

***Welcome to the 7th
European Bifurcation Club
14-15 October 2011 - LISBON***

Side Branch access session

European Bifurcation Club

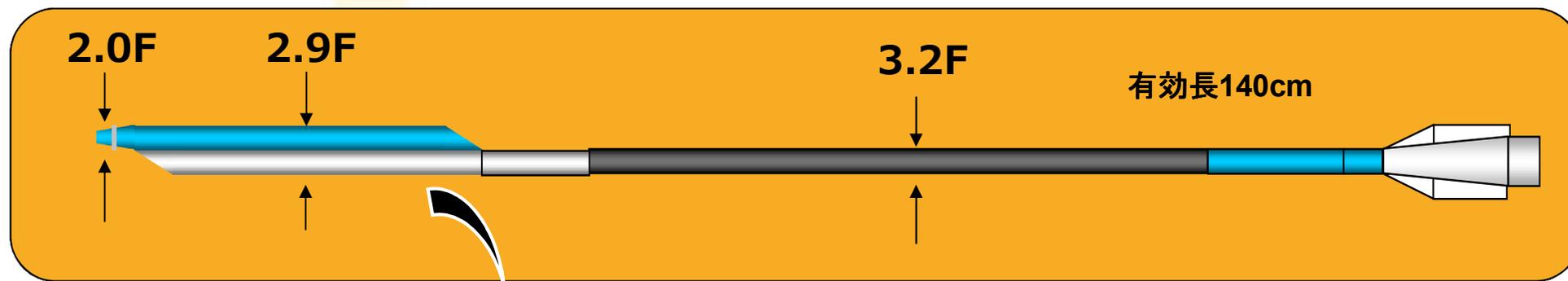


Role of dual-lumen catheter support

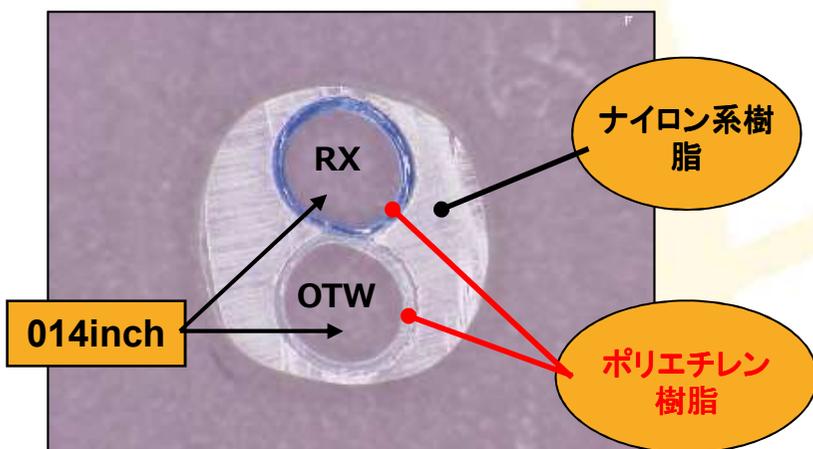
**Caress Sapporo
Hokko Memorial Hospital
Sapporo, Hokkaido
Japan
Yoichi Nozaki, M.D.**

dual-lumen catheter

Shaft Profile

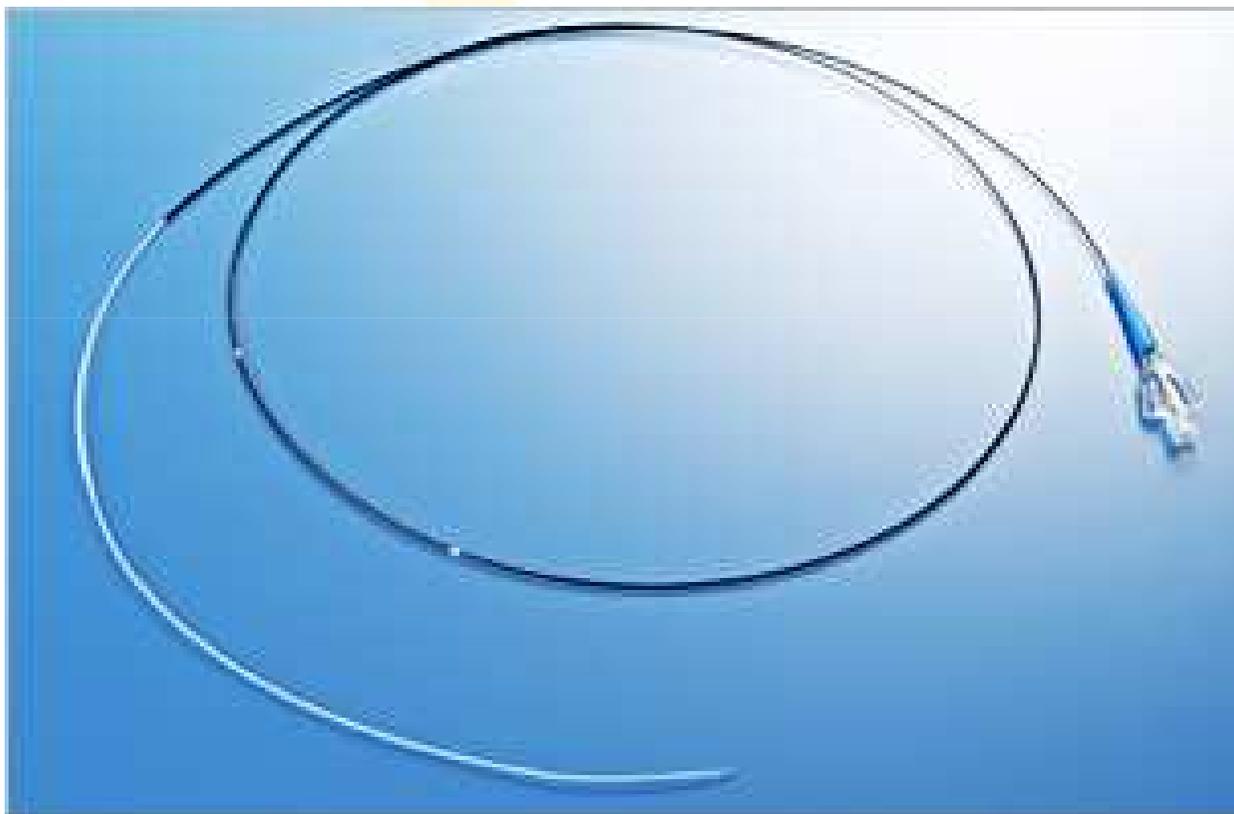


Crusade Dis断面





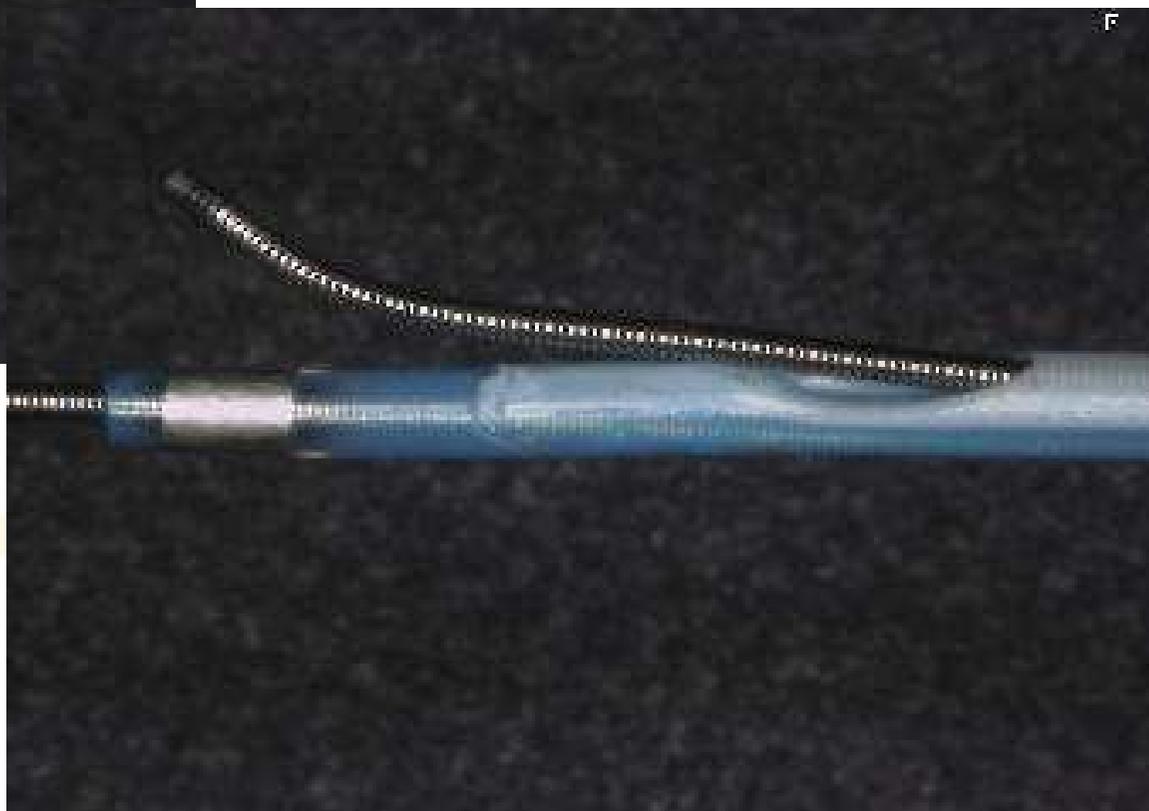
Kaneka Multifunction Catheter



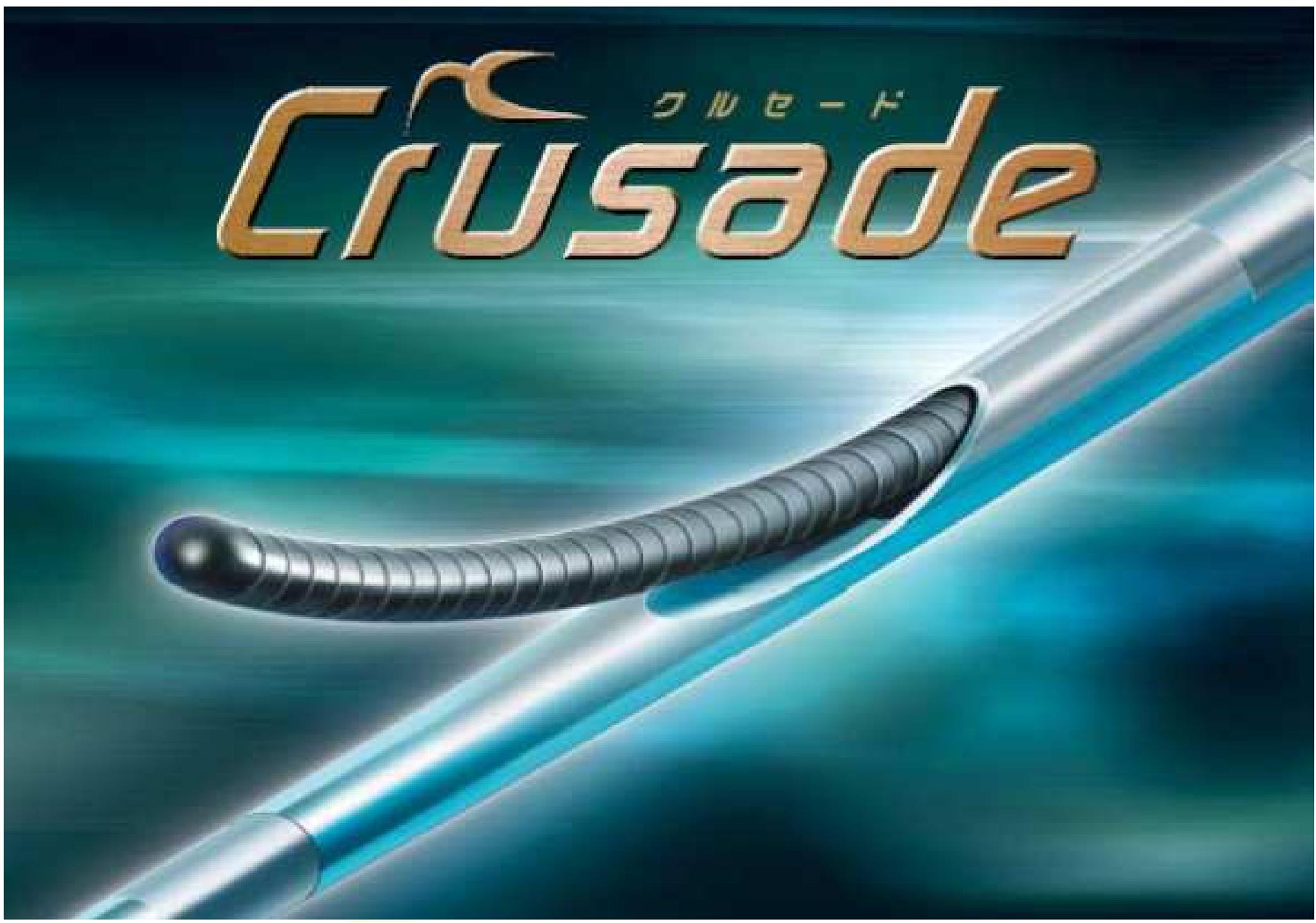
Crusade

- ・標準
- ・ハードタイプ°
- ・マーカータイプ°





クルセイード
Crusade

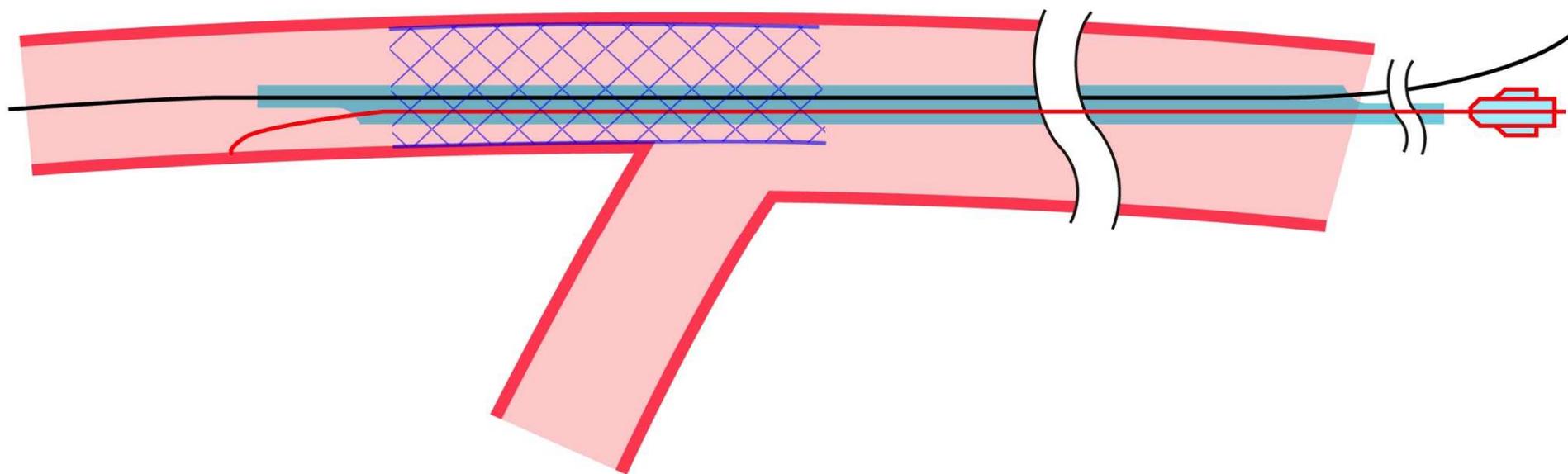
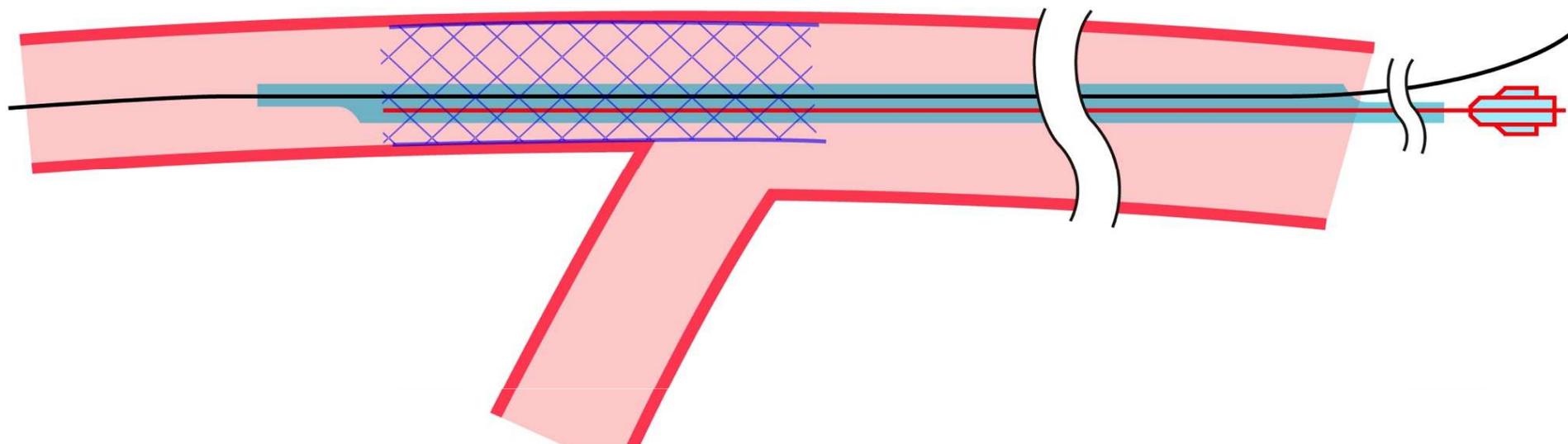




