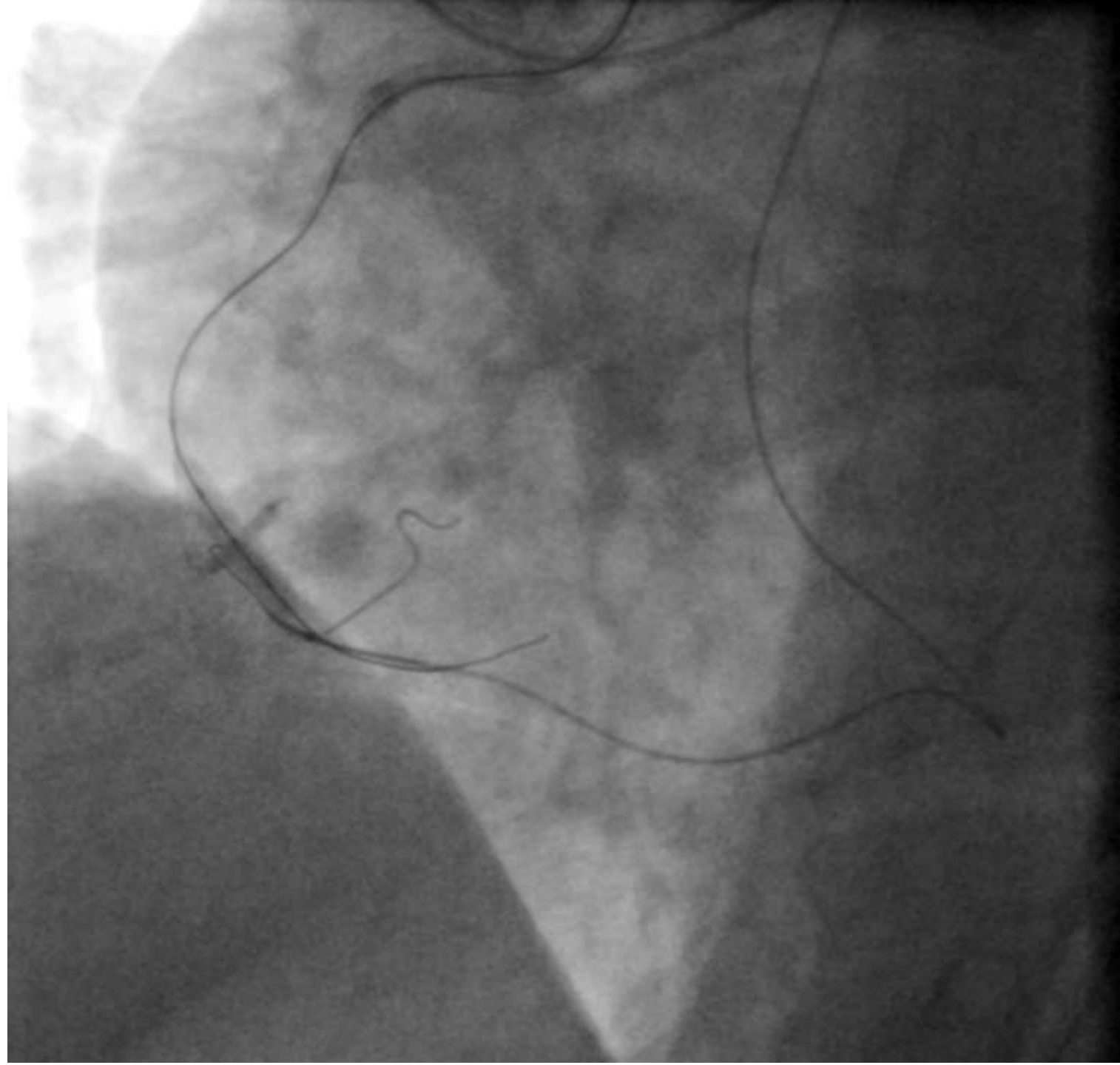
# Retrograde Approach to CTO



# Standard wire externalization



# Standard wire externalization



# Standard wire externalization



# Standard wire externalization



# Standard wire externalization



POST PLASTY



# Challenges in wire externalization



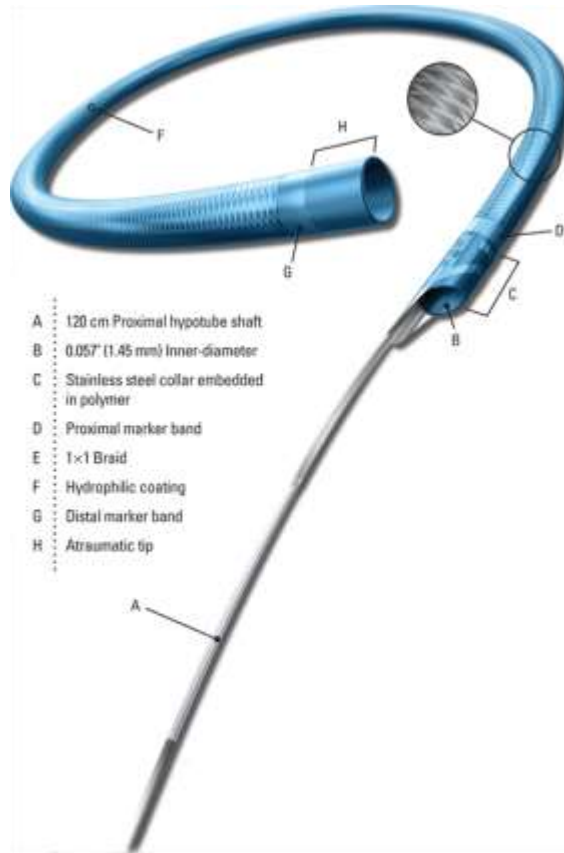
- Difficulty in advancing the retrograde wire from the proximal vessel into the antegrade guide
  - Angulation
  - Disease proximal to the CTO segment
- Retrograde microcatheter too short to reach antegrade guide.
- Inability to advance the retrograde microcatheter due to disease
- Ischemia in the donor vessel

