

14th

AICT

ASIAN INTERVENTIONAL CARDIOVASCULAR THERAPEUTICS
THE OFFICIAL CONGRESS OF APSIC

Imaging for CTO

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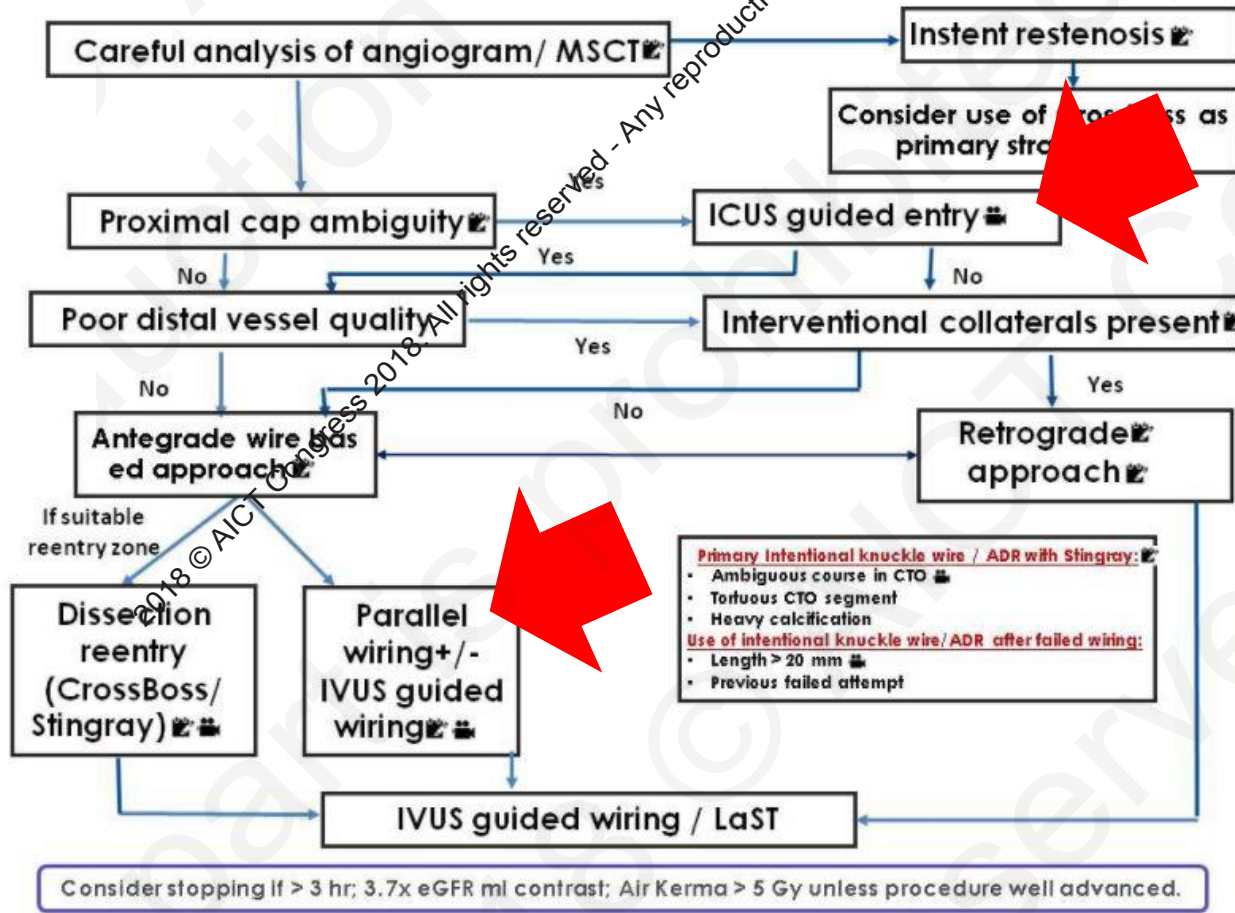


Conflicts of Interest

Speaker's name : Kenichiro Shimoji, MD, PhD

The authors have no financial conflicts of interest to disclose concerning the presentation.

