Early Switch to Retrograde Approach is Needed!

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Disclosure

- I’m a retrograde enthusiasm, and member of APCTO Club

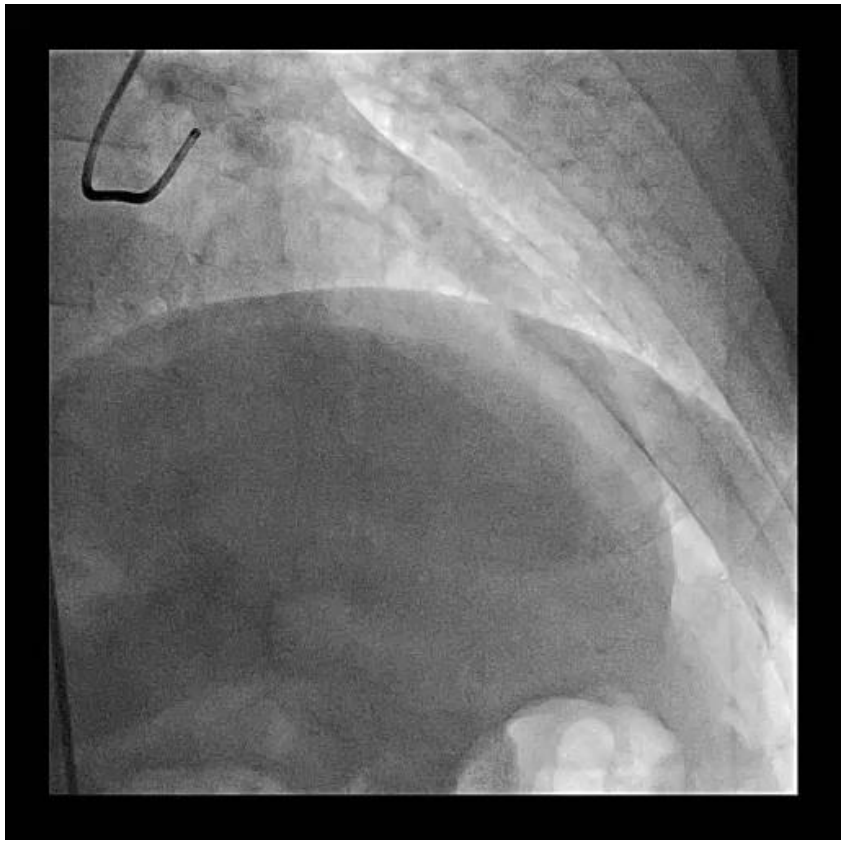
Antegrade works, of course!

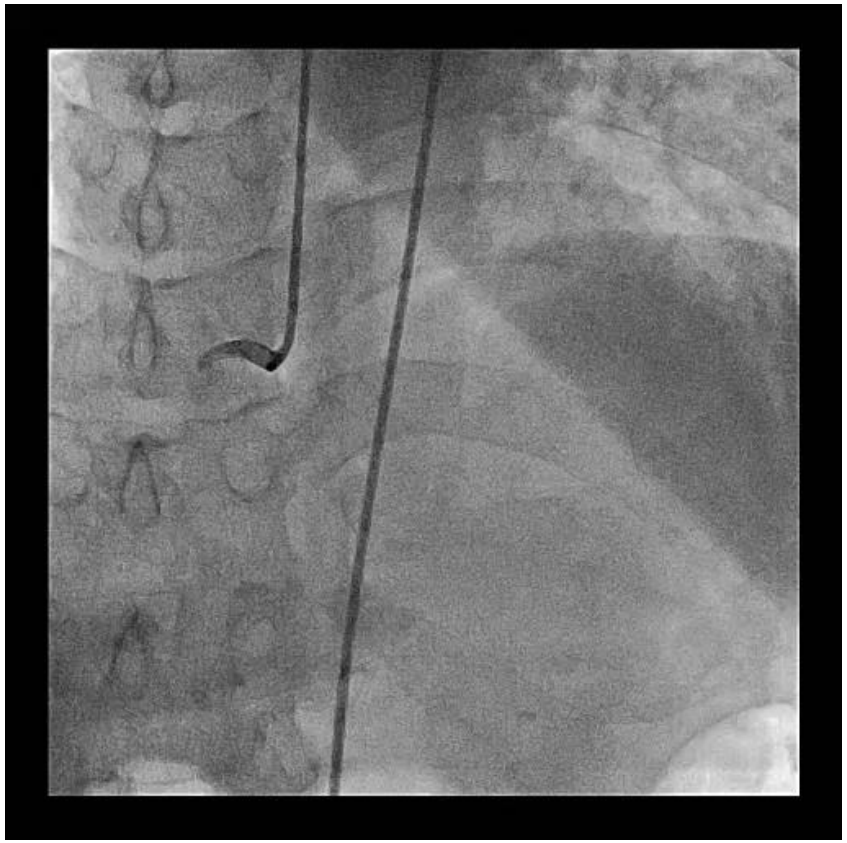
- After all, you have to deliver the stent
- We were told to start with “antegrade preparation”

- But when should we start retrograde? My answer is:

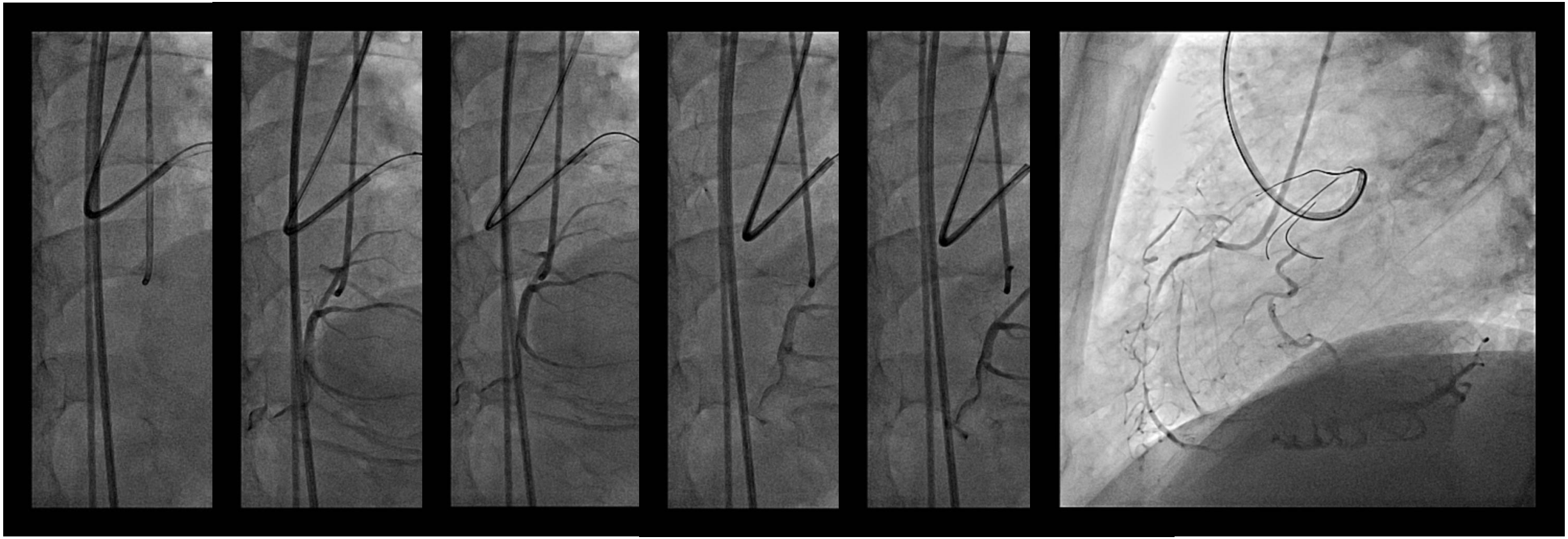
As fast as possible!

