How would you treat Complex Lesion?

Efficacy of Ultimaster in CTO PCI

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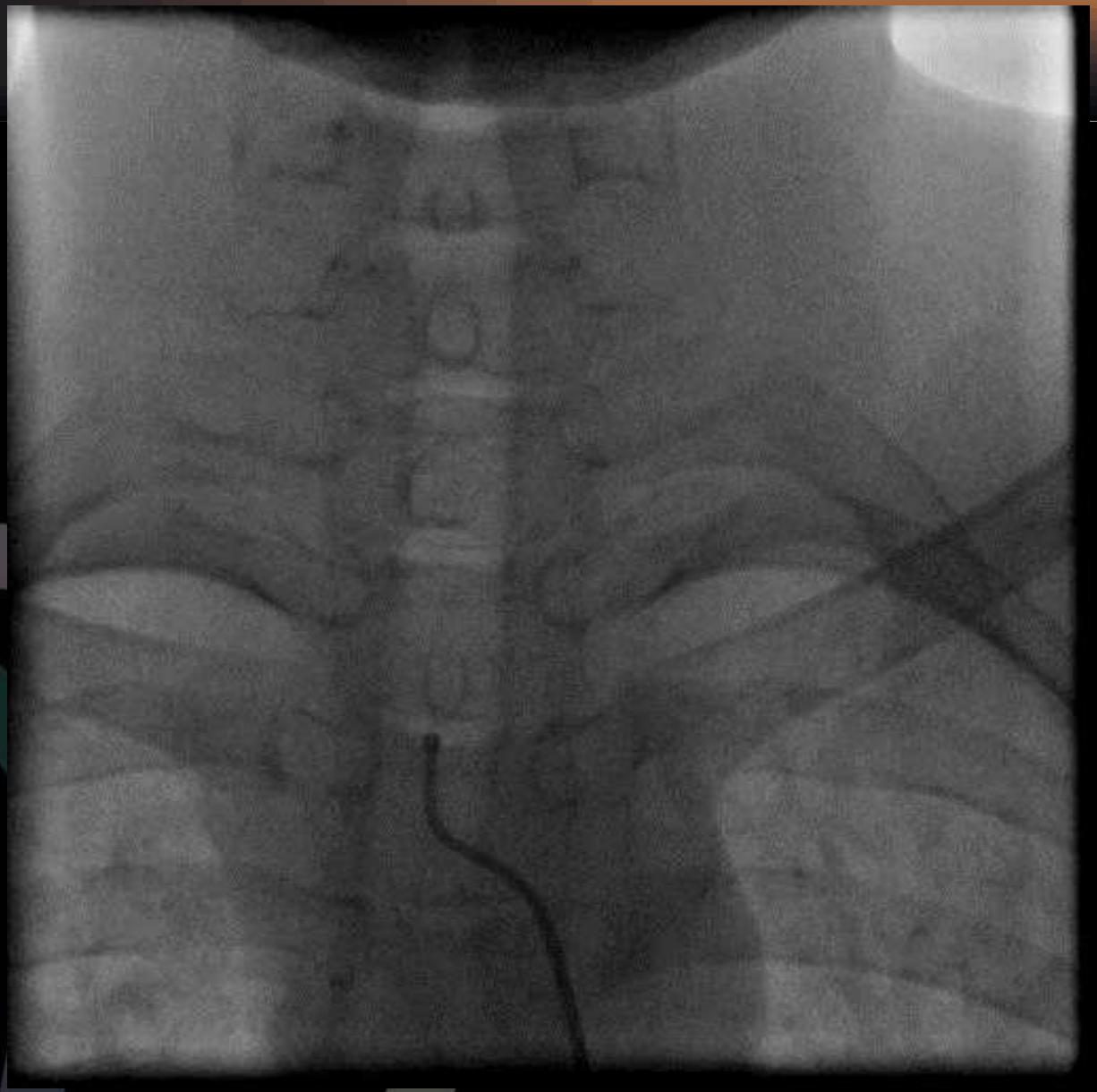
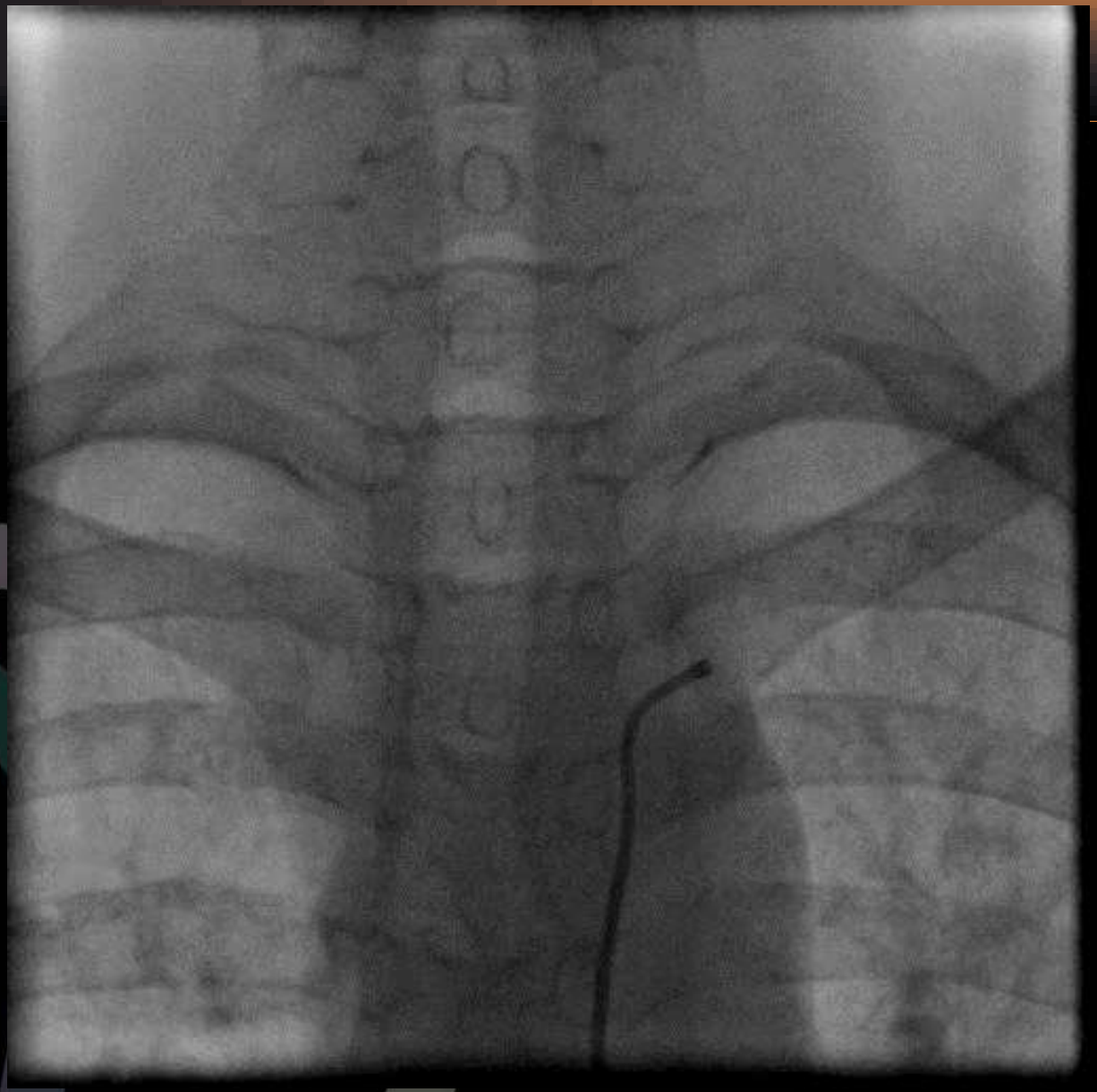
Challenge and Innovation

Case 17y/o Male

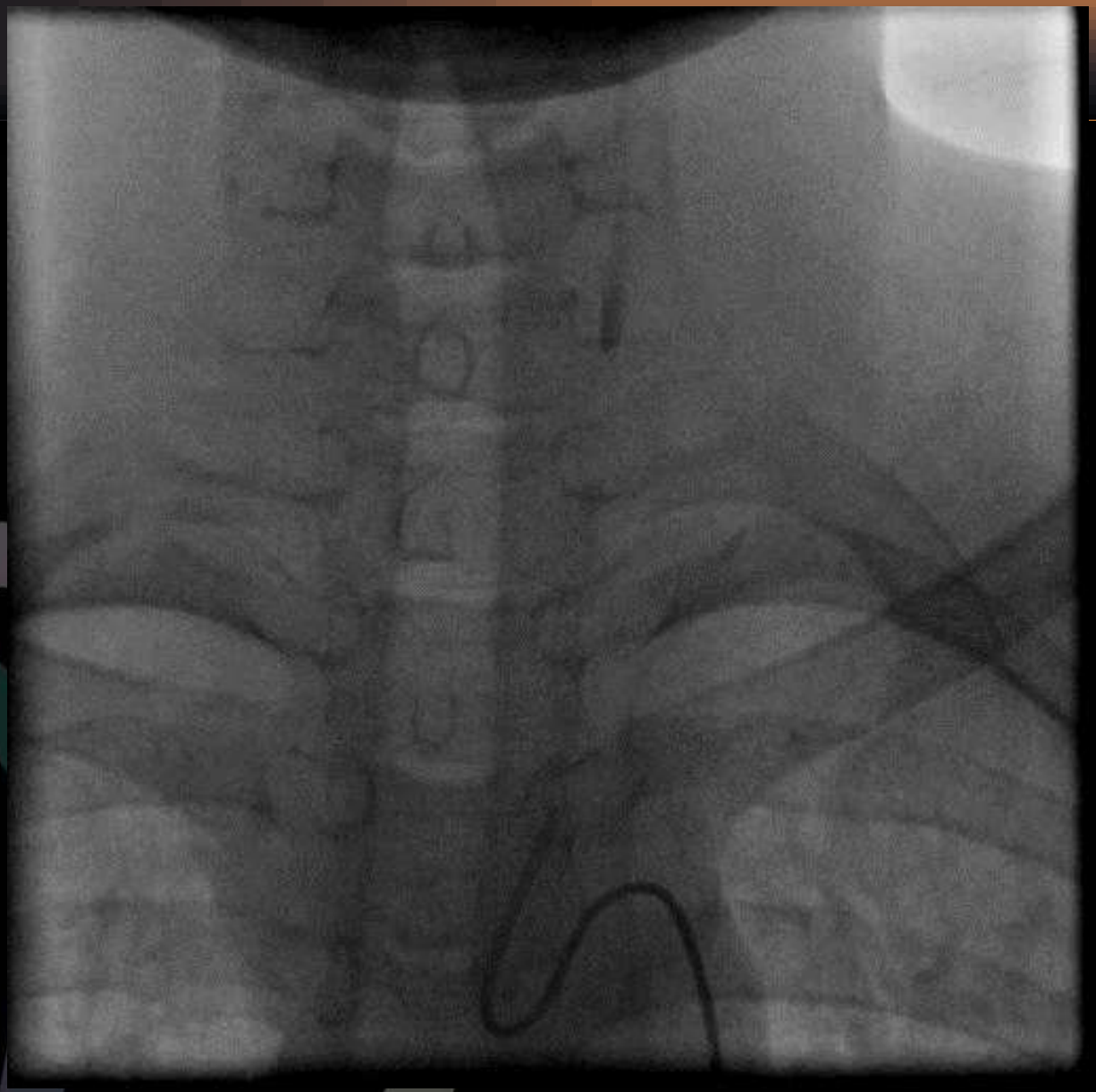
- Diagnosis: AP, TIA, s/o Takayasu's arteritis
- Height 160cm, Weight 40Kg
- EF 50%
- eGFR 158 ml/min/1.73m^2
- Coronary risk factor: none
- Prior intervention: stenting for rt common carotid artery



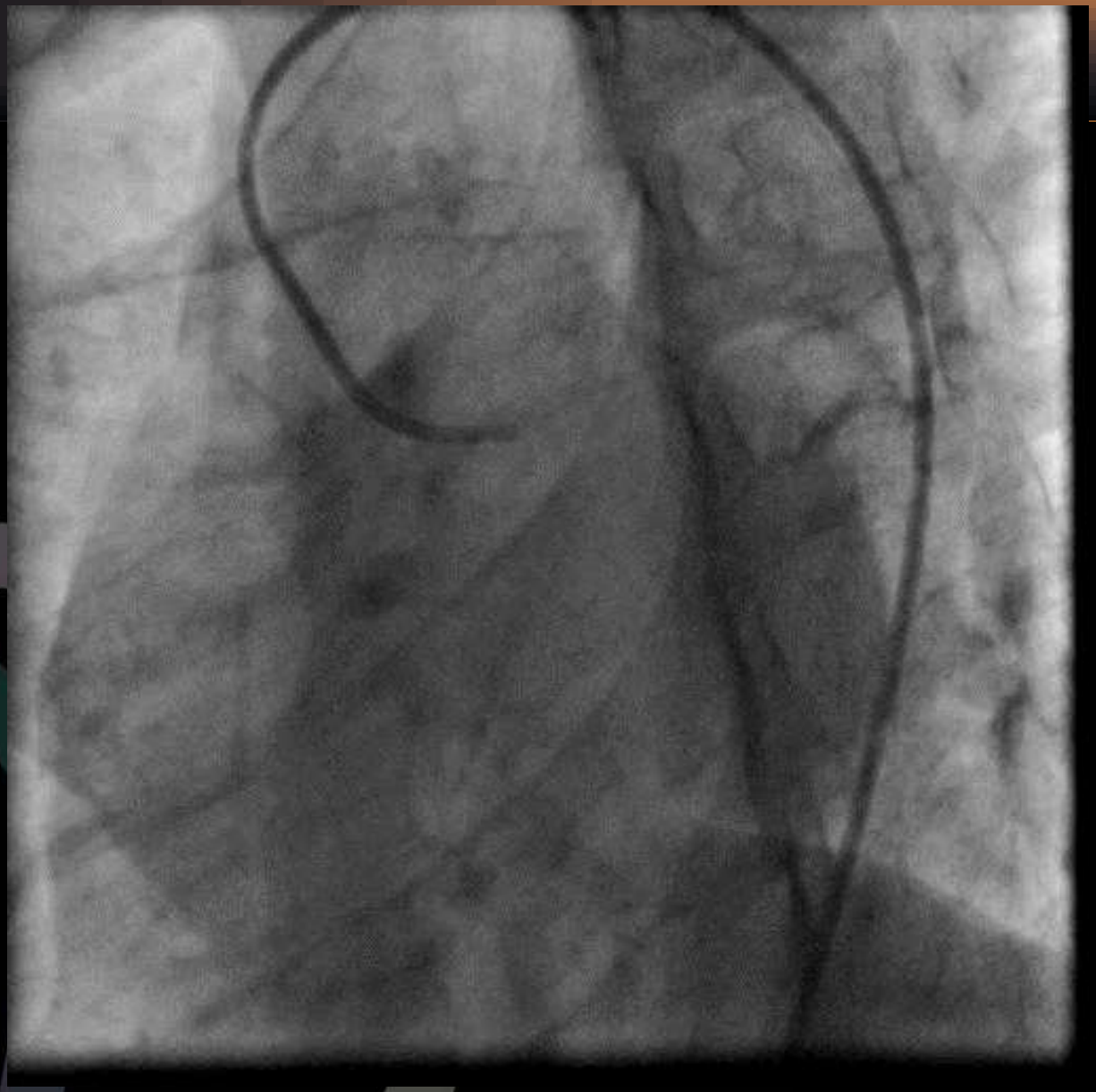
Rt common carotid artery had severe stenosis and rt subclavian artery occluded.
Stenting for rt common carotid artery had done.



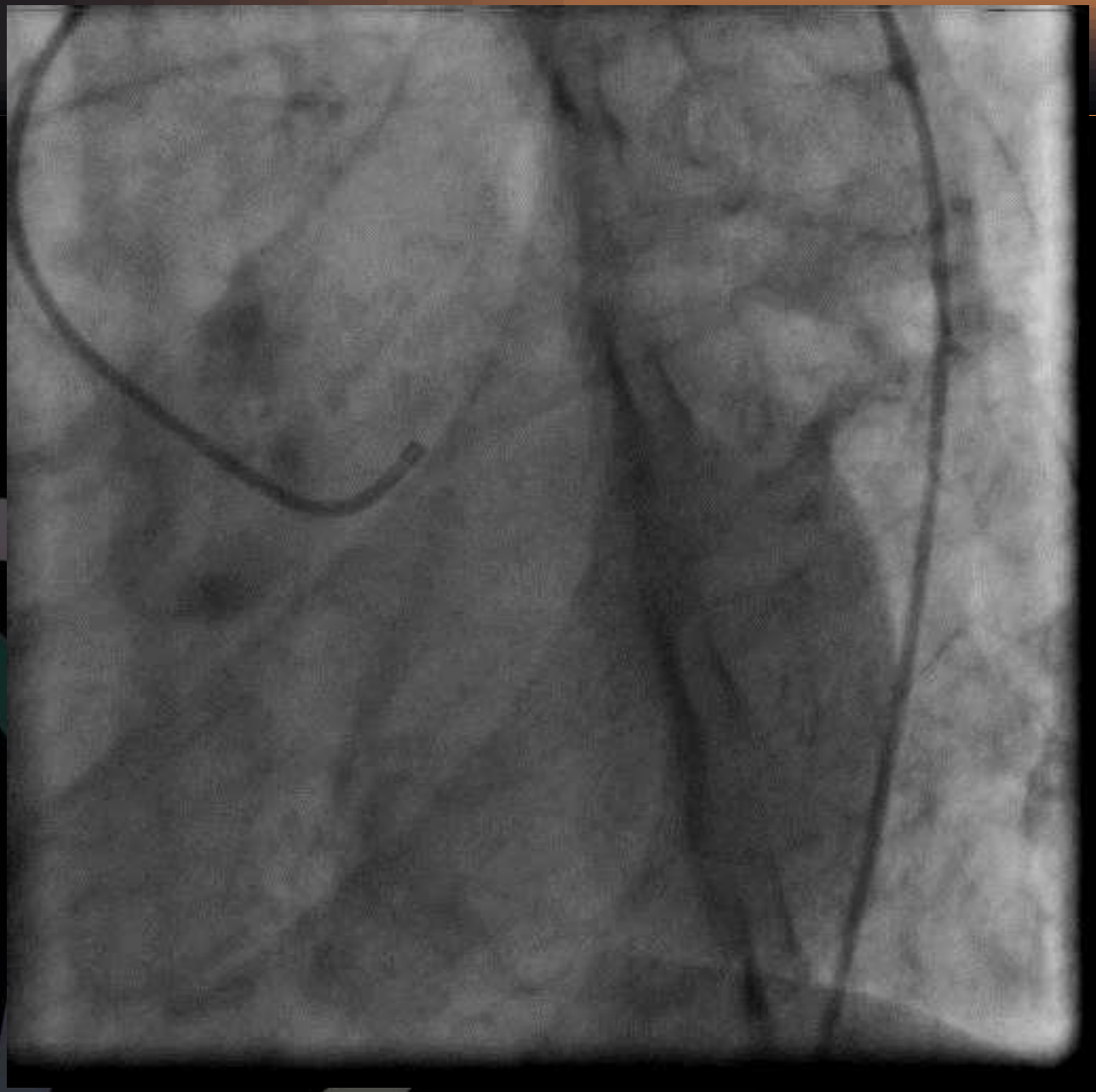
Lt subclavian artery also occluded.