# Potential solutions

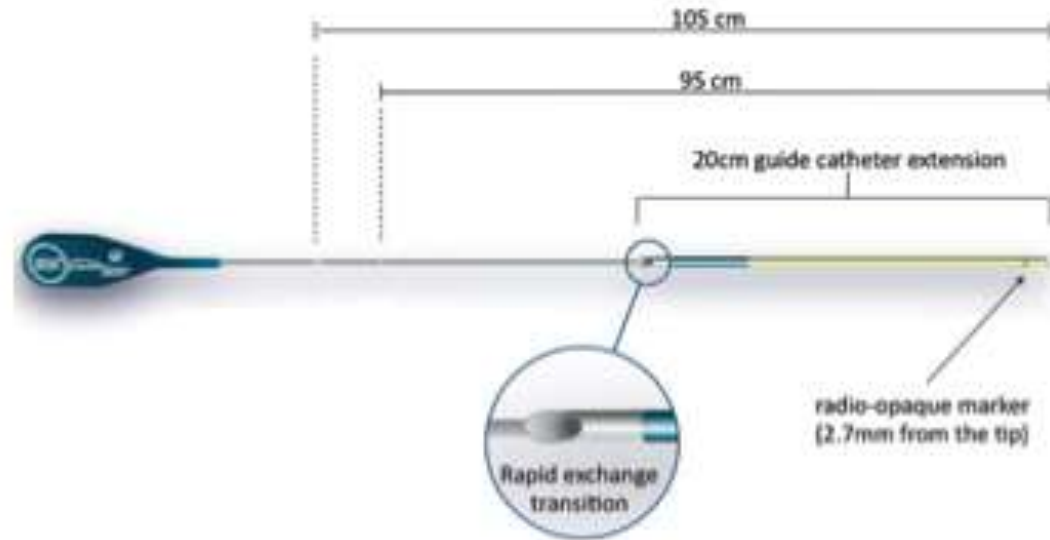
- Changing the guide catheter
- Use a guide extension catheter
- Stent reverse CART
- Snaring
- Rendezvous or “tip in” technique

# Guide extension catheters

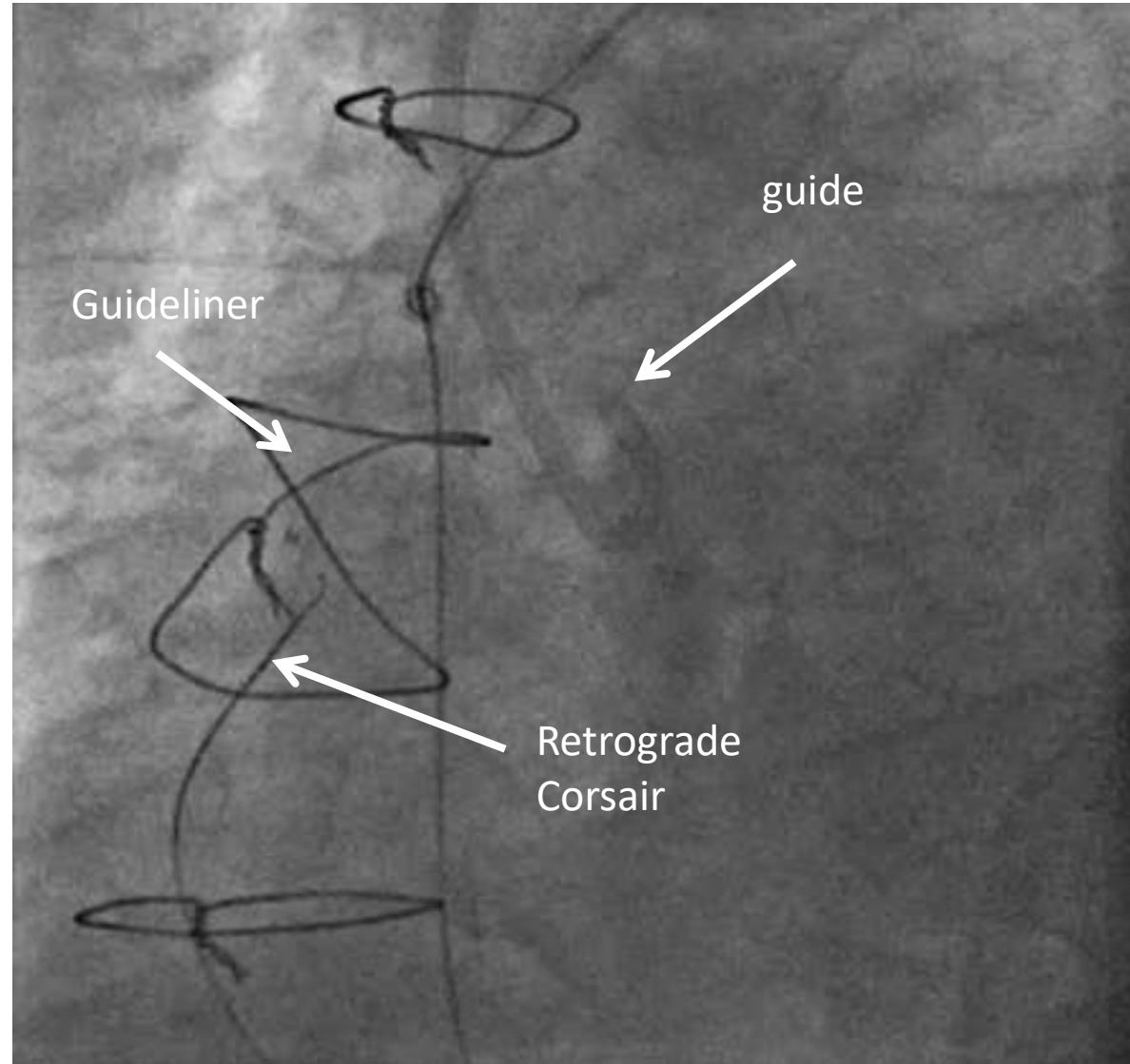
## Guidezilla



## GuideLiner



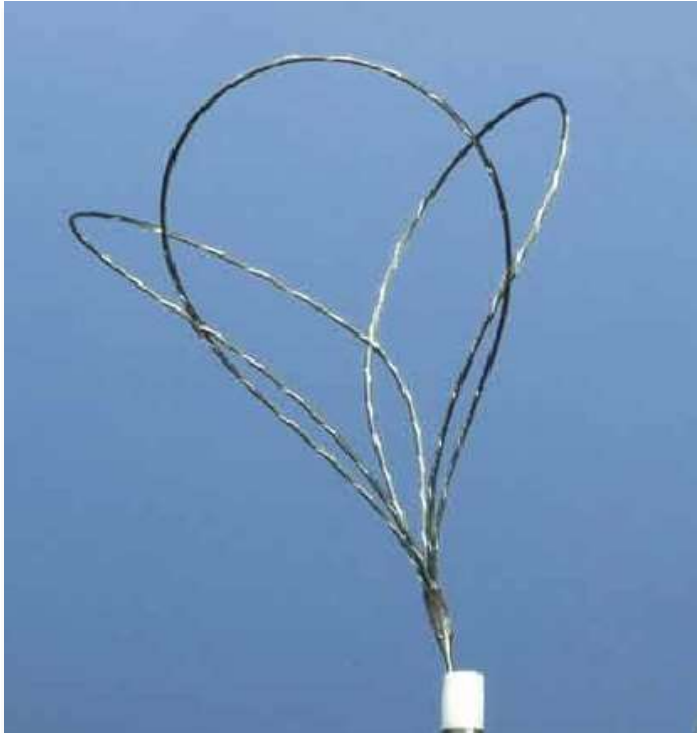
# Wiring into a guide extension catheter



