

# Special Techniques for CTOs

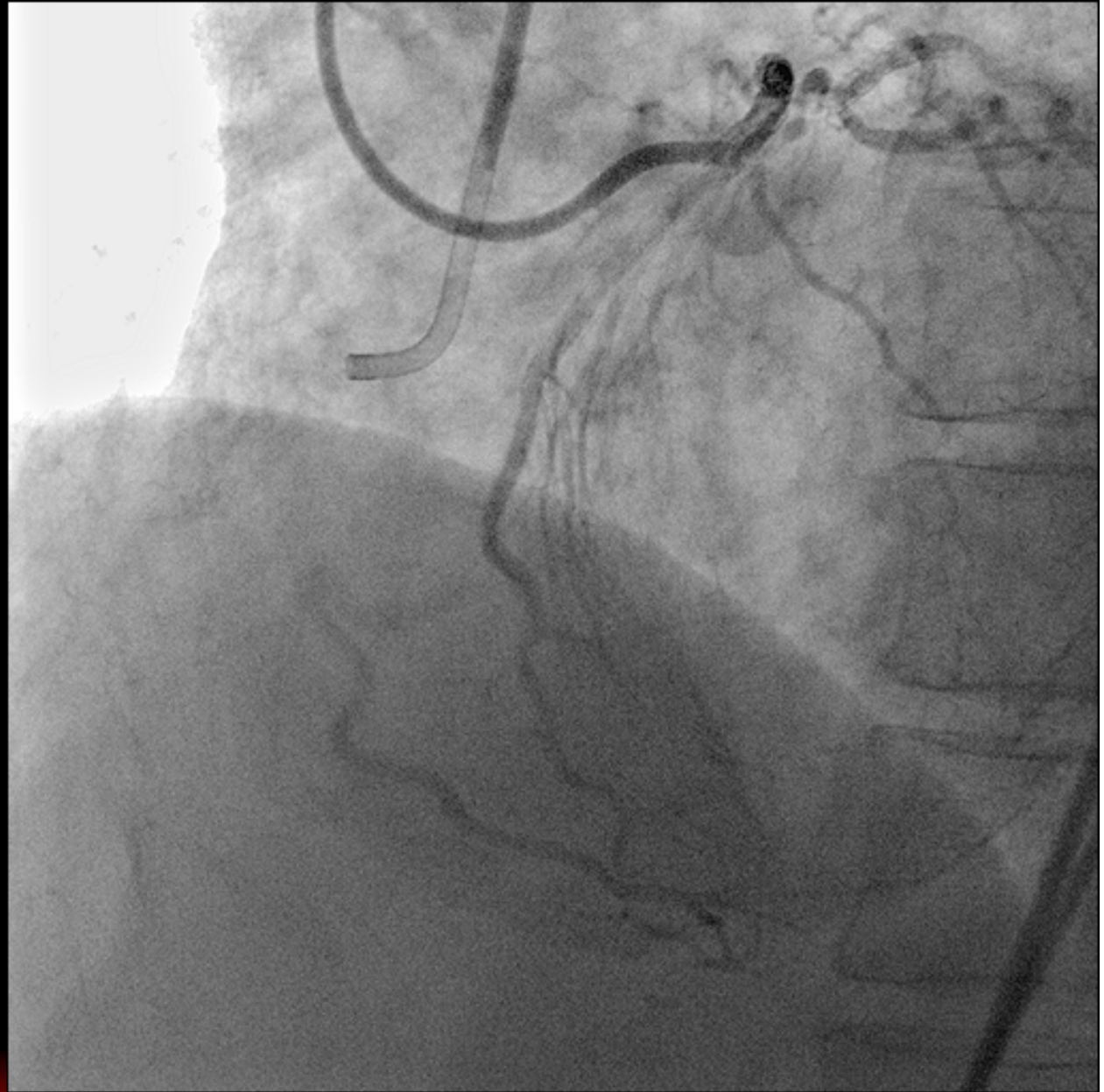
## - IVUS Guided Wiring -

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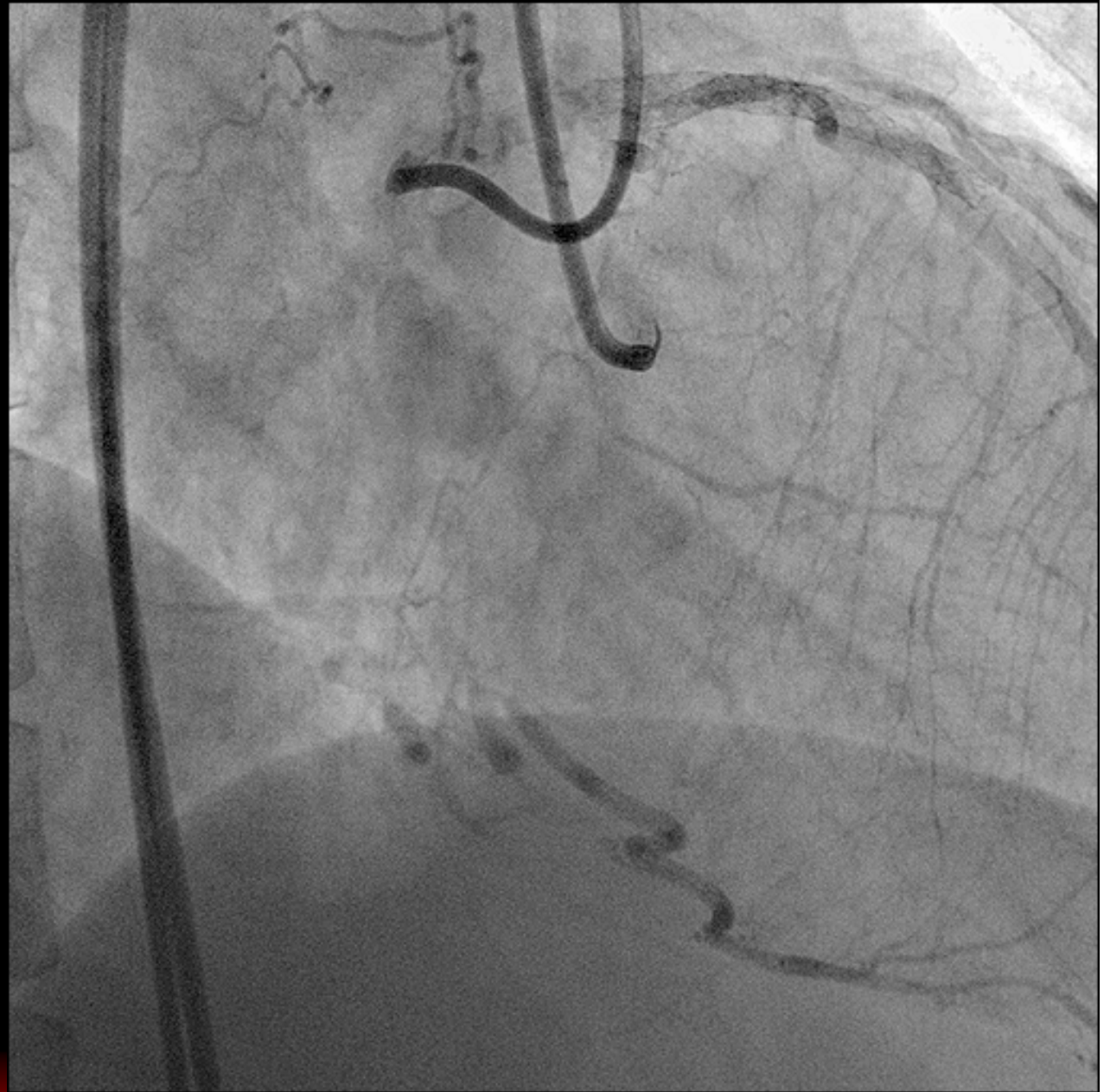