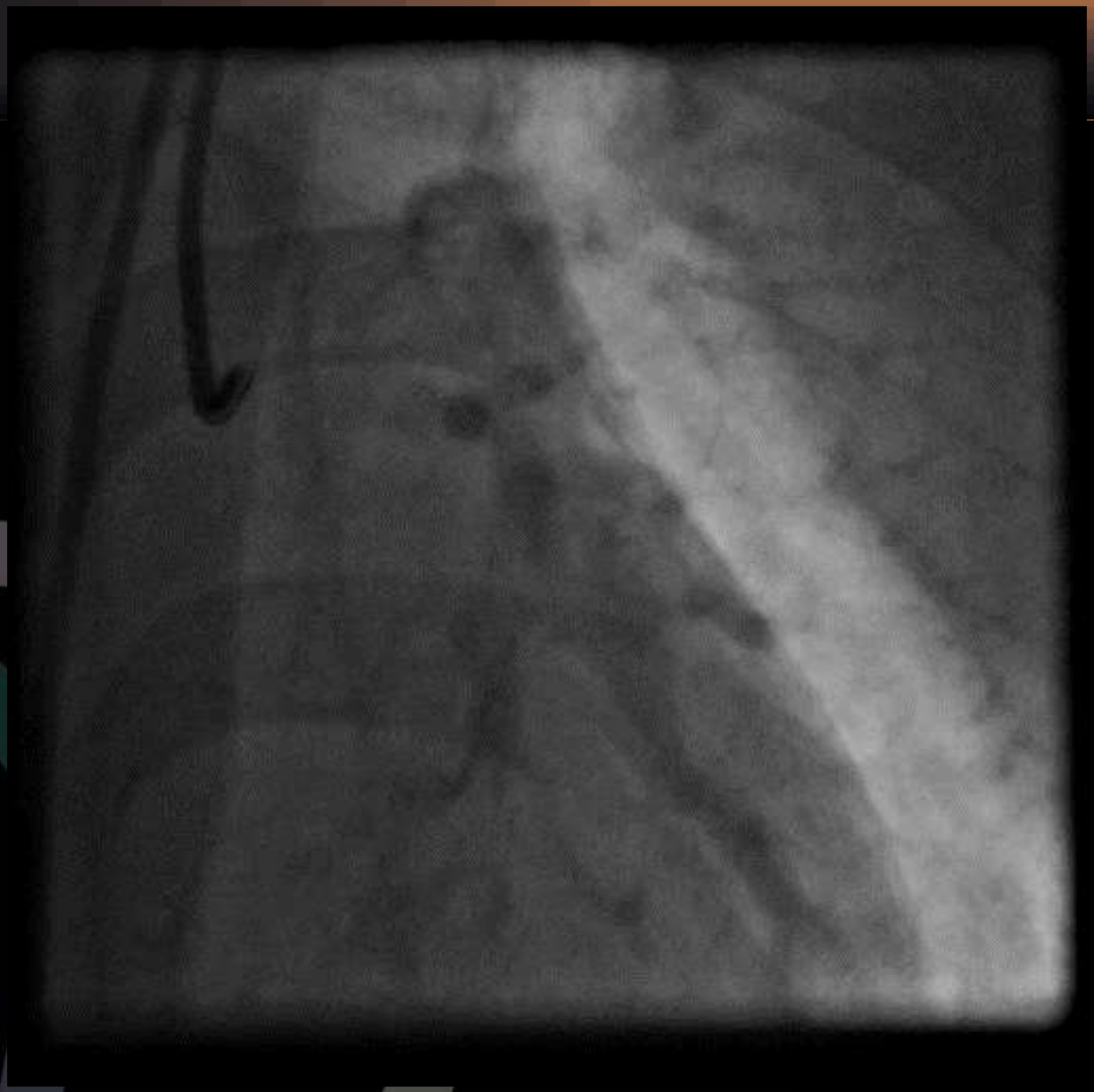


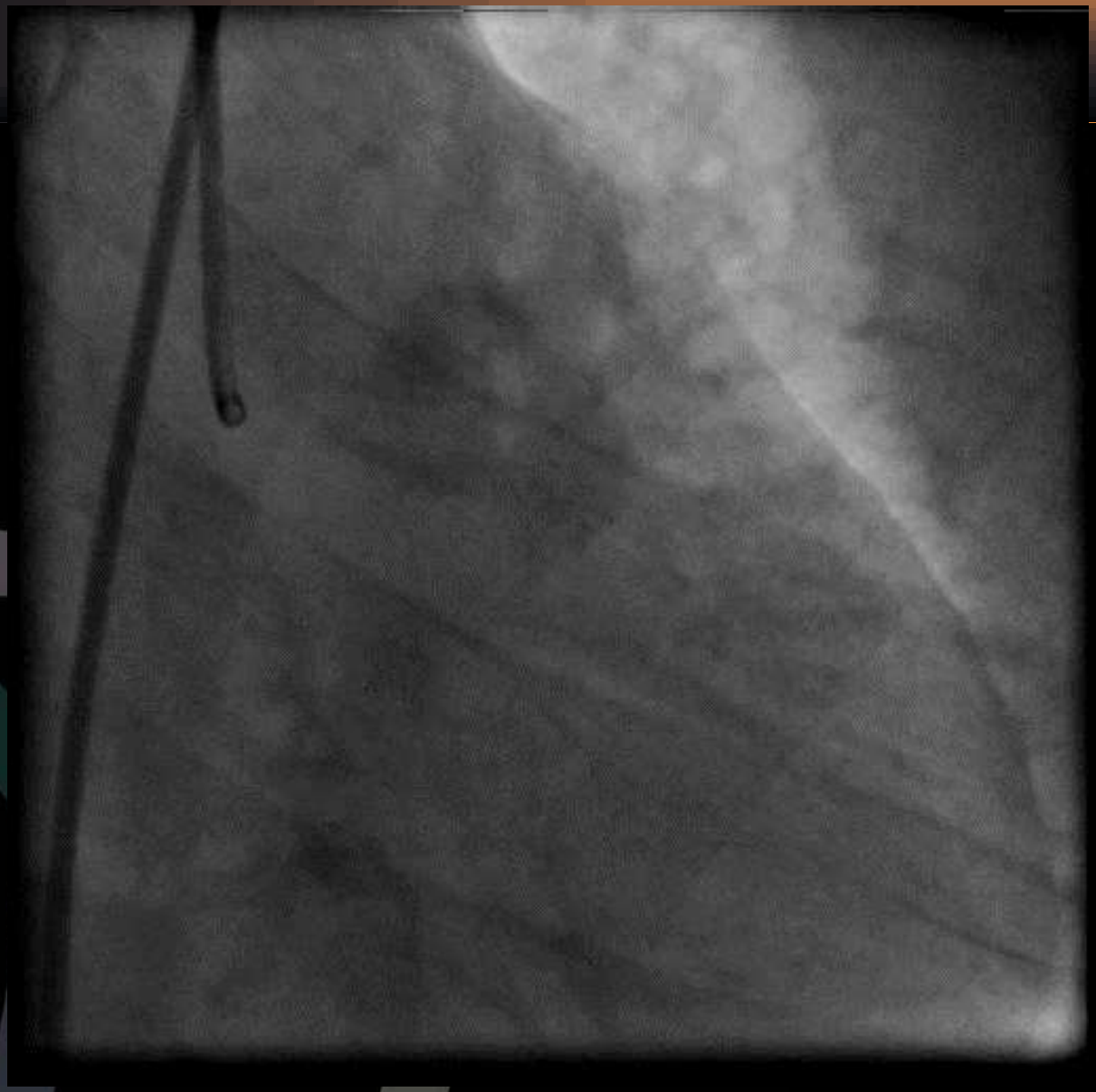
Lt common carotid artery had also severe stenosis.

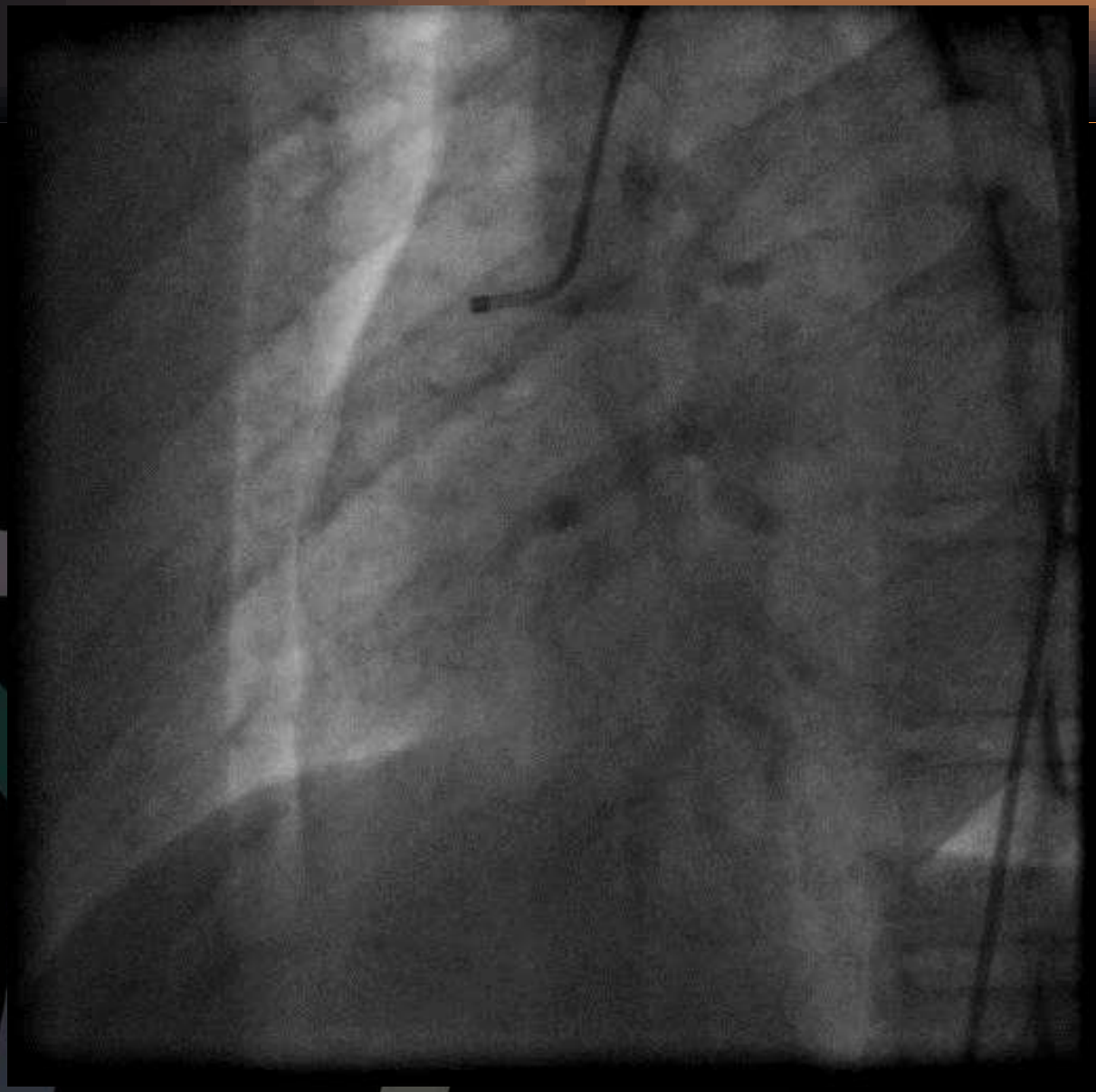


LMT occluded at ostium and bridge collateral to HL branch existed.