AP CTO Algorithm

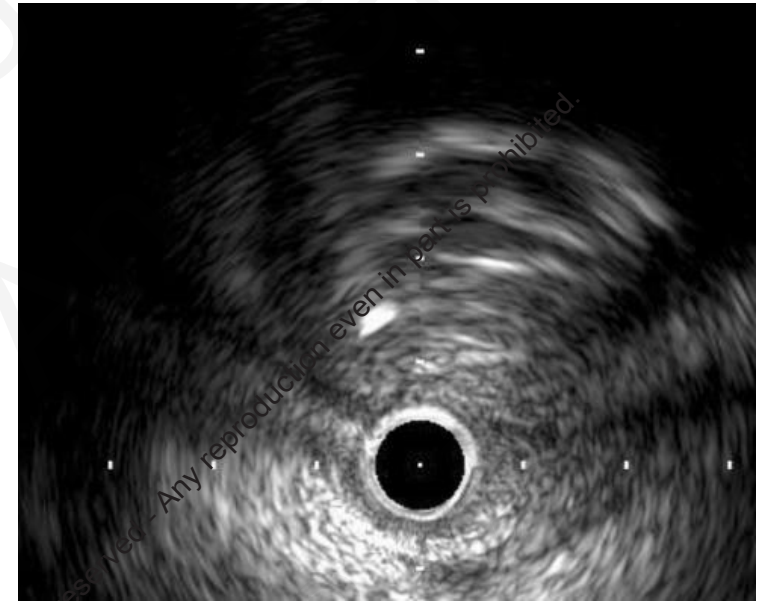


1. IVUS guided penetration

2. IVUS guided rewiring

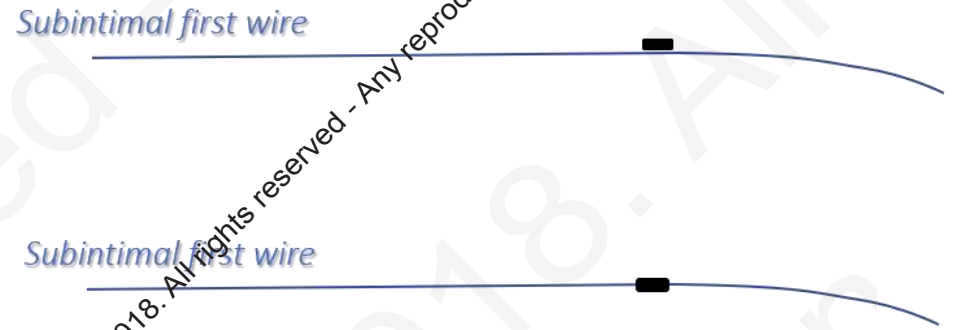
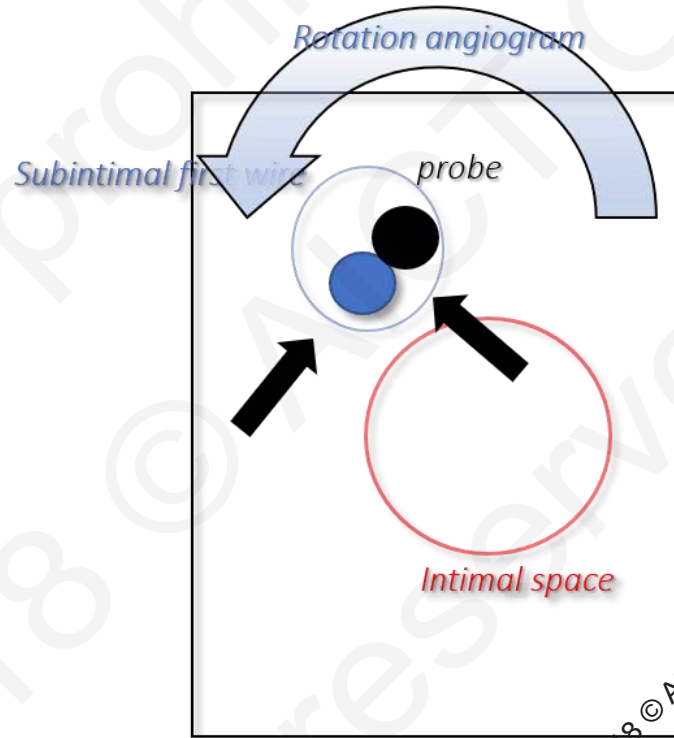
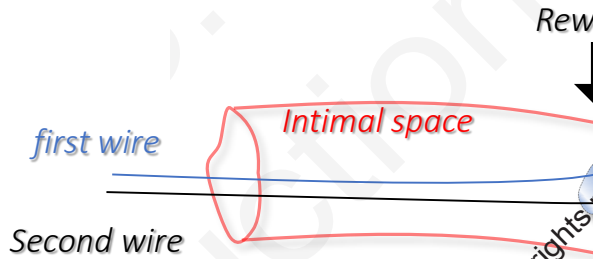
1. IVUS guided penetration

Retrograde approach is the only option for angiographically blunt CTO in Hybrid algorithm.



IVUS guided entry is the first step in APCTO club algorithm.

IVUS guided rewiring; How to link angiogram and IVUS image?



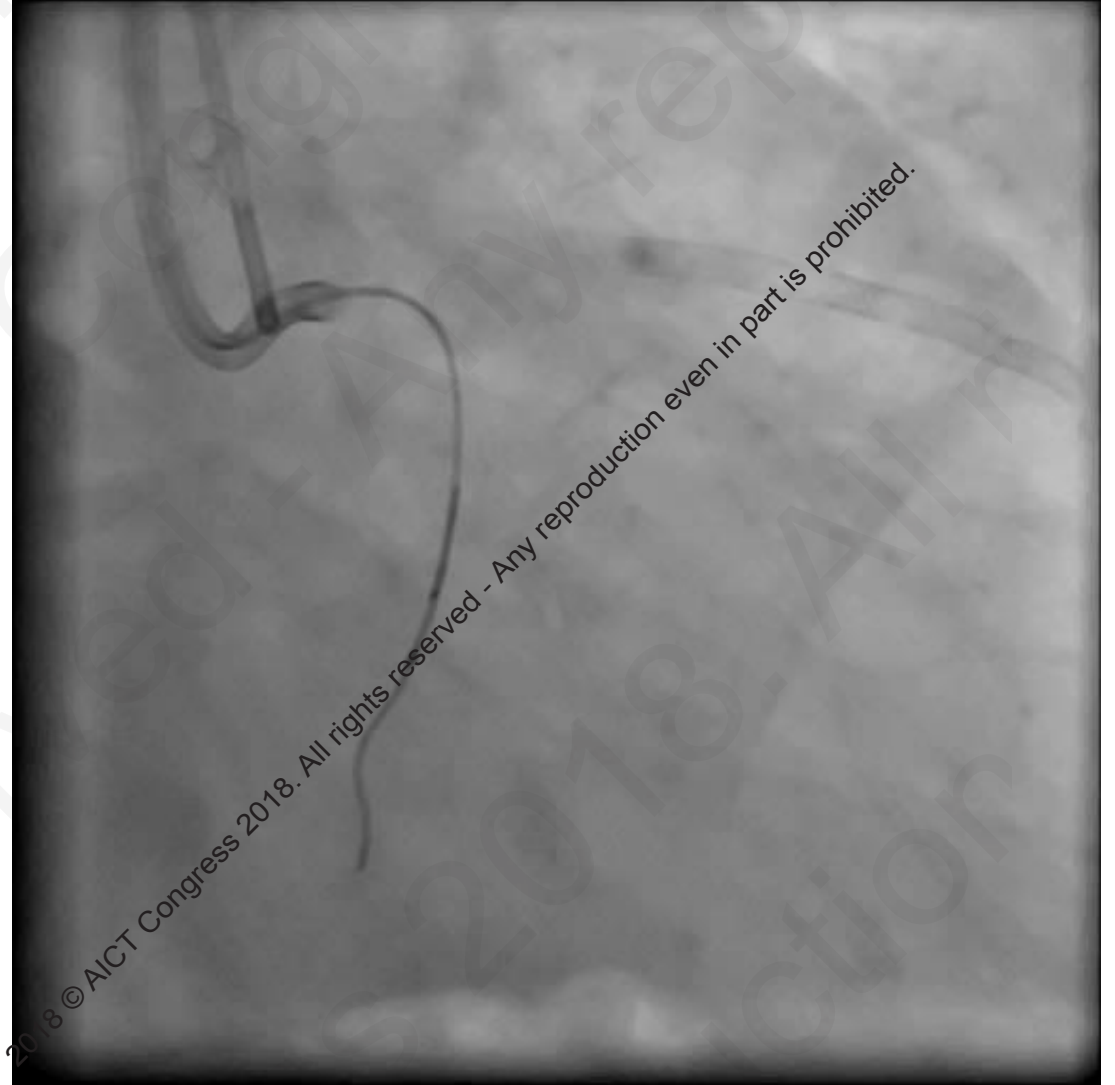
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LCX CTO case