**Case 1**  
**Baseline CAG**  
**(LAO view)**



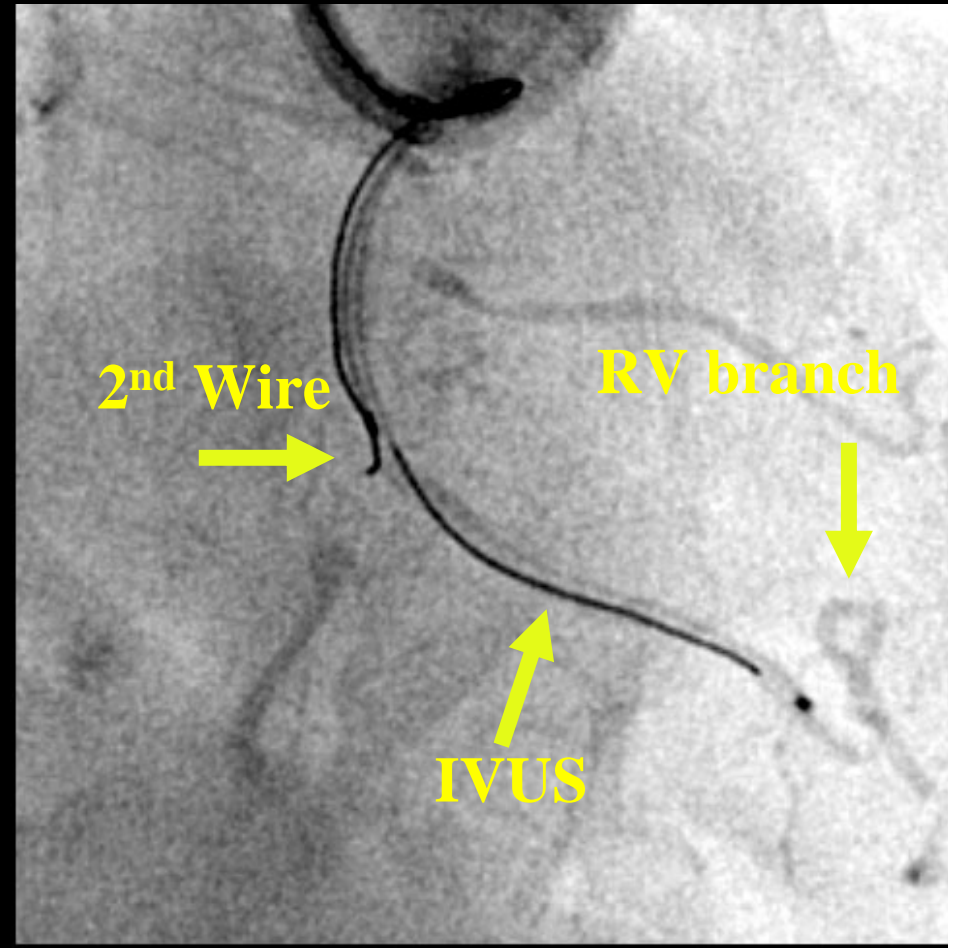
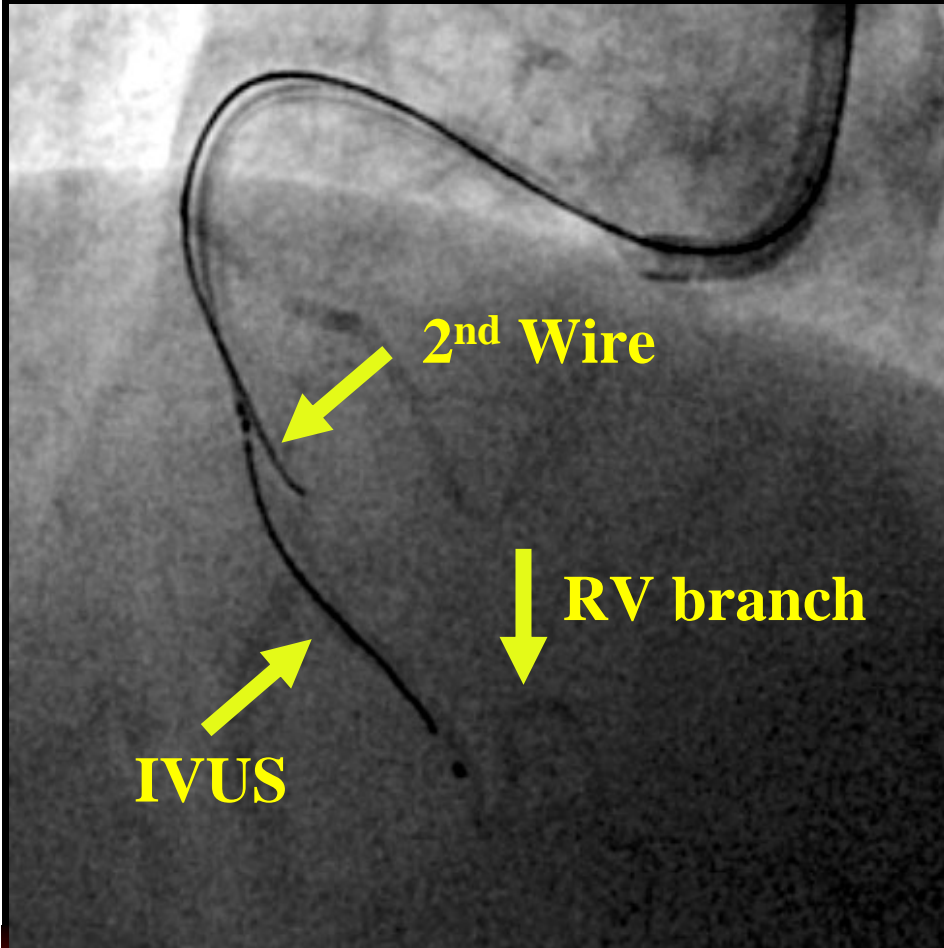