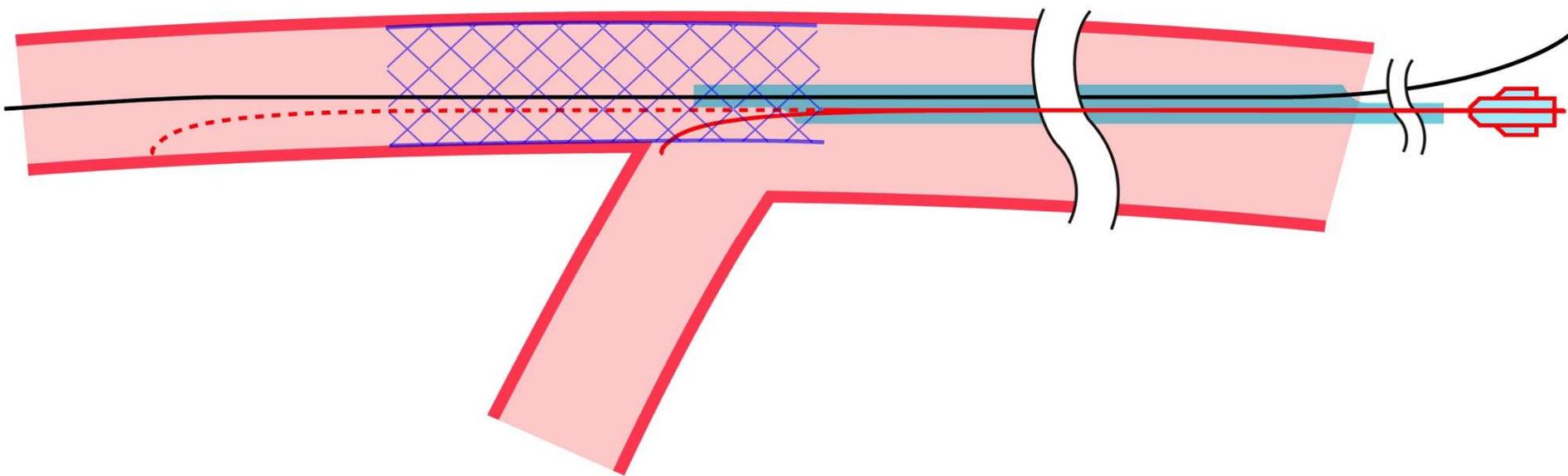
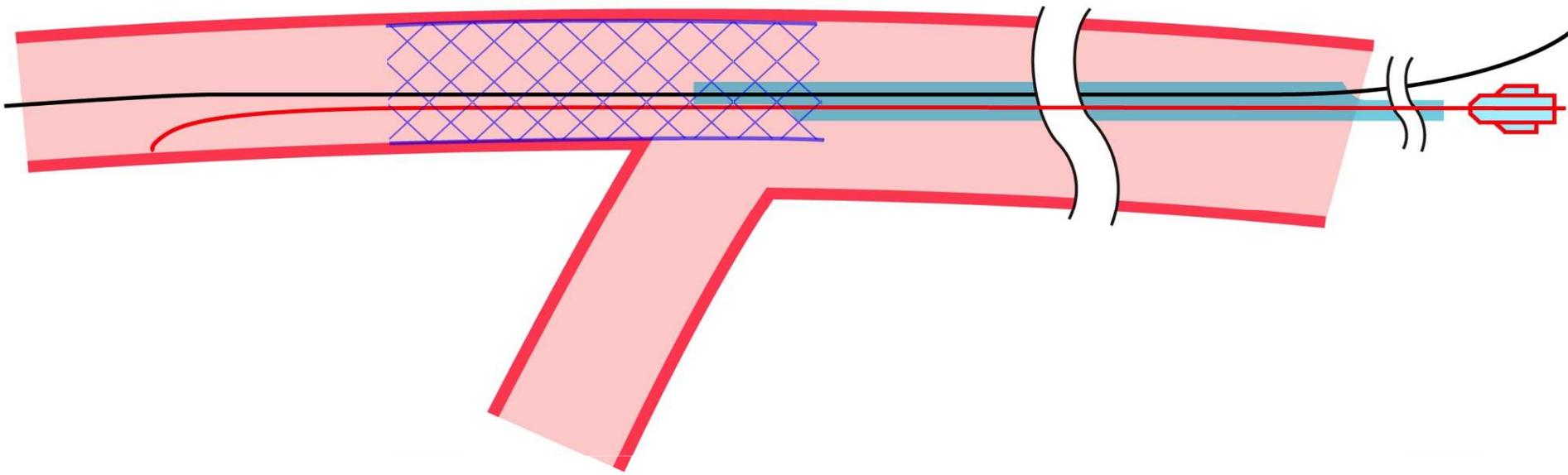
Role of double lumen catheter using 2nd wire with double lumen catheter

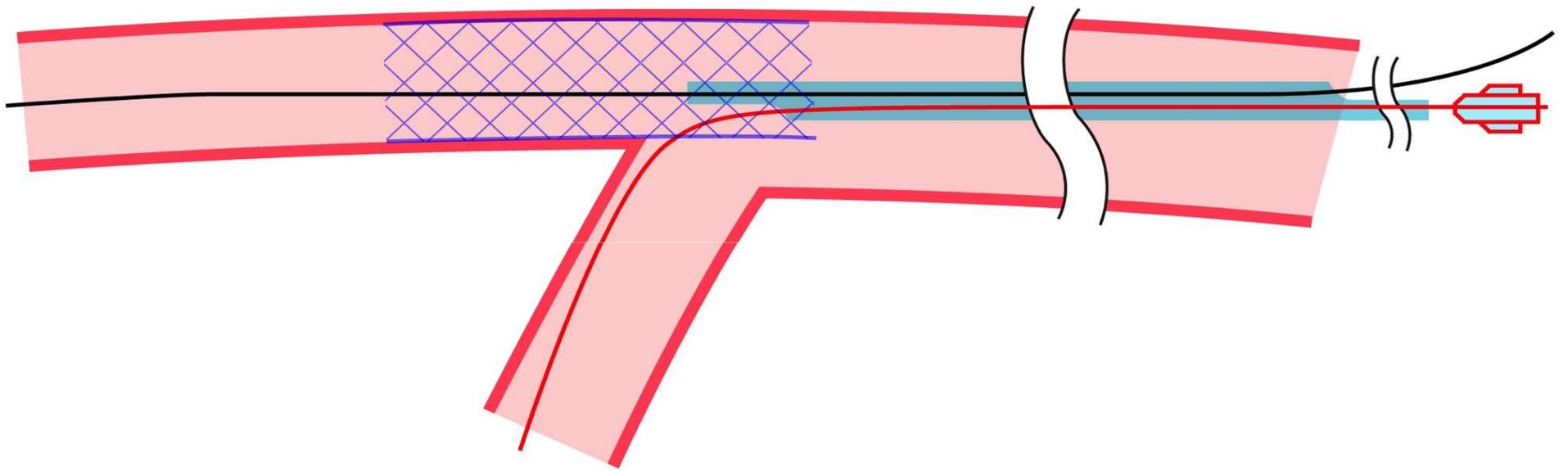
- **Get a same route along the 1st wire
parallel wire or buddy wire after complex channel
crossing
side branch crossing, especially complex anatomy of
side branch or stent struts recrossing**
- **Enhance the maneuverability of the 2nd wire using the
over the wire lumen**
- **Provide a good back up support (stabilize the over-the
wire lumen due to the 1st wire insertion)**
- **Prevent from entangling the wire shafts one another**

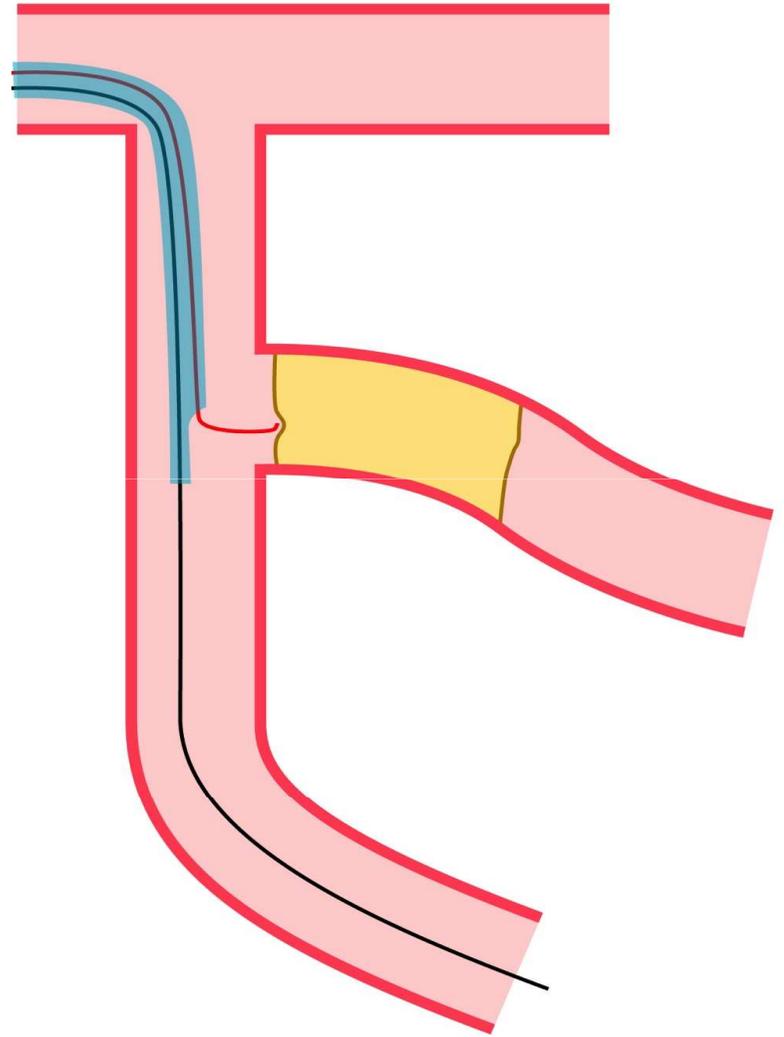
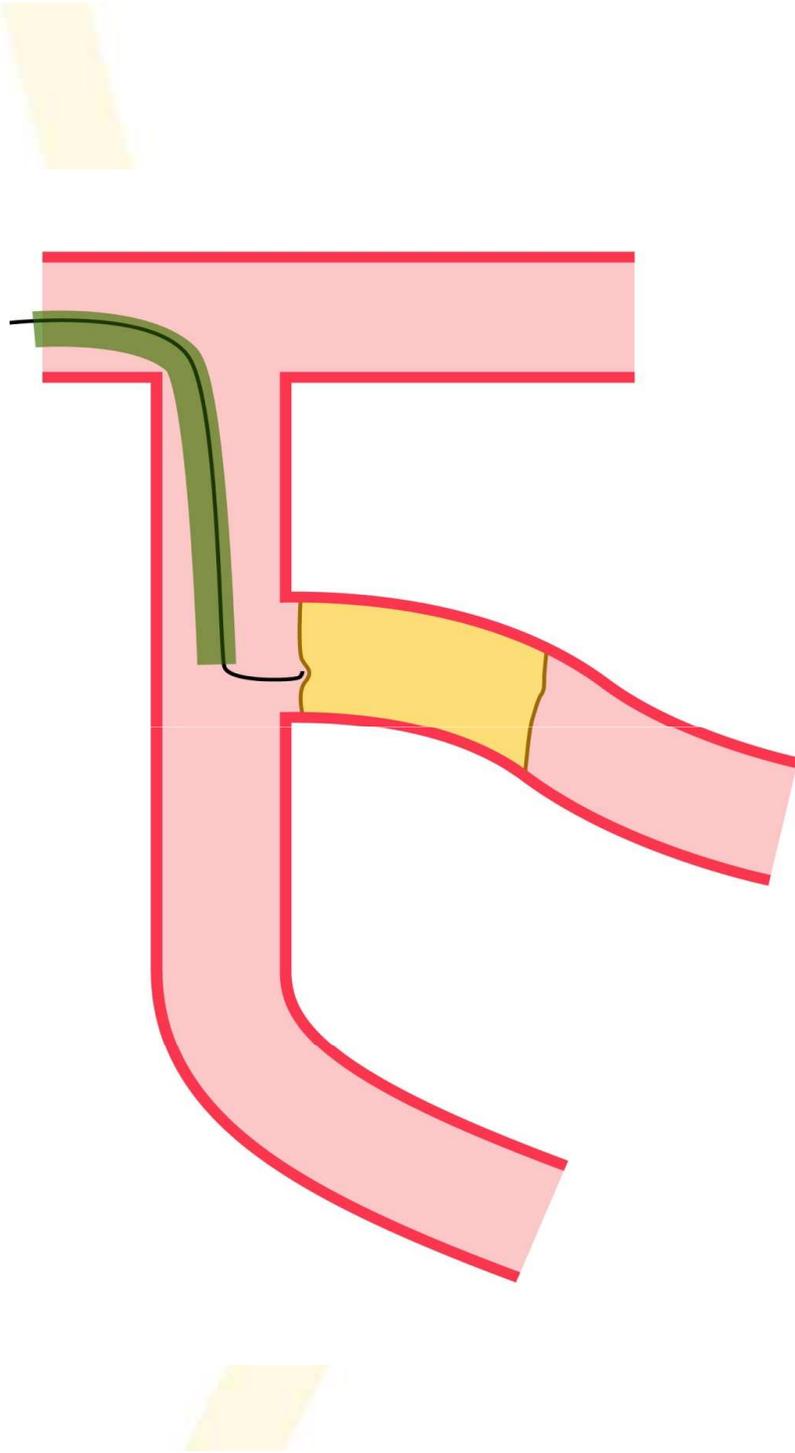
FRC



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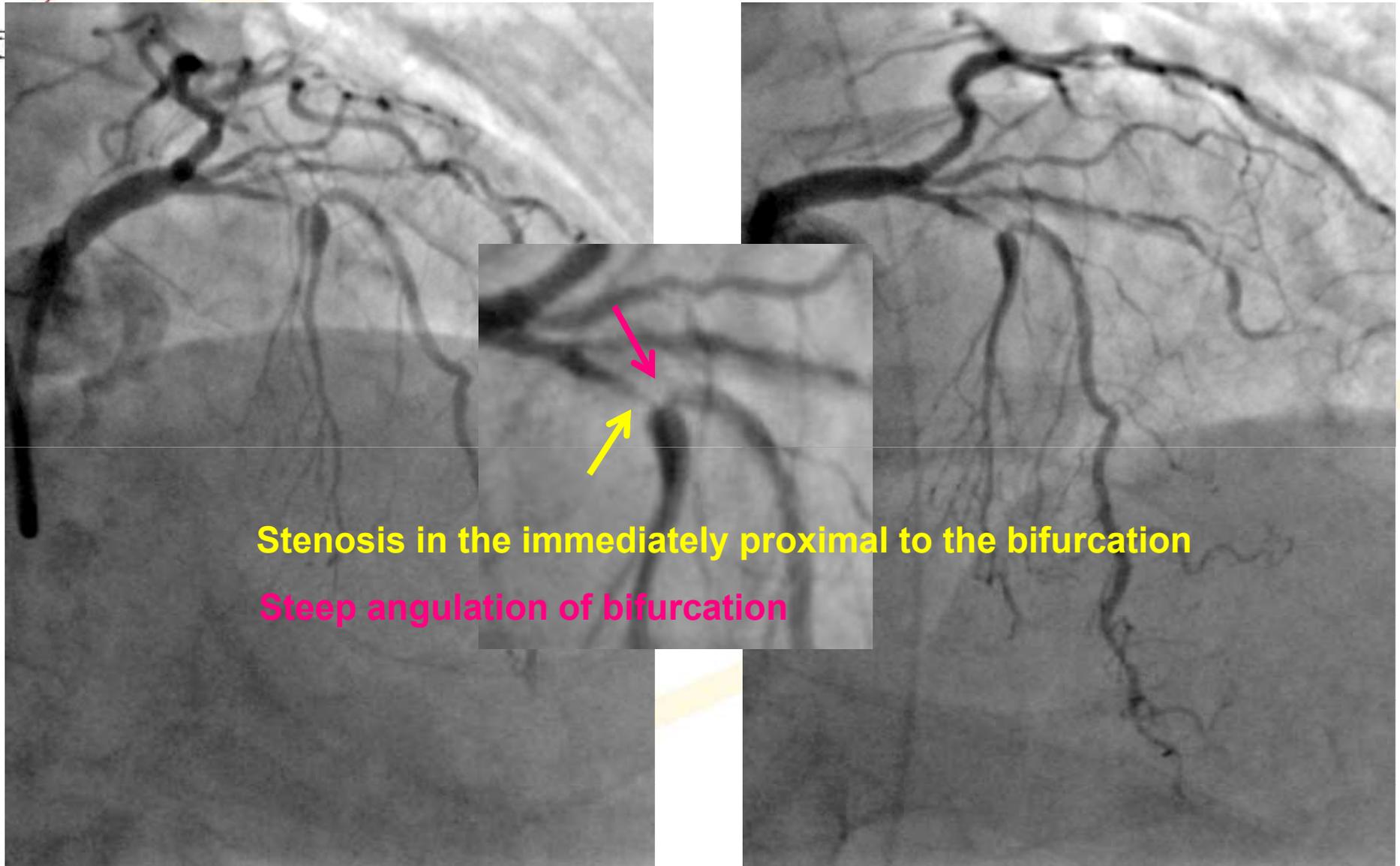






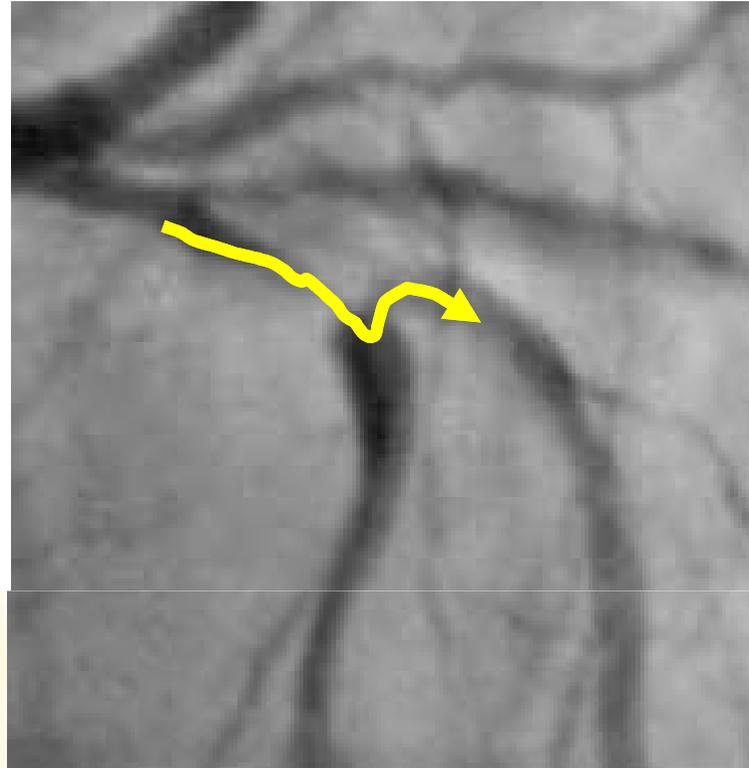
Reverse wire technique with double lumen microcatheter

Control angiogram



Stenosis in the immediately proximal to the bifurcation
Steep angulation of bifurcation

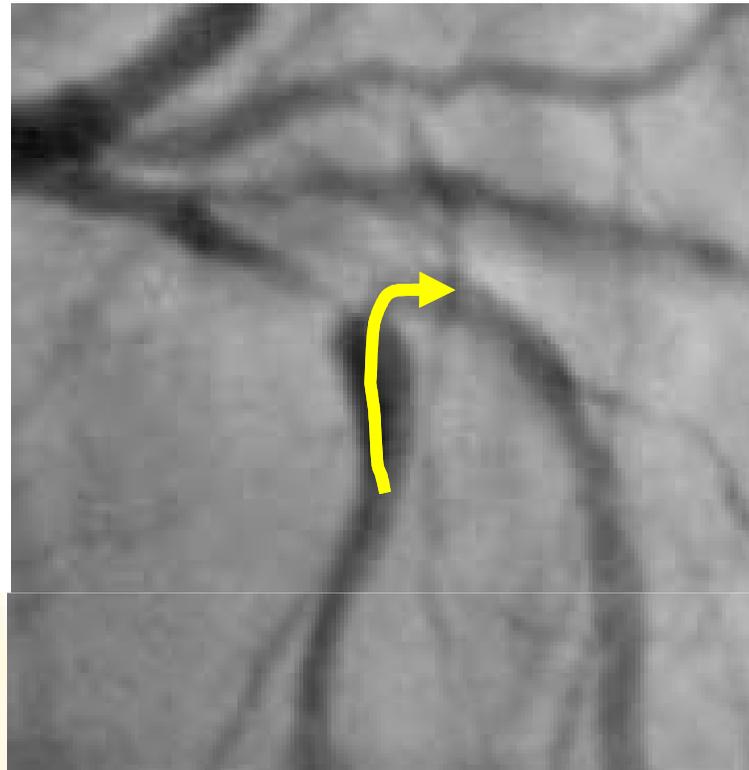
a highly angulated tight stenosis lesion with calcification in mid LAD



The wire tip needs a large curve to negotiate the angulated branch ostium

But preshaped large curve is getting collapsed to be straightened by the stenosis, which hinders the tip to direct itself toward the desired branch