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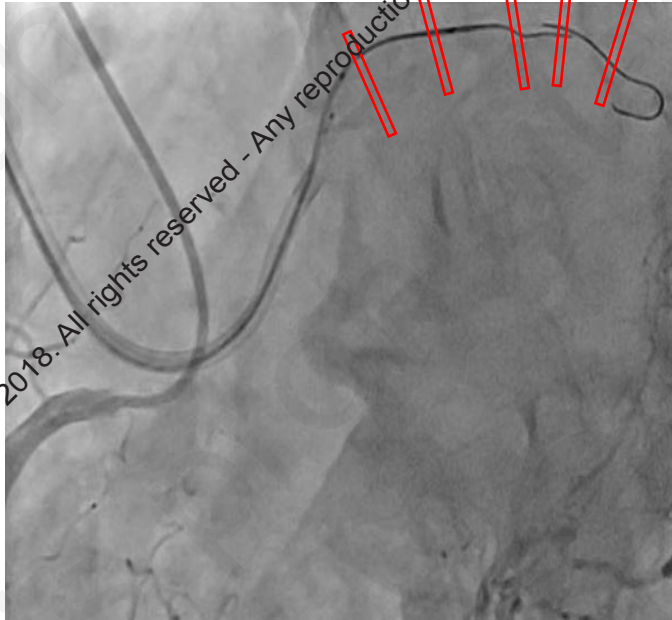
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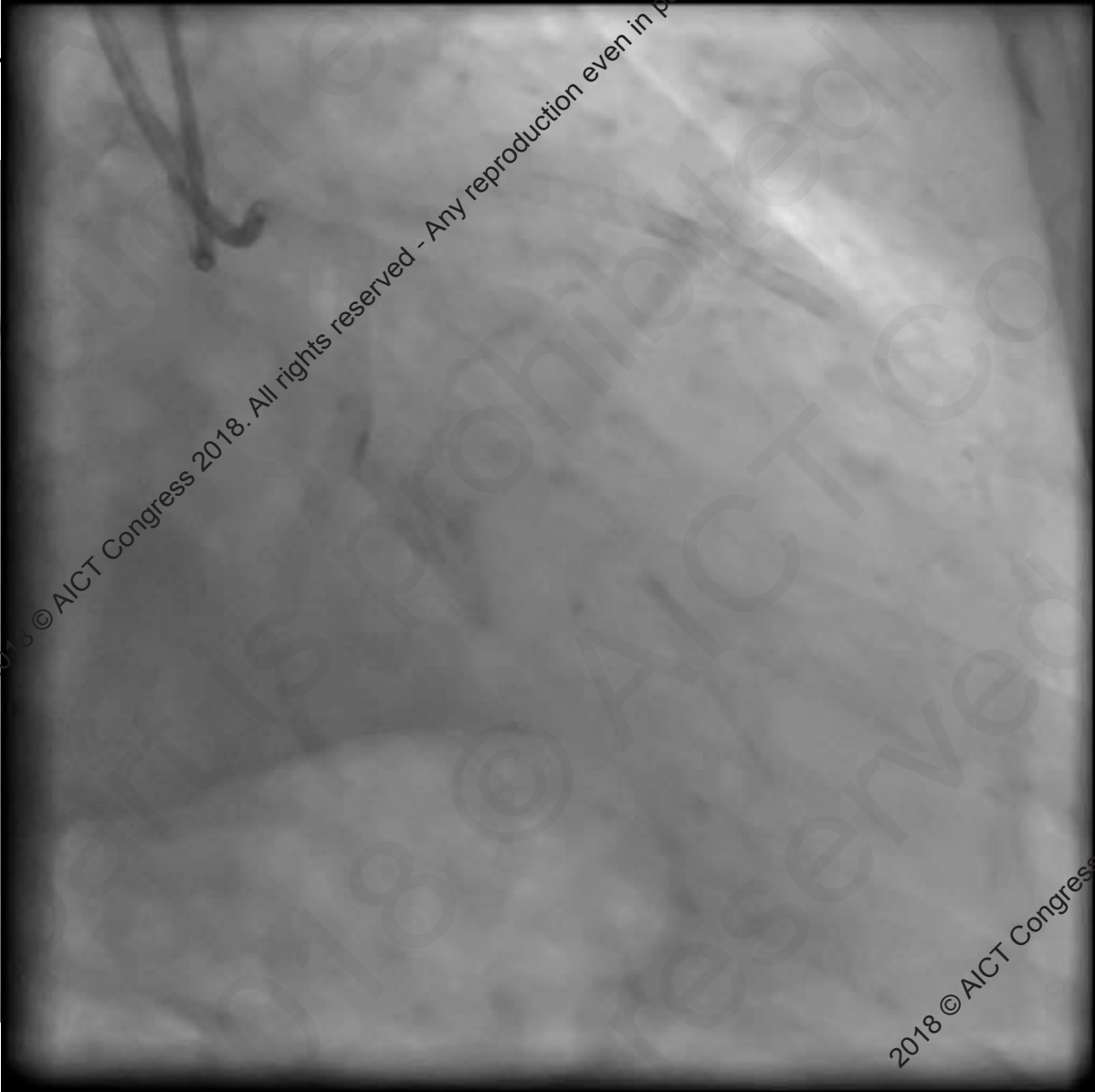
Entry



