Improve CTO PCI success: Utilization of support devices

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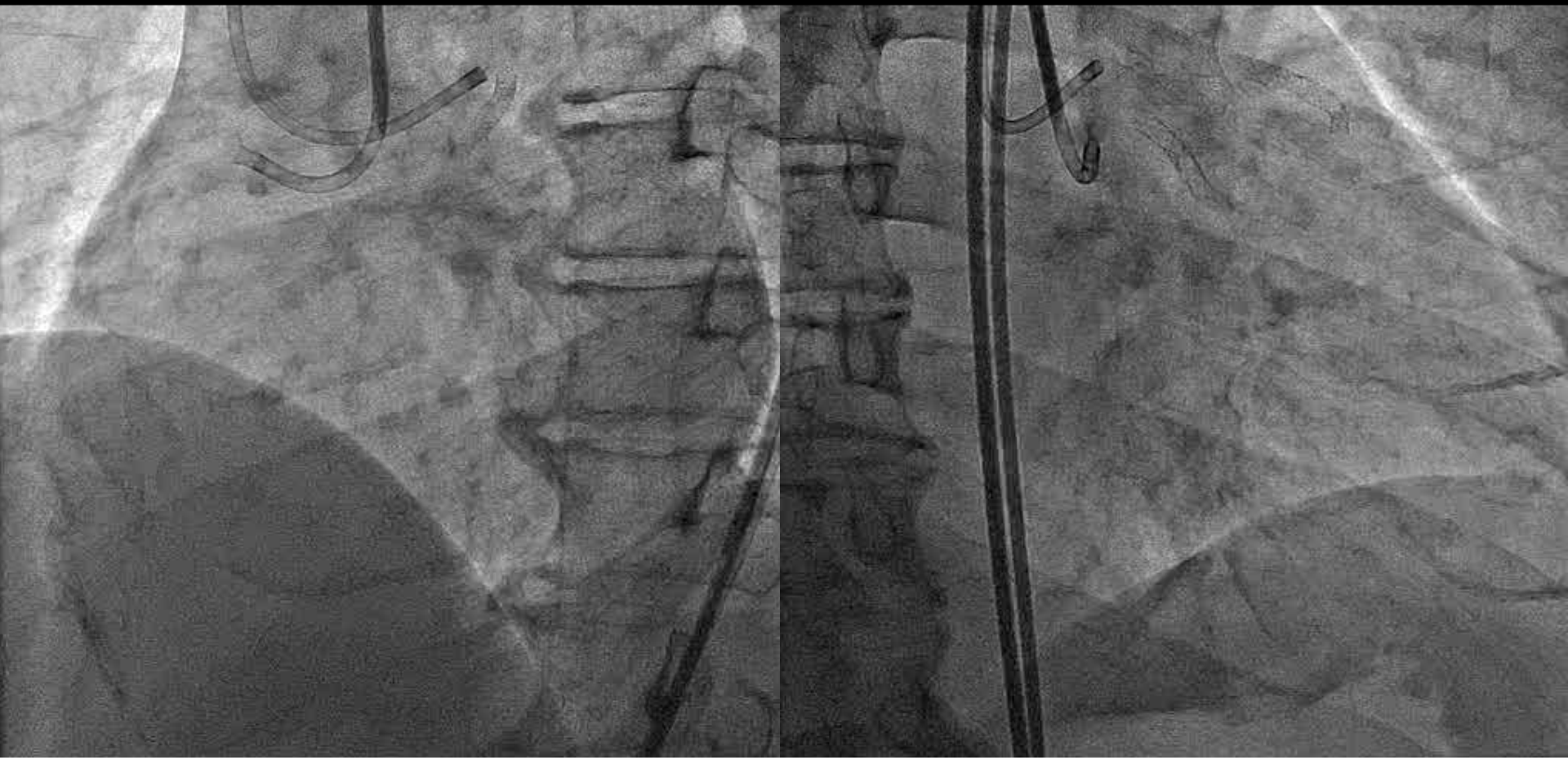
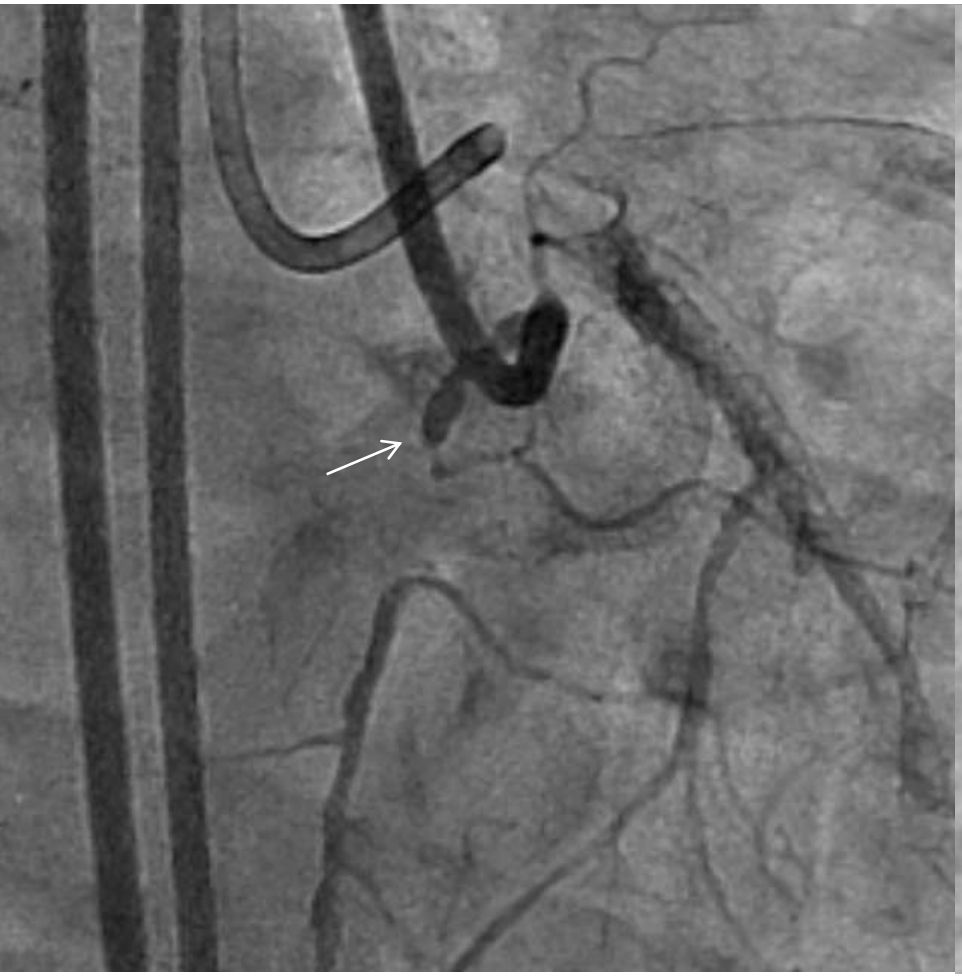
Introduction

- Many support devices are manufactured now.
- They are frequently used in CTO PCI.
- How could we use these devices according to various types of lesion?

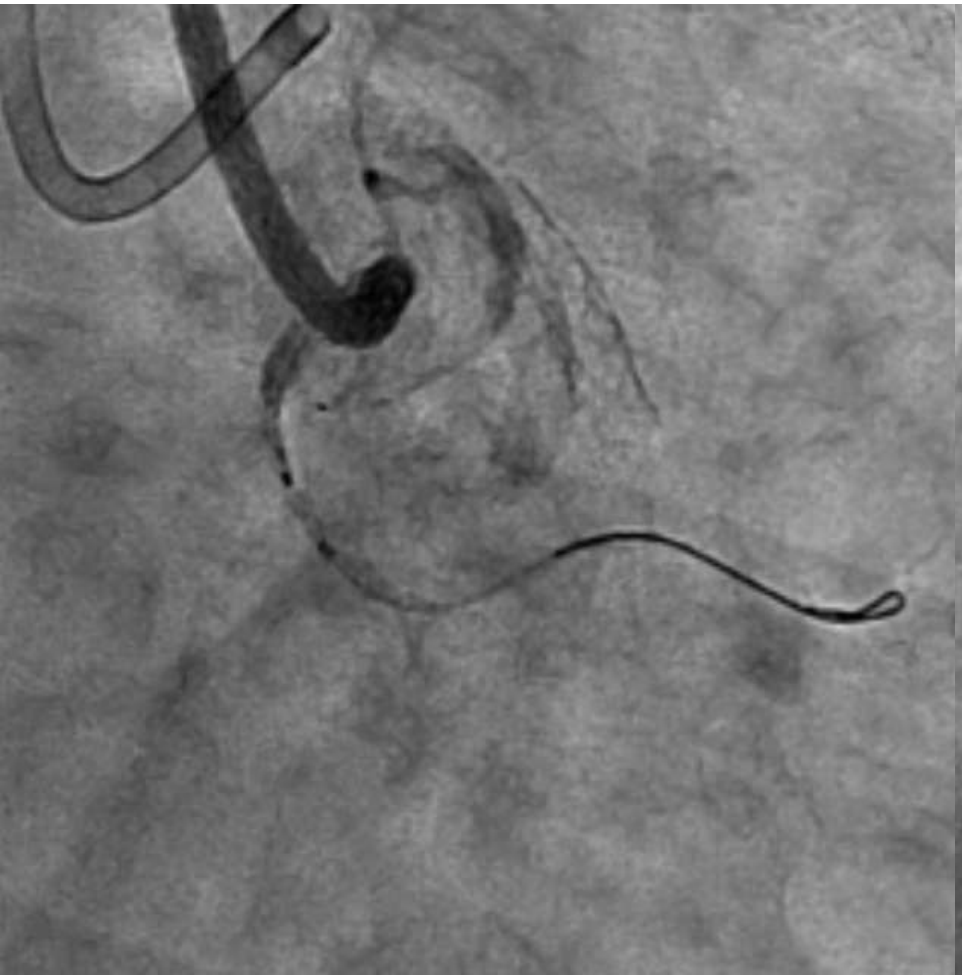
RCA CTO

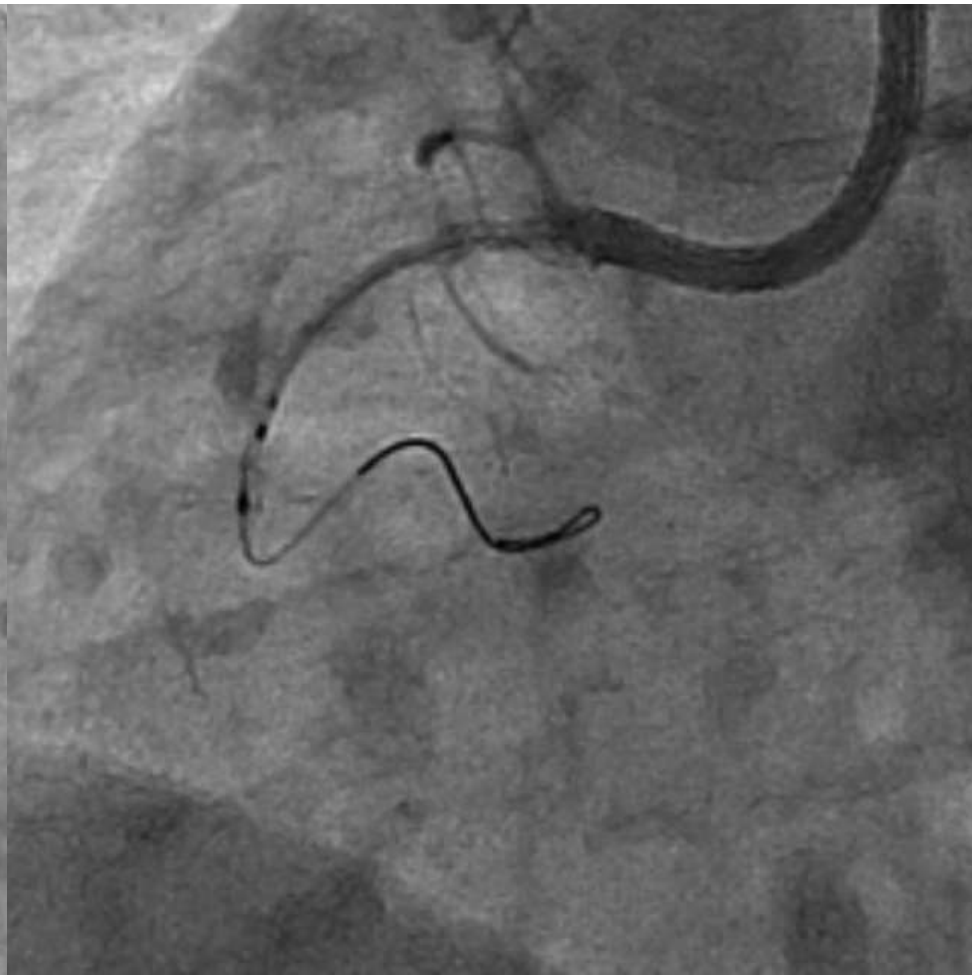


Where is the entry?