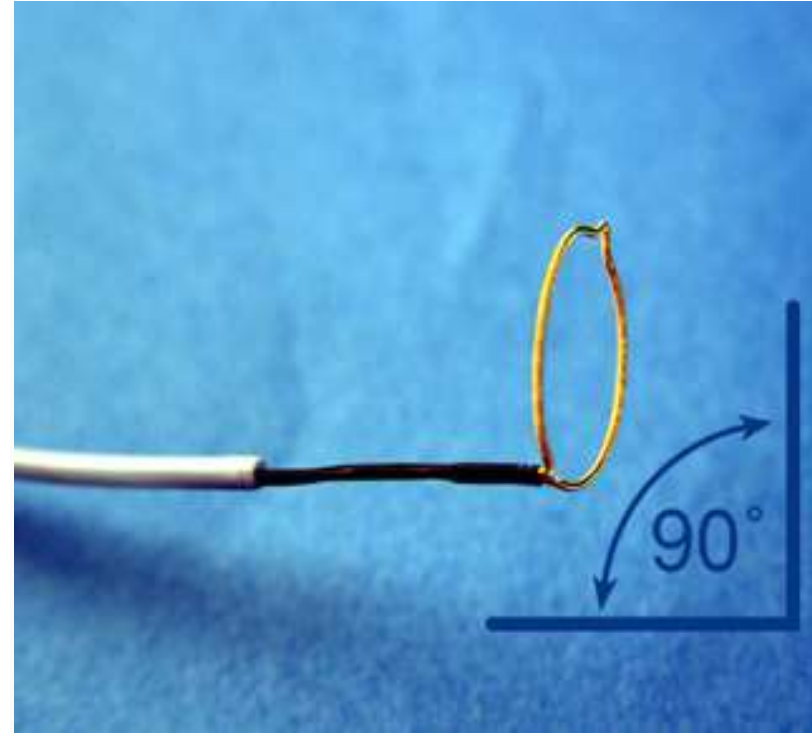
# Snare

- Large 3 loop snares are preferred
- Discard the snare delivery sheath as the antegrade guide is used instead.
- It is safest to snare the wire Used for externalization (such as RG3) on the radiopaque portion of the wire
- Should avoid snaring short 180 cm wires