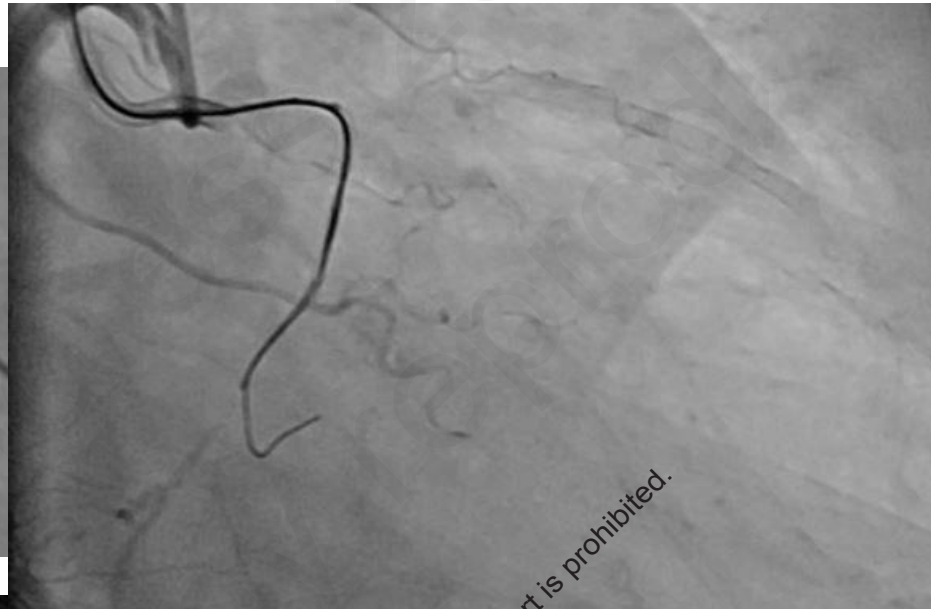
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Dir



