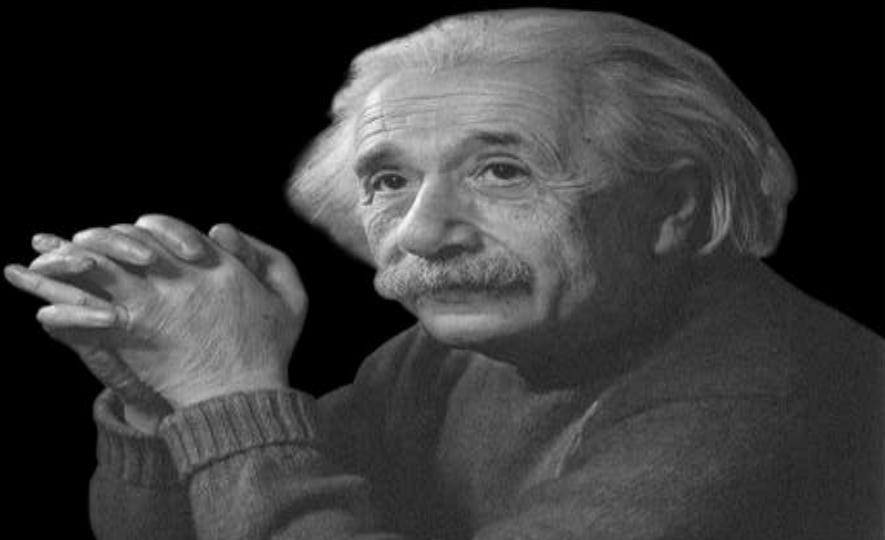


# **Staged CTO PCI: The investment that pays dividends**

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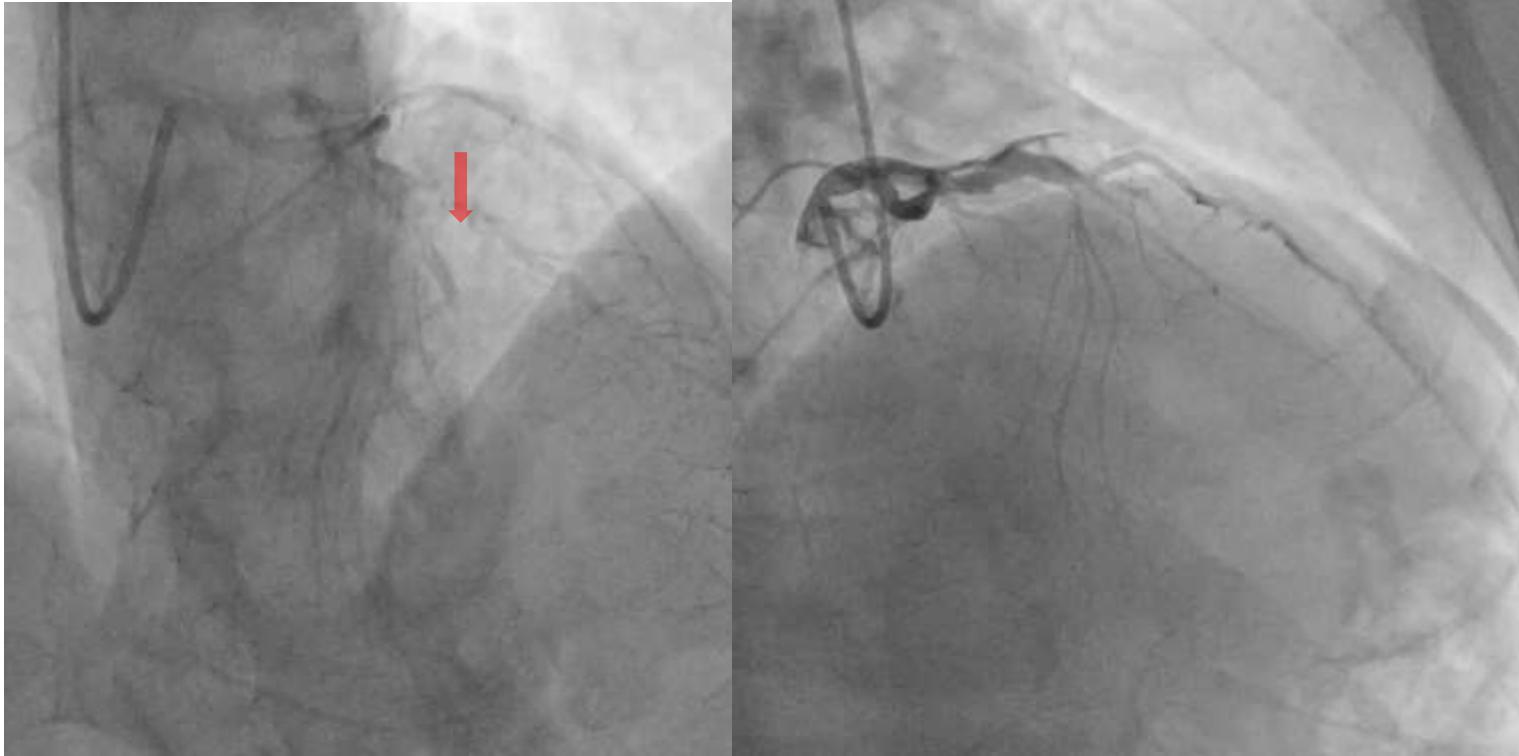
~~INVESTMENT~~  
**FAILURE is  
SUCCESS in  
PROGRESS**