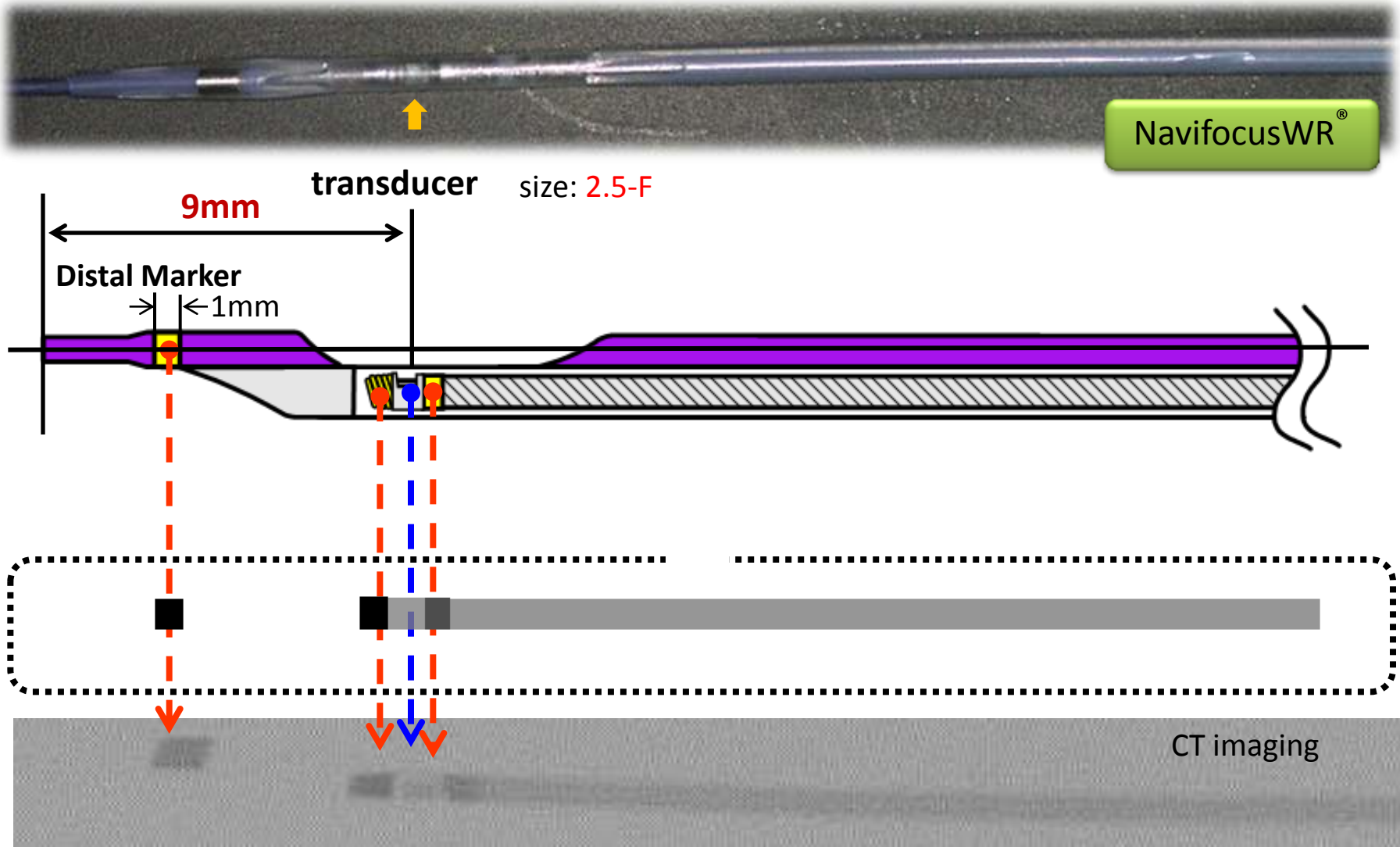


IVUS guidance

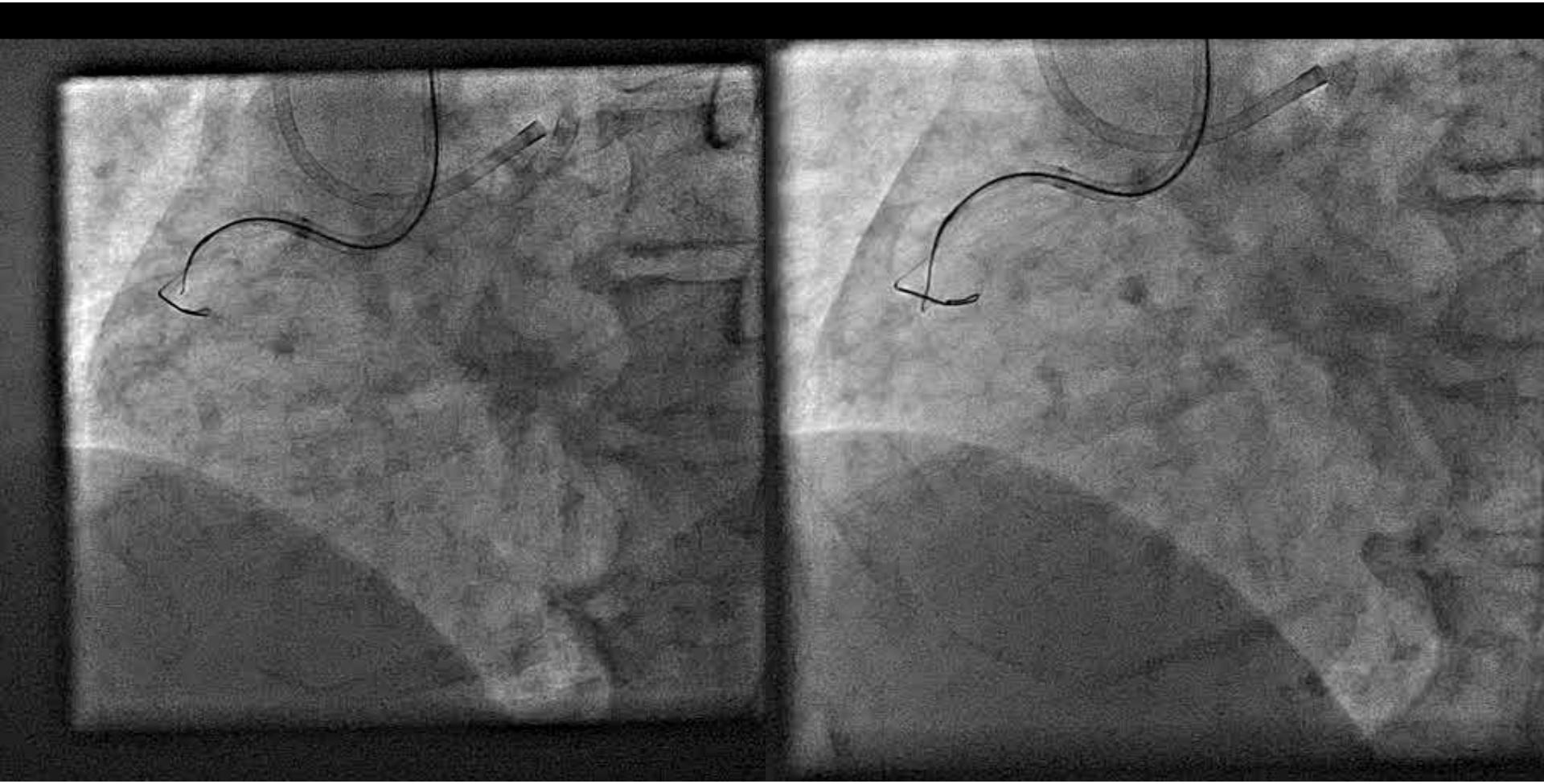




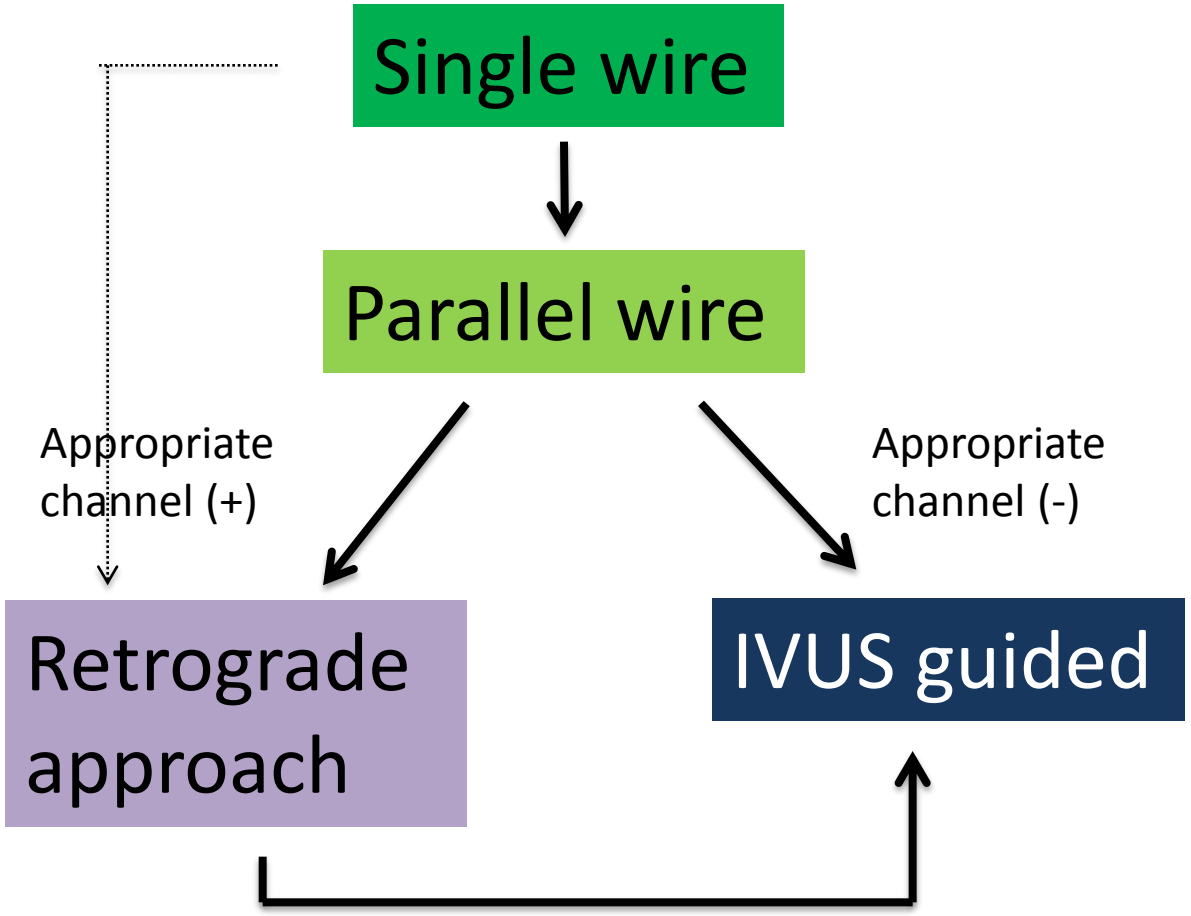
Navifocus WR



Guide wiring via a Corsair



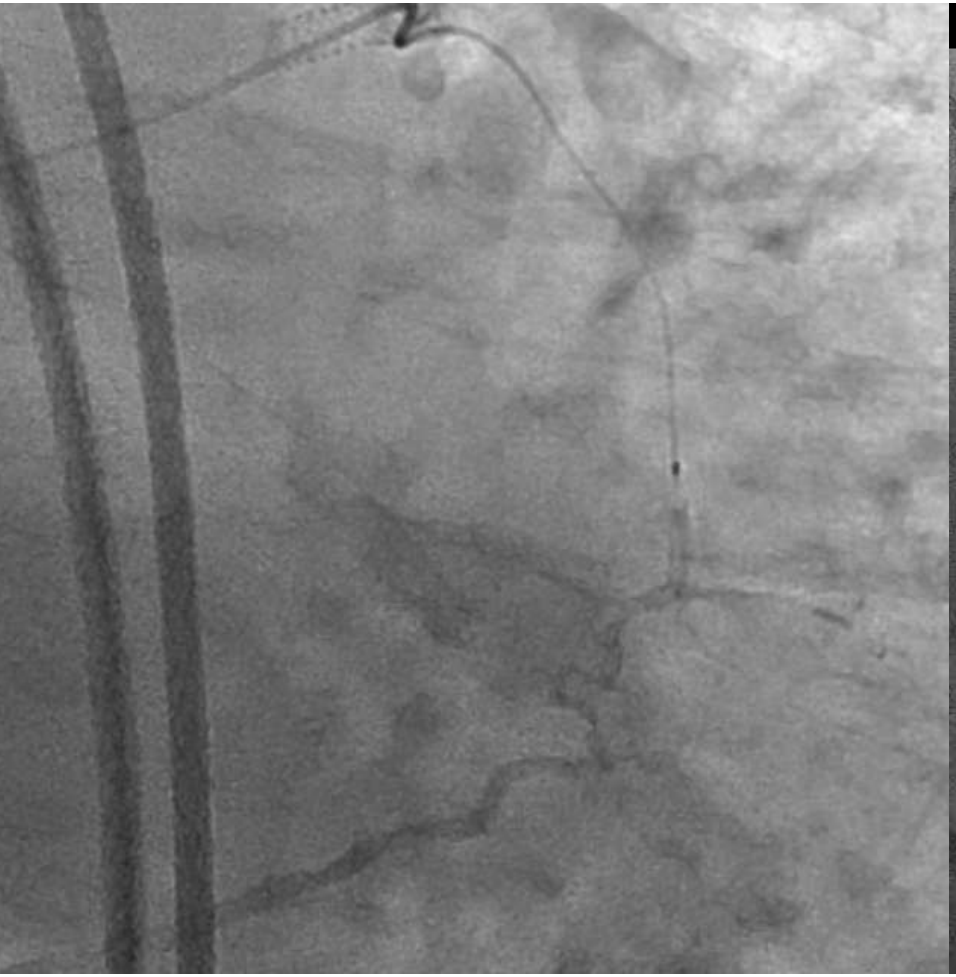
What is the next step?