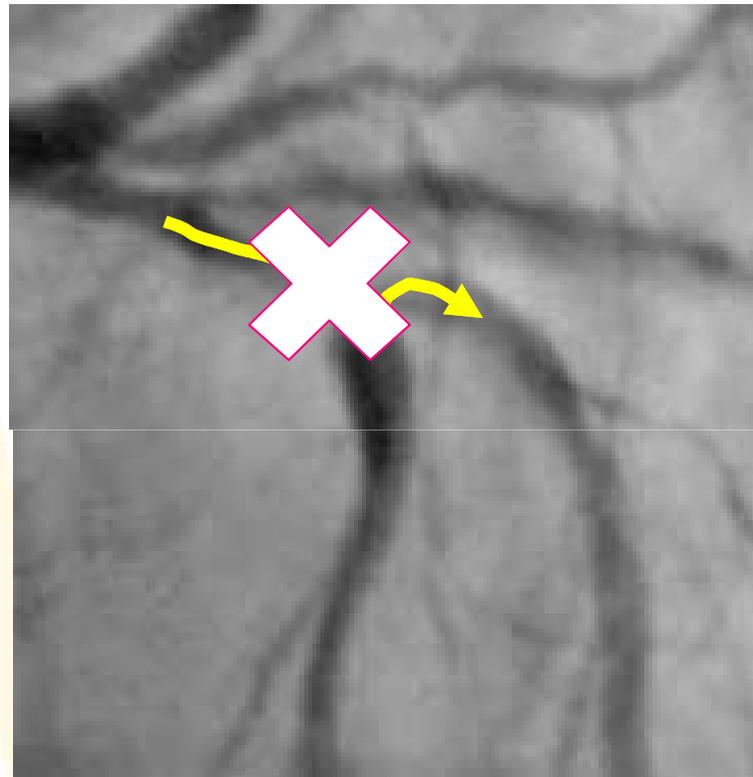
Even if the tip once engages the intended vessel ostium, it can immediately prolapse into the unintended main vessel, because of large different directions between wire tip and wire shaft

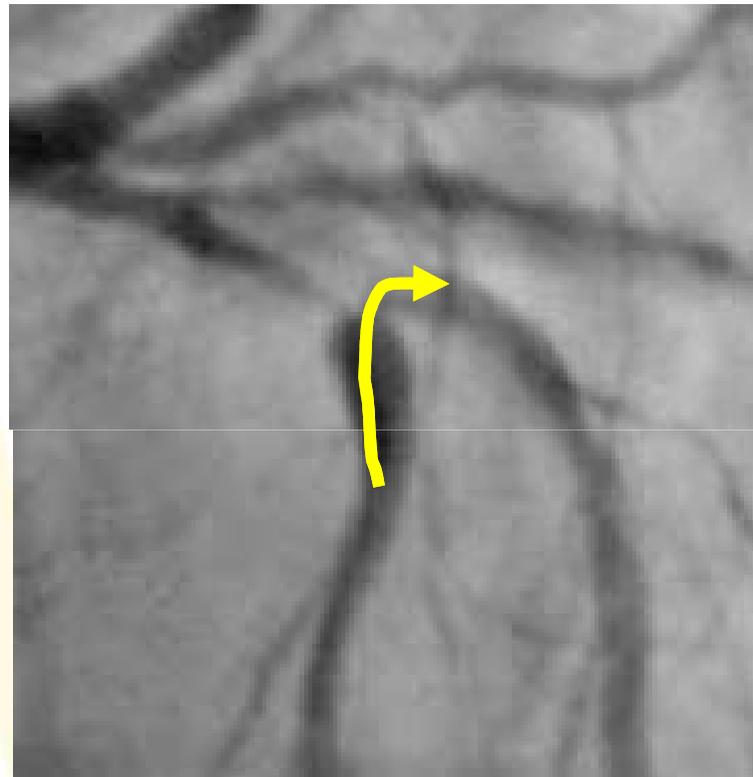


This course makes the angle obtuse from the direction that the wire tip is facing ahead

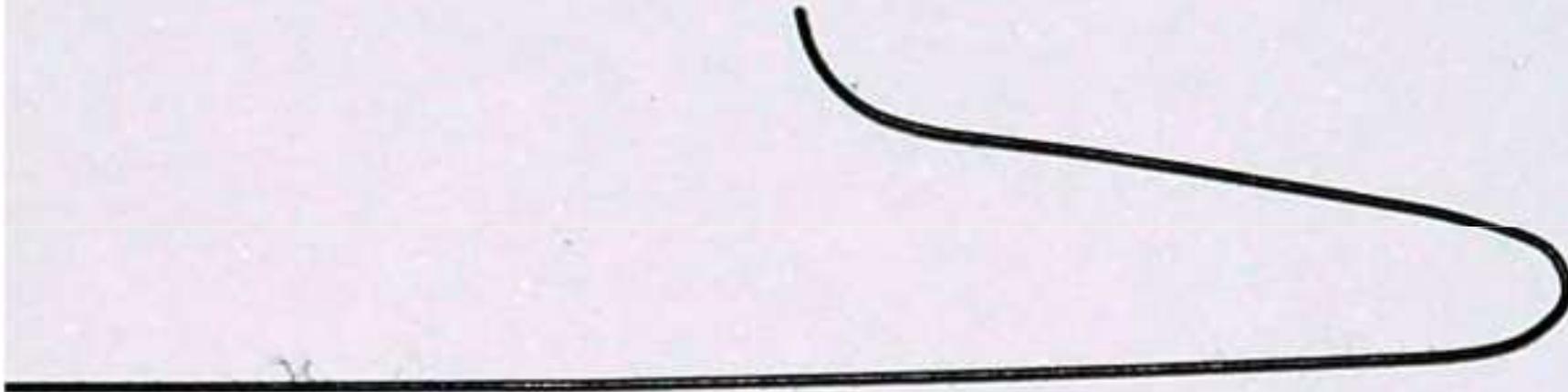


Fielder FC™ wire would not follow the highly angulated channel using conventional manner





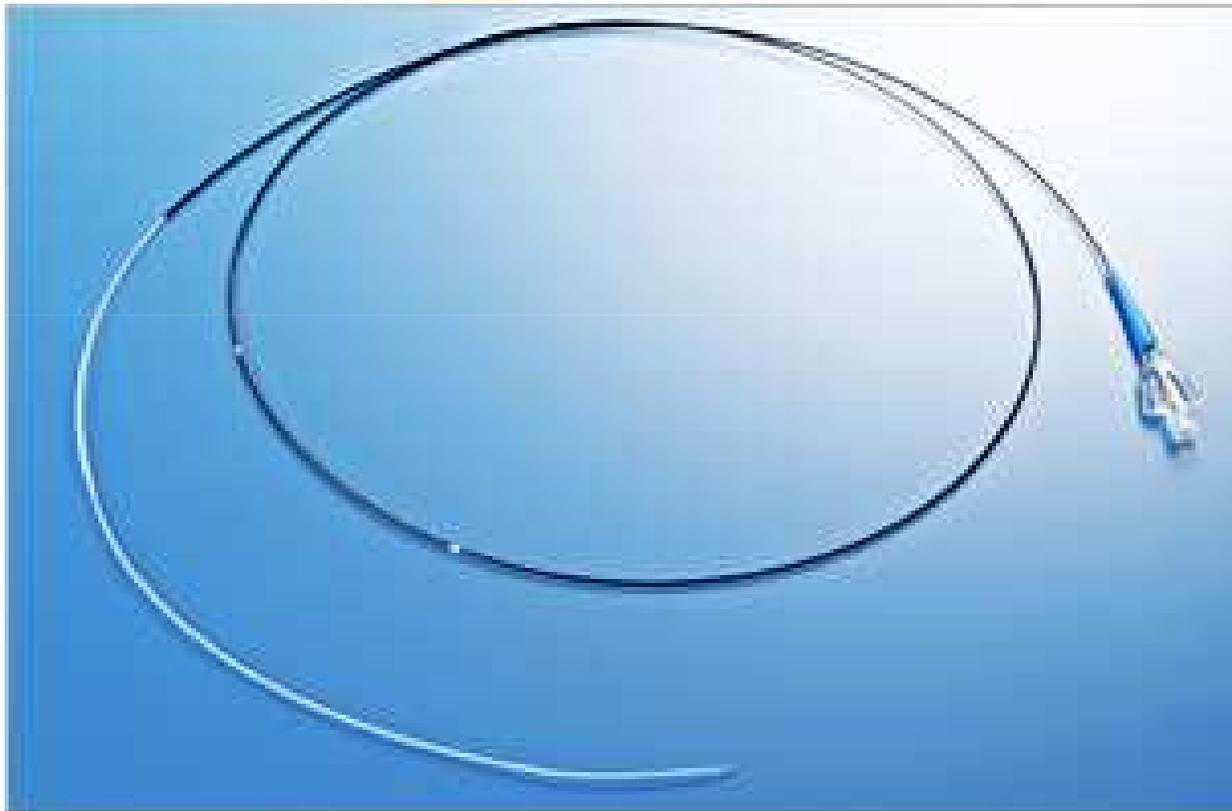
Swan neck shaped guidewire



a hairpin-bend at a point of approximately 3cm from the tip

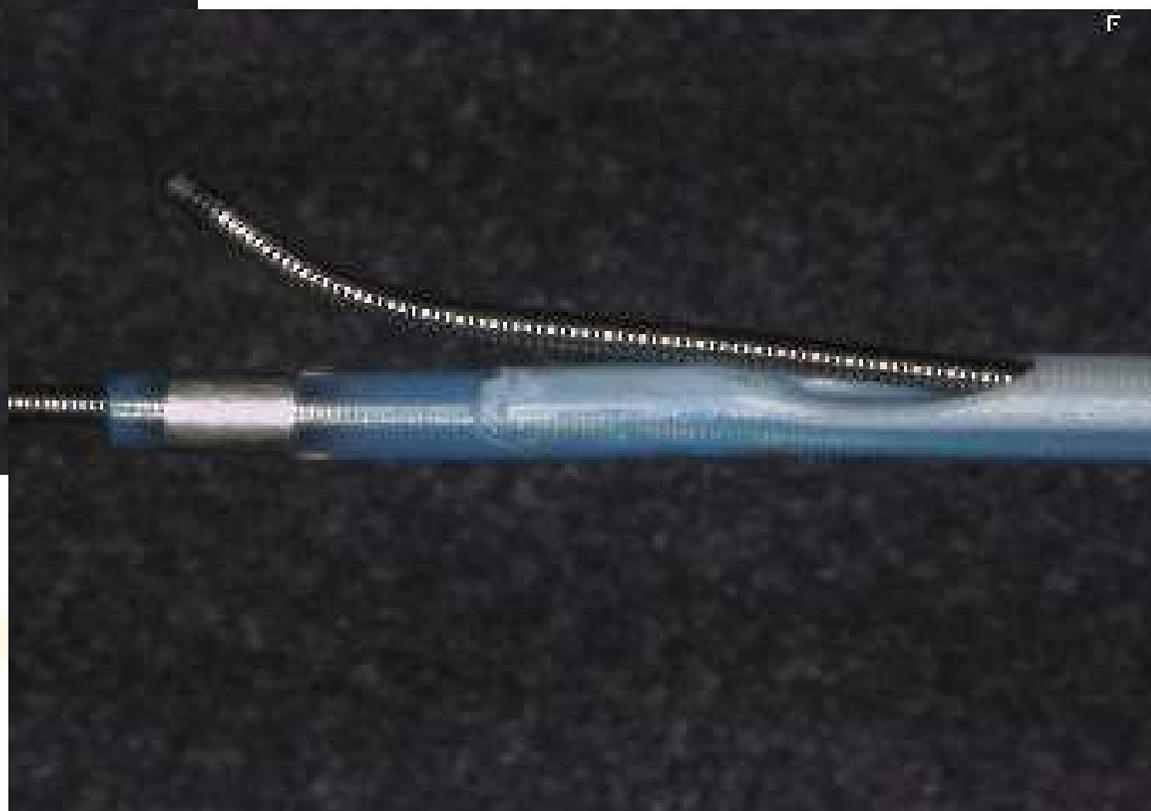


Kaneka Multifunction Catheter



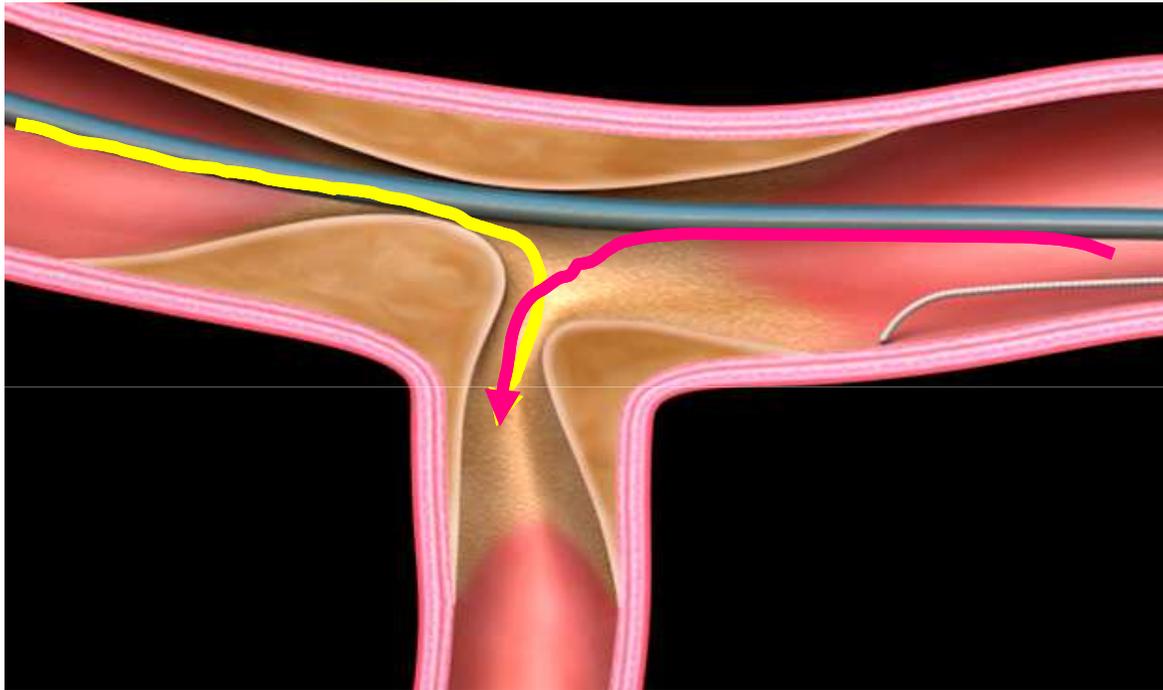
Crusade





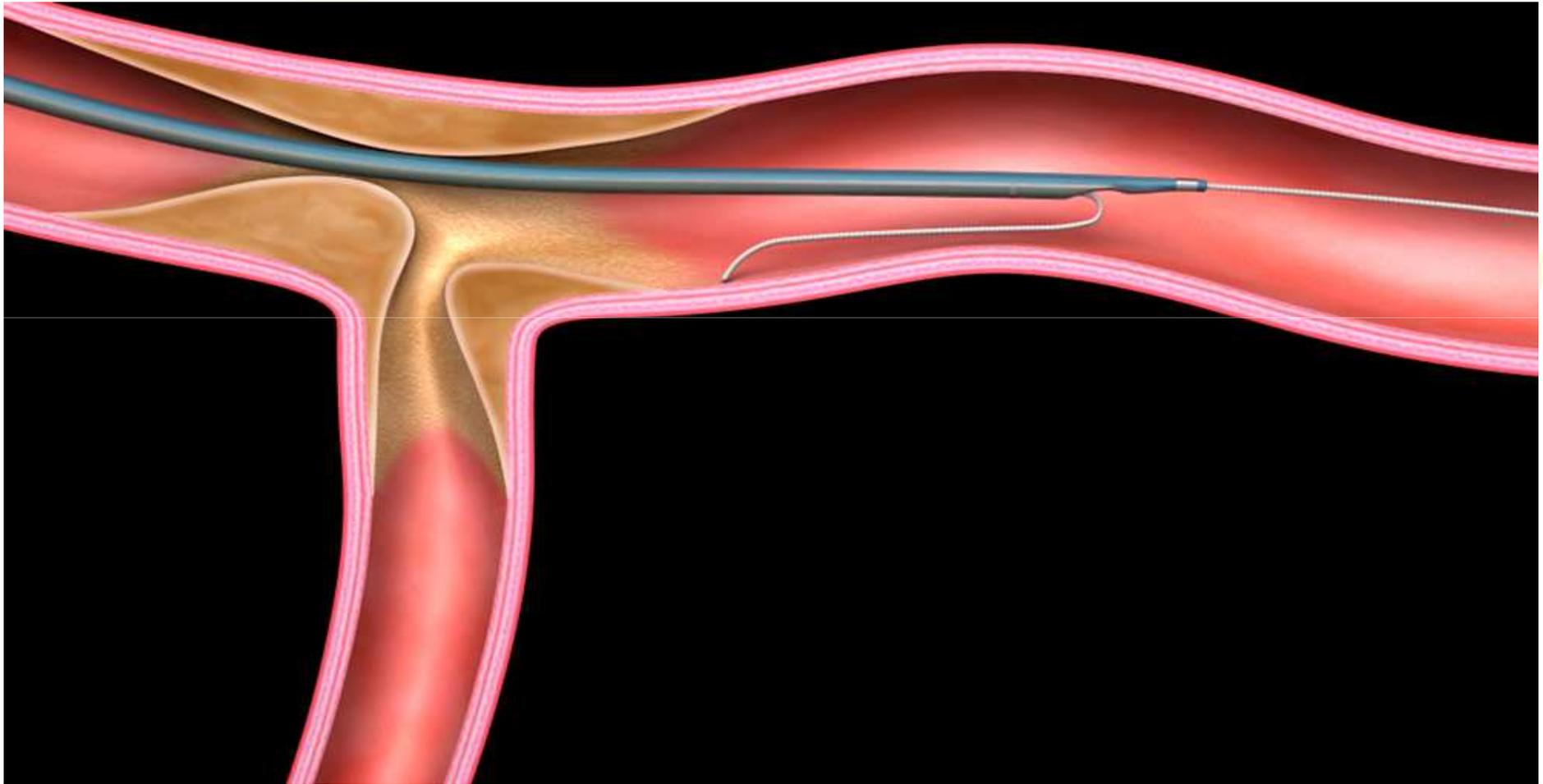


Swan GW Technique





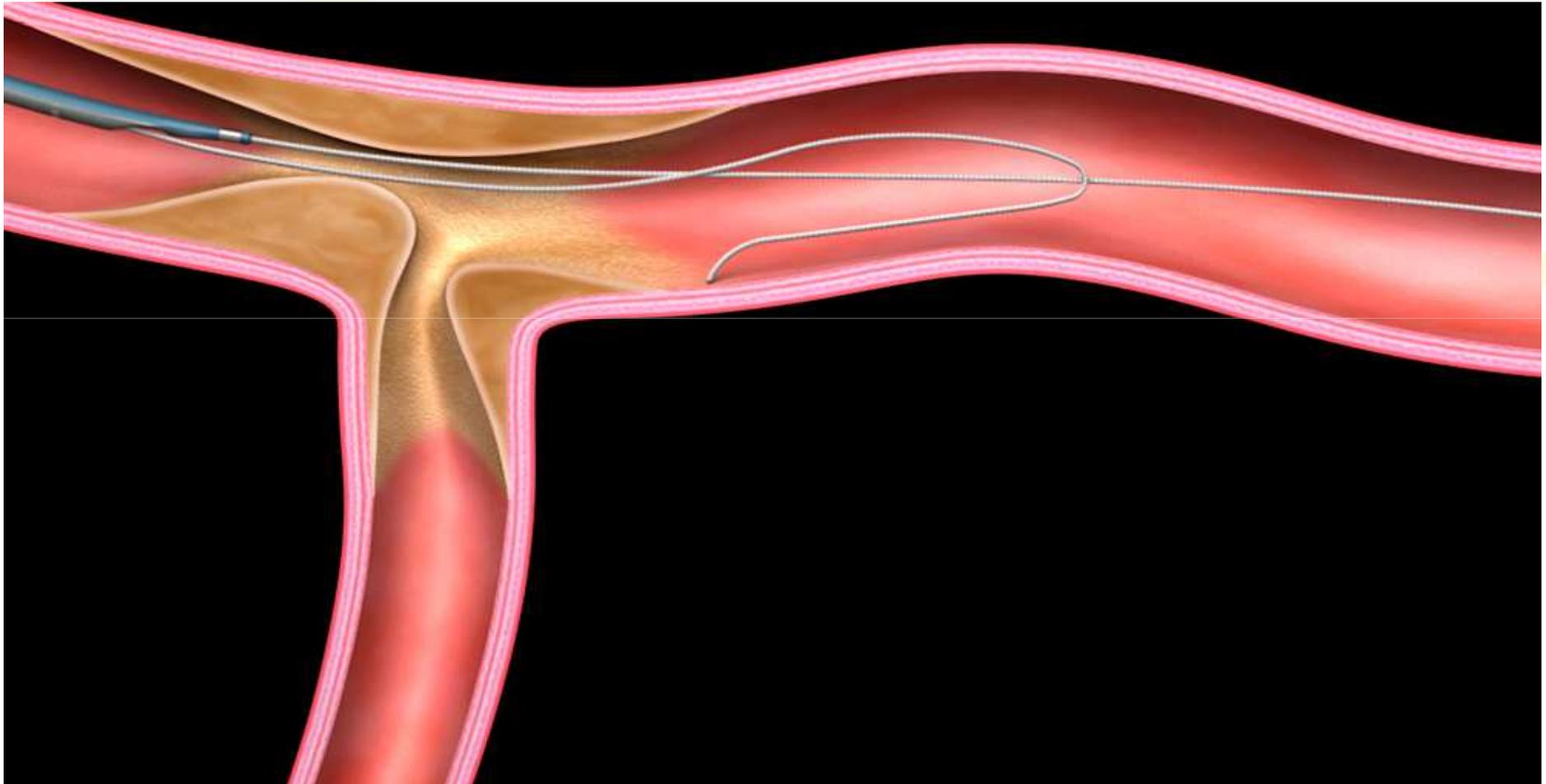
Swan GW Technique



Swan neck guide wire is introduced the distal unintended vessel across the proximal stenosis with double lumen catheter, protruding from side hole