# Snare

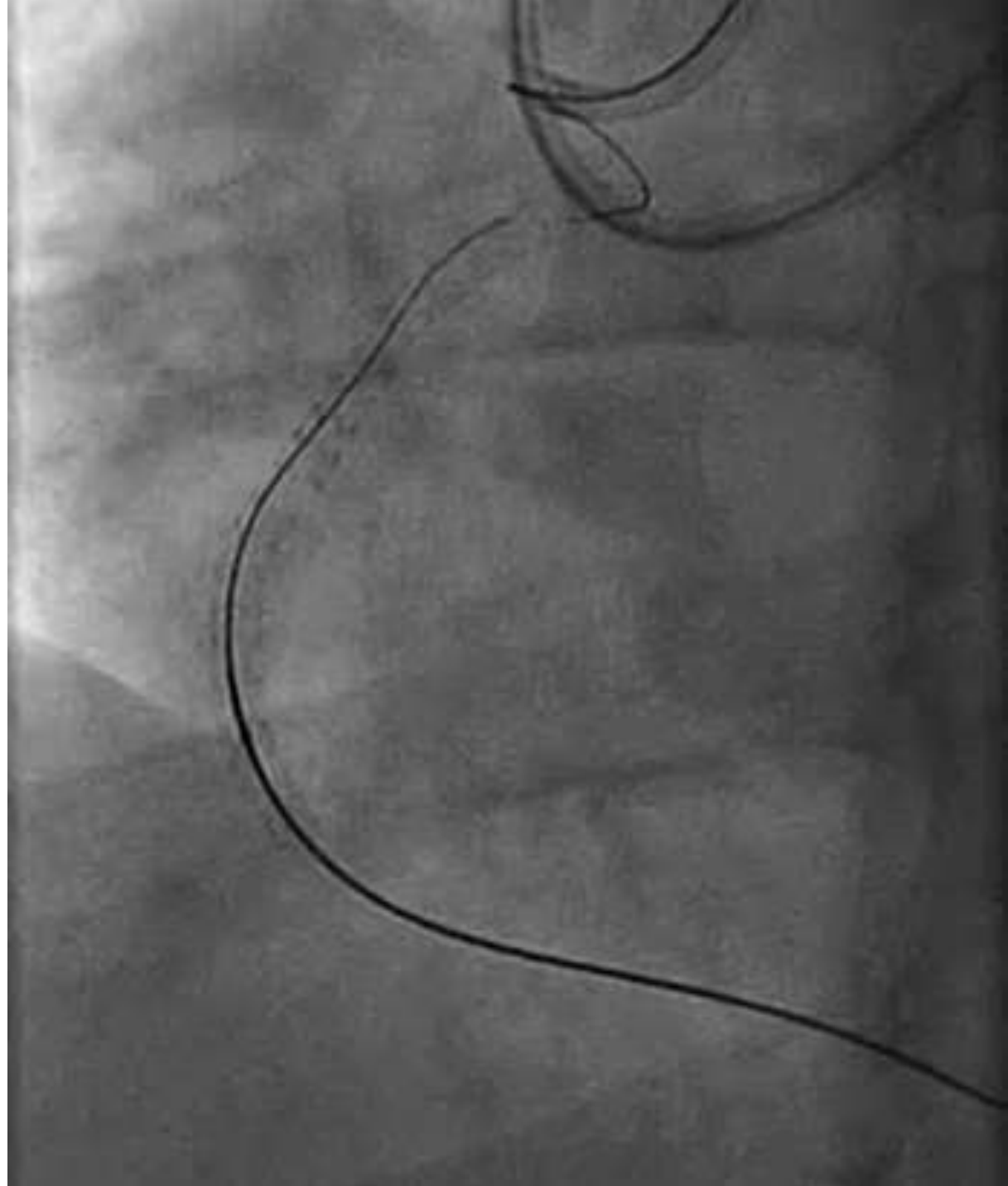


EN Snare 18-30 mm

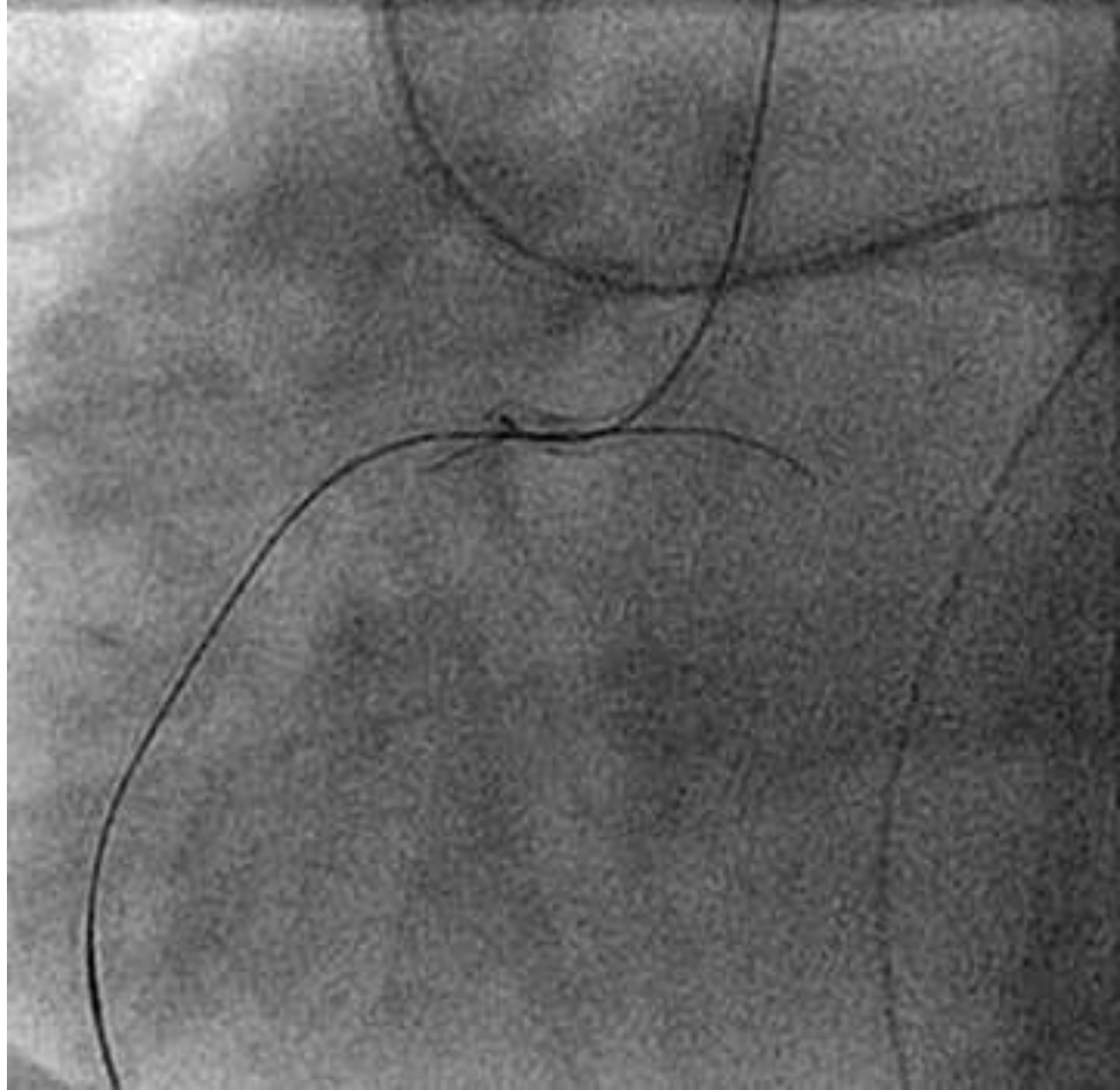


Goose neck snare

# Snaring in the aorta

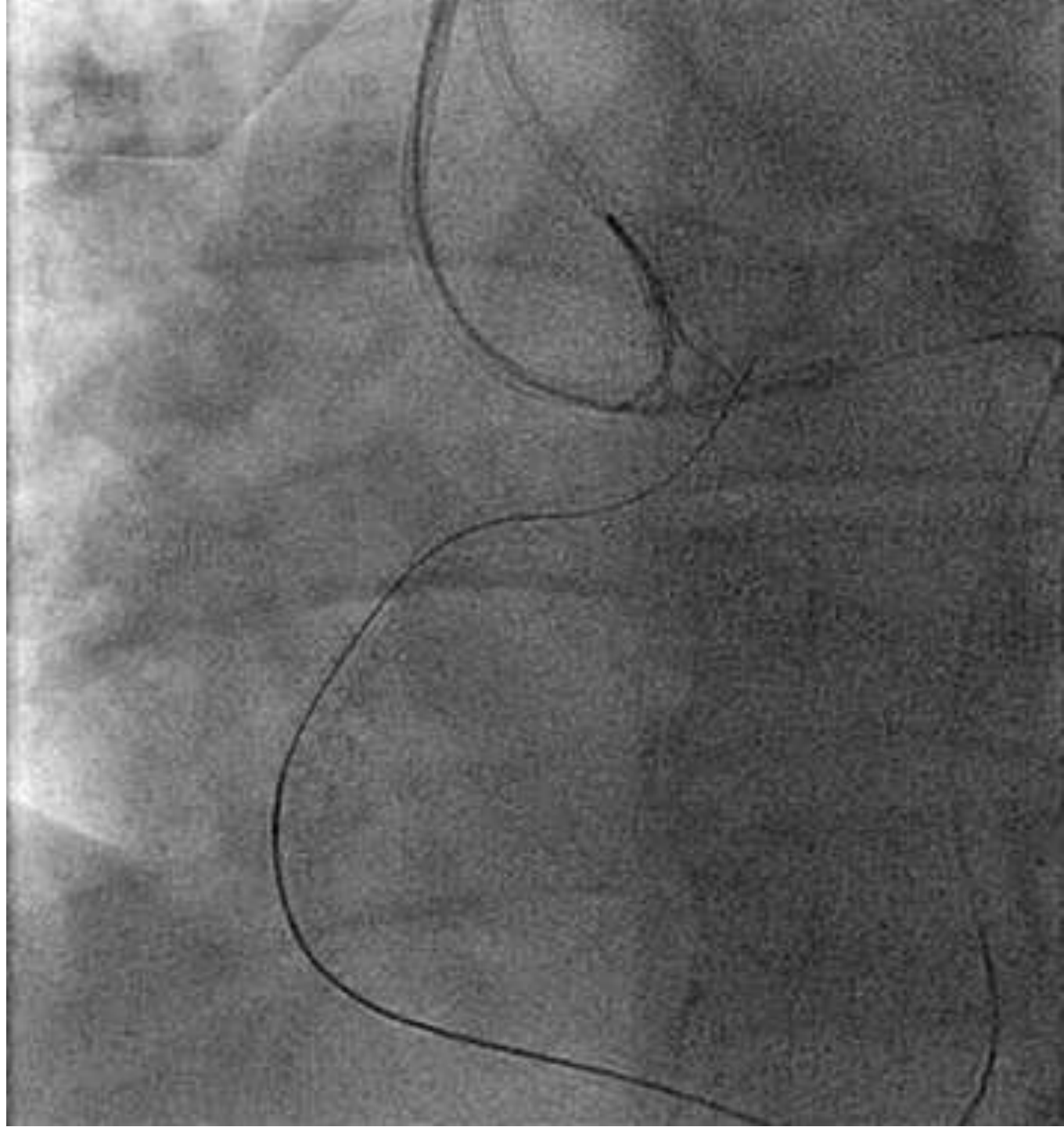