# Baseline CAG (RAO view)



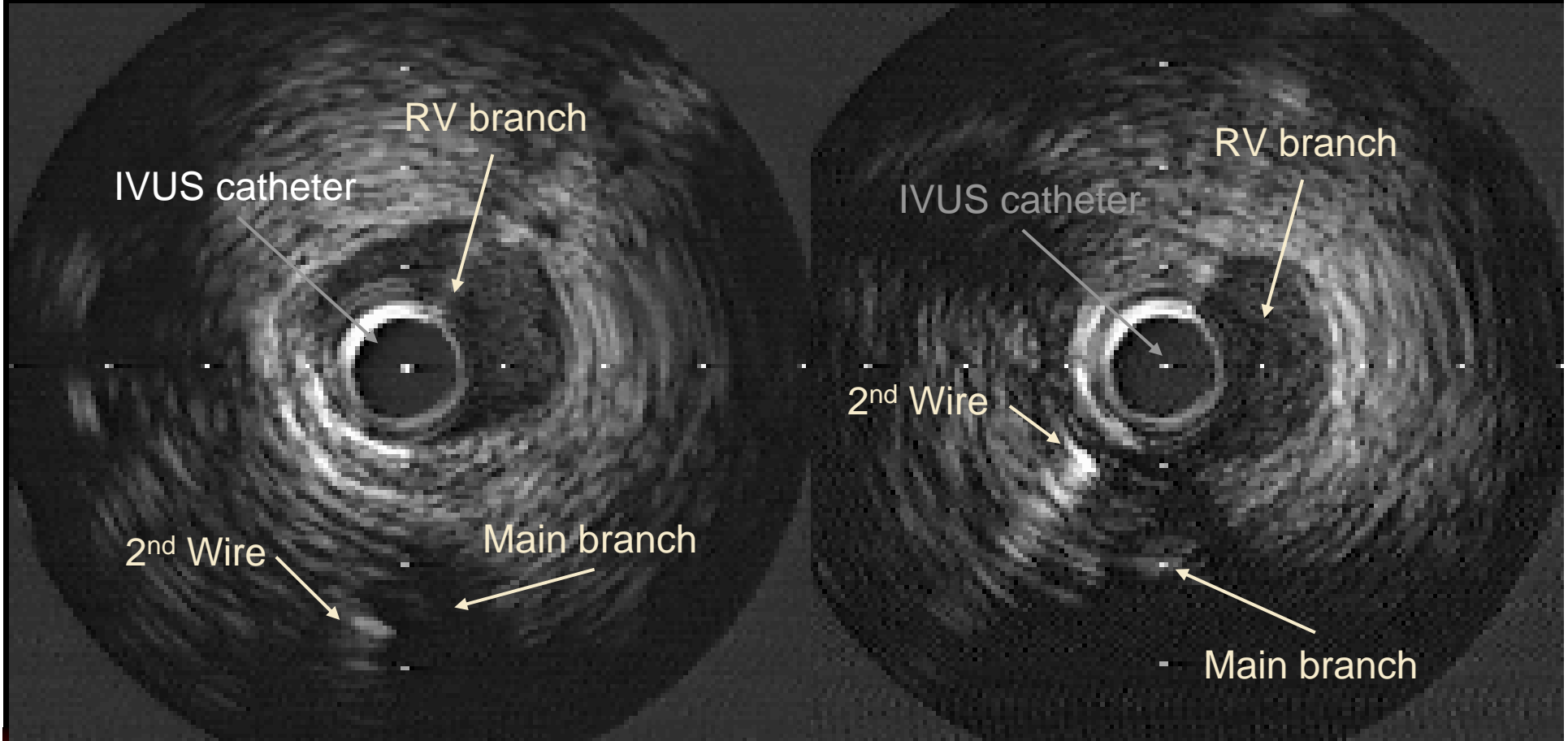


# Identify a CTO entry by IVUS



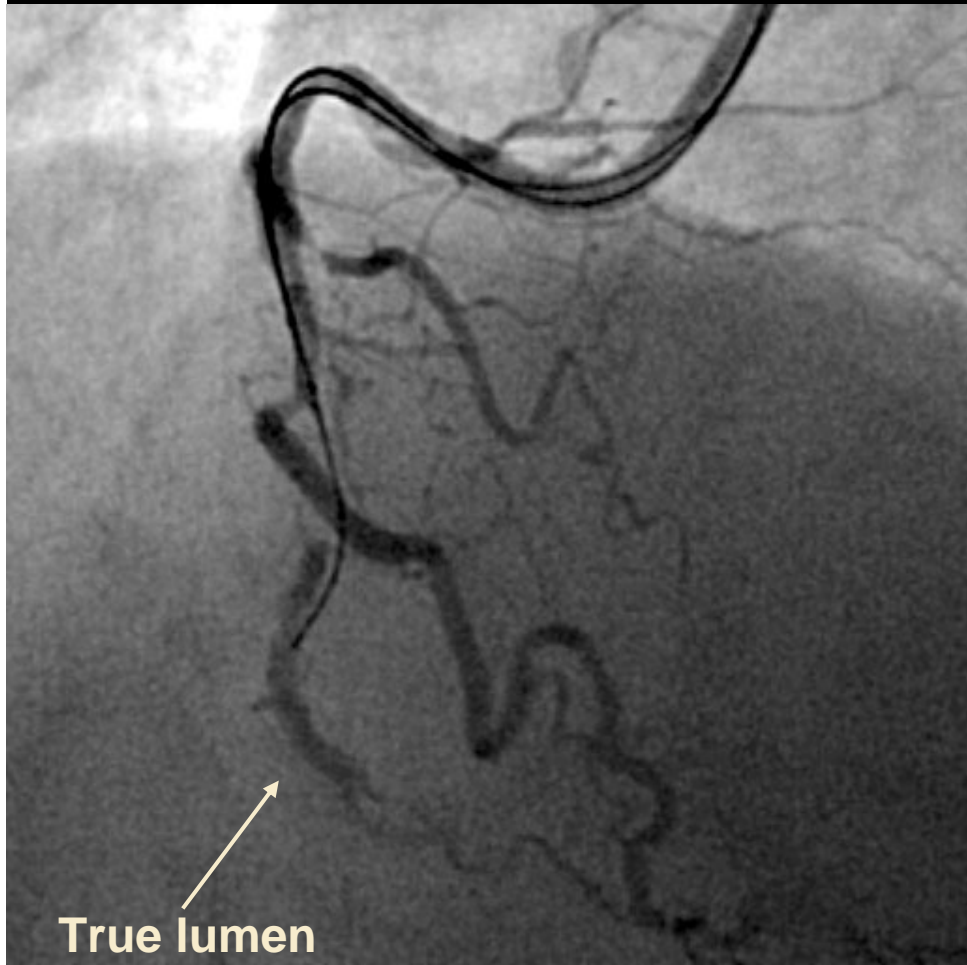


