

IVUS Guided Wiring in CTO PCI

Hakujikai Memorial Hospital
Yasushi Asakura M.D.





Step by Step Approach

**Antegrade Approach
with Single Wire**



Parallel Wire Technique



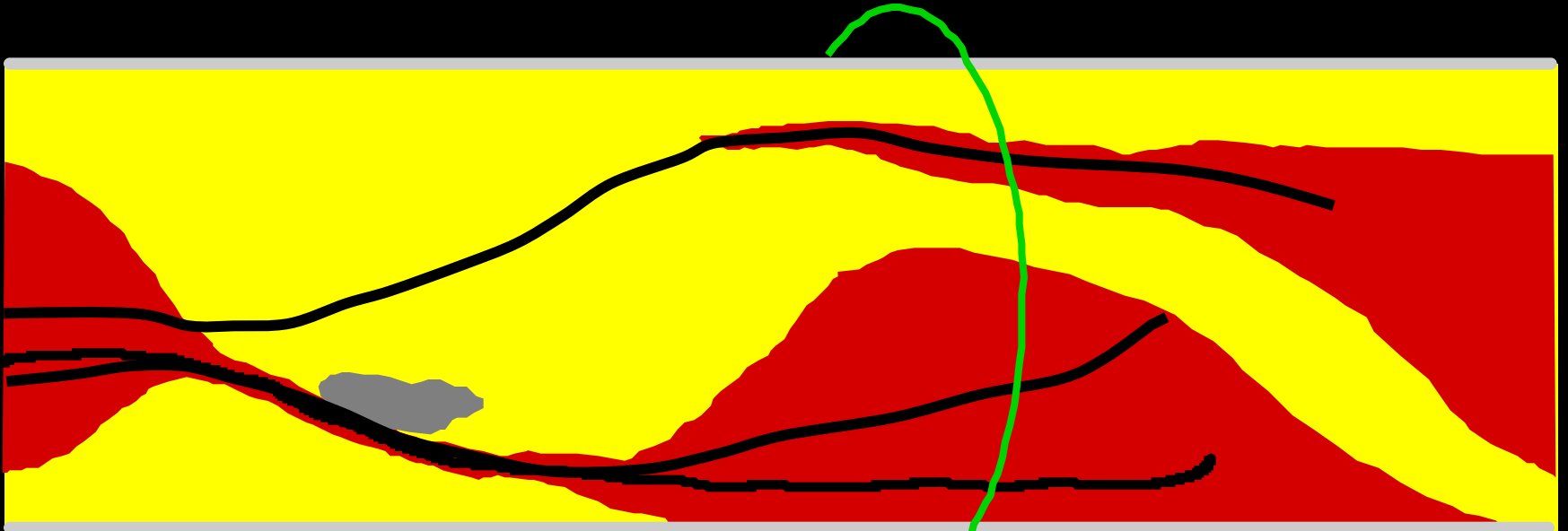
Retrograde Approach



IVUS Guided Wiring

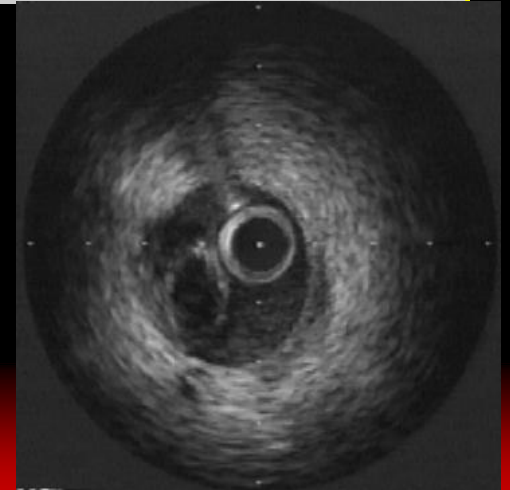


Where should the 2nd wire run?



Re-Entry **X**

Fresh Start **O**



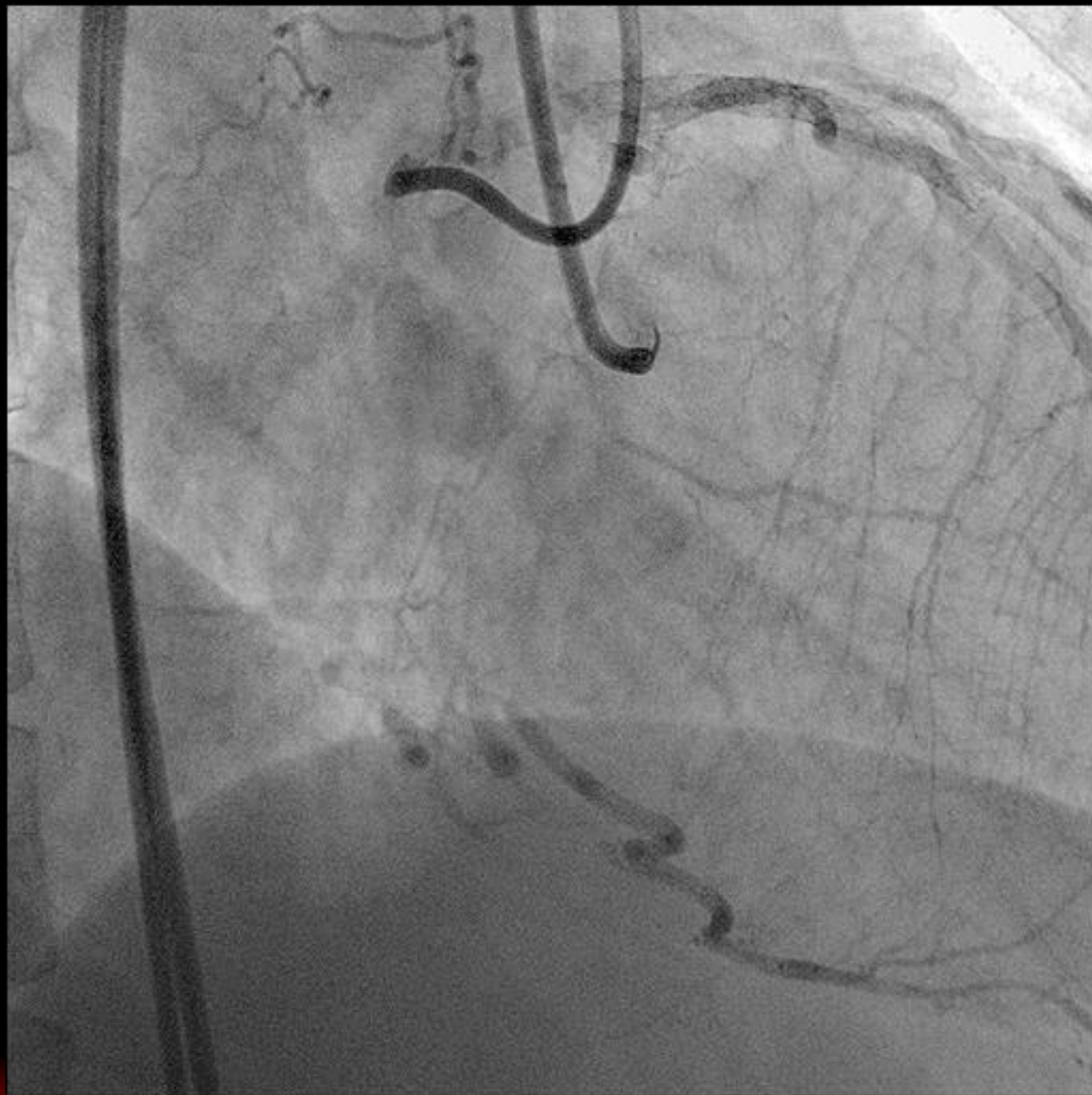


Case



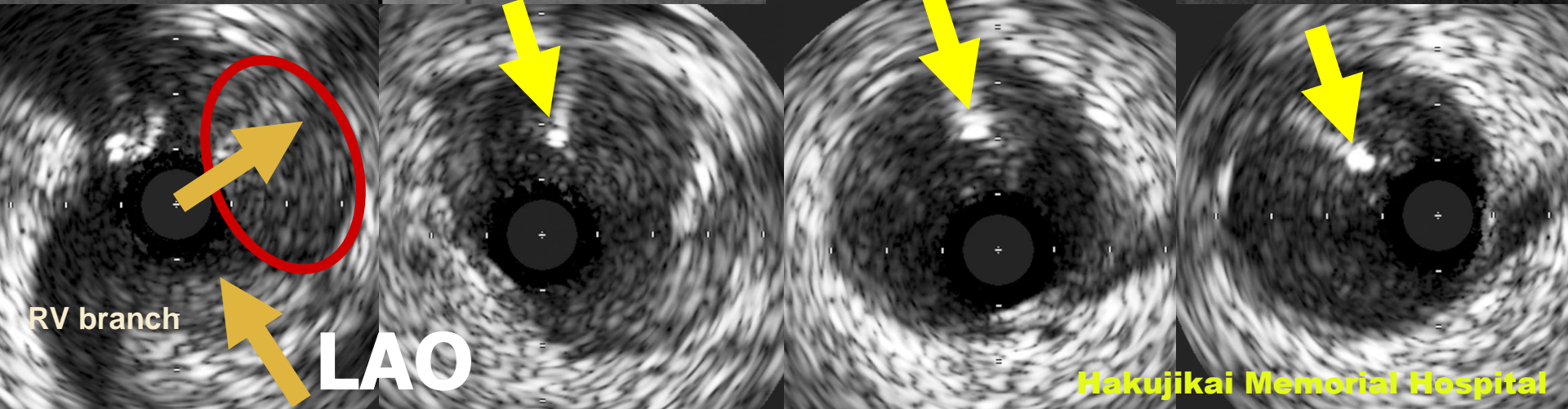
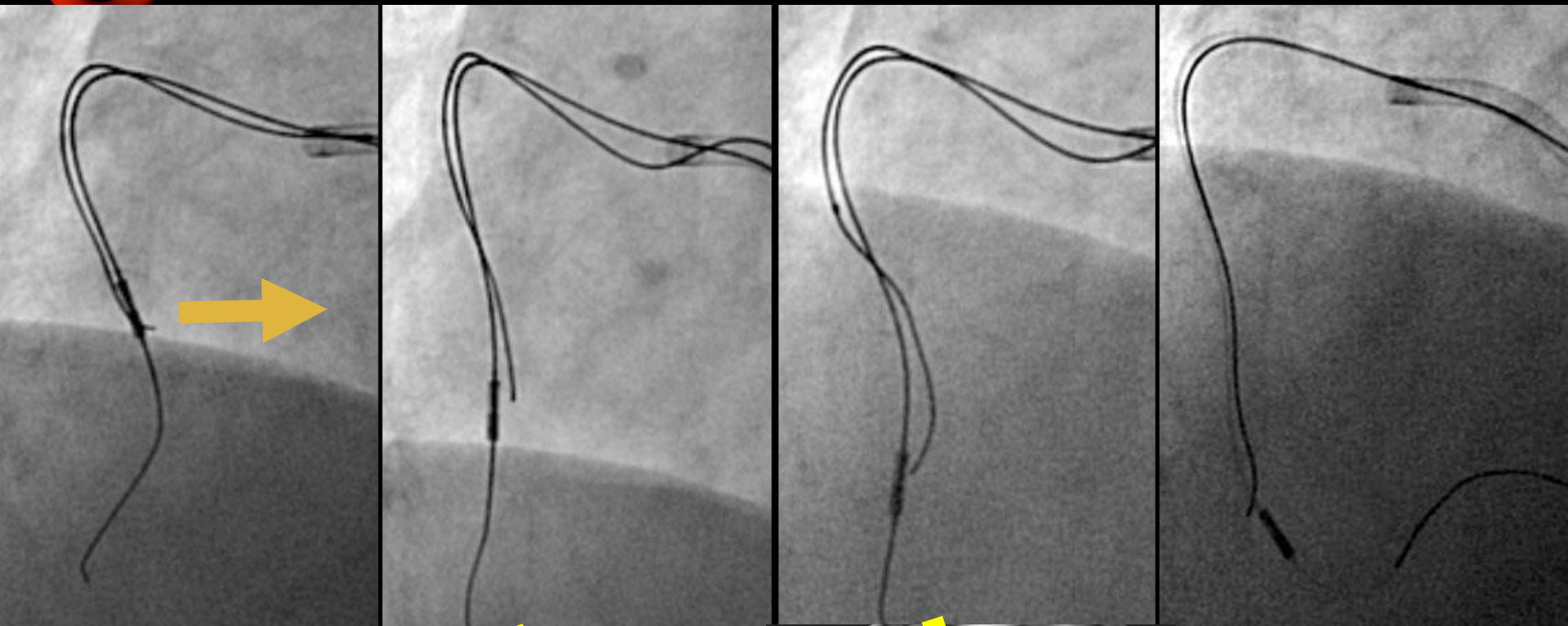


