

Treating CTO Lesions with Imaging Guidance

Hakujikai Memorial Hospital
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Step by Step Approach

**Antegrade Approach
with Single Wire**



Parallel Wire Technique



Retrograde Approach



IVUS Guided Wiring



Step by Step Approach

**Antegrade Approach
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Parallel Wire Technique



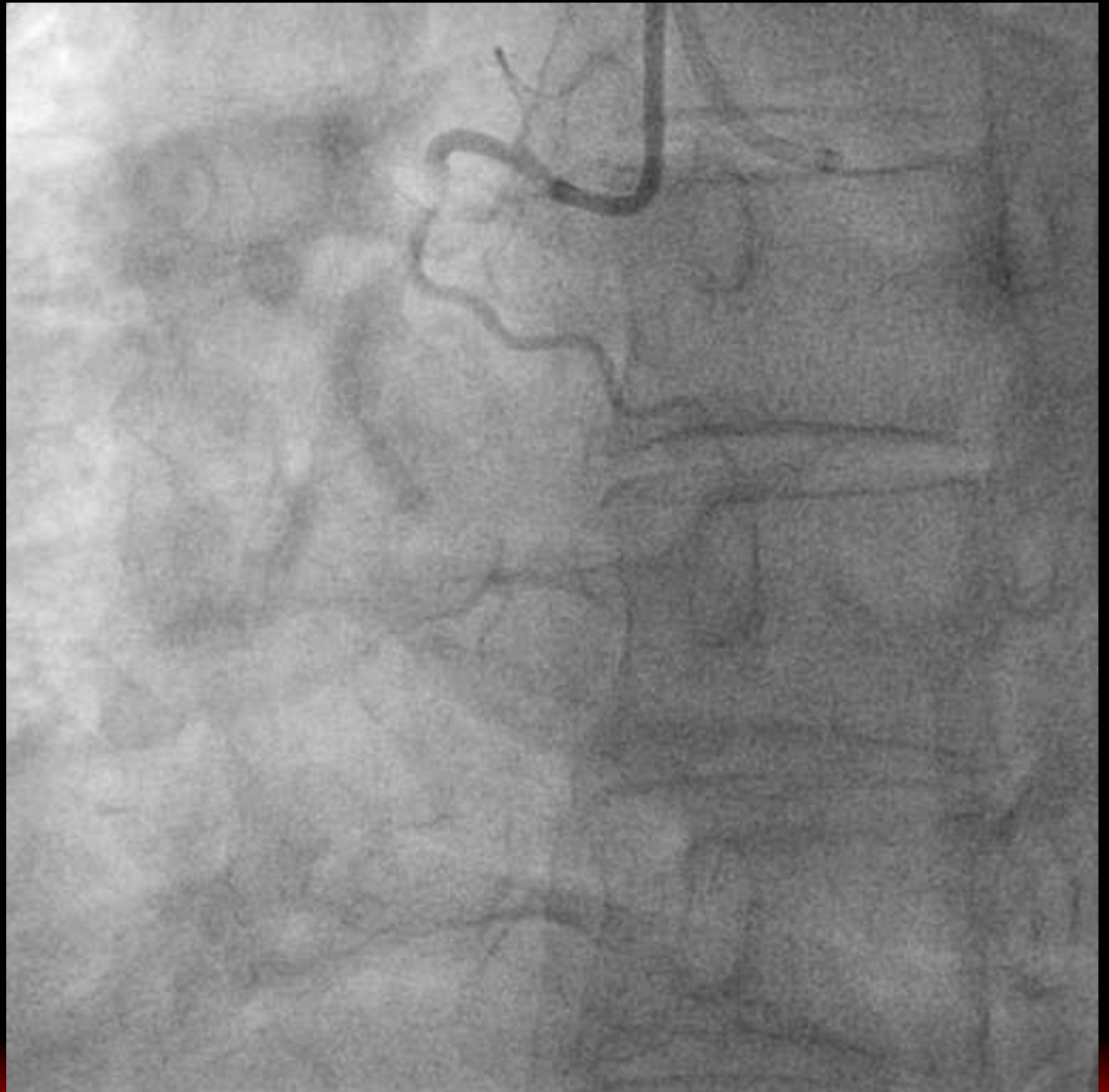
Retrograde Approach