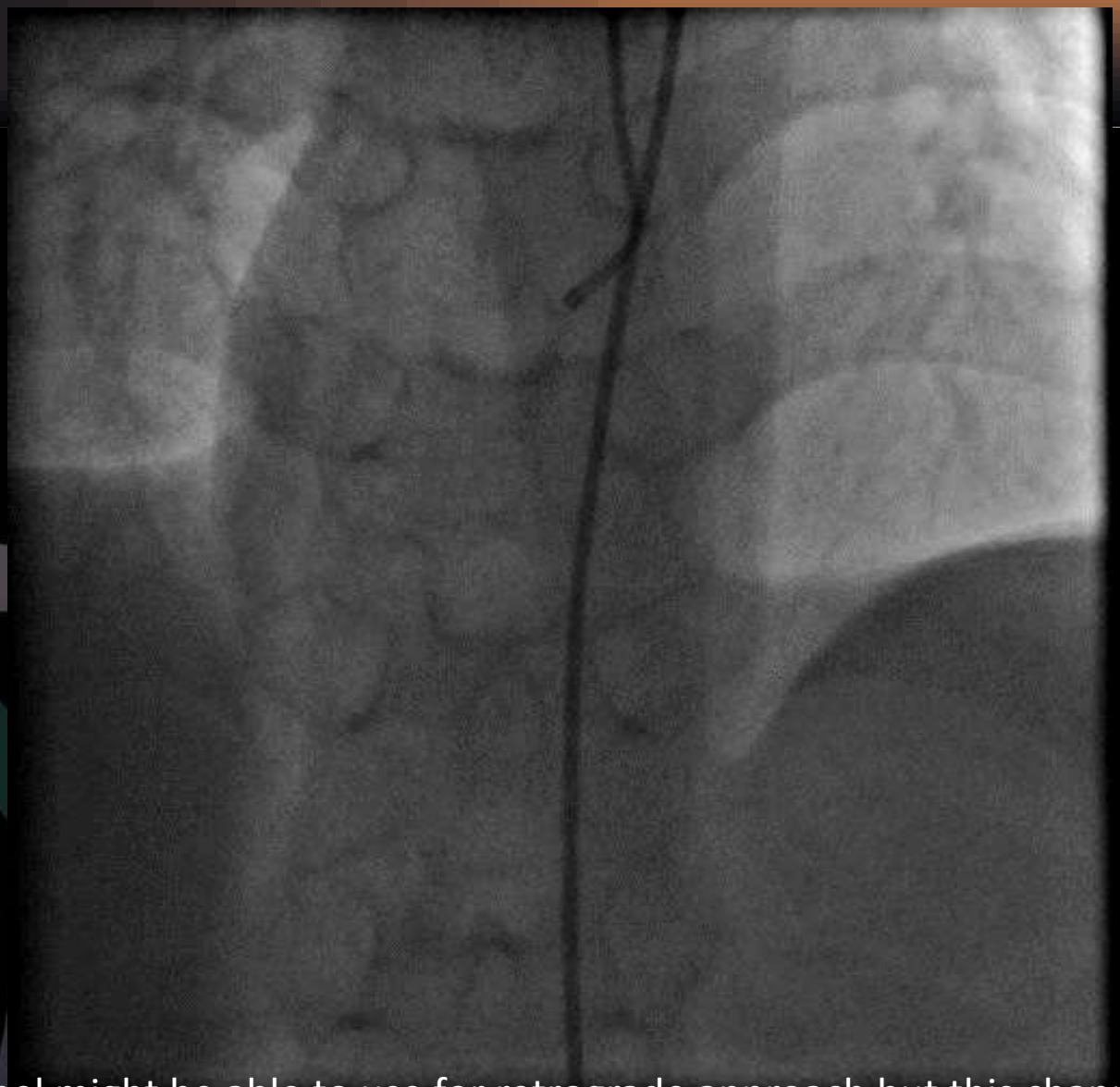




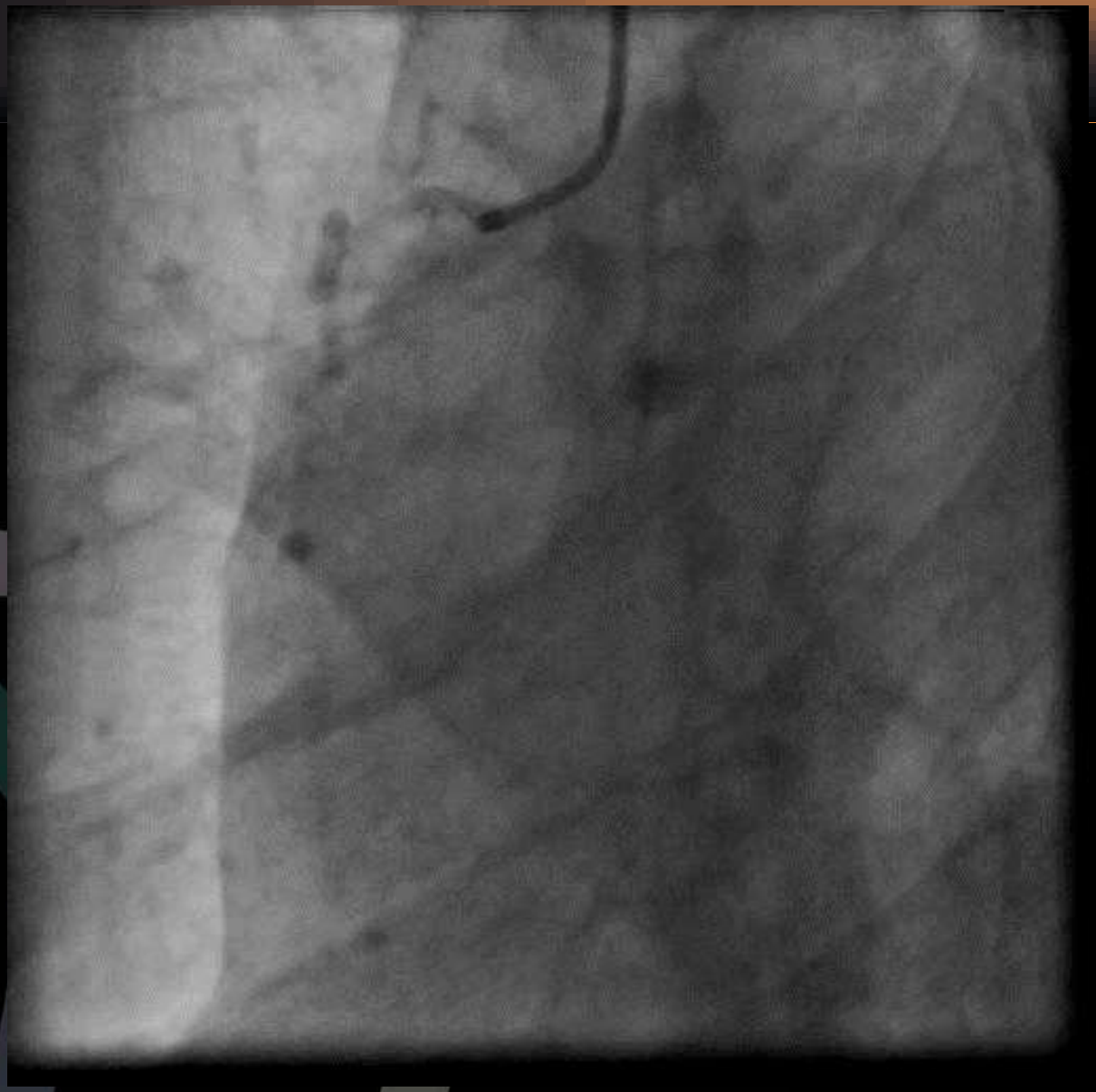




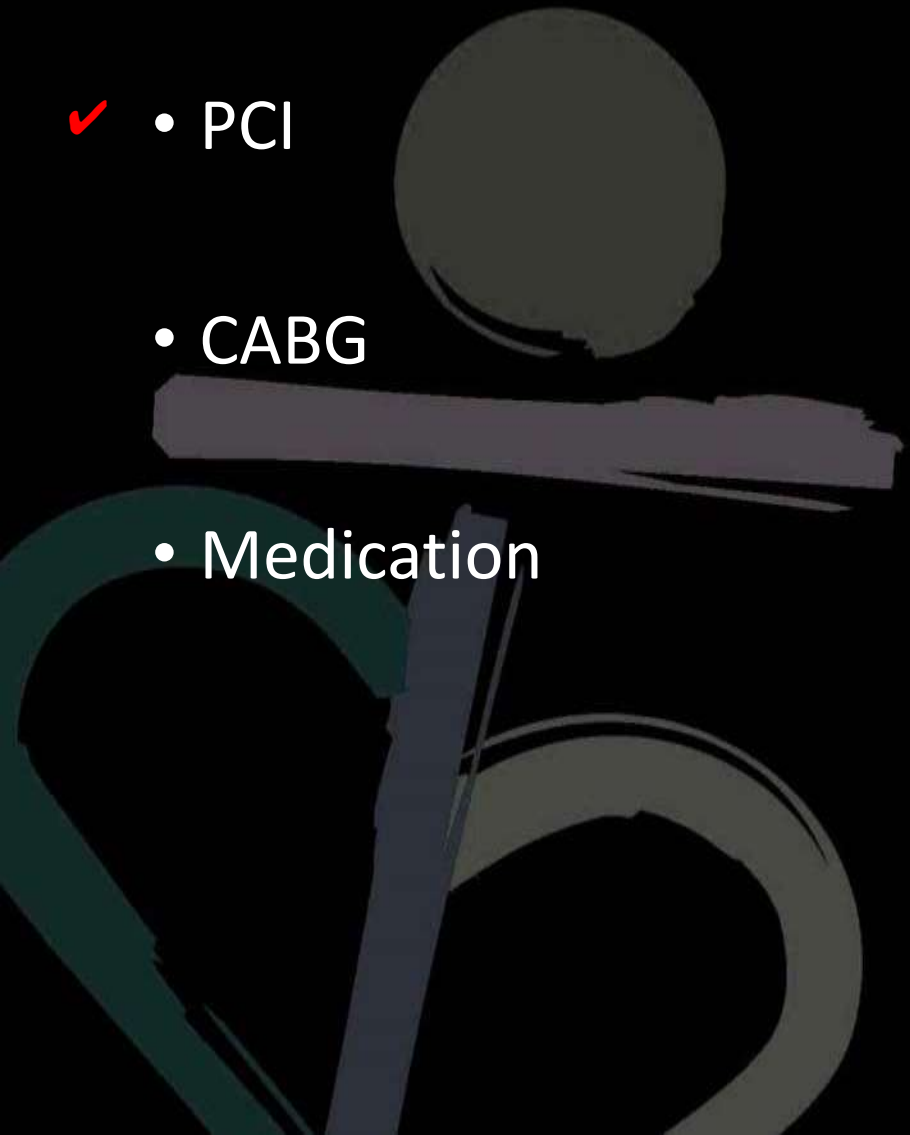
RCAG showed no stenosis and collateral flow to LAD via apex.



Collateral channel might be able to use for retrograde approach but this channel was tortuous. Therefore ischemia due to accordion phenomenon might occur after retrograde channel cross.



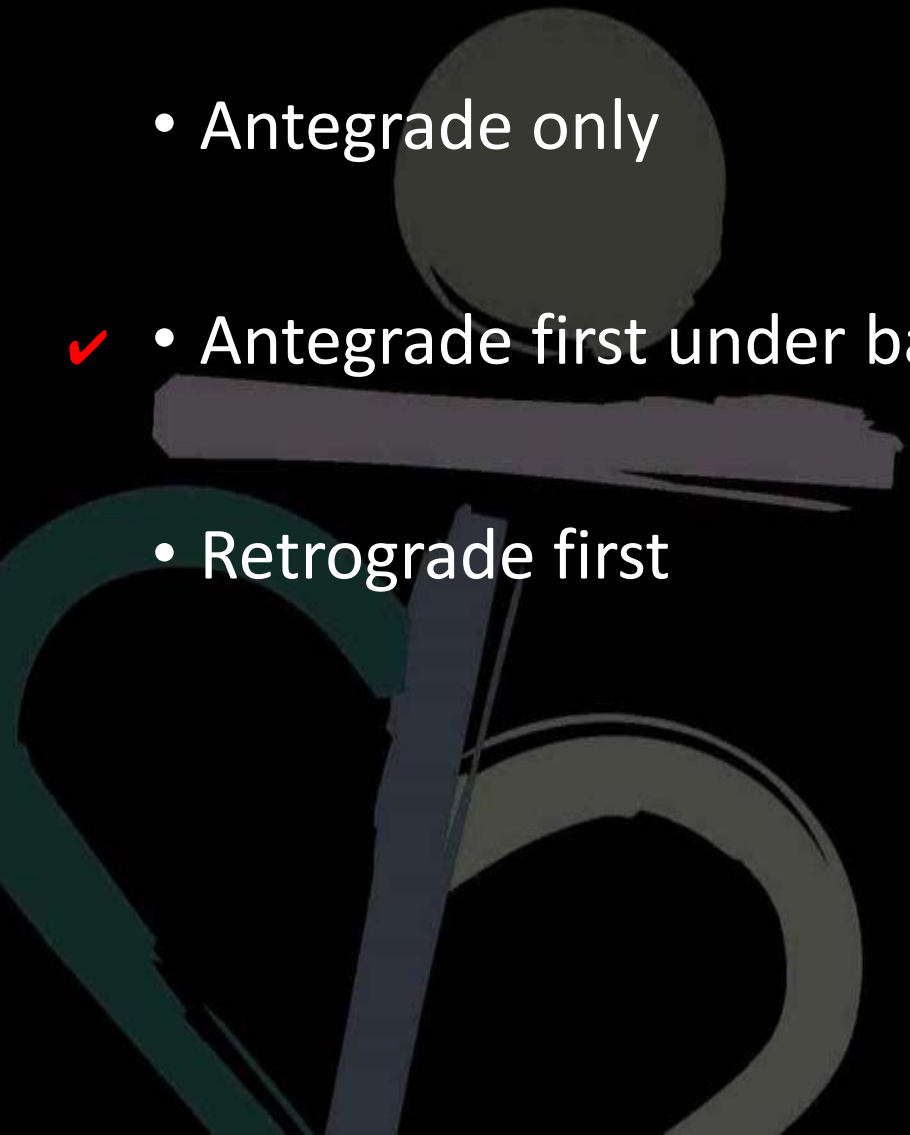
What is your strategy?

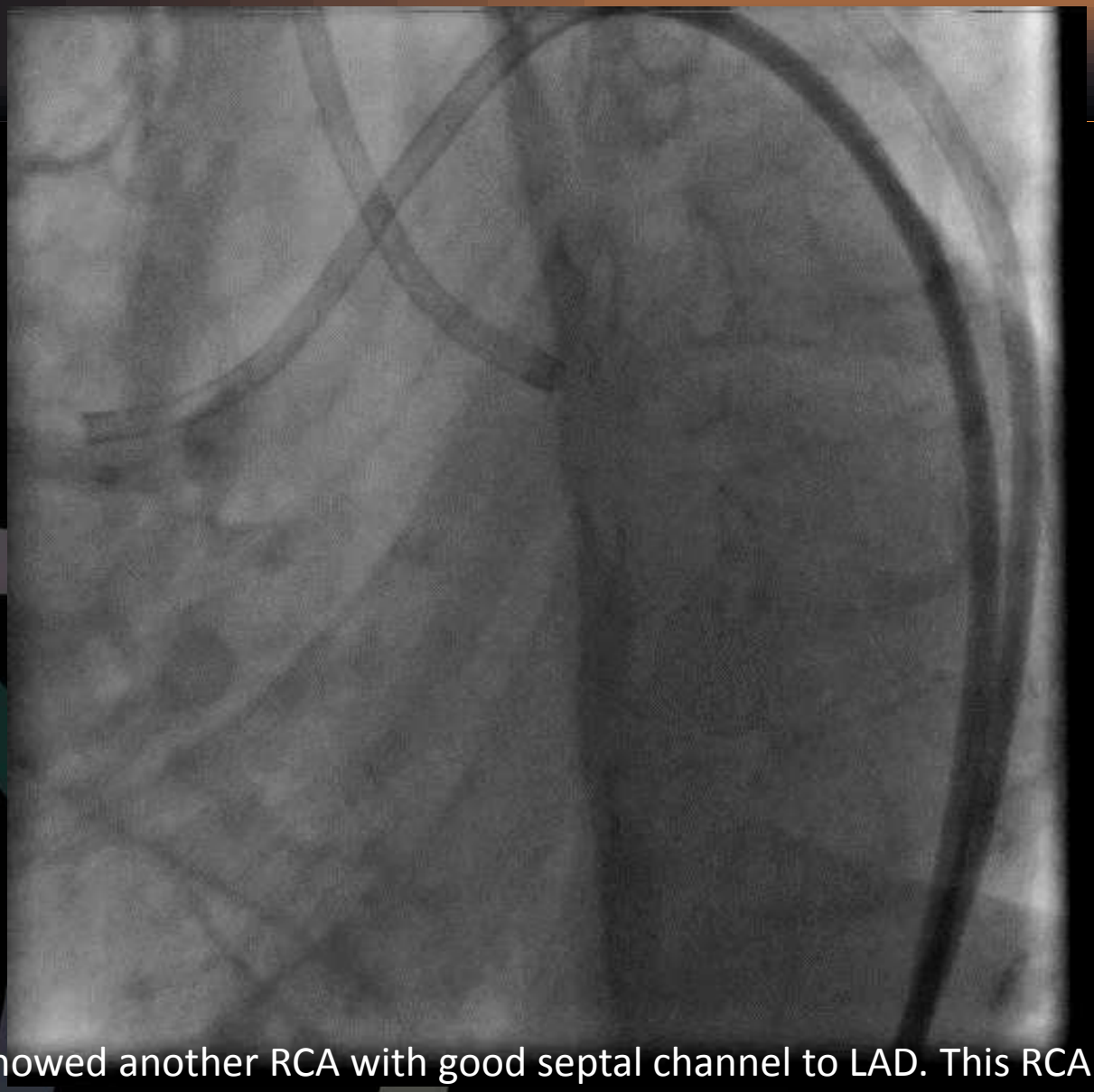


- ✔ PCI
- CABG
- Medication

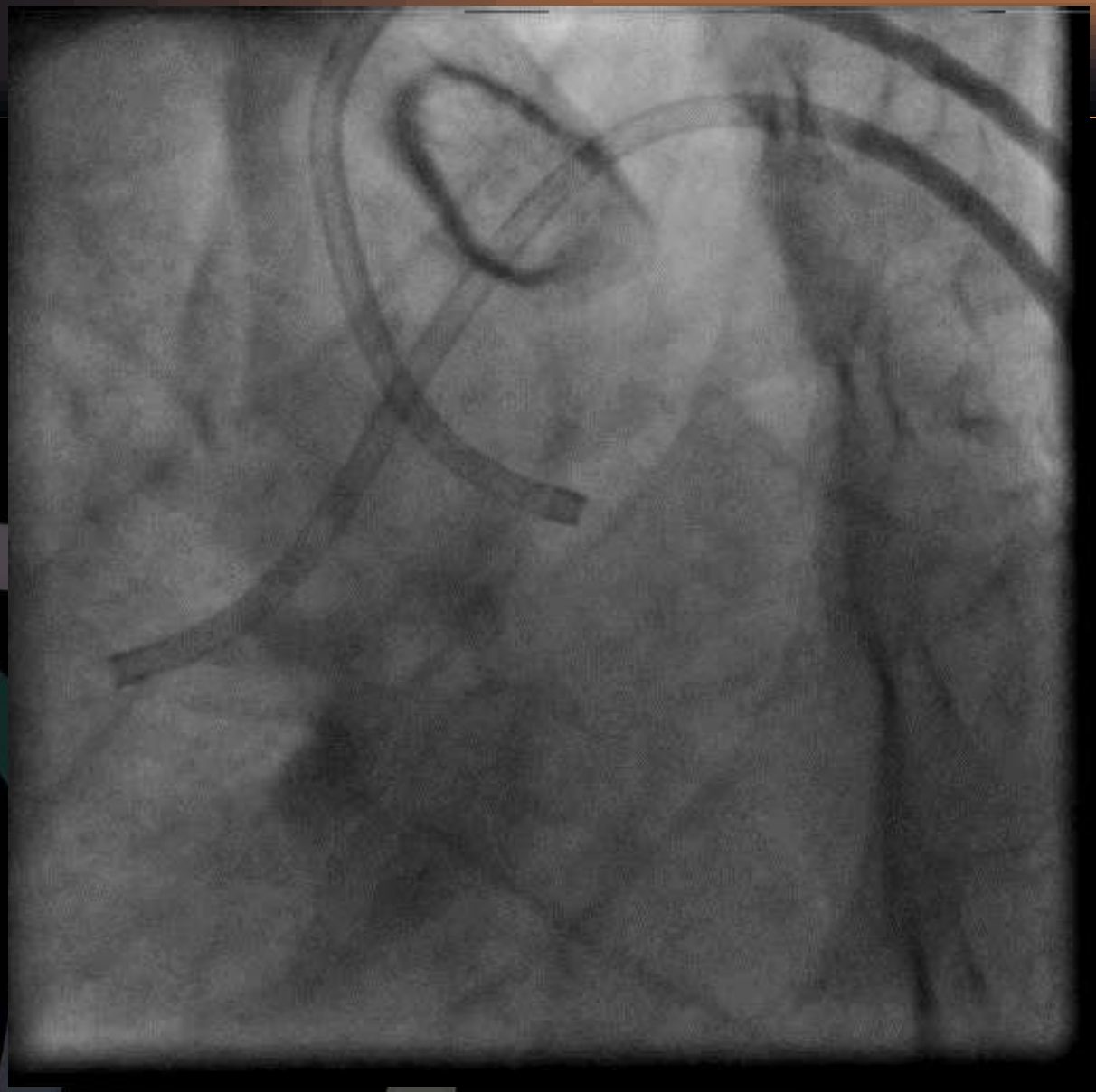
What is your PCI strategy?

- Antegrade only
- ✔ Antegrade first under back up of retrograde approach
- Retrograde first