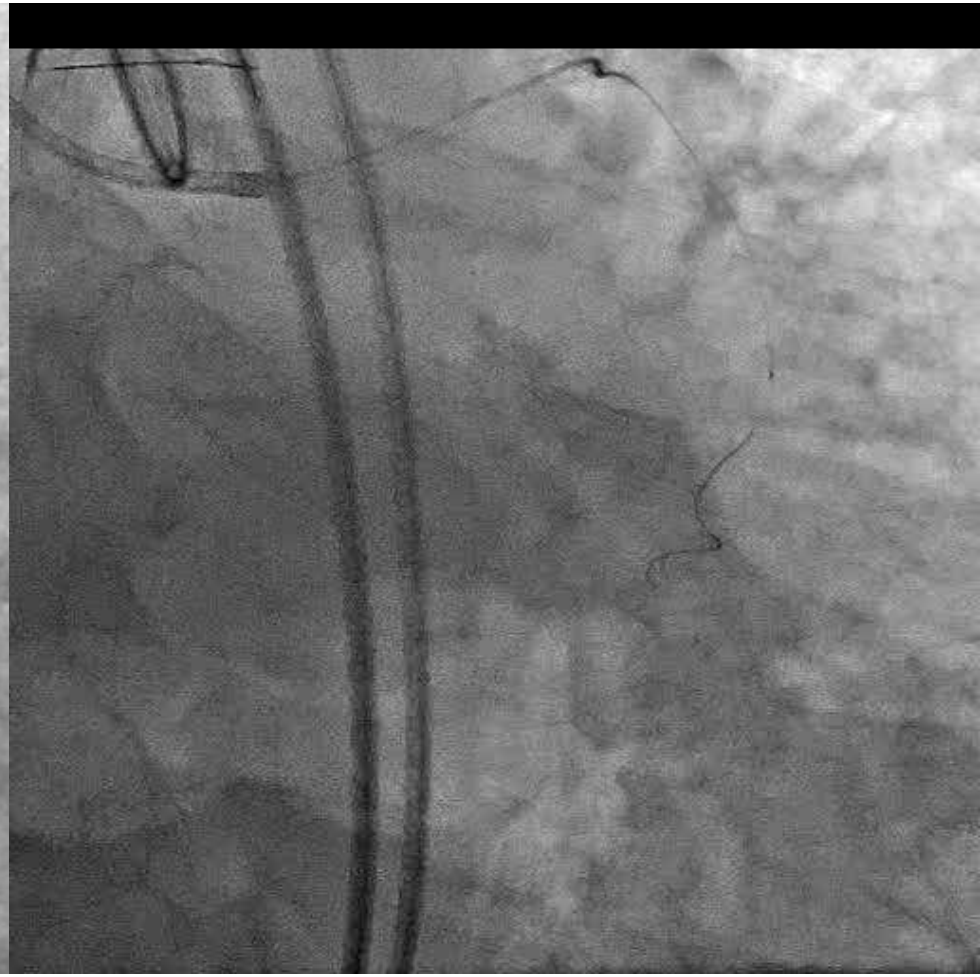


Parallel wiring

⟶ Second wire

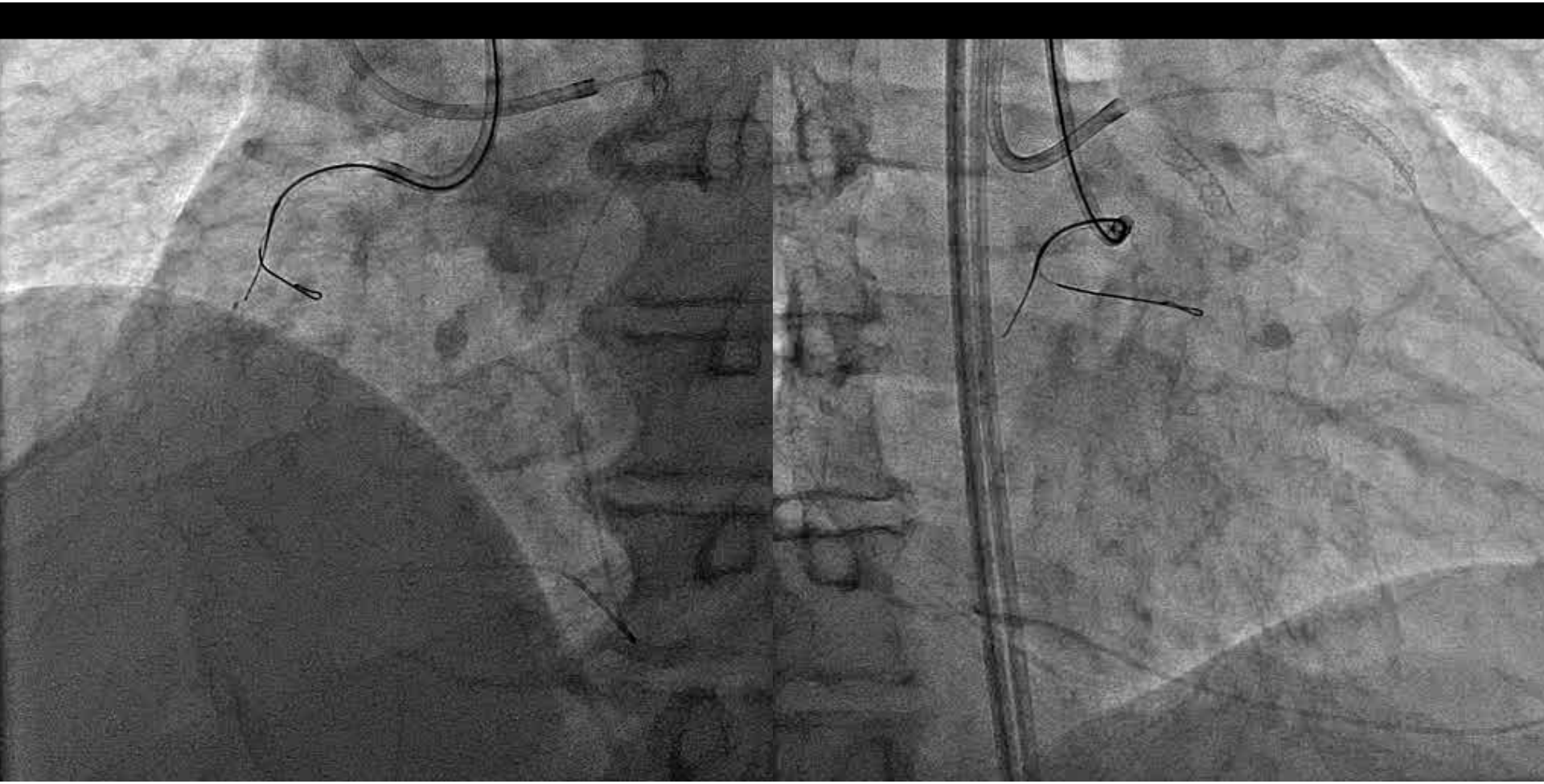
Retrograde approach using Sortana



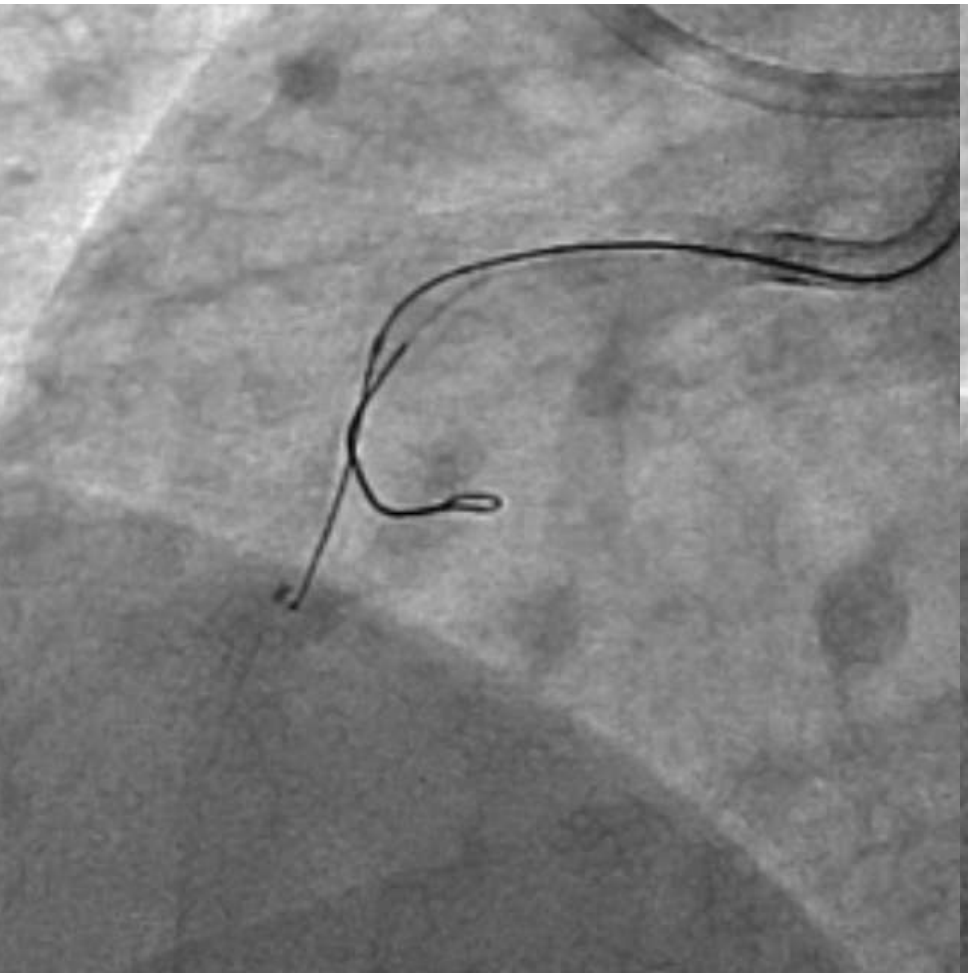


Sortana was used Instead of Corsair.

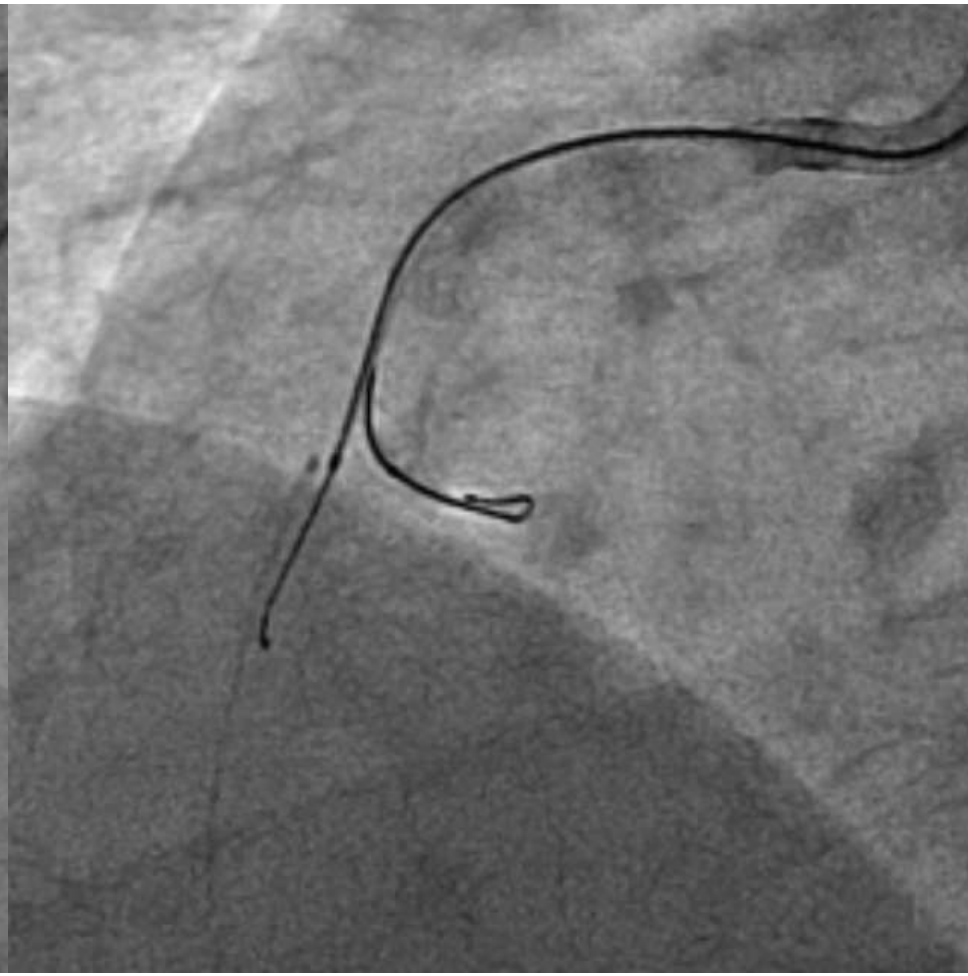
What is the next step?