RAO view



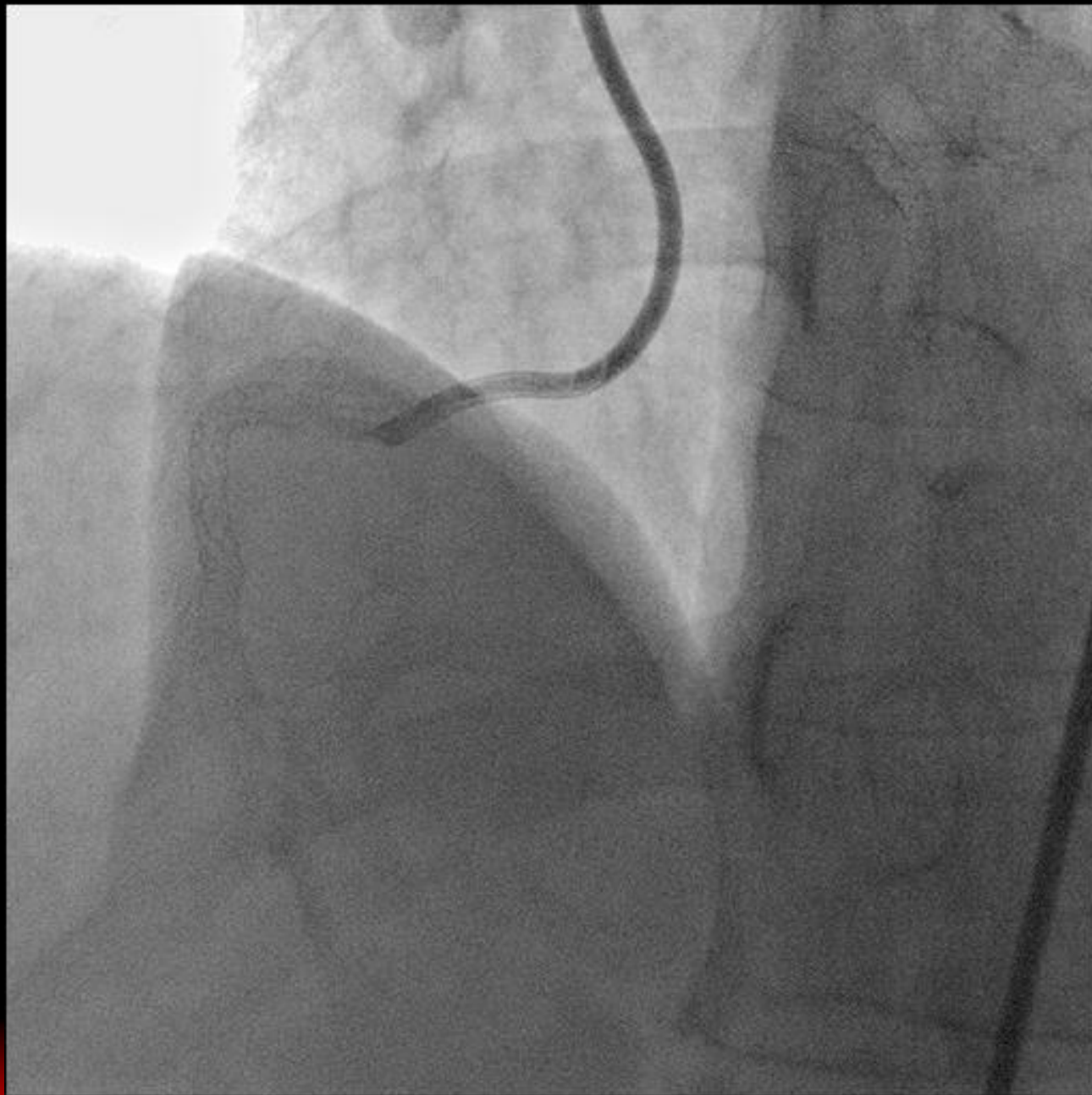


IVUS Guided Wiring





Final





3 Dimensional Orientation

- ✓ **Side Branch**
- ✓ **Side Hall of GC**
- ✓ **NaviFocus IVUS**
- ✓ **2nd GW**
- ✓ **IVUS Catheter Bias**

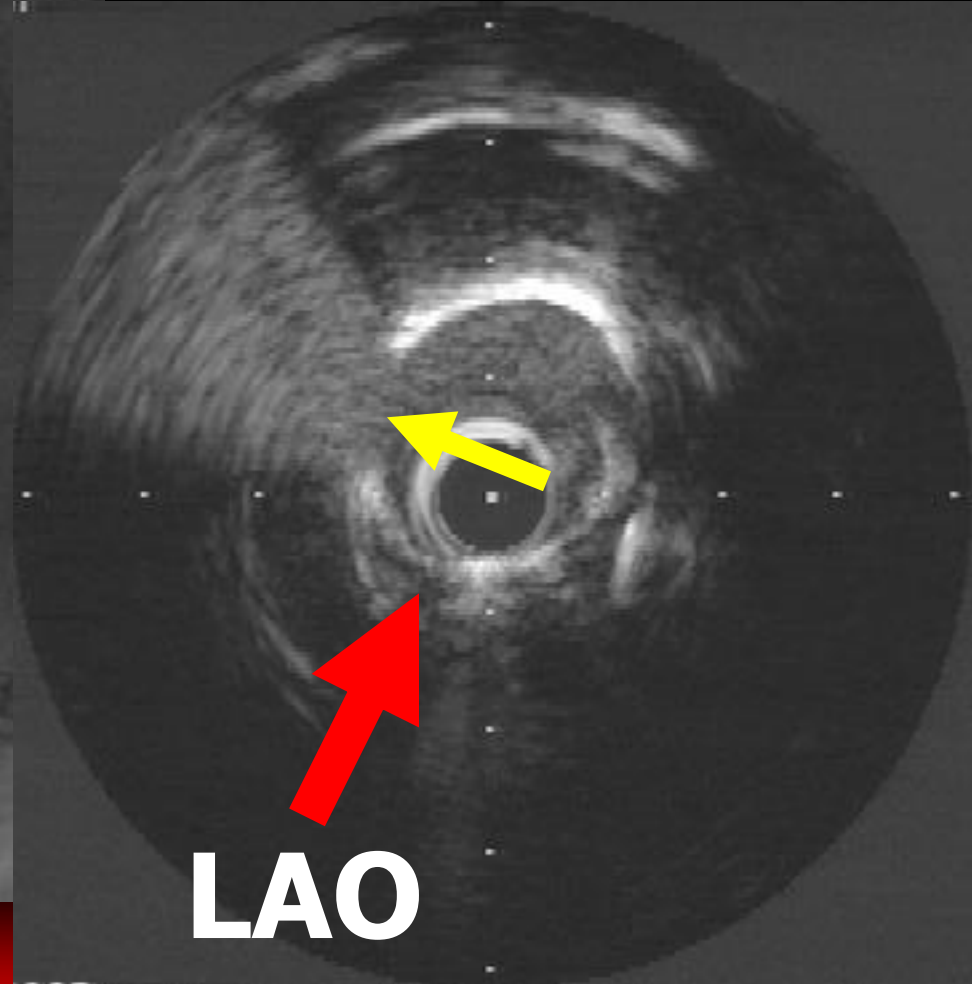
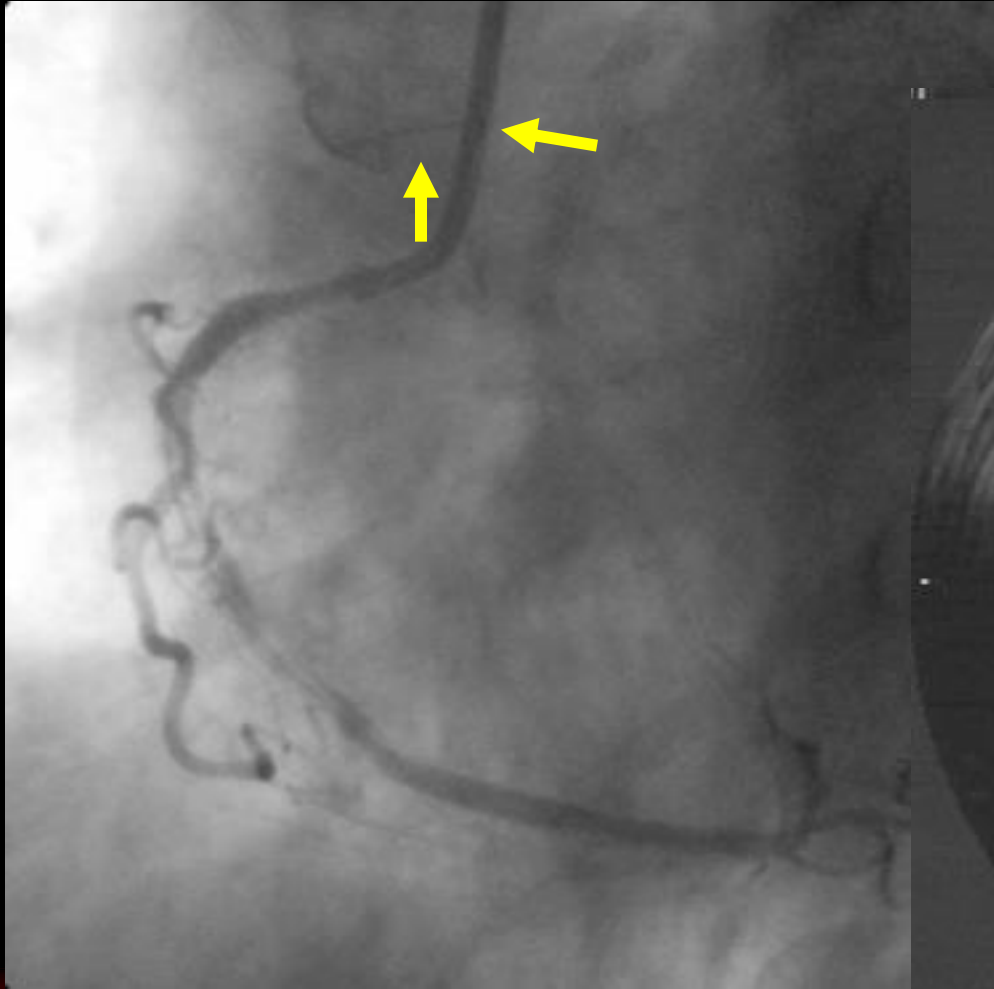