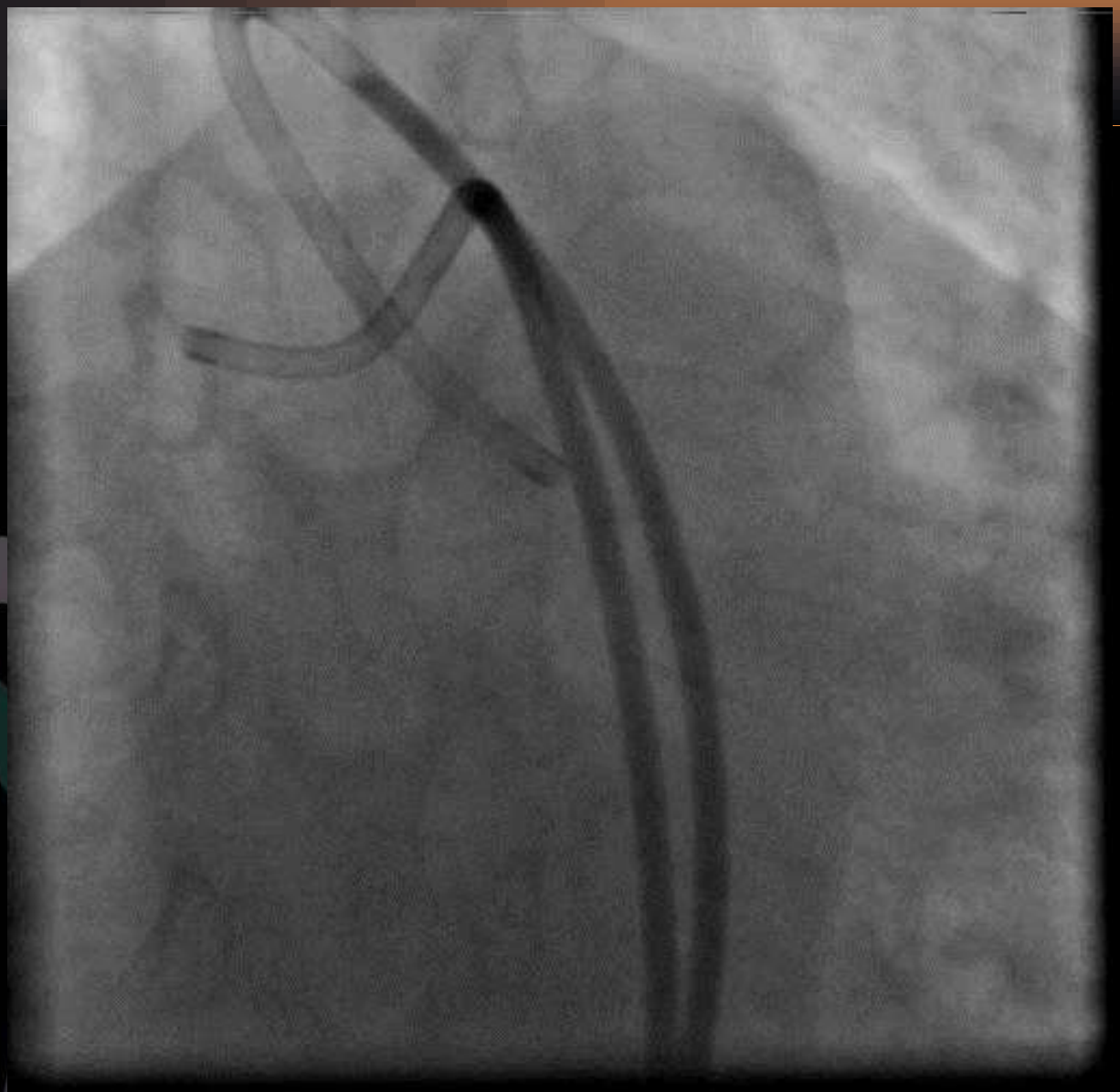




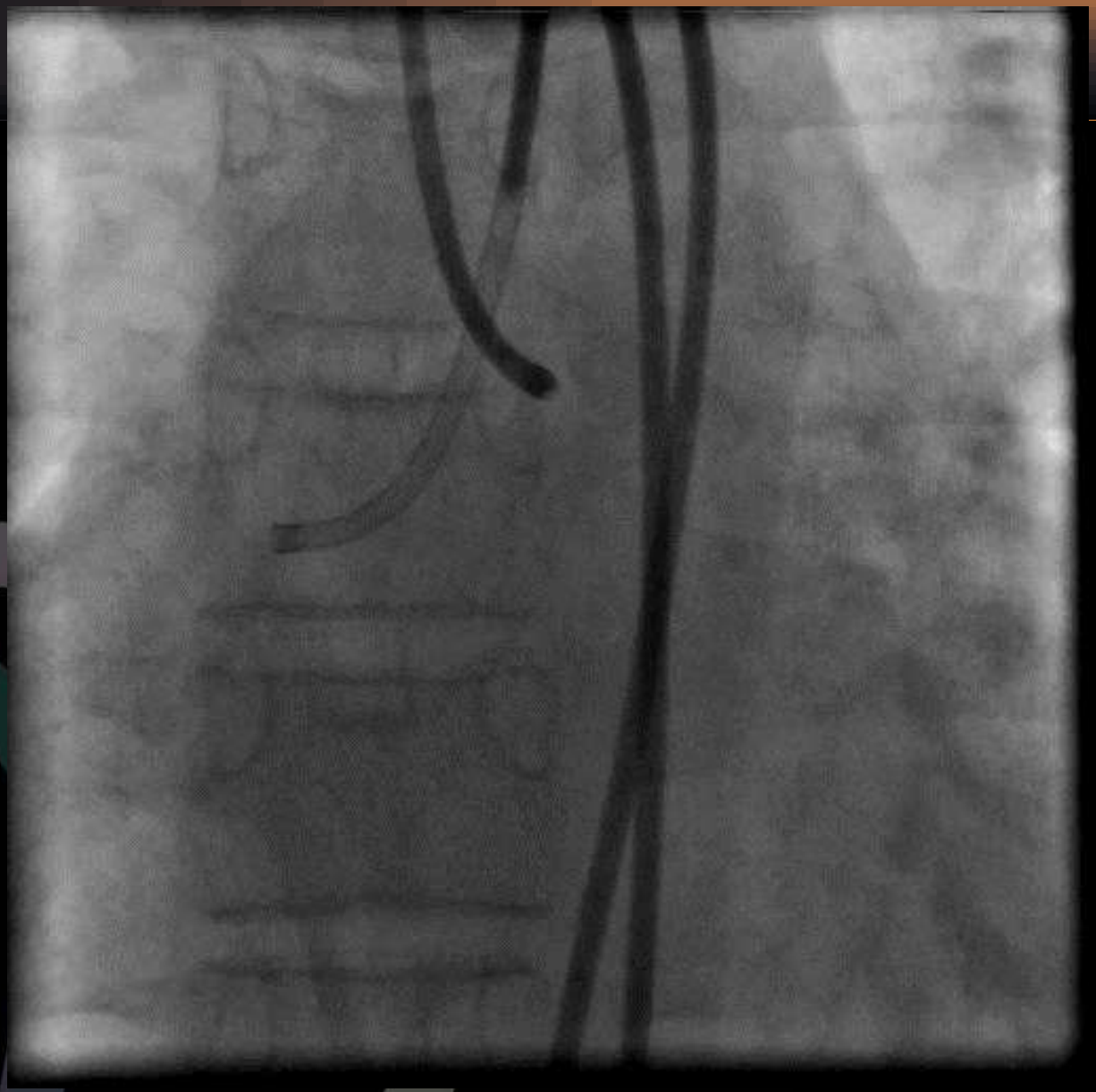
Baseline CAG showed another RCA with good septal channel to LAD. This RCA was different from RCA shown by diagnostic CAG. This RCA was main branch and previous RCA was separate RV branch.



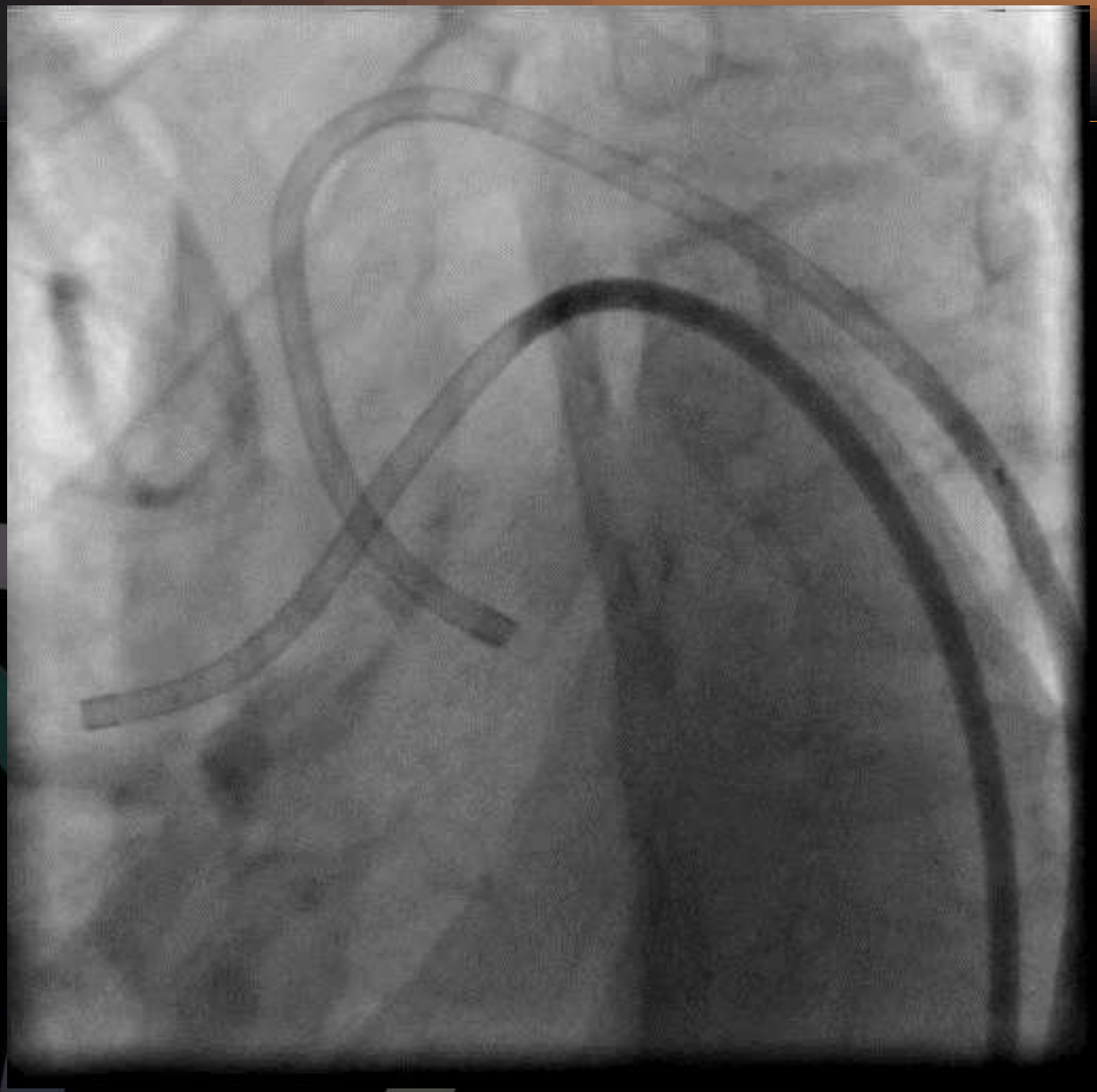
Occlusion site was only LMT and bifurcation of LAD and LCx was patent.

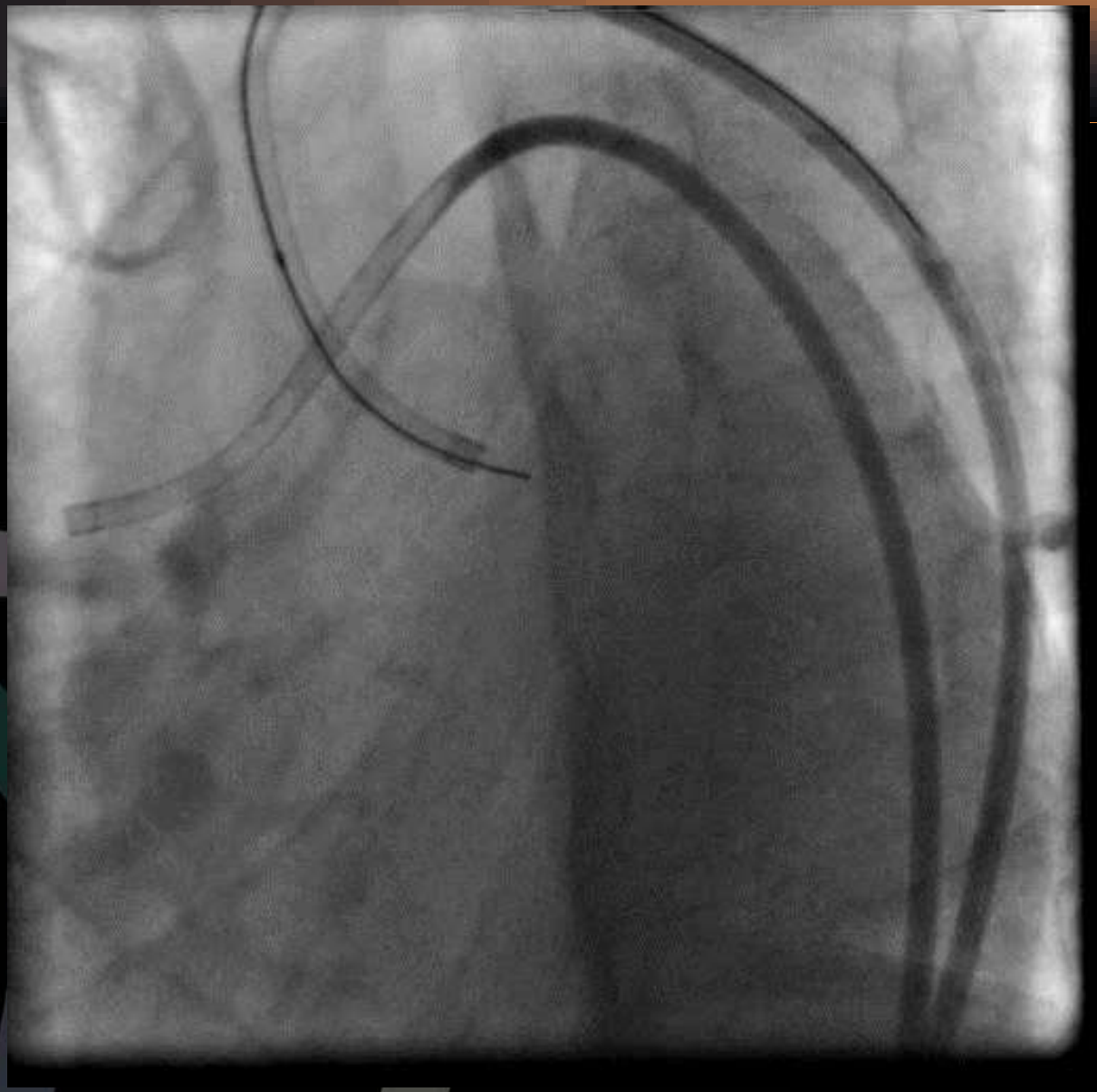


RCA had good collateral channels to LAD via septal branch.
From this CAG findings, retrograde approach in this case became easier and safer.

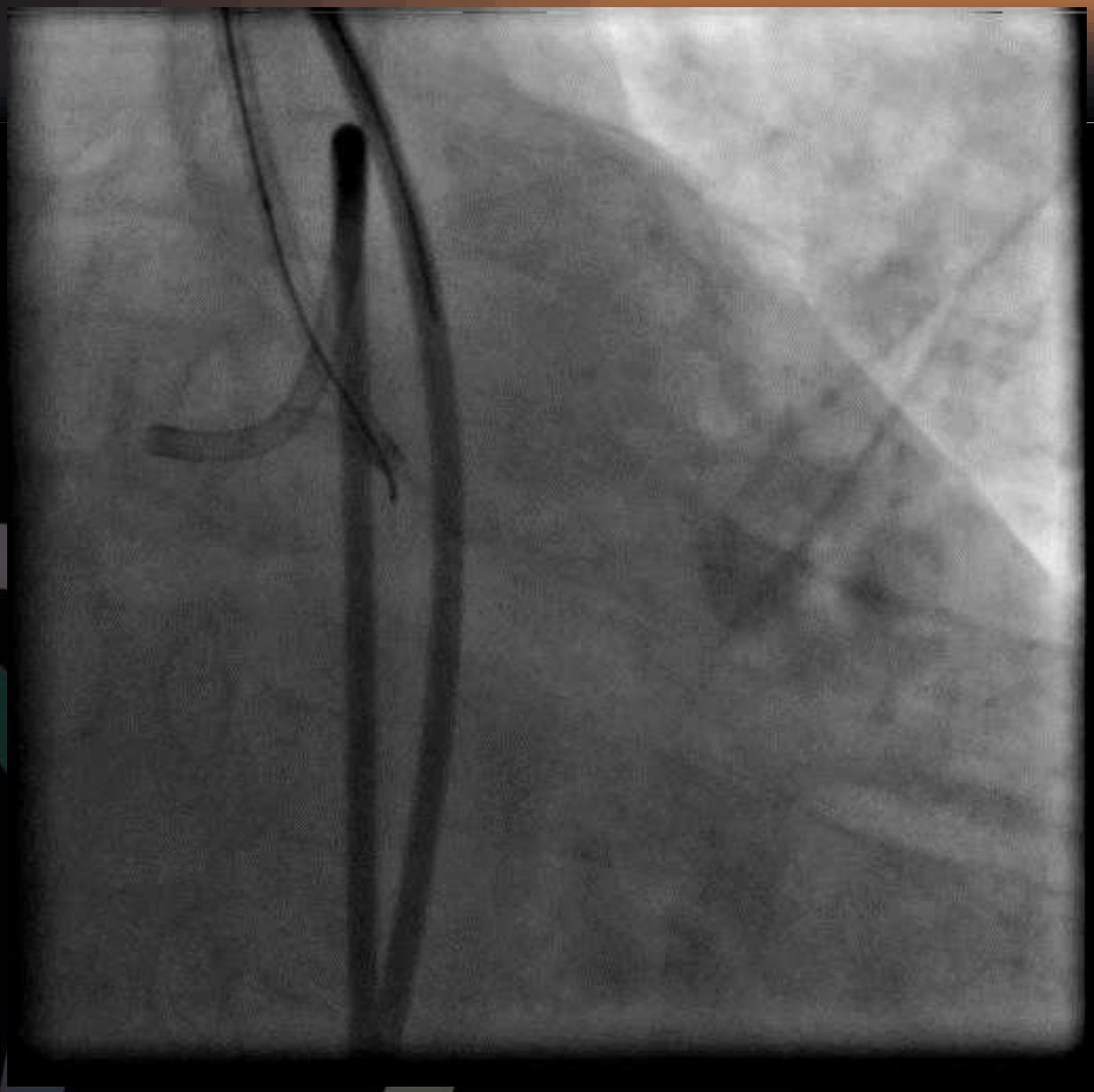


JL3.0 was used but JL3.0 could not be engaged with LCA well.