IVUS Guided Wiring

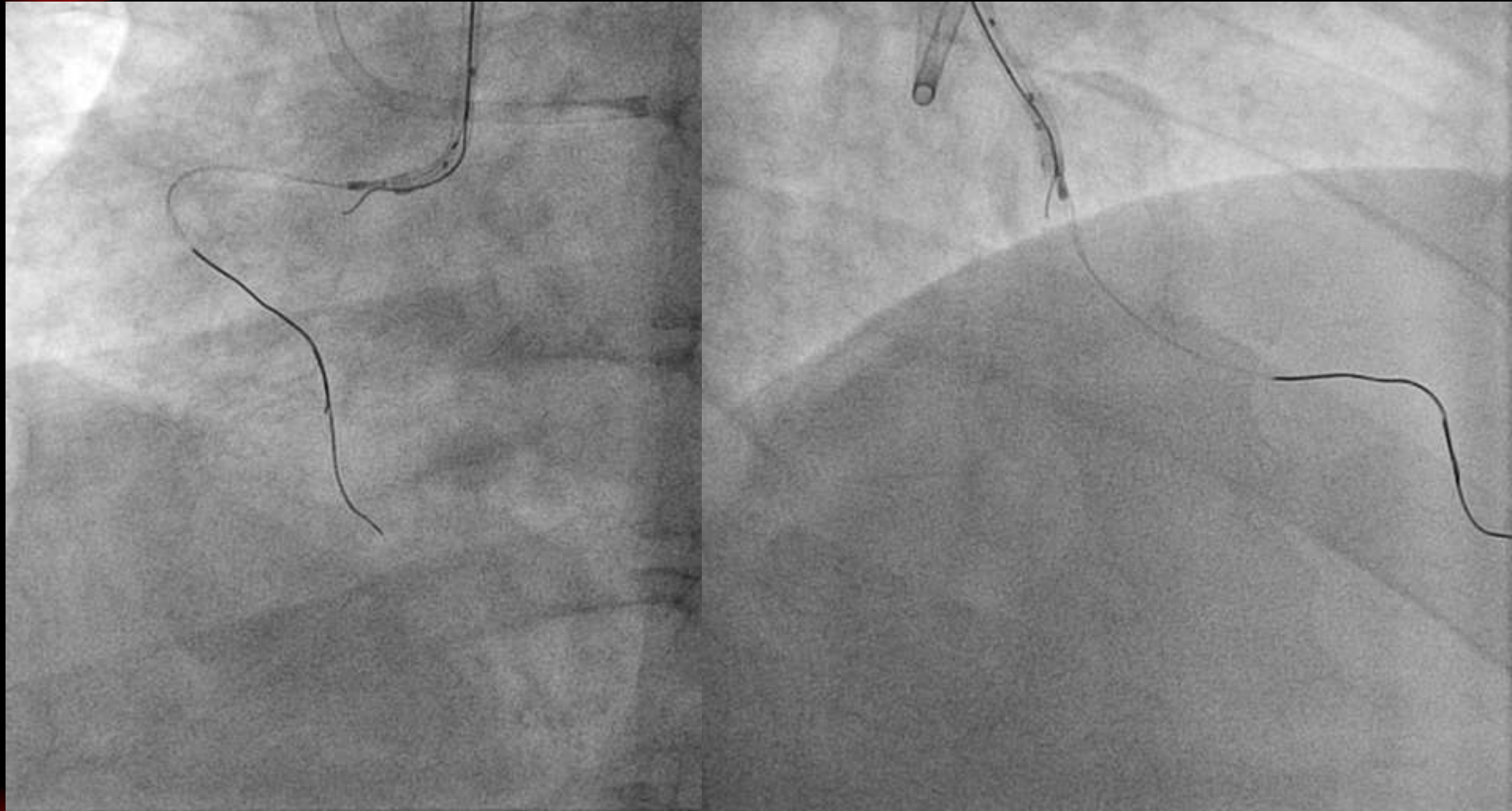


Case



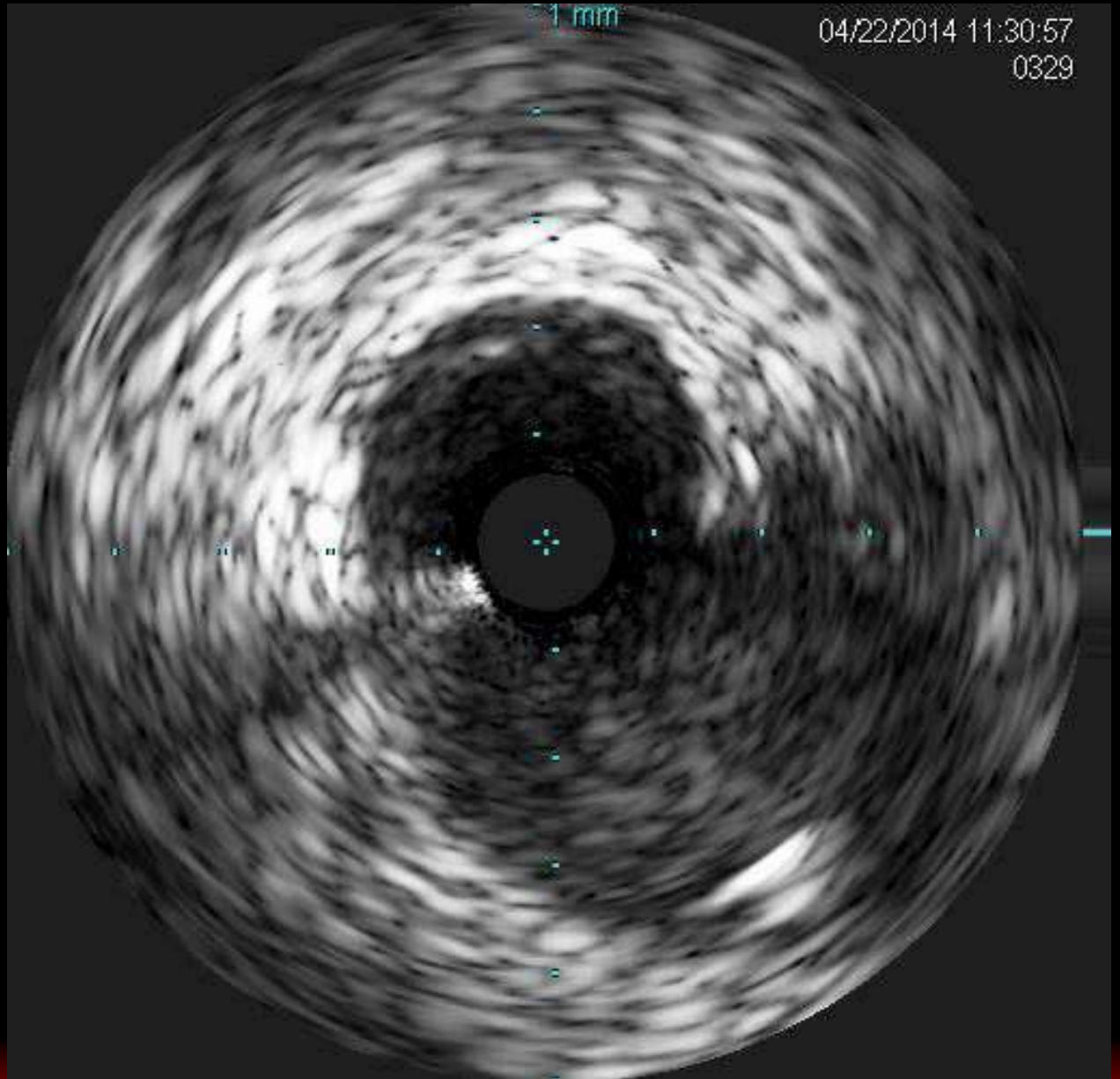


IVUS Guided Wiring



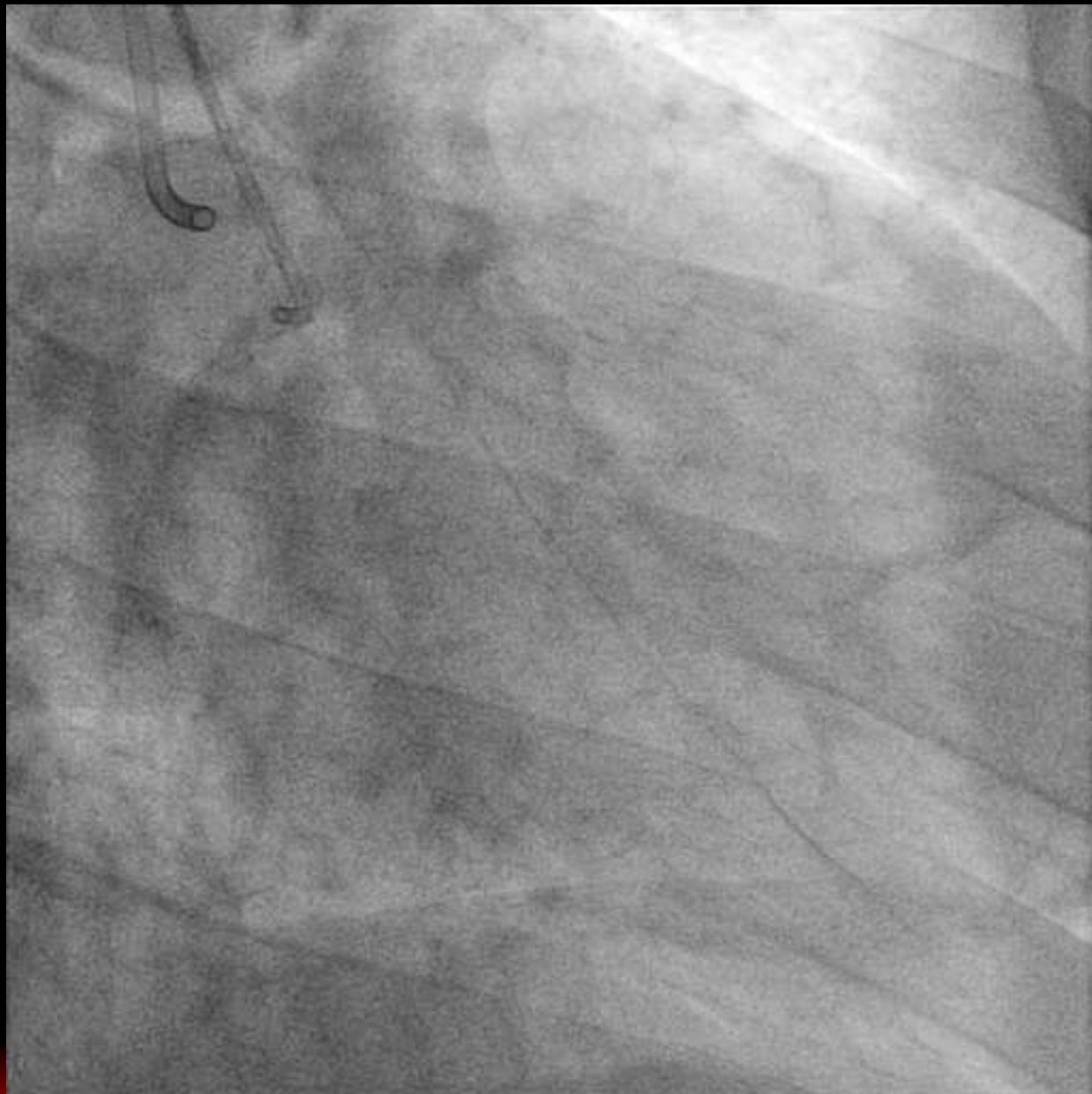


IVUS





Final





Step by Step Approach

**Antegrade Approach
with Single Wire**



Parallel Wire Technique



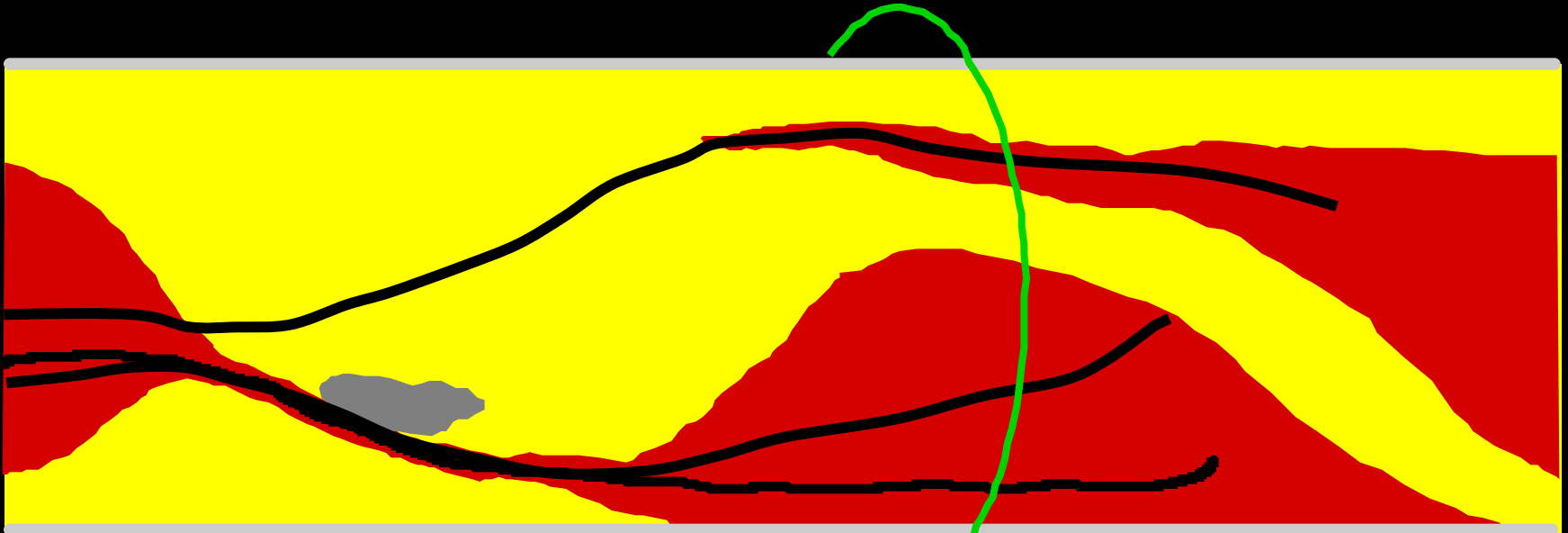
Retrograde Approach



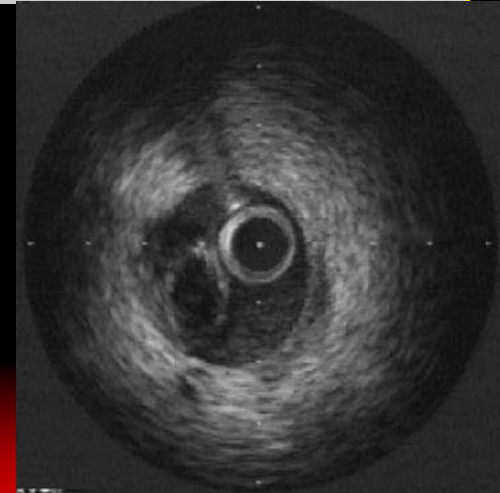
IVUS Guided Wiring



Where should the 2nd wire run?