3 Dimensional Orientation

- ✓ Side Branch
- ✓ Side Hall of GC
- ✓ NaviFocus IVUS
- ✓ 2nd GW
- ✓ IVUS Catheter Bias



Side Hall



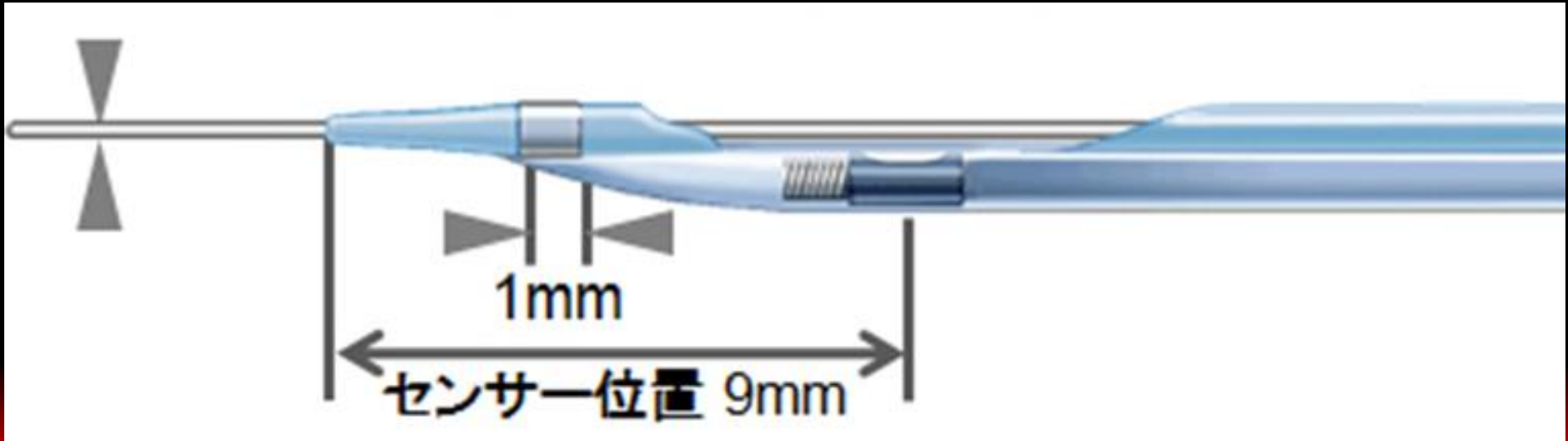
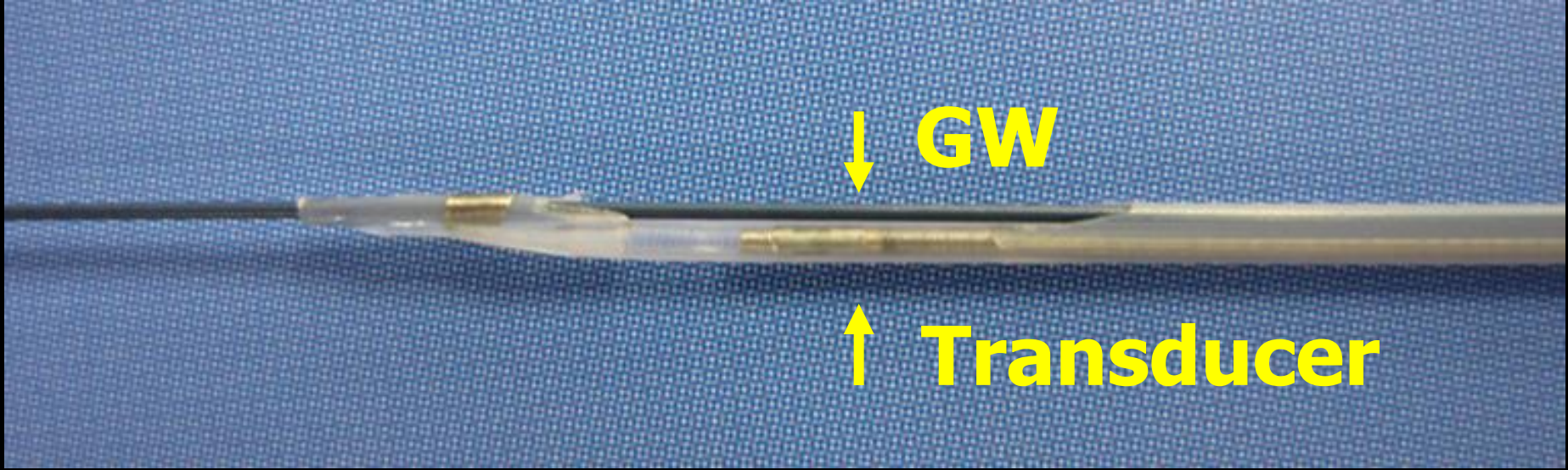


3 Dimensional Orientation

- ✓ Side Branch
- ✓ Side Hall of GC
- ✓ **NaviFocus IVUS**
- ✓ 2nd GW
- ✓ IVUS Catheter Bias



Navi Focus





LAO 40

RAO 50

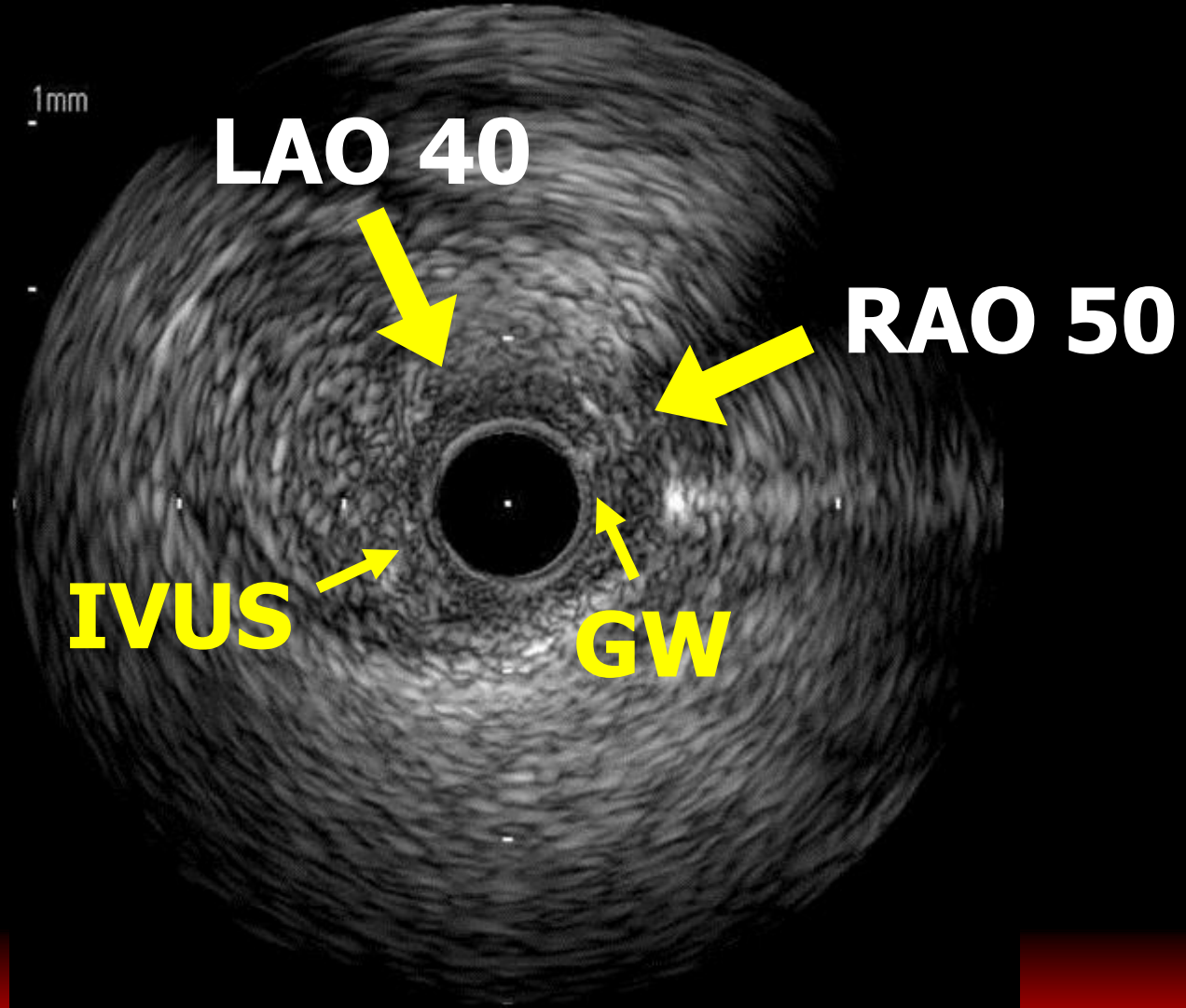
**GW
Left**

**IVUS
Right**

Overlap



Navi Focus





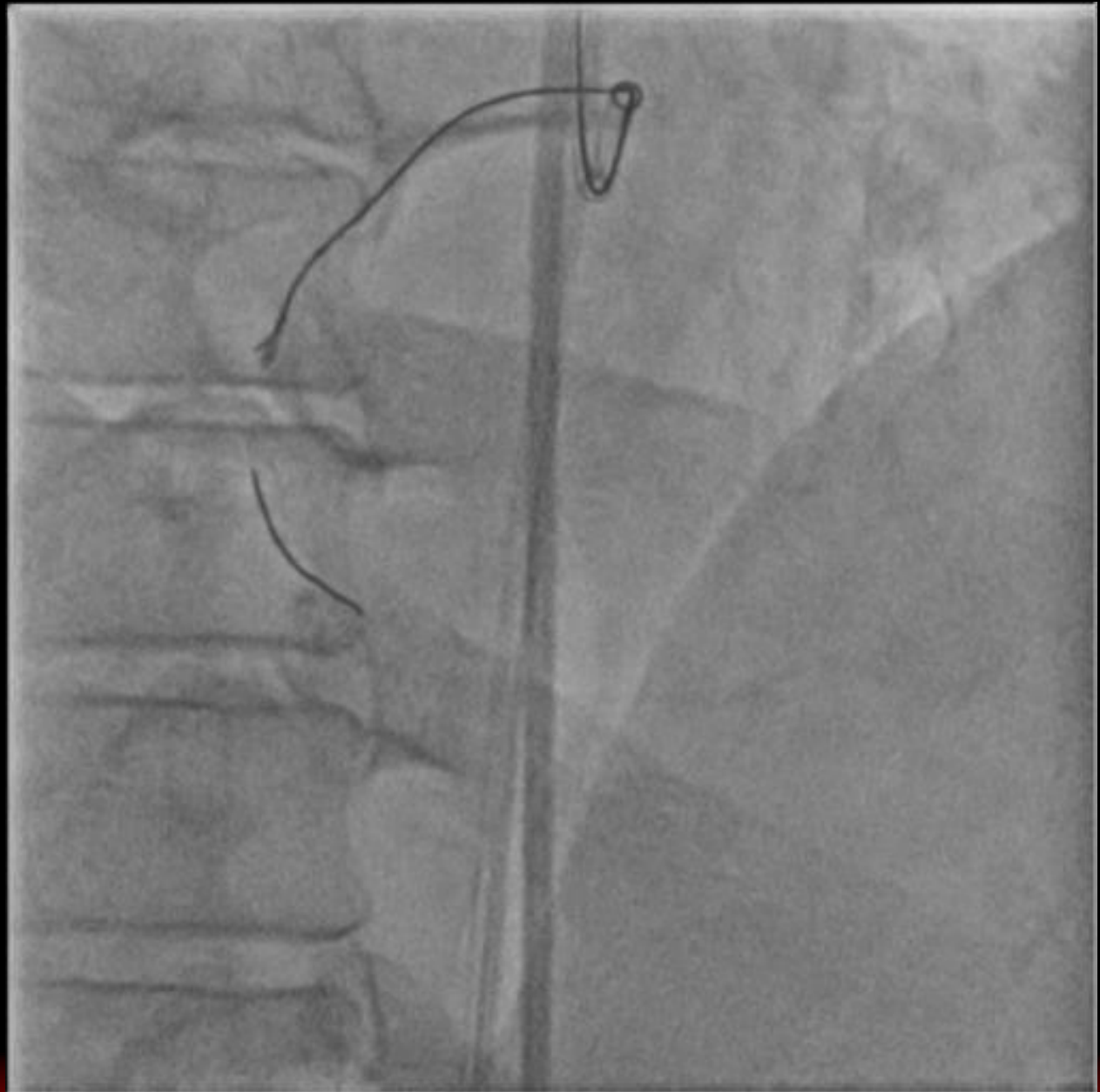
3 Dimensional Orientation

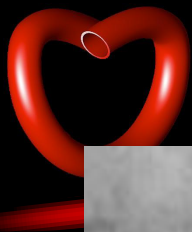
- ✓ Side Branch
- ✓ Side Hall of GC
- ✓ NaviFocus IVUS
- ✓ 2nd GW
- ✓ IVUS Catheter Bias