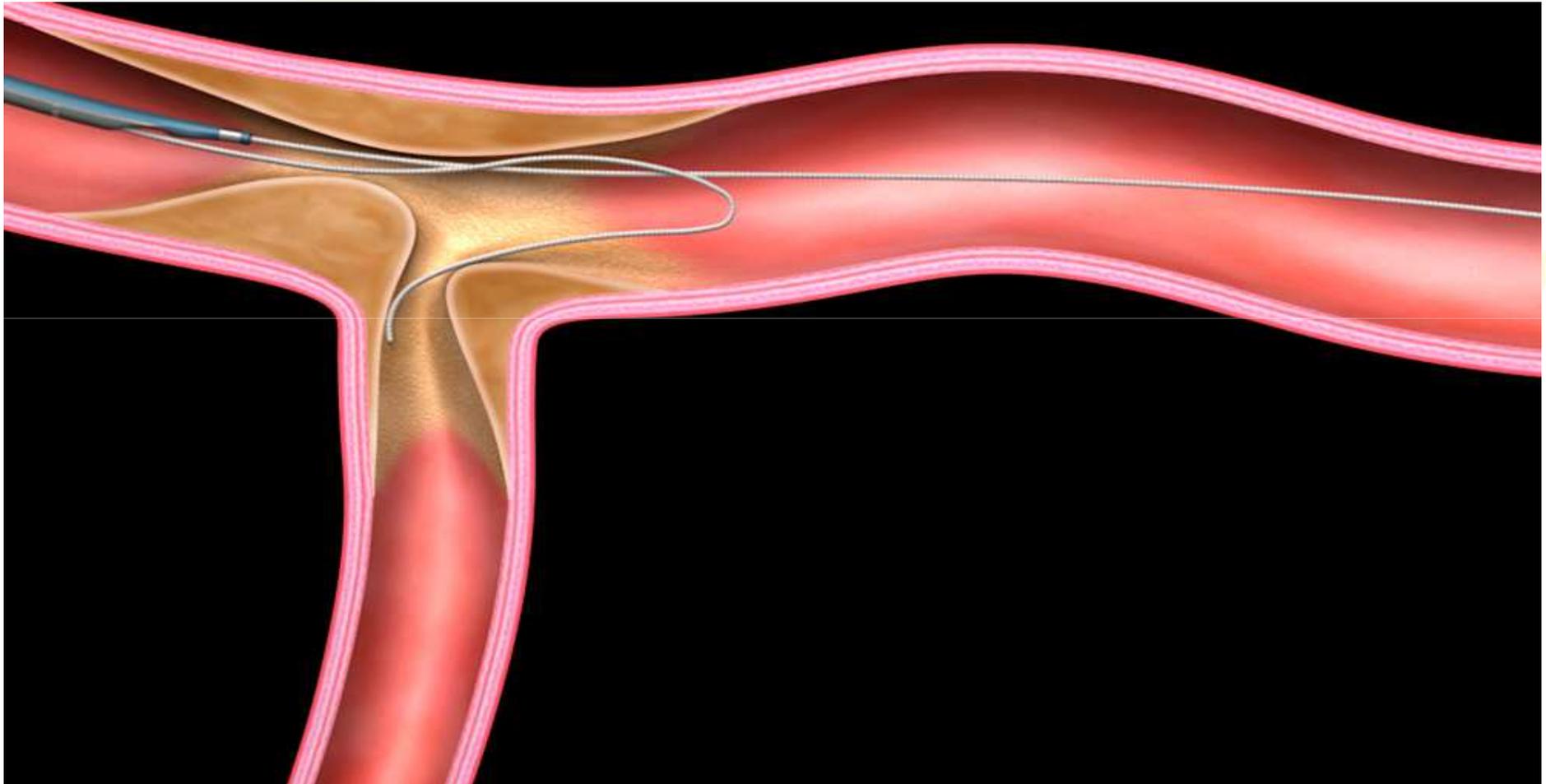
Swan GW Technique



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



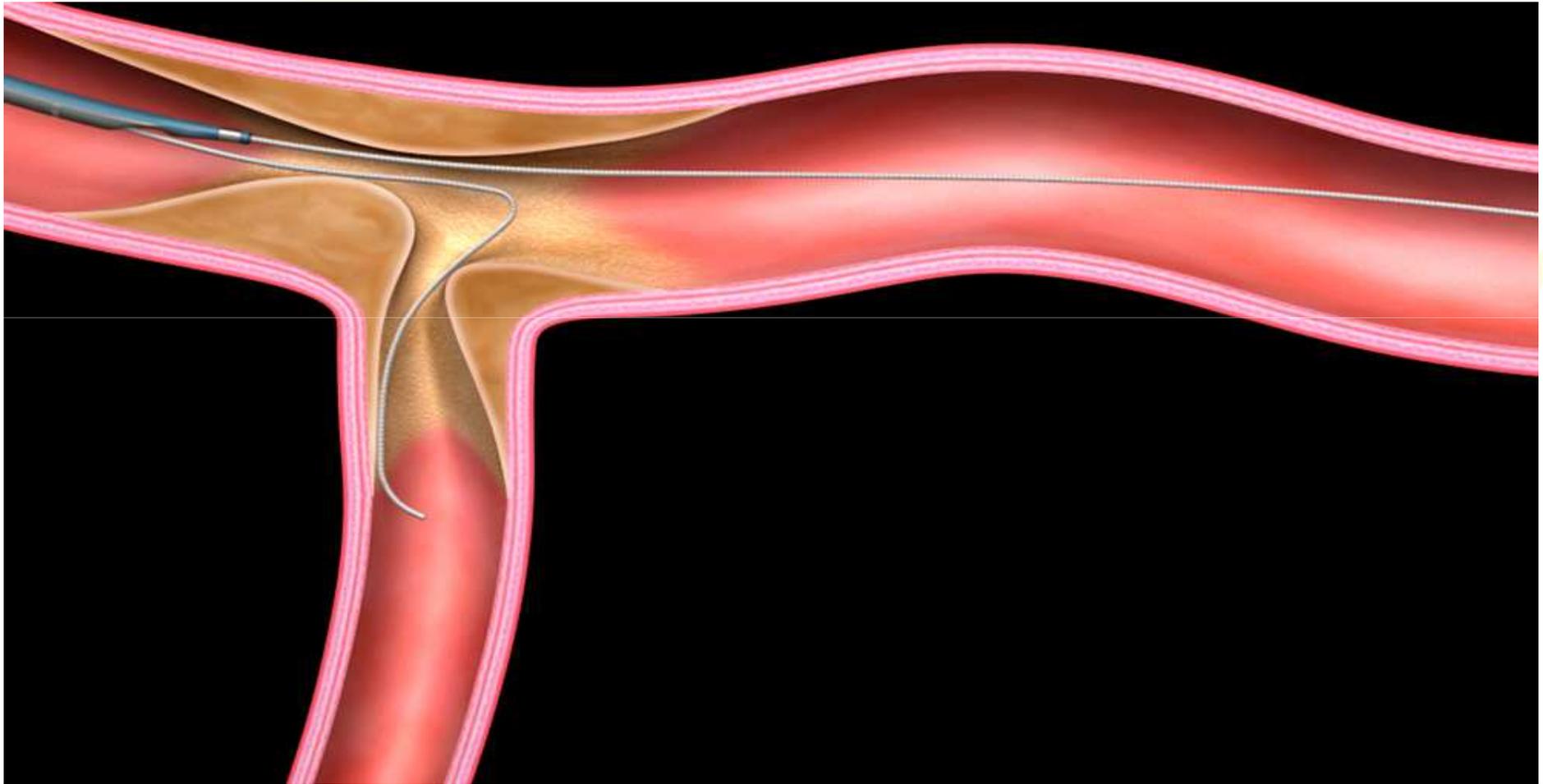
Swan GW Technique



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



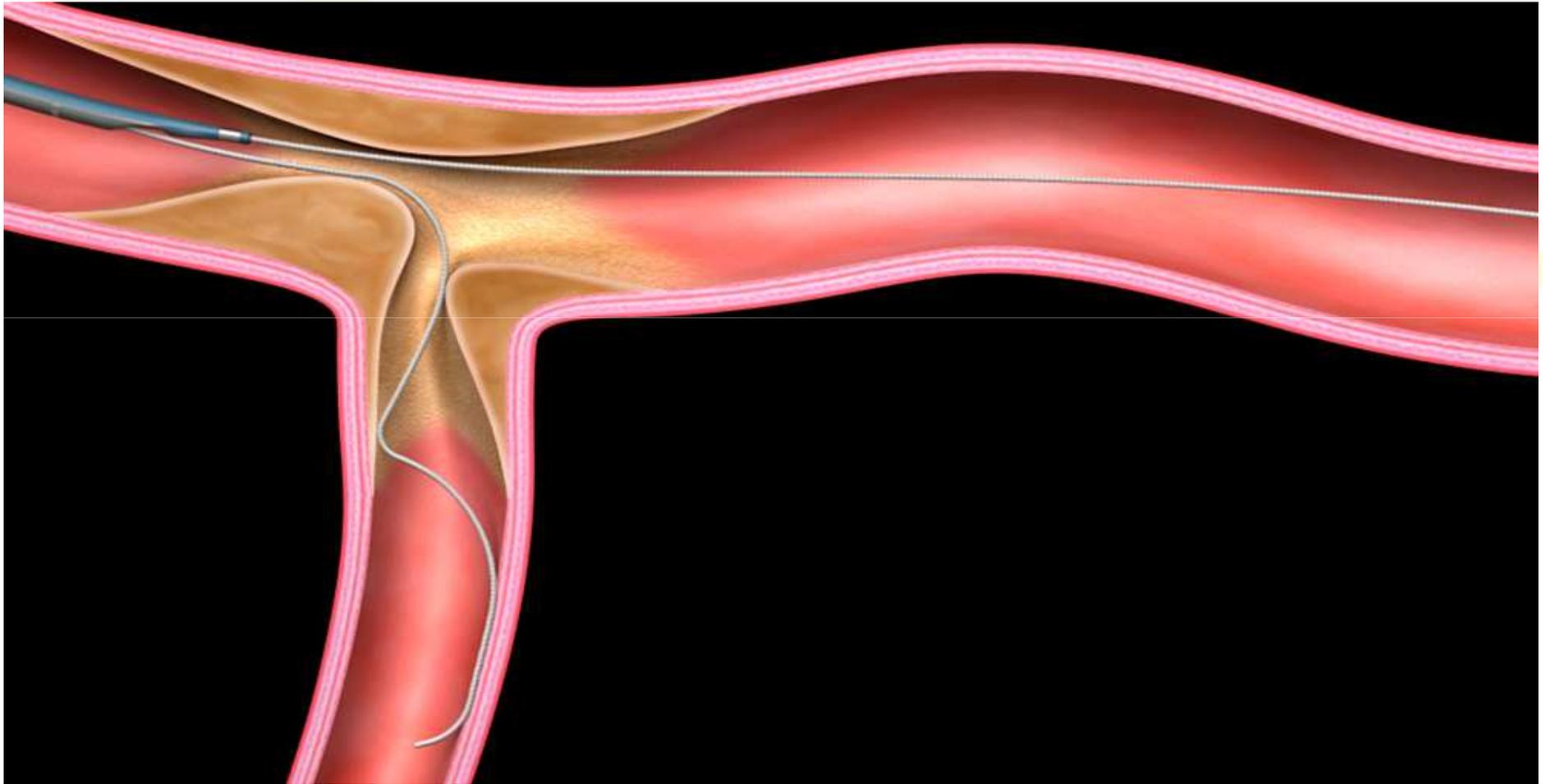
Swan GW Technique



Further withdrawing a wire shaft allows the tip go into the deep vessel in association with ealarging the angle of the angle of the haipin bend.



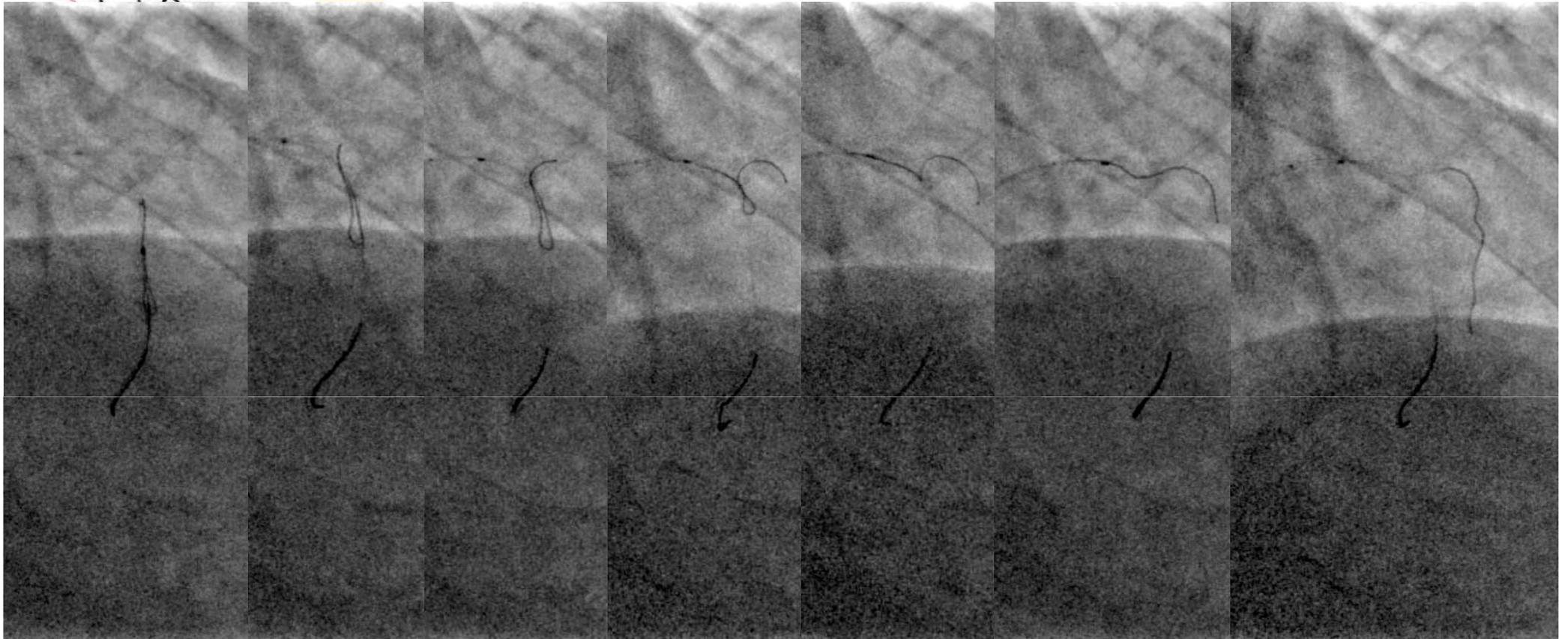
Swan GW Technique



Once after the hairpin-bend arriving at the bifurcation giving gentle force forward with adequate rotation on the shaft takes the tip into further deep along the intended branch