# Identify a CTO entry by IVUS



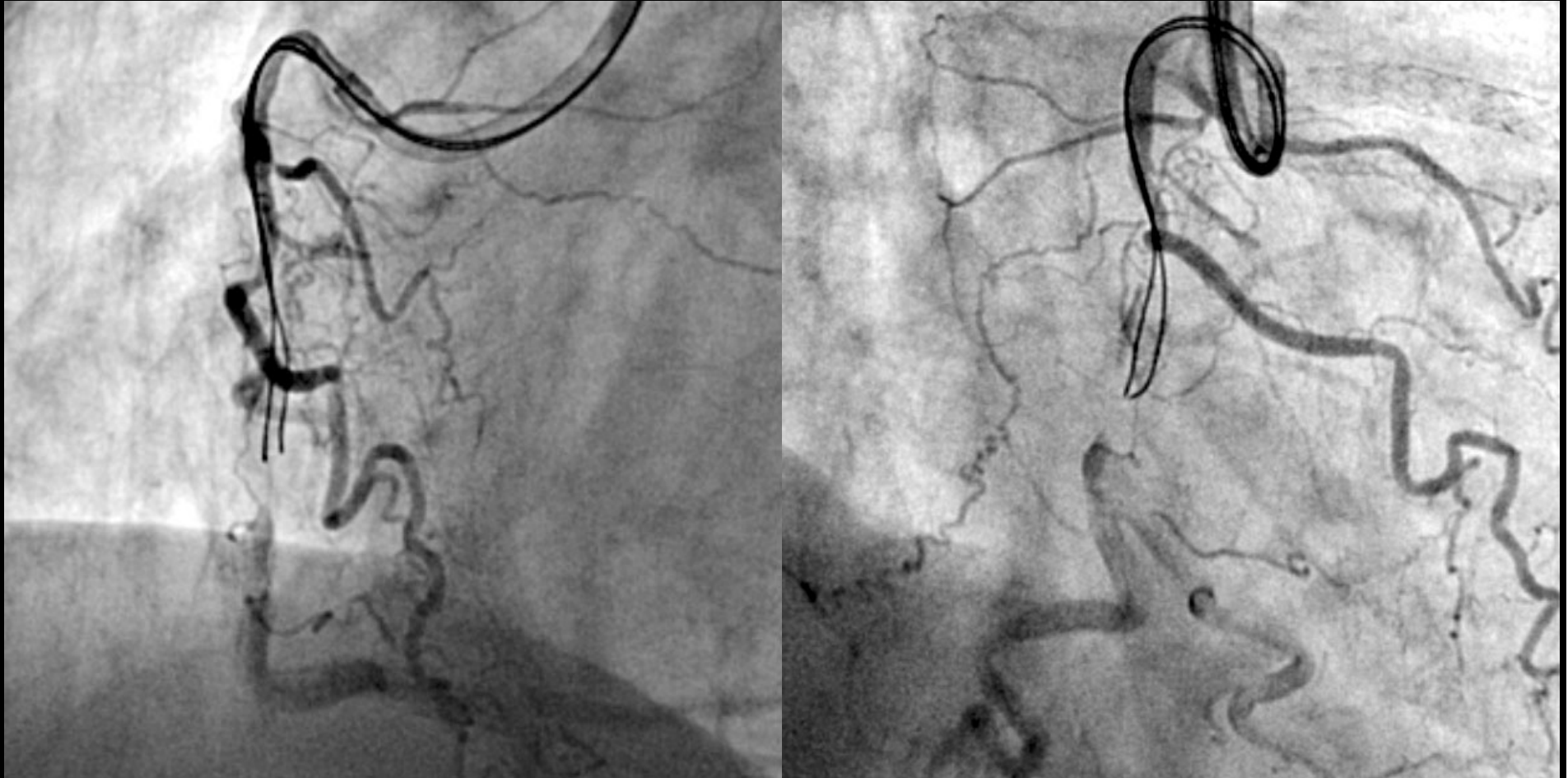


# Failure to cross



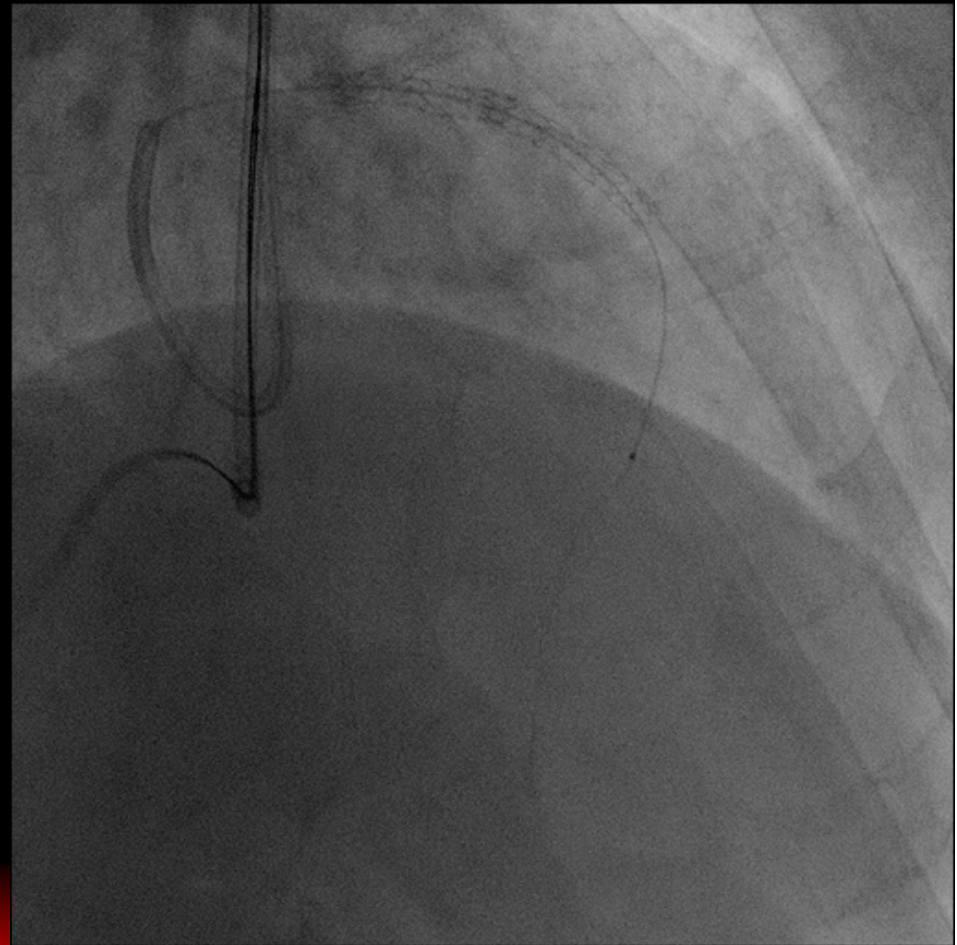
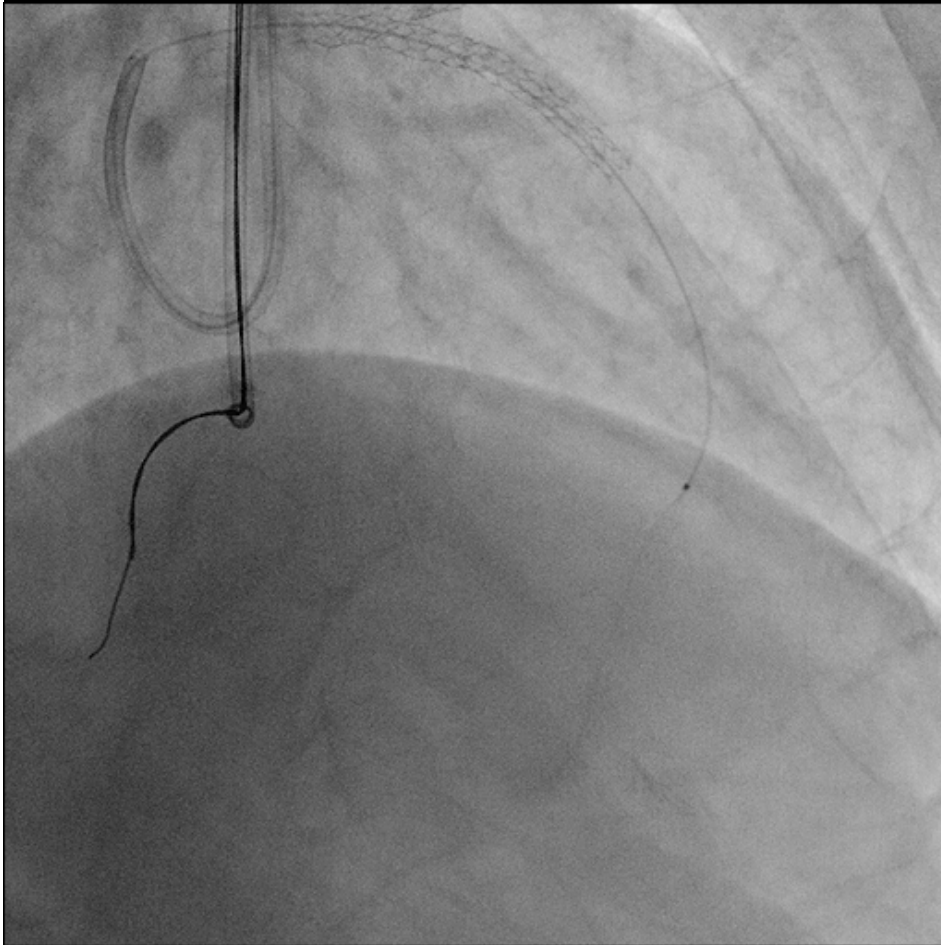