Device insertion via antegradelly

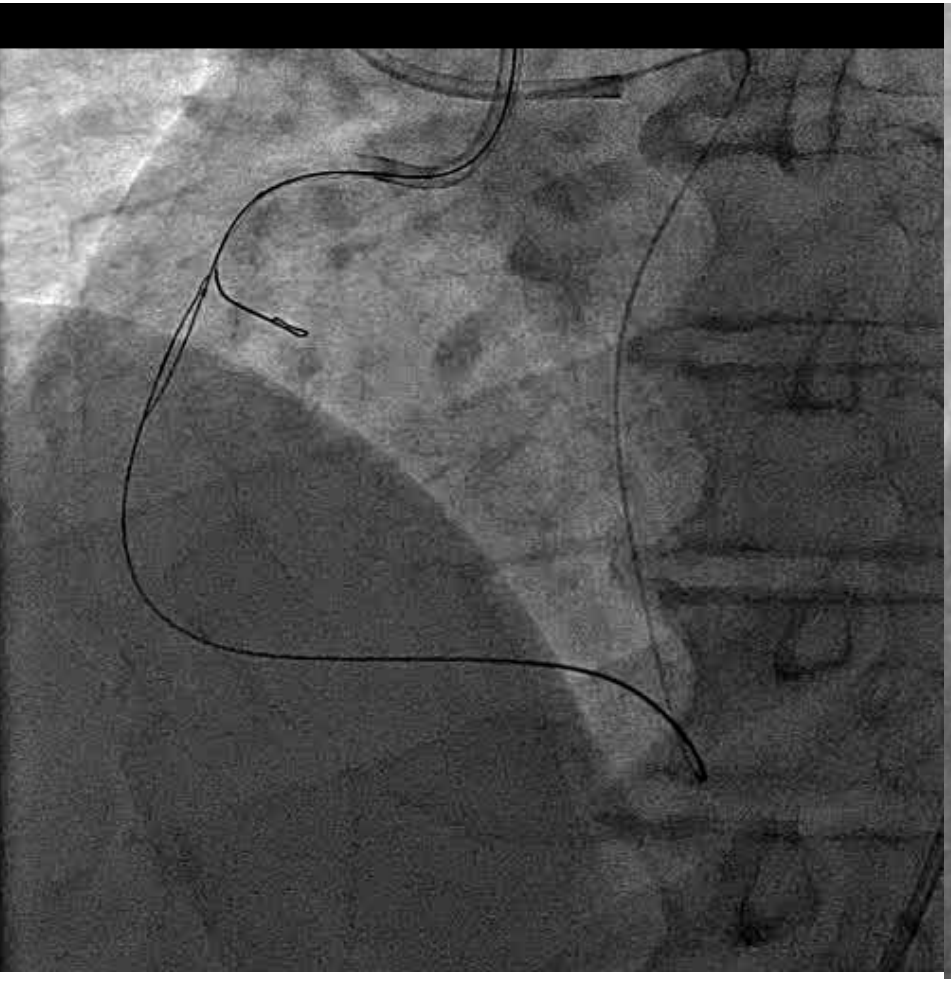


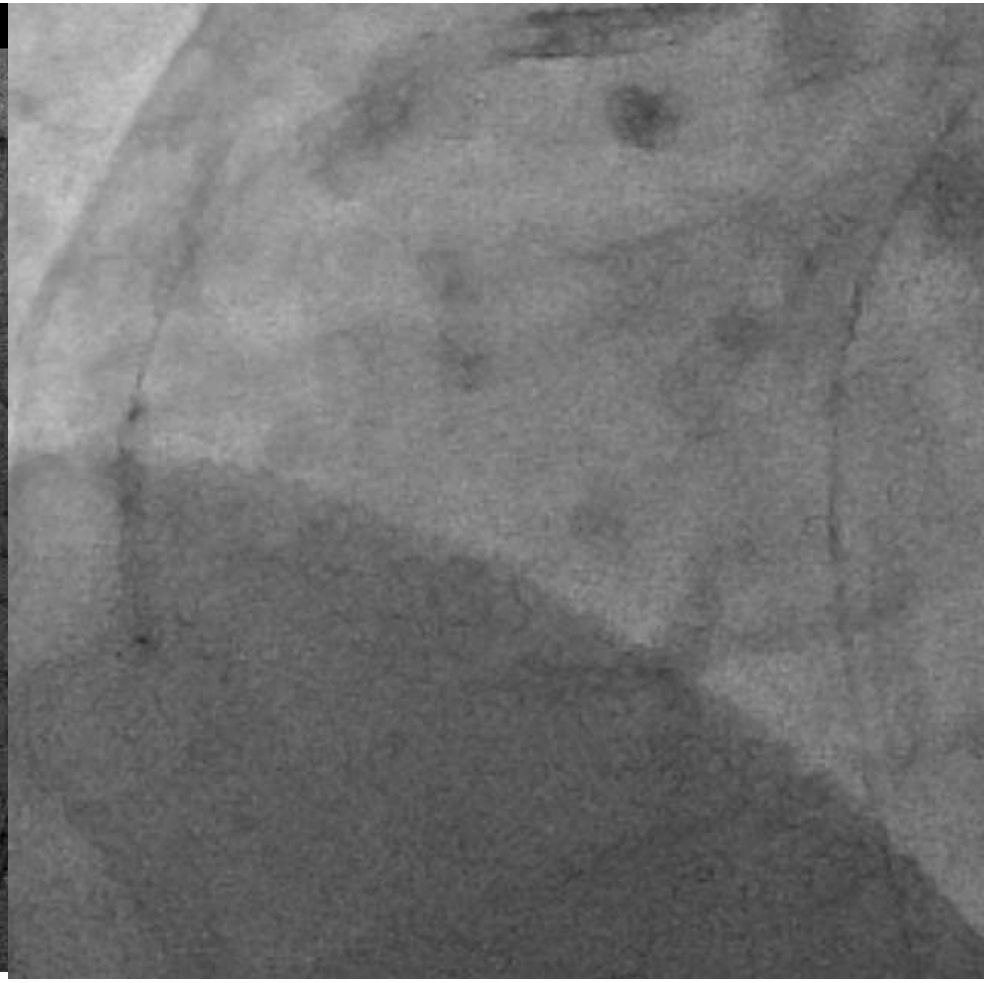
Small balloon



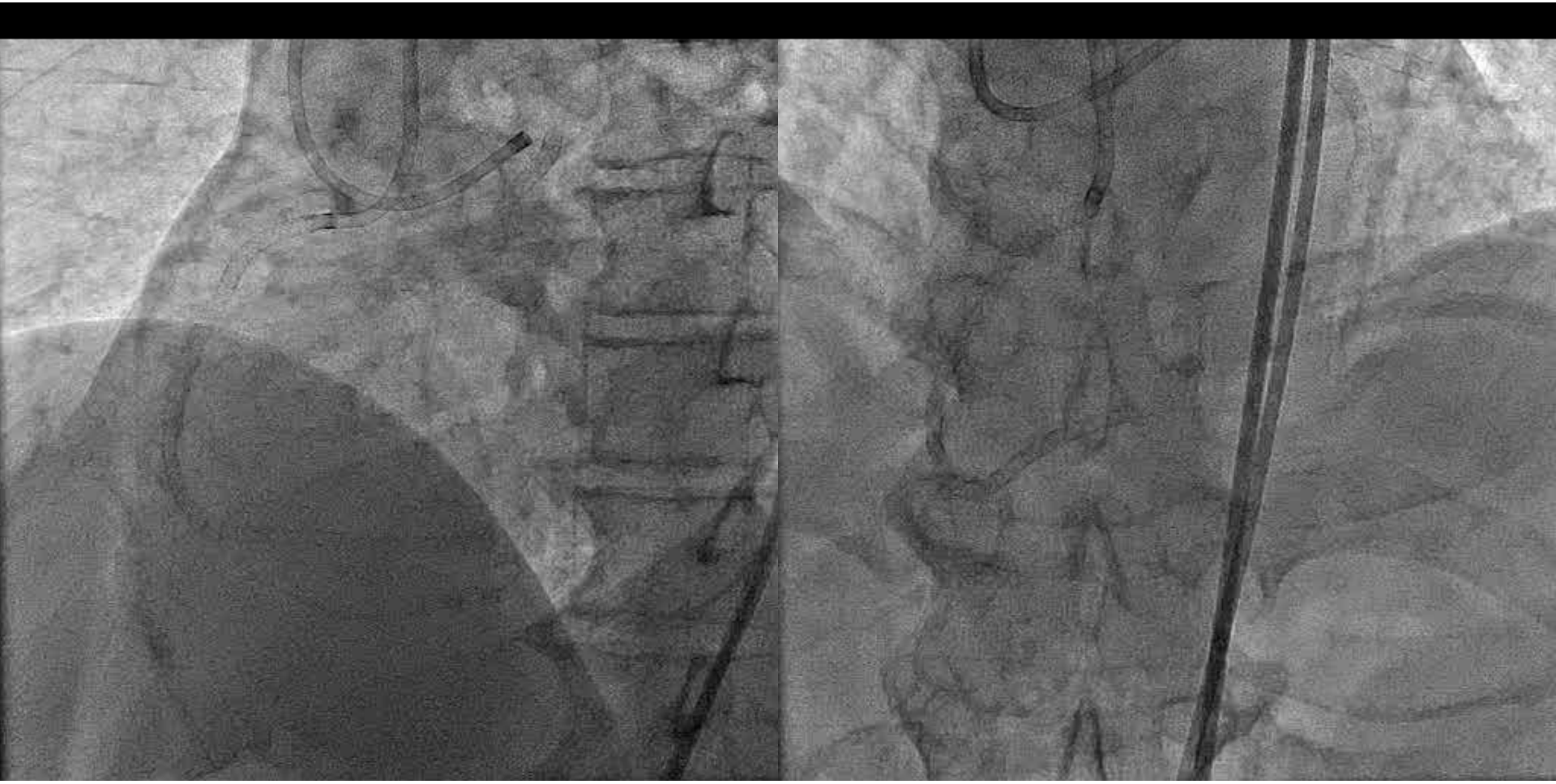
Tornus

Reverse CART



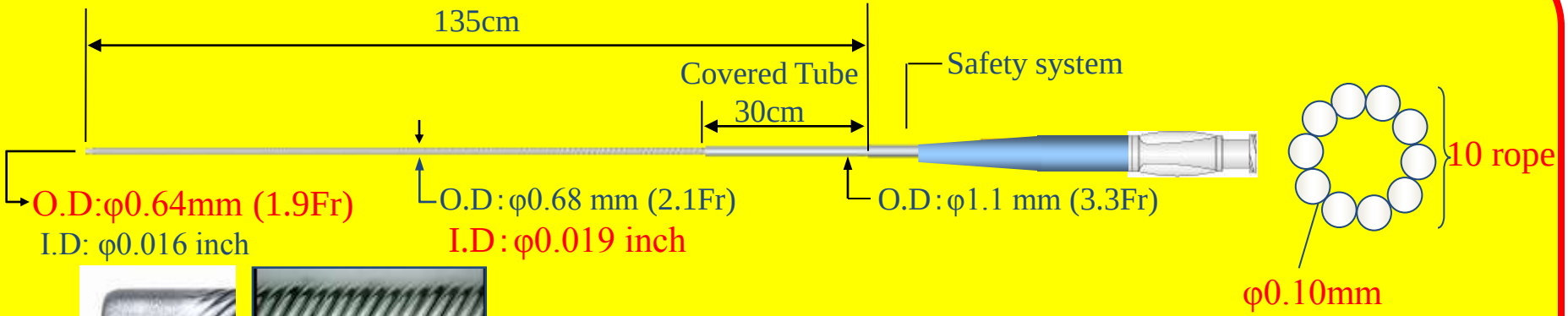


Final angiograms

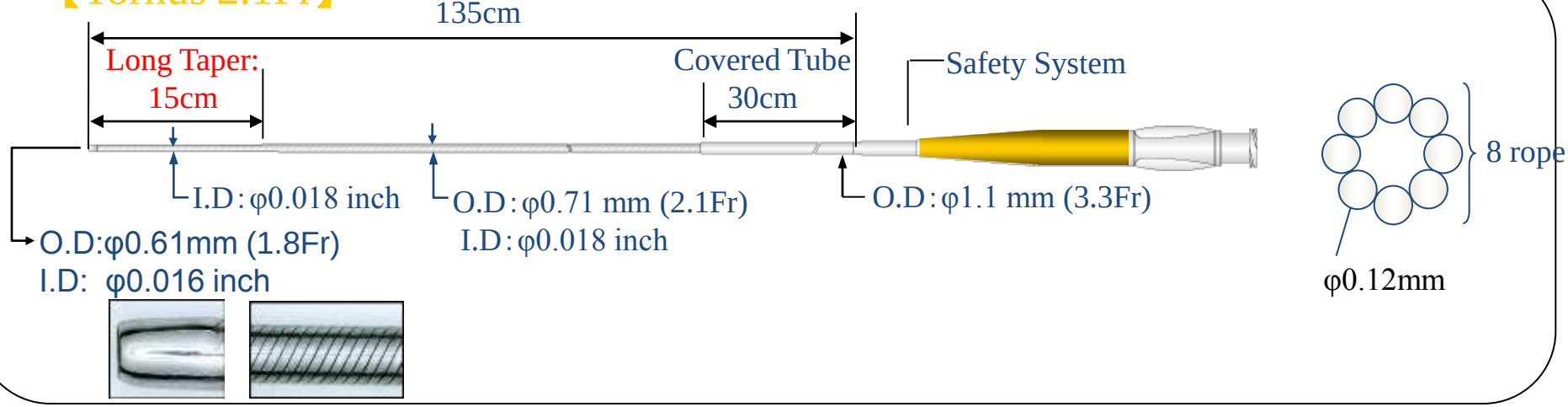


Tornus

【Tornus Pro 2.1Fr】



【Tornus 2.1Fr】

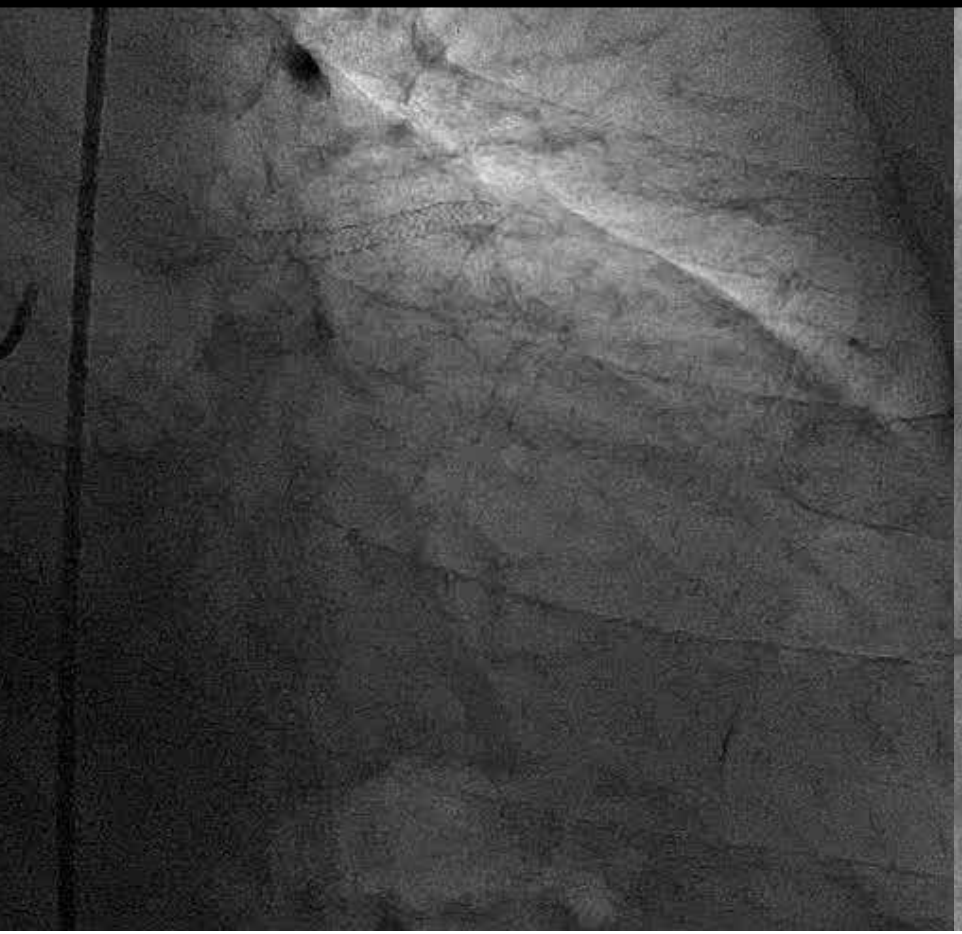


Micro catheters in this case

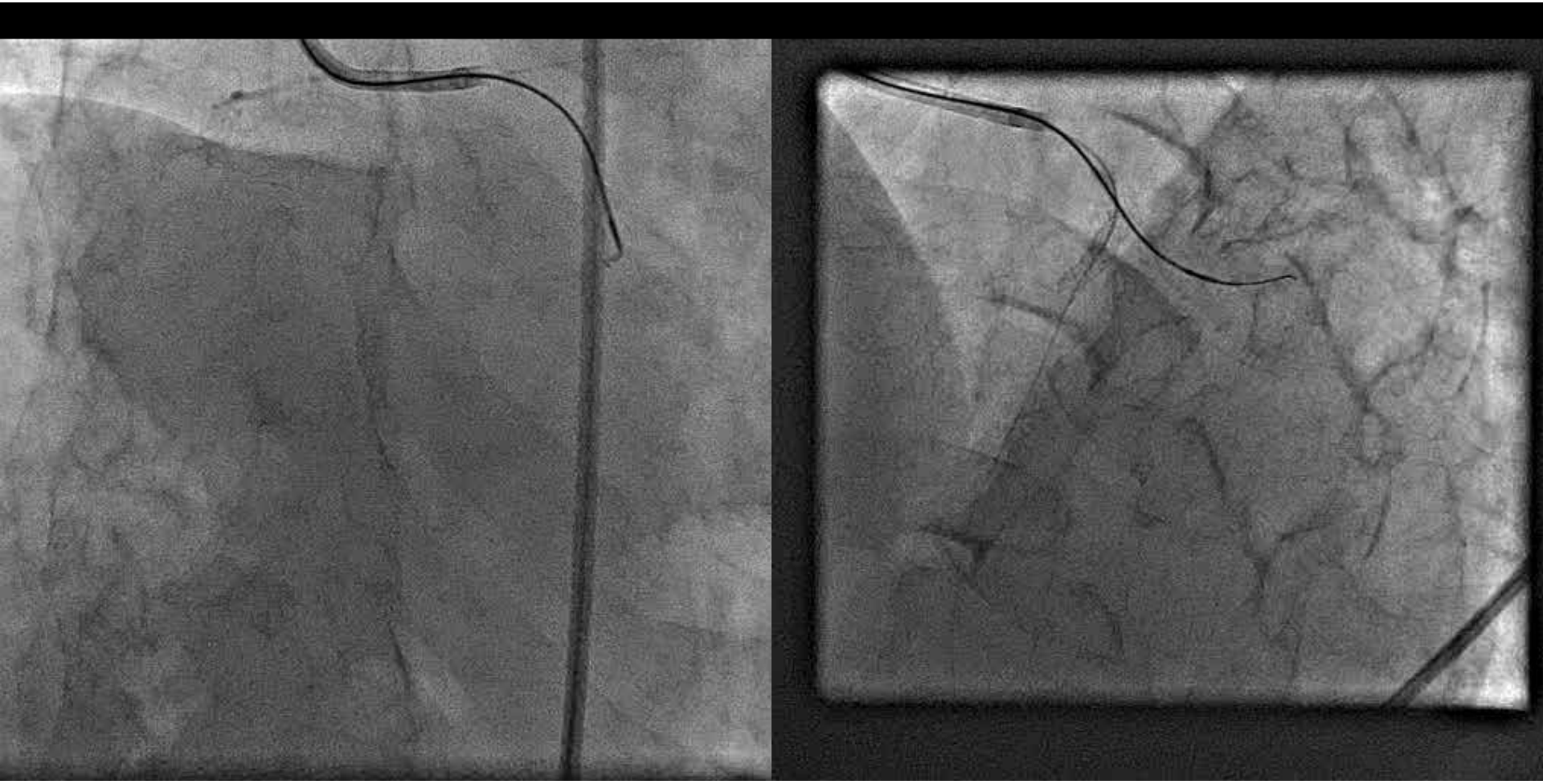
Three different micro catheters were used

- Corsair was used to facilitate wire manipulation.
- To avoid provocative ischemia, slender micro catheter was used for channel crossing.
- Tornus was used to achieve device (balloon) advancement into the lesion for reverse CART.