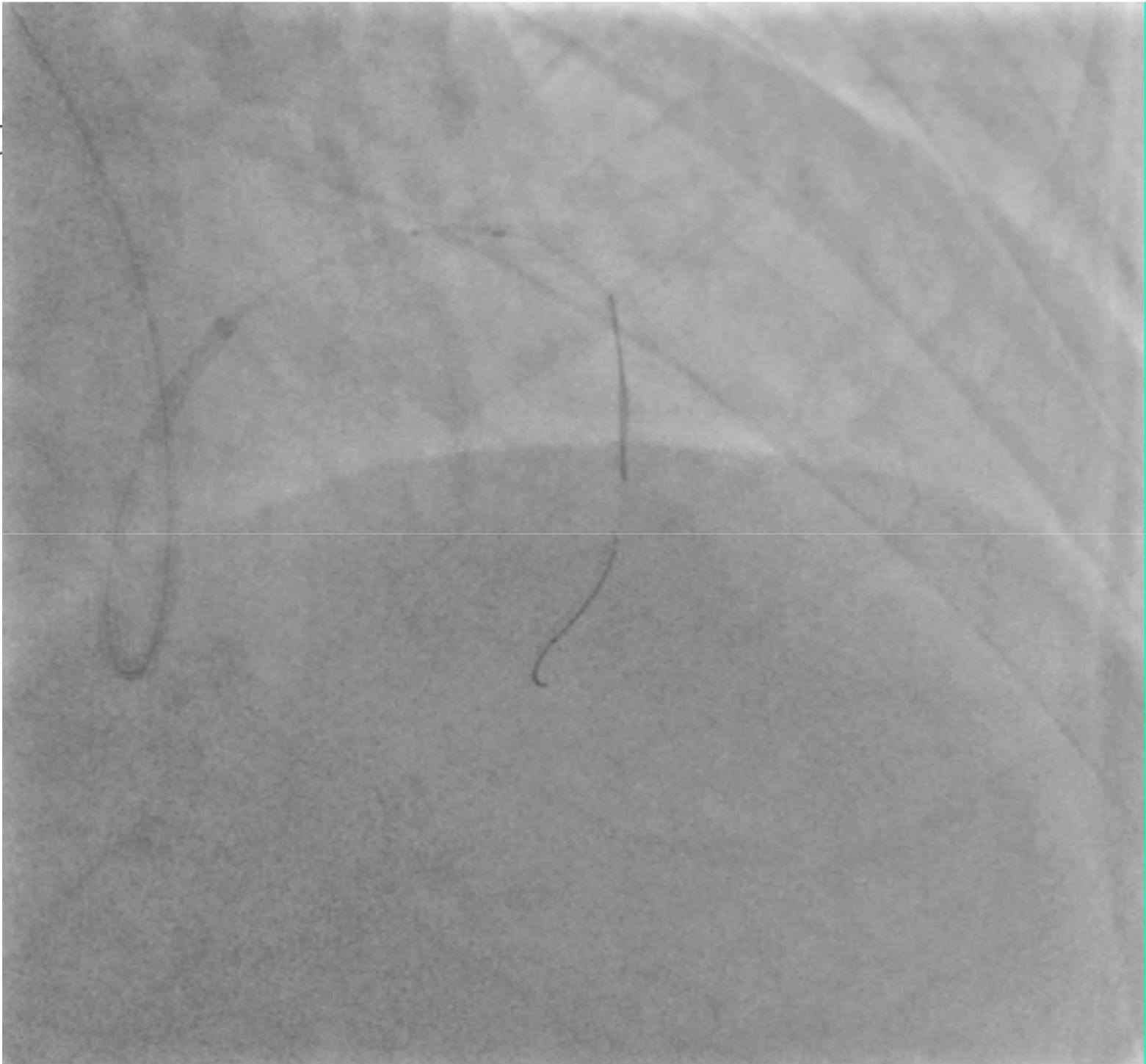


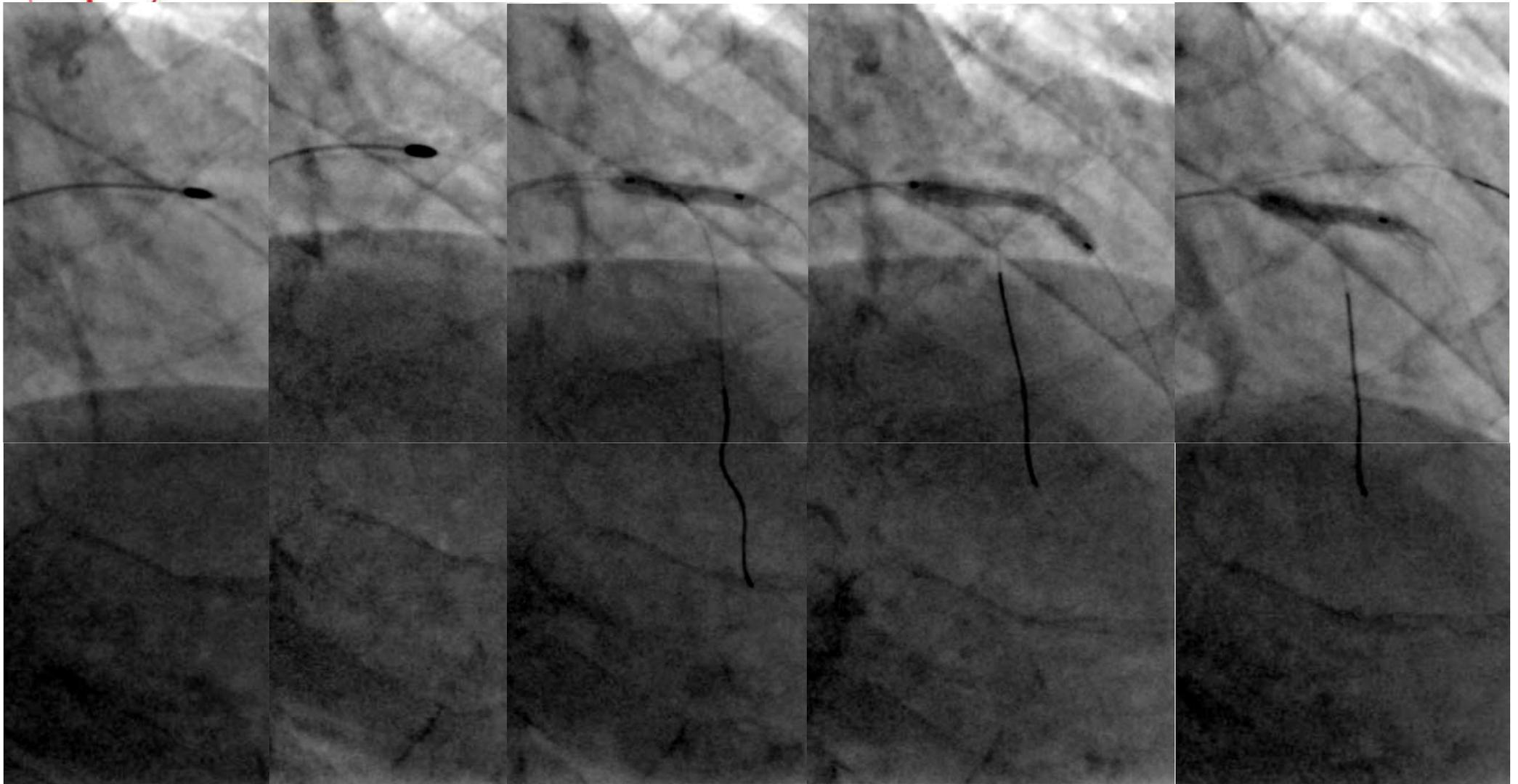
after dilatation of ostium of septal branch with 1.25mm balloon, applied rotablation with 1.25 burr following 1.5mm burr



using double port microcatheter (Crusade™), special curved Whisper LS™ (with tip was figured like swan neck) was introduced in septal branch. After pulling back the Crusade™ , special curved Whisper LS™ was pulled back toward angulated LAD. As pulling back special curved Whisper LS™ , the guide wire tip will advance to LAD distal. At when the guide wire was extended straightly ,push the wire with rotation.

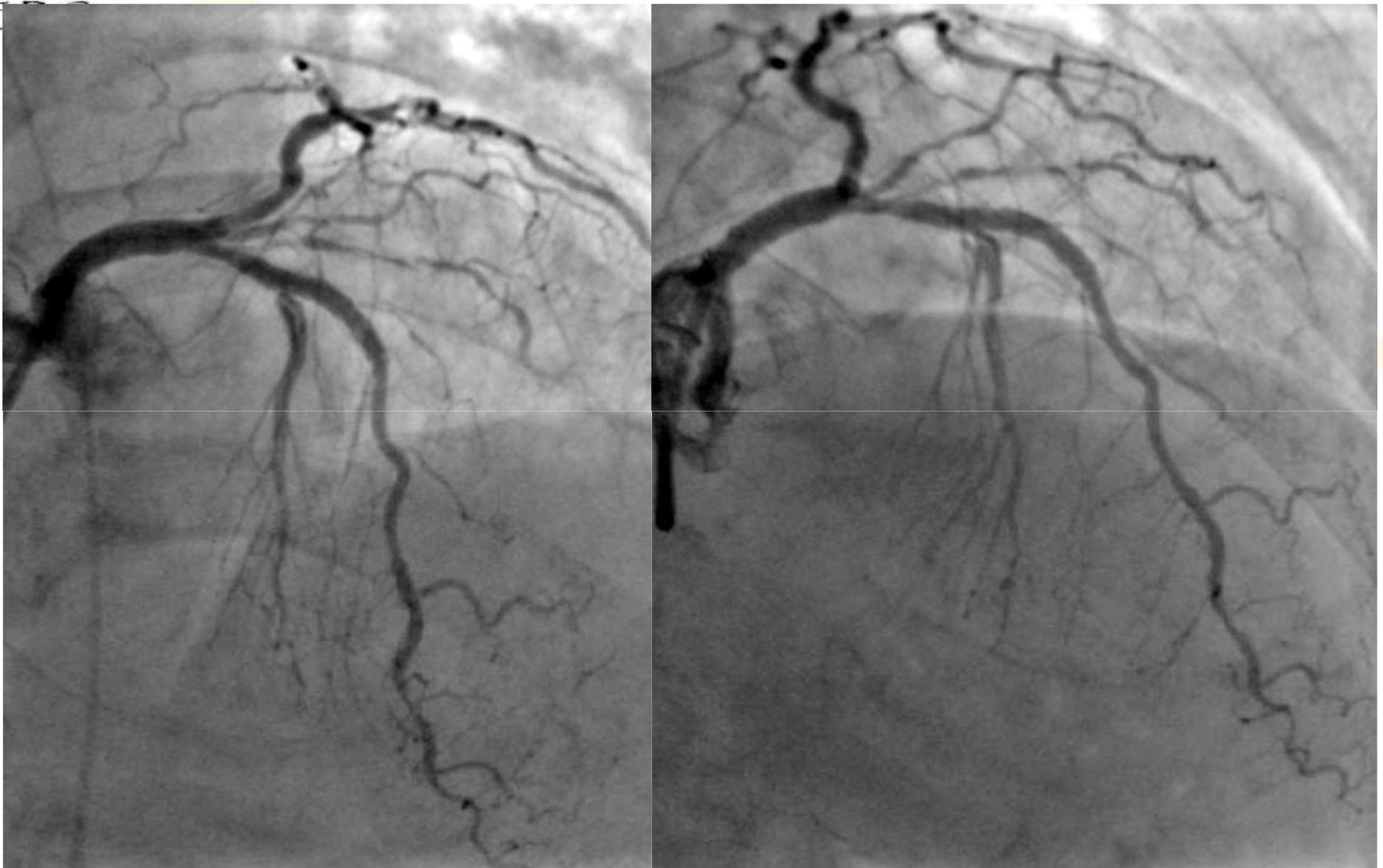
So the special curved guide wire will go more distally.





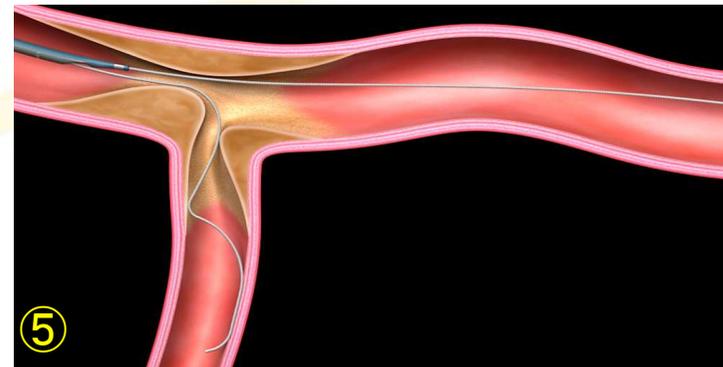
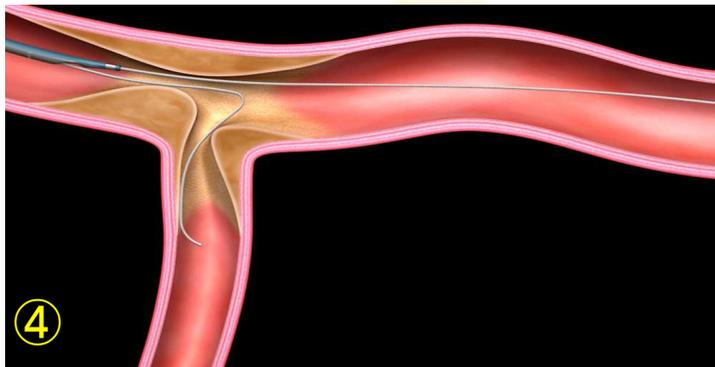
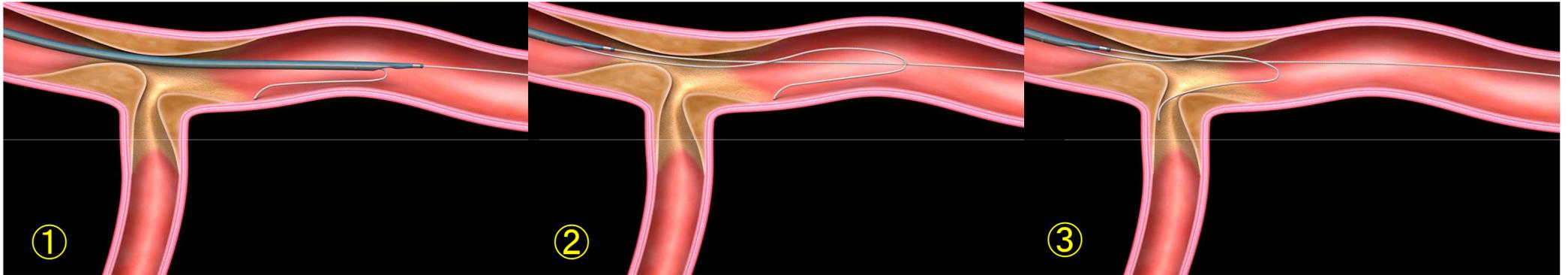
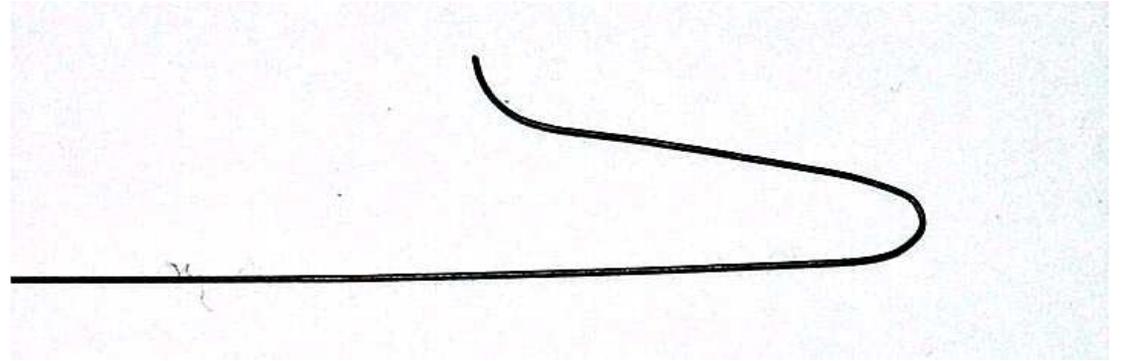
after changing to rotawire, calcified LAD lesion was rotablated up to 1.75mm burr. after pre-dilatation with 2.0mm balloon, Cypher stent 2.5 × 28mm was implanted following post-dilatation with 2.75mm high pressure balloon.