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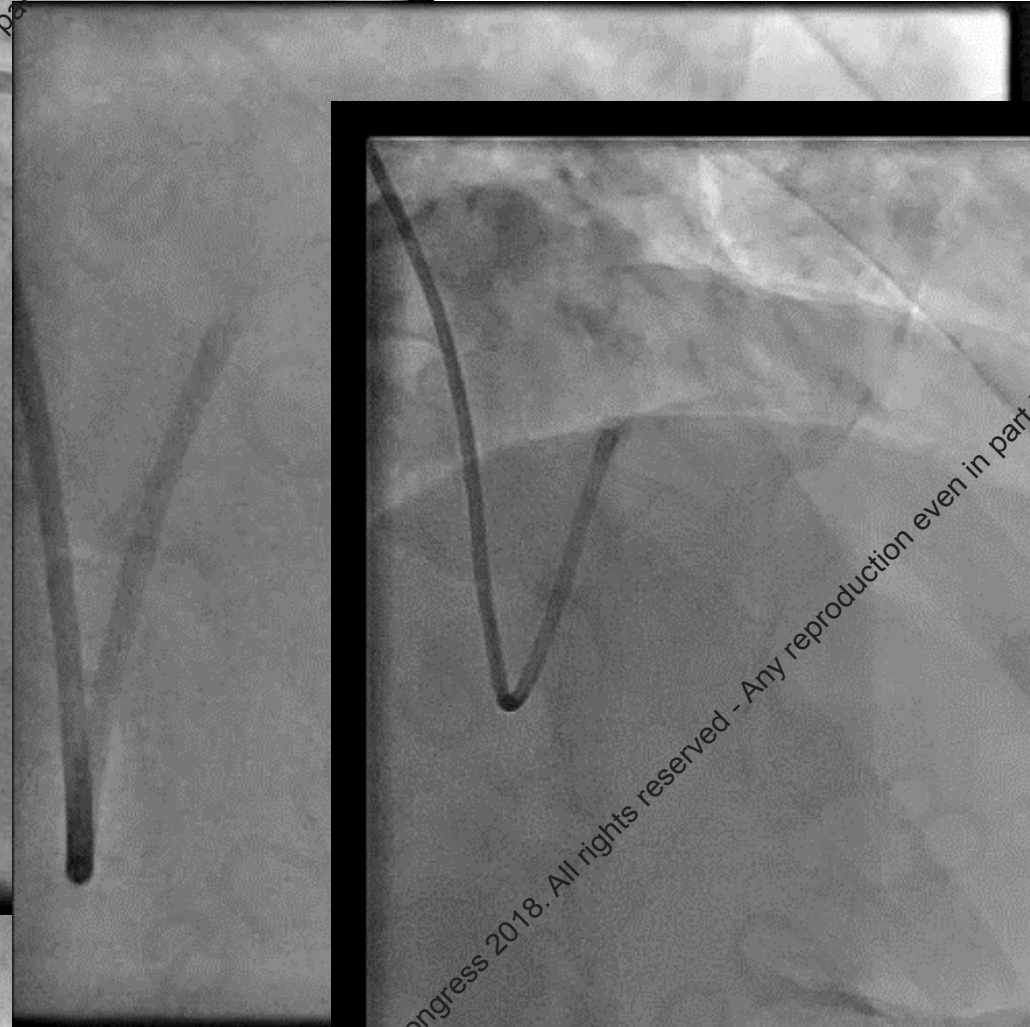
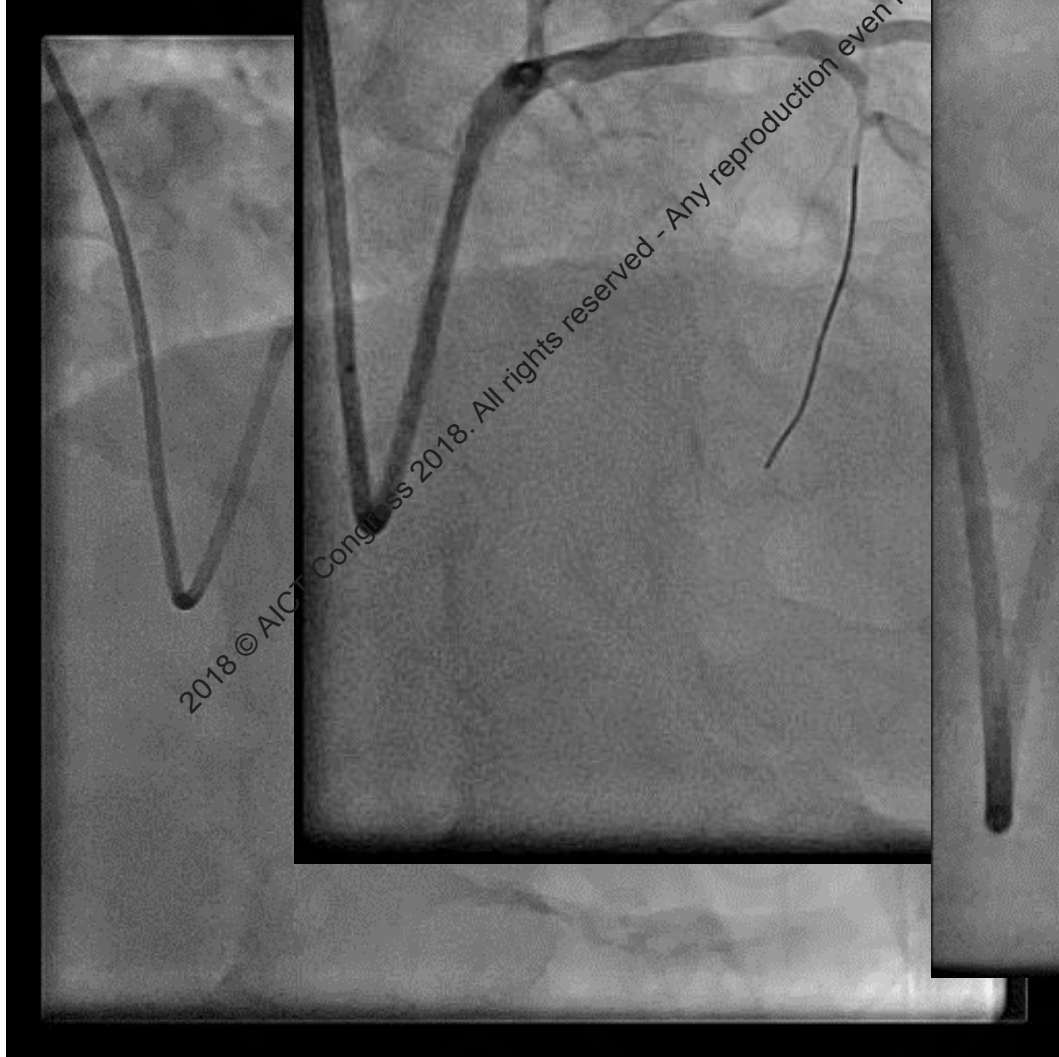
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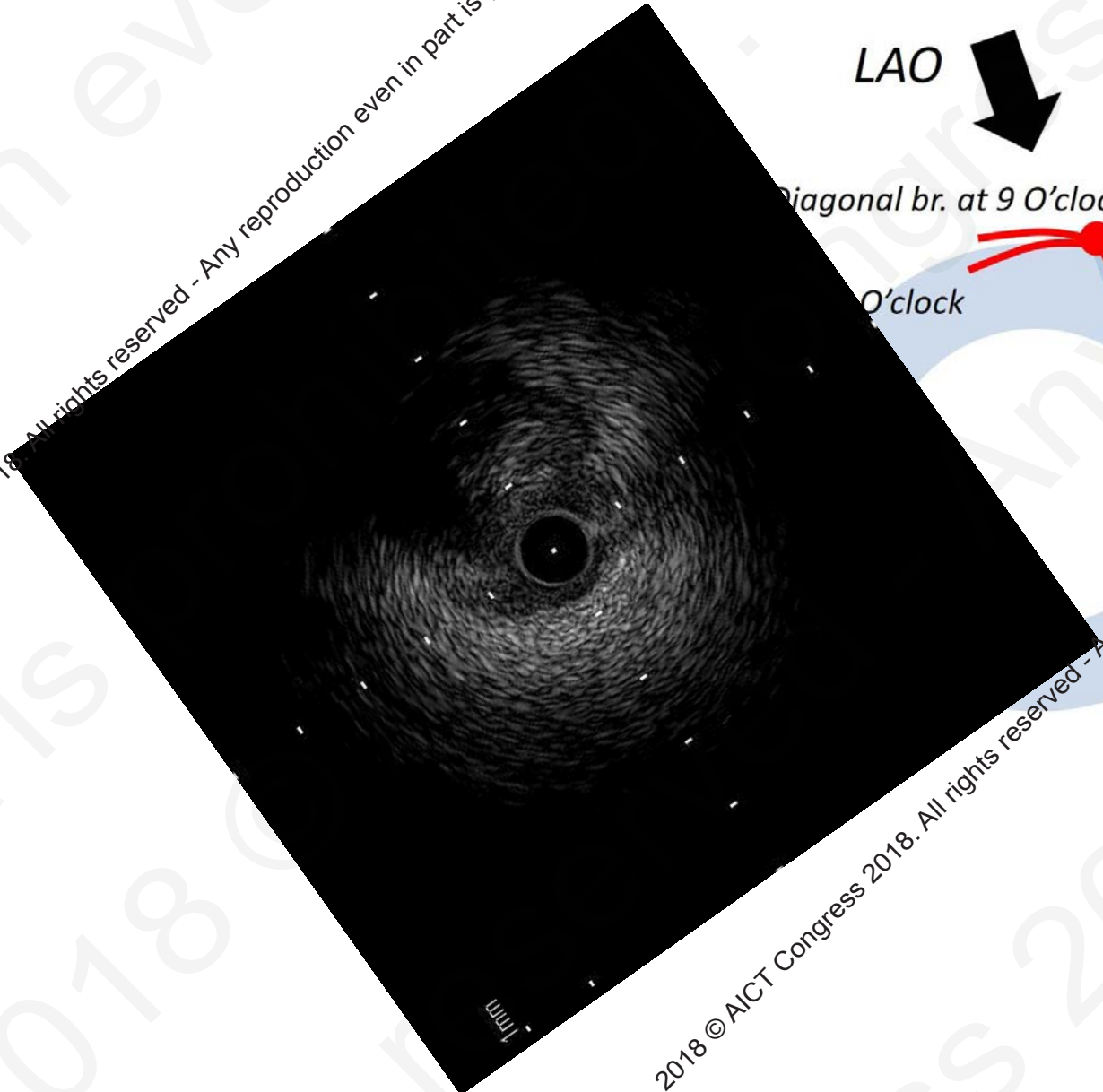
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useful