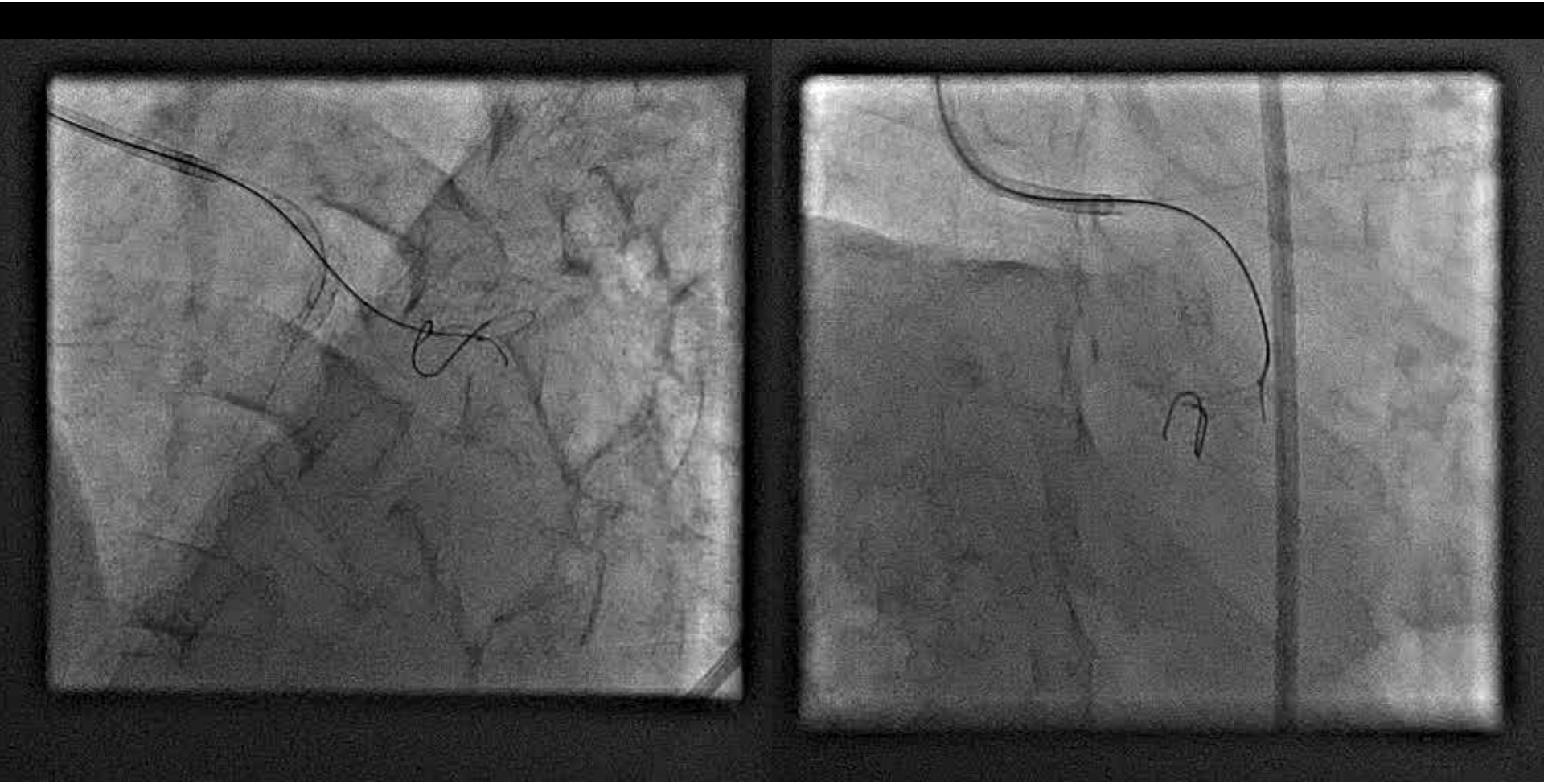
LCX CTO



Guide wiring via a Corsair



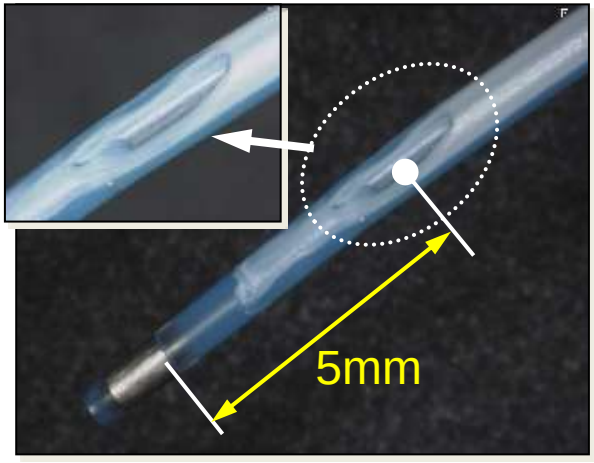
Guide wiring via a Crusade

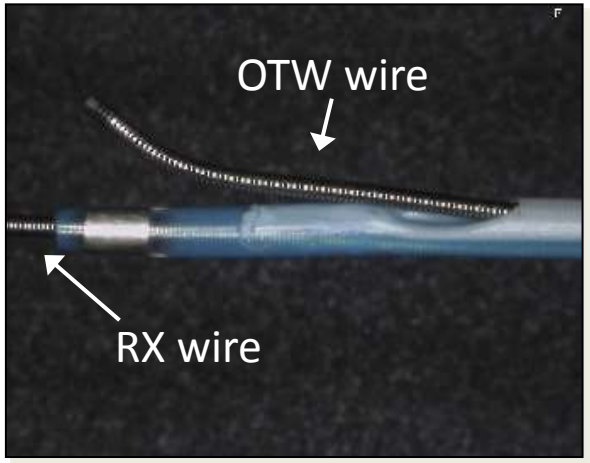


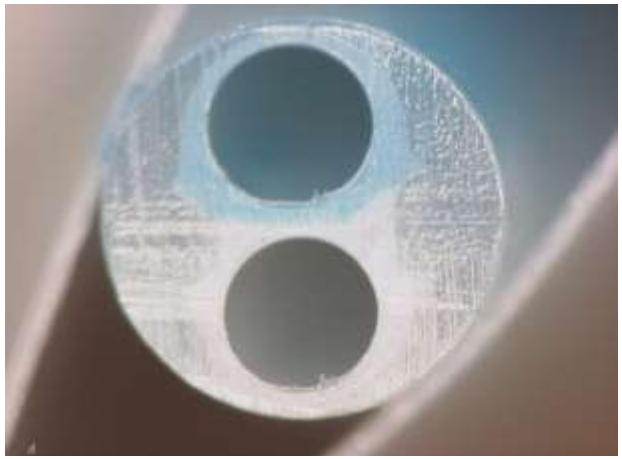
Crusade

Wire Lumen：<u>0.014”GW</u> compatible

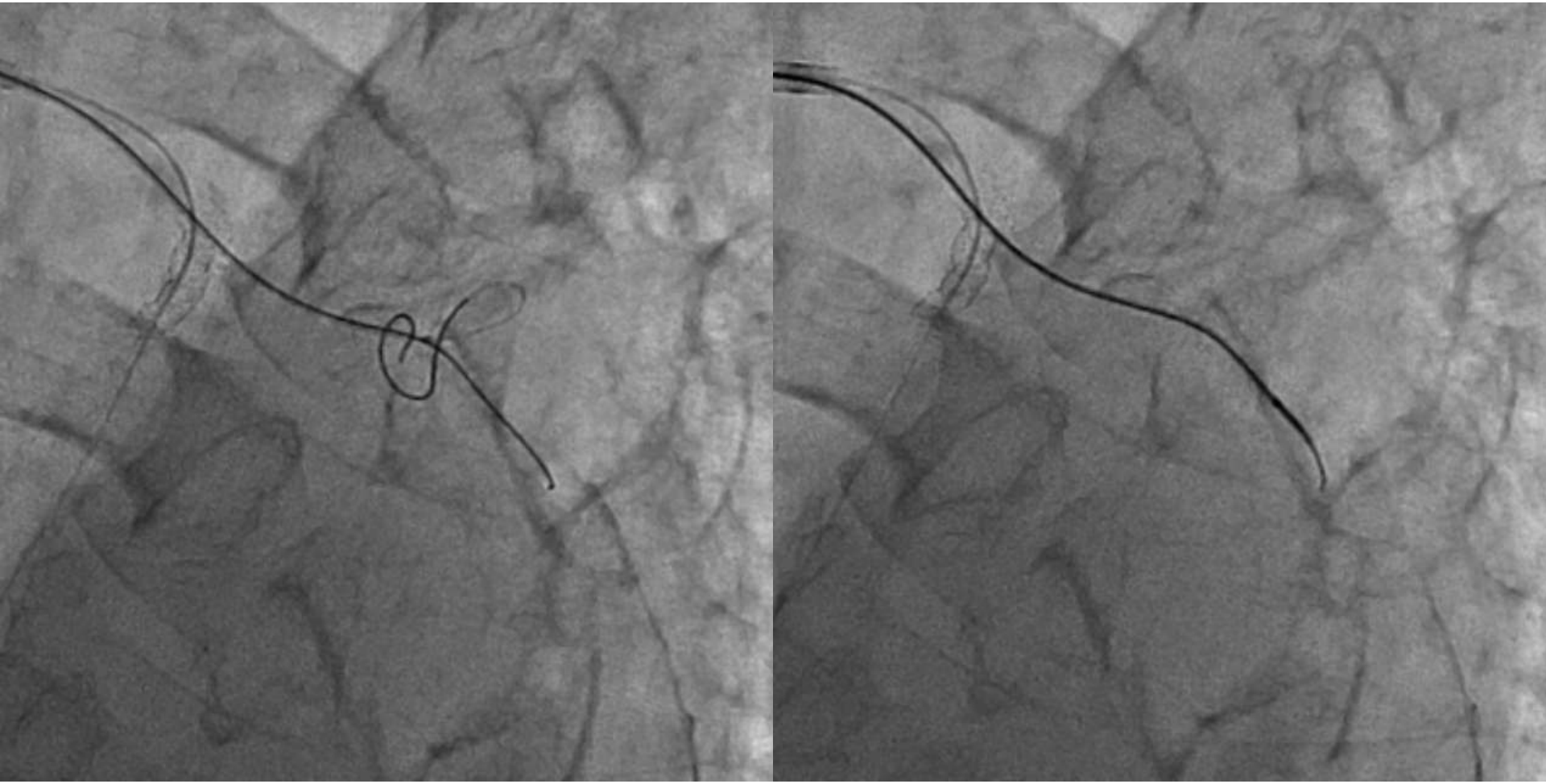
Effective Length 1,400mm



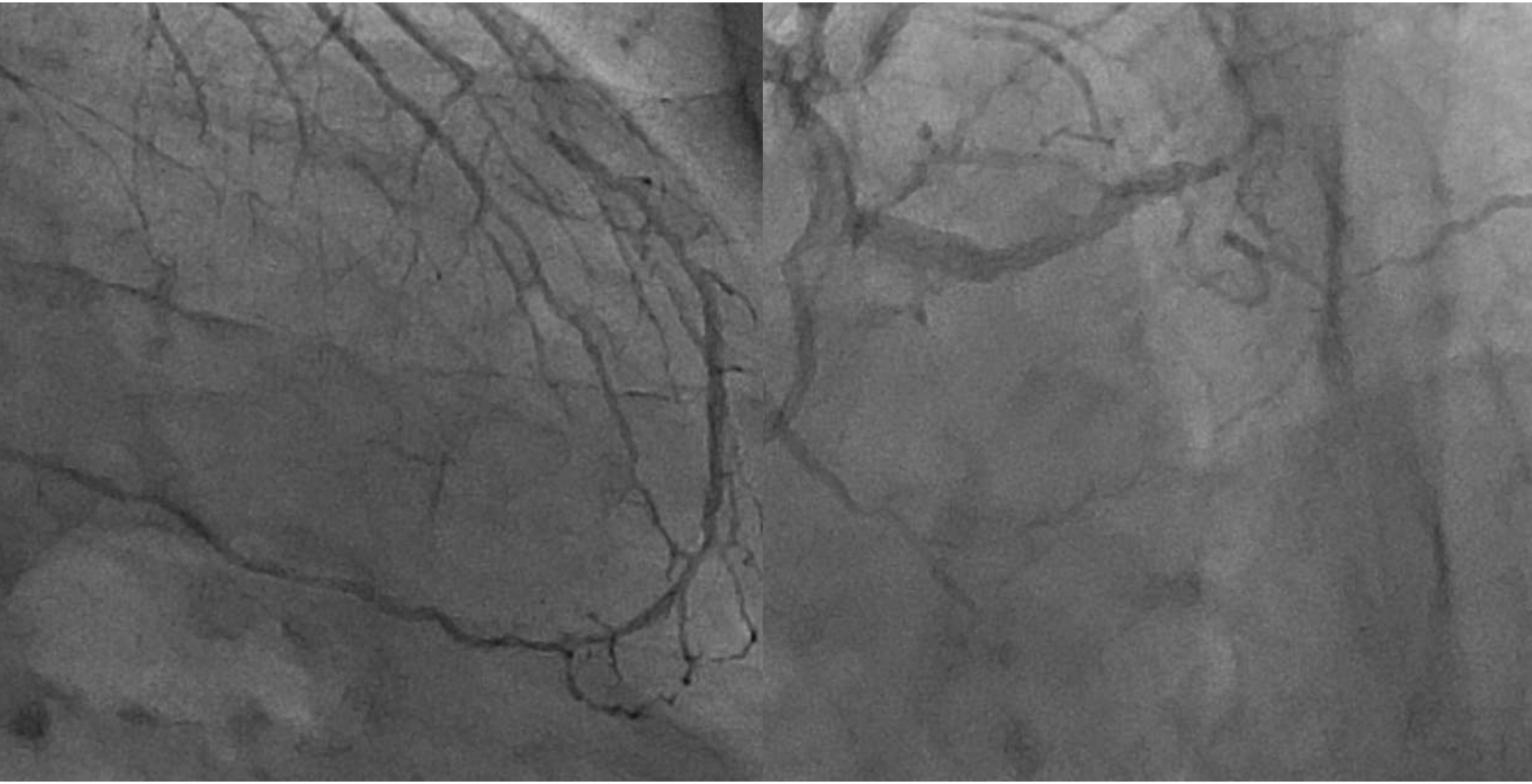




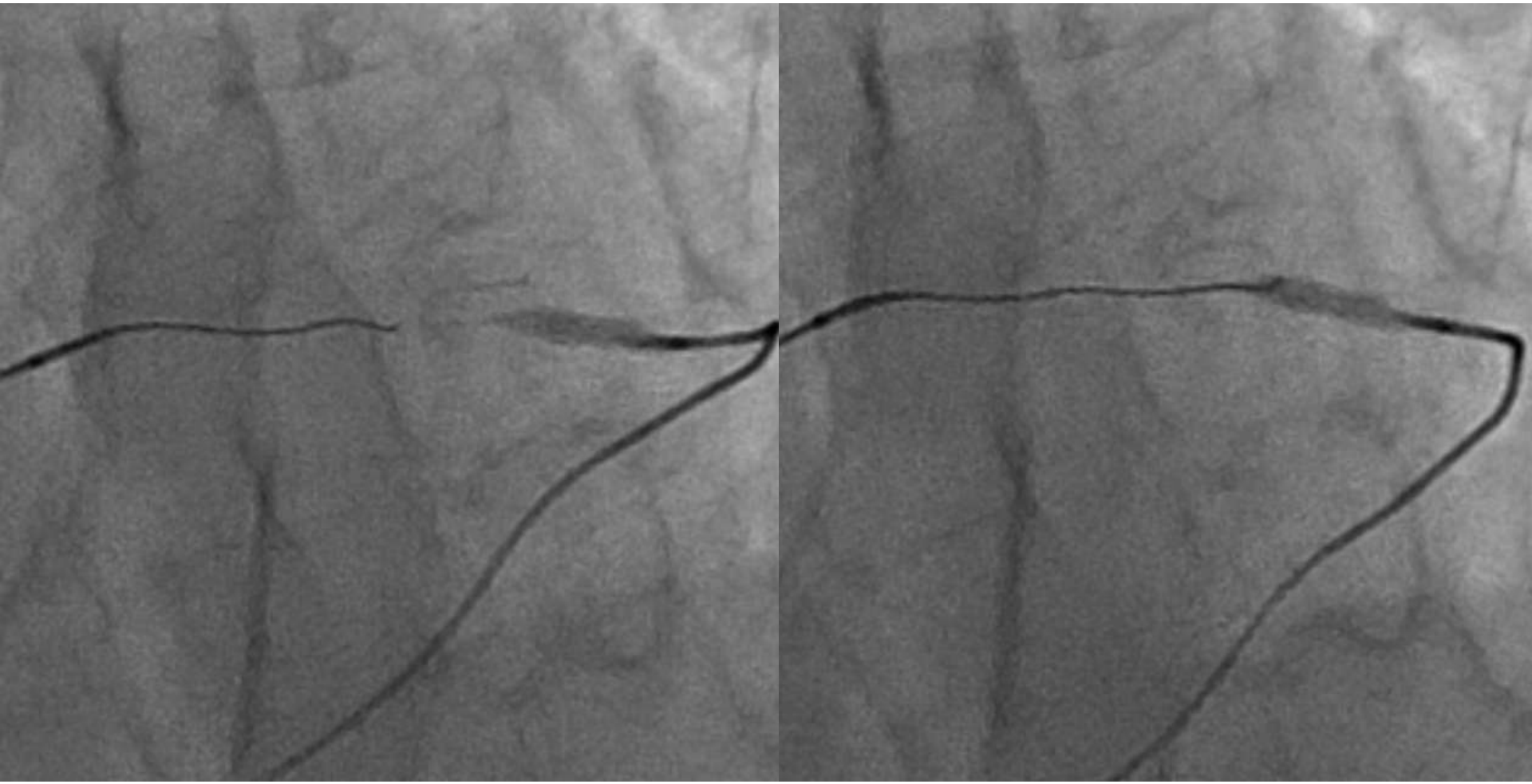
Guide wire to the subintima



Epicardial collateral

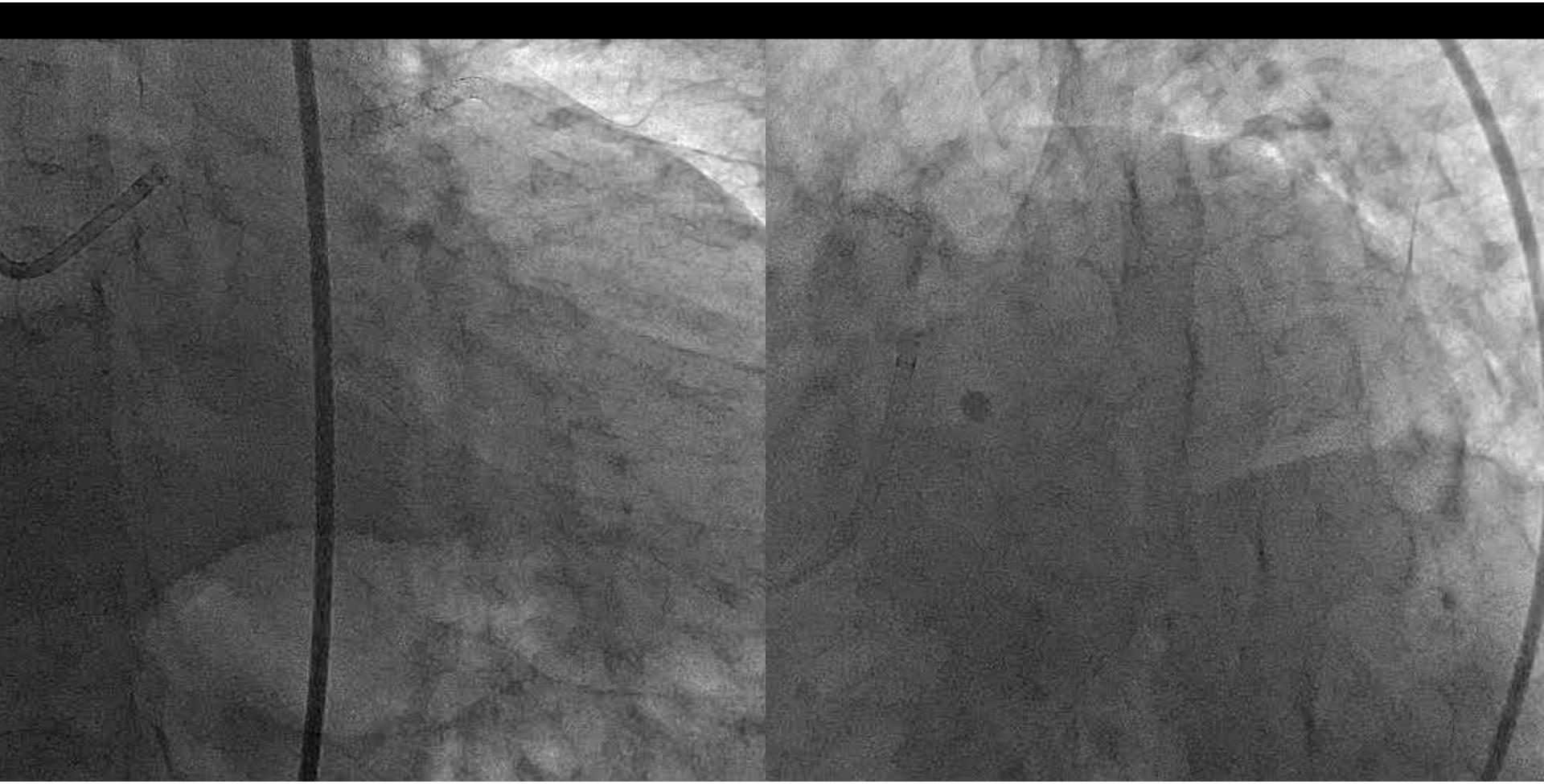