Re-Entry X
Fresh Start O





Case

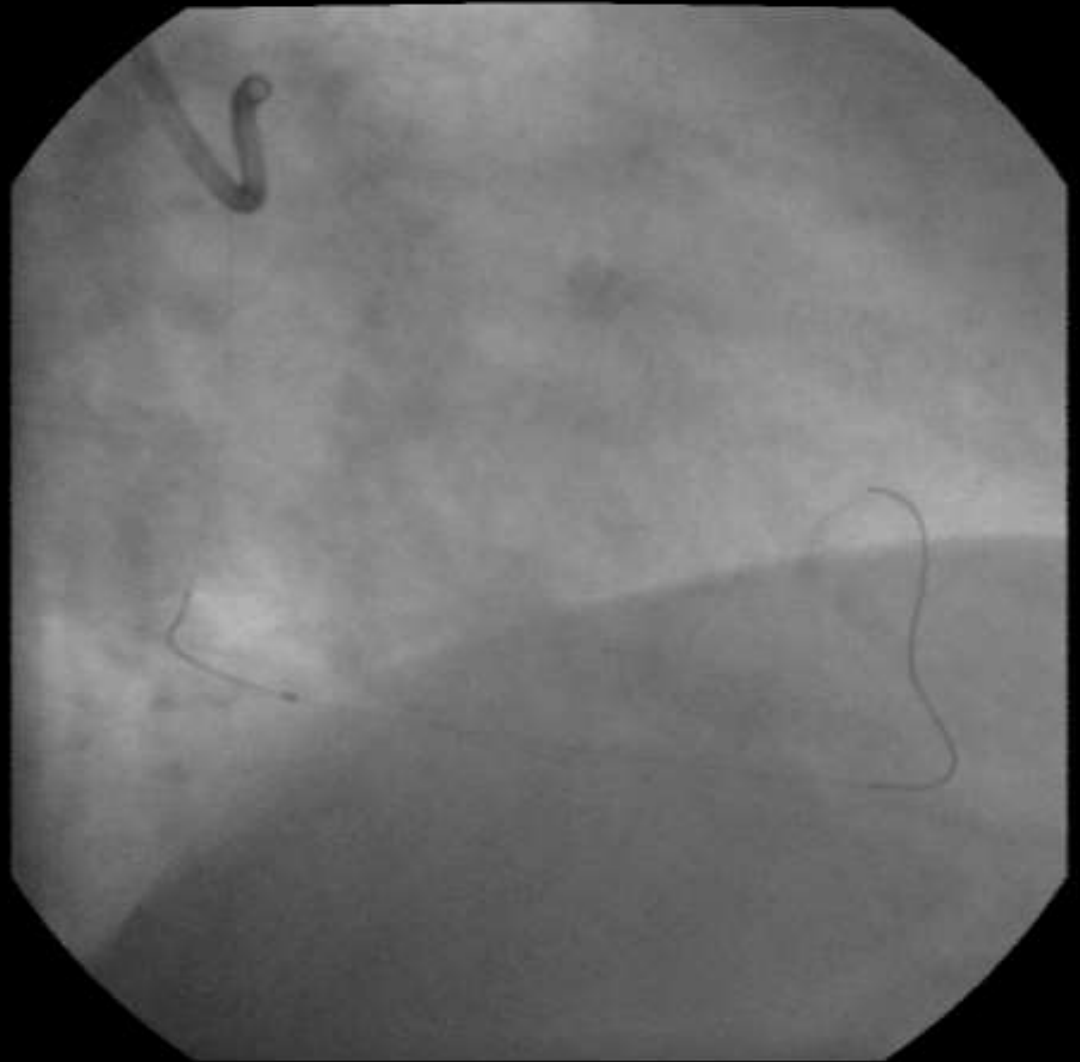




**Retrograde
Approach**

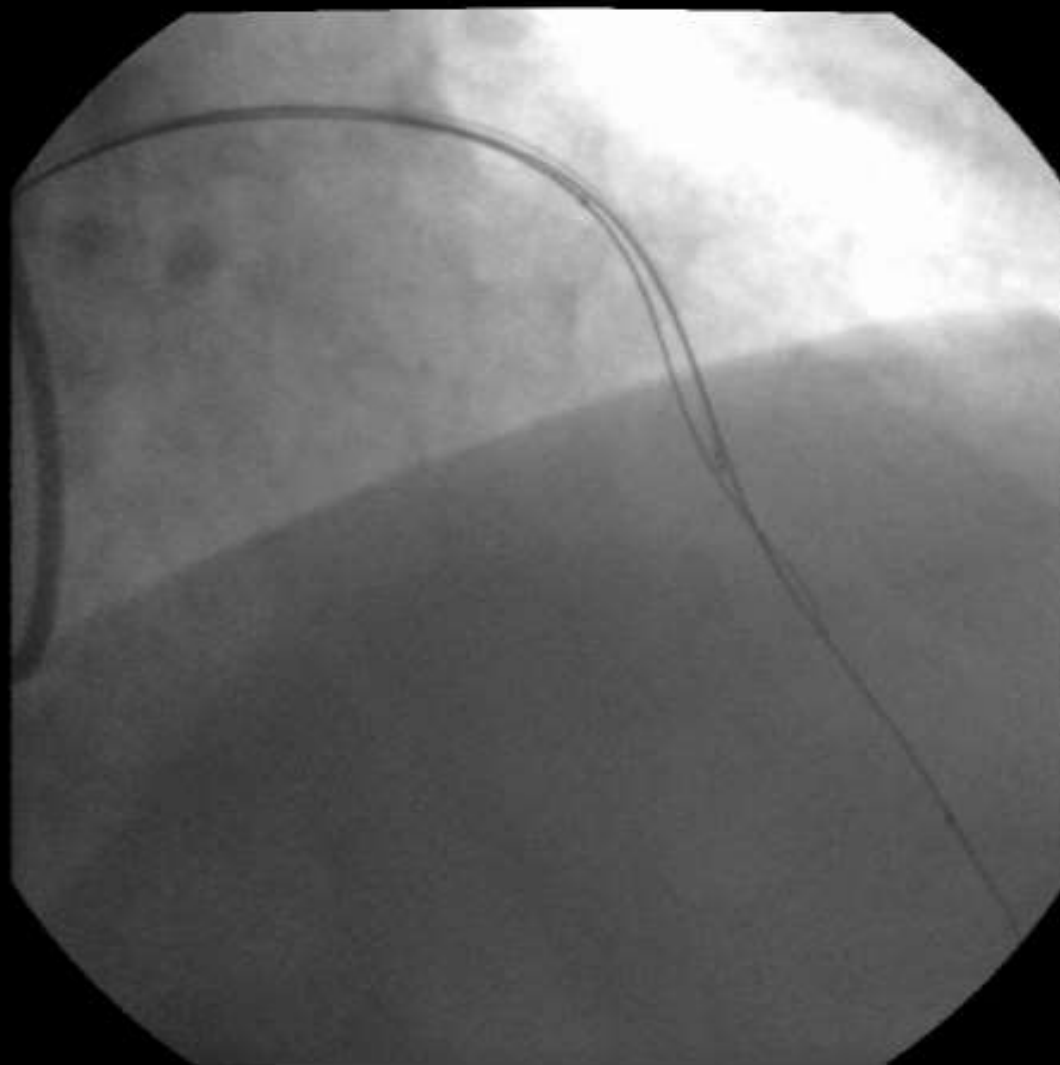


Failure





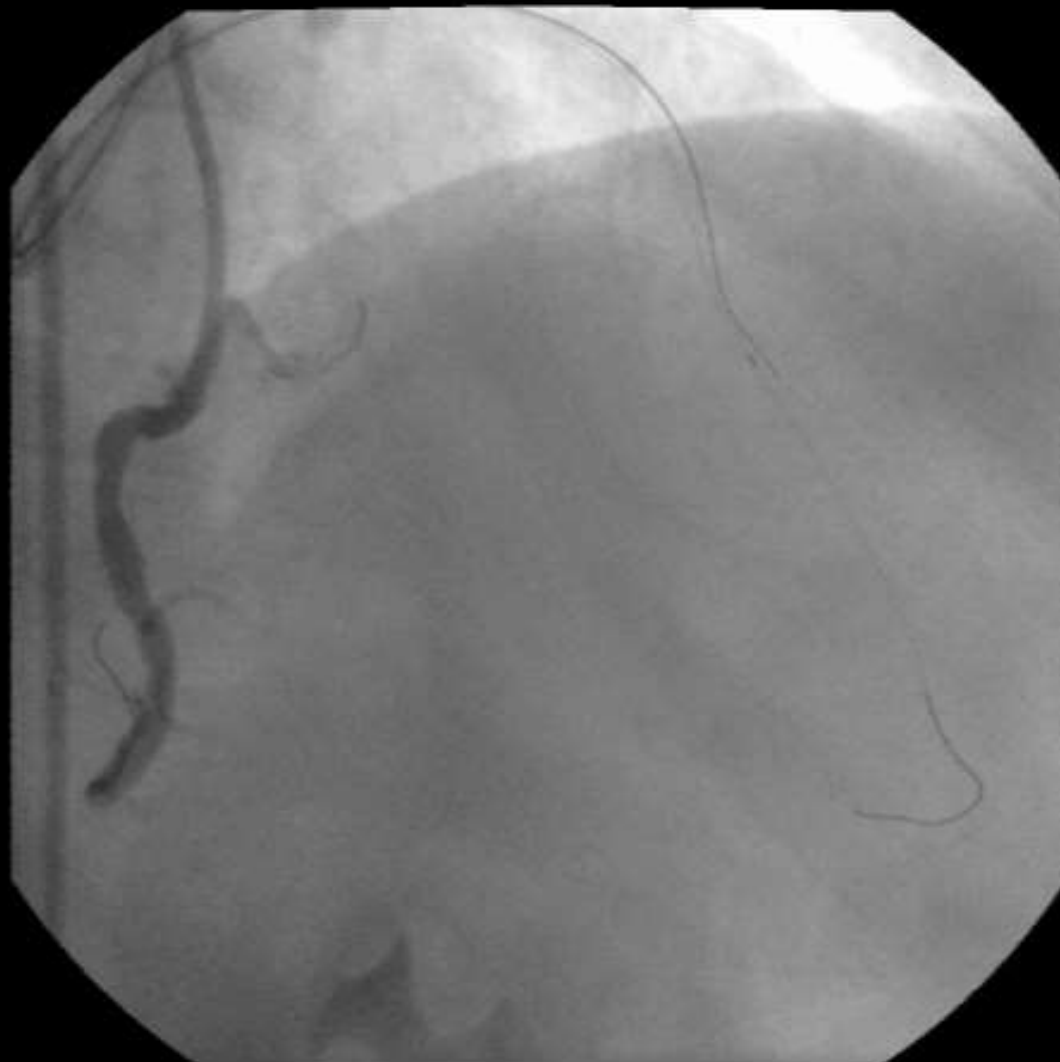
IVUS Guided Wiring





Successful Wiring

Confianza
Pro 8-20



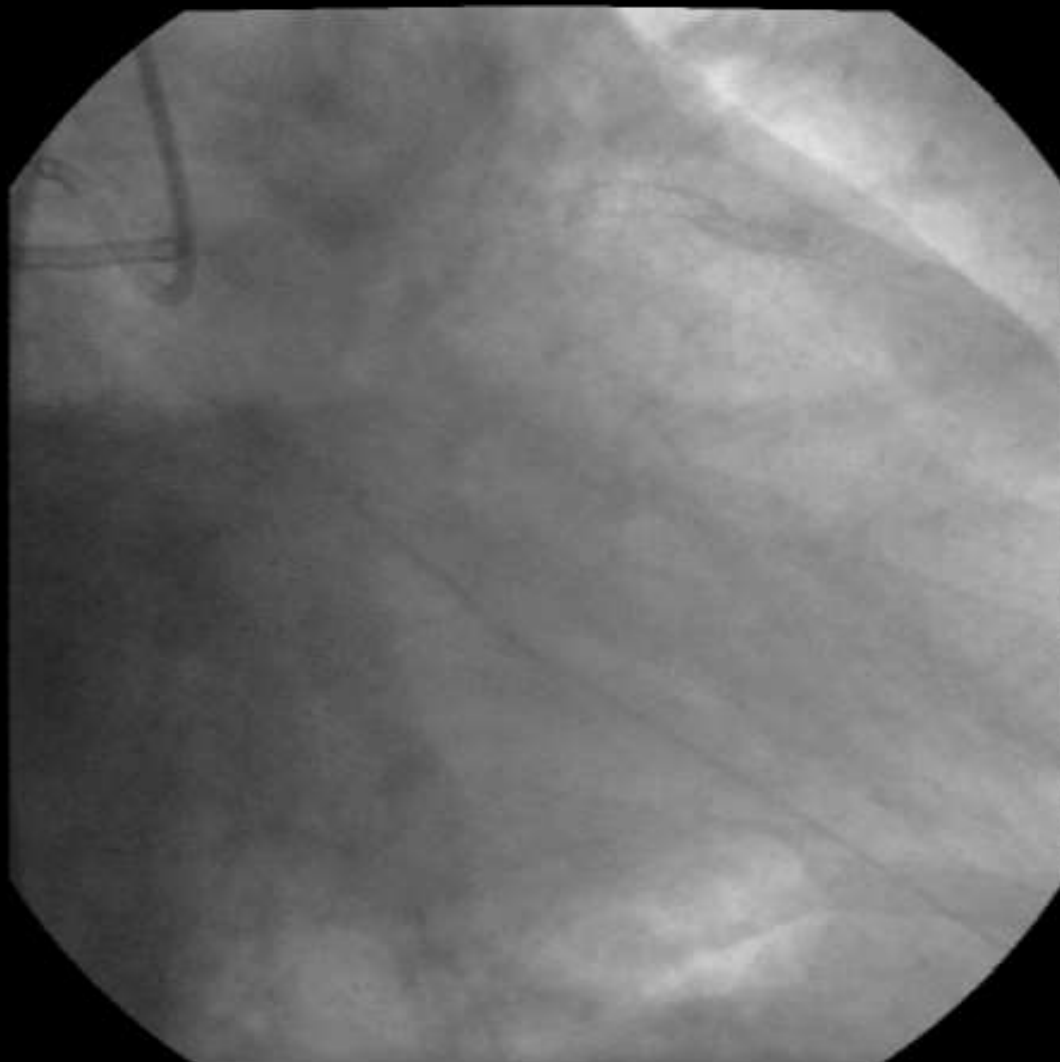


IVUS





Final



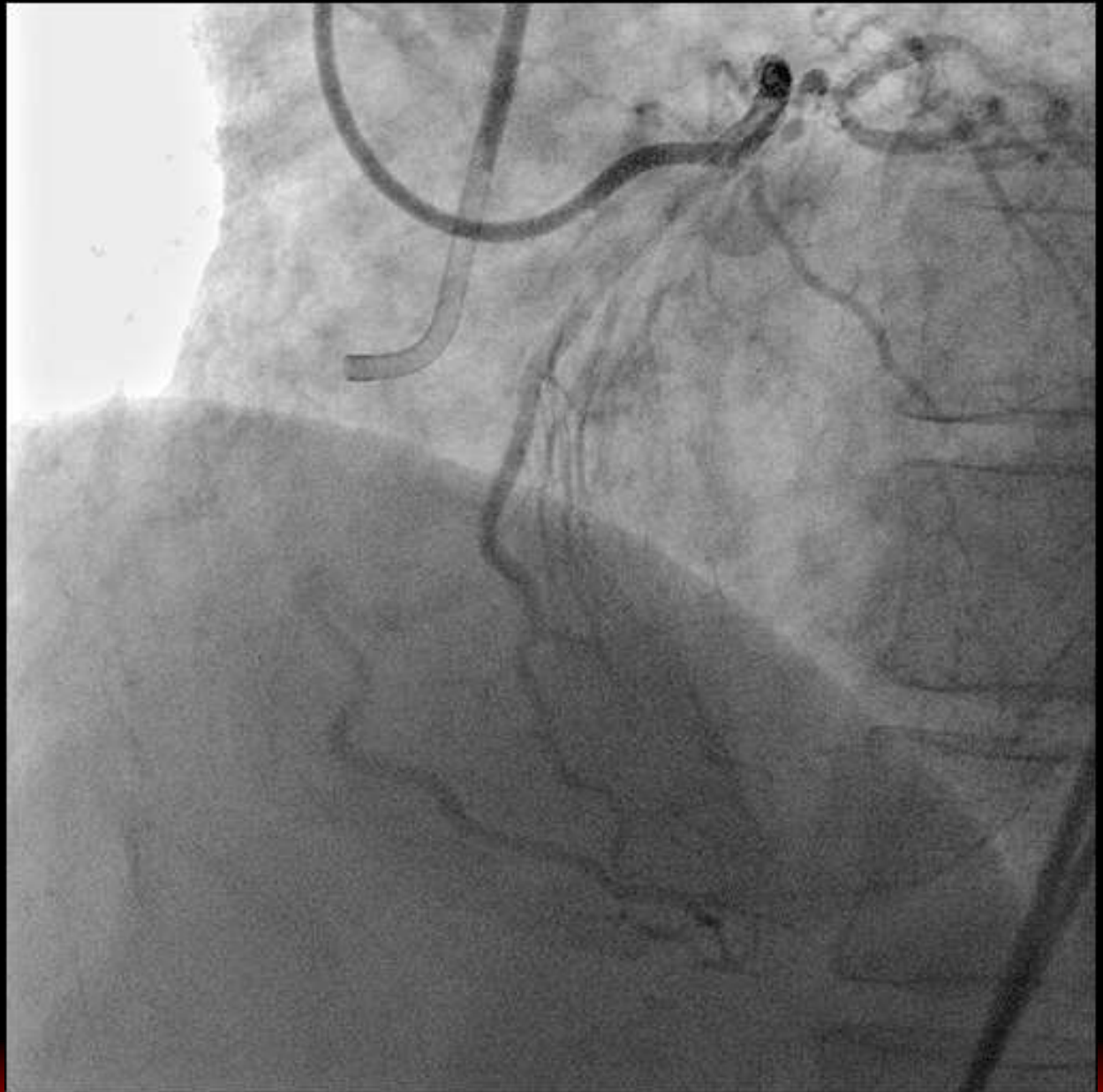


Trajectory should be in the intima!