procedure.



1. Major branch guided.



LAO

RAO

Diagonal br. at 9 O'clock

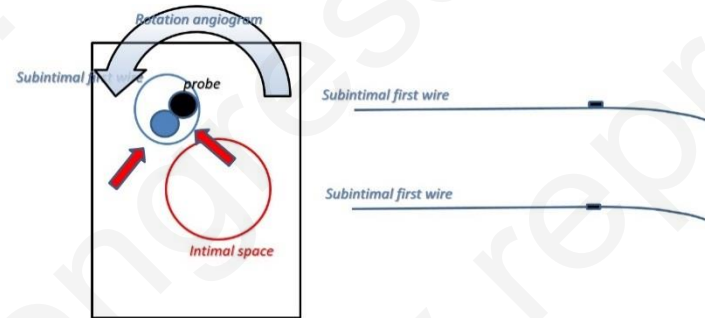
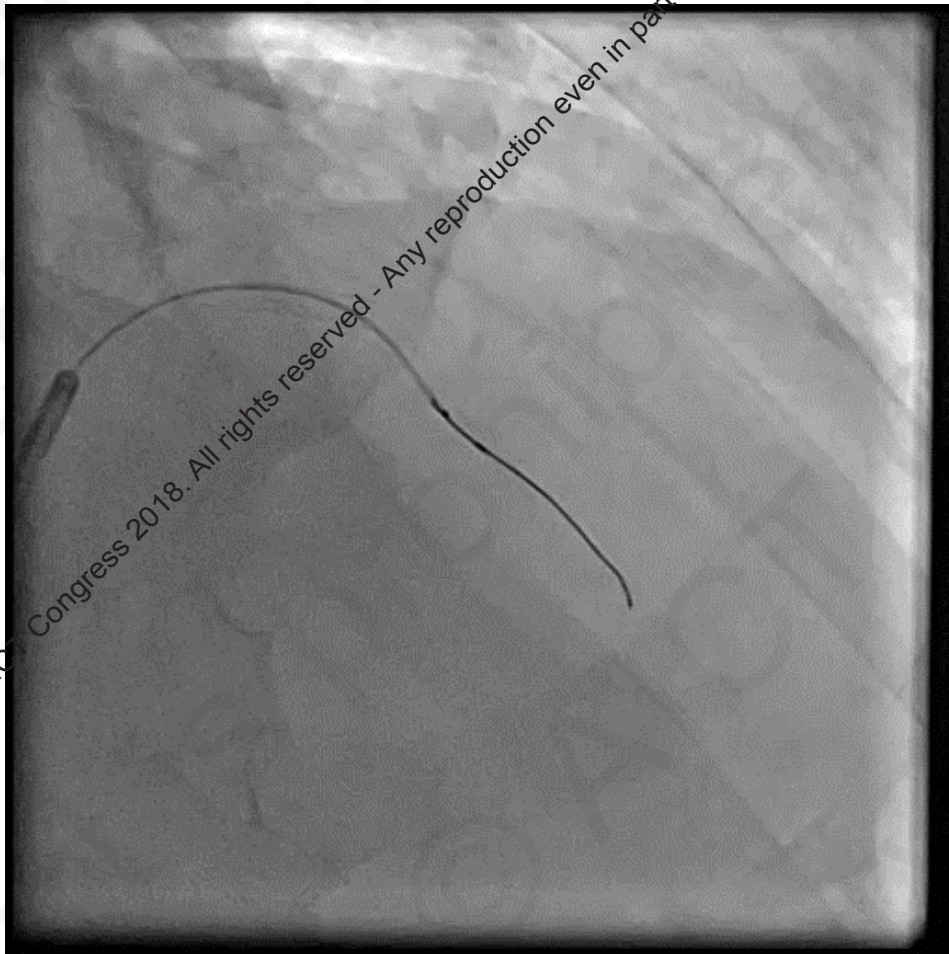
12 O'clock