**- Albert Einstein**



## Case of the day

- 52 years old male
- Hypertension and hyperlipidemia
- 5-10-2022 Acute anterior myocardial infarction.



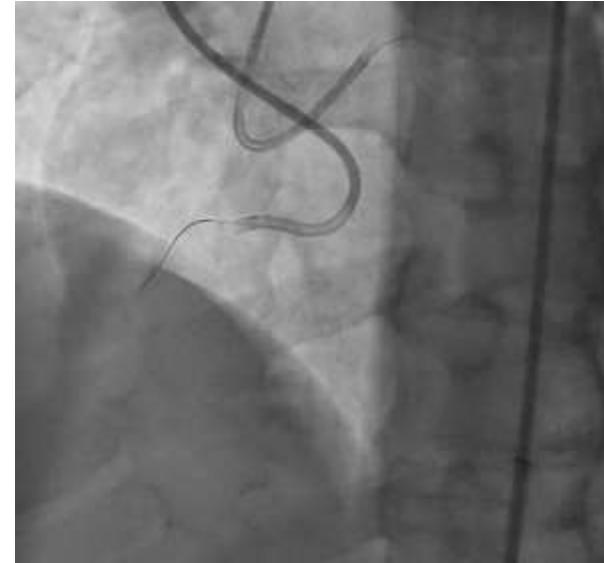
## Case of the day

- 2 DES were implanted in the mid LAD .
- coronary angiography also showed CTO of the RCA, with collateral filling from LAD



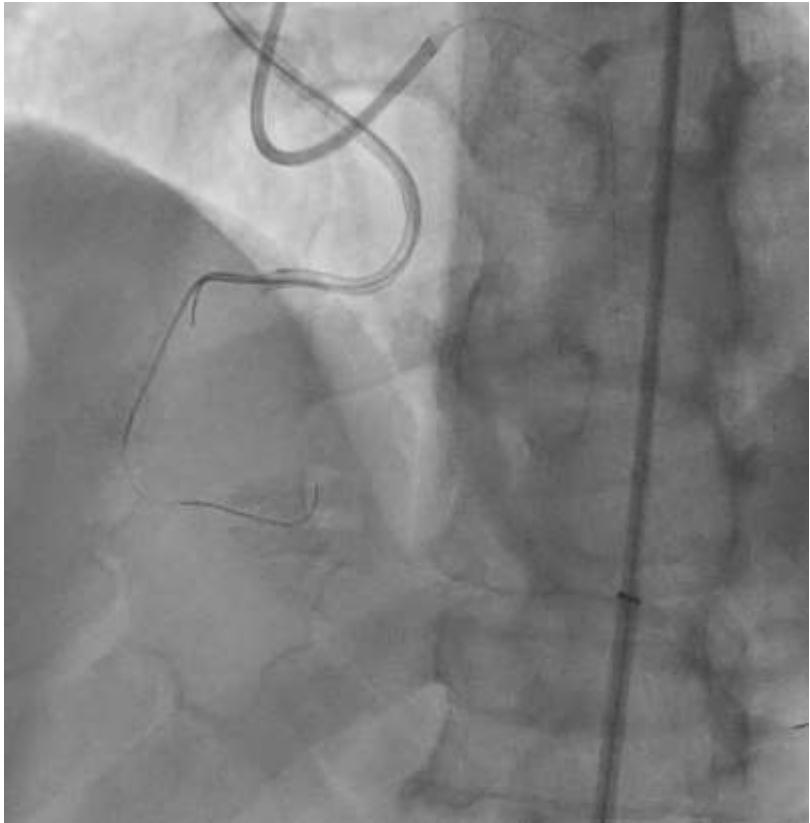
J-CTO SCORE SHEET		Version 1.0
Variables and definitions		
Topred	Blunt	
		Every with any tapered tip or simple indistinct division of lumen can be categorized as "tapered".
		<input checked="" type="checkbox"/> Topred (1) <input type="checkbox"/> Blunt (0)
Classification		
		Regardless of severity, 1 point is assigned if any occlusive classification is detected within the CTO segment.
		<input type="checkbox"/> Nonoc (0) <input checked="" type="checkbox"/> Occlusive (1)
Bending > 45 degrees		
		One point is assigned if bending > 45 degrees is detected within the CTO segment. Any tortuosity separated from the CTO segment is excluded from this assessment.
		<input type="checkbox"/> Abnormal (0) <input checked="" type="checkbox"/> Presence (1)
Occlusion length		
		Using post-contrast images, try to measure "true" distance of occlusion, which tends to be shorter than the first impression
		<input type="checkbox"/> < 20 mm (0) <input checked="" type="checkbox"/> >= 20 mm (1)
Retro lesion		
Is this the Retro (Dif) lesion? (previously attempted but failed)		Retro lesion <input type="checkbox"/> No (0) <input checked="" type="checkbox"/> Yes (1)
Category of difficulty (total point)		
<input type="checkbox"/> easy (0) <input type="checkbox"/> intermediate (1) <input checked="" type="checkbox"/> difficult (2) <input type="checkbox"/> very difficult (> 3)		Total <input checked="" type="checkbox"/> points