Case

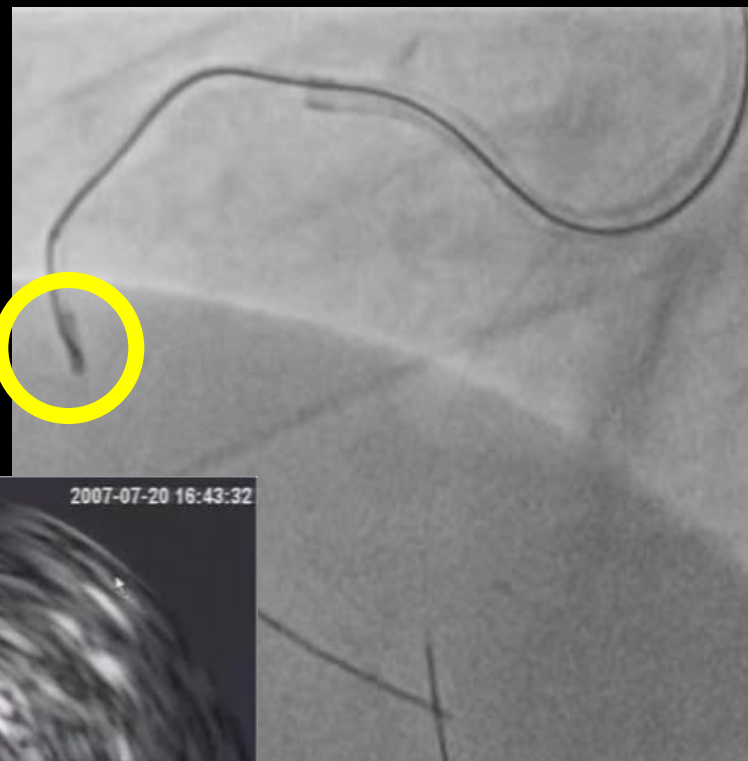
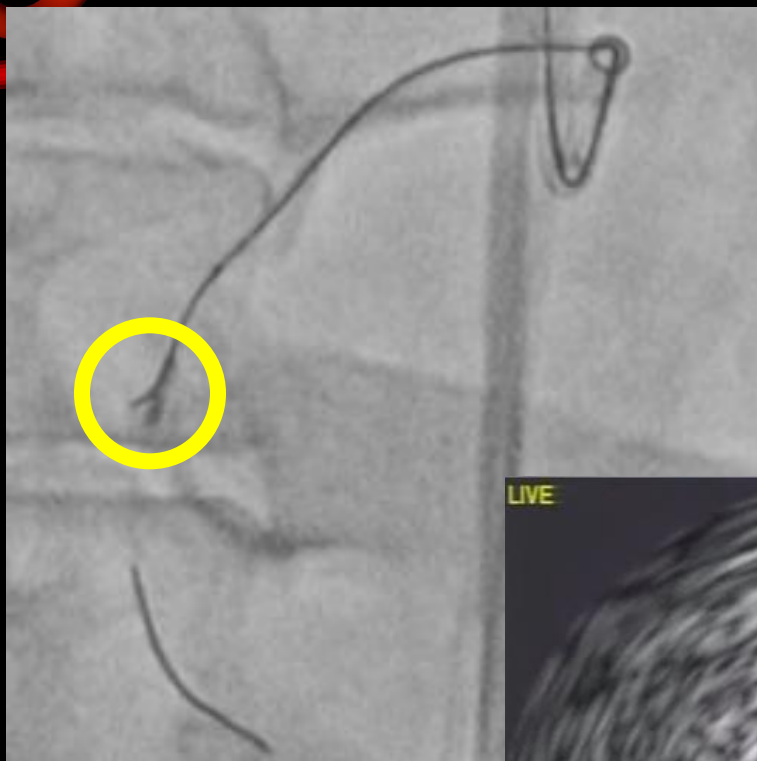
Rotational Angiography



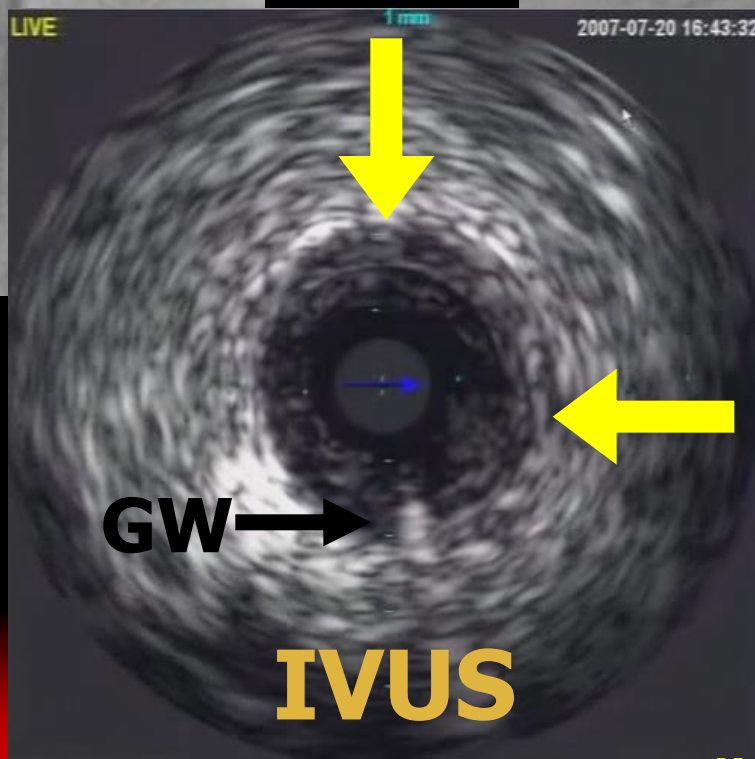


RAO 20

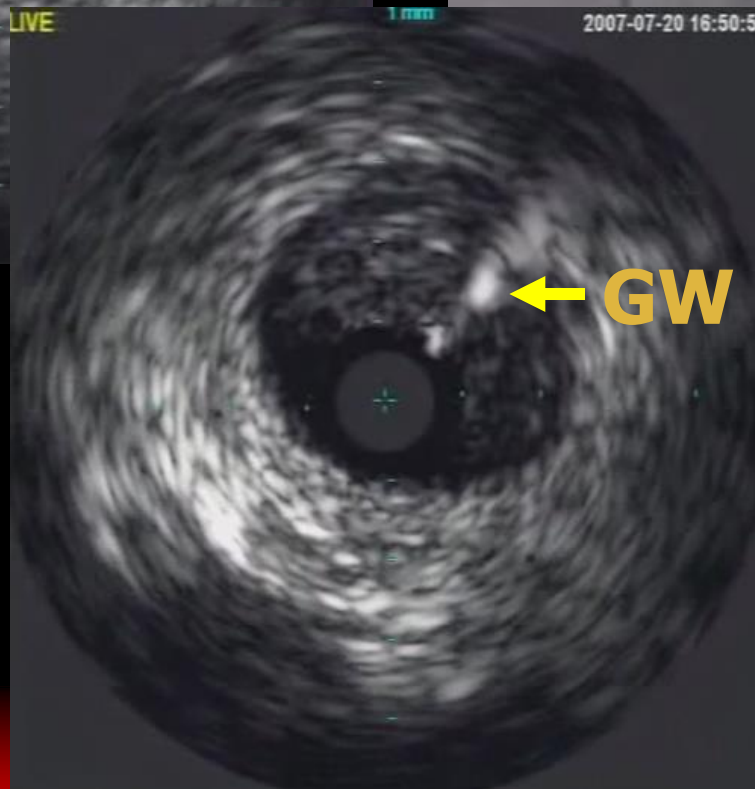
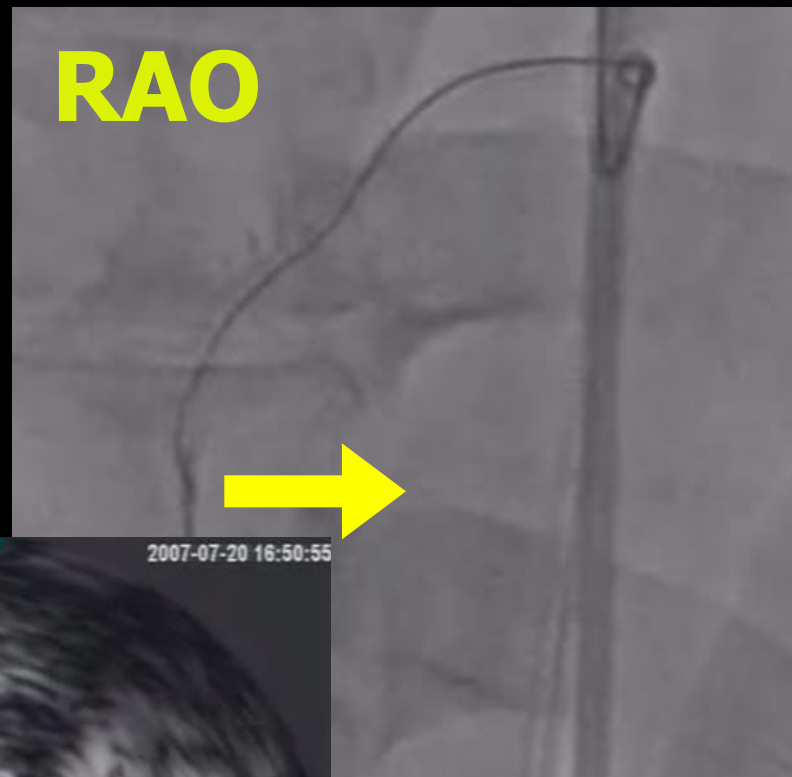
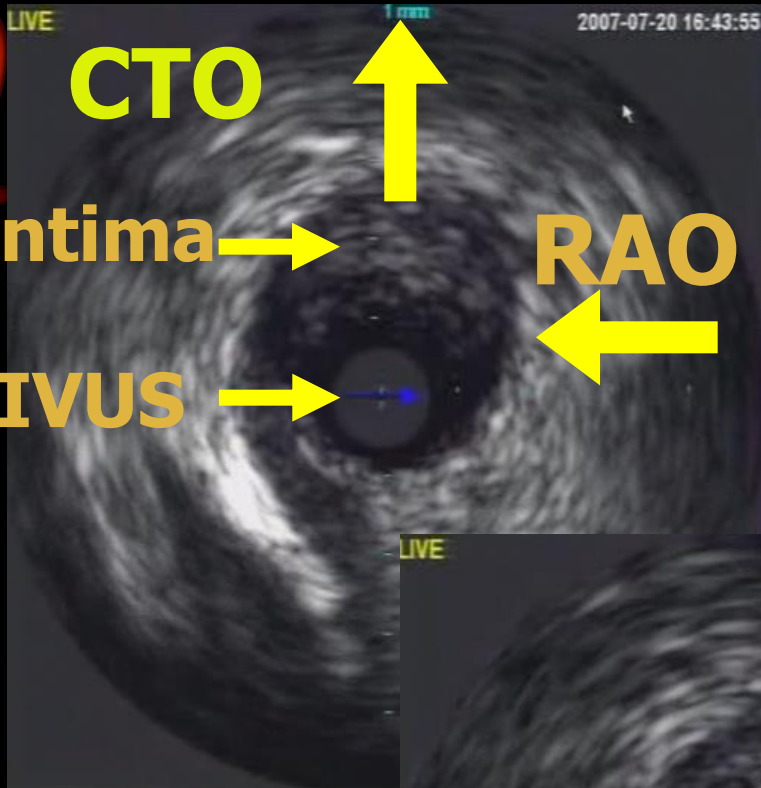
LAO 70