Septal br. at 5 O'clock

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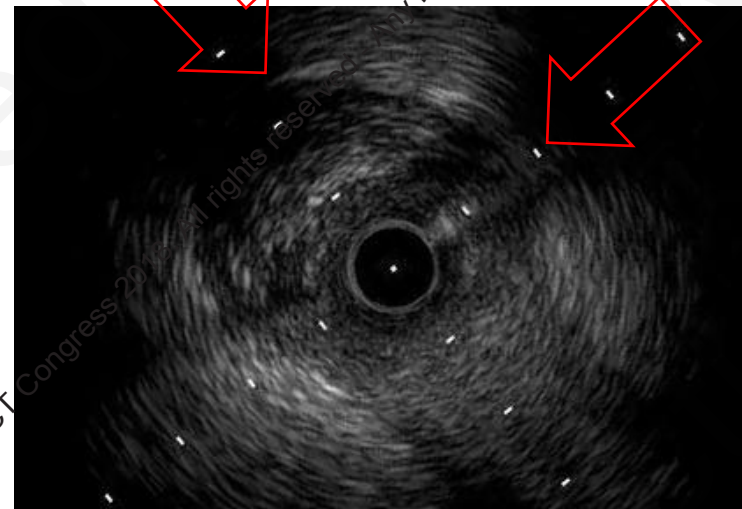
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2. Probe-wire position guided.