# Snaring in the aorta

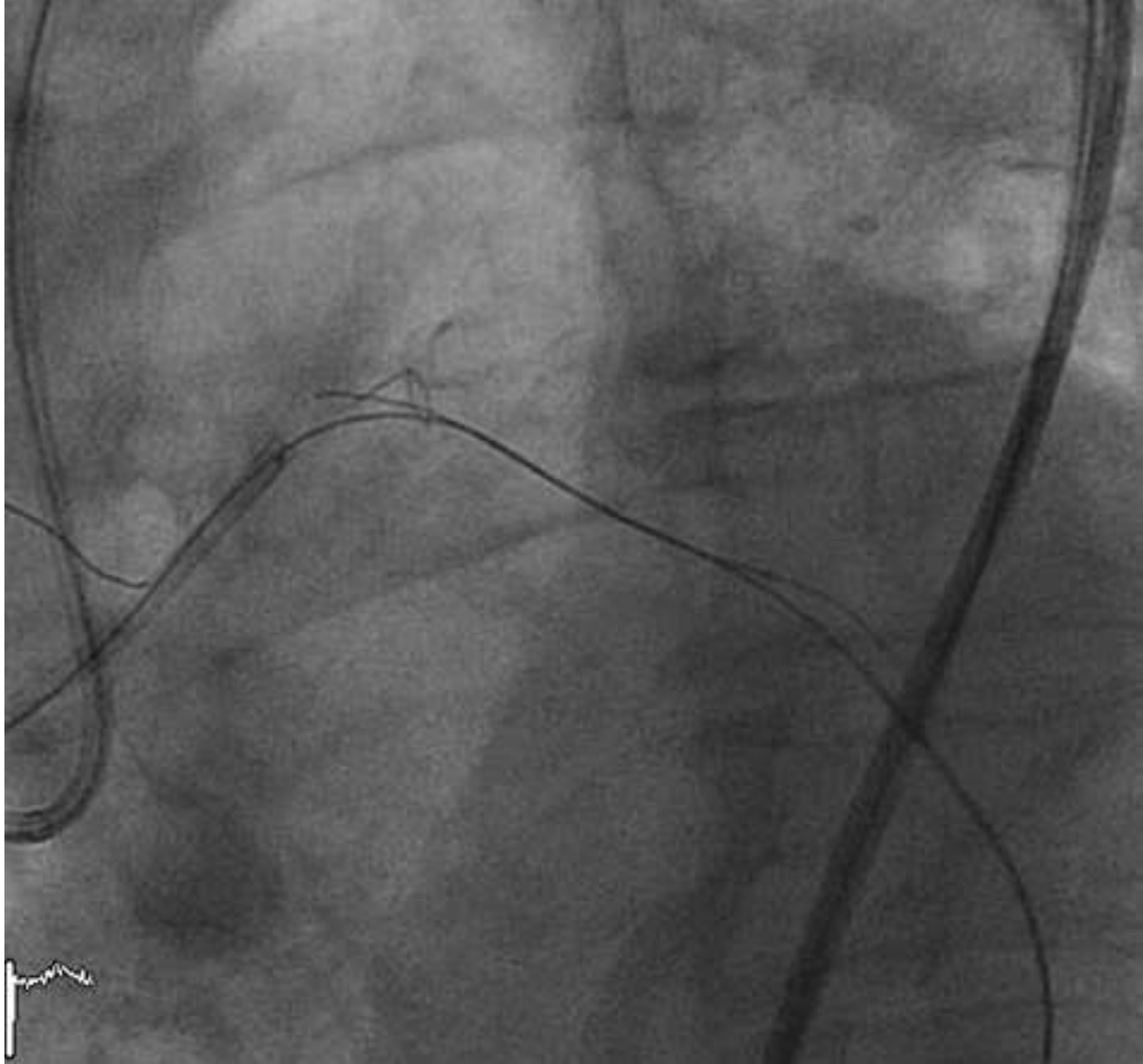




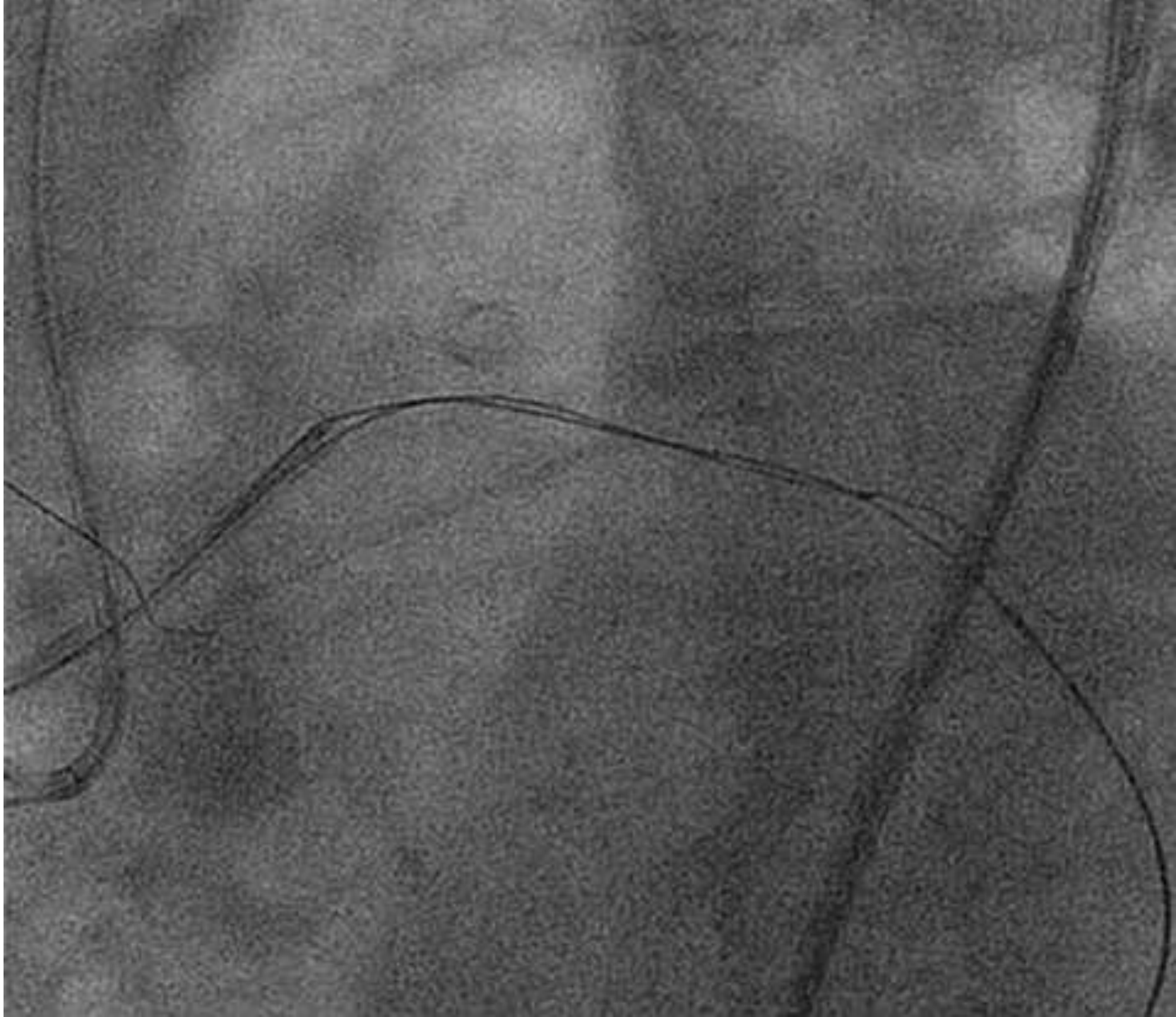
# Snaring in the aorta



# Snaring in the coronary



# Snaring in the coronary



# “Rendezvous” technique

Can be used to facilitate wire externalization

Or

Can be used to convert to an antegrade approach without externalization.