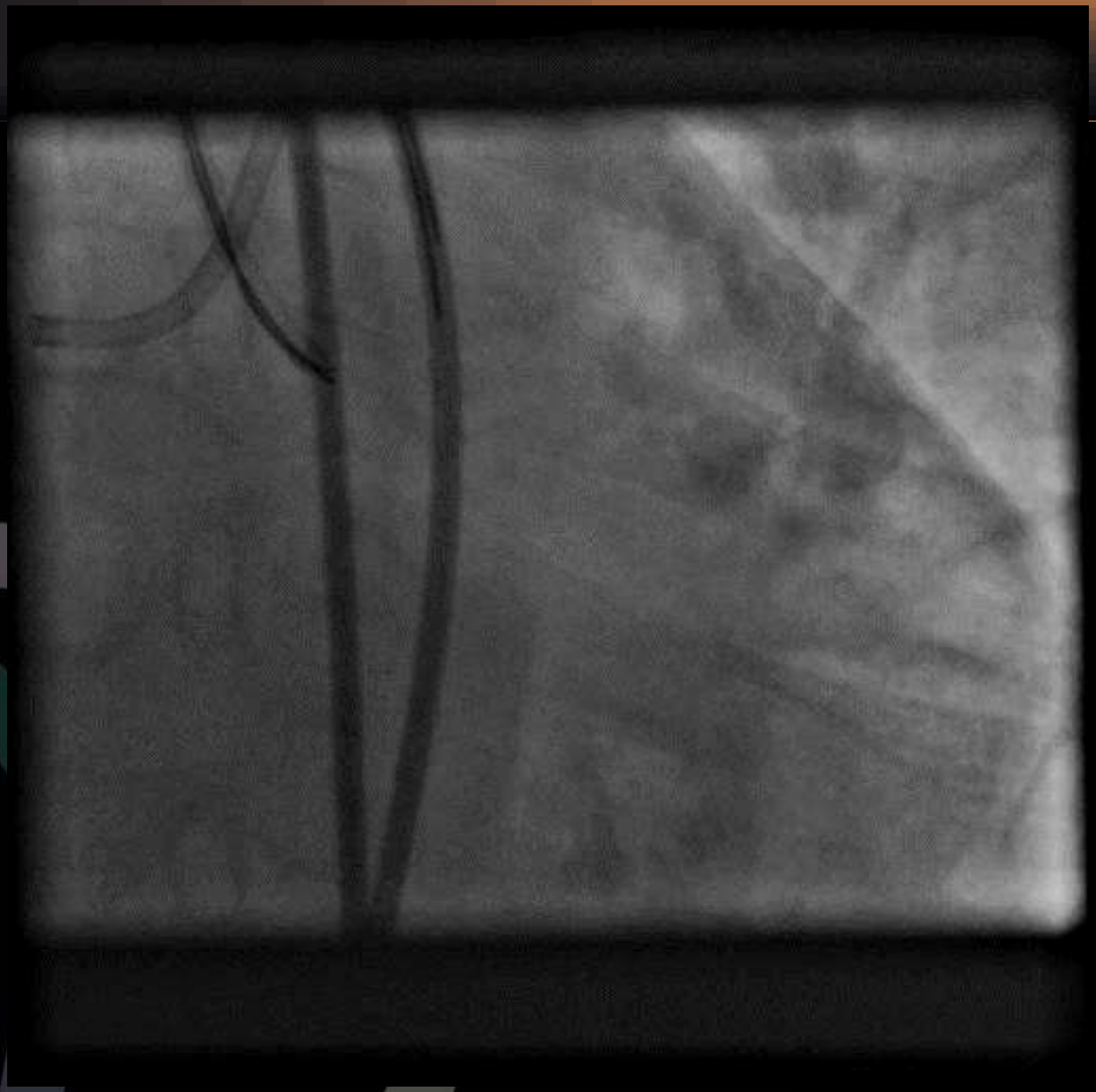




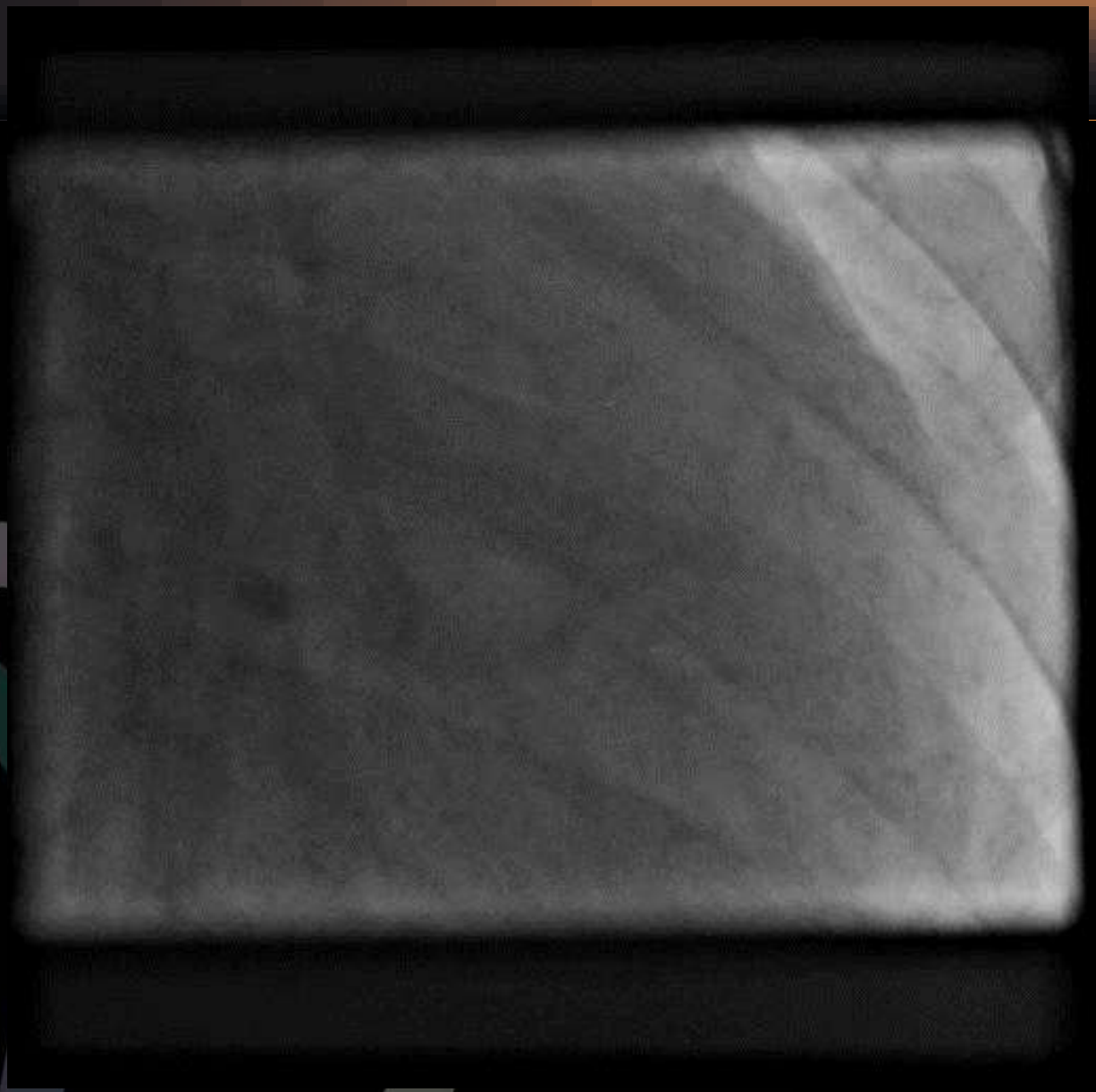
PCI started with antegrade approach. But it was not easy to advance GW into LMT. XT-R and UB3 could not be advanced but CP9g could be advanced into LMT.



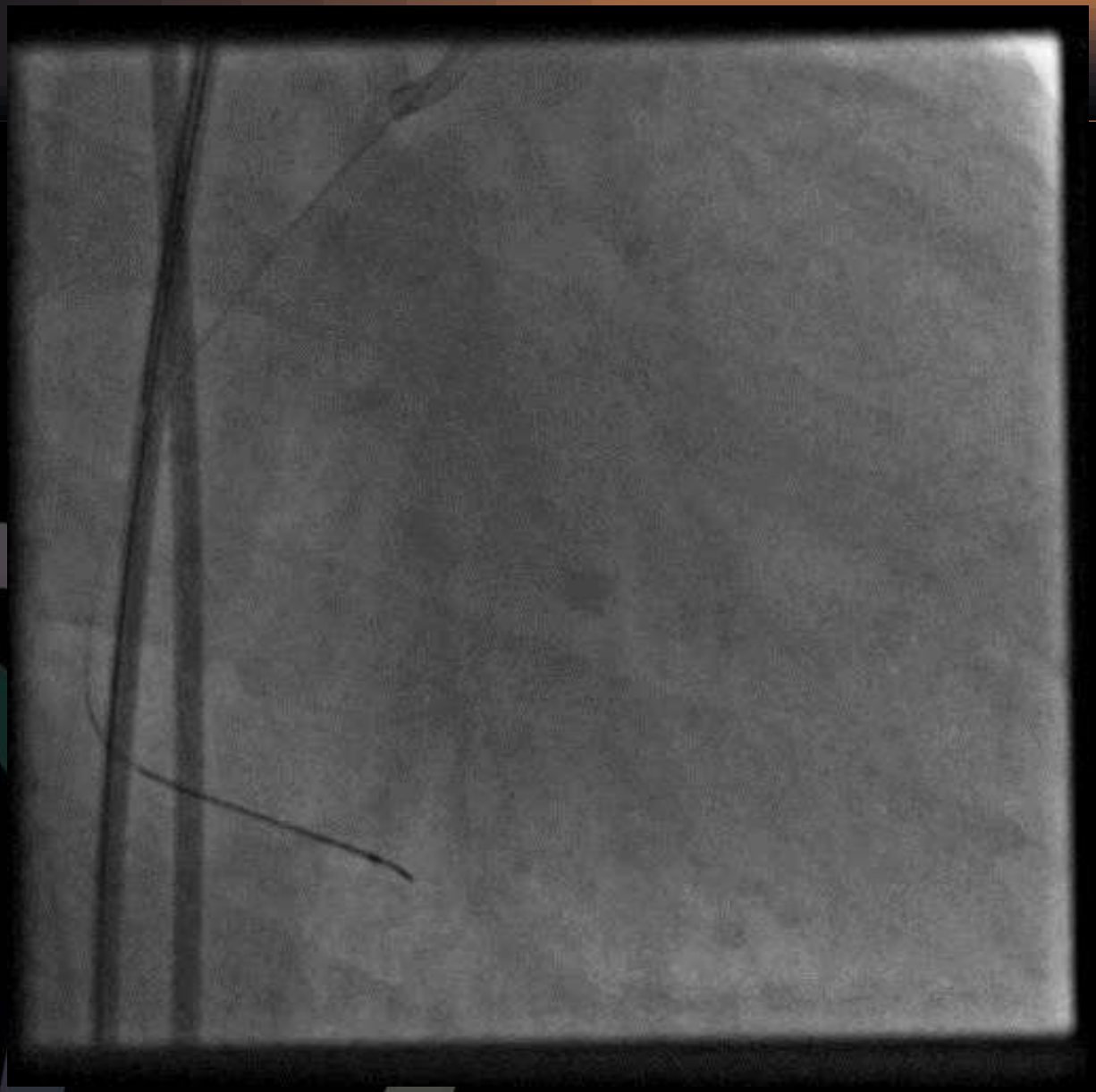
In another view, GW position was not good route.



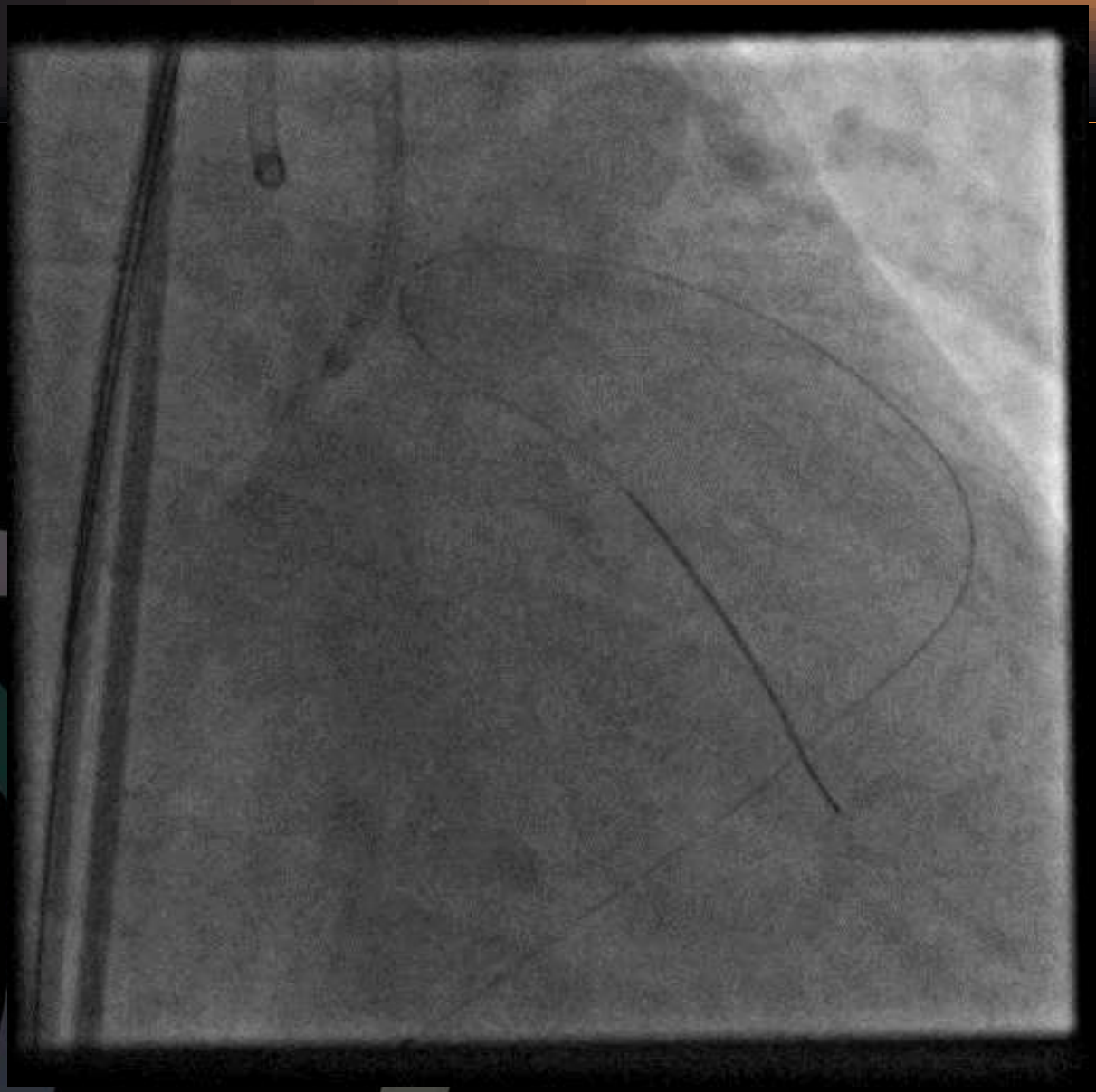
Parallel wire technique was used but 2nd GW could not be advanced.



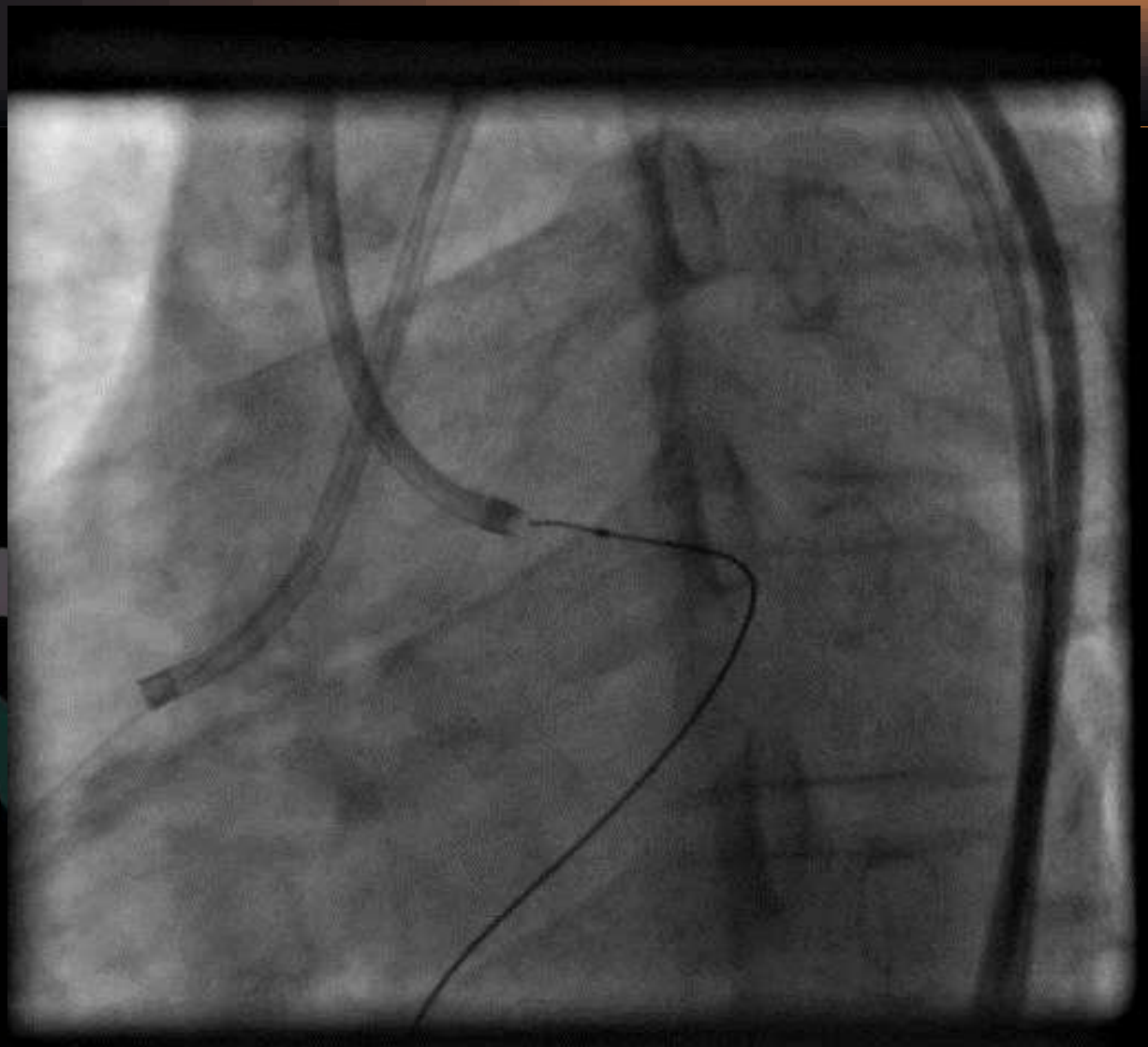
After that, retrograde approach started.



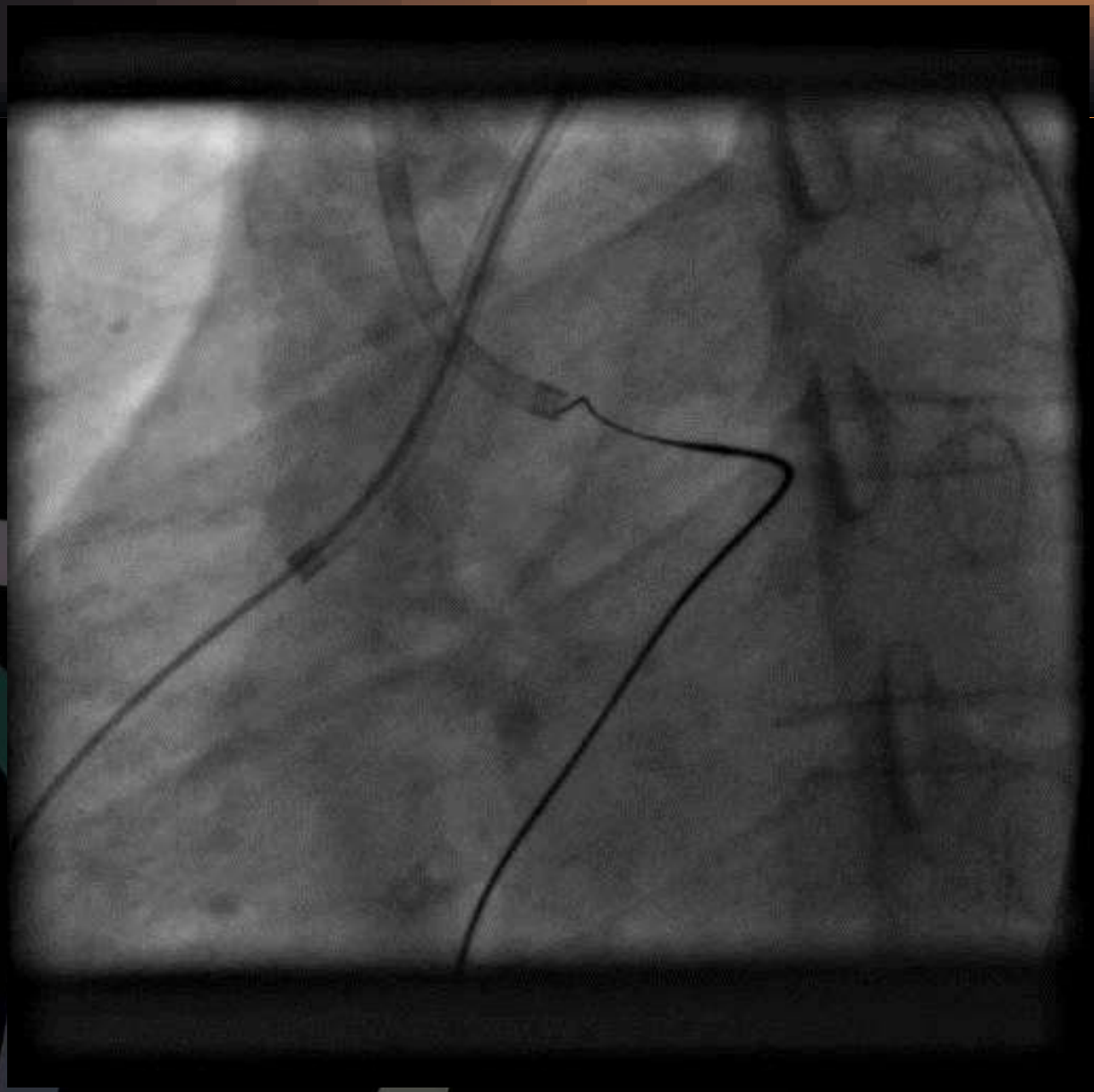
SIONBlue could pass septal channel easily and could be advanced into LAD