LAO



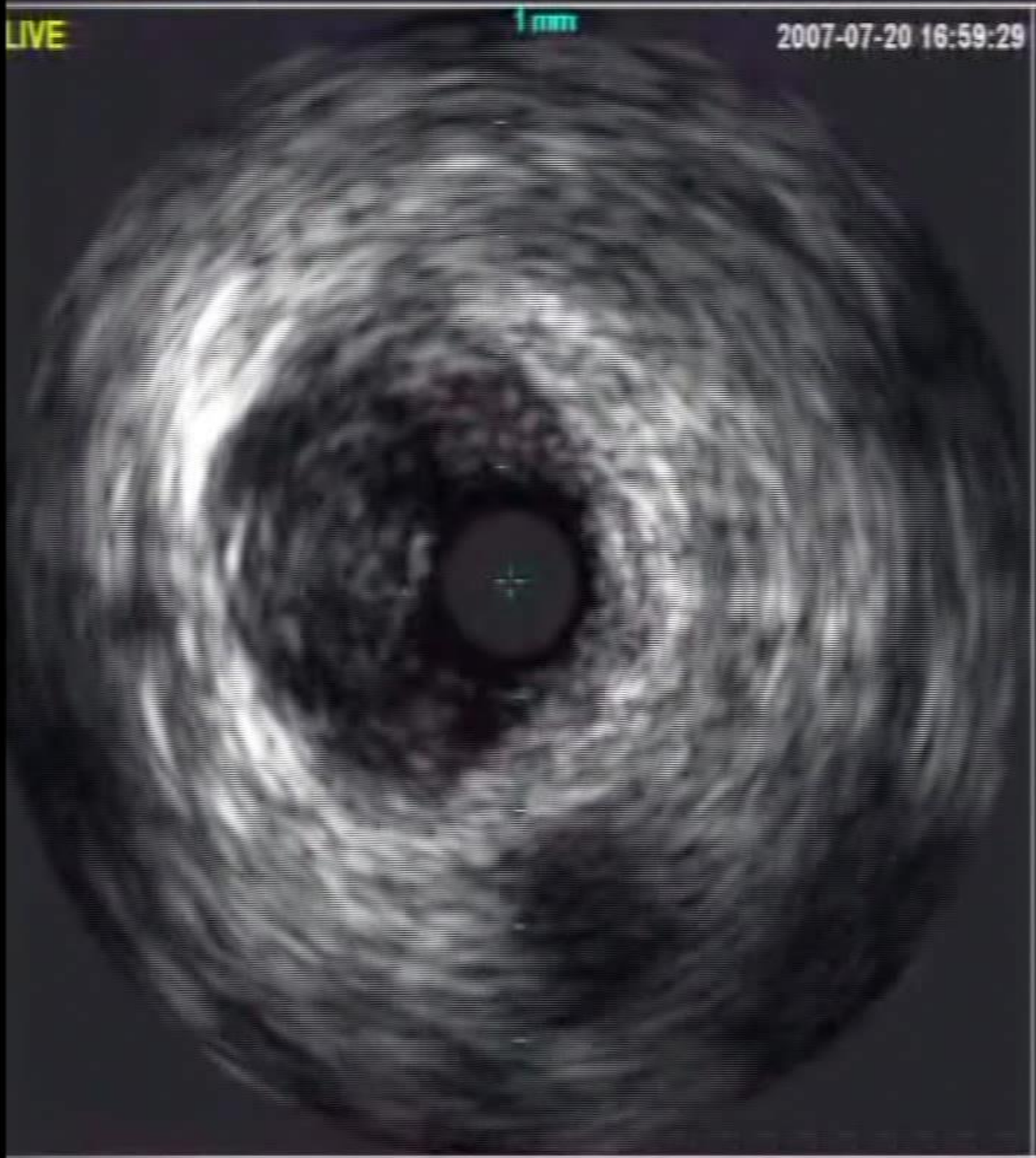
RAO



LIVE

1 mm

2007-07-20 16:59:29



Freeze

Save Frame

Record Loop

Ad



3 Dimensional Orientation

- ✓ Side Branch
- ✓ Side Hall of GC
- ✓ NaviFocus IVUS
- ✓ 2nd GW
- ✓ **IVUS Catheter Bias**