“I think we should start with antegrade”

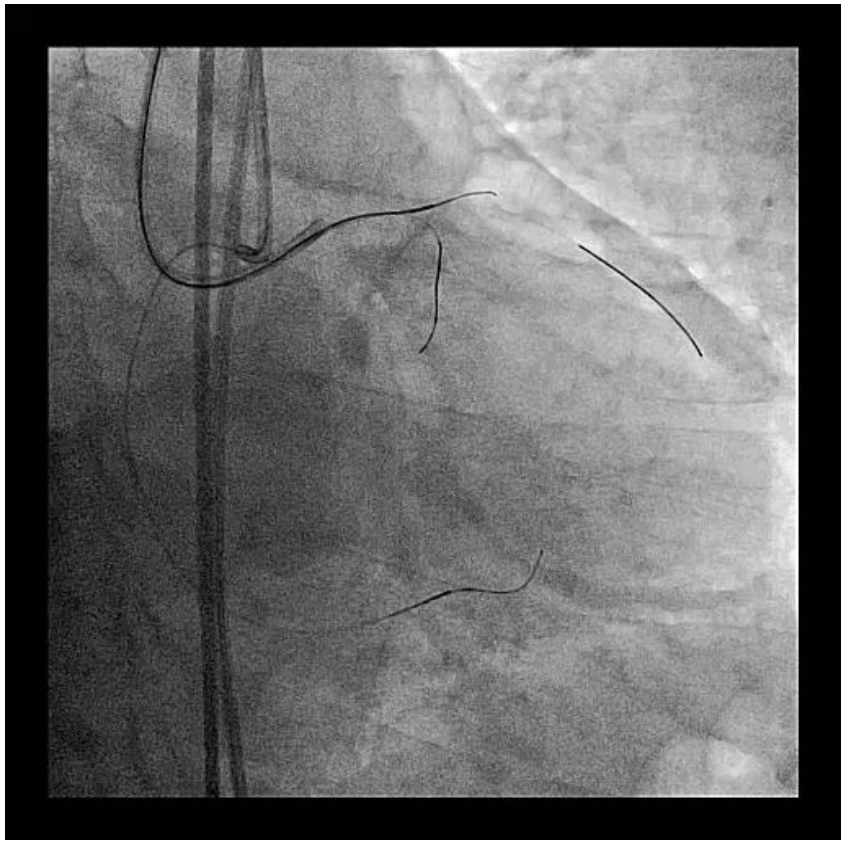


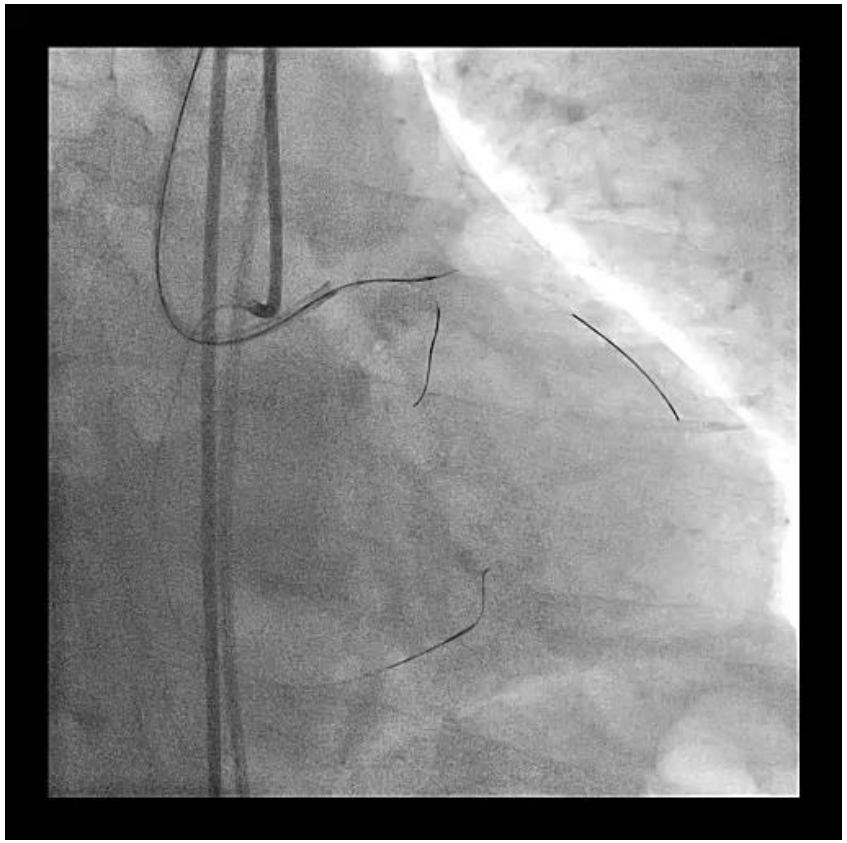


Extensive antegrade techniques

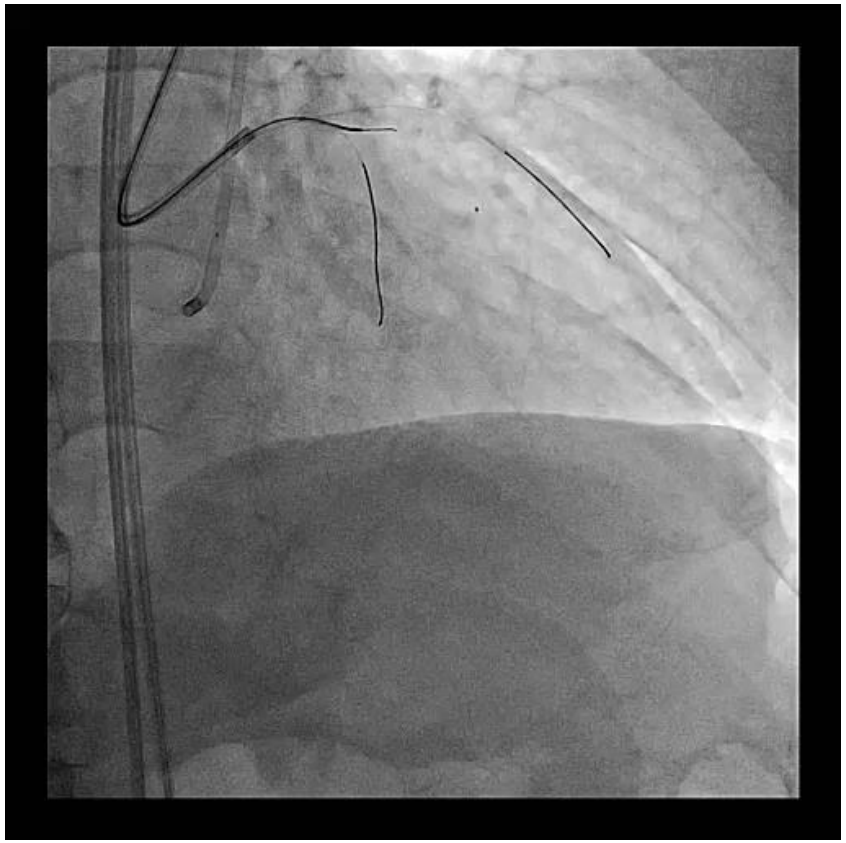


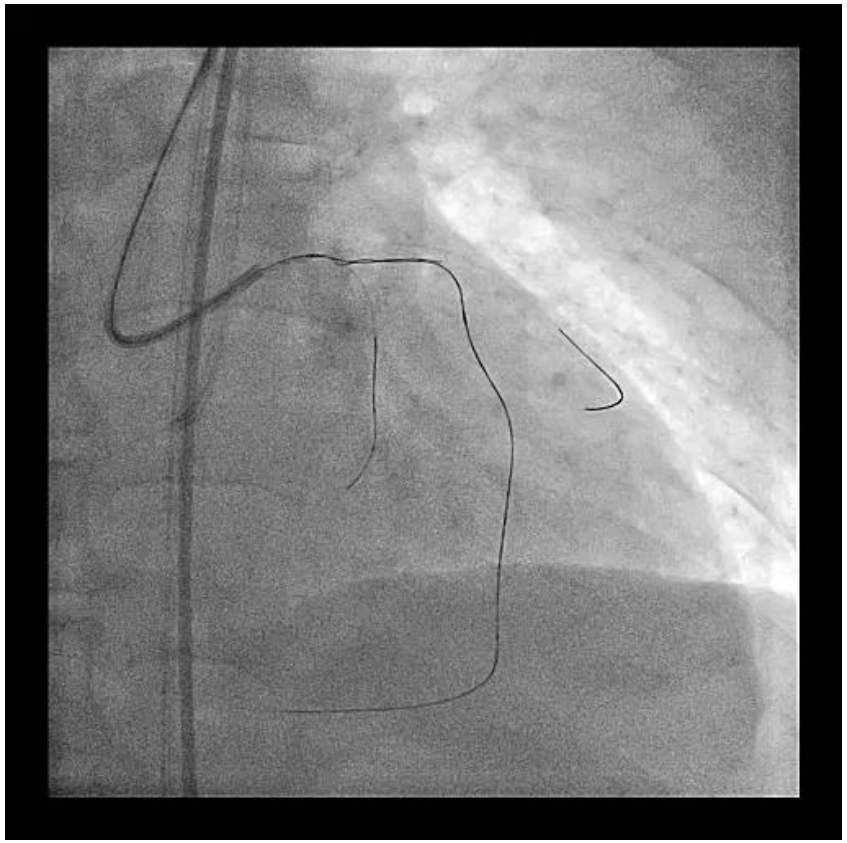