Final result

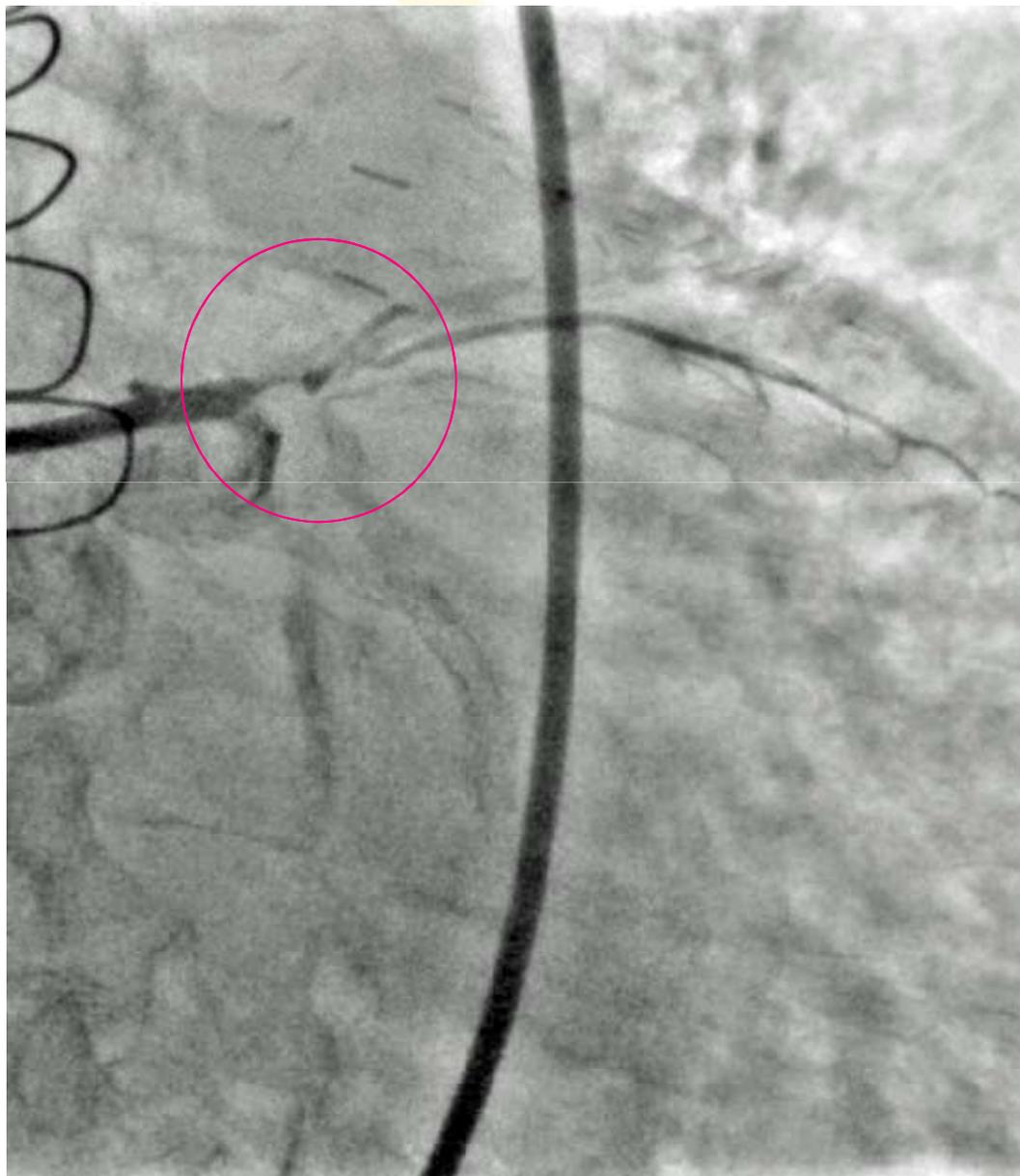


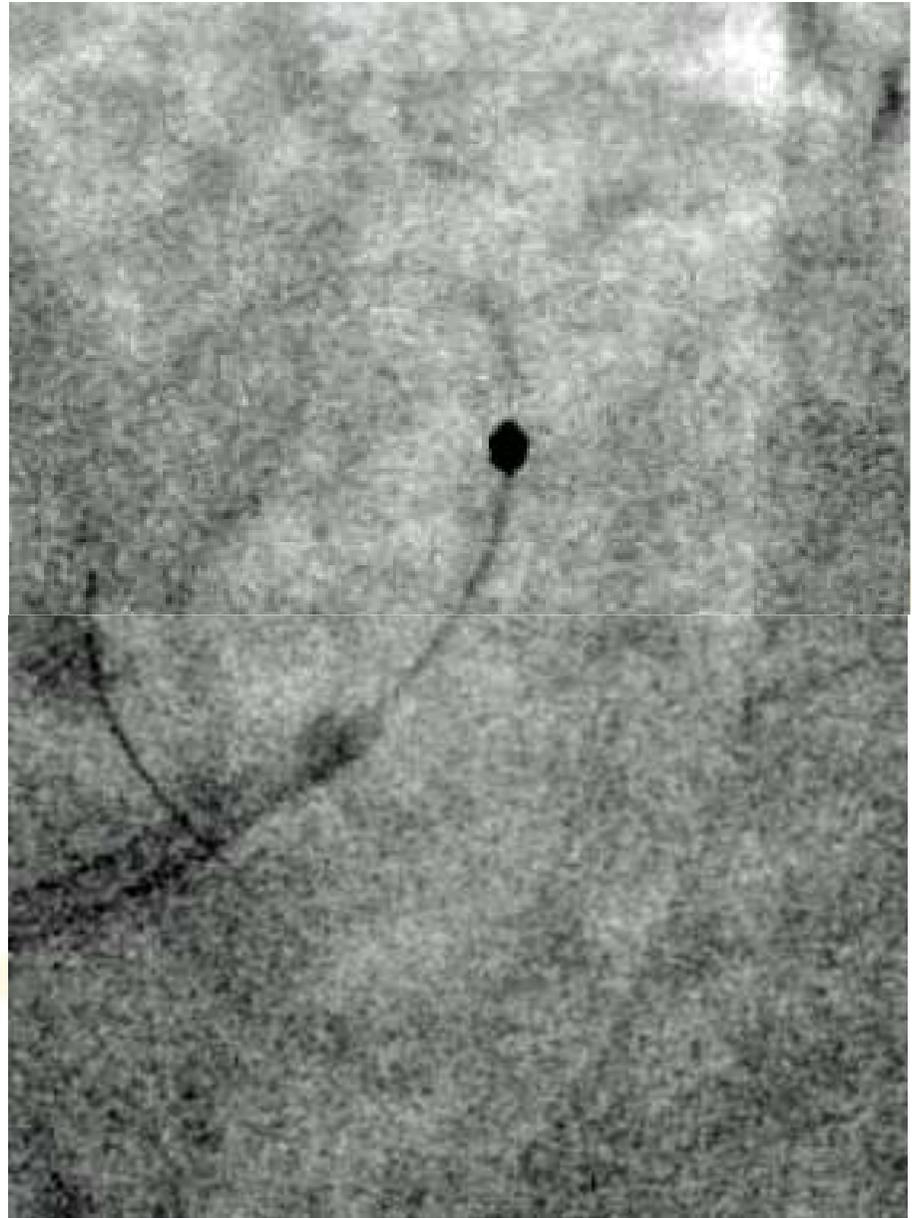
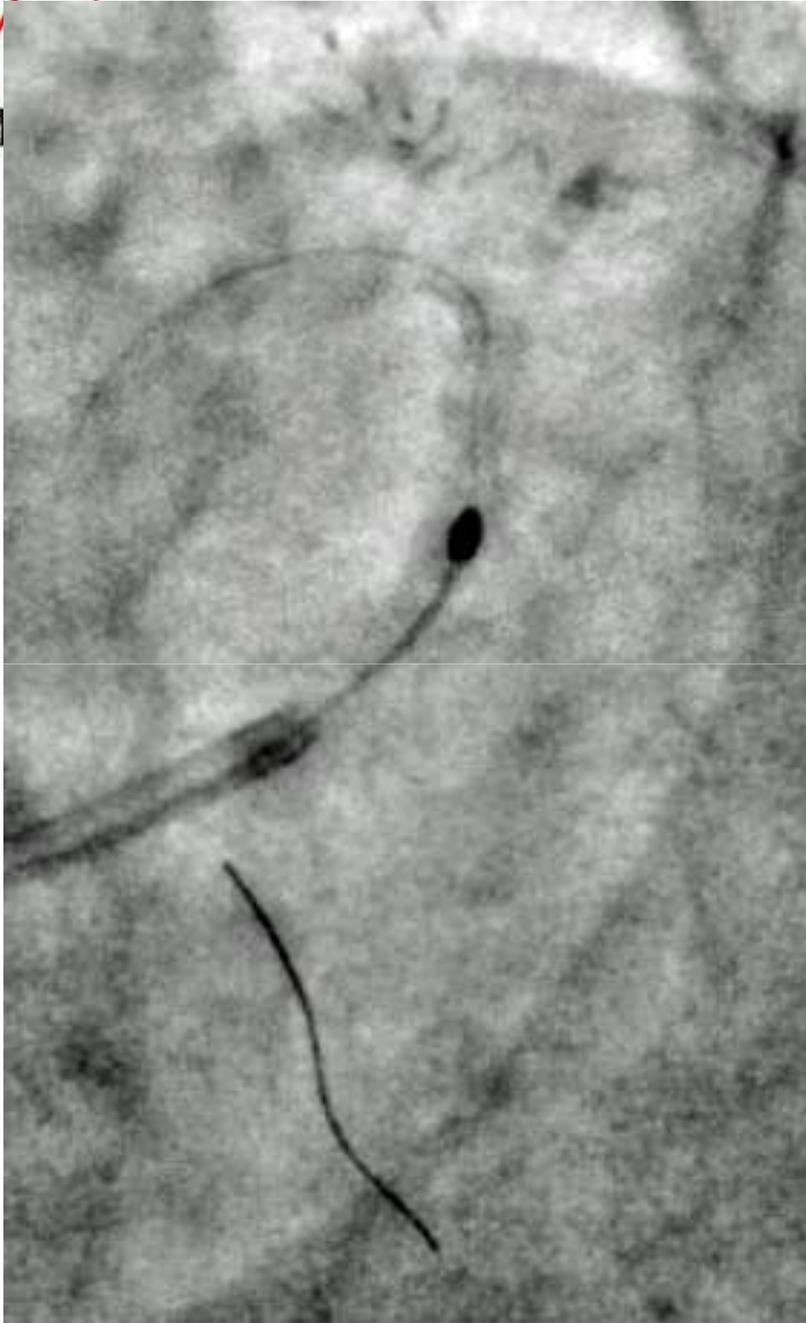


schema of Reverse wire technique with double port microcatheter Crusade™

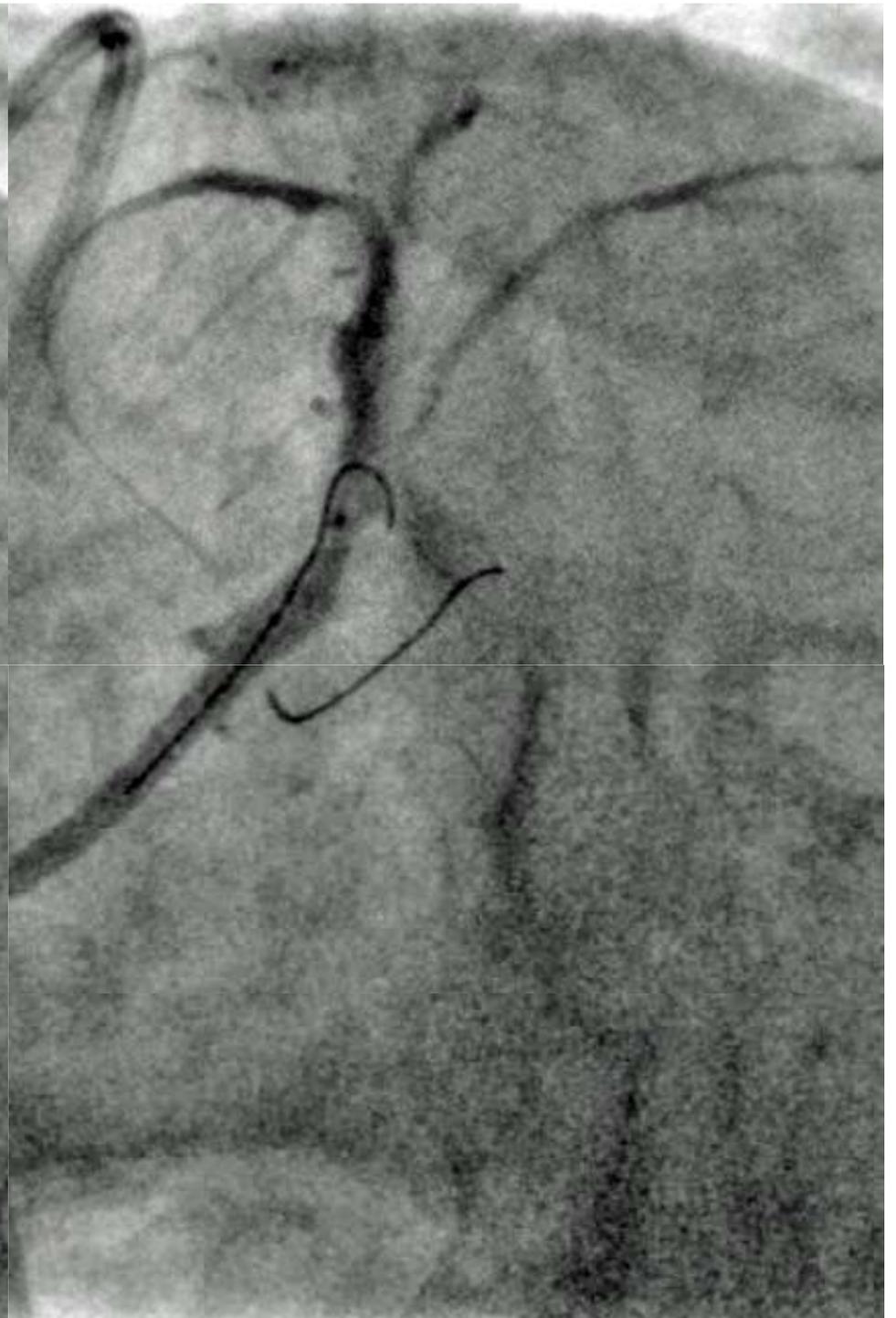
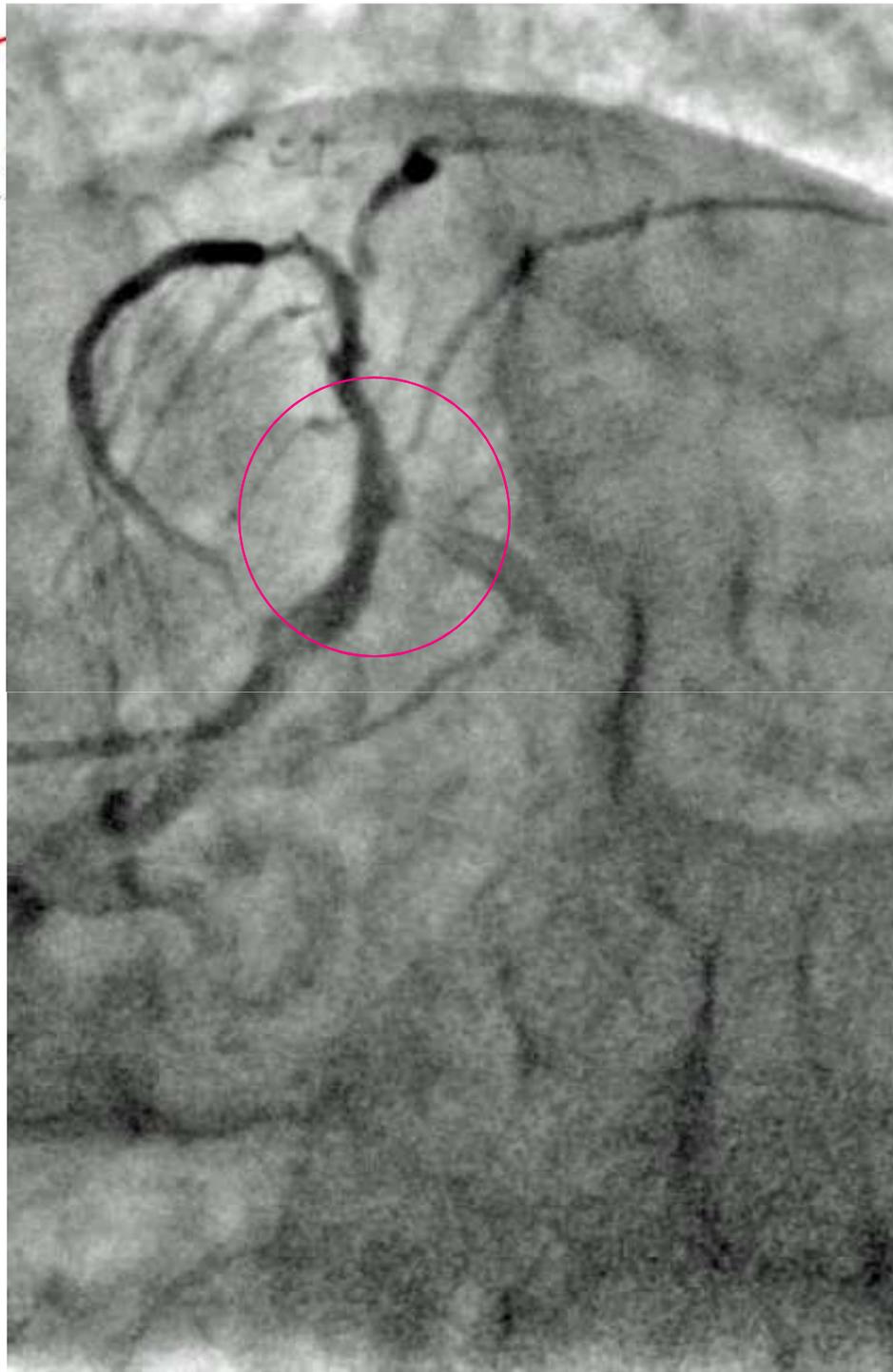