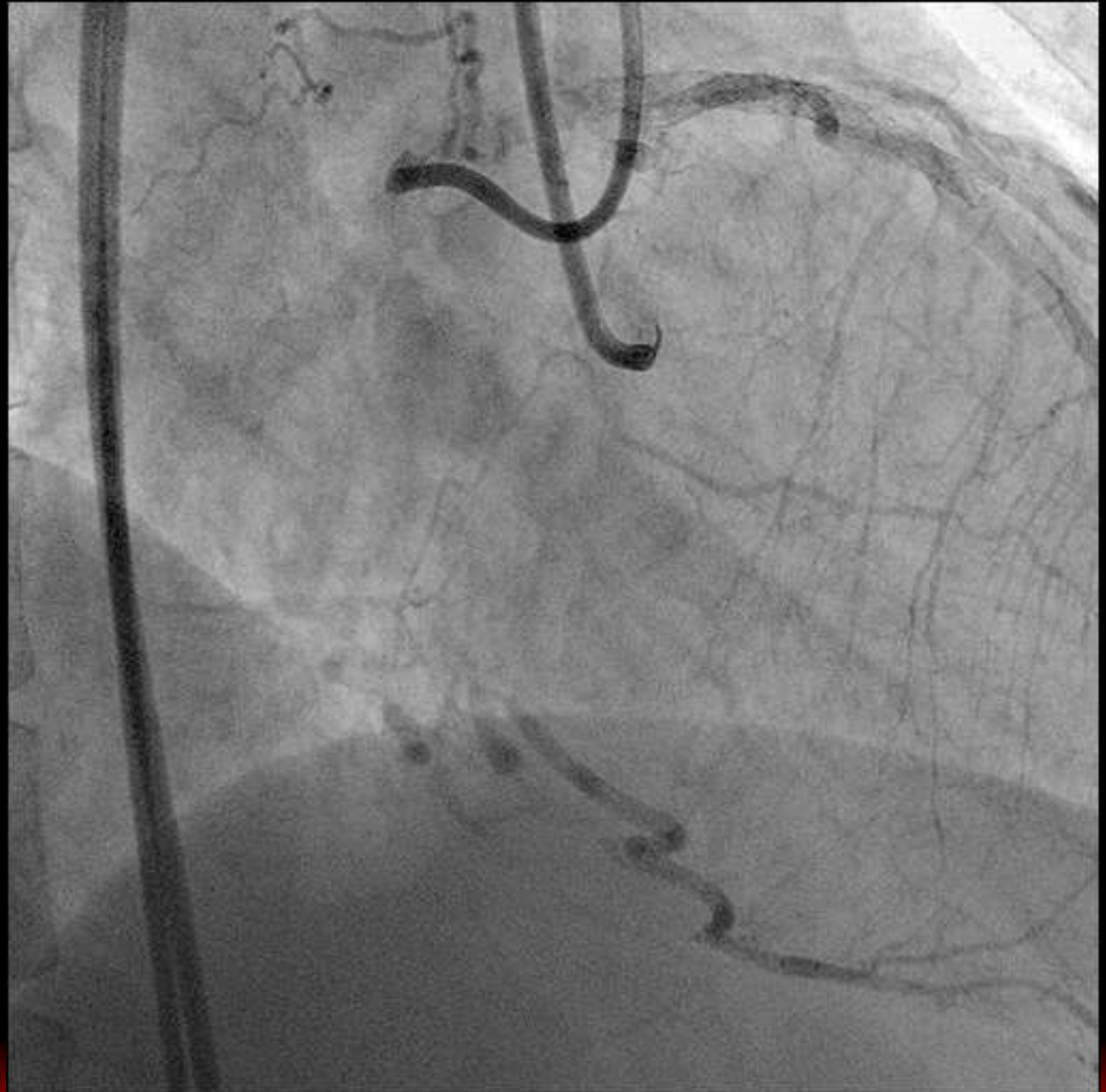


Case



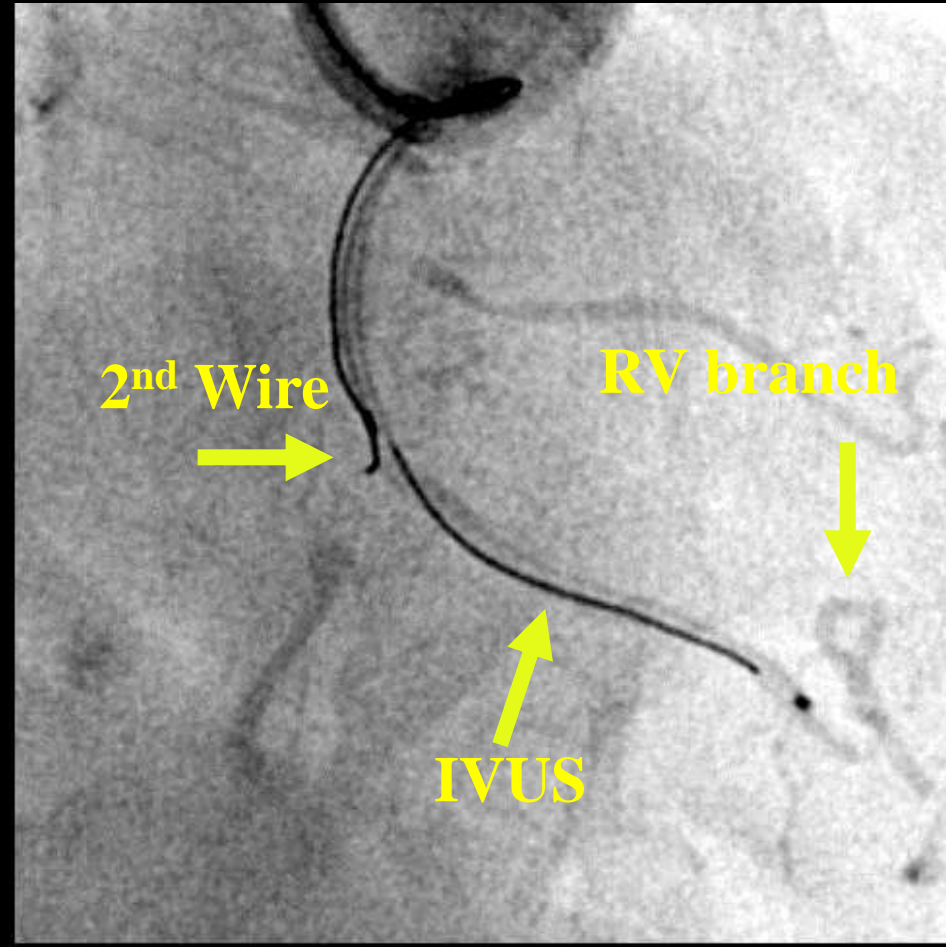
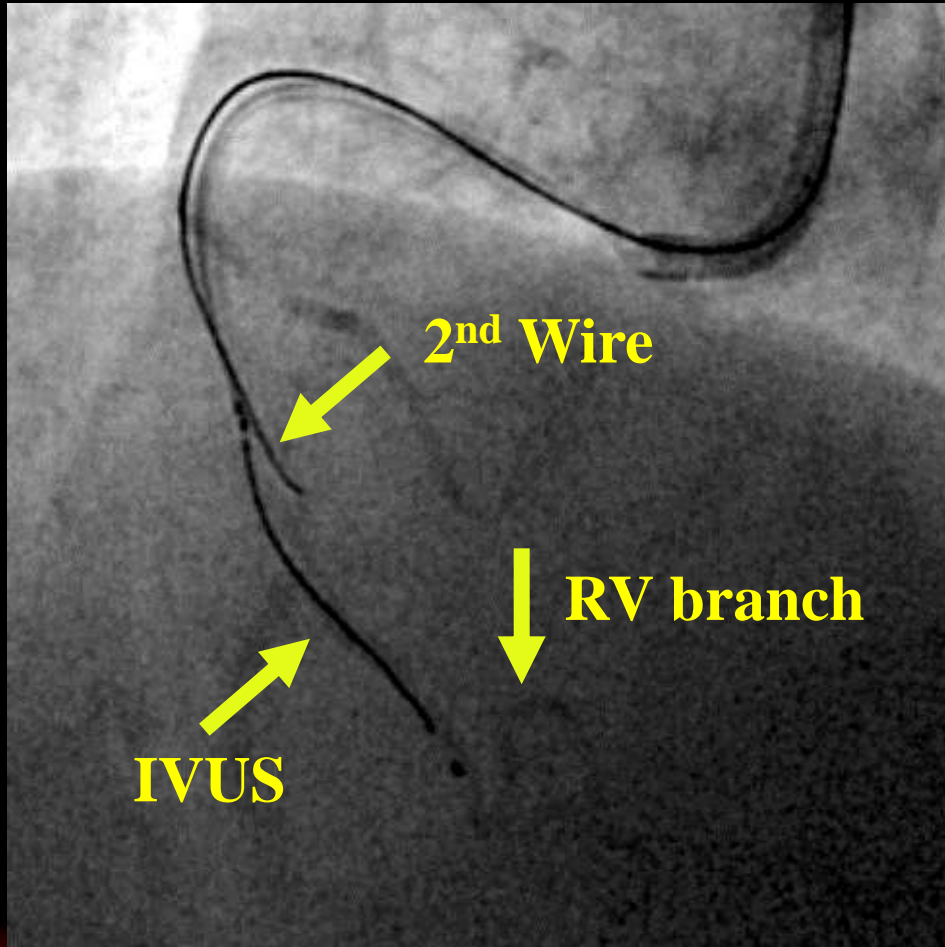


RAO view



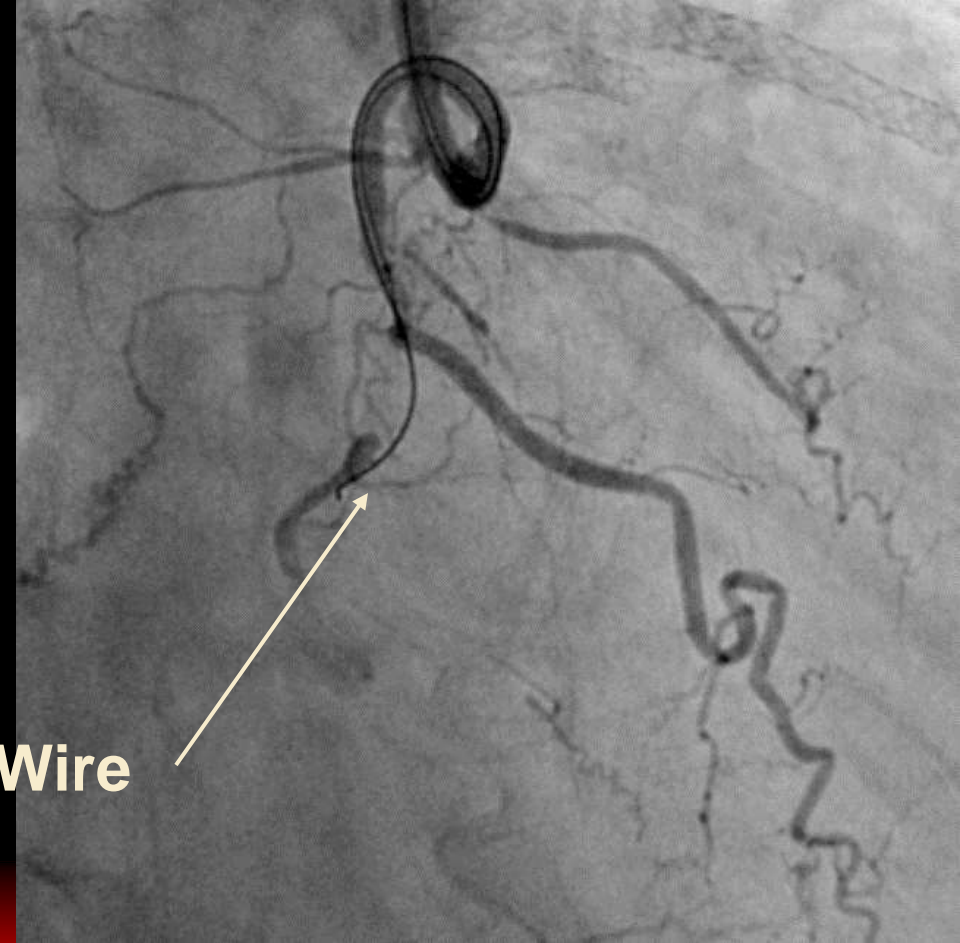
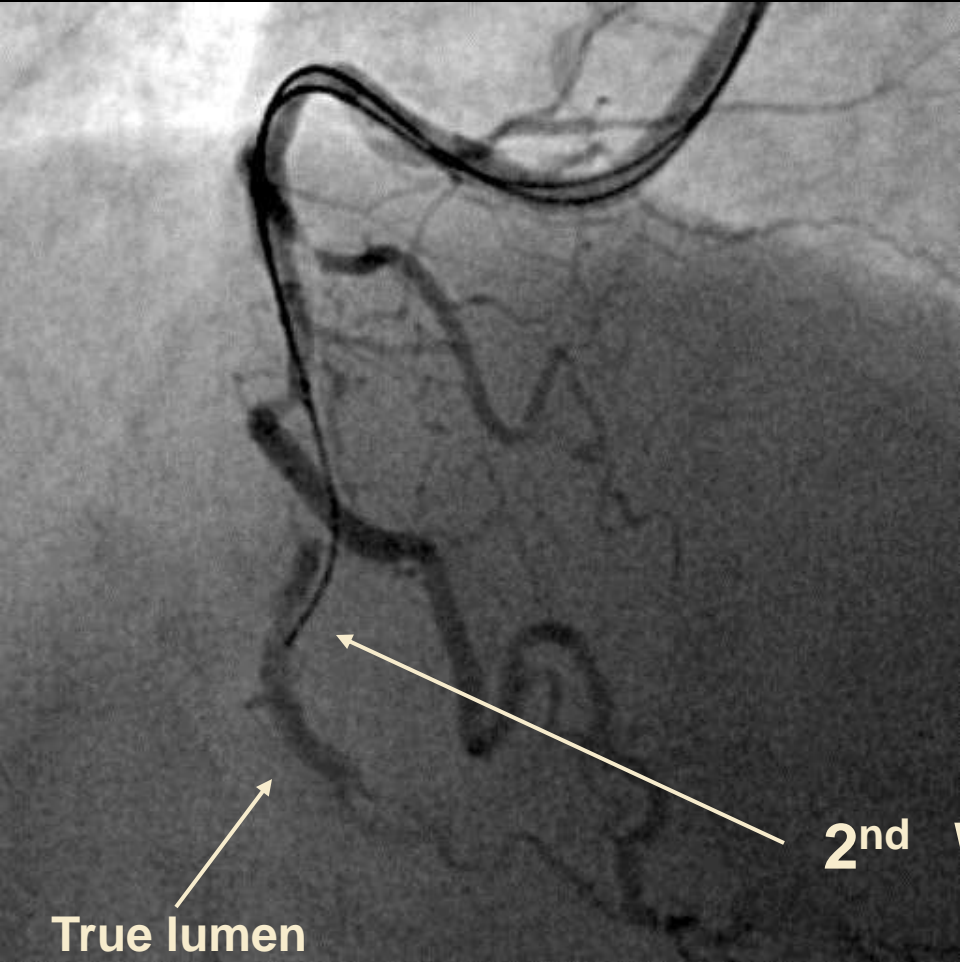