Shift to retrograde after 1.5 hours



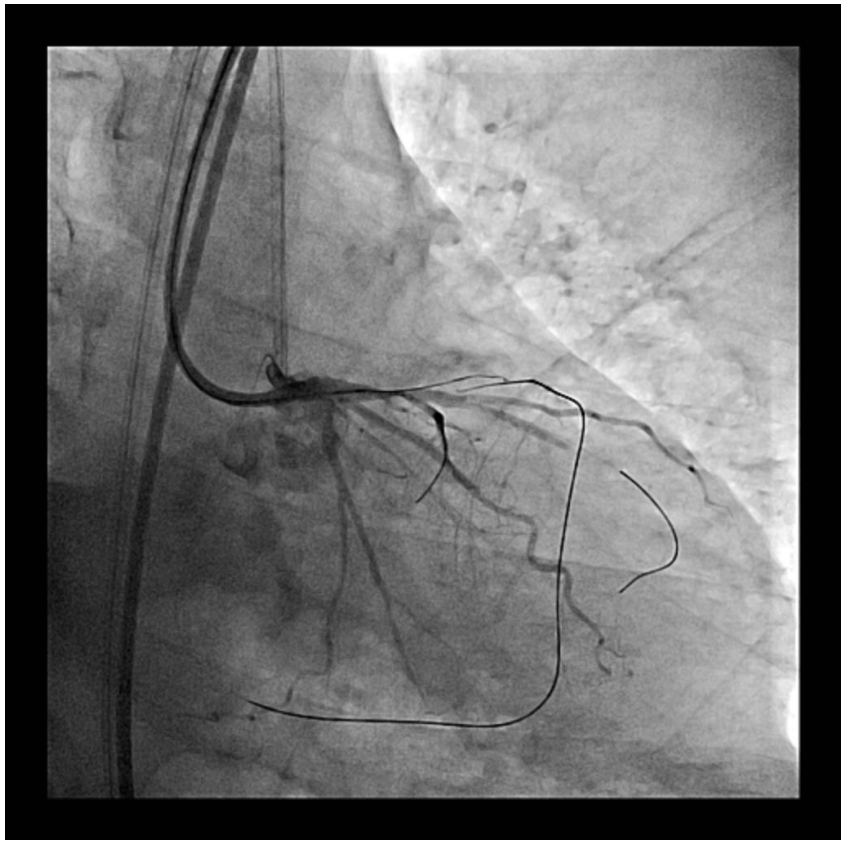


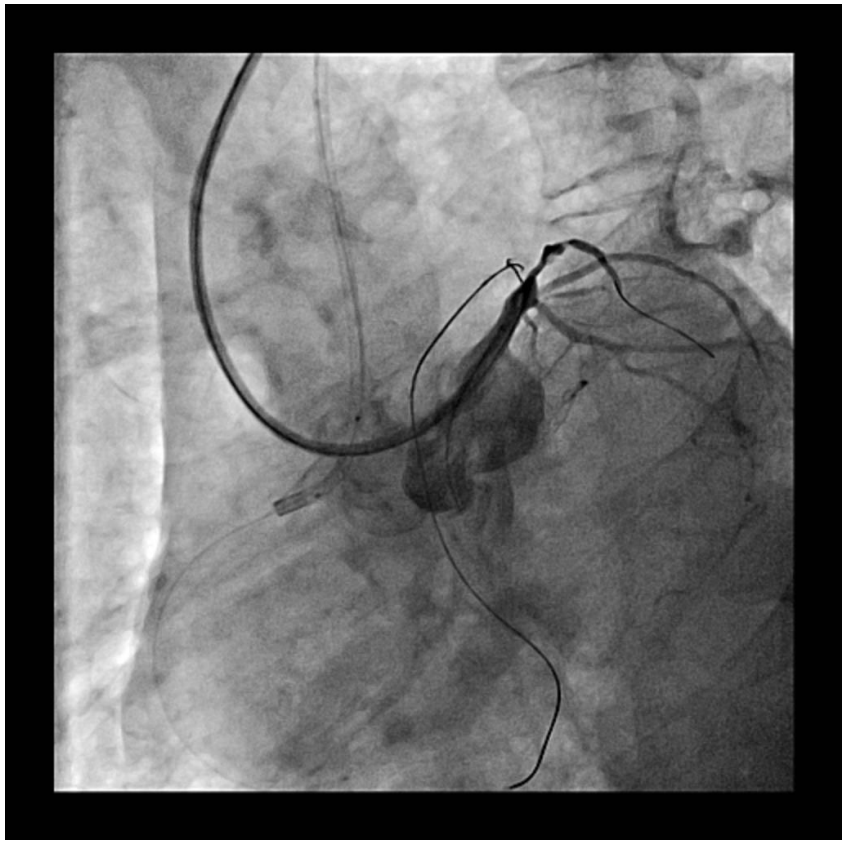
Direct retrograde crossing in 15 minutes



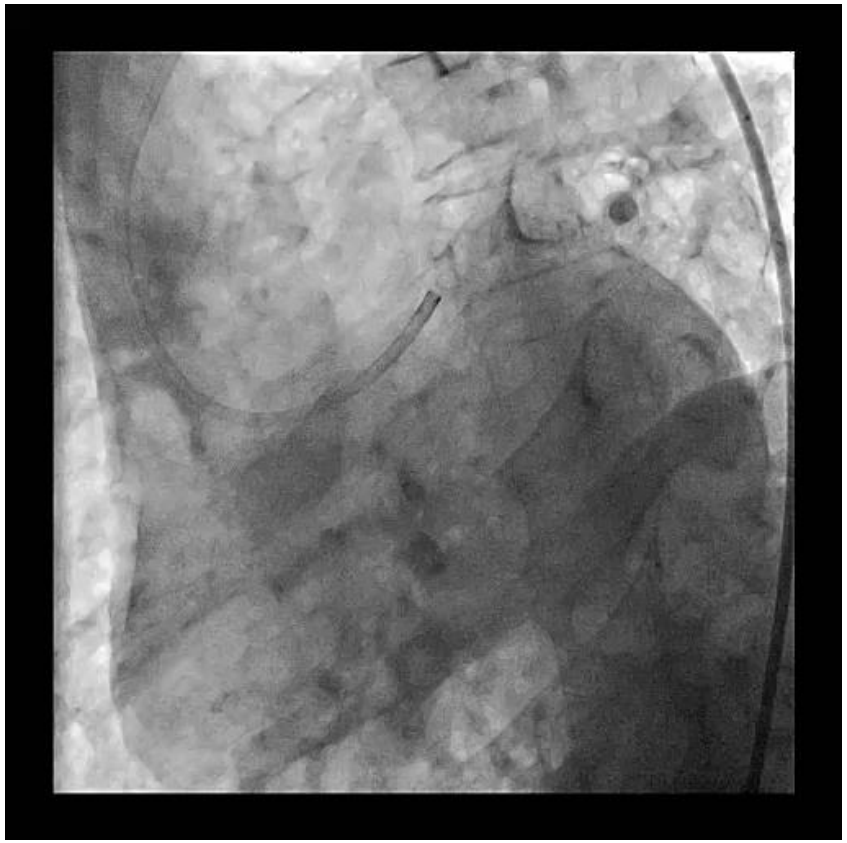


Imagine if you do ADR!!!