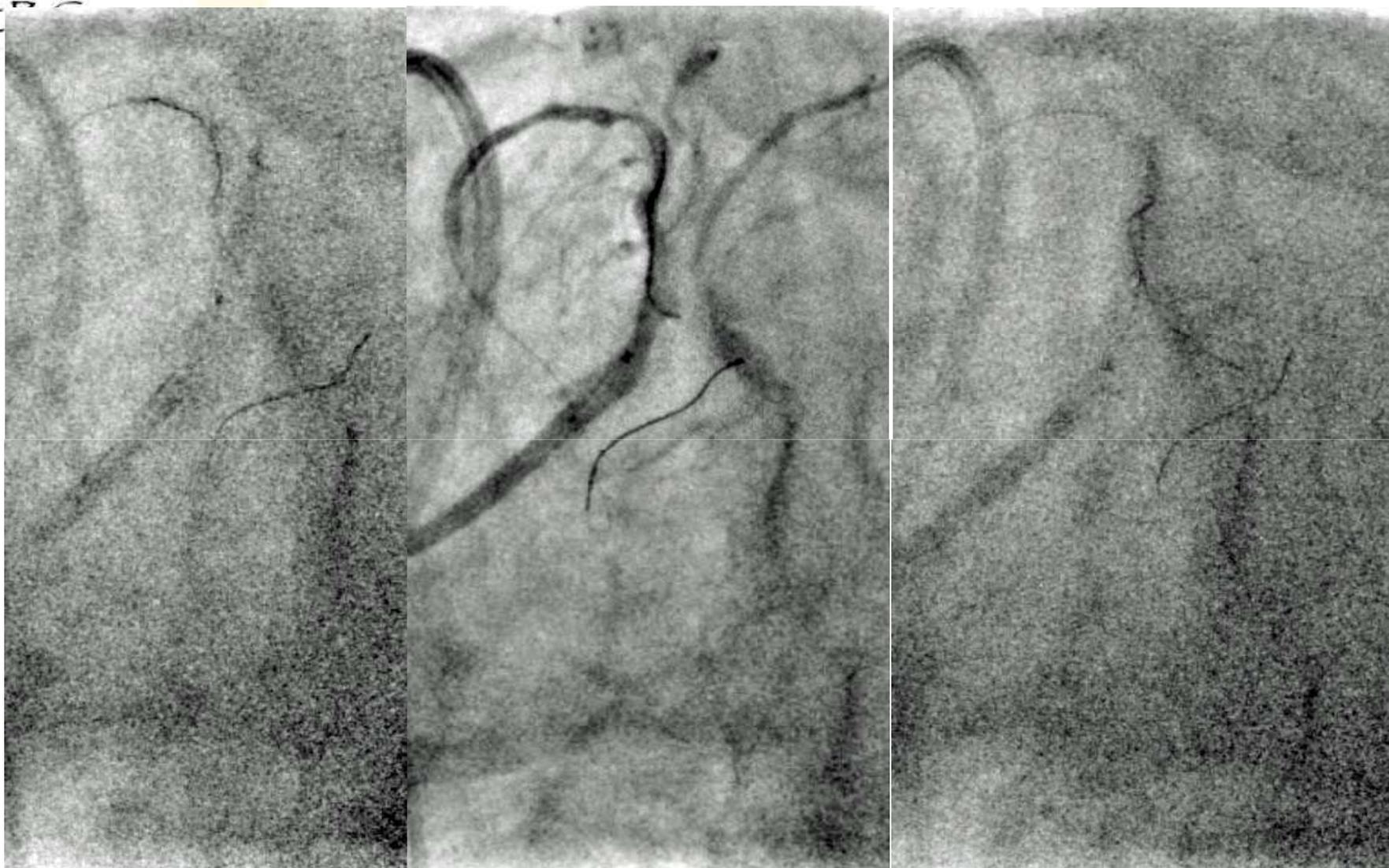


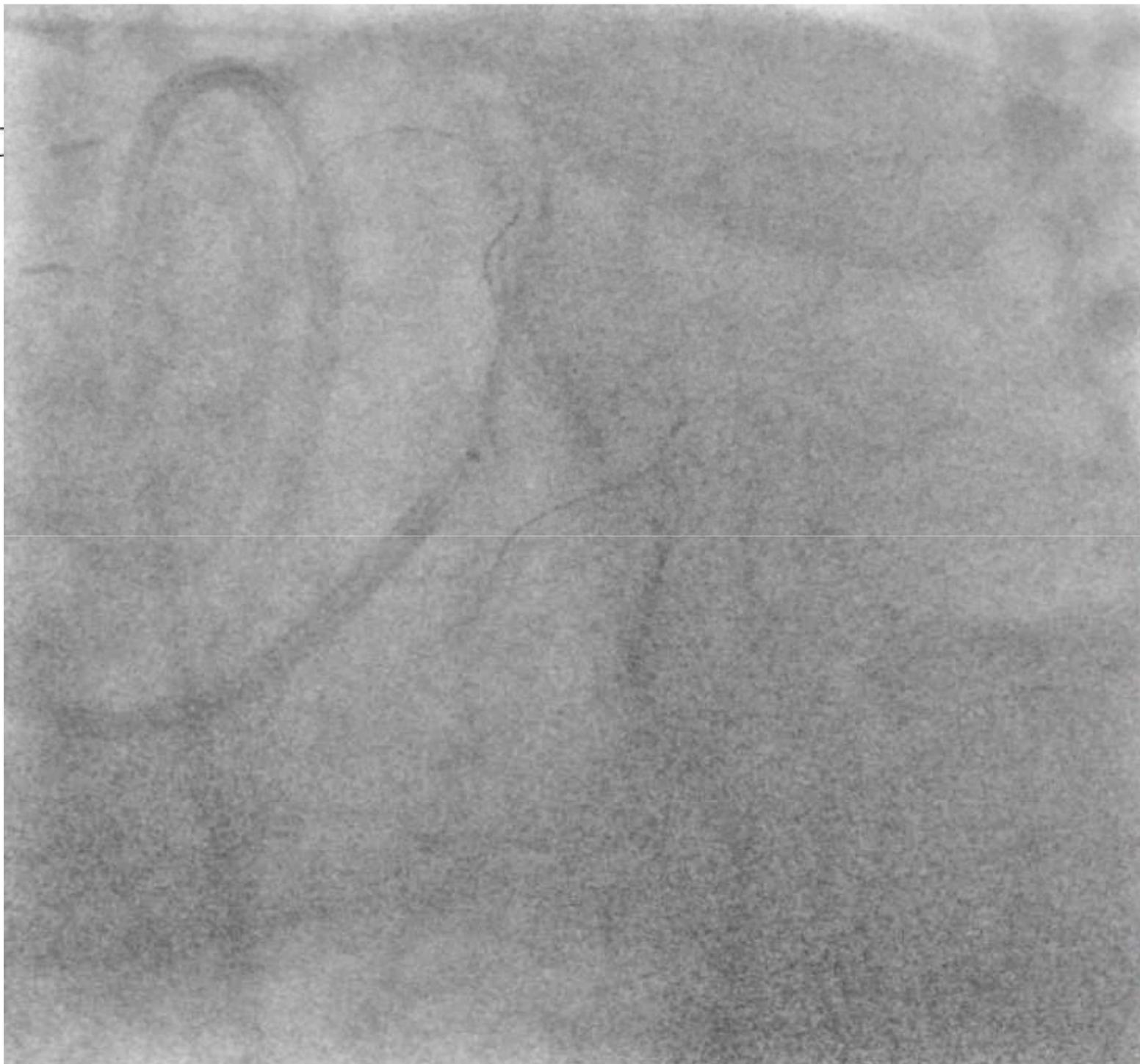


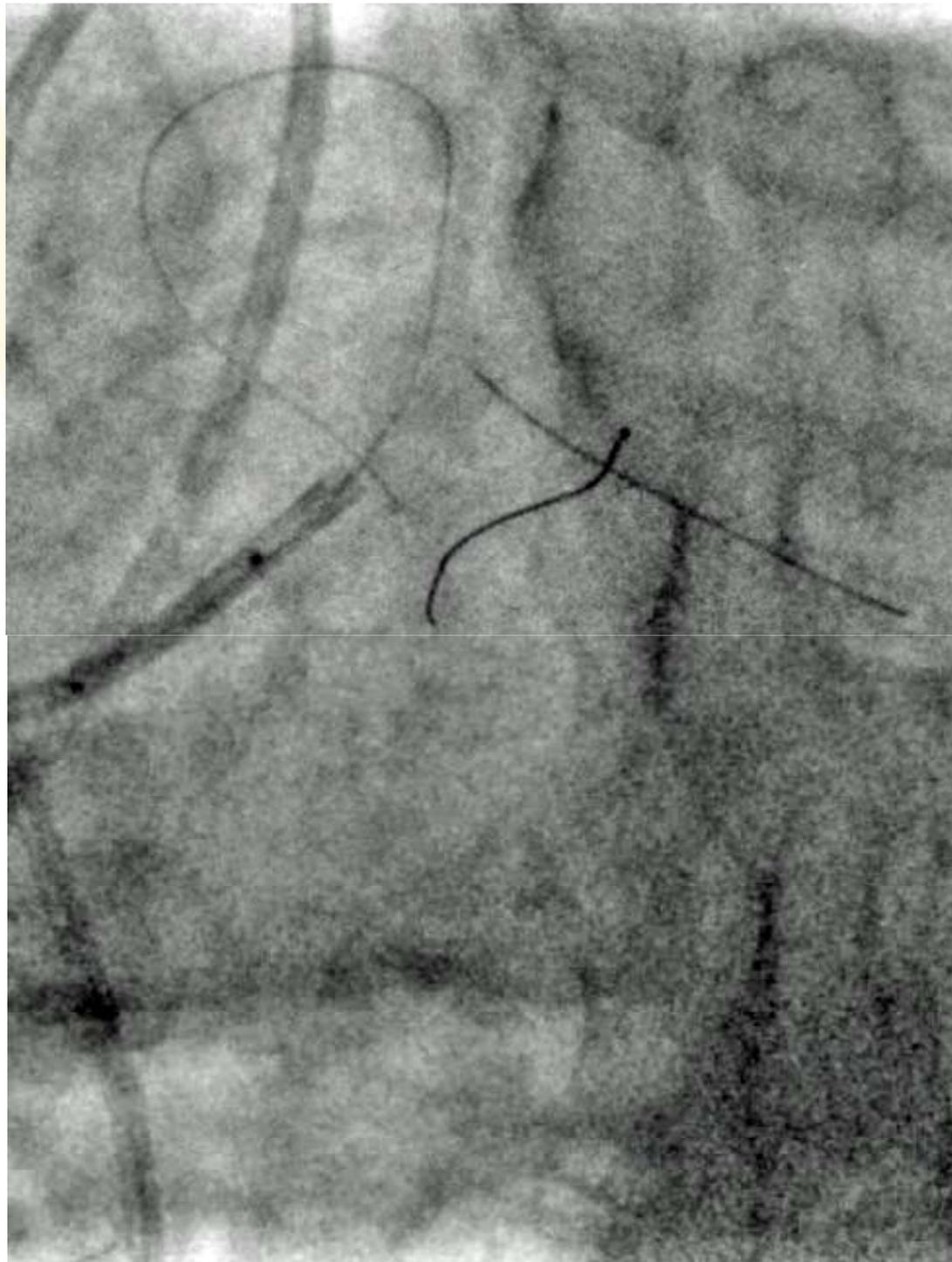


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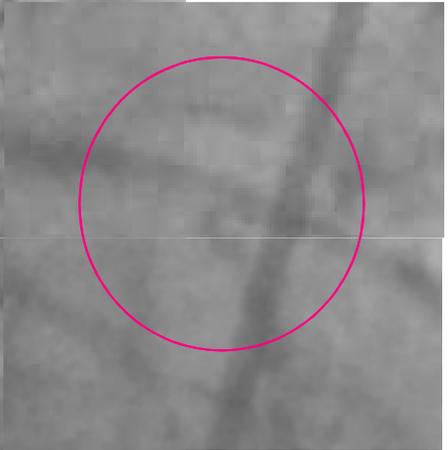