**J CTO SCORE 4**

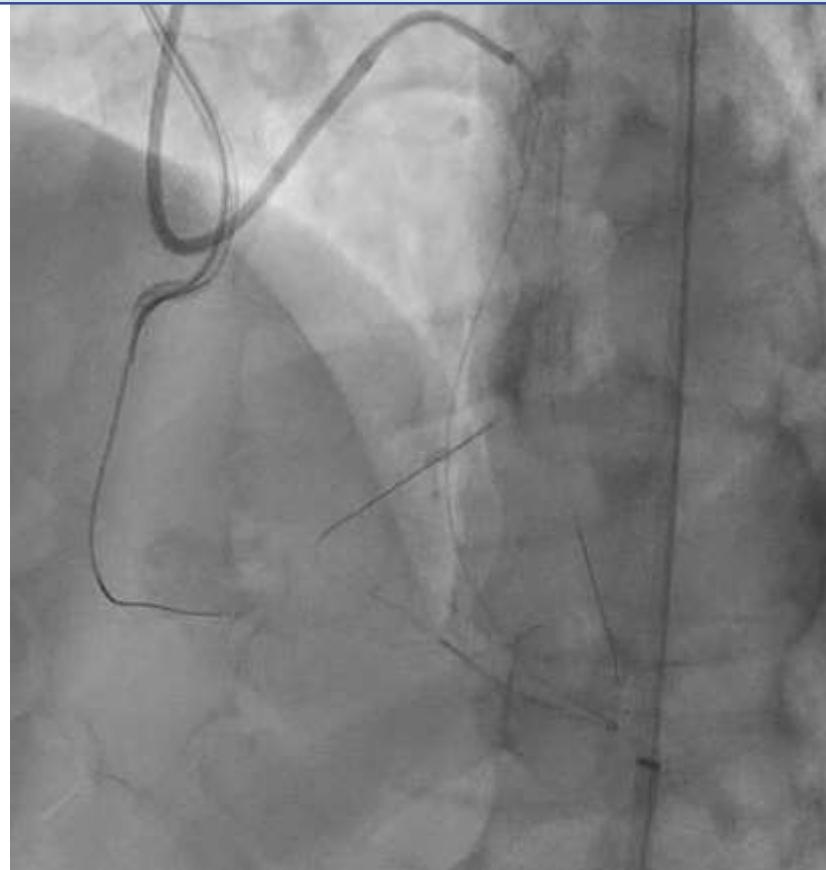


Coronary angiography showed CTO of the distal RCA (just after RV branch) with ambiguous cap, with retrograde septal collaterals from LAD CC2, long calcified CTO body, small and diffusely disease at the distal landing zone.