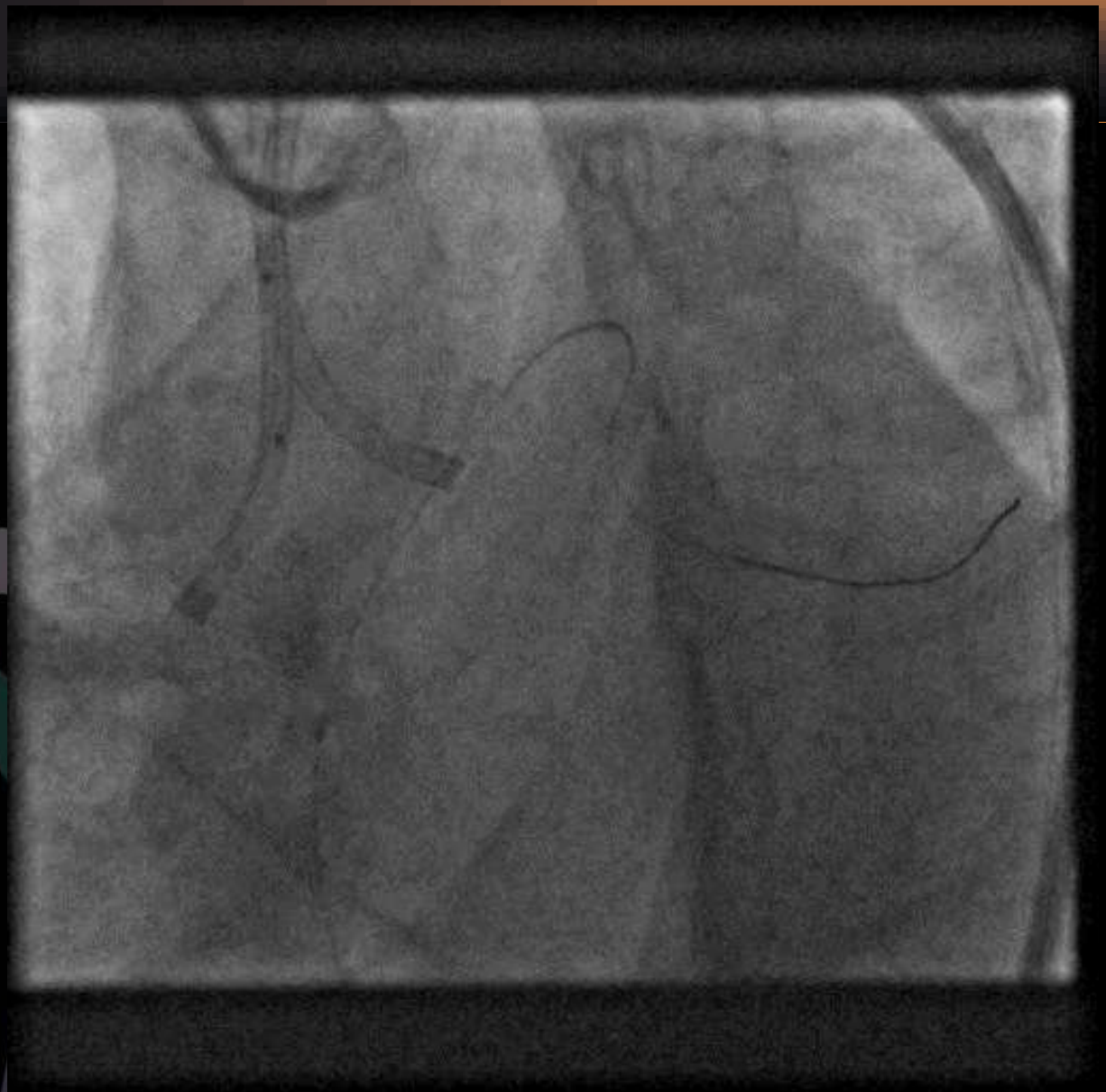
FimecrossGT also could be advanced into LAD.



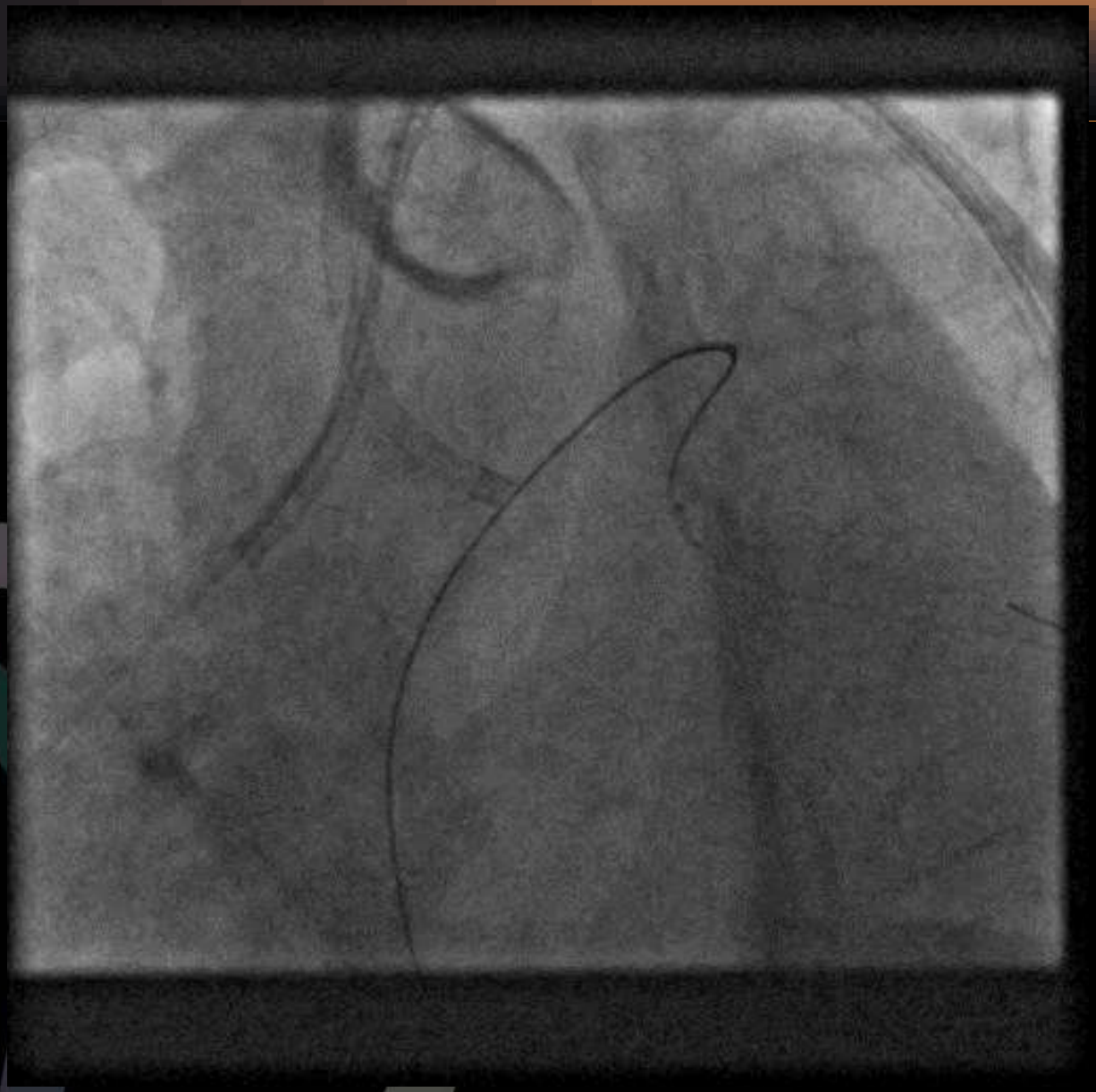
It was not easy to pass CTO from retrograde side. UB3, Gaia 1st , 2nd , CP9g, CP12g and CP8-20 supported by FinecrossGT could not pass.



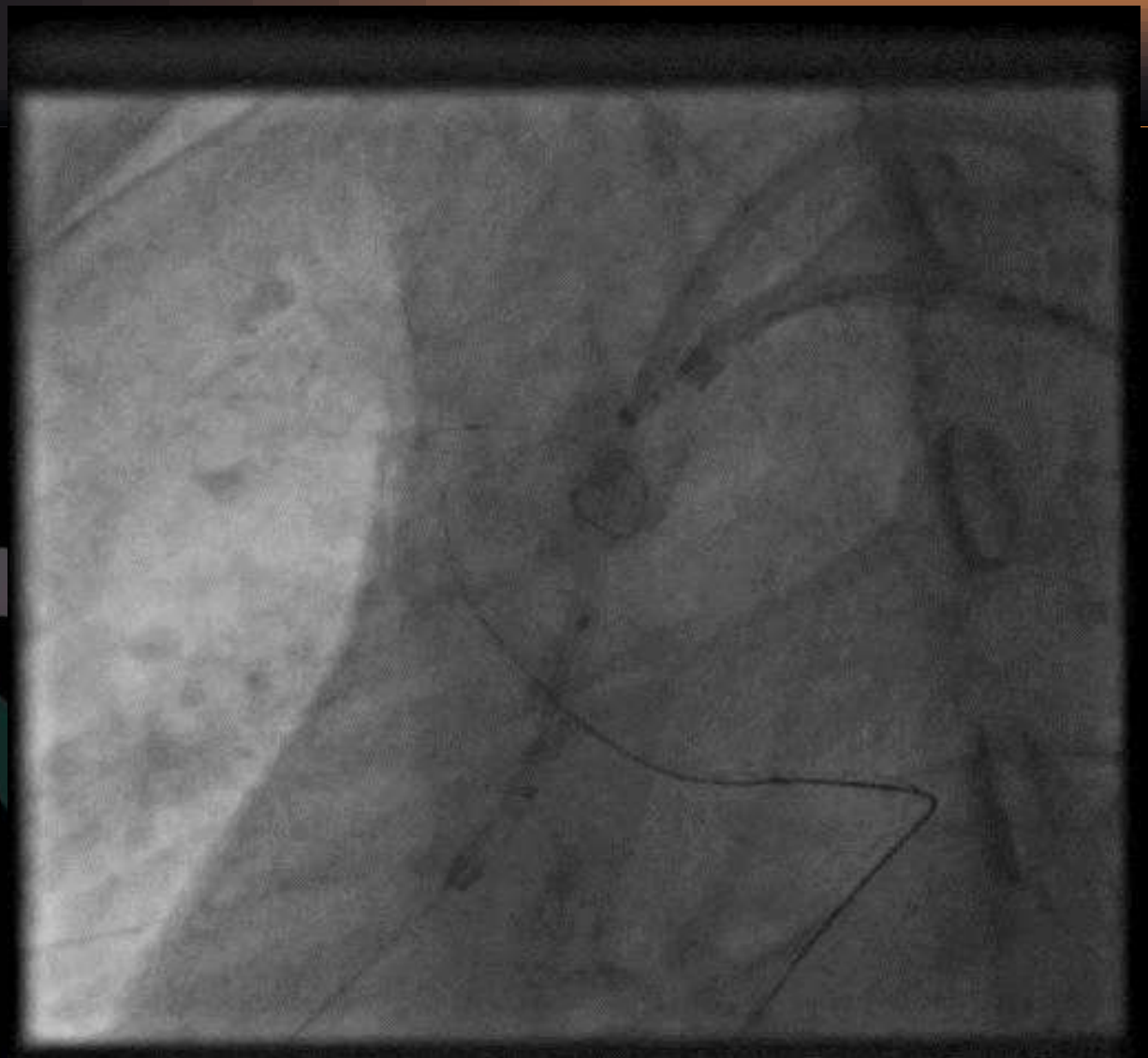
MC was exchanged from FinecrossGT into Corsair but GW could pass CTO.



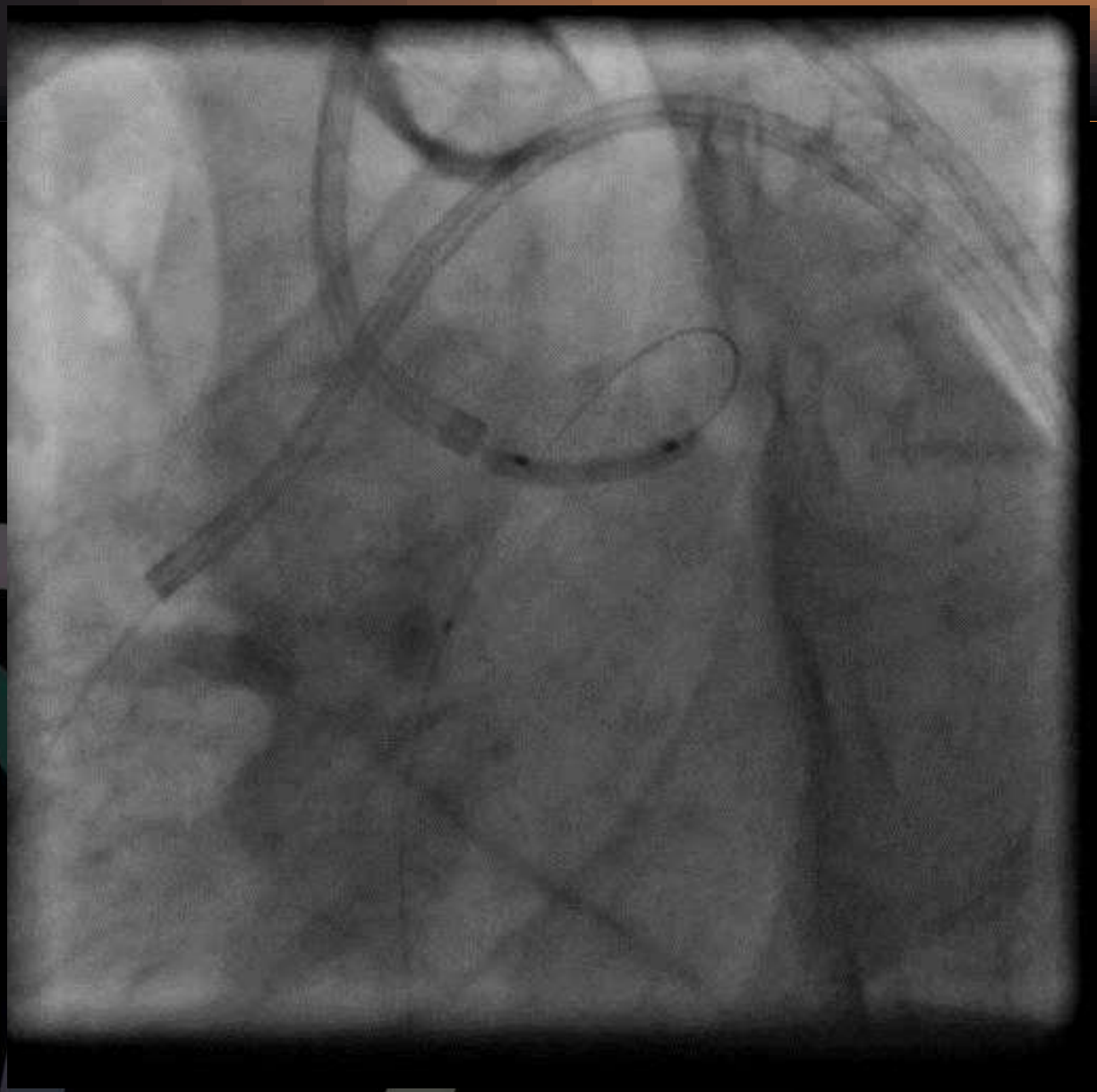
Therefore MC was exchanged from Corsair into Crusade to get much better GW control. Crusade could pass septal channel and be advanced to bifurcation of LAD and LCx.



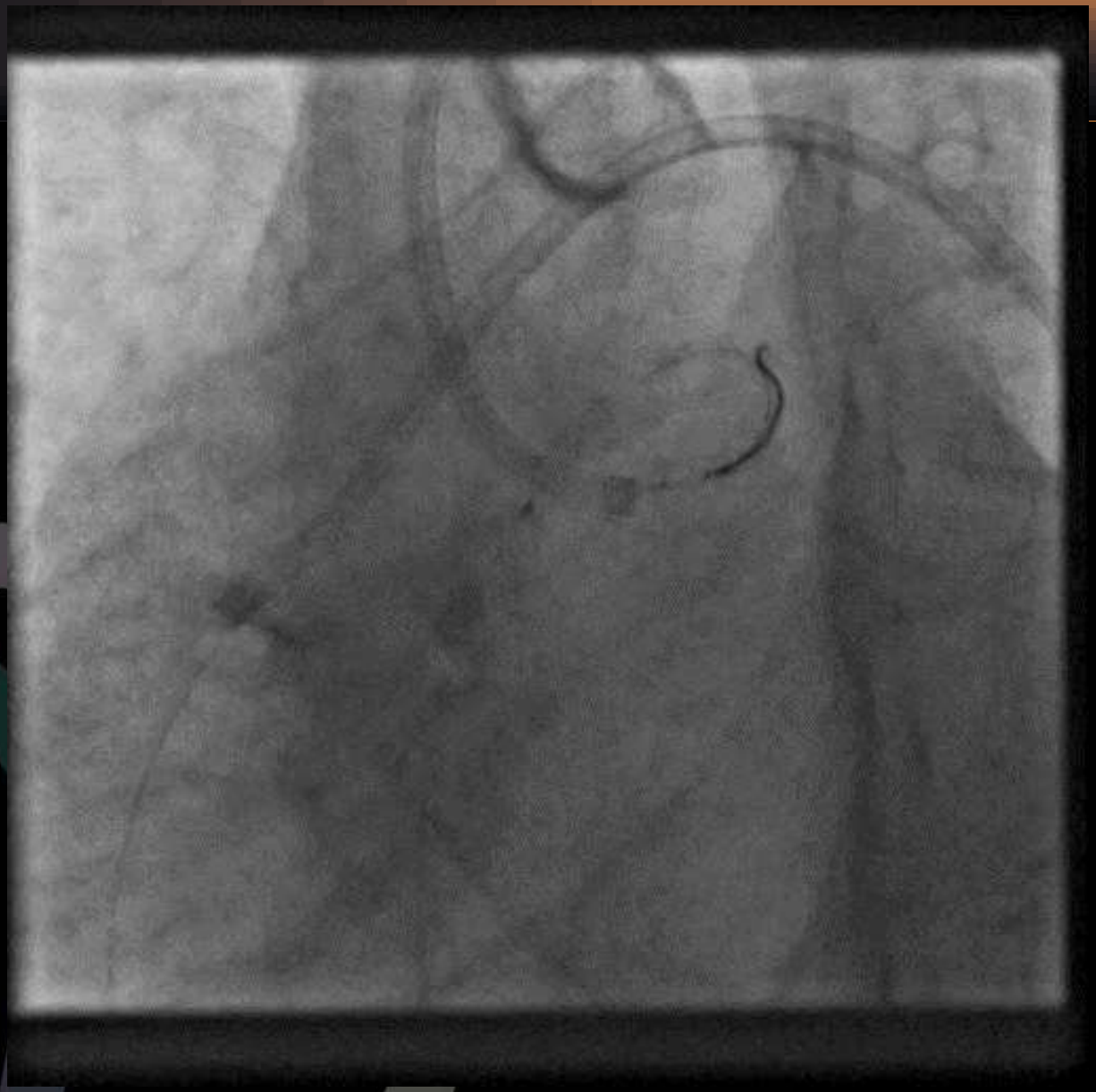
After that, Fielder XT supported by crusade could pass lesion.