Final

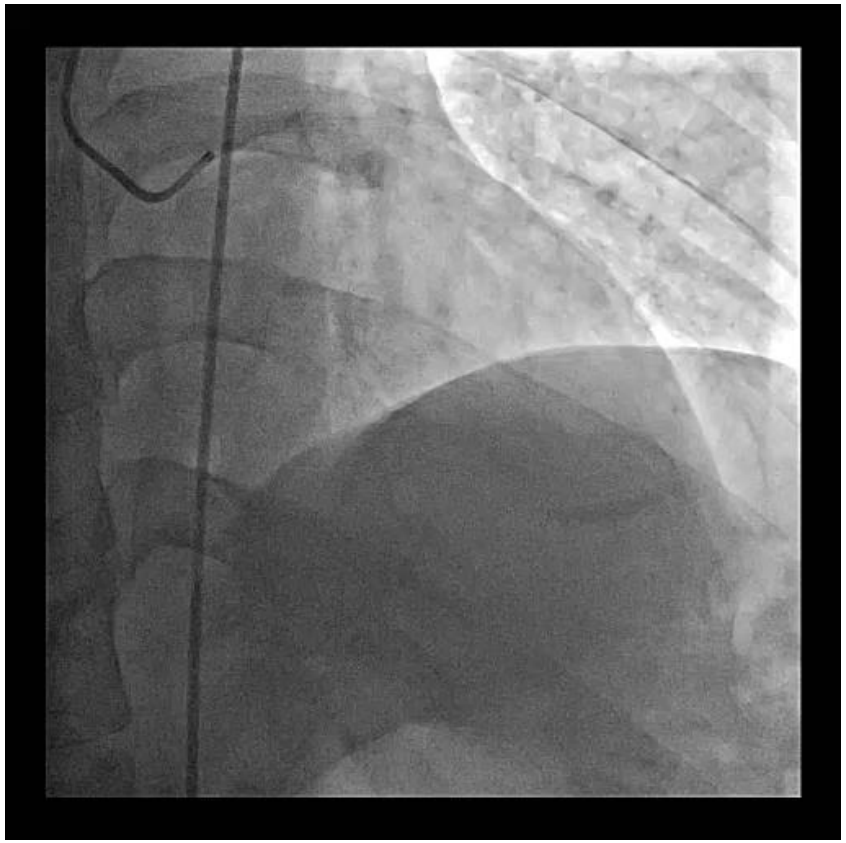


Caveats for antegrade approach

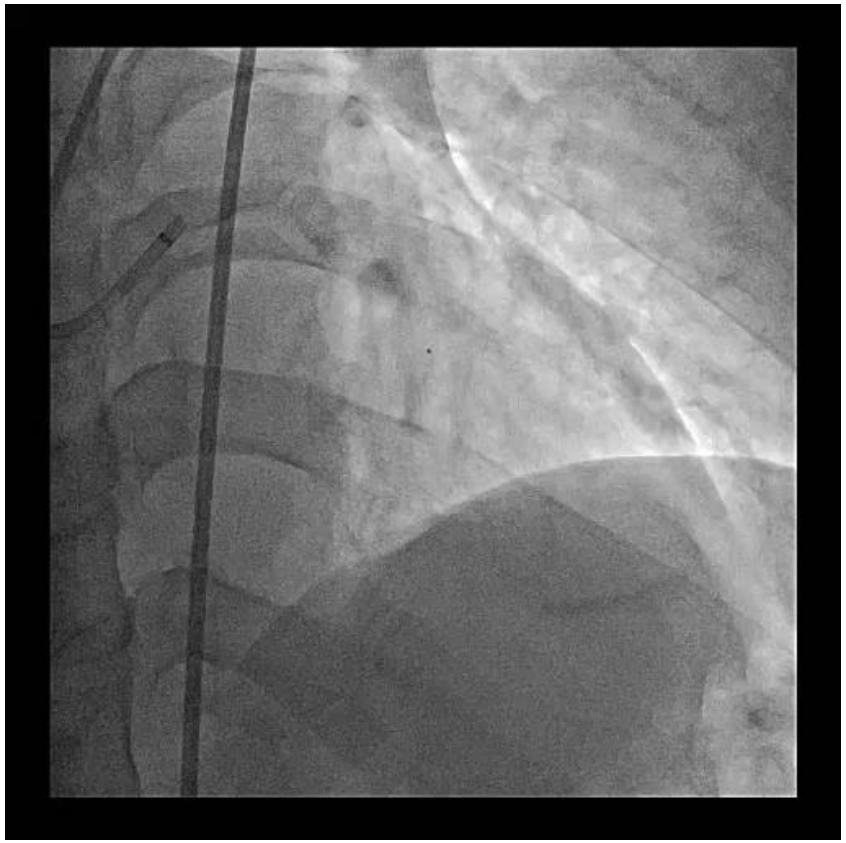
- Uncertain antegrade wire path, bifurcation at distal cap, etc.

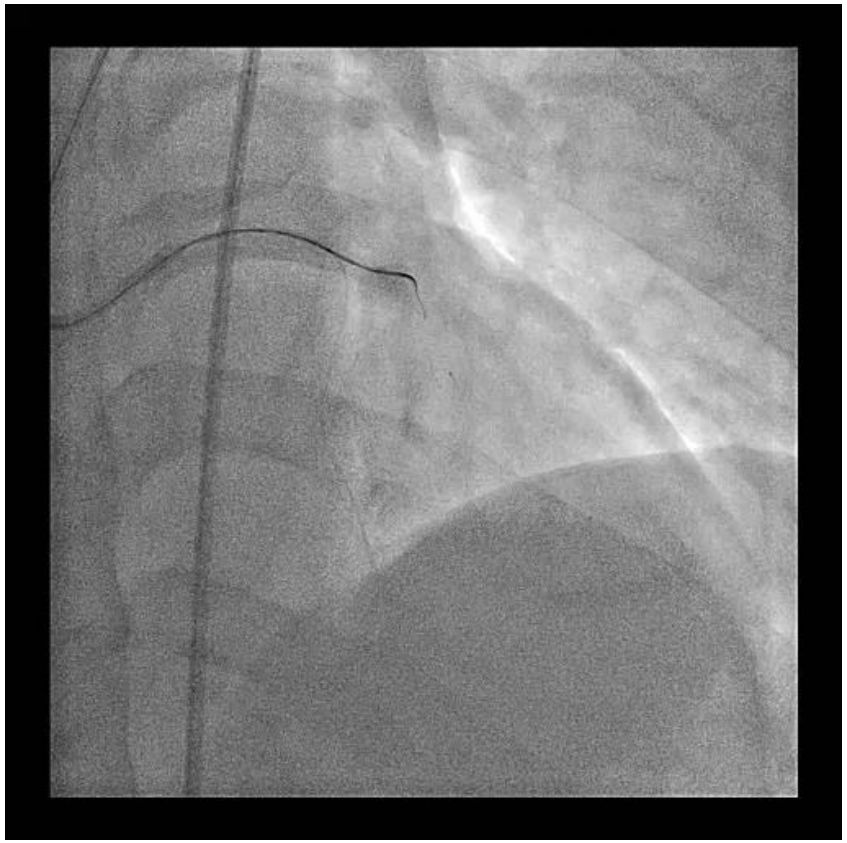
- Being persistence is good, but being stubborn is not
- ADR is not your bailout, retrograde is
- Recanalization with lost of branches is not successful reperfusion