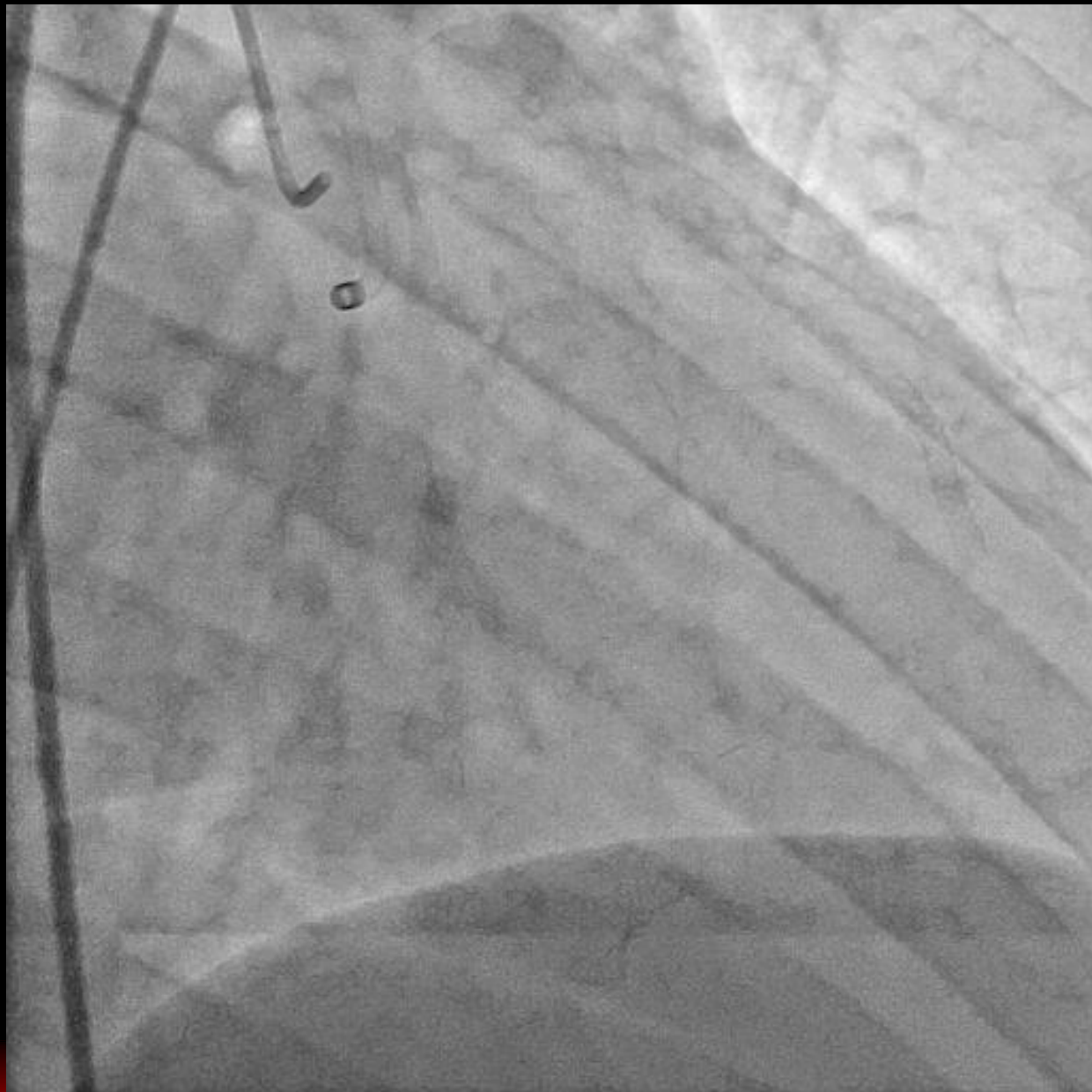


Case



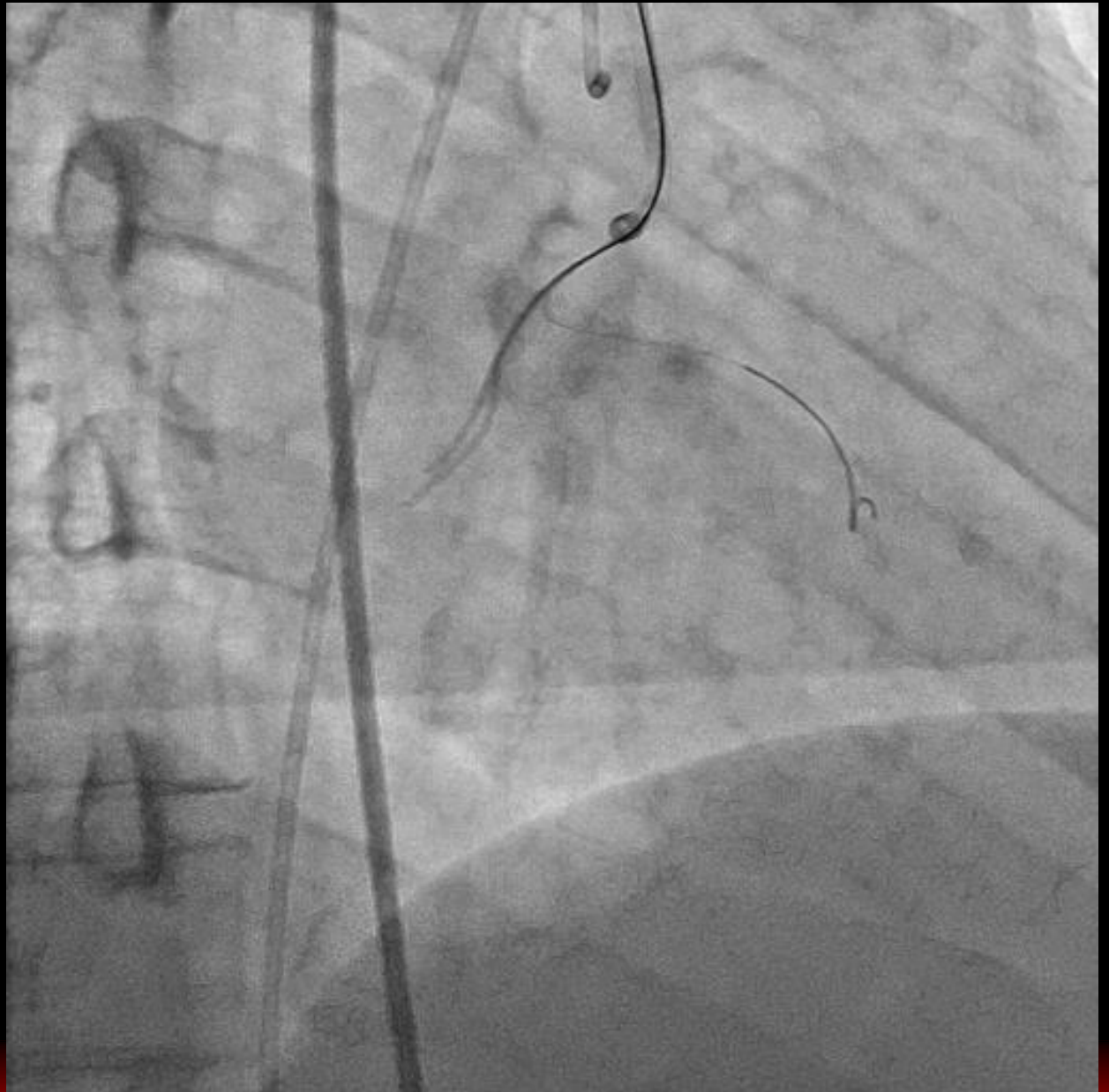


LCA



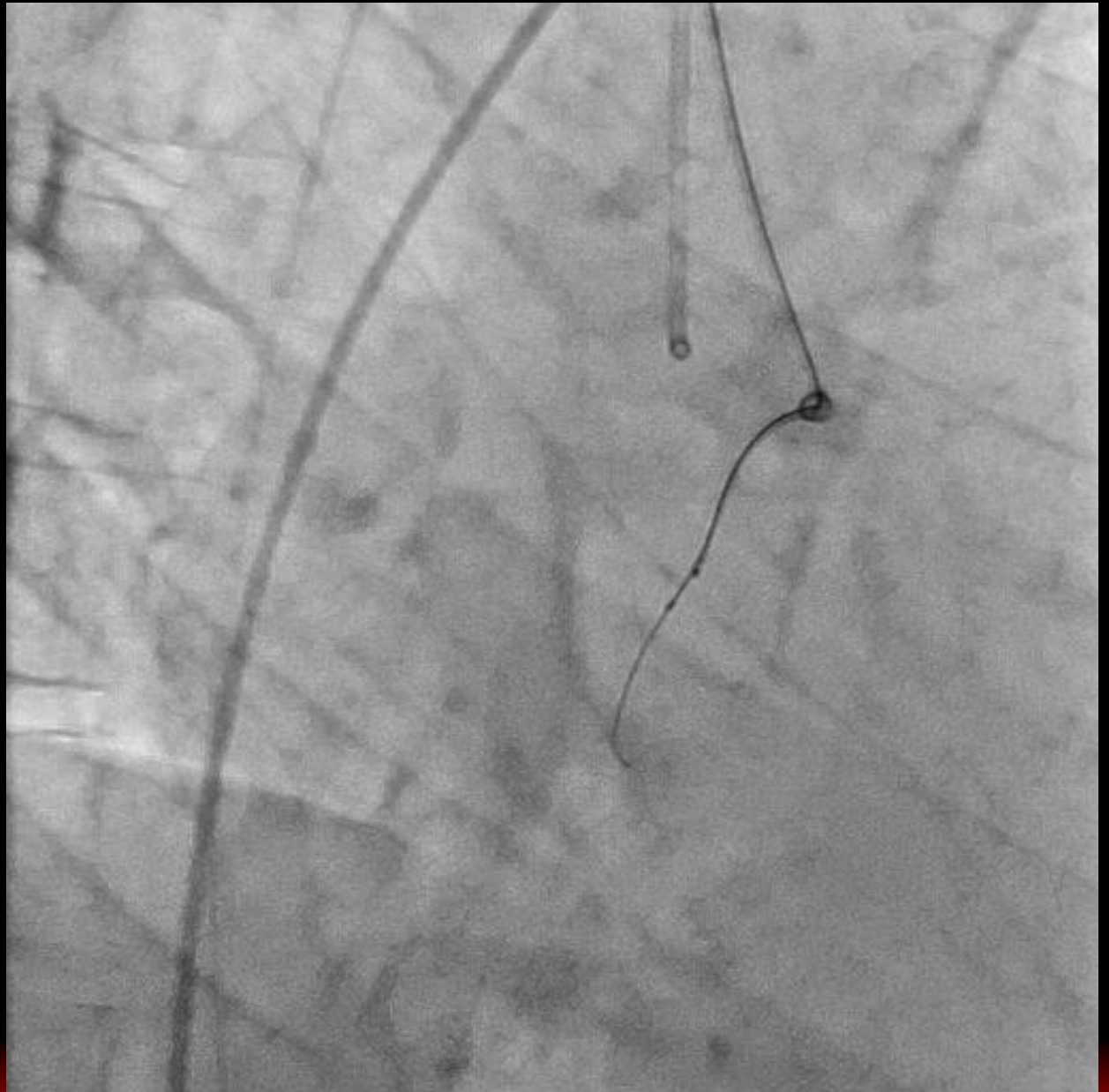


Parallel Wire Technique