# “Rendezvous” technique

Useful when:

- The retrograde microcatheter is too short to reach the antegrade guide
- Disease prevents the passage of the retrograde microcatheter into the antegrade guide
- You want to convert to an antegrade case without externalization
  - to avoid ischaemia
  - to facilitate distal lesion handling

# “Rendezvous” technique

## Step 1

In the rendezvous method the antegrade and retrograde microcatheters are aligned in the antegrade guiding catheter or coronary artery

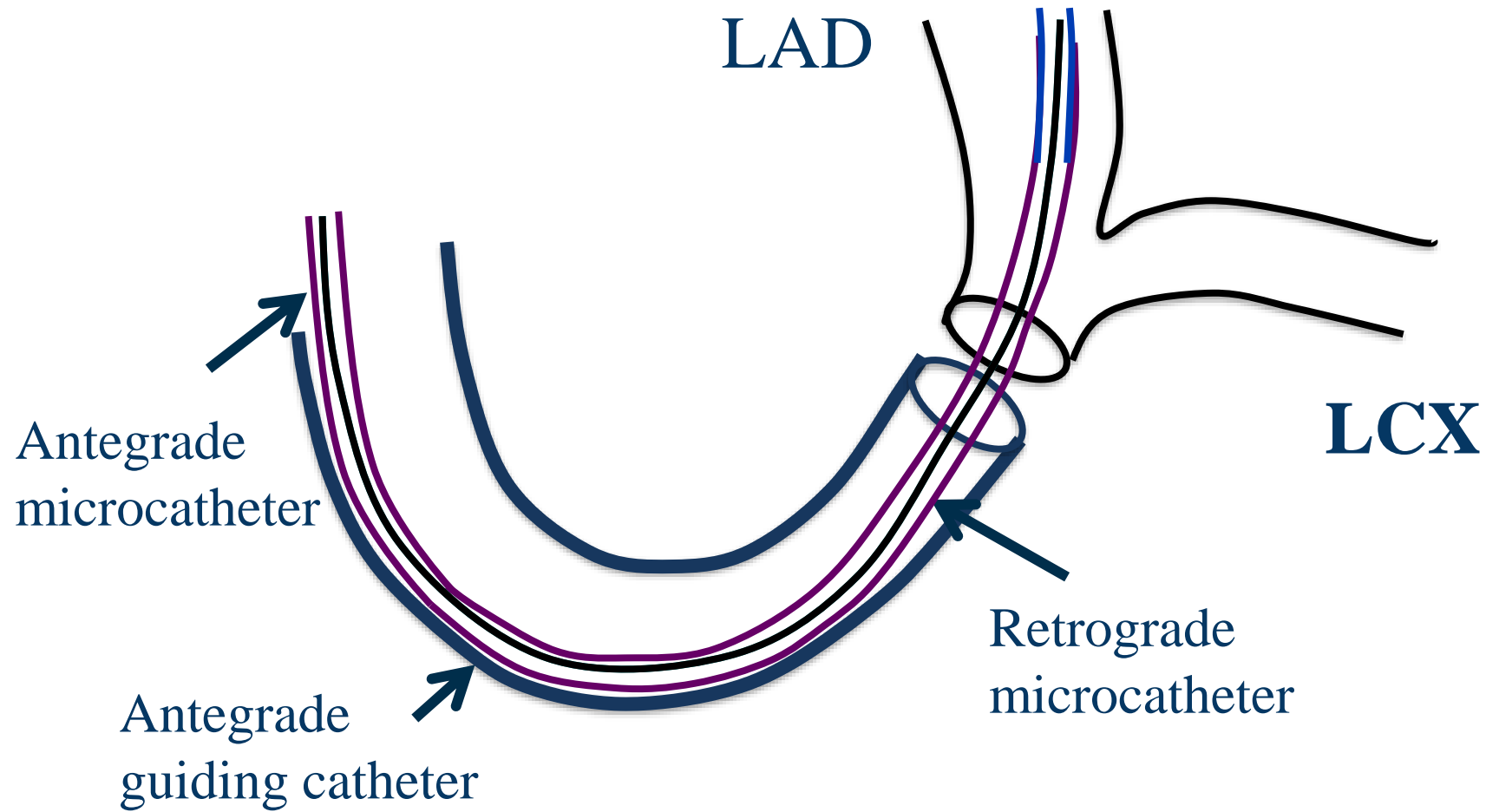
## Step 2

Then an antegrade guidewire is inserted into the retrograde microcatheter

or

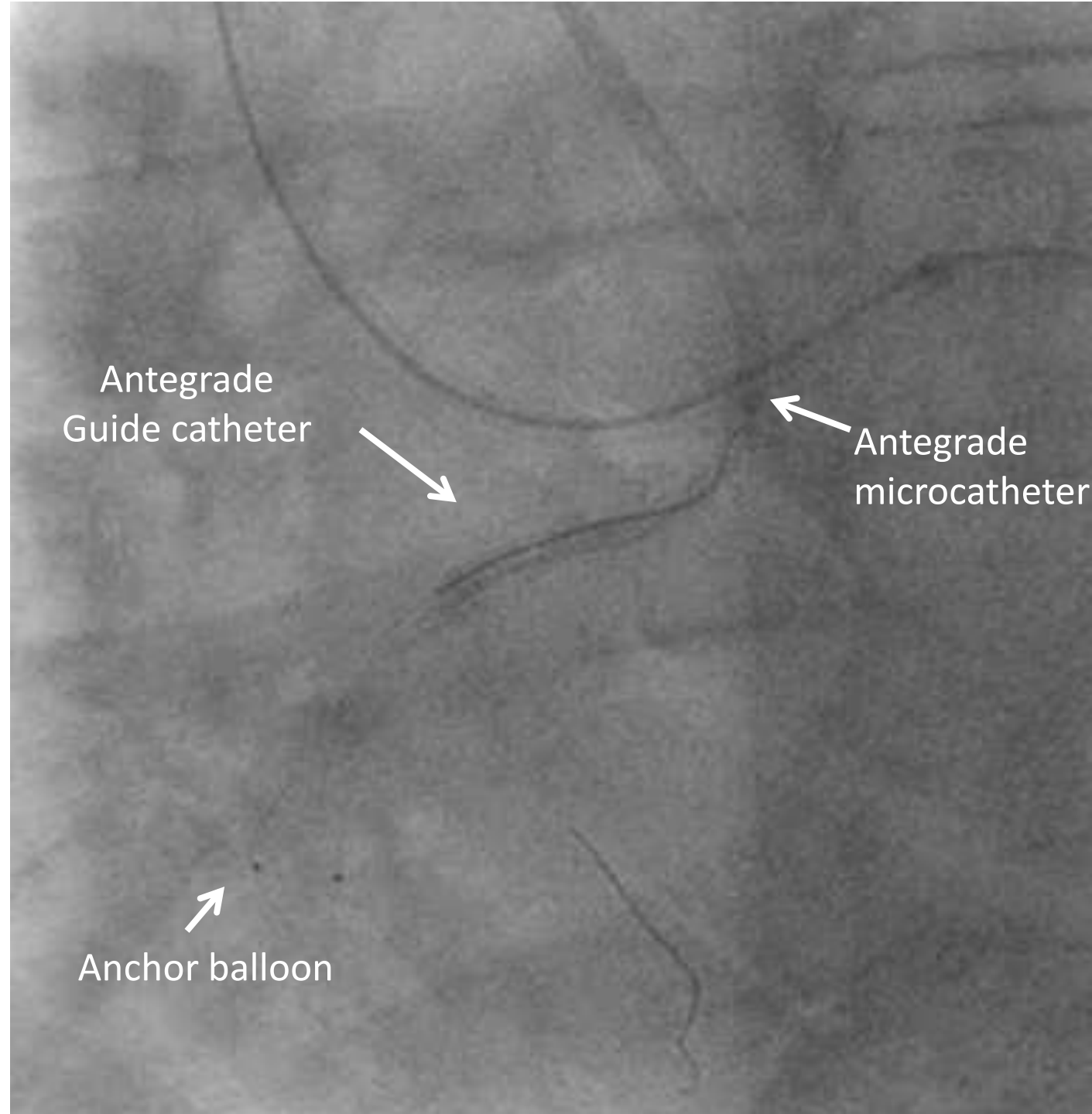
Alternatively the retrograde guidewire may be inserted into the antegrade microcatheter