Of course antegrade, but eGFR only 15ml/min/1.73m^2

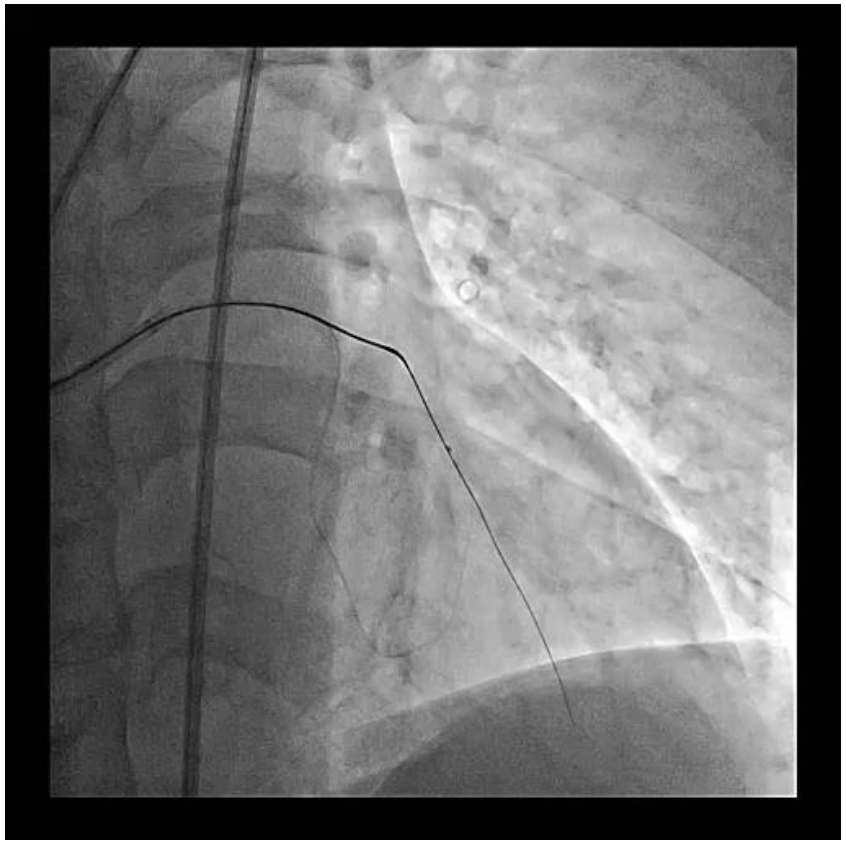


Hematoma progression with antegrade injection avoided





20cc of contrast to finish

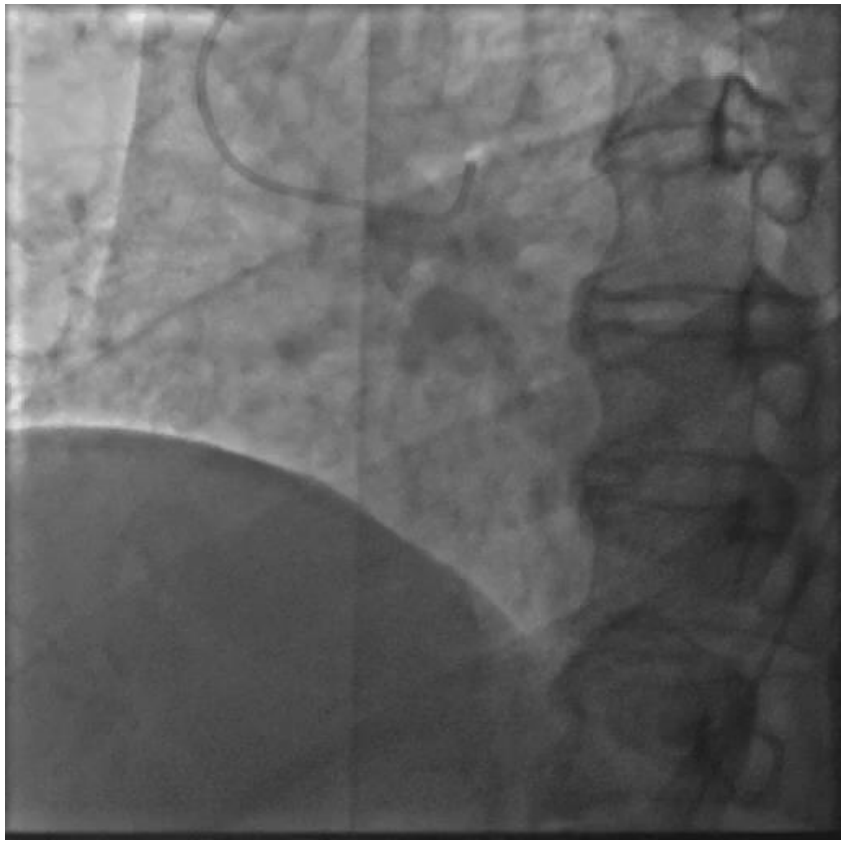


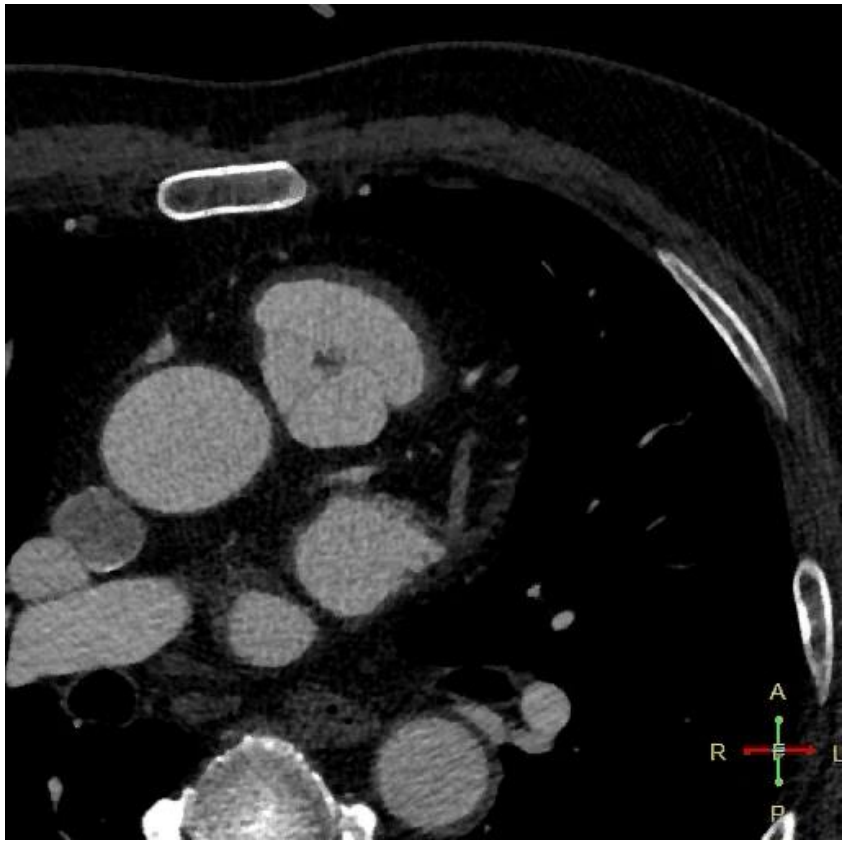
CTO operator can't survive without retrograde skills

- There can be issues even in a seemingly "straightforward" antegrade case

- Contrast volume constraints
- Hematoma progression with antegrade injection
- A microcatheter in the distal true lumen is your homing beacon