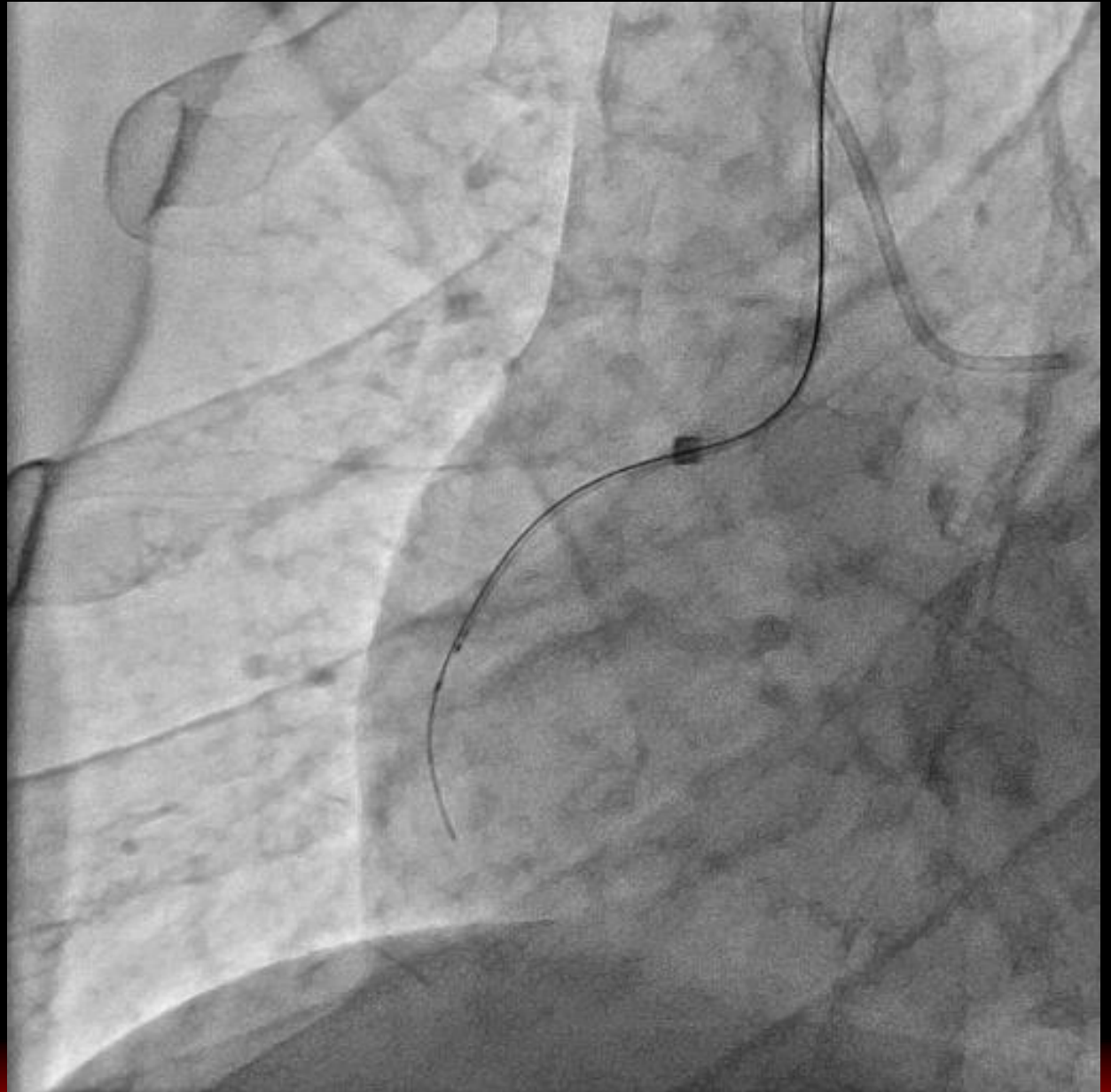


IVUS Guided Wiring



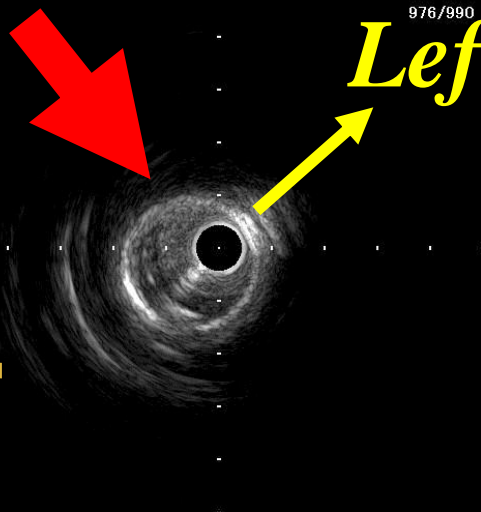


IVUS Catheter Bias

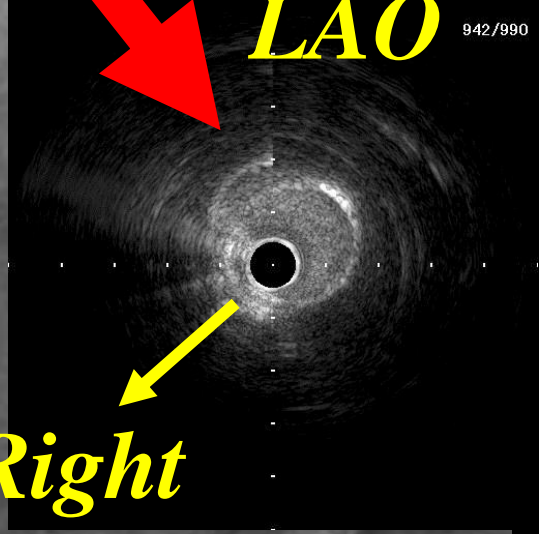
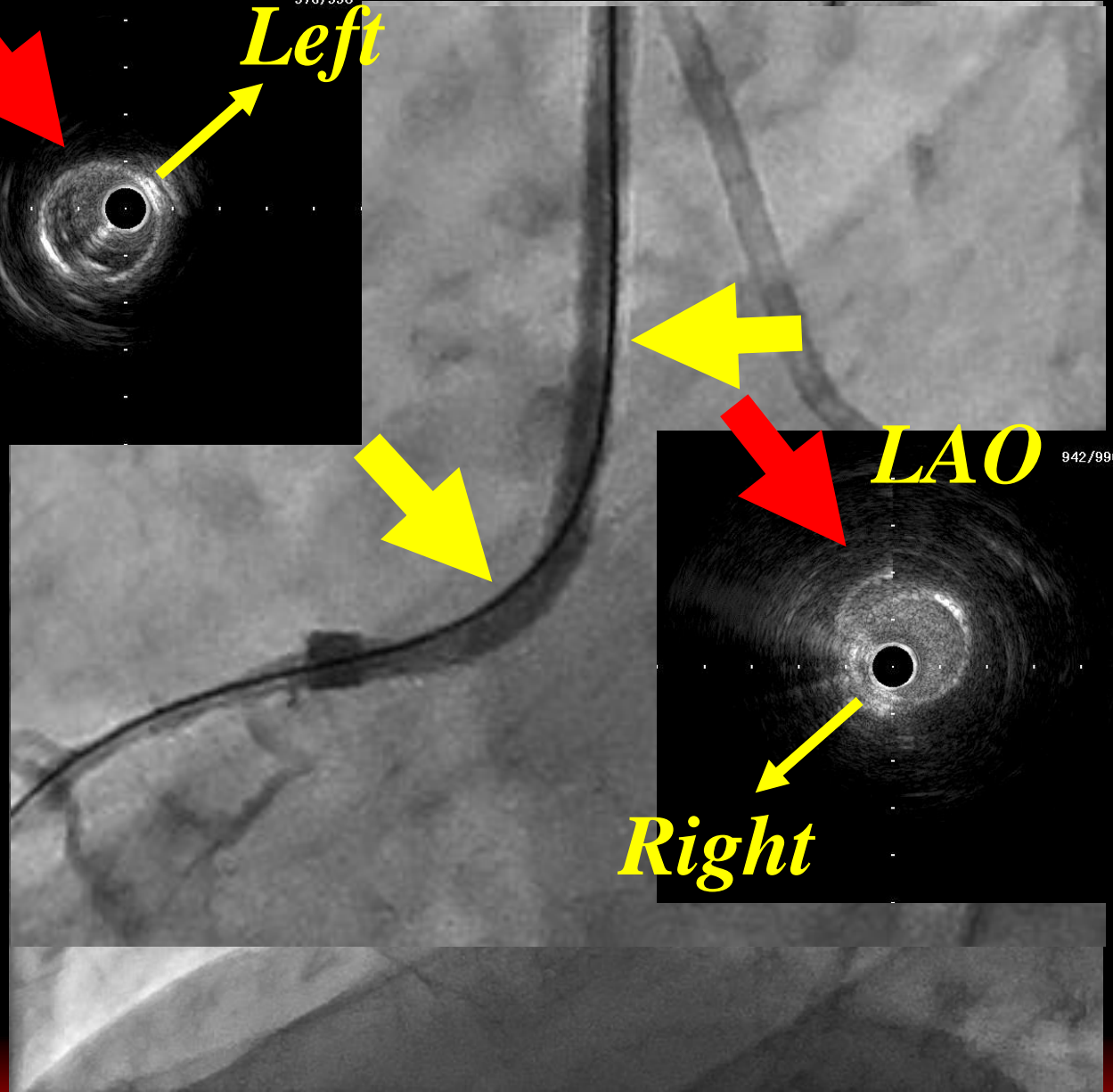