Control antegrade wire



Tip injection from retrograde Corsair

Final angiograms



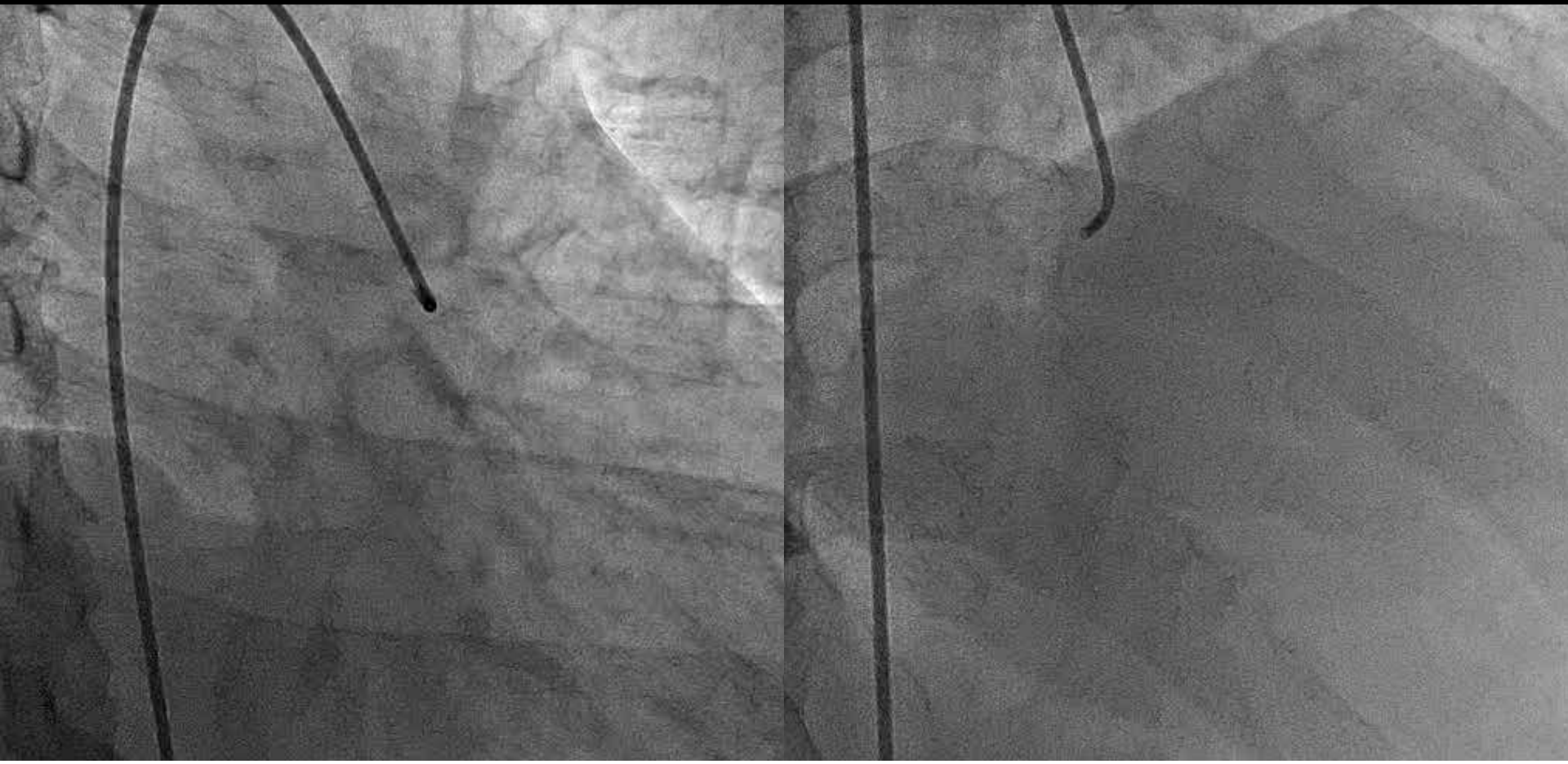
Micro catheters in this case

Two different micro catheters were used

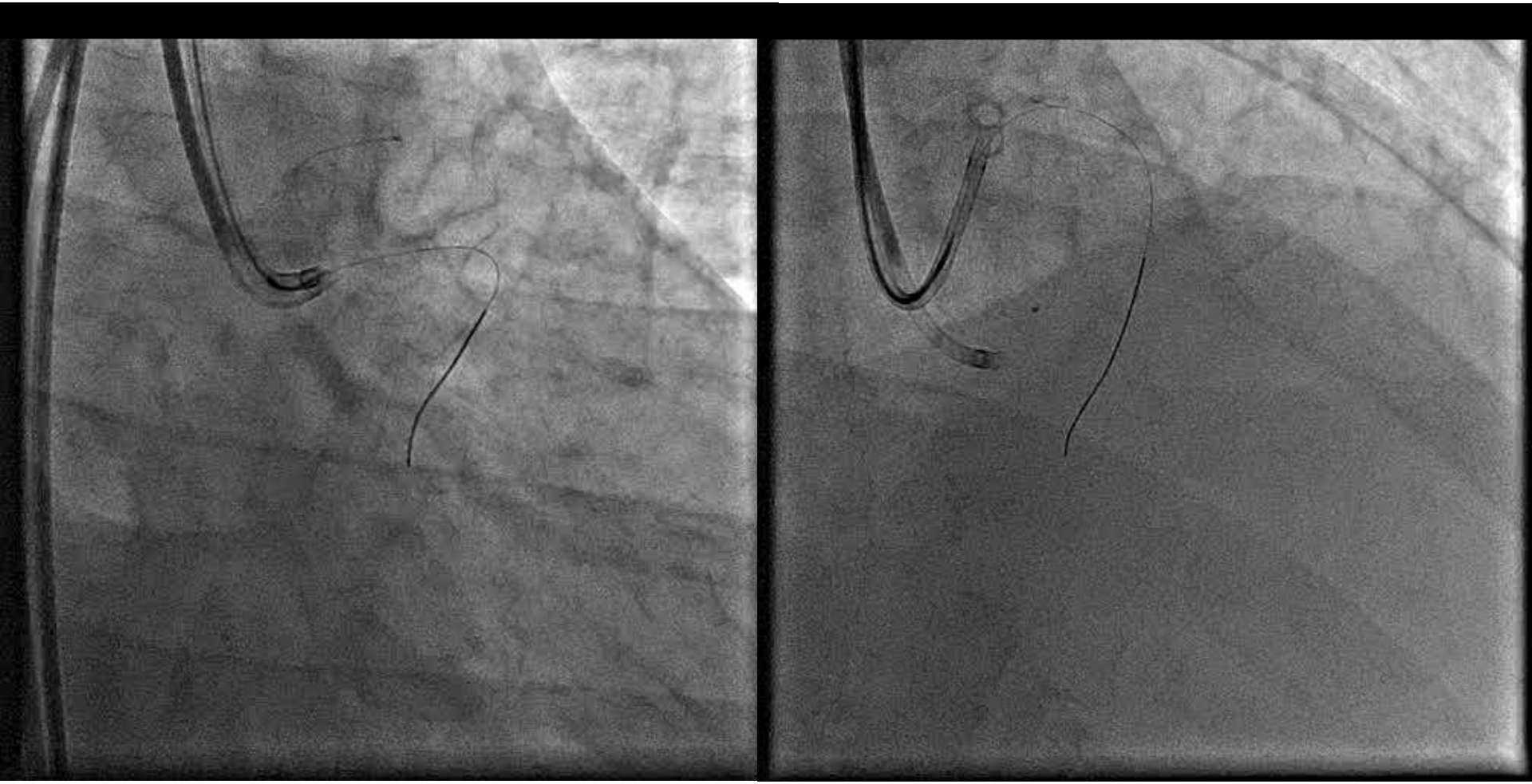
- Crusade was used to stabilize micro catheter position and enhance wire manipulation.
- Channel crossing was achieved via a driving force of Corsair.
- Tip injection from retrograde Corsair can clearly delineate distal end of CTO.
- Antegrade wiring was re-facilitated by using Corsair.