Referring hospital cannot find RCA

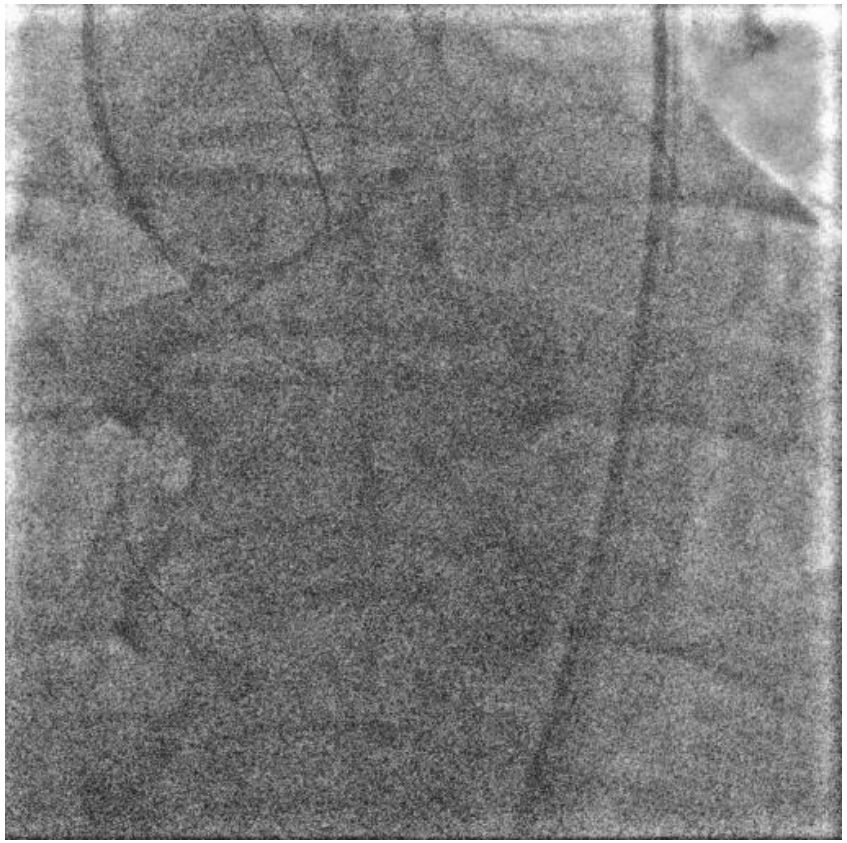




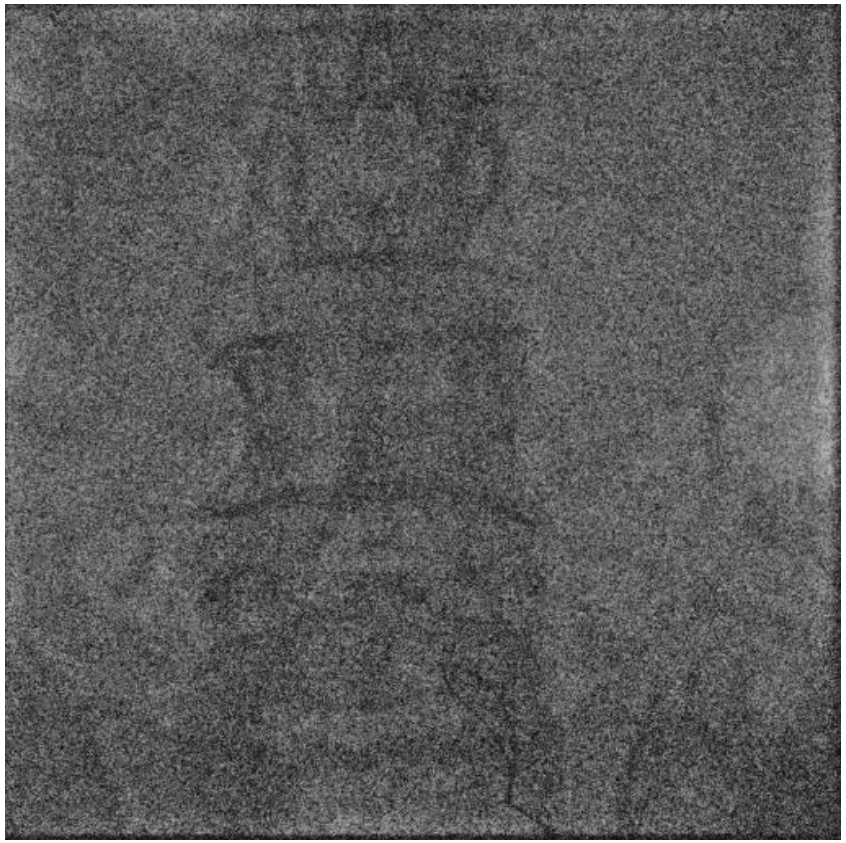
What CTA tells you: Don't bother!