LAO
IVUS
Catheter
Bias



Left

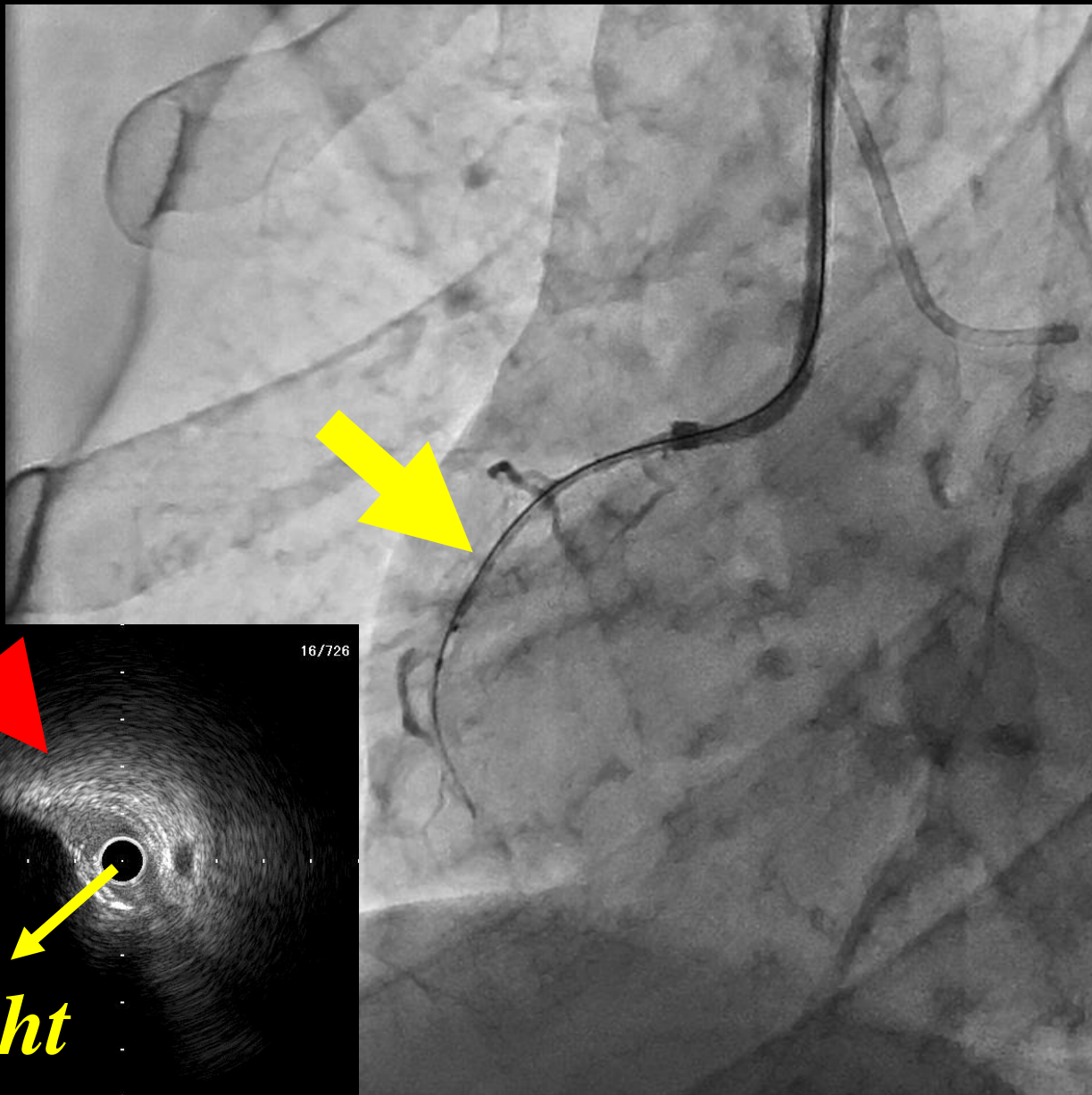


LAO

Right



IVUS Guided Wiring

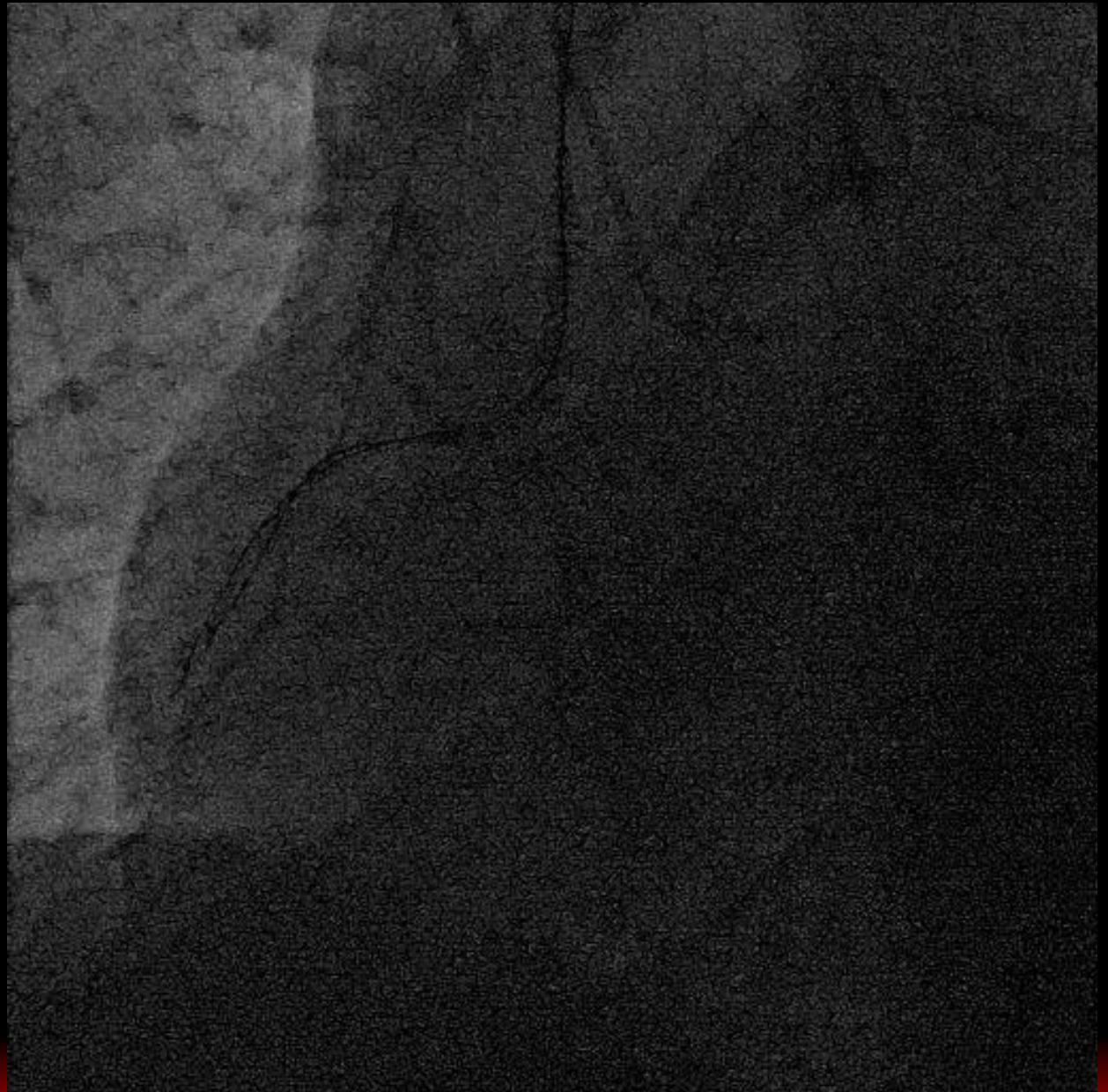


LAO

Right

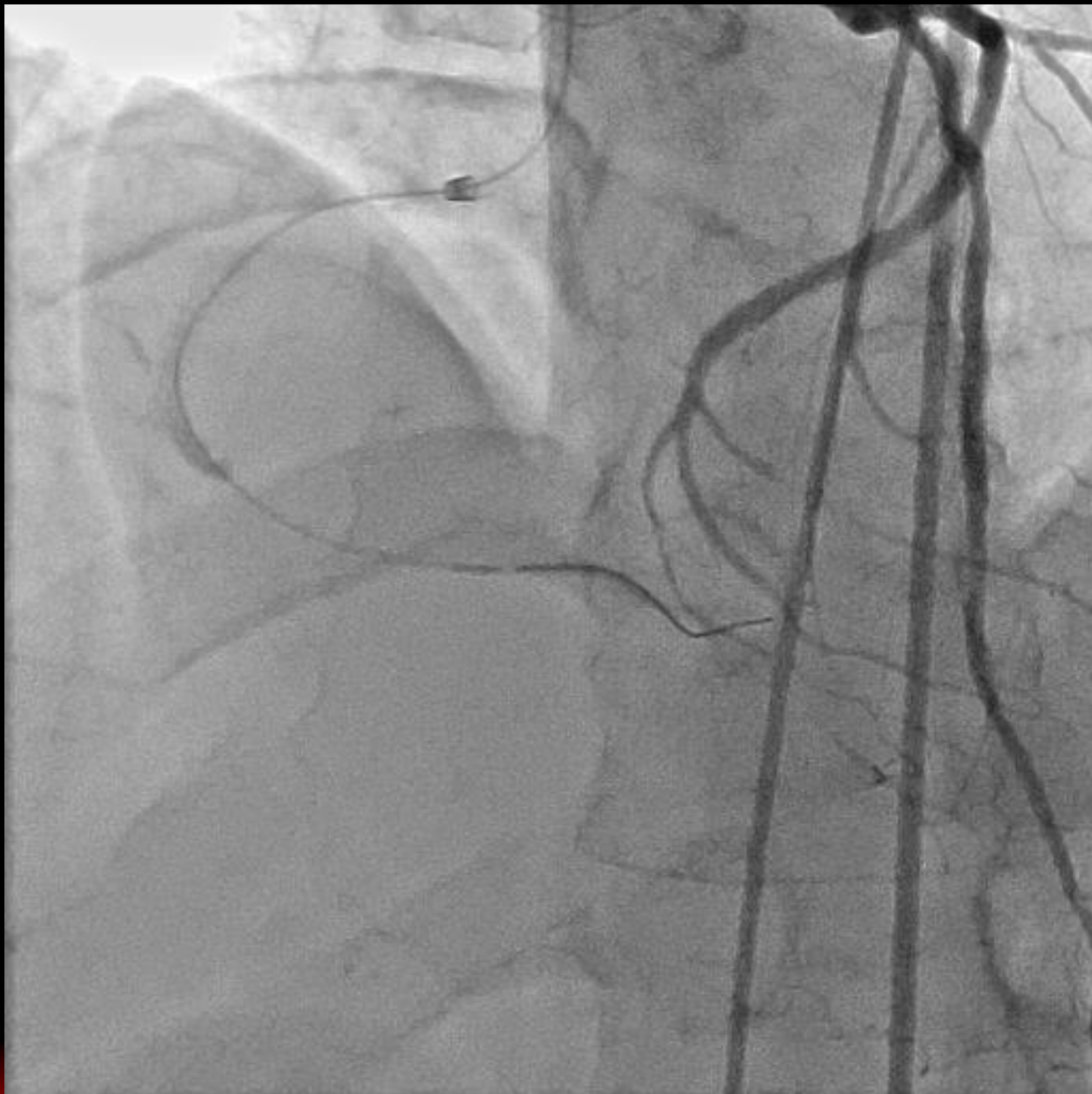


IVUS Guided Wiring





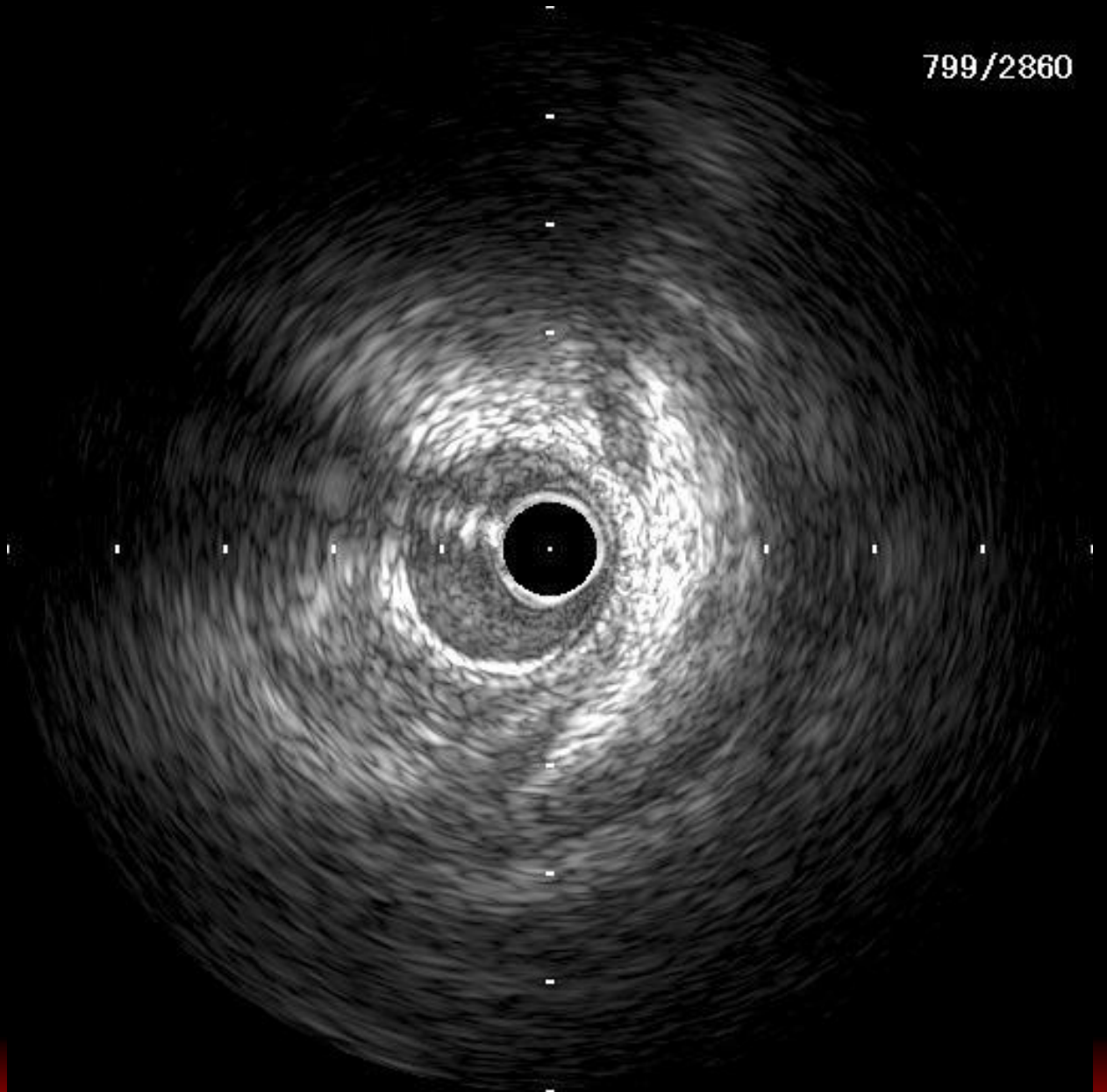
GW Crossing





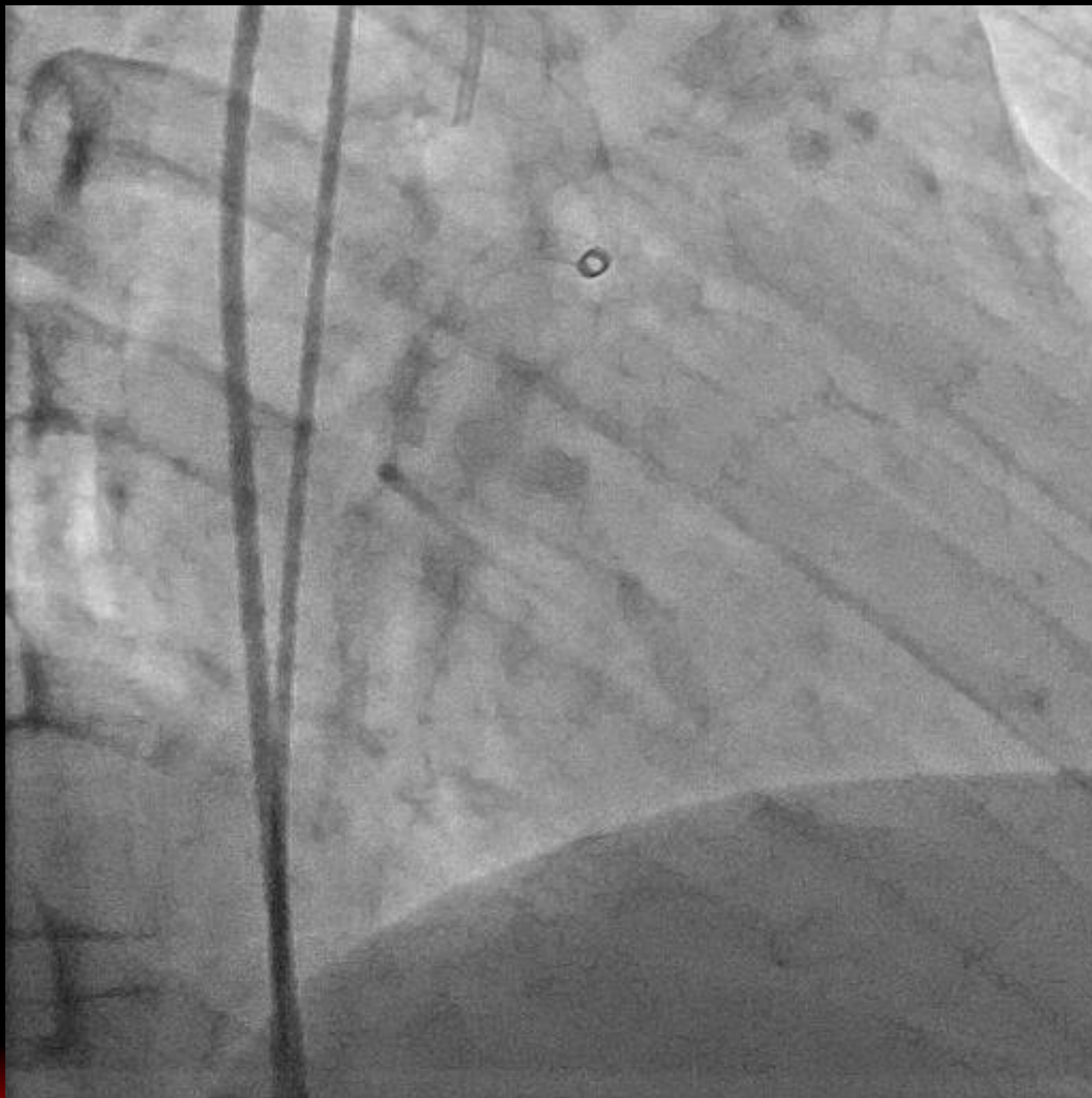
799/2860

IVUS





Final





Summary

- 1. IVUS guided re-wiring is the last resort in CTO PCI.**
- 2. This technique should be done before false lumen is enlarged.**
- 3. The 2nd wire should go through intima from begin to end.**
- 4. Three dimensional recognition is important in this strategy.**



TOPIC 2018

July 12-14, 2018

Thank you for Attention!