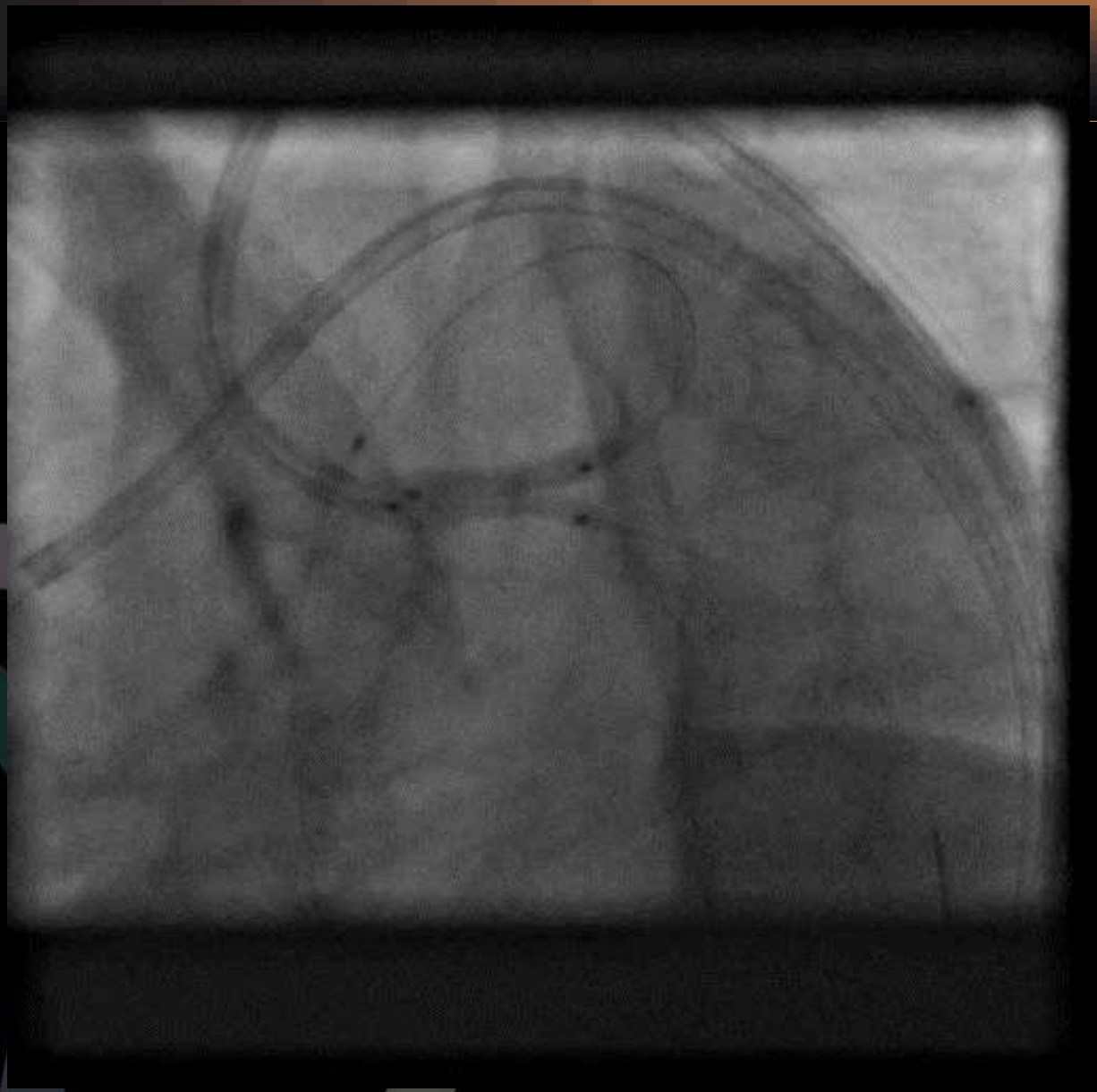
To advance retrograde GW into antegrade GC, hand made snare using Guideliner and Runthrough Extrafloppy is used. And then, Externalization was achieved.



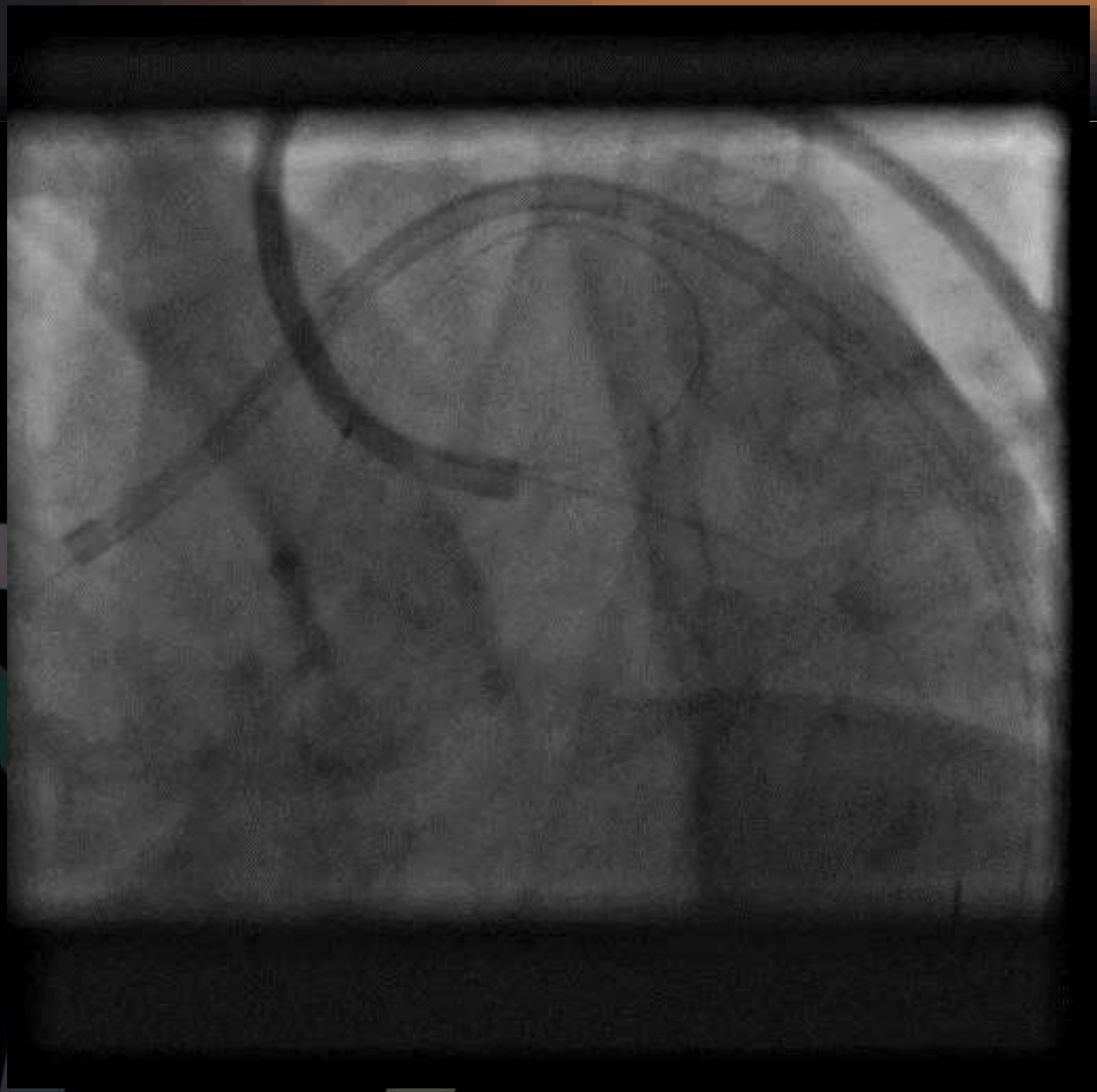
Ballooning with 2.5mm balloon was performed.



After ballooning, Runthrough extrafloppy supported Crusade was inserted into LCx.



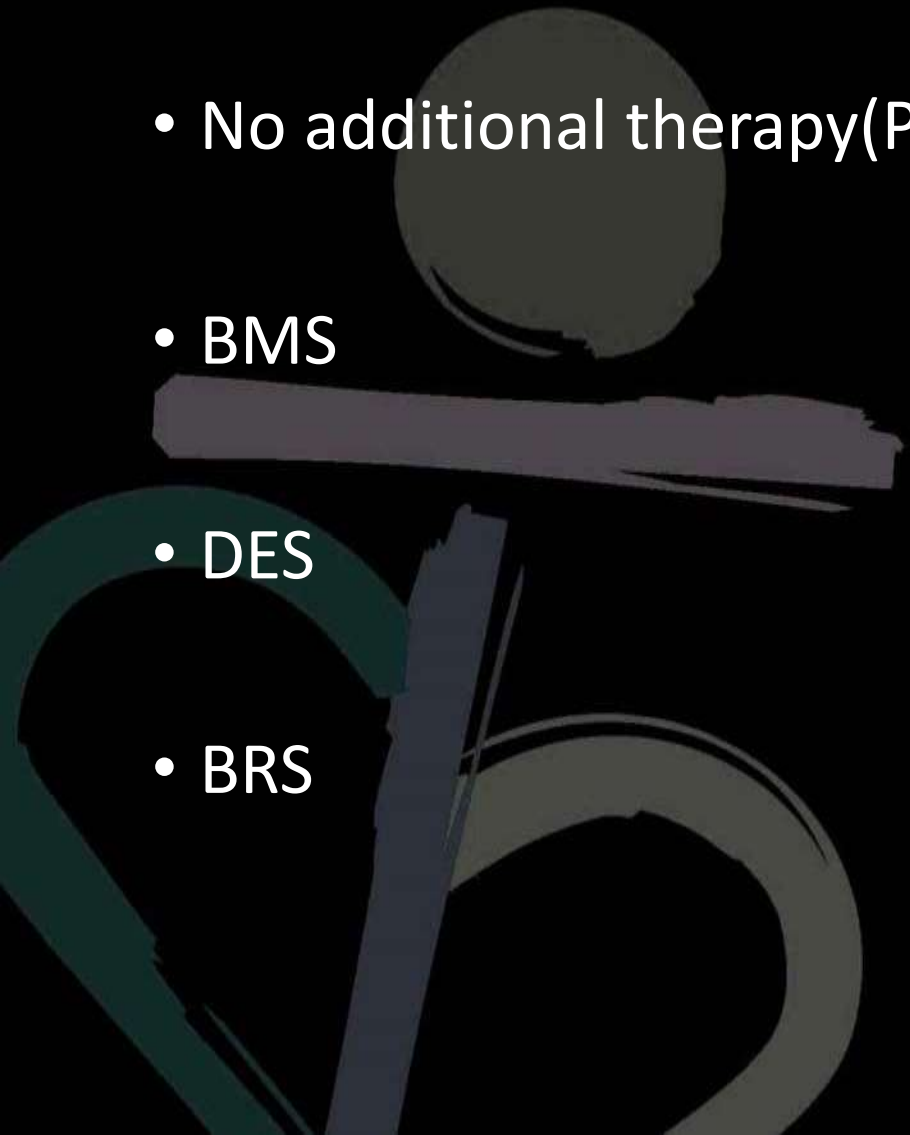
KBT with 3.0mm balloon and 2.5mm balloon was performed.



CAG showed good dilation by only ballooning.

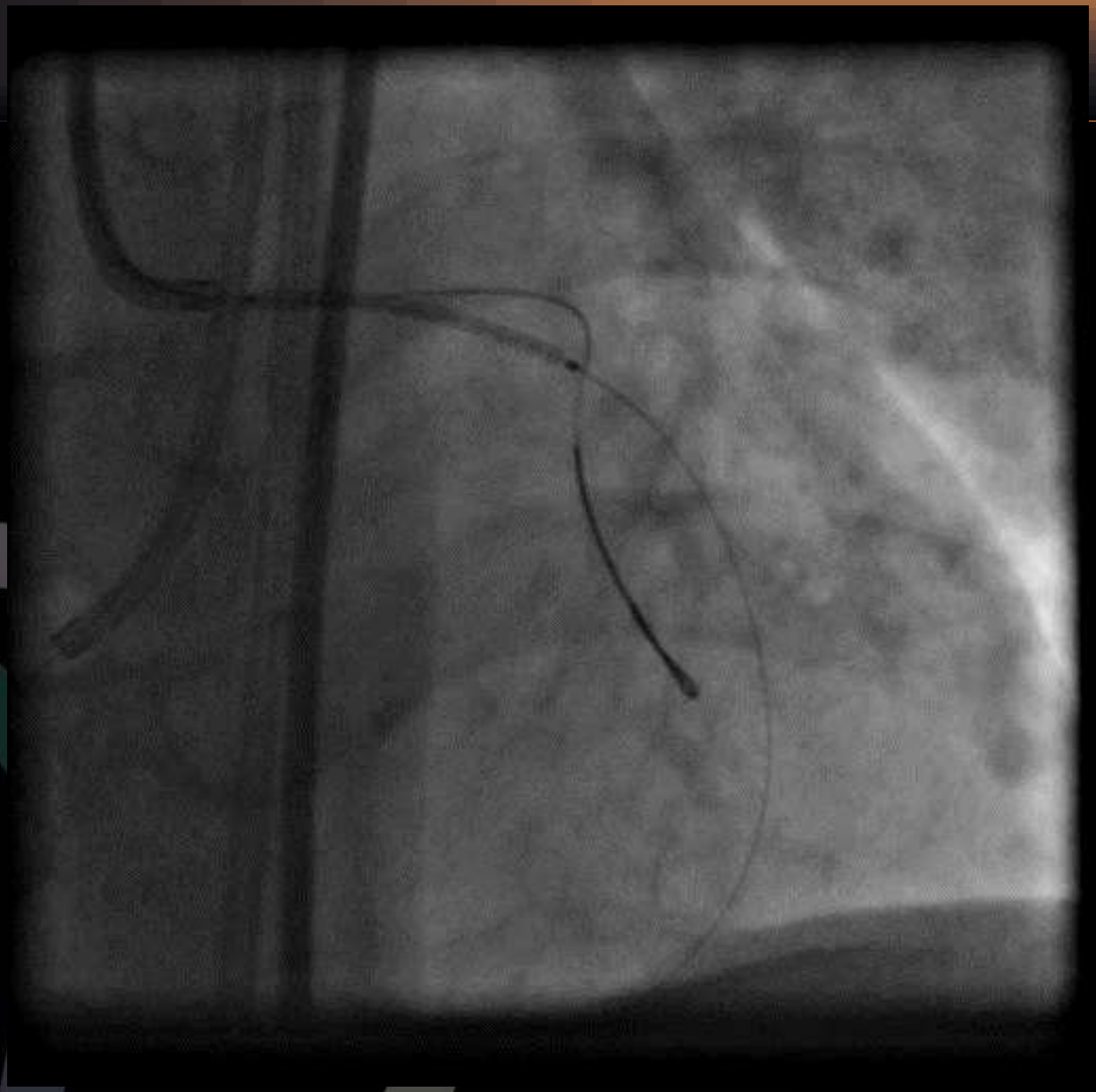
What is your next step?

- No additional therapy(POBA only)
- BMS
- DES
- BRS

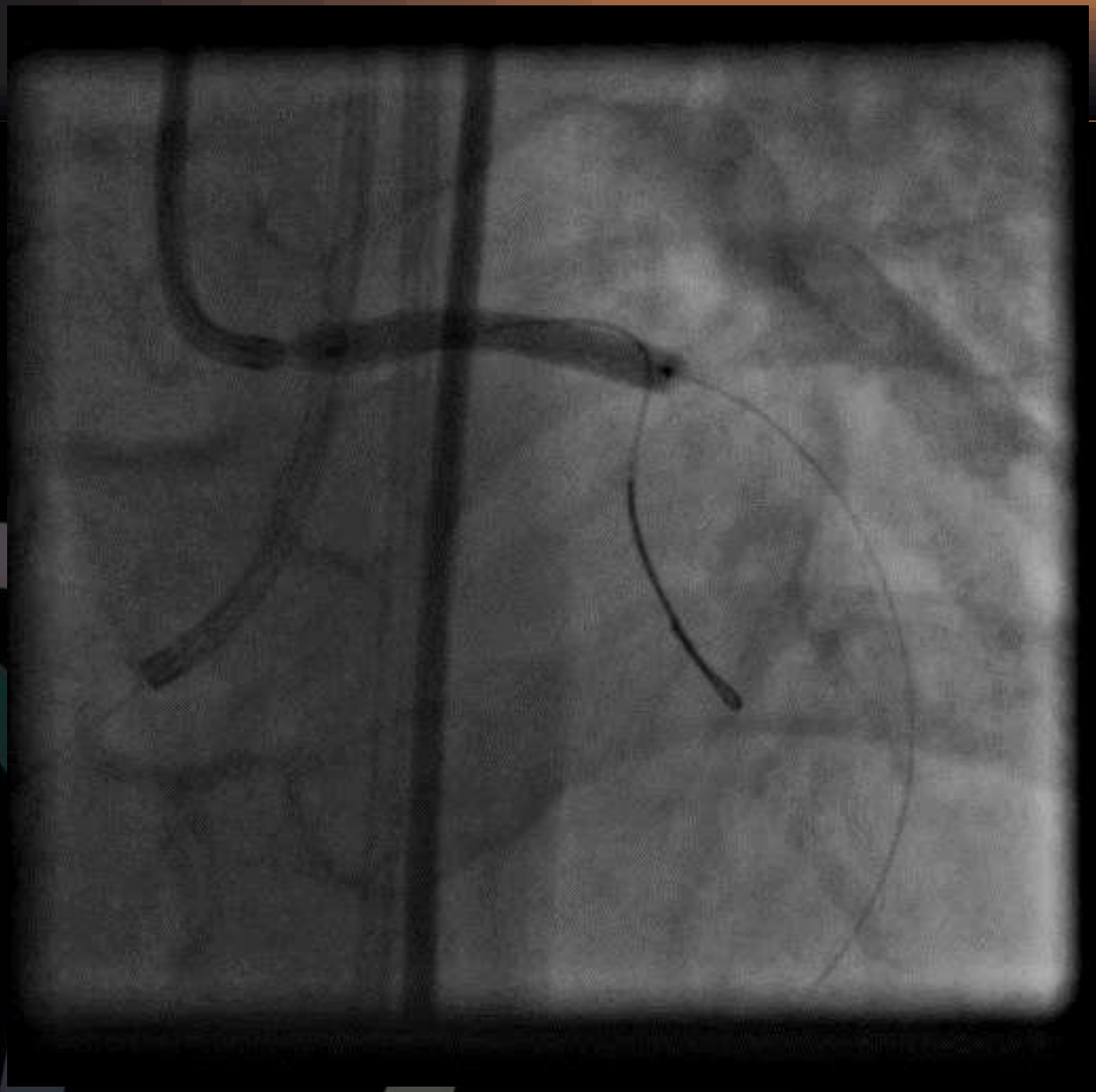


Why Ultimaster?