Identify a CTO entry by IVUS



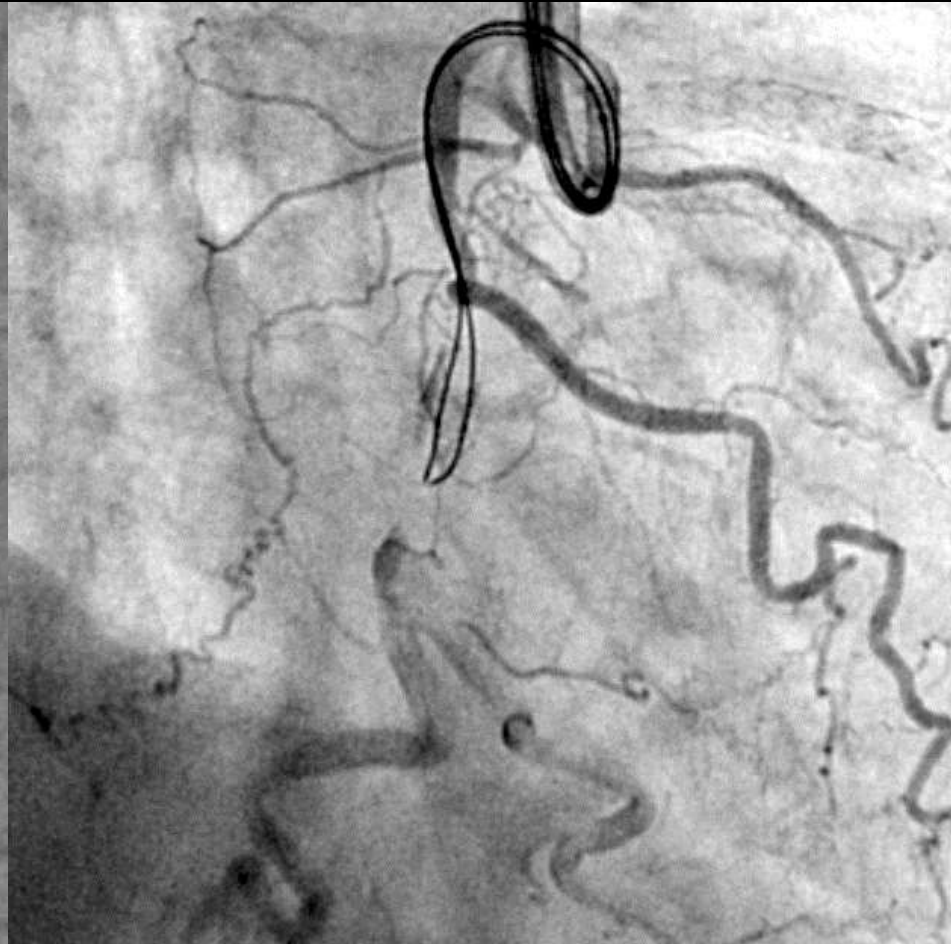
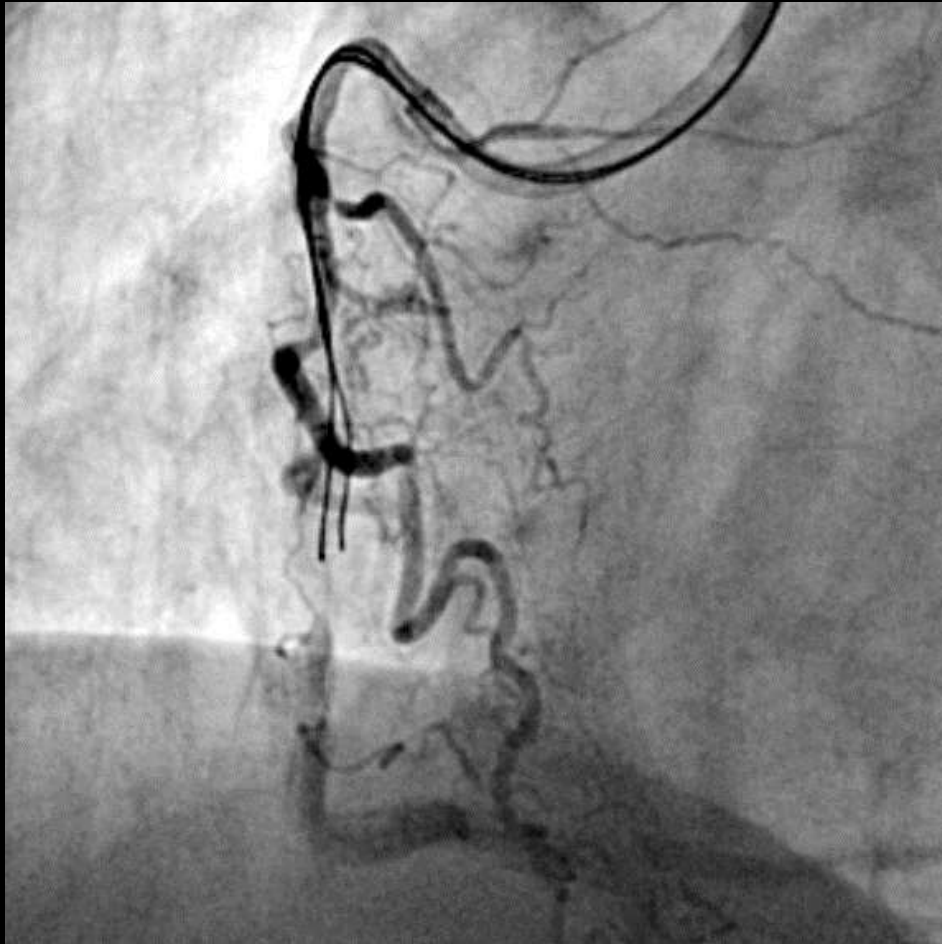