# Parallel Wire Technique





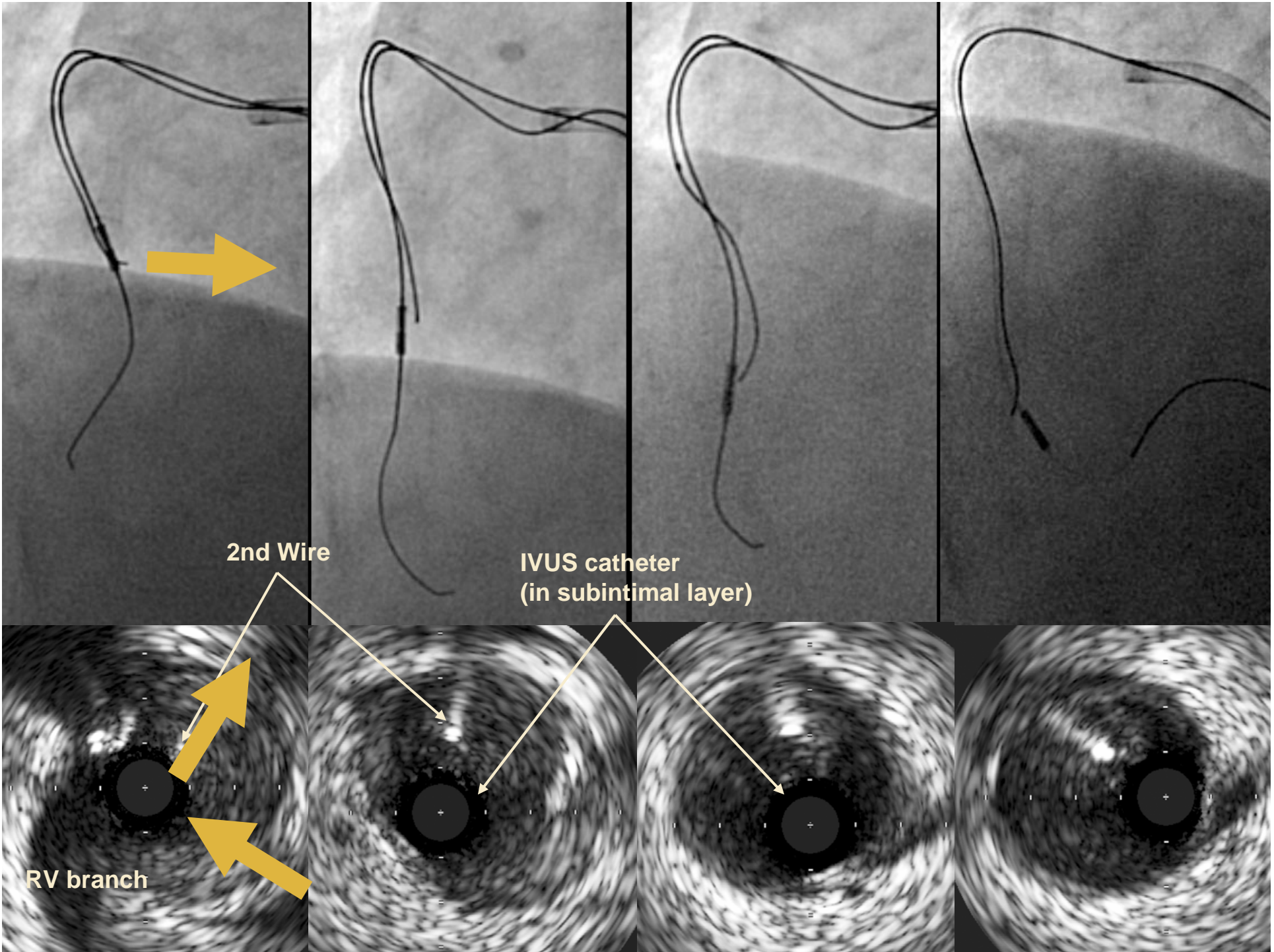
# Retrograde Approach





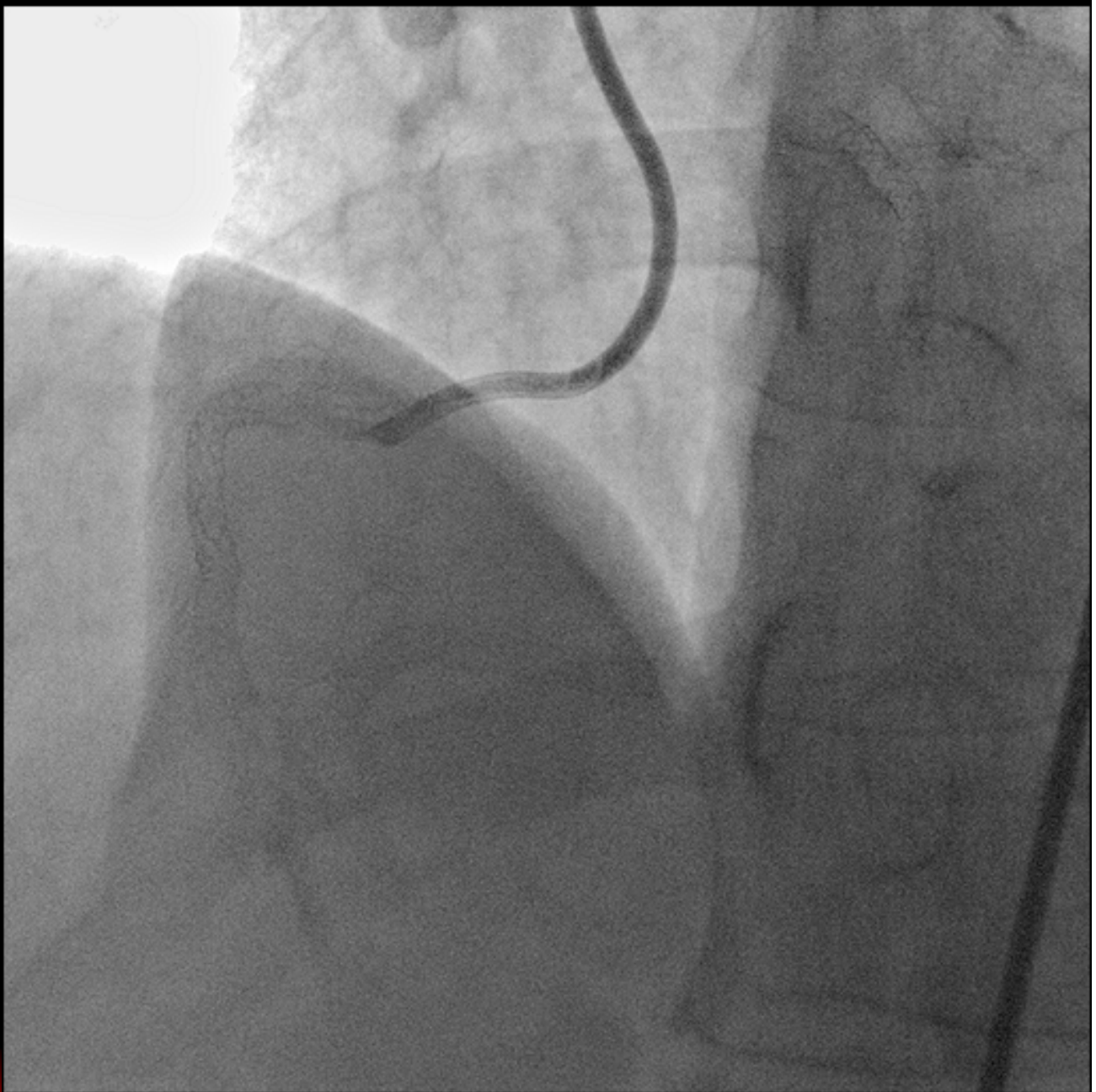
# IVUS guide CTO-PCI







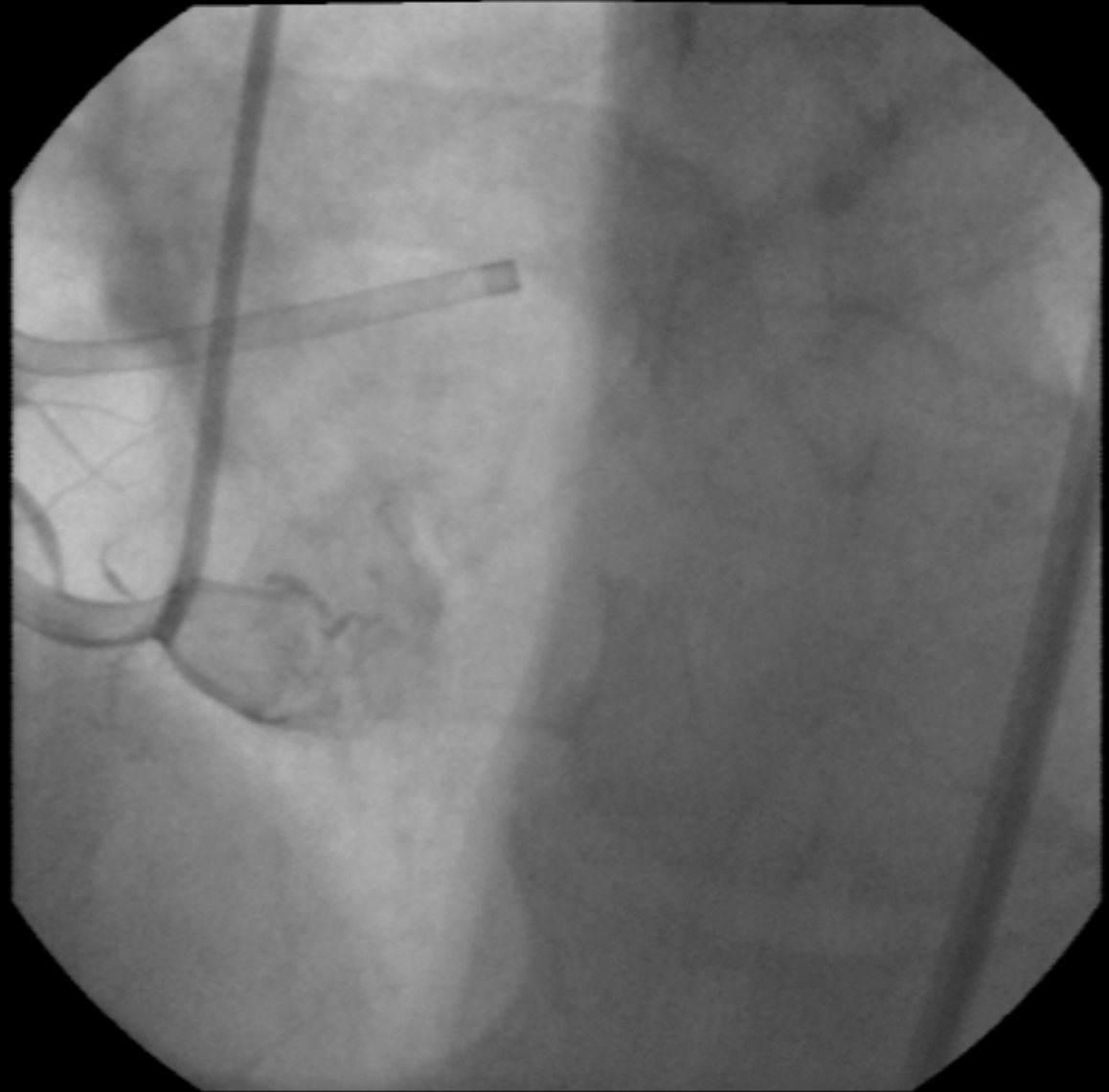
## Final CAG (LAO cranial)