# Retrograde Rendezvous Technique



# Retrograde rendezvous

Retrograde wire advanced into the antegrade microcatheter

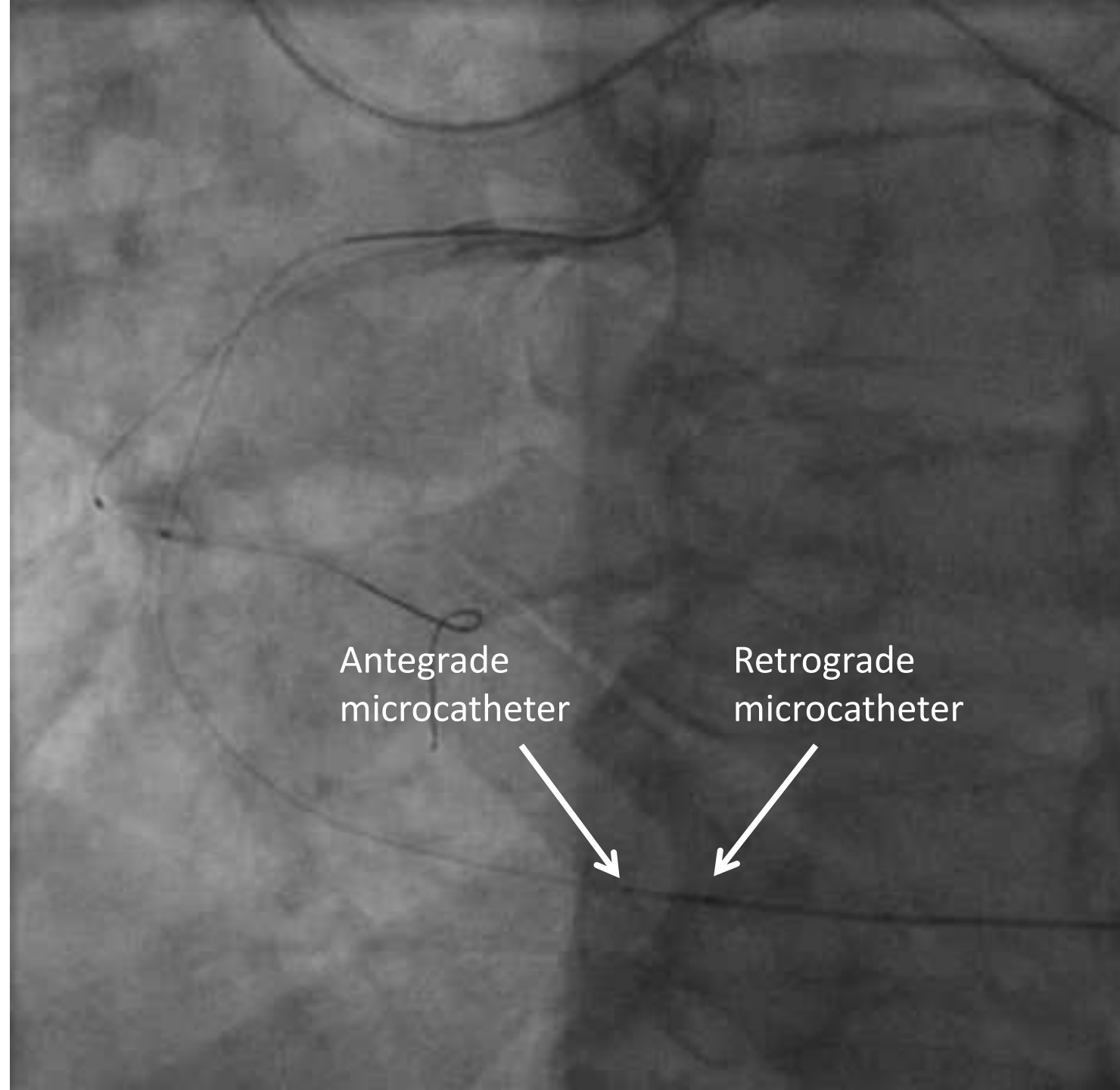






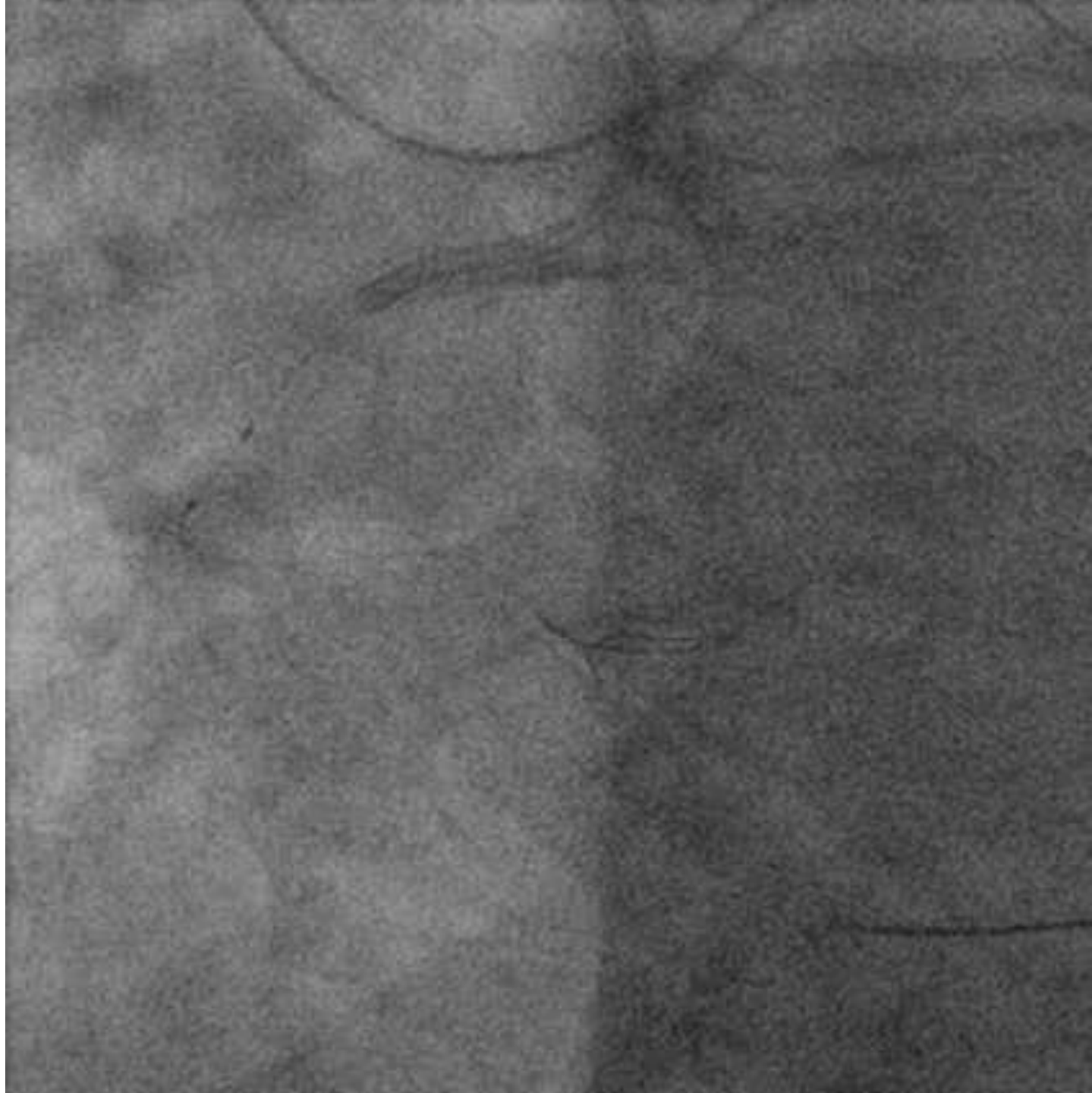
# Retrograde rendezvous

Antegrade microcatheter advanced further across the CTO segment. The retrograde wire is then removed.

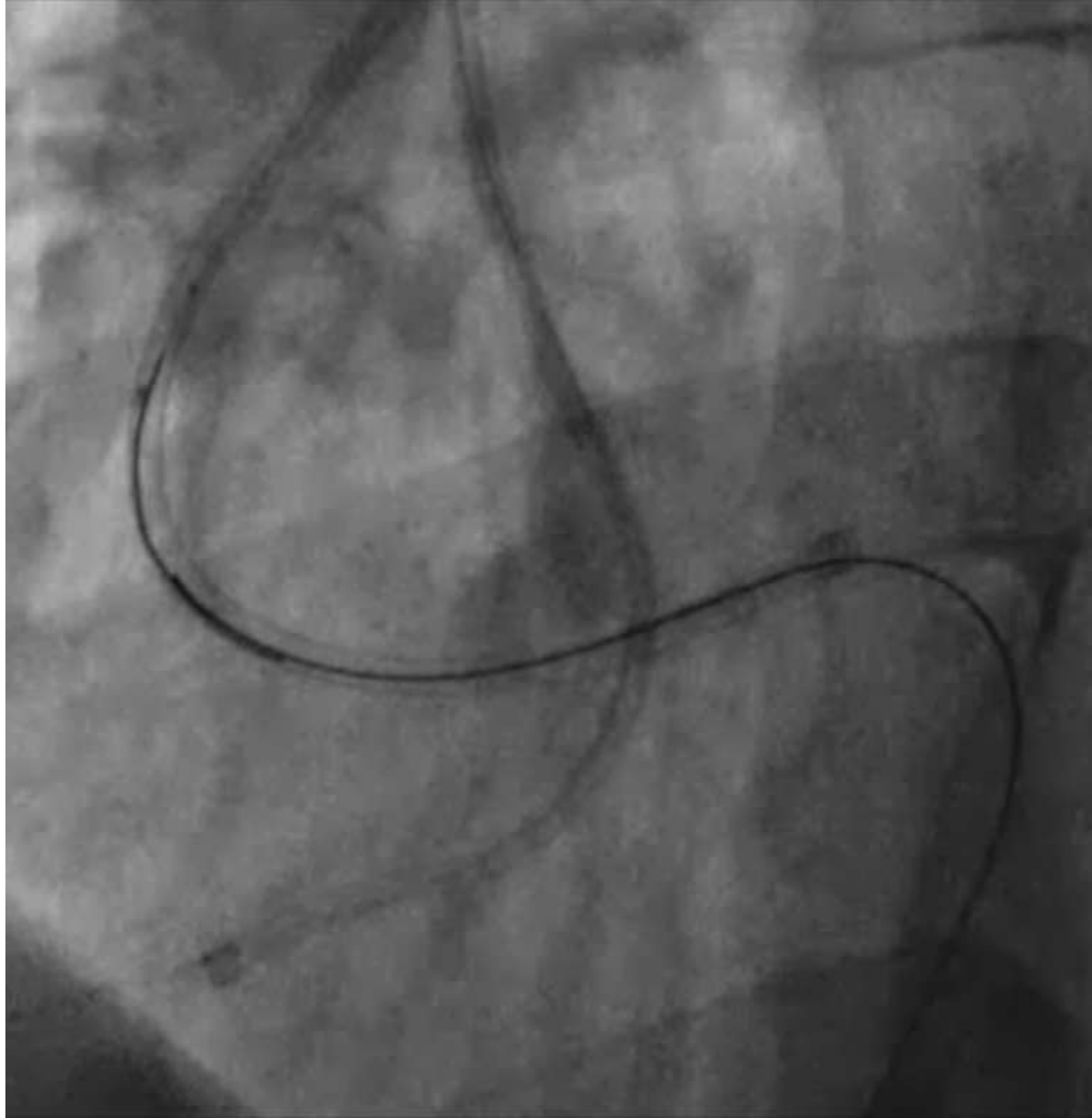


# Retrograde rendezvous

Antegrade wire advanced through  
antegrade microcatheter



# Antegrade rendezvous technique



# Summary

Wire externalization can be challenging in some cases

It is important to know what equipment and techniques can be used to overcome these problems