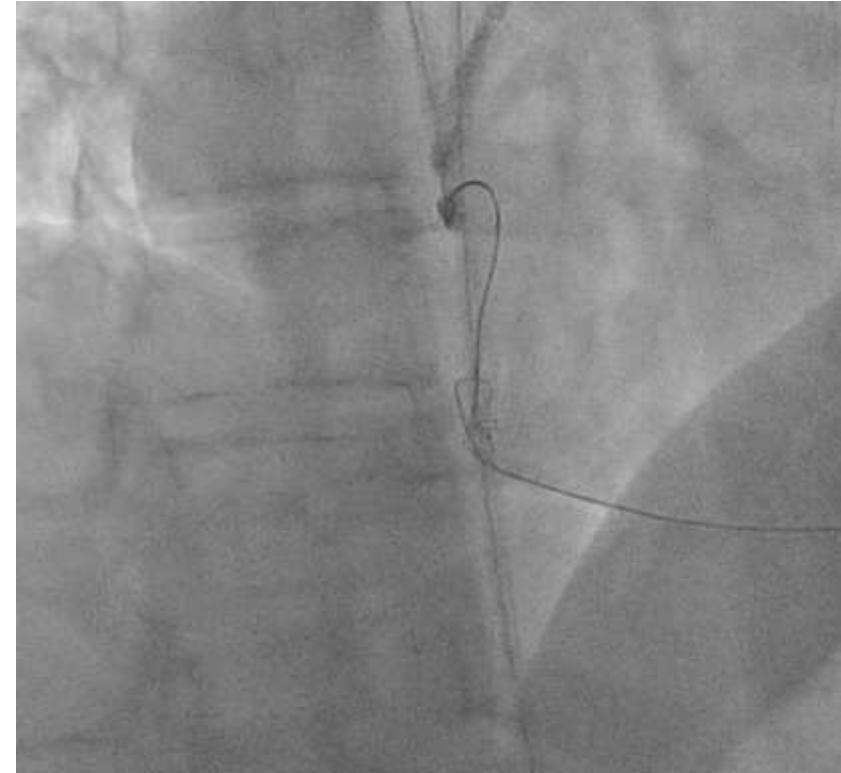
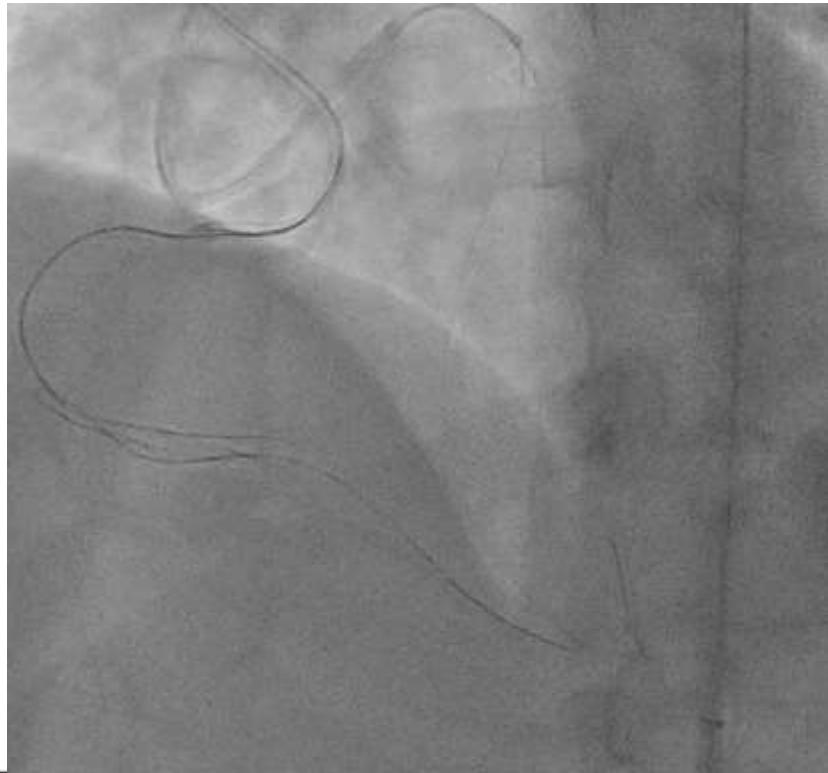
The initial strategy was a short attempt of antegrade wire escalation that failed, so we performed ADR as preparation for Revars CART