Failure to cross



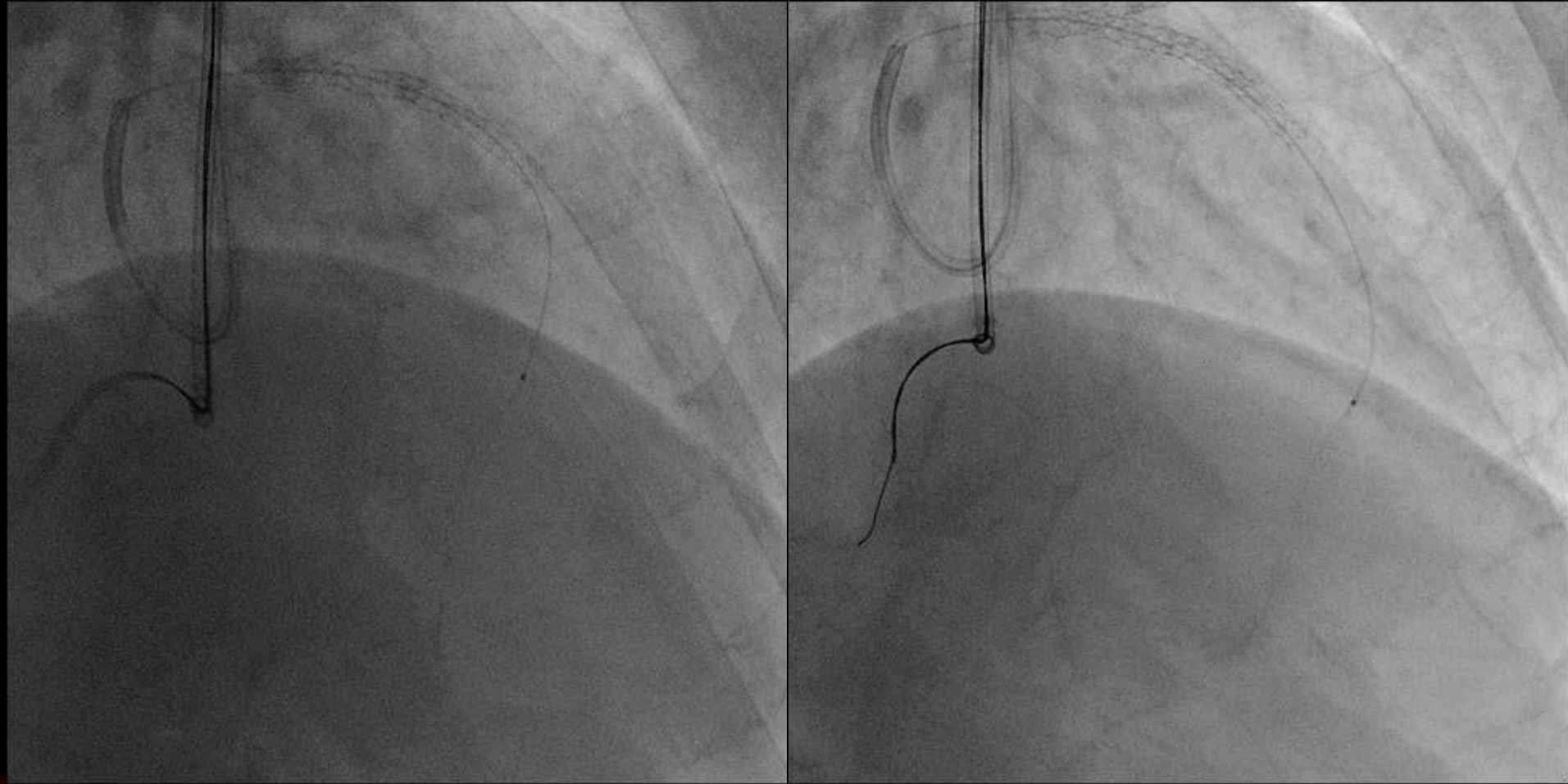


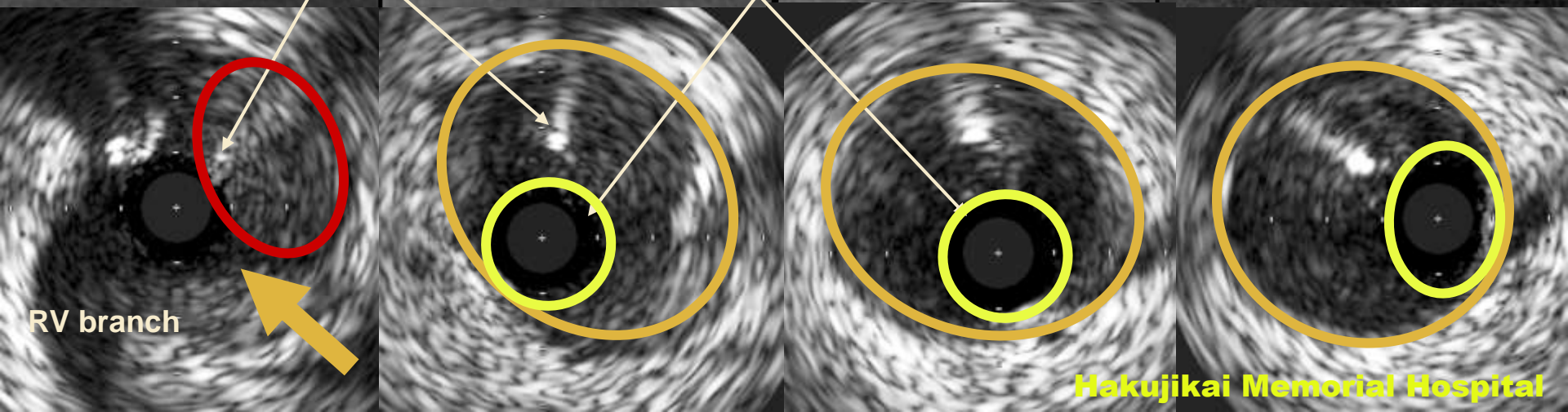
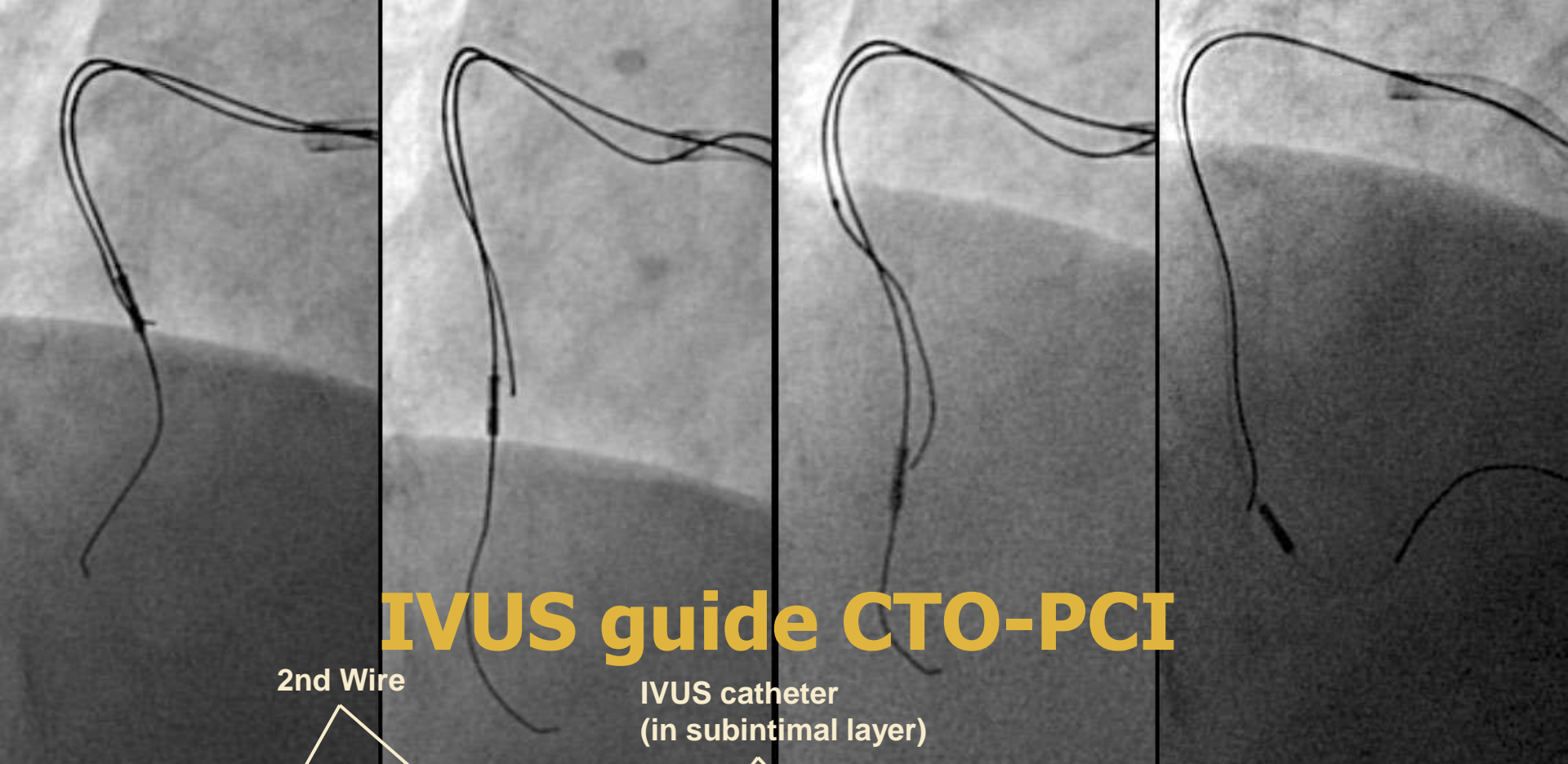
Parallel Wire Technique





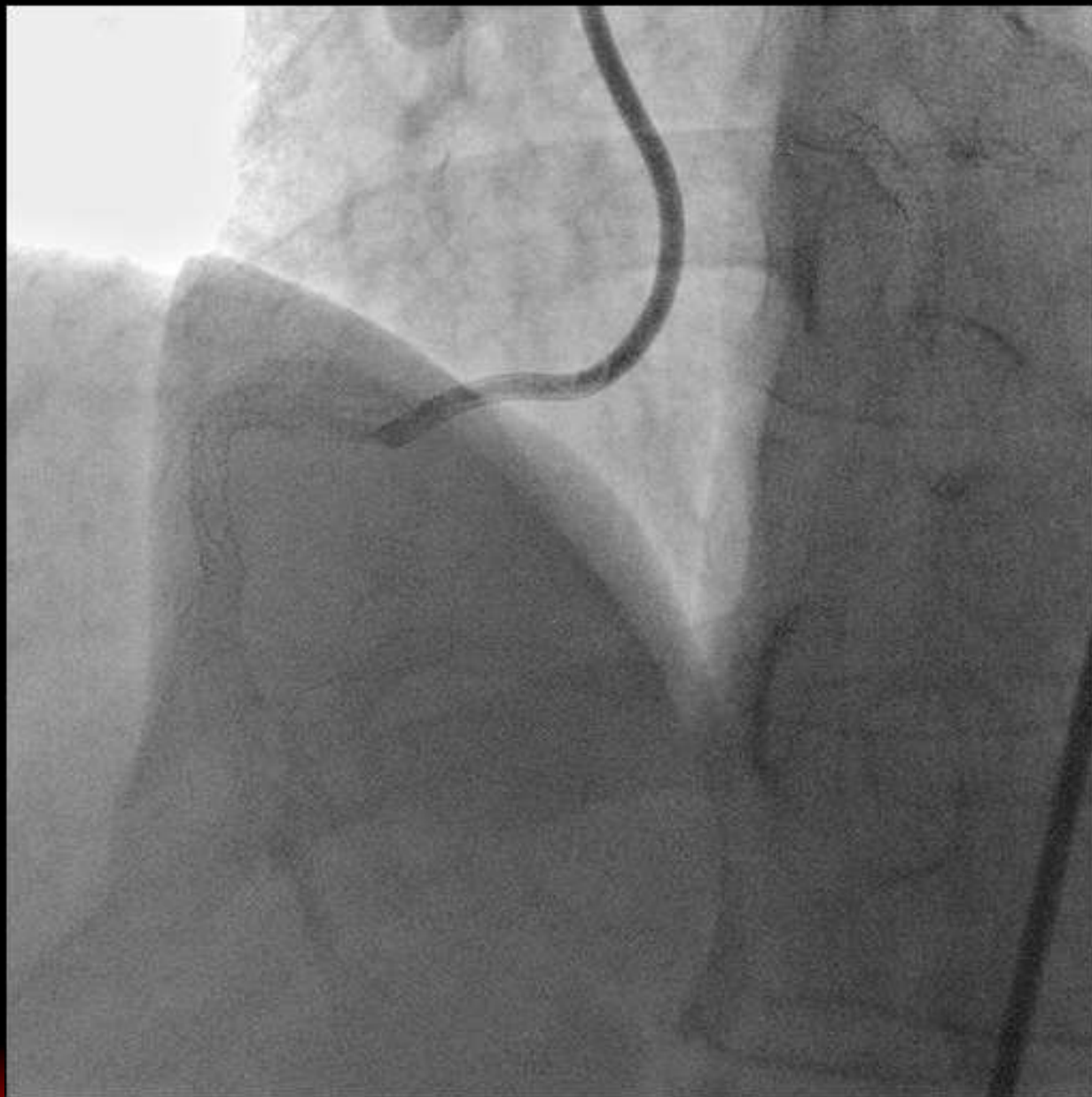
Retrograde Approach





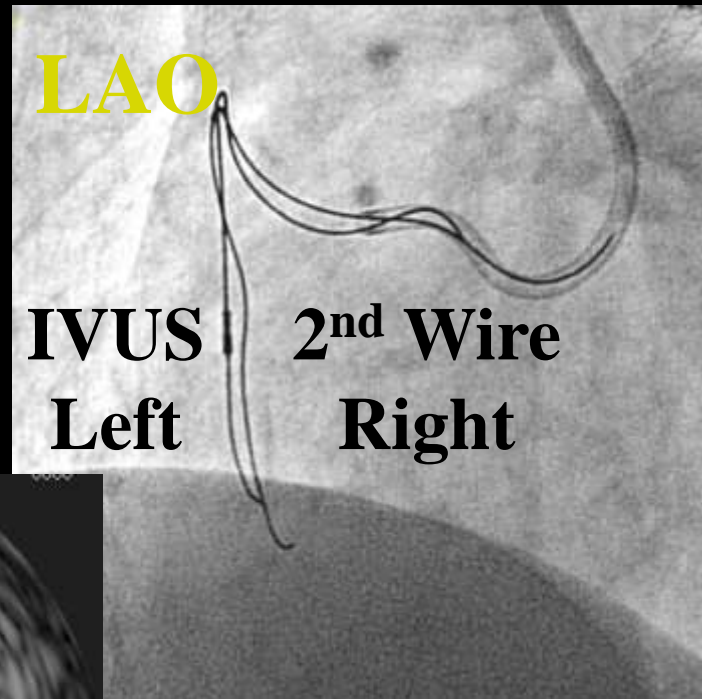
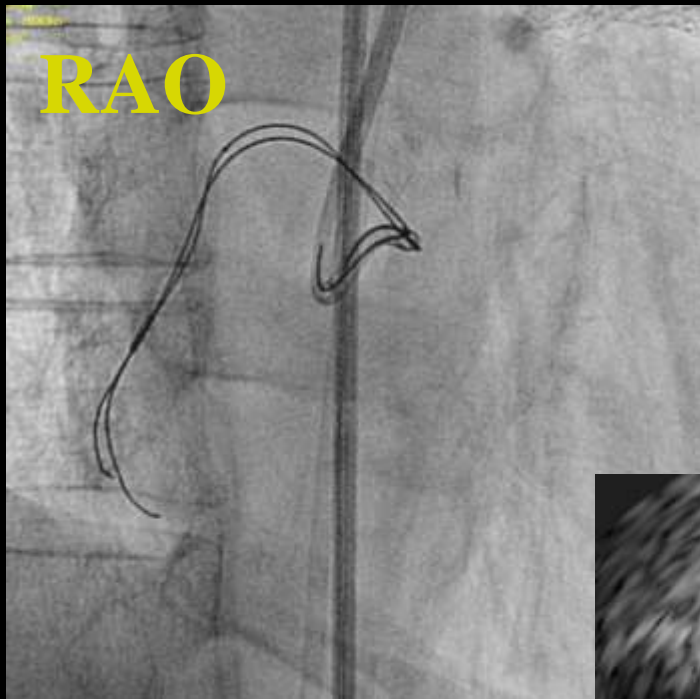