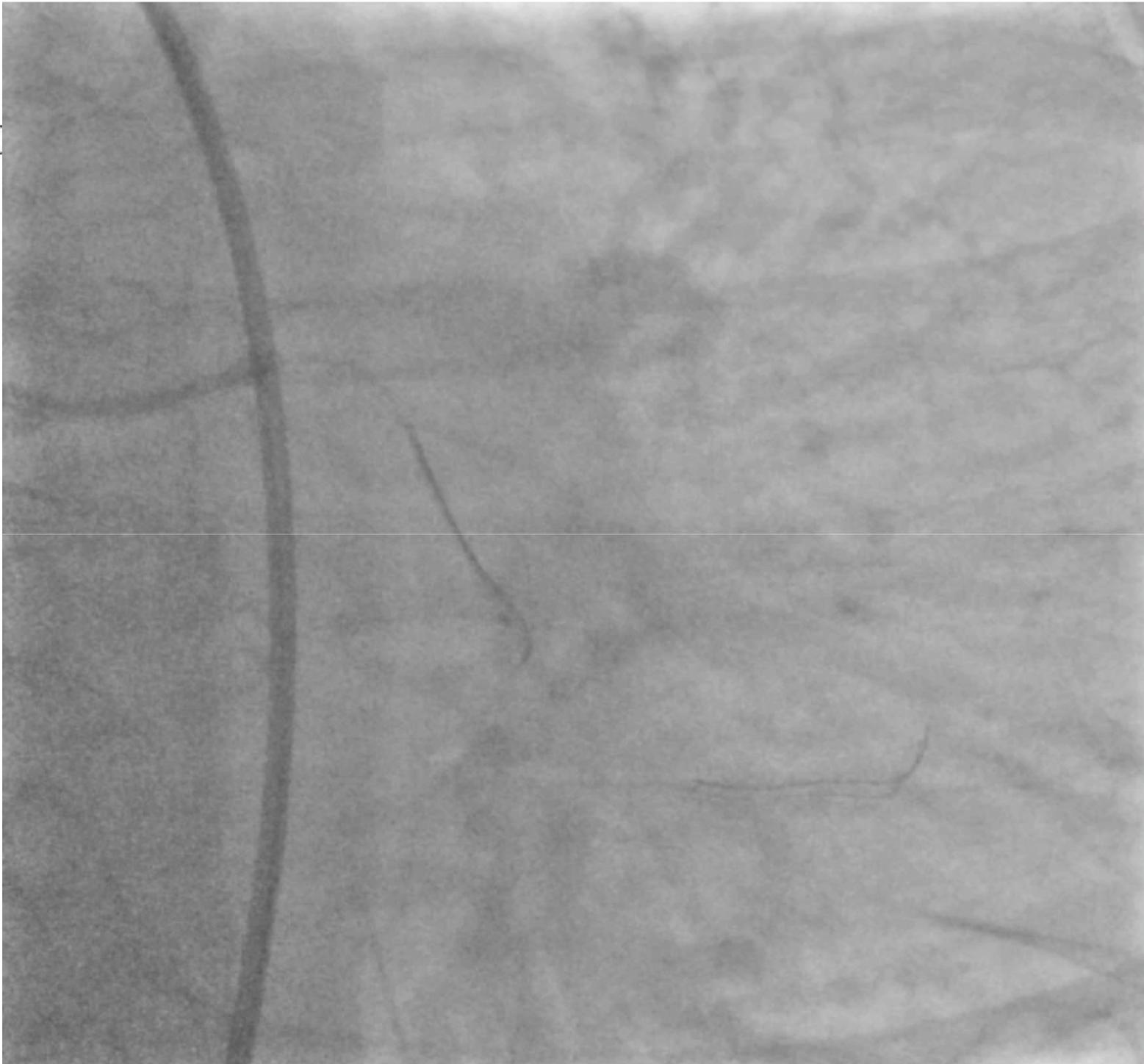


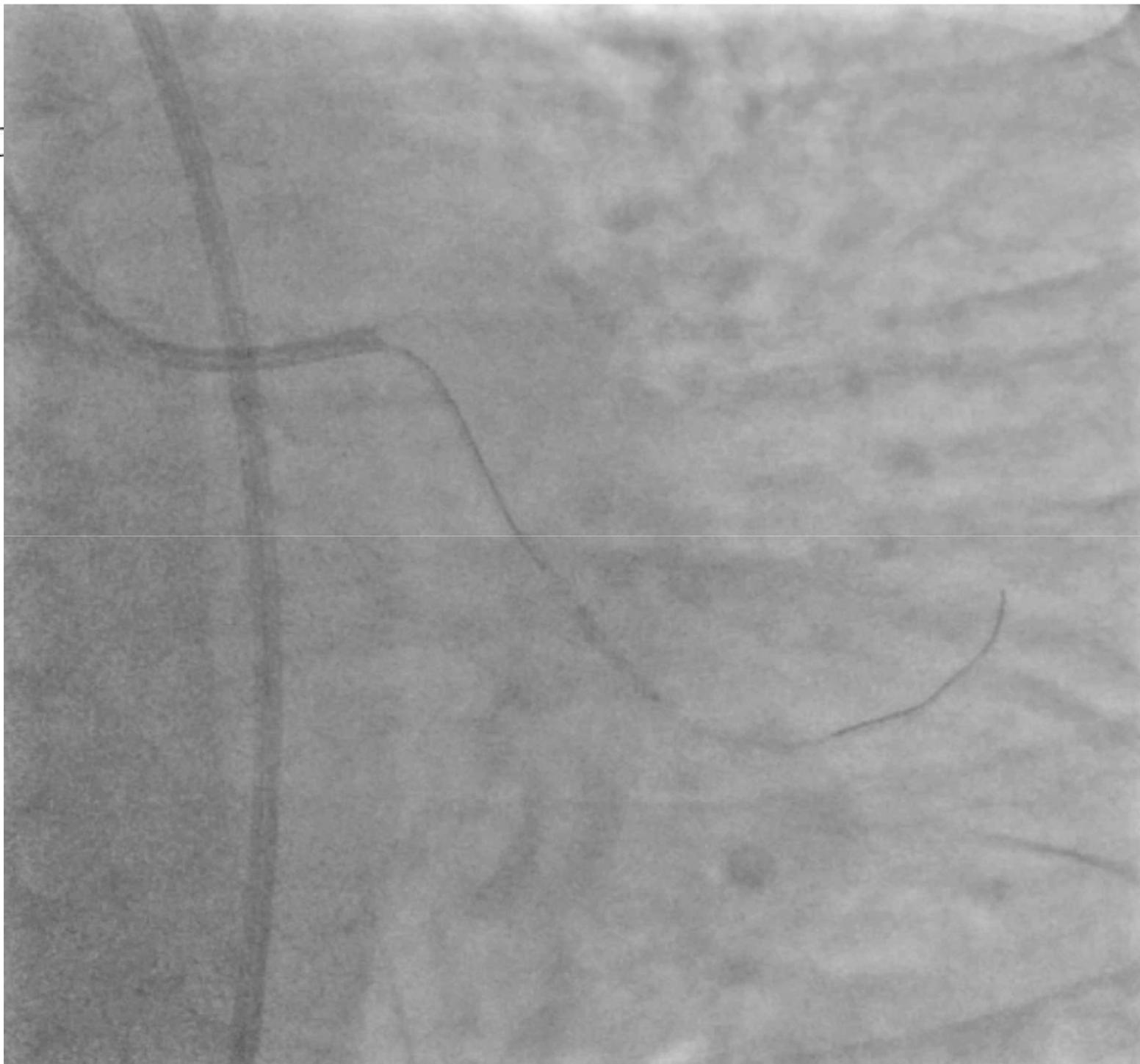


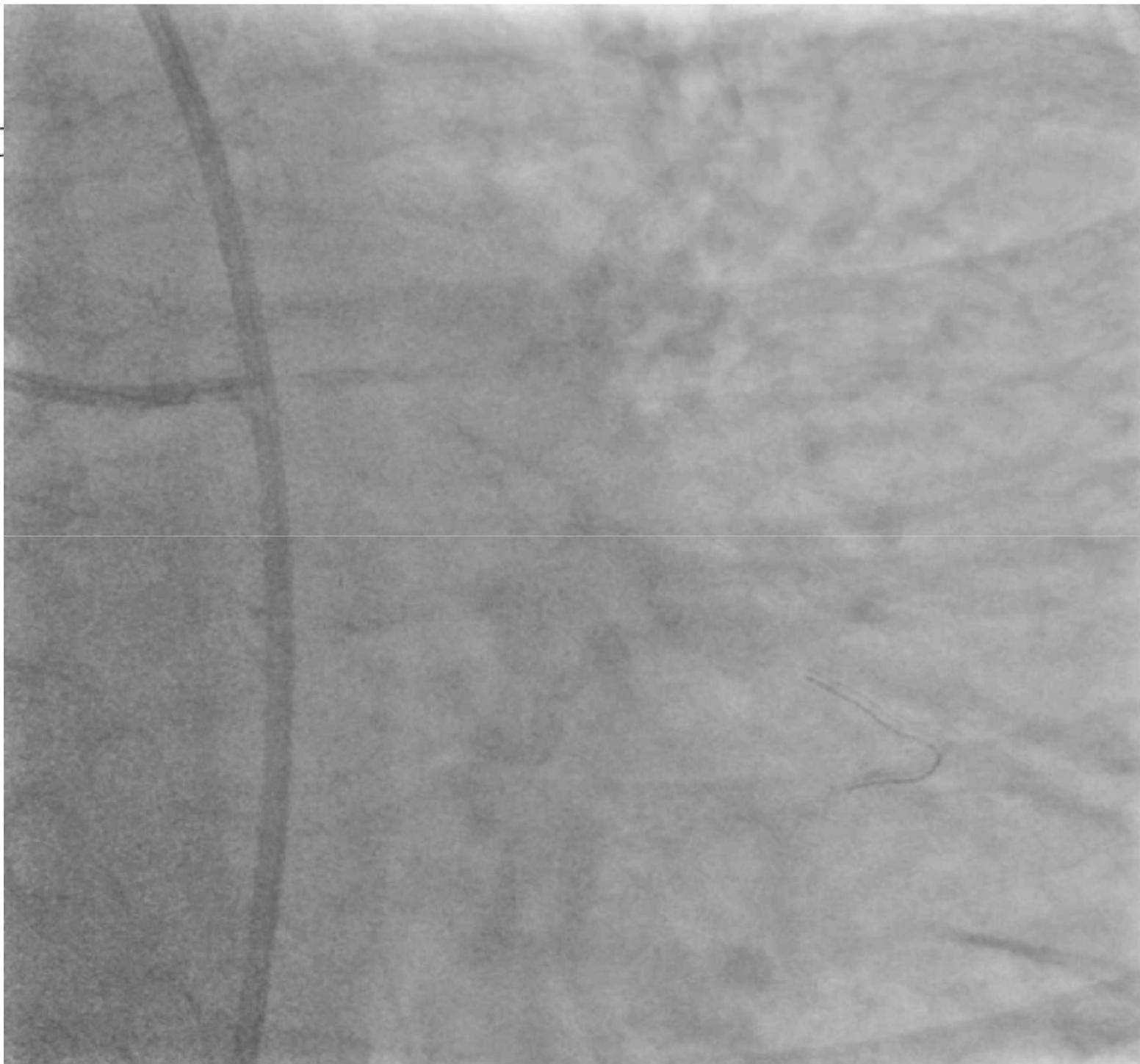


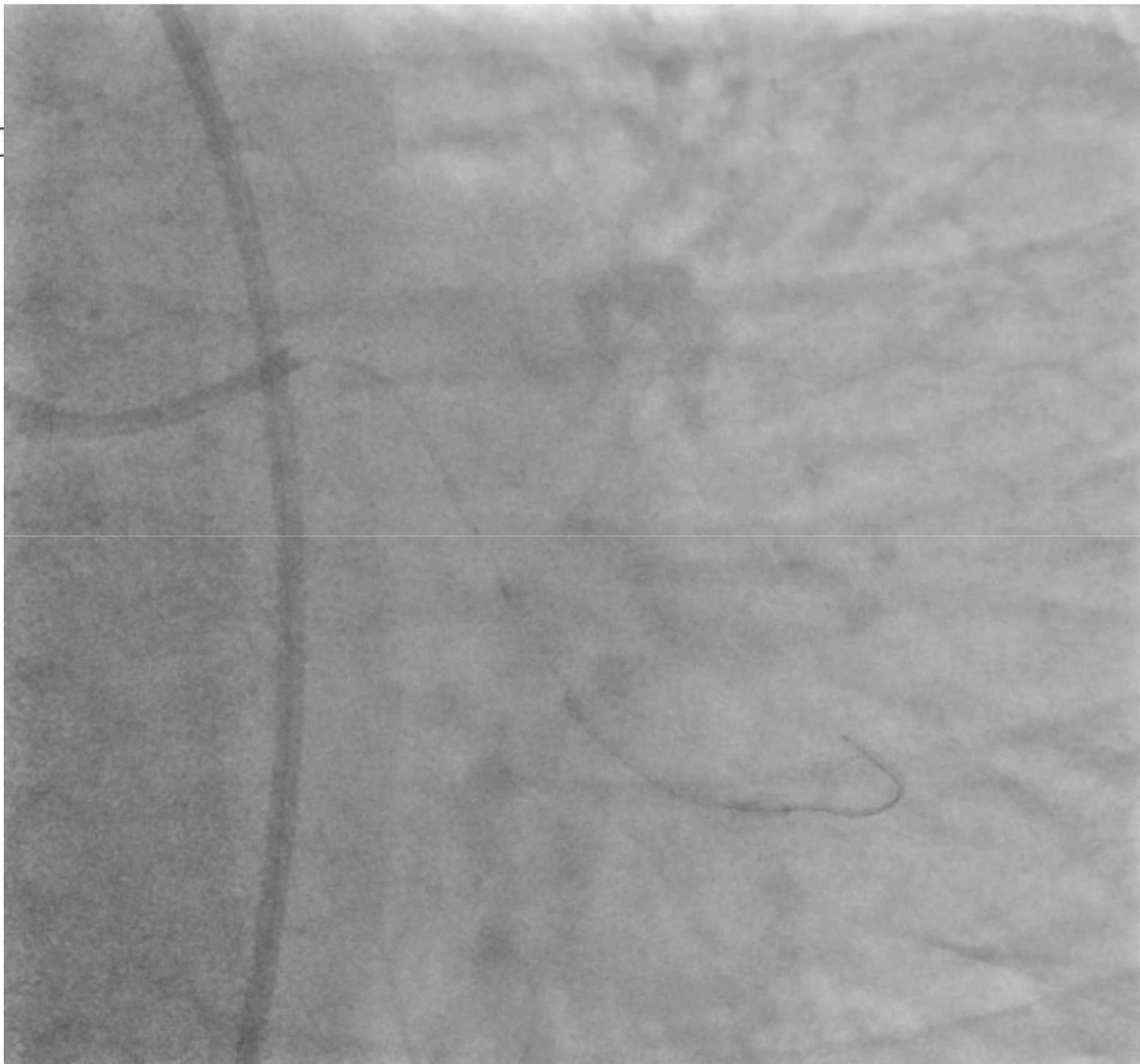




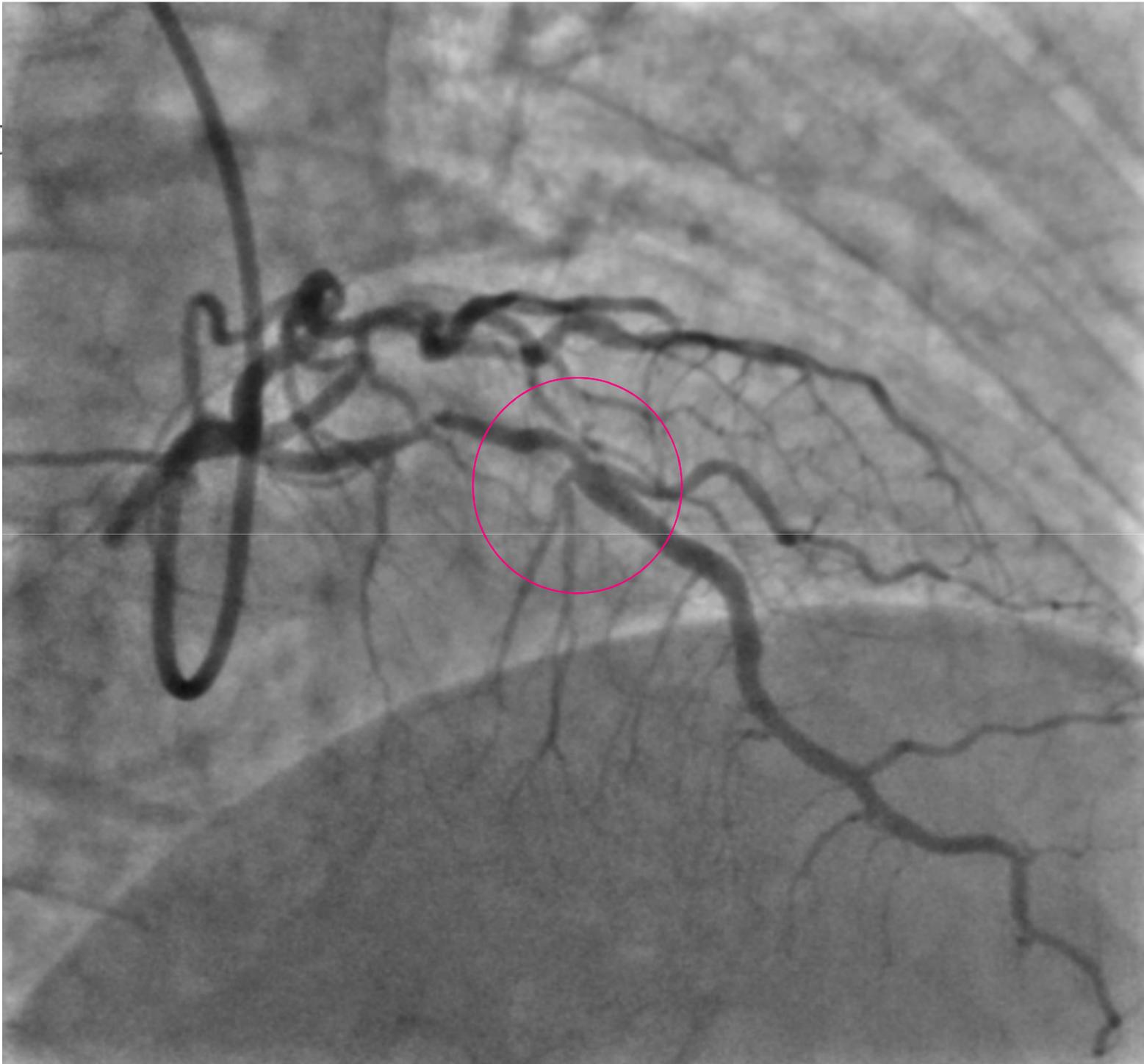


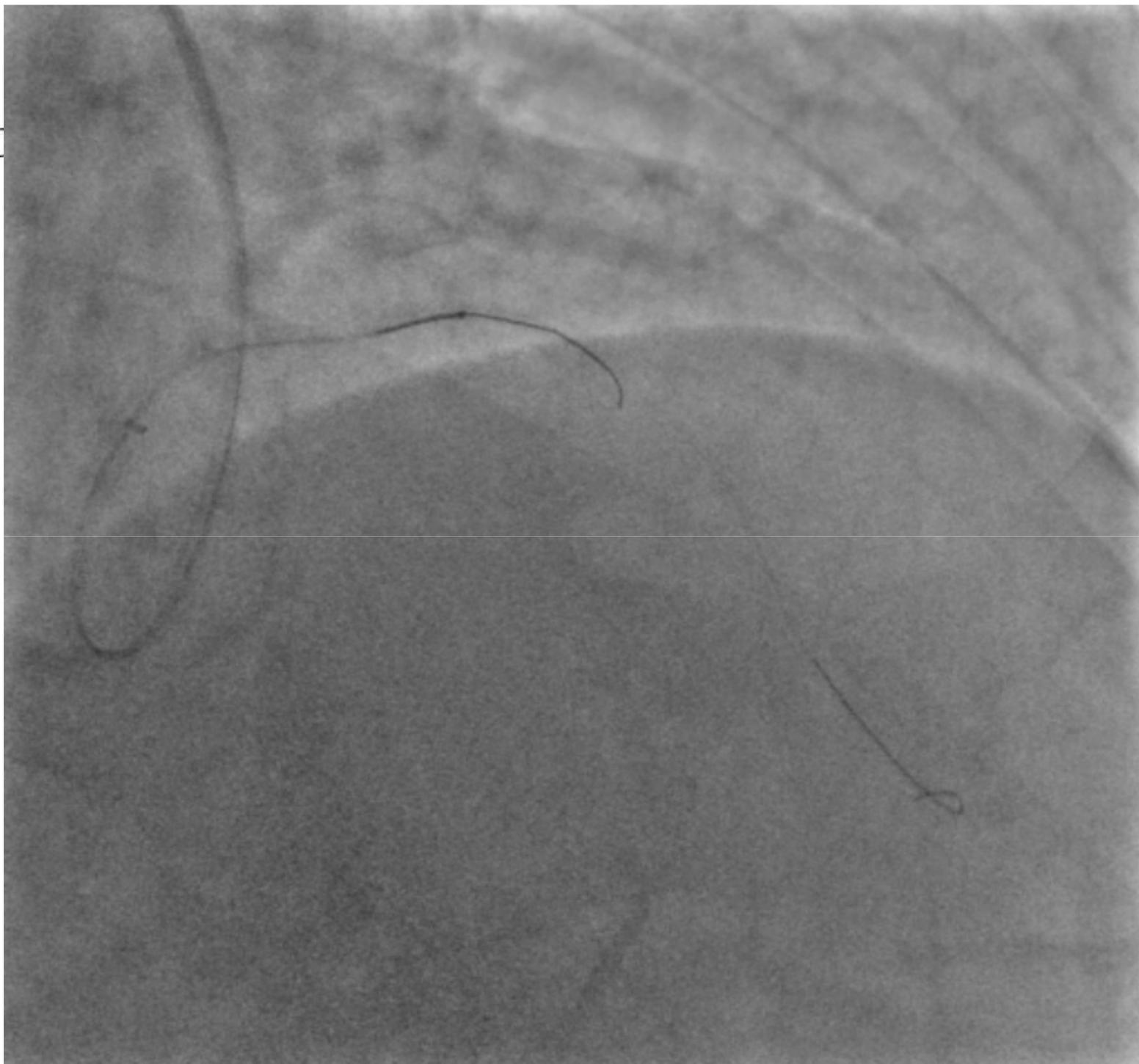


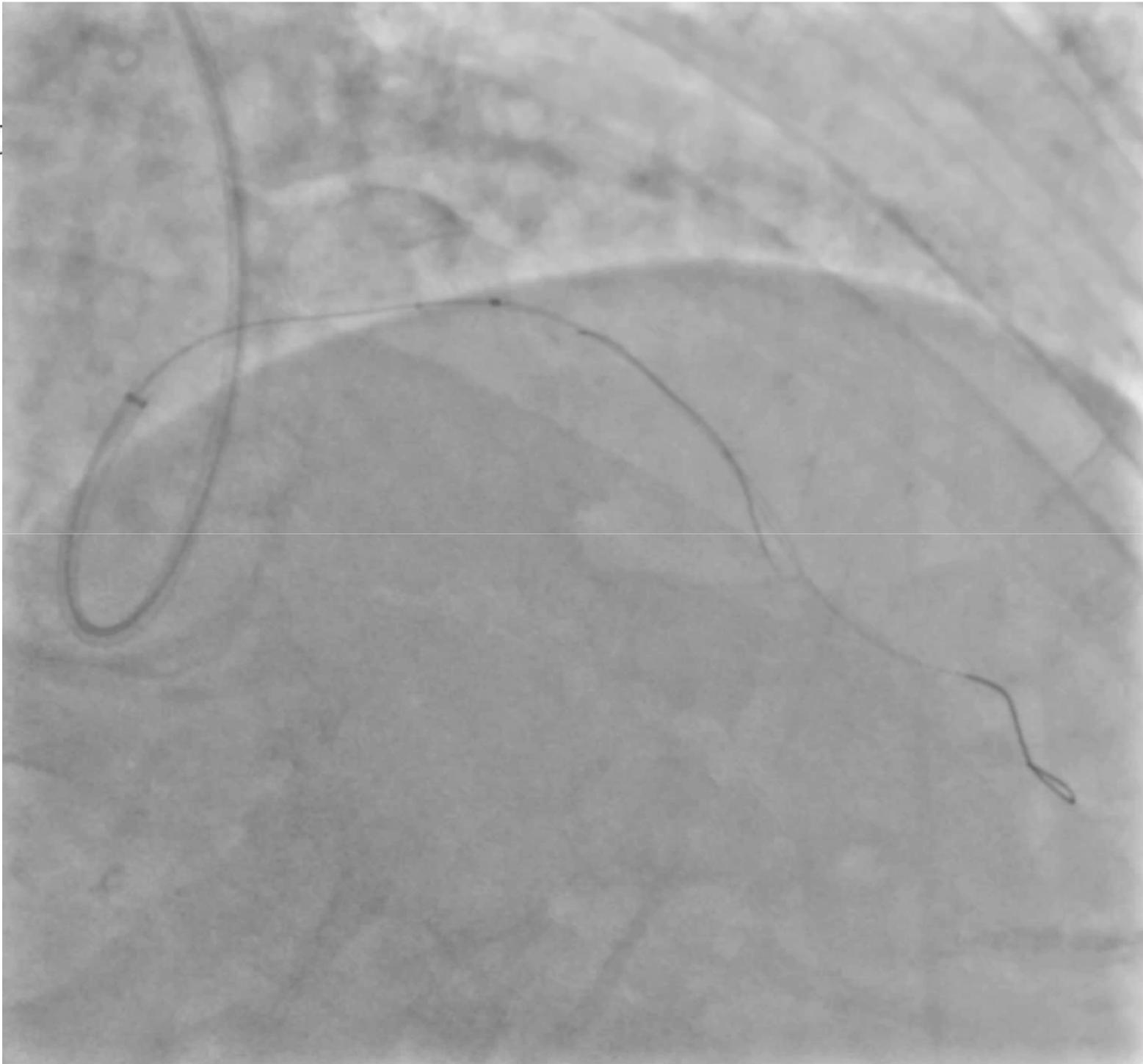






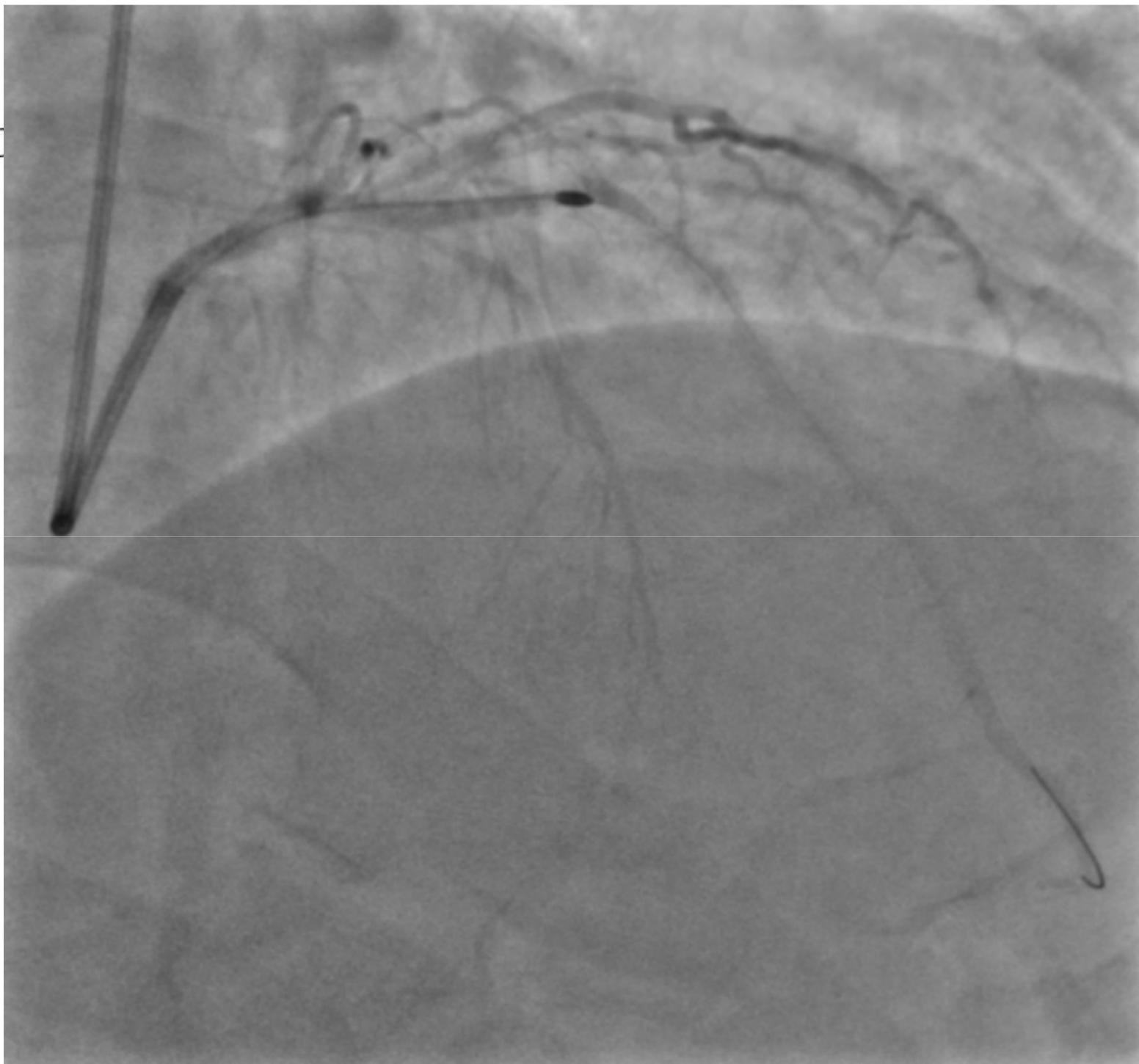




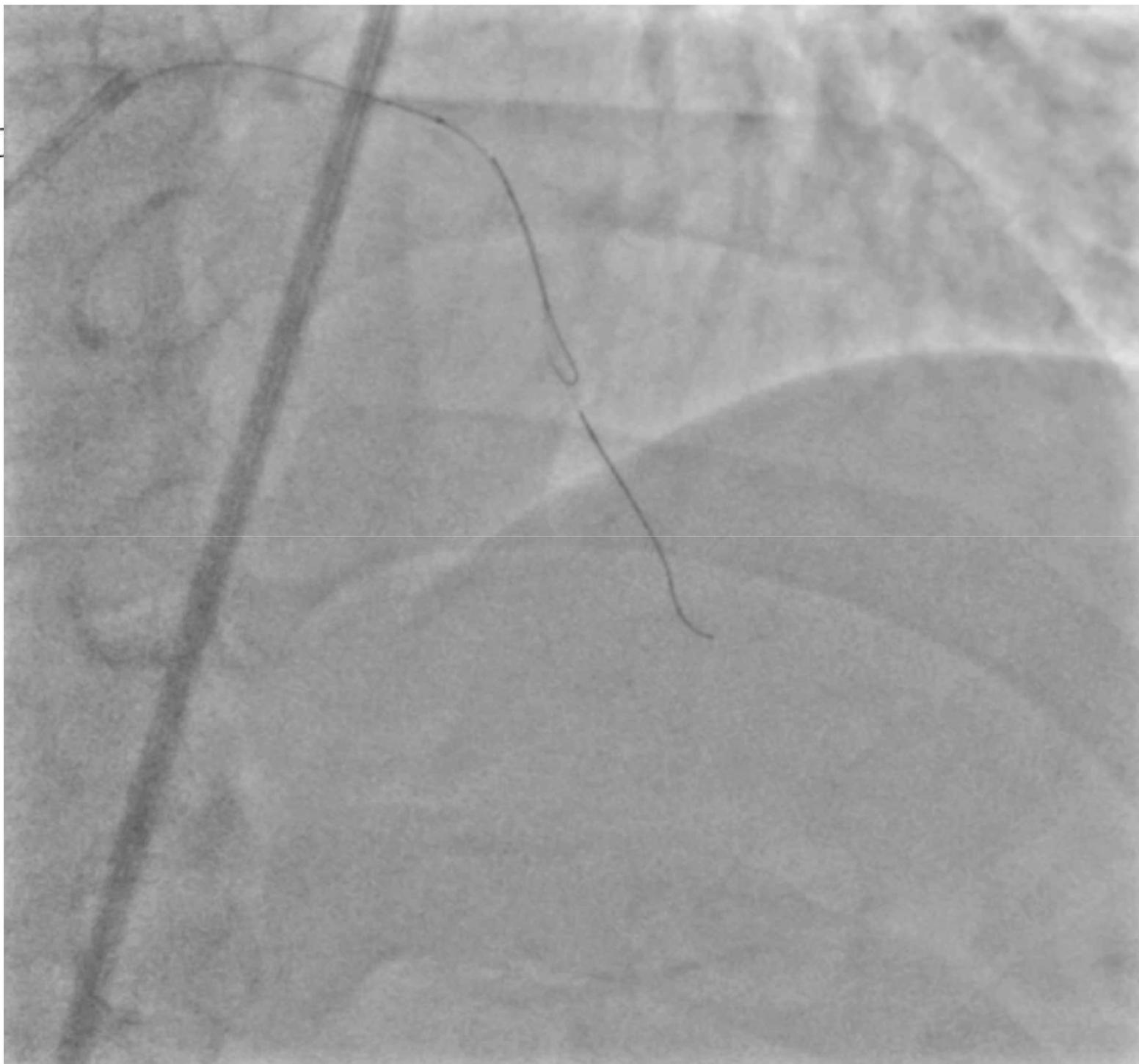














points

- **Hydrophilic polymer jacket wire will be recommended**
- **Wire neck need approximately 3cm**
- **longer is better to obtain better wire control after get branch ostium, but longer neck has risk of wire shaft brockeness**
- **Using double lumen catheter negotiate to deliver the complex shaped wire across the proximal stenosis to distal and gain better back up support as catheter minimizes the sway of wire shaft**



Limitation of this technique

- **desease in distal main branch**
 - Need enough space in distal main vessel for working swan-neck shaped wire**
- **Side branch stenosis near bifurcation**
 - The 2nd wire may trap after crossing side branch ostium (very poor cotrolability in side branch due to complex shaping of the 2d wire)**
- **Risk of perforation in wire tip using hydrophilic coating wire**
 - care in time of double lumen catheter removal**



summary

- **Double lumen catheter is effective in getting complex bifurcated side branch**
- **Reverse wire technique using swan neck shaped wire with double lumen catheter is effective in some complex bifurcation lesion subset (just proximal stenosis in main vessel and steeply angled side branch)**

Thank you!

European Bifurcation Club