LAD CTO

Collateral from RCA

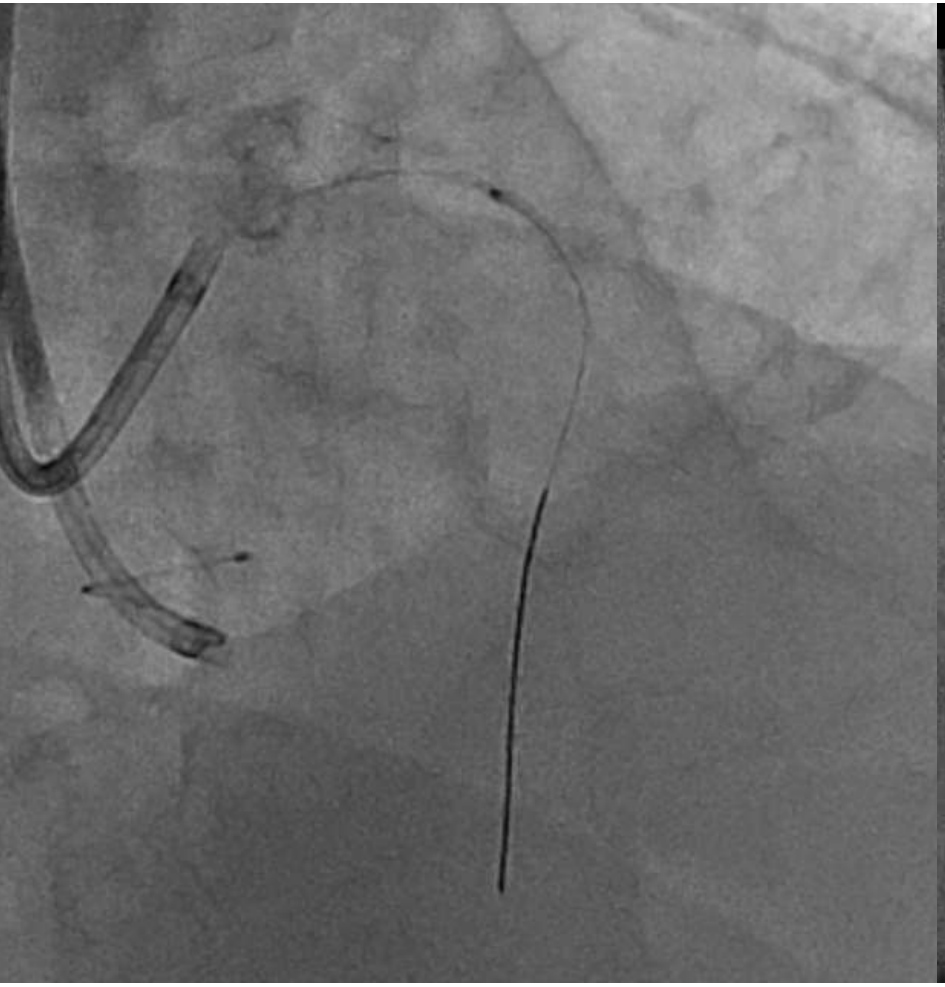


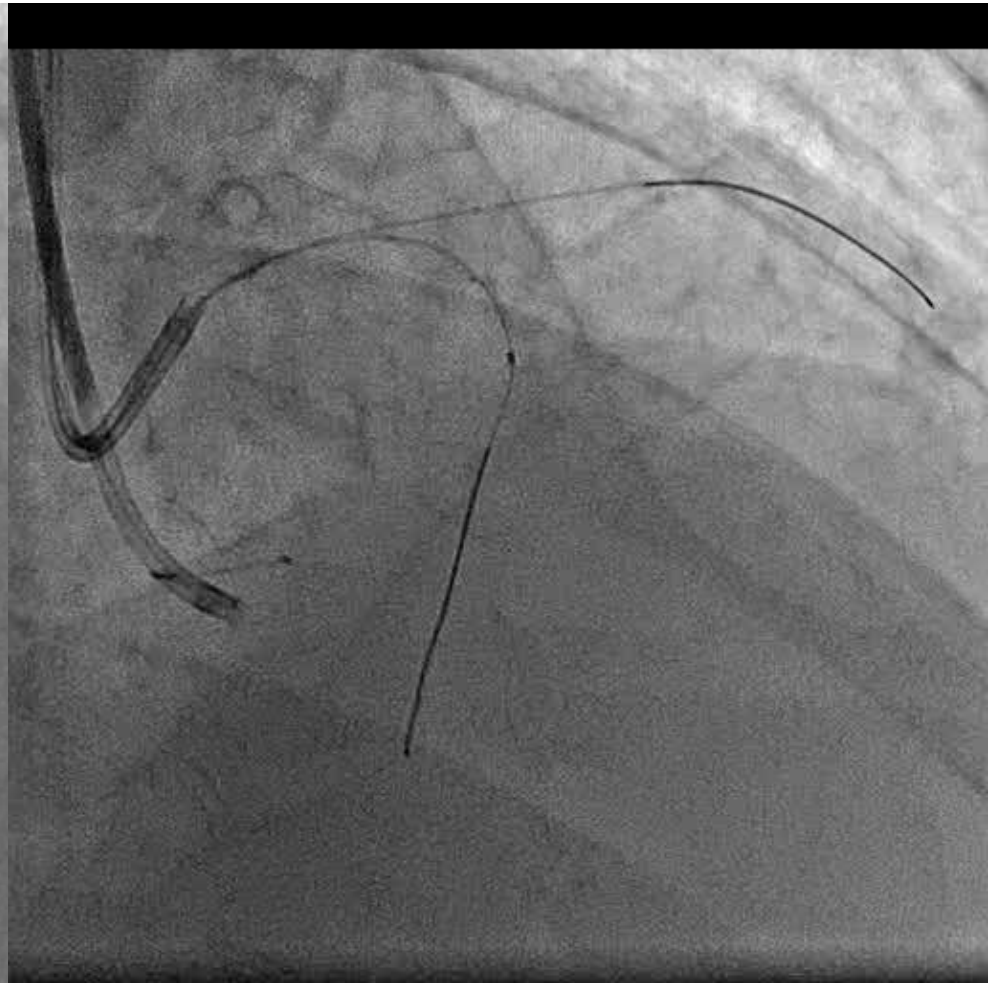
Wire to the septal branch



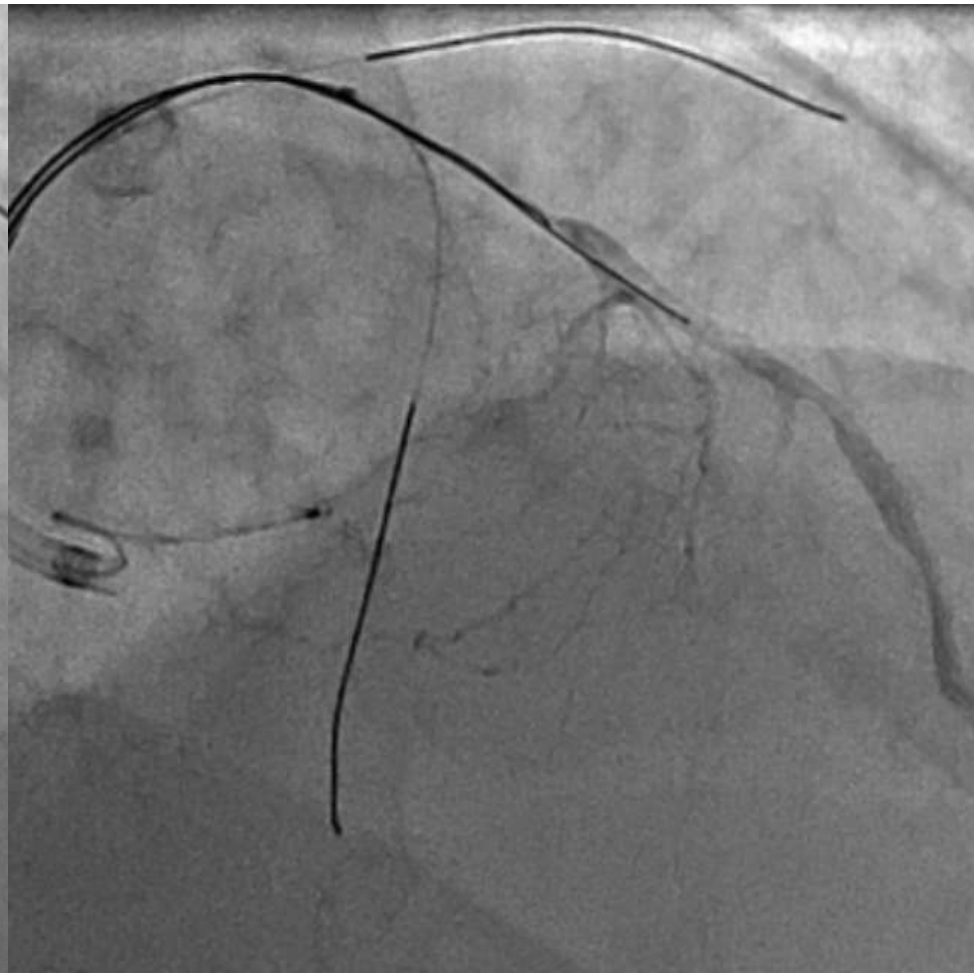
Tip injection via a Finecross advanced in the conus branch

Injection via a second lumen of Crusade

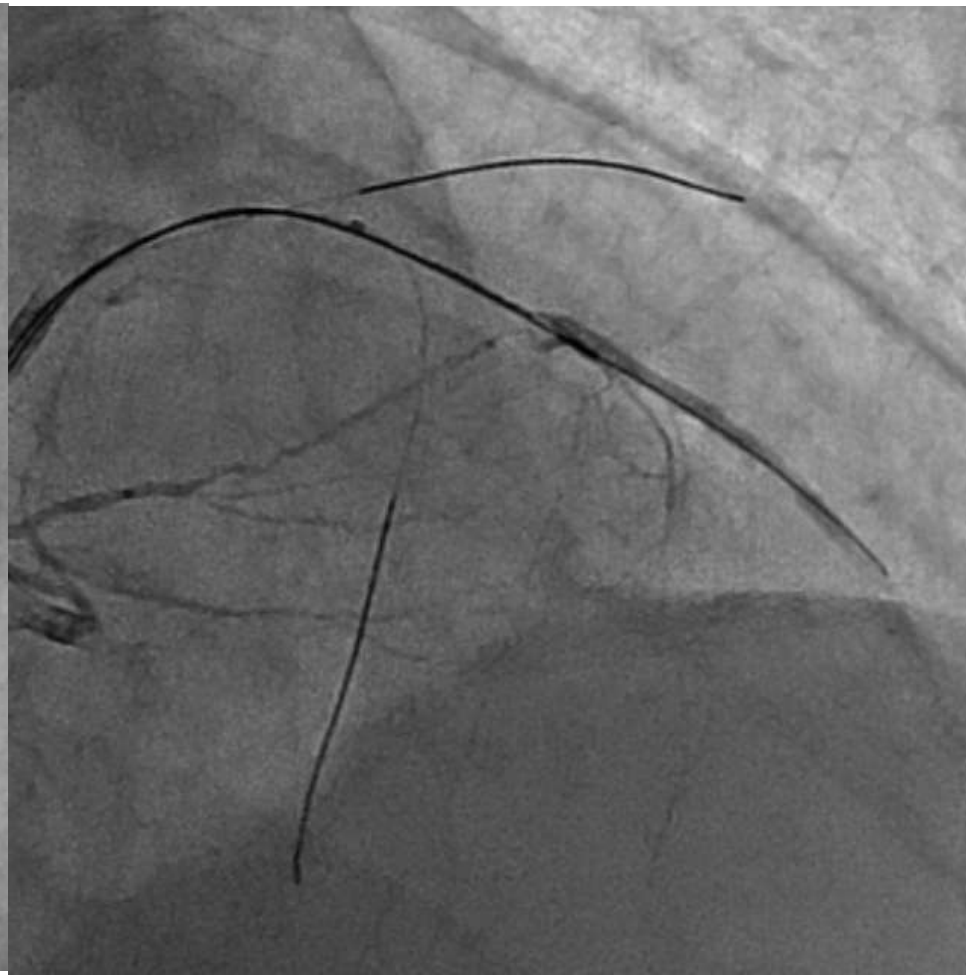




Parallel wiring



Crossing the lesion



Final angiograms

Micro catheters in this case

Two different micro catheters were used

- A slender micro catheter was used for tip injection from the collateral source to reduce the amount of contrast media.
- Tip injection clearly show the distal exit of CTO.
- Contrast injection via a second lumen of Crusade was useful to determine the entry point of CTO.
- Coaxial alignment between two wires which was established by using Crusade can facilitate parallel wire technique.