Final

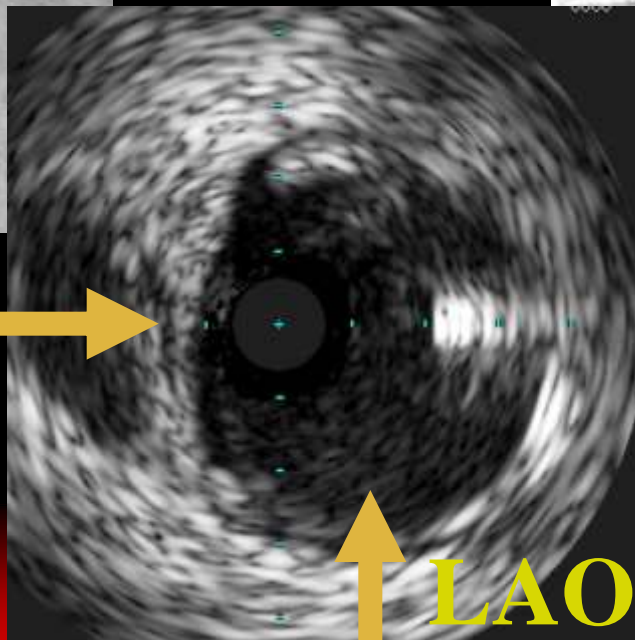




3 Dimensional Orientation



RAO View

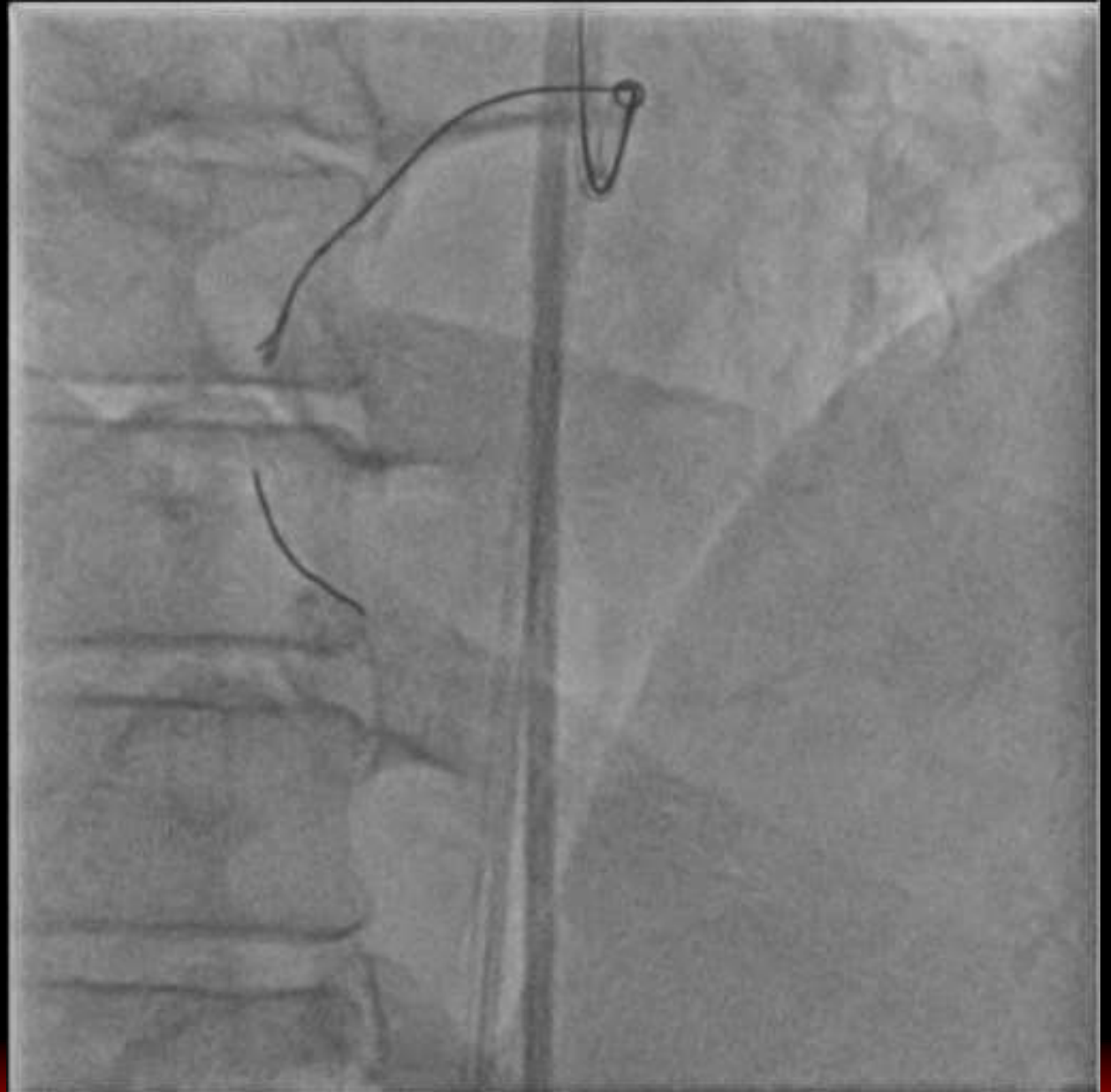


LAO View



Case

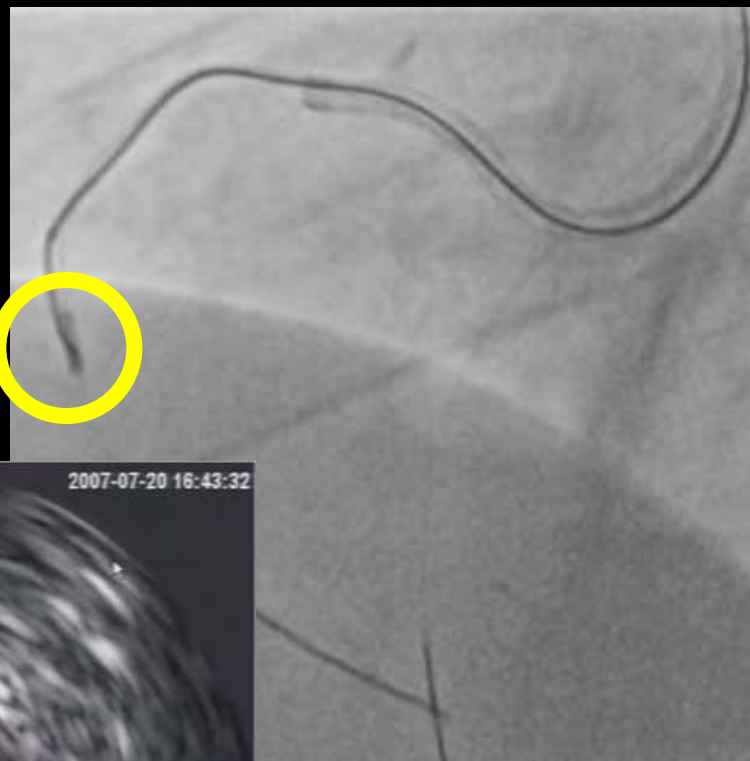
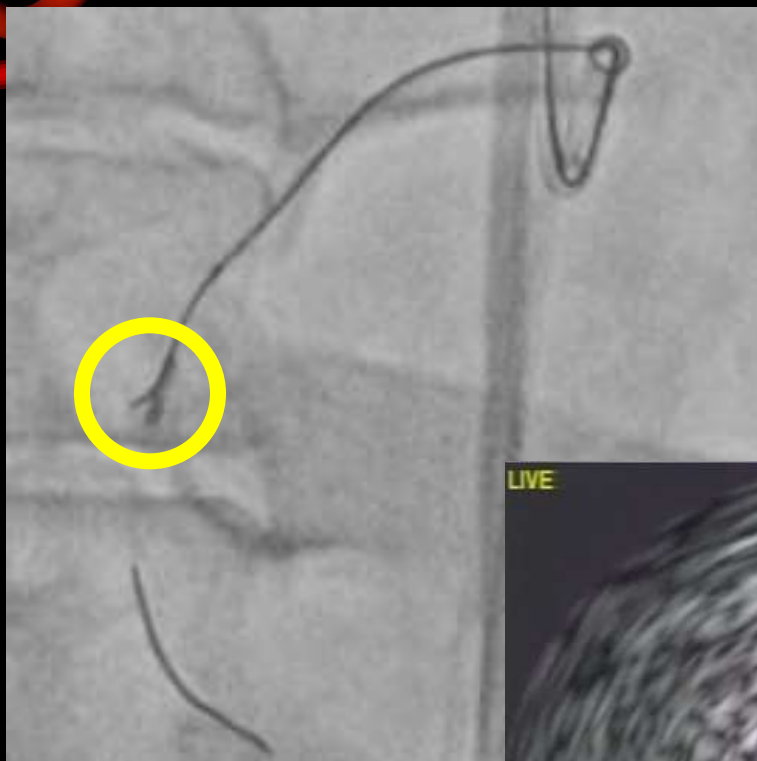
Rotational Angiography



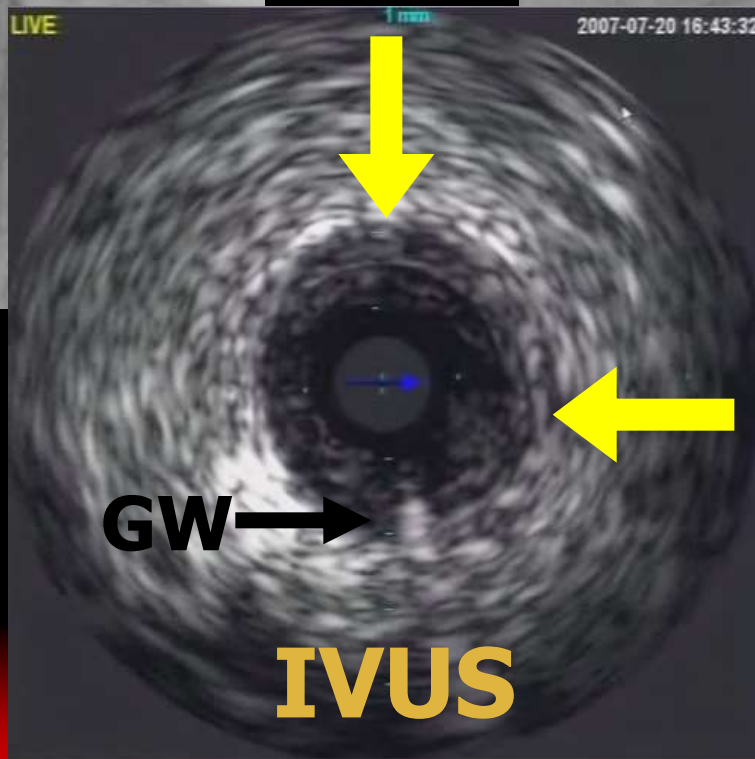


RAO 20

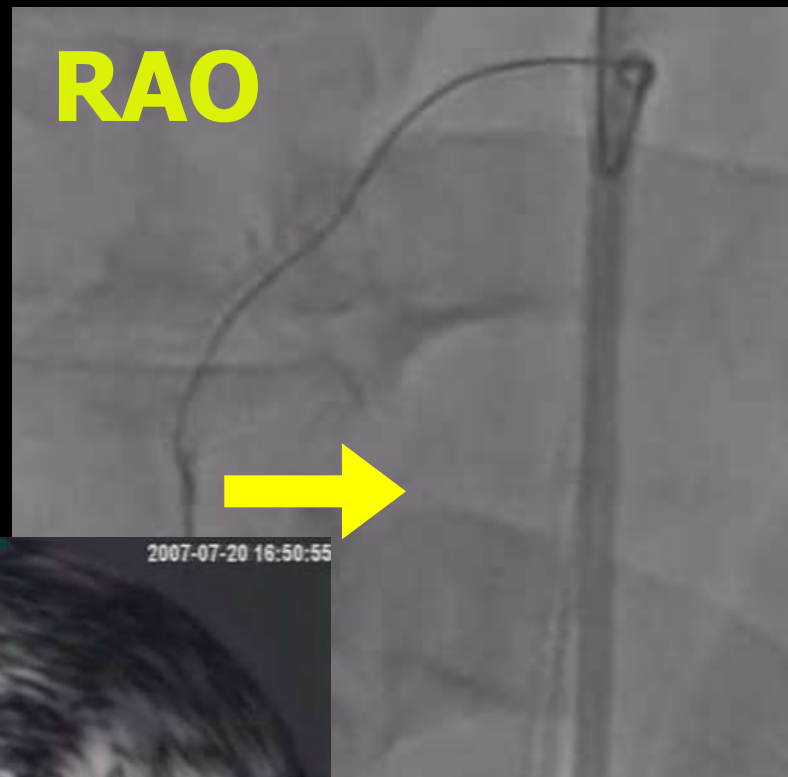
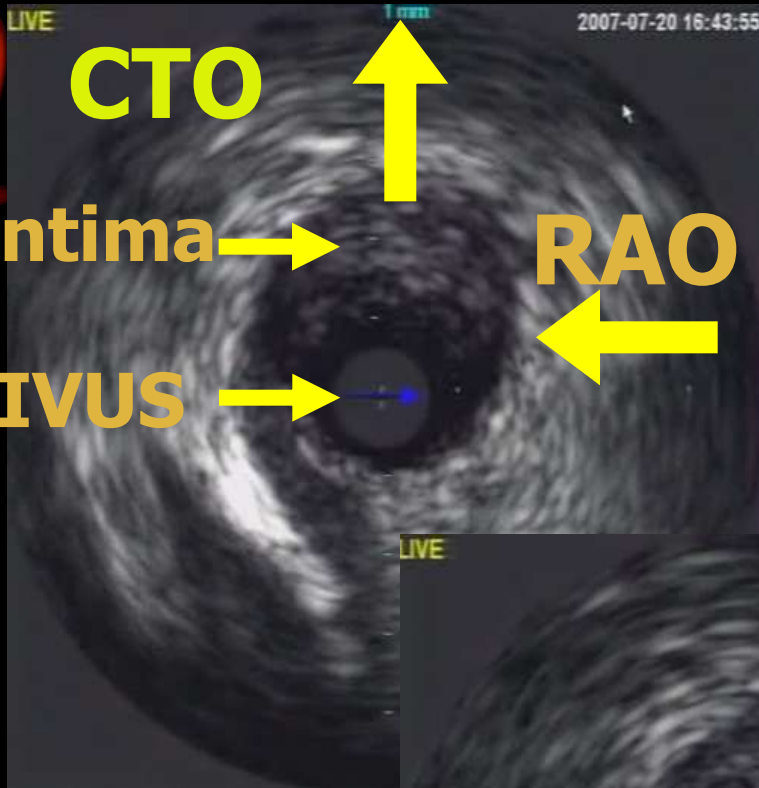
LAO 70