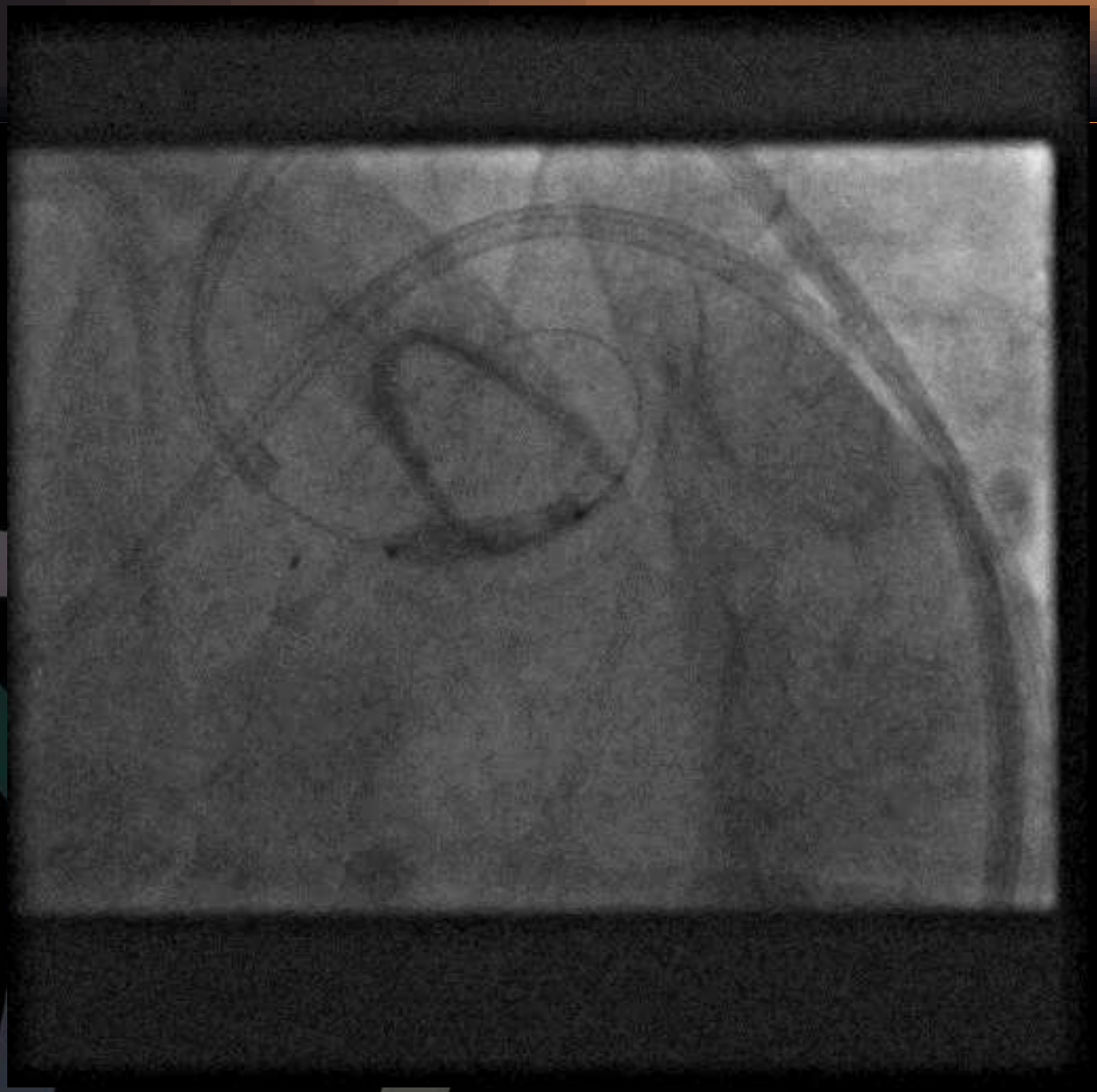
- Metal stent is better than POBA and BRS
  - Metal stent remains and becomes landmark for future PCI
  - POBA can not become landmark for future PCI
  - BRS is same as POBA because BRS disappears several years later
- Why Ultimaster in metal stent
  - Proven safety and efficacy
    - Data from CENTURY and CENTURY II trial
  - Rapid and healthy vascular repair
    - Fast stent strut coverage has been shown in DISCOVERY 1TO3
    - 80% of strut coverage as early as 1 month
    - Safety of early interruption or discontinuation of DAPT
  - Uniform scaffolding
    - Good for bifurcation stenting



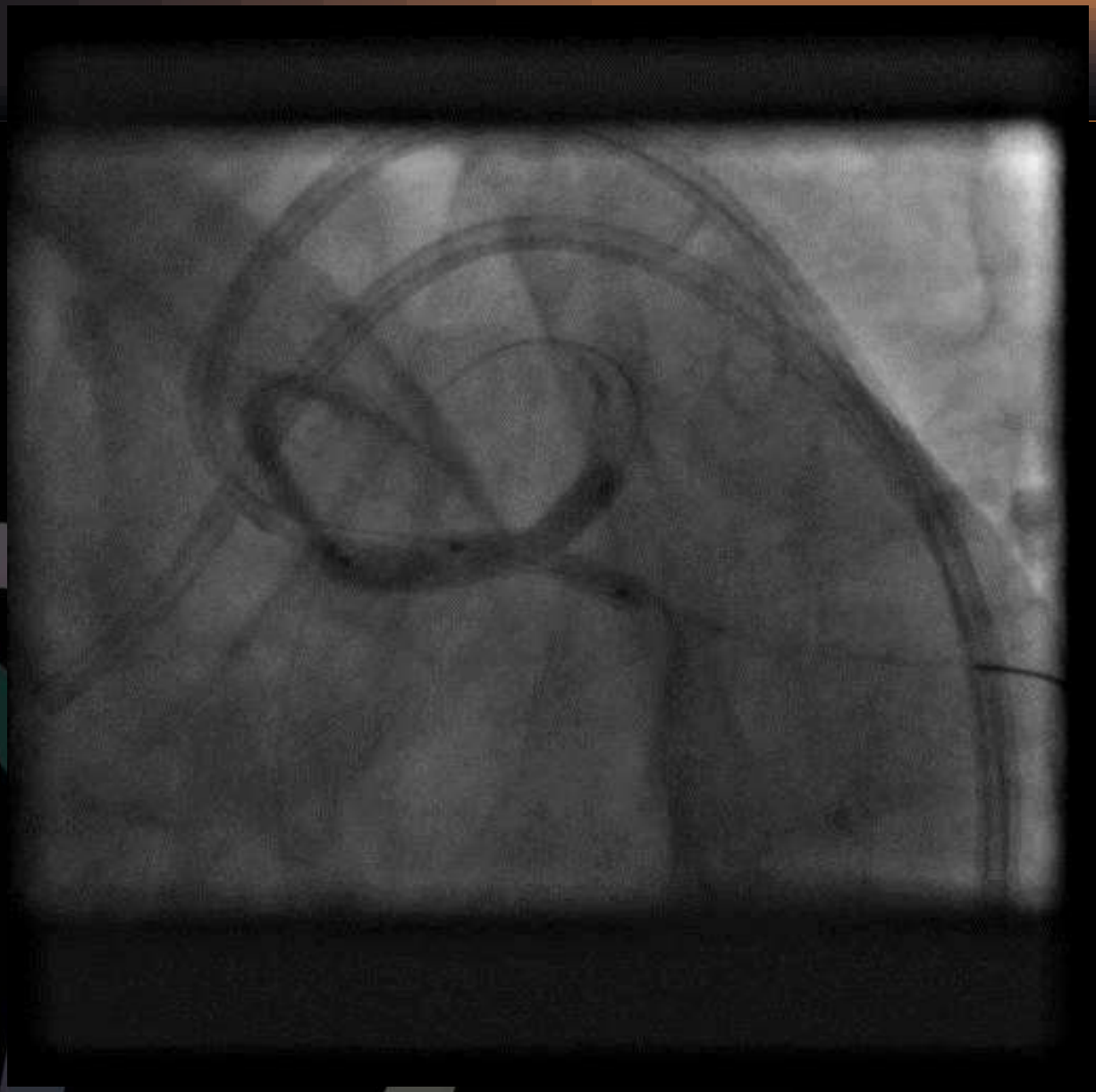
Untimaster 3.5.24 mm was inserted.



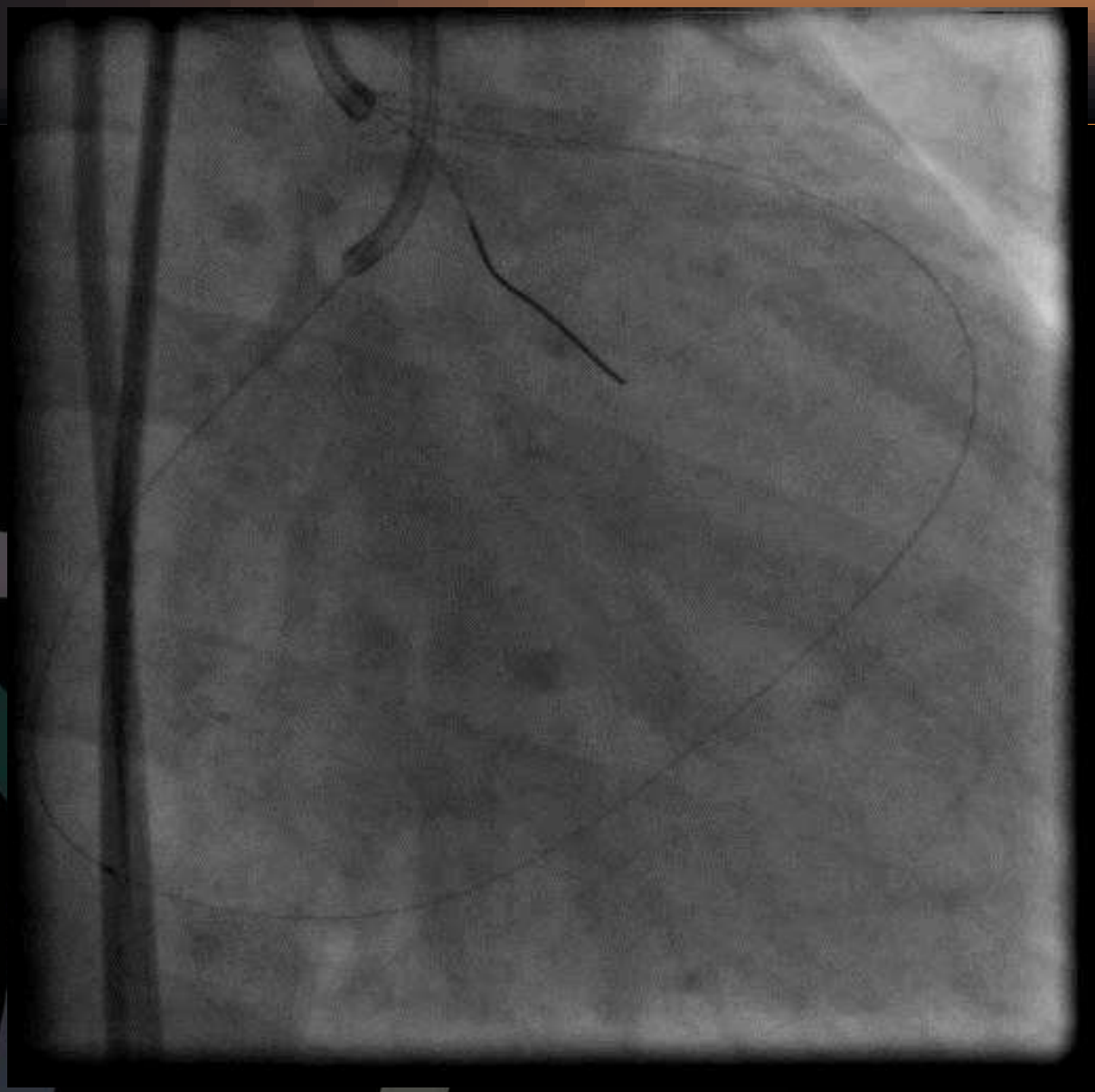
Ultimaster was implanted from LMT to LAD



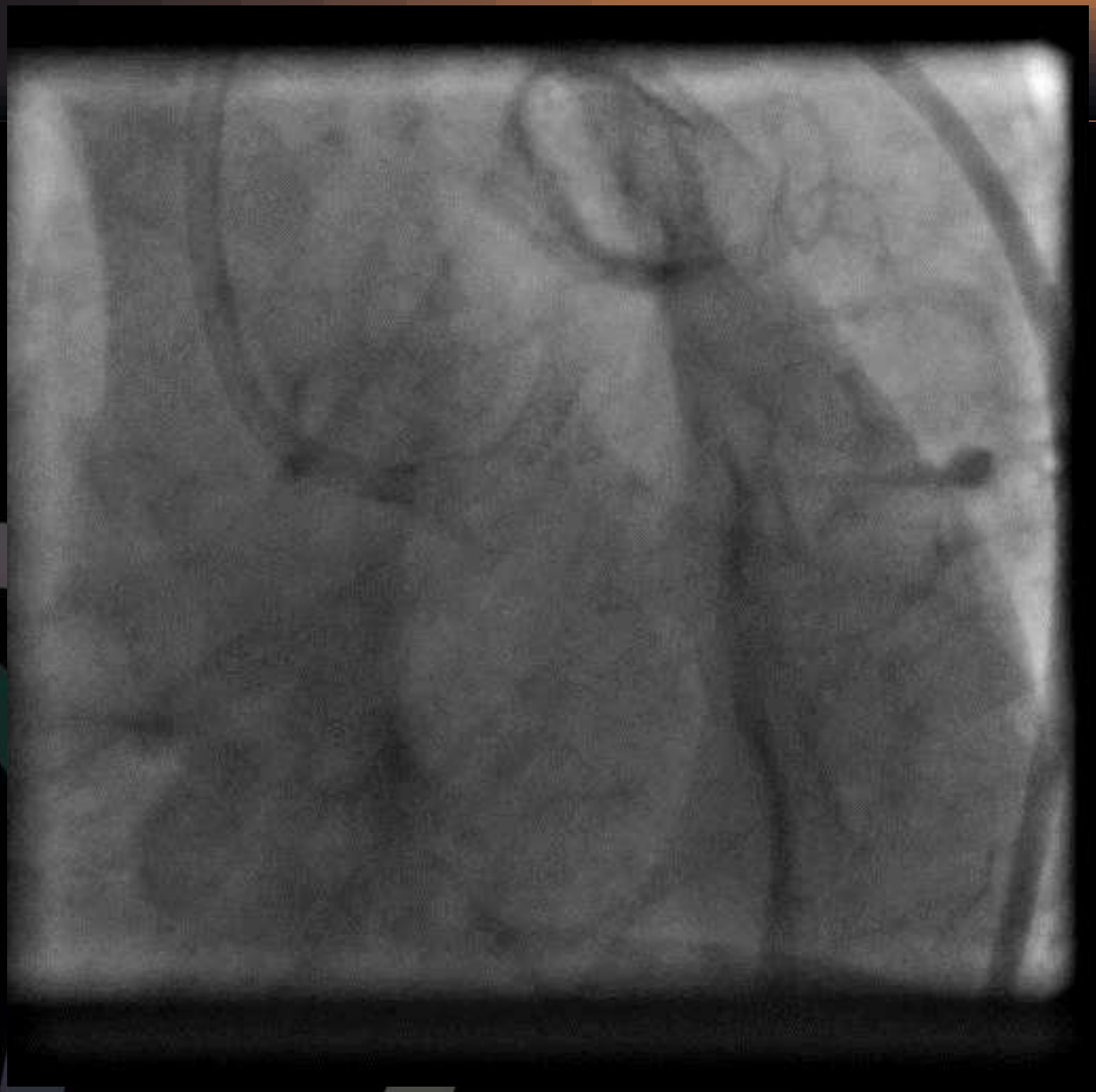
Post dilation with 4.0mm balloon for LMT was performed.



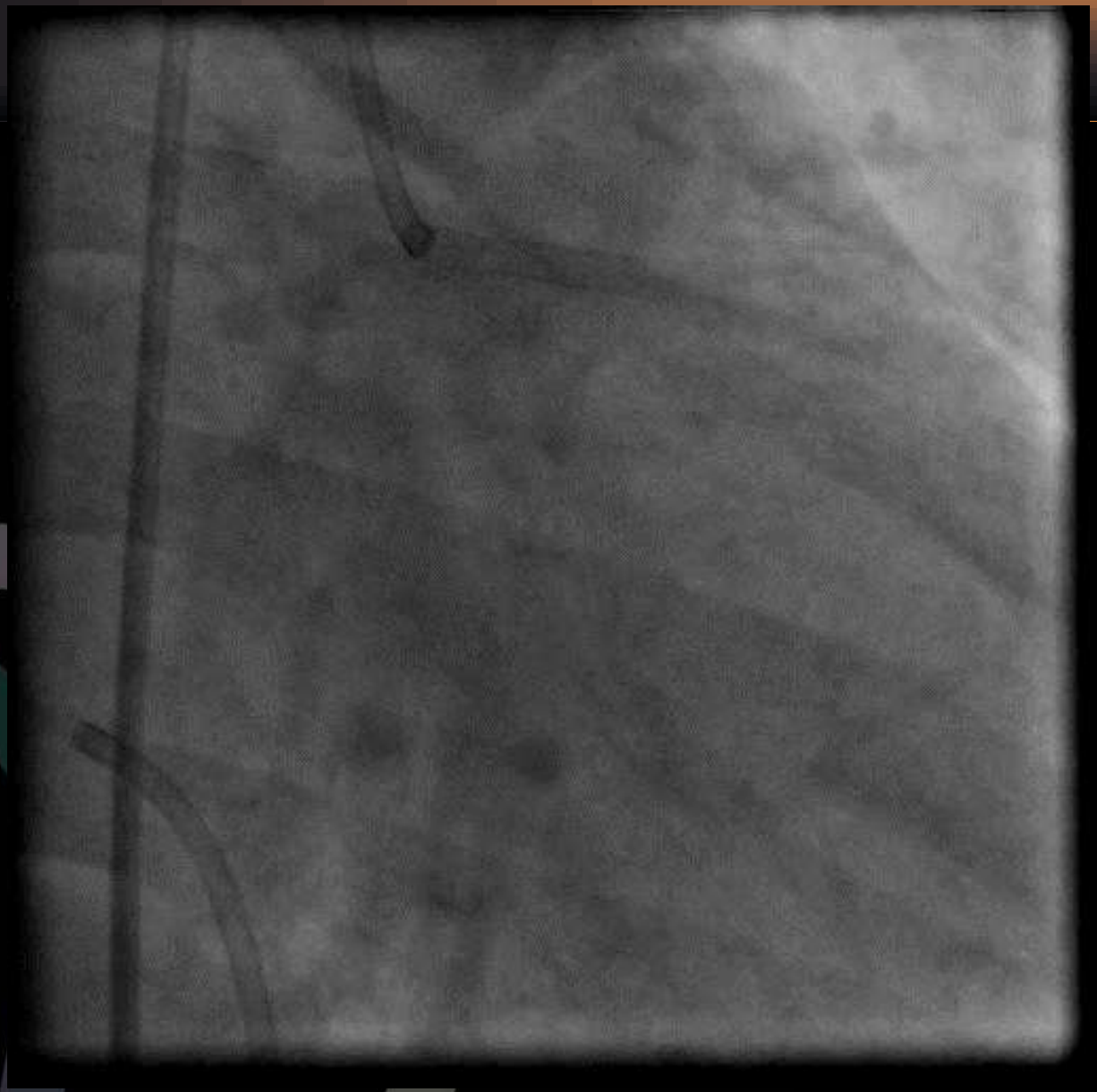
After that, KBT with 3.5mm balloon and 3.0mm balloon was performed .



RCAG was performed to confirm retrograde route. RCAG showed no damage of retrograde route



Final CAG showed good results.



Final CAG showed good results.

Summary

- This case was 17y/o male with CTO at LMT.
- PCI started with antegrade approach but GW from antegarde side could not pass CTO at all.
- Retrograde wire crossing could be achieved by wiring with Crusade
- After GW gross, Ultimaster was used.
- Advantage of Ultimaster
  - Landmark for future PCI
  - Proven safety and efficacy
  - Rapid and healthy vascular repair
  - Uniform scaffolding