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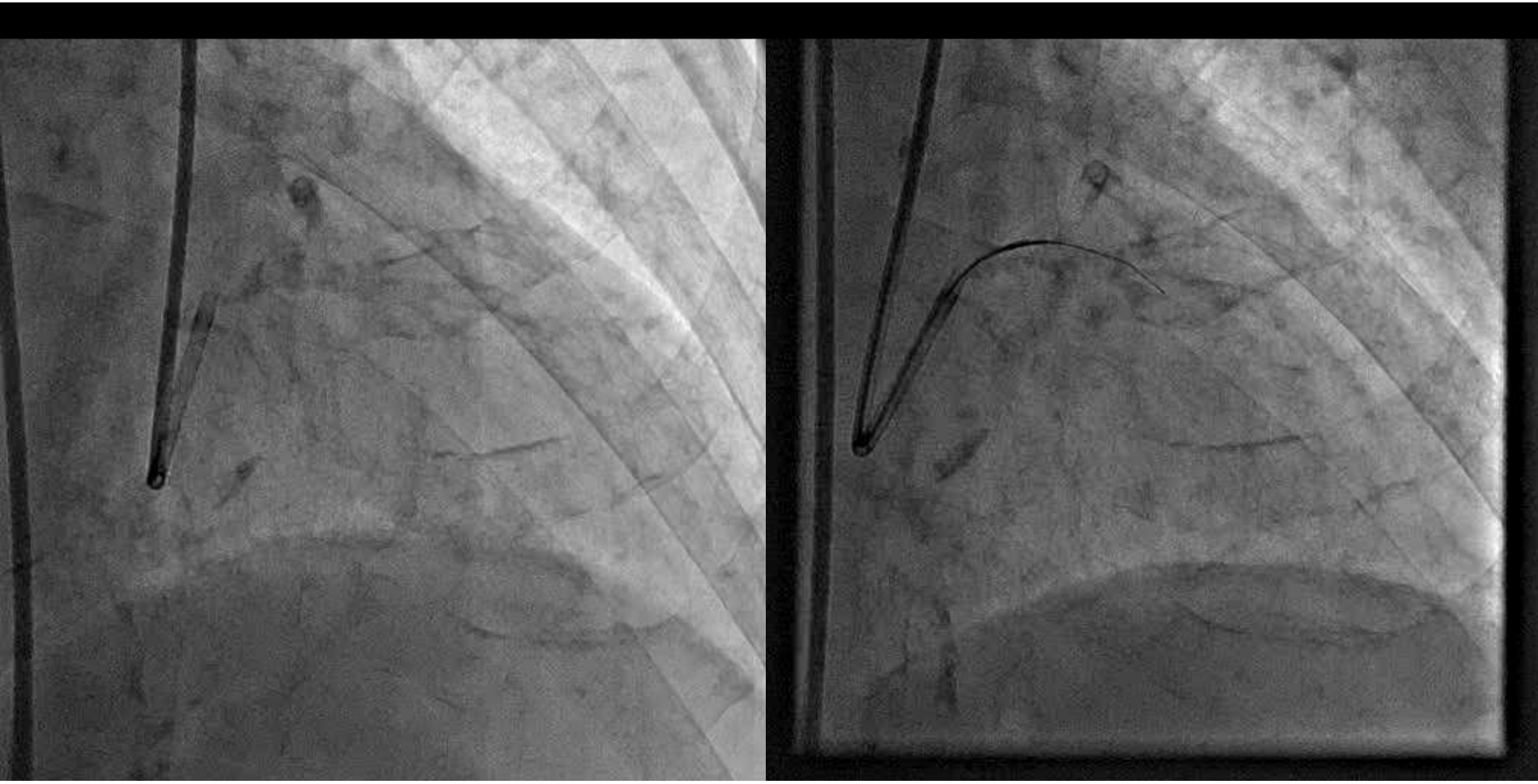
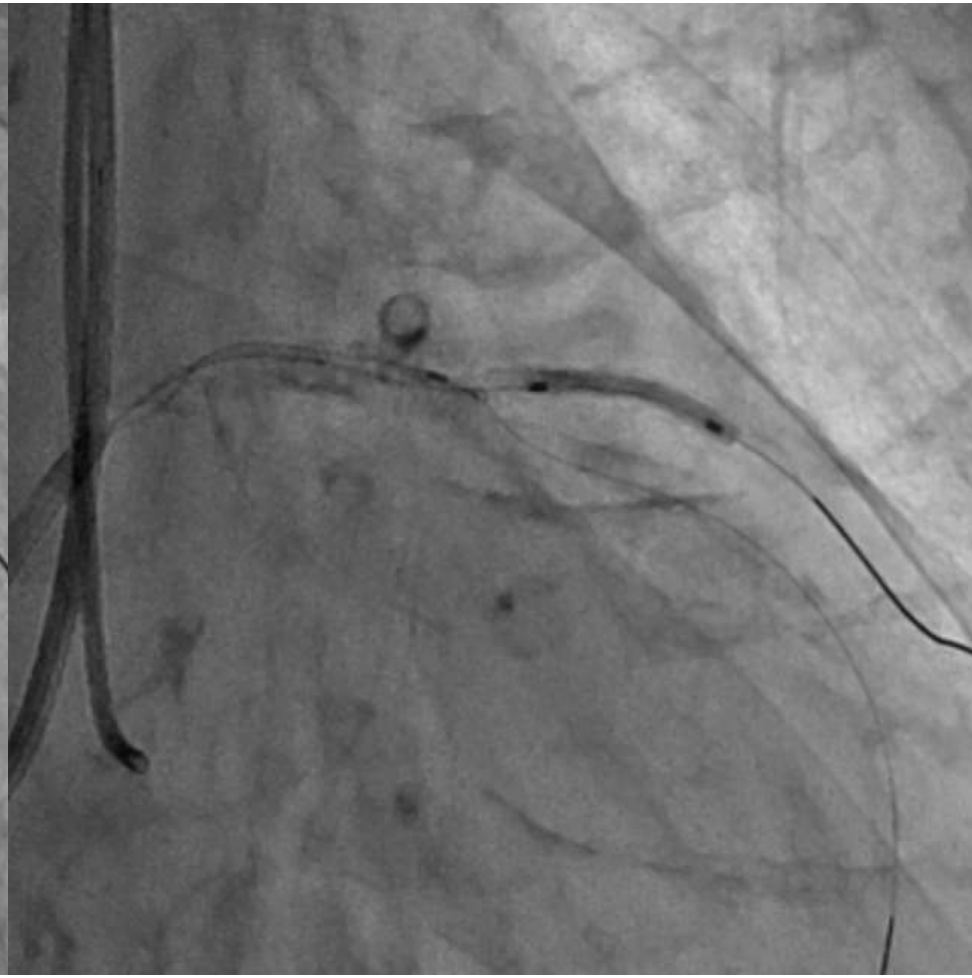
LAD CTO

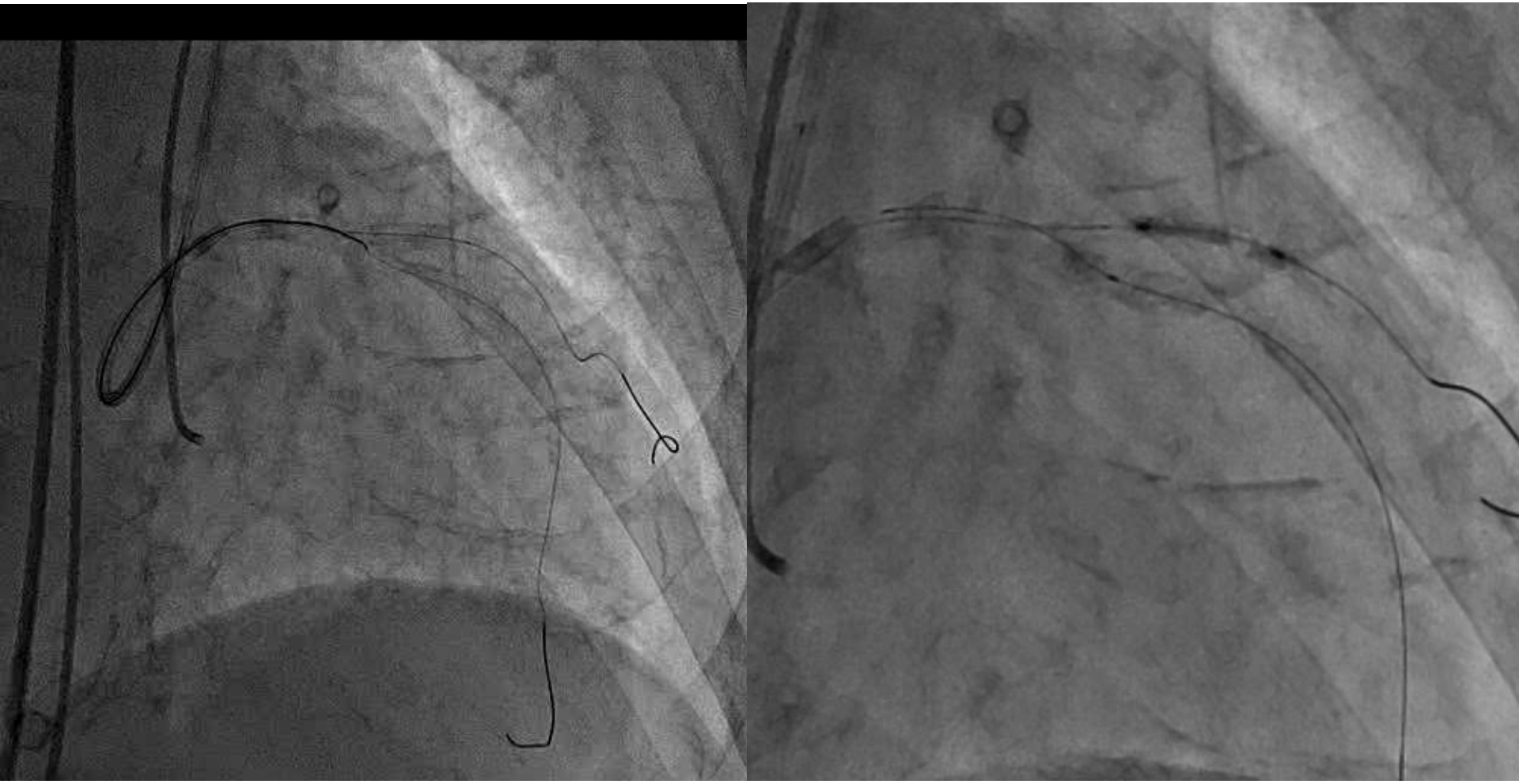


Micro channel in the CTO

Device cannot cross

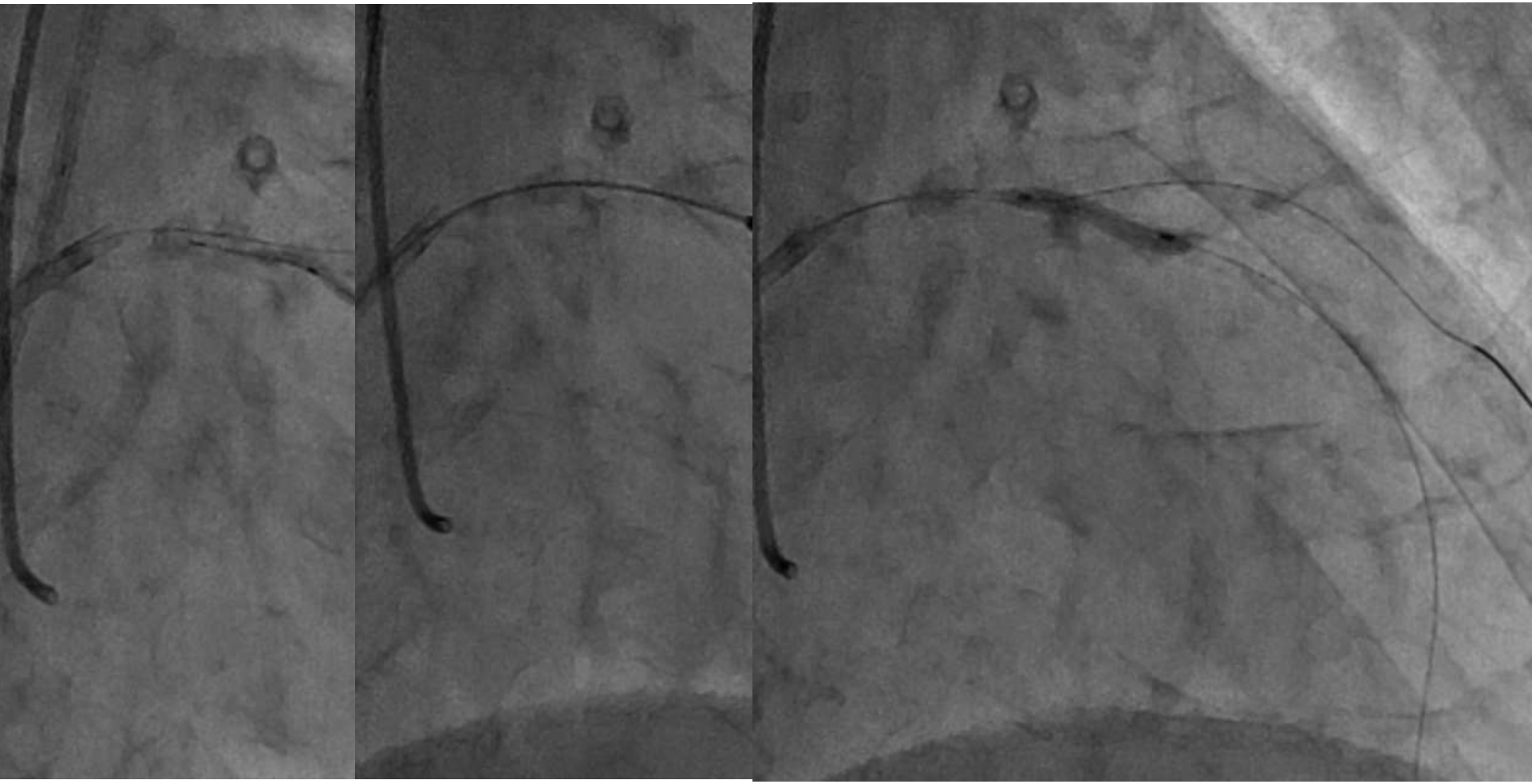


Plaque cracking

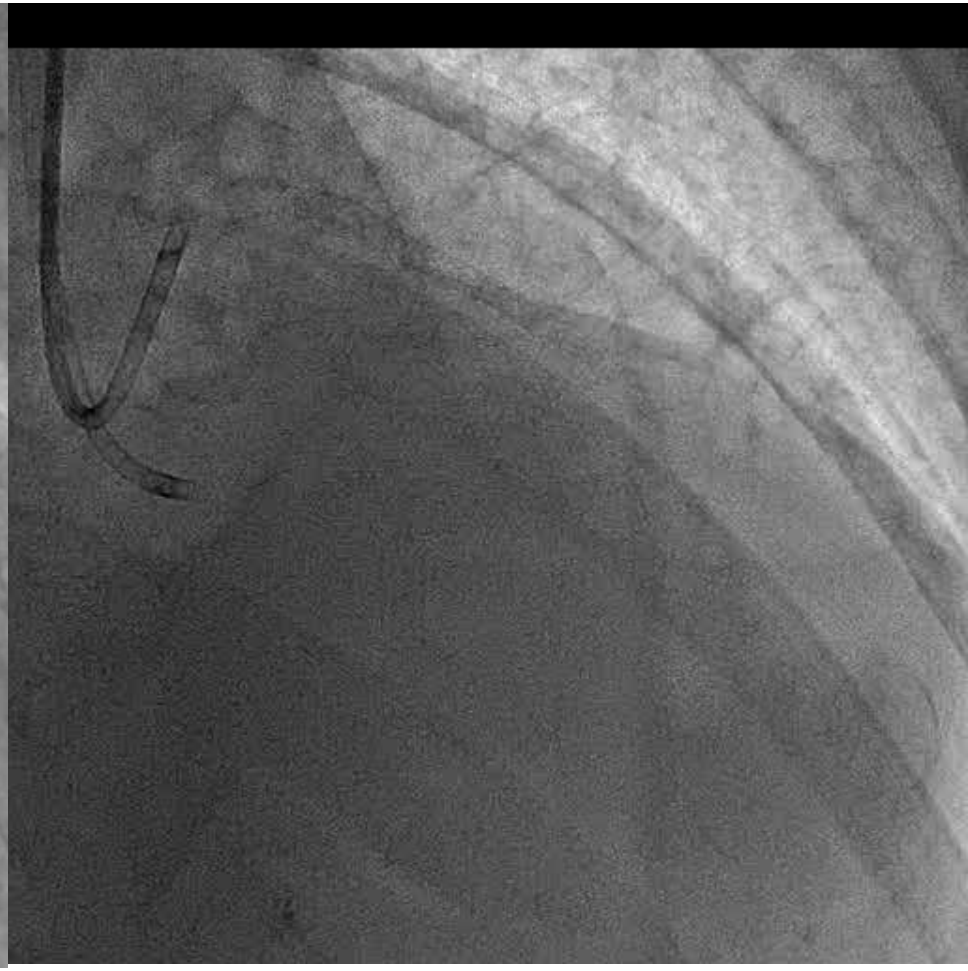


Miracle 12 supported by Crusade

Device cross



Stenting and final angiogram



Tips in this case

- In severe hard lesion, small balloon, anchor balloon, Tornus, anchor Tornus and mother-child method, all measures are sometimes unsuccessful.
- Exchange CTO wire to rotawire via a micro catheter beeing inserted as far as possible to the lesion will be successful, however it has a risk to lose true lumen.
- Plaque cracking by using a miracle 12 under the coaxial support via a Crusade is one of the possible methods to overcome this difficult situation .

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Conclusions

- Every support device has unique characteristics.
- Making good use of these devices could improve success in CTO PCI further.
- Comprehension of structure and characteristics of these devices are good help in using them.