LAO



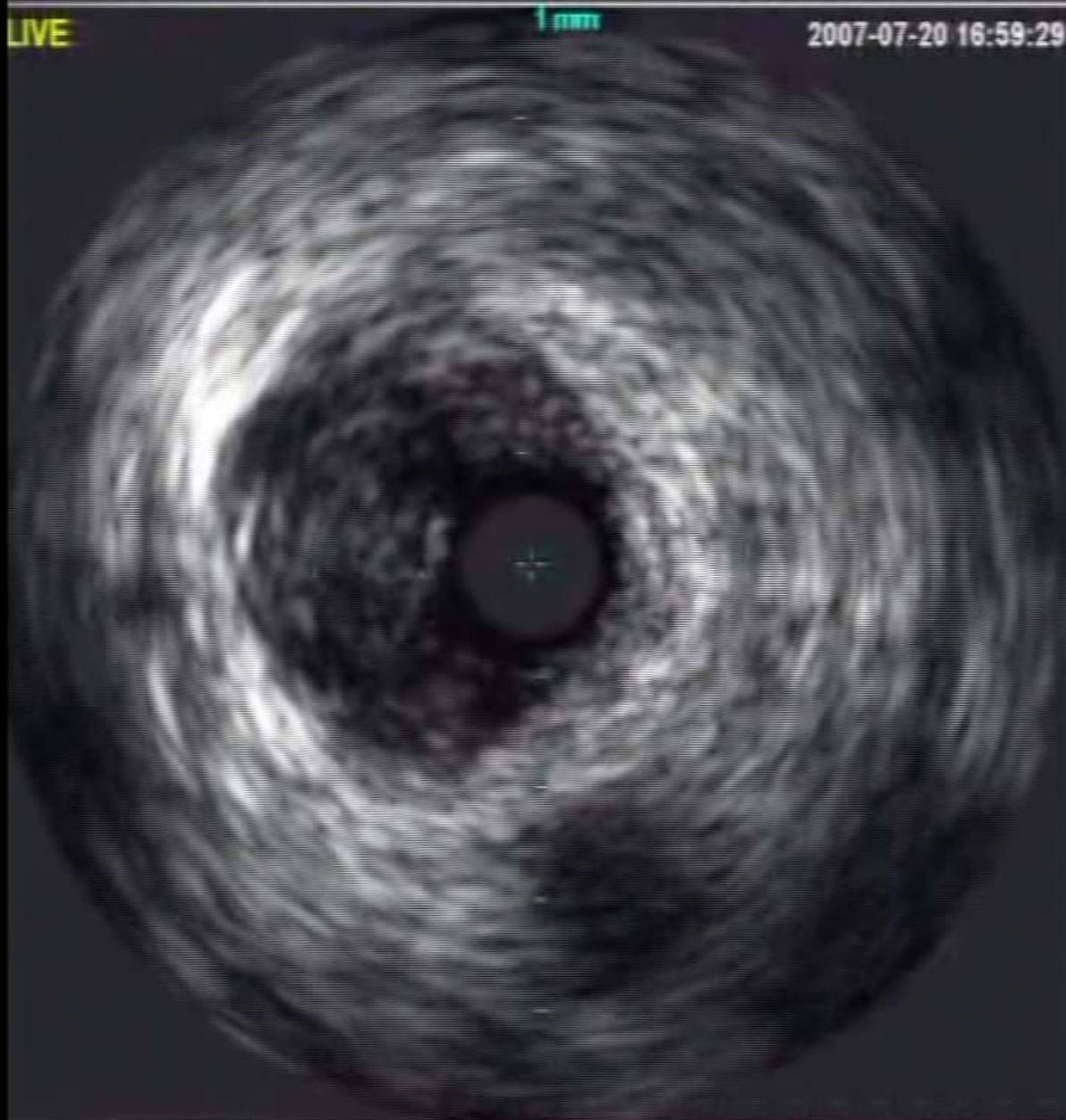
RAO



LIVE

1 mm

2007-07-20 16:59:29



Freeze

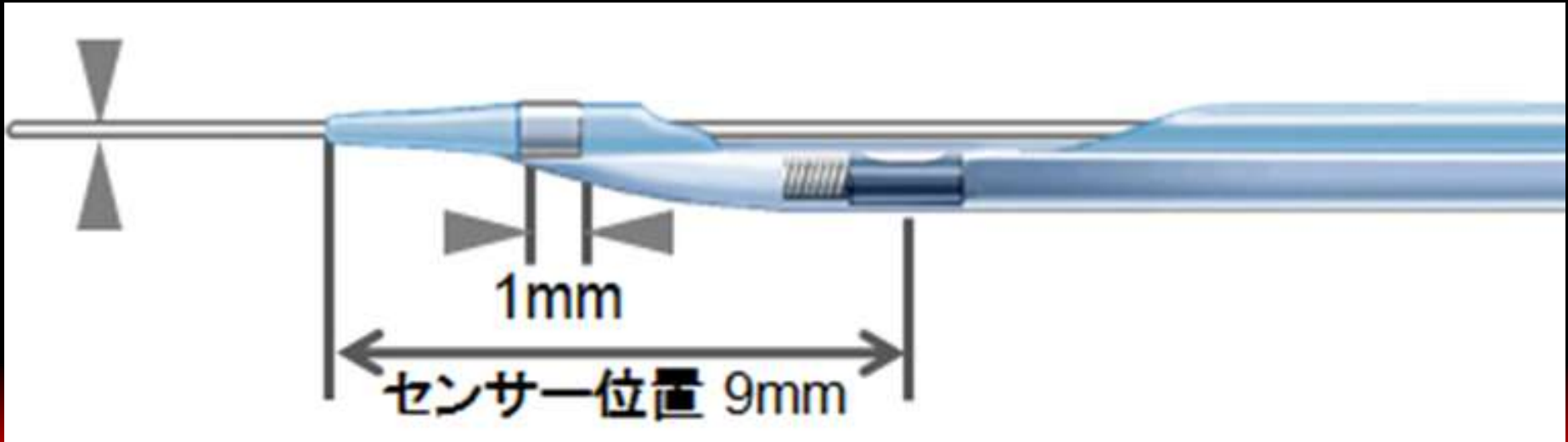
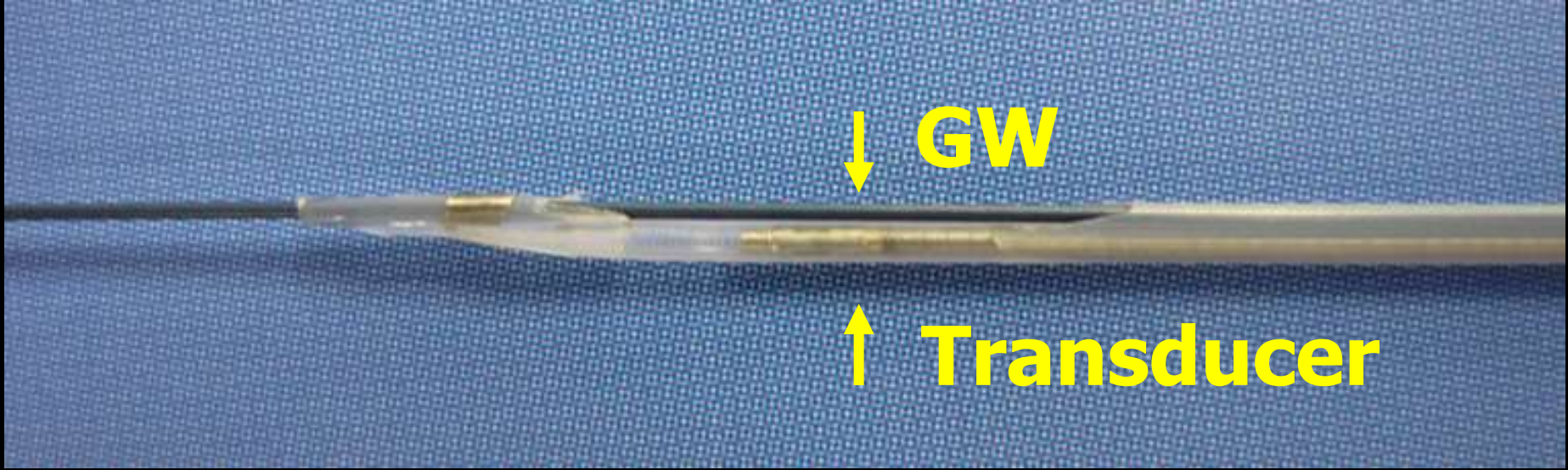
Save Frame

Record Loop

Adjust I



Navi Focus





LAO 40

RAO 50

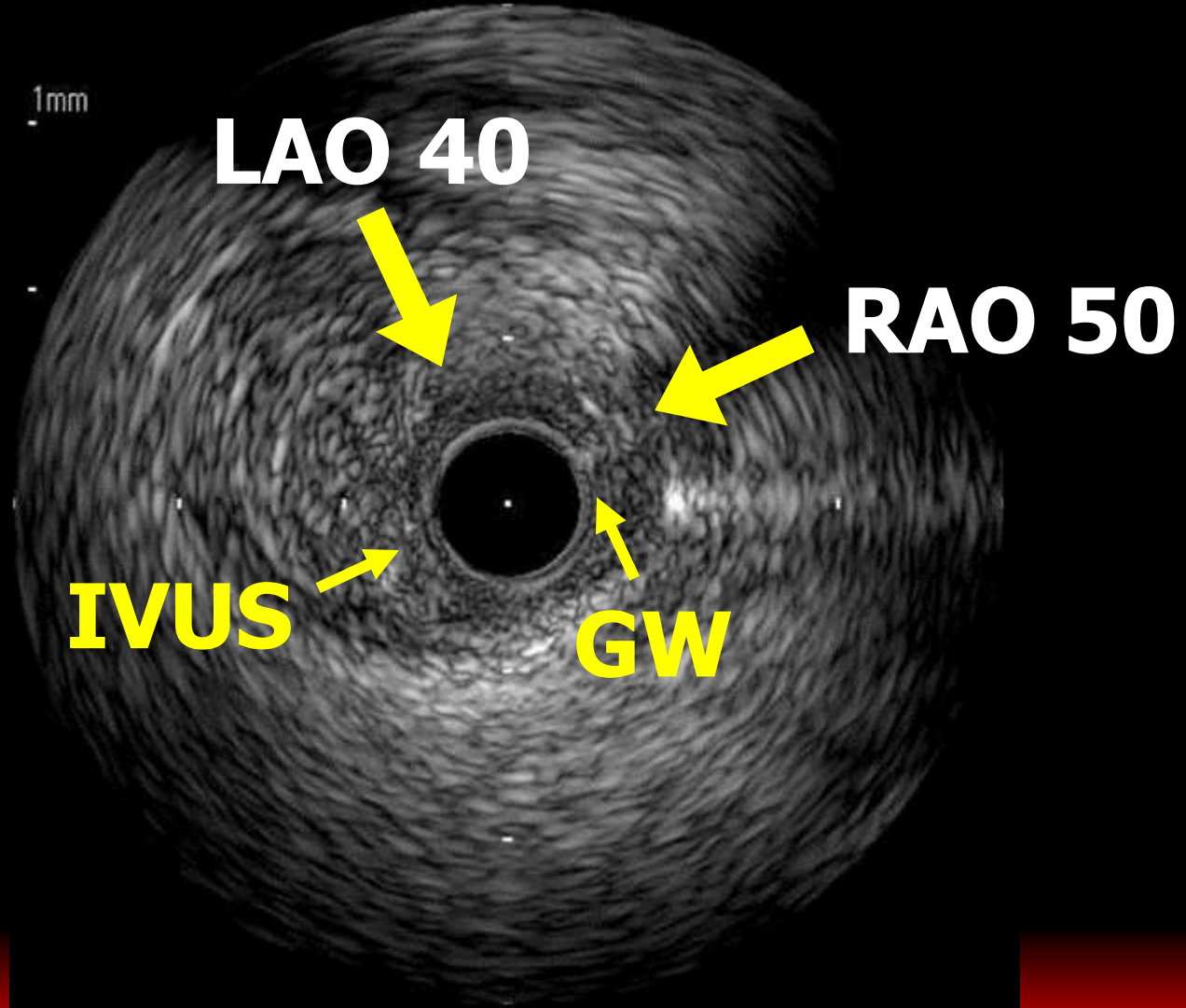
**GW
Left**

**IVUS
Right**

Overlap



Navi Focus





Summary

- 1. In an antegrade approach, IVUS is used in order to identify the entry.**
- 2. IVUS guided wiring is the last resort in CTO PCI.**
- 3. This technique should be done before false lumen is enlarged.**
- 4. The 2nd wire should go through intima from begin to end.**
- 5. Three dimensional recognition is important in this strategy.**