# Case 2

## Baseline CAG





**Antegrade  
Approach**



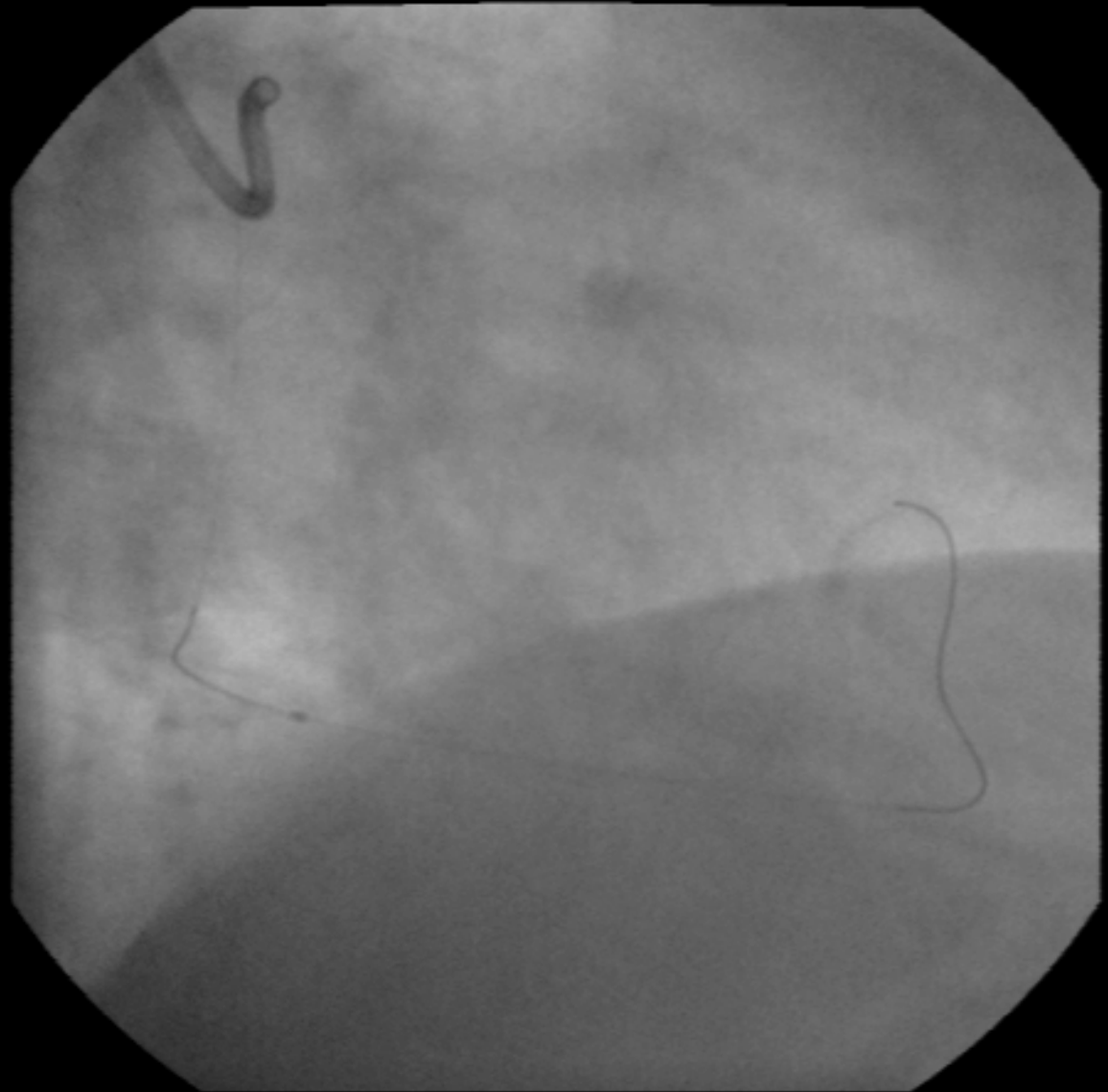
**Failure**



**Retrograde  
Approach**

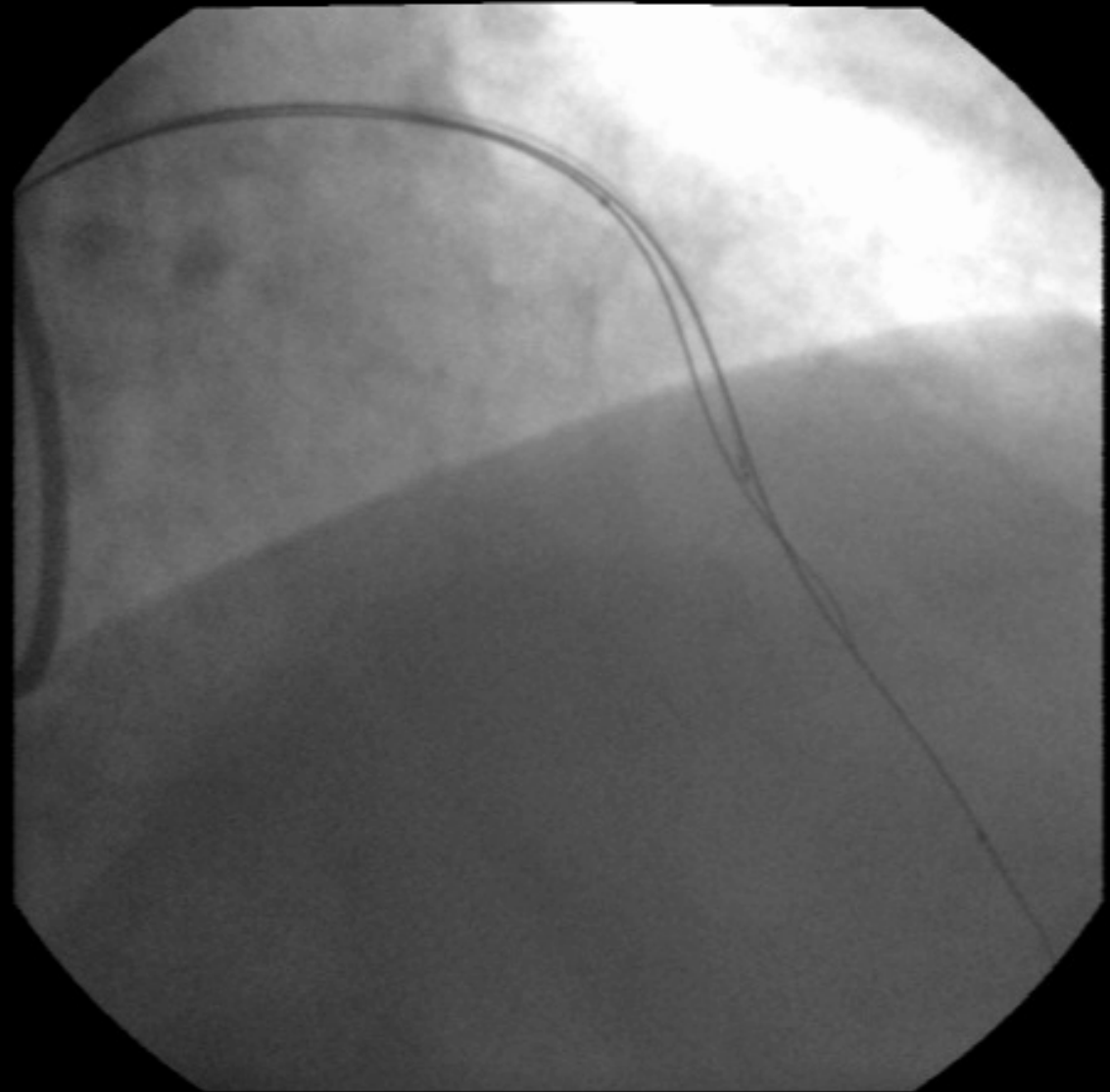


**Failure**





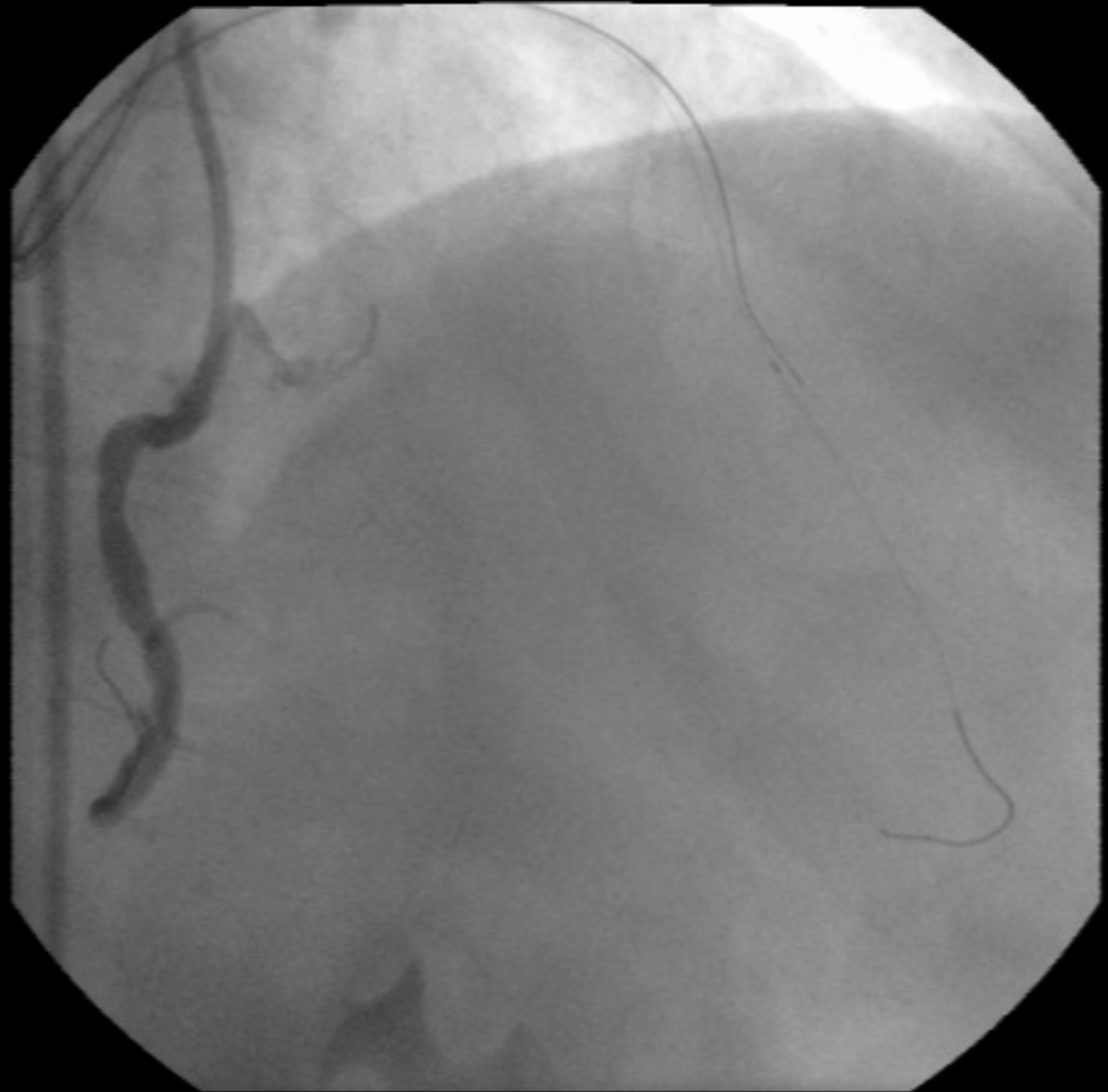
# IVUS Guided Wiring





# Successful Wiring

Confianza  
Pro 8-20





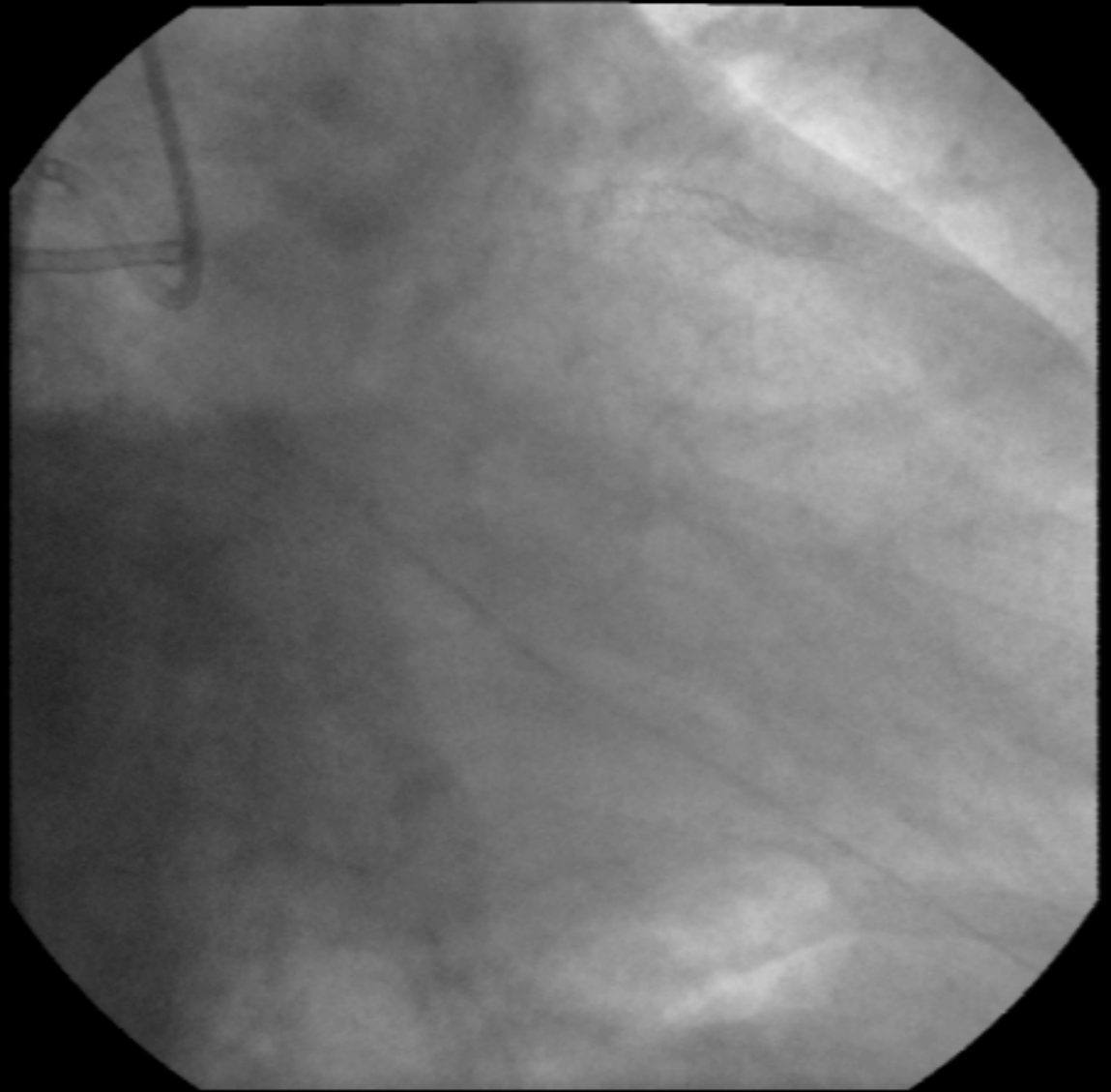
# IVUS







**Final**



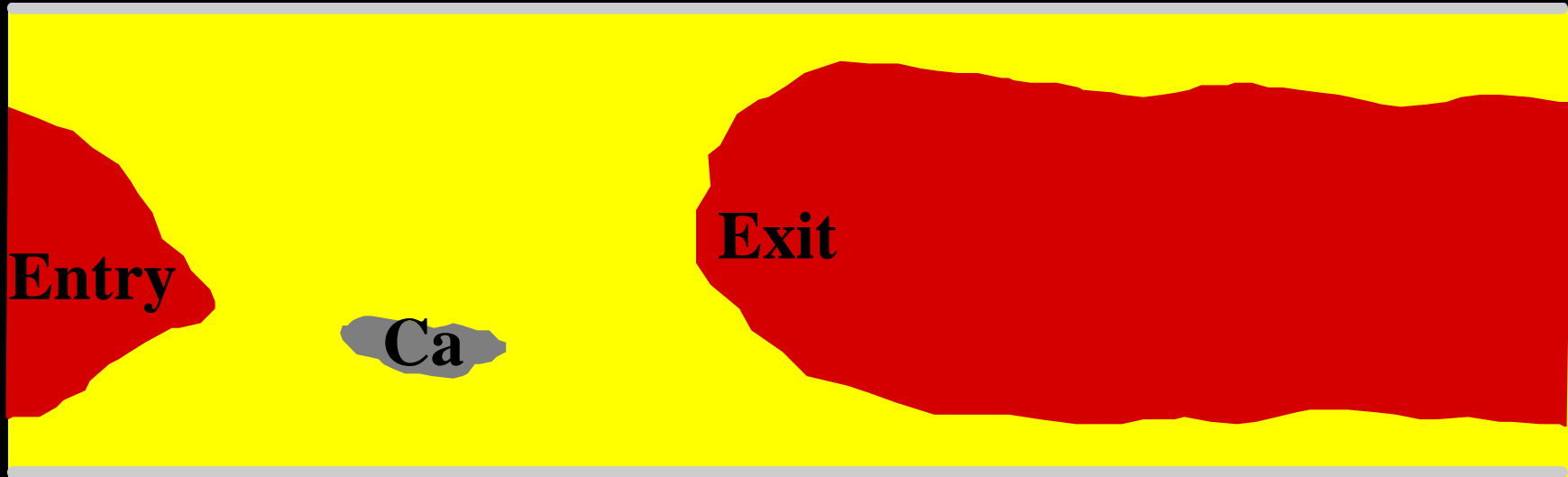