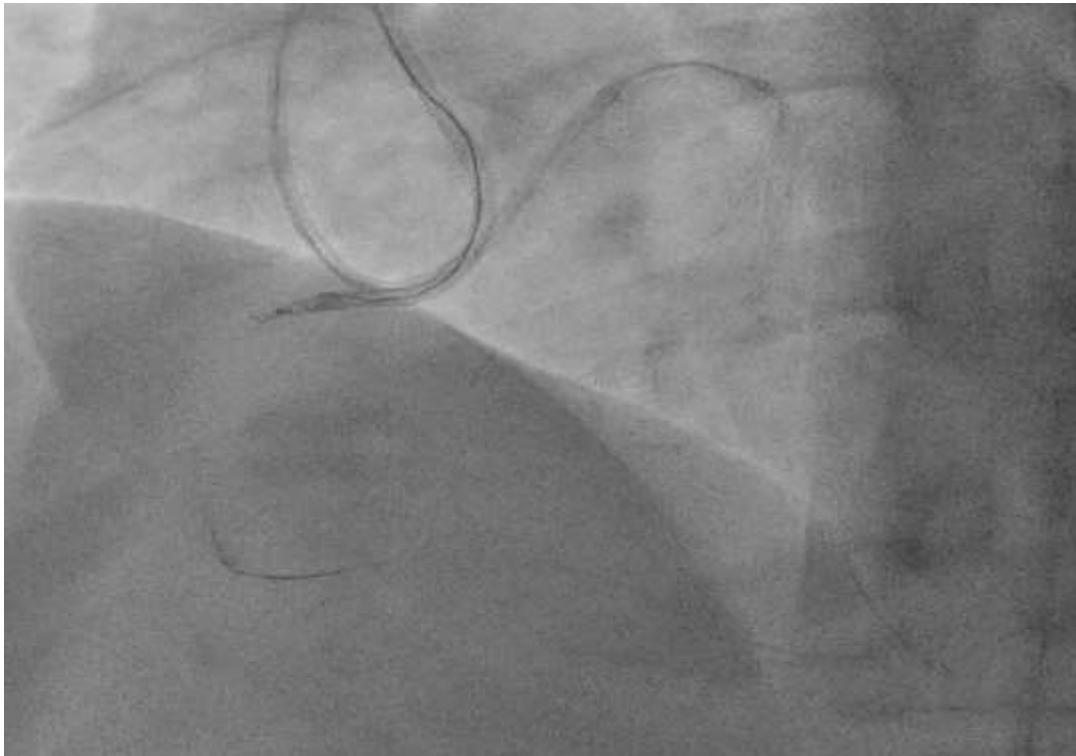
In retrograde approach we succeeded to advance the sion wire via septal collateral to distal RCA.



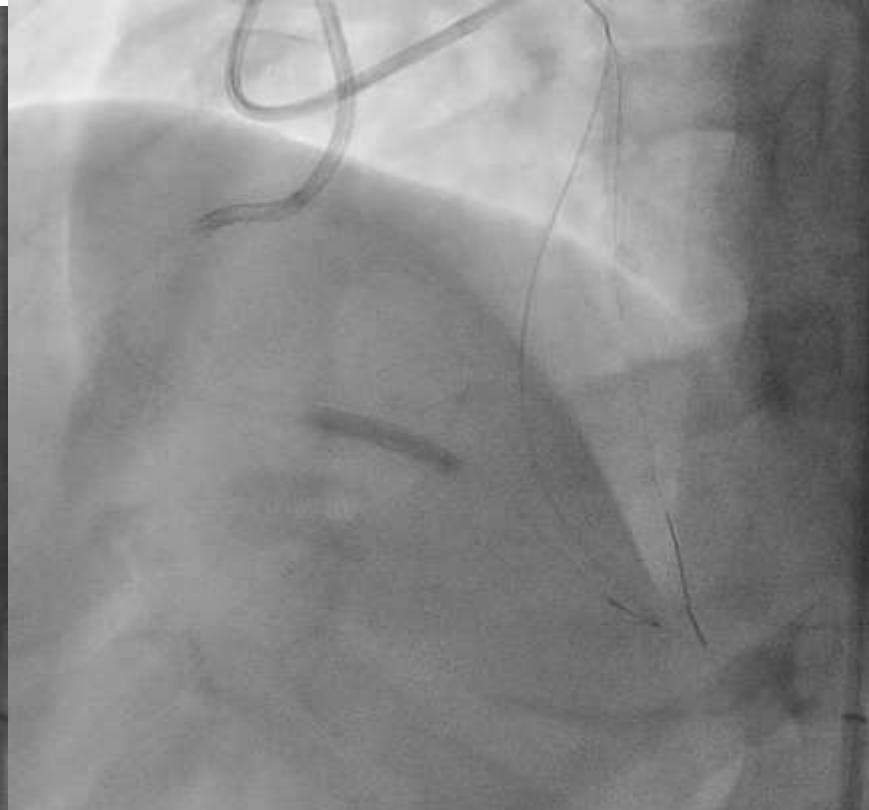
A dissection antegrade and retrograde technique were performed, and the REVERSE CART was successful