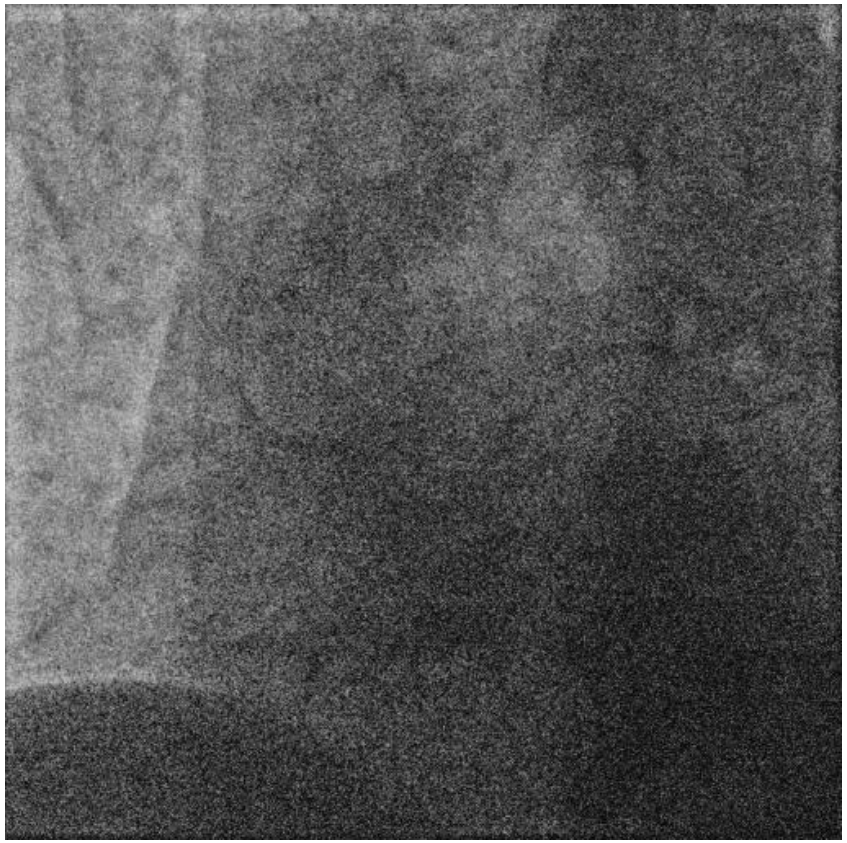
RCA ostial flush occlusion

Primary retrograde wire crossing

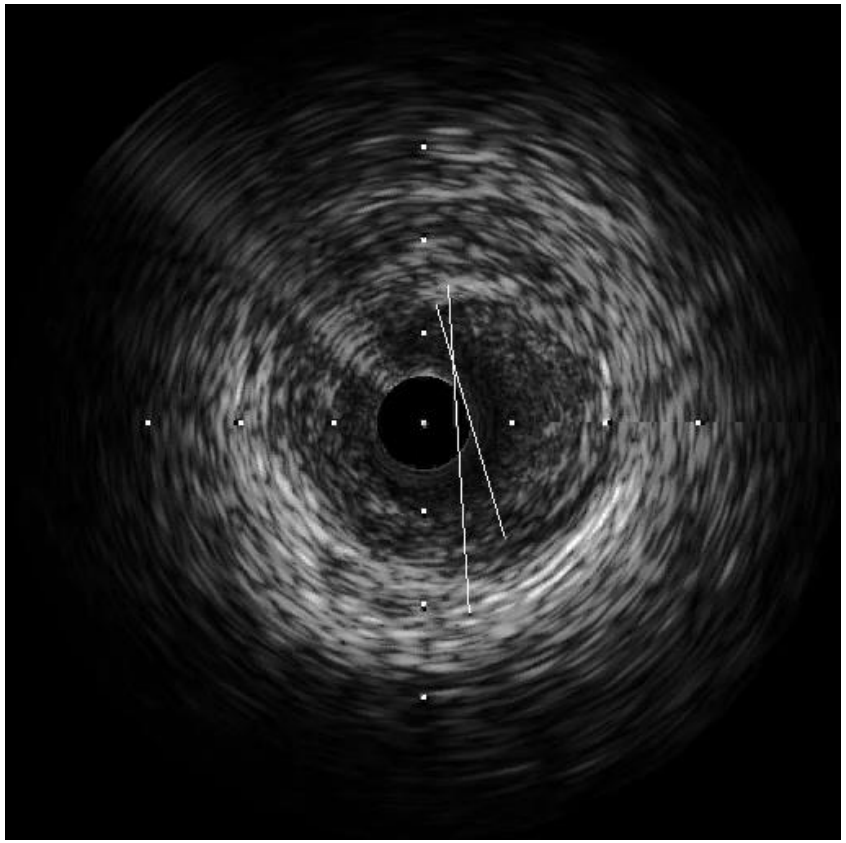


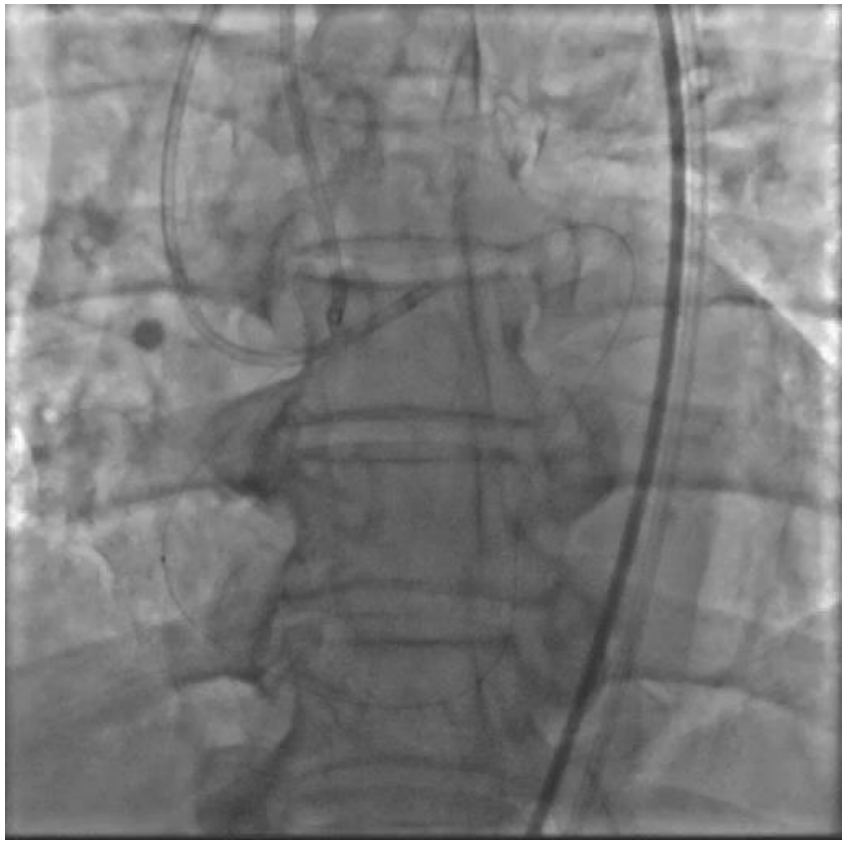
RG3 snared to engage antegrade guide





All intraplaque course



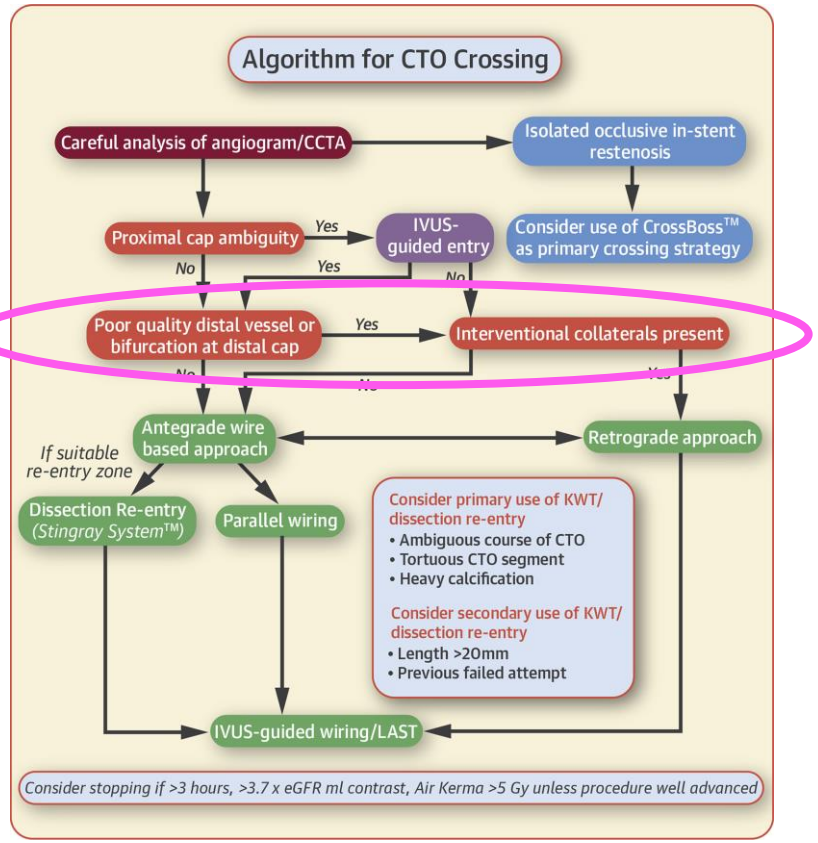


The ultimate antegrade challenge

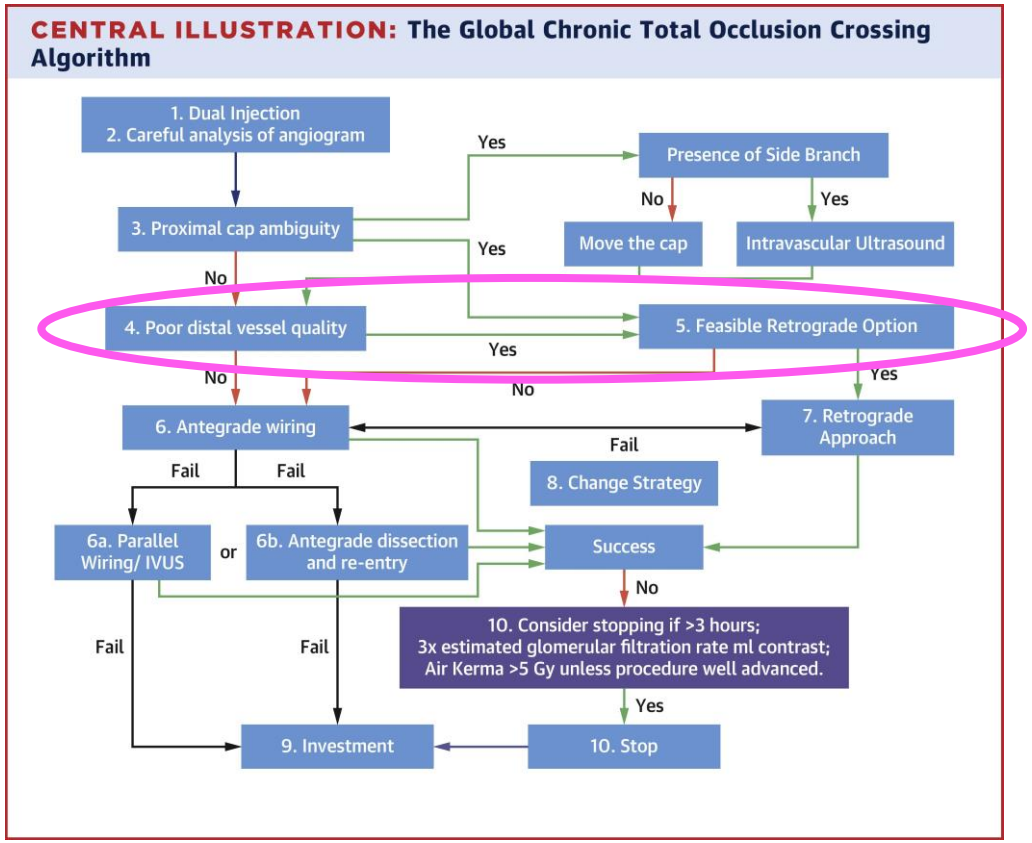
- LM or RCA ostial flush CTO

- How can you engage your antegrade guide?
- Any even you can, there will be no support for antegrade wiring
- Primary retrograde may be your only solution

Good algorithm should dictate approach priority



JACC Intv 2017



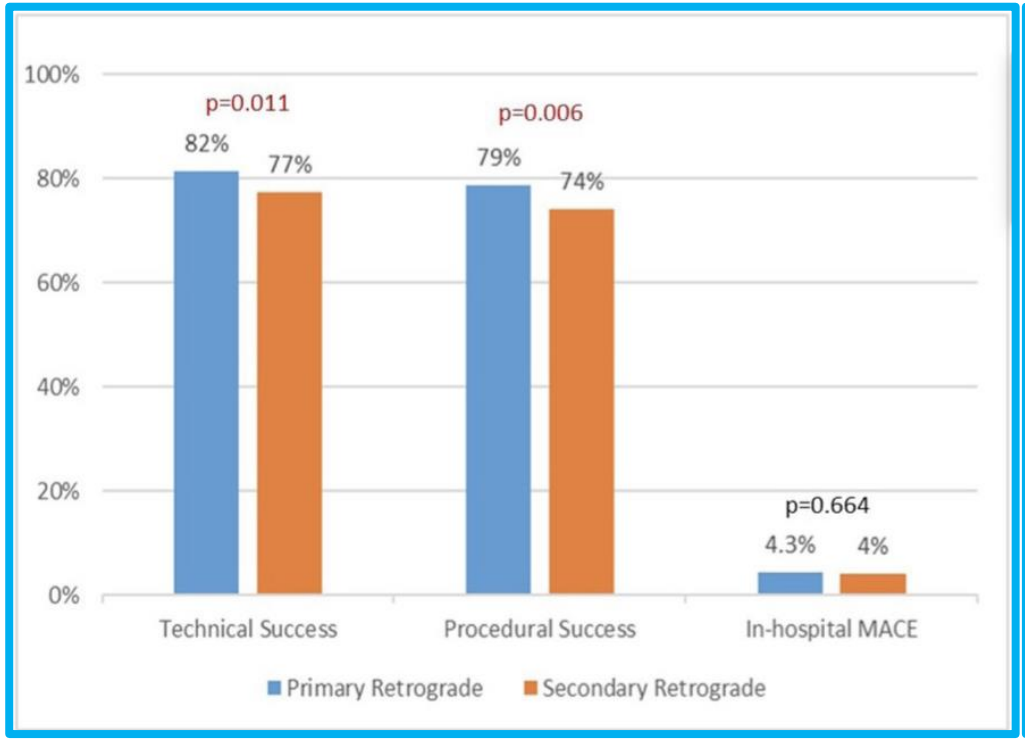
JACC 2021

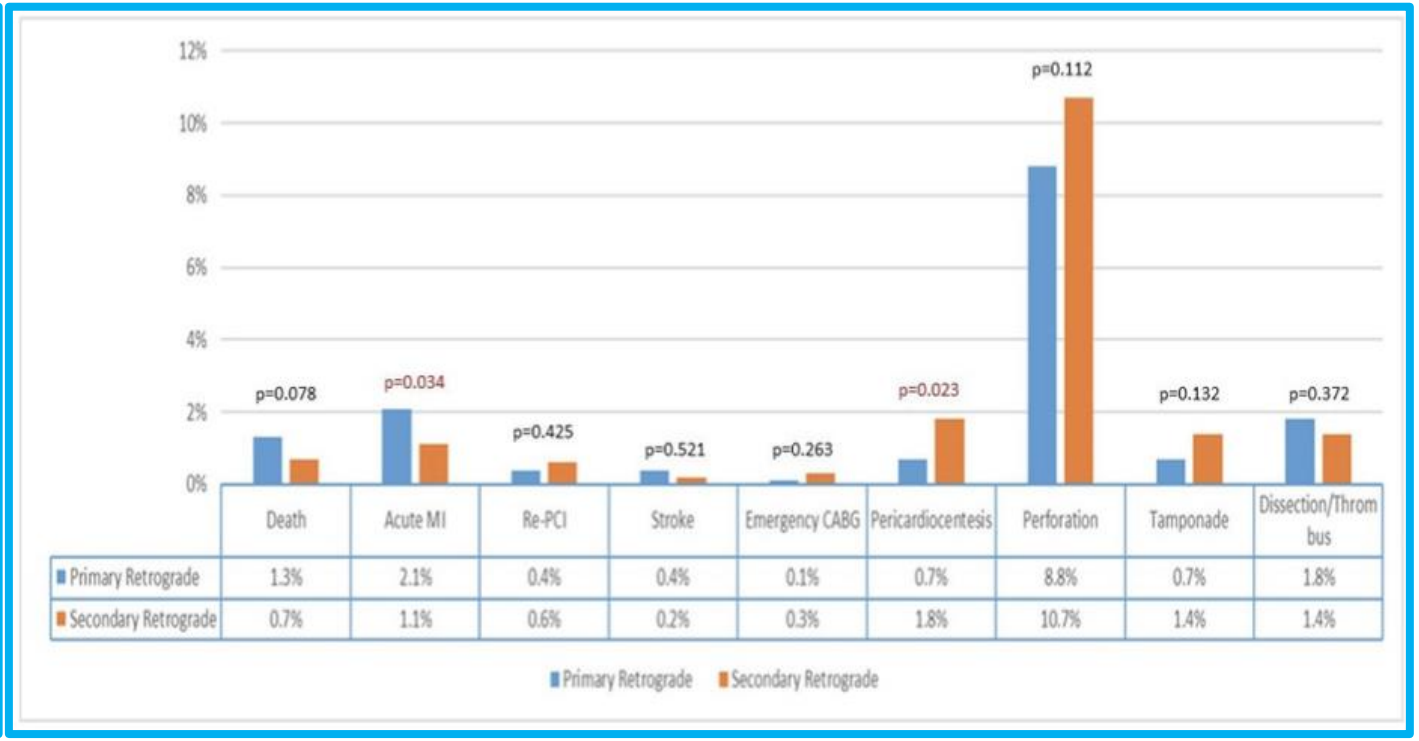
But we don't have a "global" score for that purpose

	J-CTO	CL	PROGRESS-CTO	ORA	CT-RECTOR	RECHARGE	CASTLE
Age				✓			✓
Prior CABG		✓				✓	✓
Prior failure	✓				✓		
Proximal cap							✓
Tortuosity							✓
Calcification							✓
Lesion length							✓
Target vessel							
Collateral quality			✓	✓			
Other		Prior MI			Multiple CTOs; duration >12m	Diseased distal landing zone	

Quality of distal target lumen and cap was often neglected

In fact, primary retrograde is better than bail-out retrograde





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Think again when you see the followings

Be smart and efficient, abandon the "default antegrade" doctrine, and switch to retrograde