# Tips in IVUS Guided wiring

1. Re-entry Point
2. 3 Dimensional Recognition





# Where is the New Way?



**CTO site**

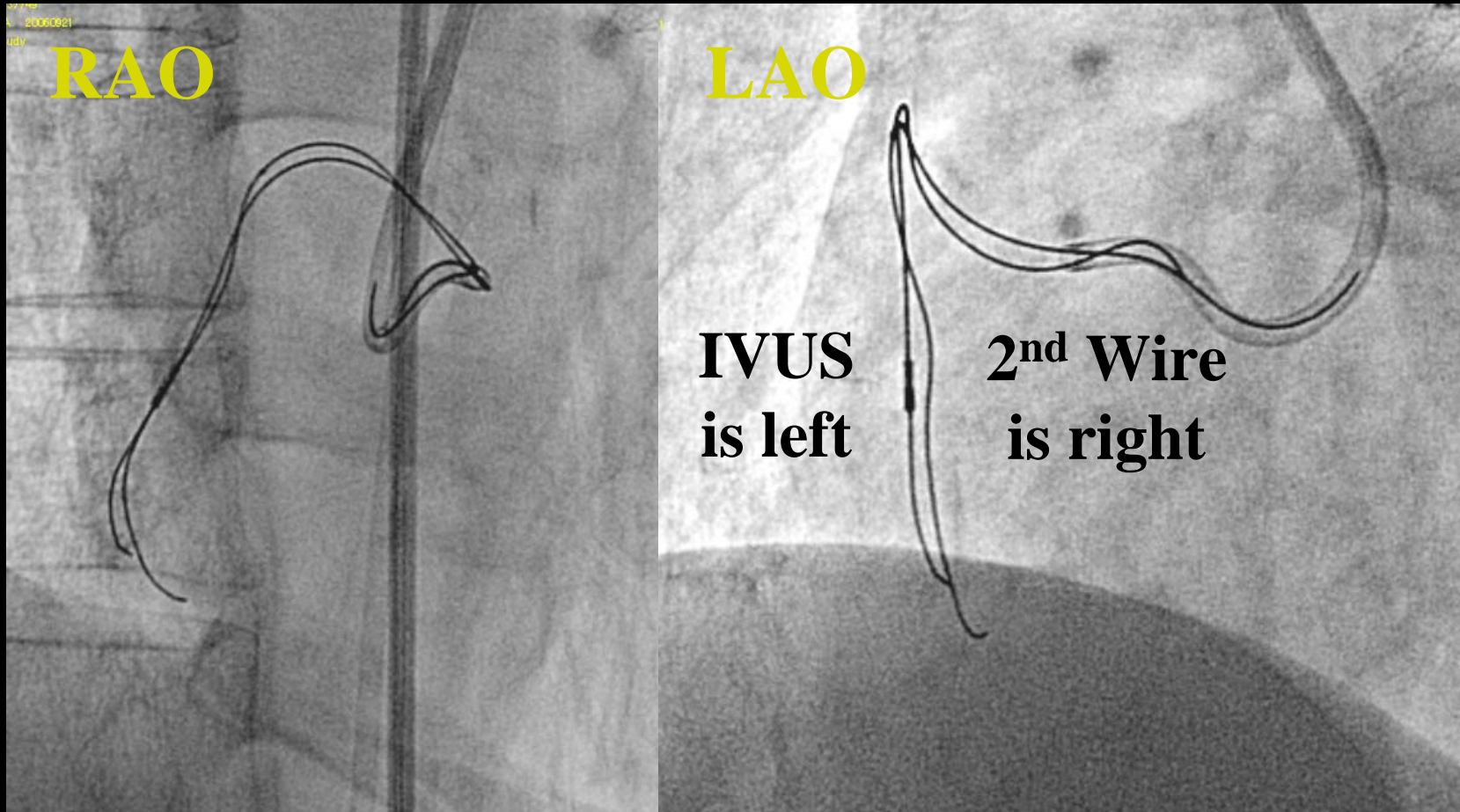


# Where is the New Way?



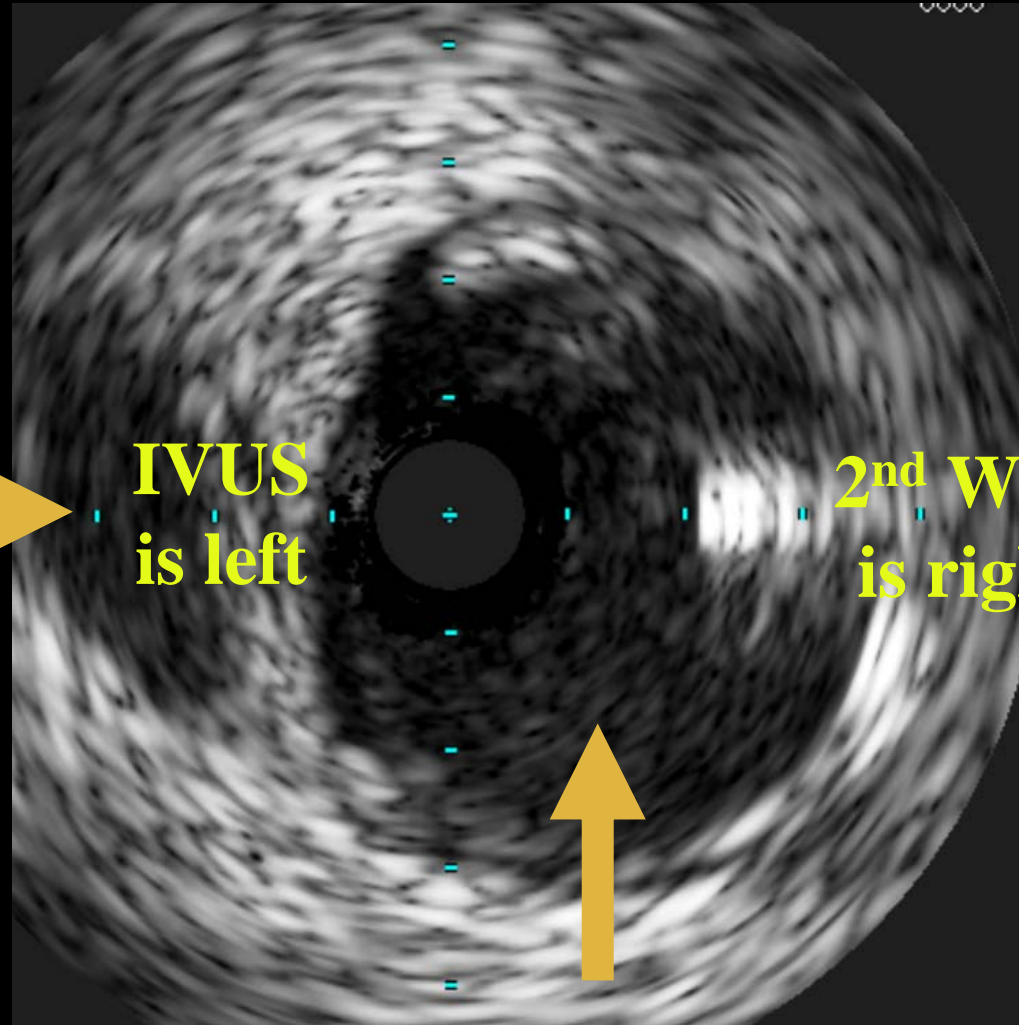


# 3 Dimensional Orientation





**RAO  
View**



**IVUS  
is left**

**2<sup>nd</sup> Wire  
is right**



**LAO  
View**



# Summary

- 1. IVUS guided wiring is a feasible and effective method in the treatment of CTO, when other strategies fail.**
- 2. This method is especially recommended before the enlargement of the subintimal space.**
- 3. The wire manipulation in the intima has higher success rates than in the subintimal space.**
- 4. Three dimensional recognition is inevitable for this procedure.**