A dissection antegrade and retrograde technique were performed, and the REVERSE CART was successful



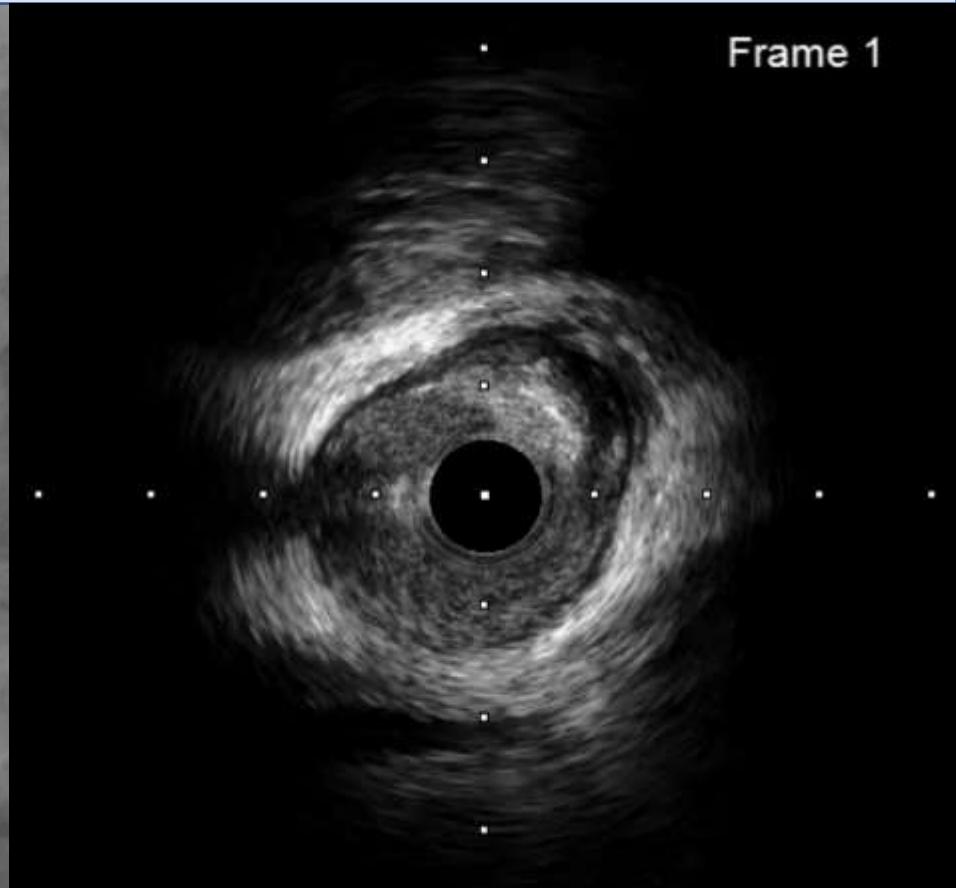
Balloon inflation and IVUS were performed with a final result of long subintimal trajectory with TIMI 1 flow, and according to that we reinflated a balloon and declared it as an investment procedure.



6 week later , coronary angiography was reattempted, revealing improvement of the result of RCA artery with TIMI FLOW 3, pre and post-dilatation NC balloons were performed.



4 overlapped DCB were implanted from distal to proximal RCA with a good result confirmed by IVUS.



- ✓ For those who perform CTO recanalization, initial failure does not mean the vessel cannot be opened later.
- ✓ It is important for operators to not only be well experienced, highly skilled, and equipped with the appropriate tools but also to consider the benefits in an investment procedure before classifying an intervention as a failed attempt.
- ✓ Investment procedures allow for the CTO vessel to form an antegrade tract, that can be successfully wired in the subsequent procedure.

- ✓ If repeat PCI is performed after subintimal plaque modification, it is best to let the vessel heal for at least 40- 60 days before reattempting the procedure for the best results, which led to safer repeat procedures, with greater success and shorter length stents.
- ✓ A second procedure in a CTO can result in high success rate (83%).