LAO

RAO



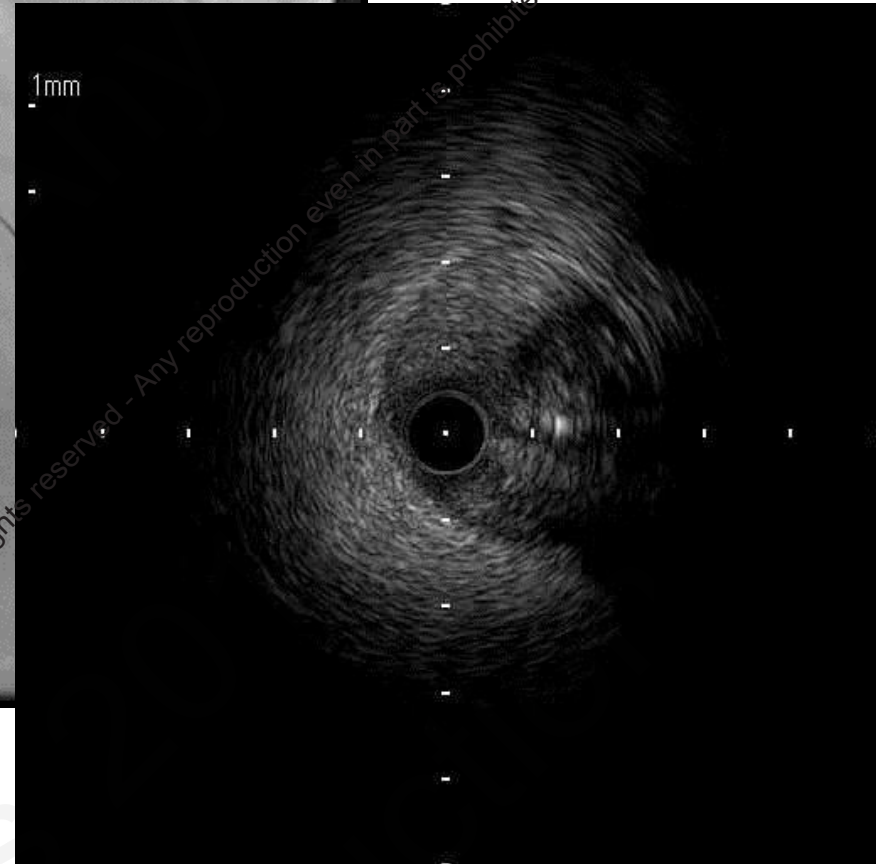
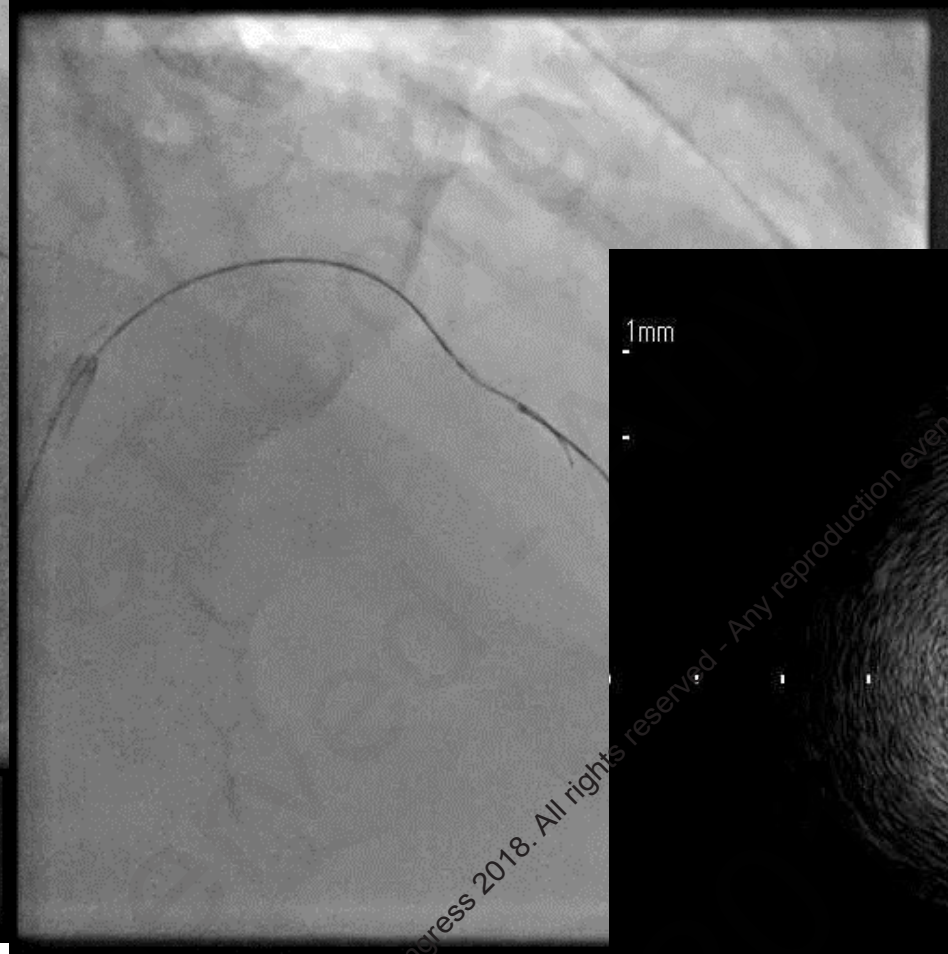
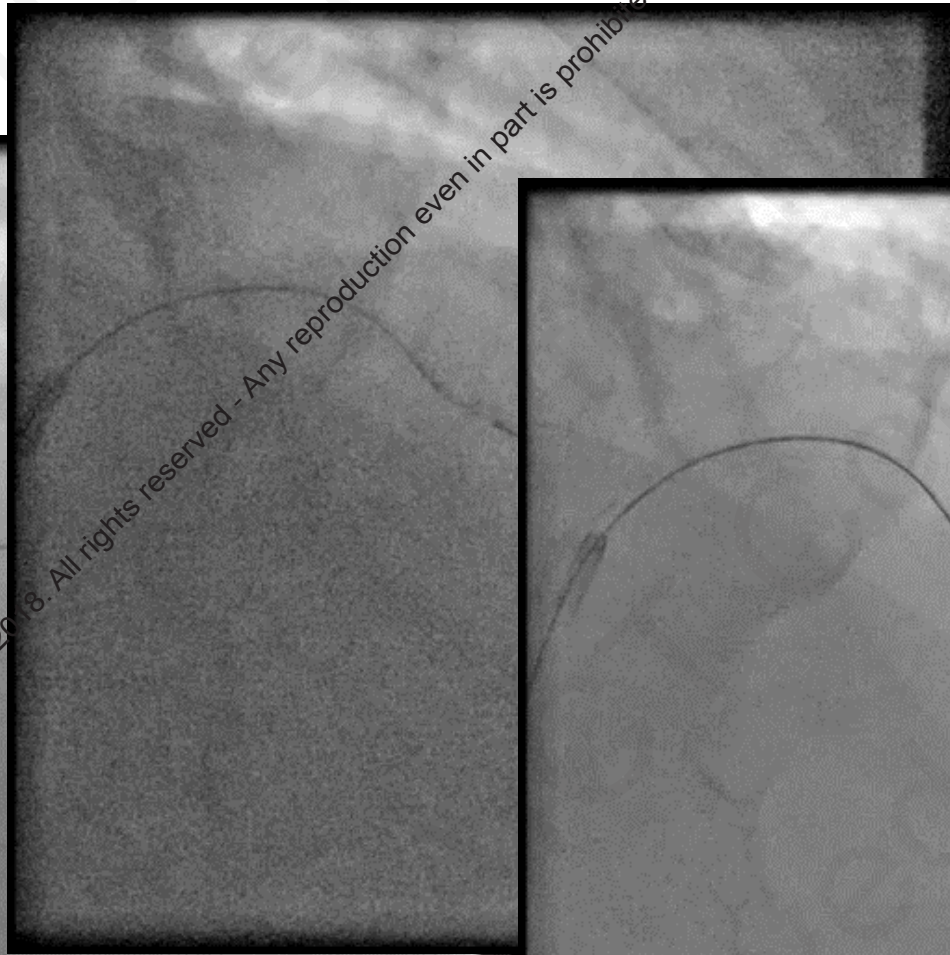
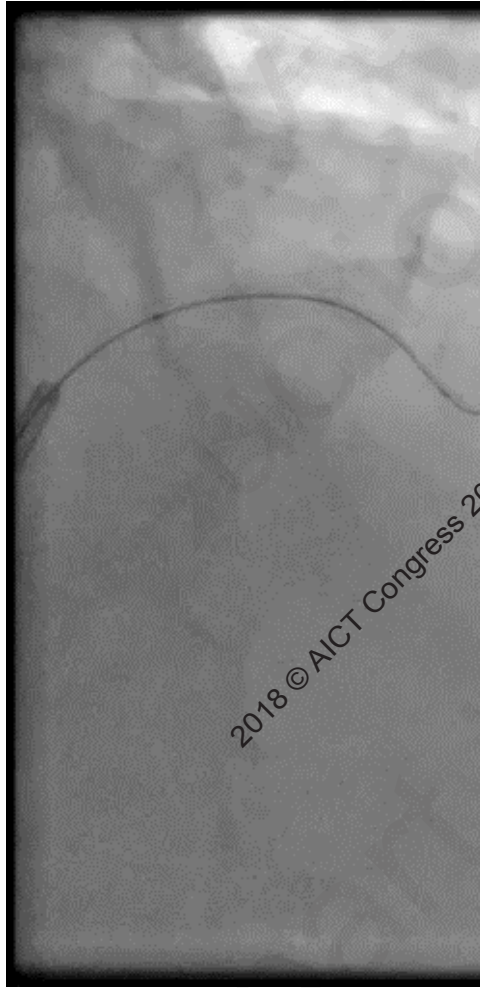
Probe and wire are in the same line in RAO and is separatedly located from the wire in LAO .

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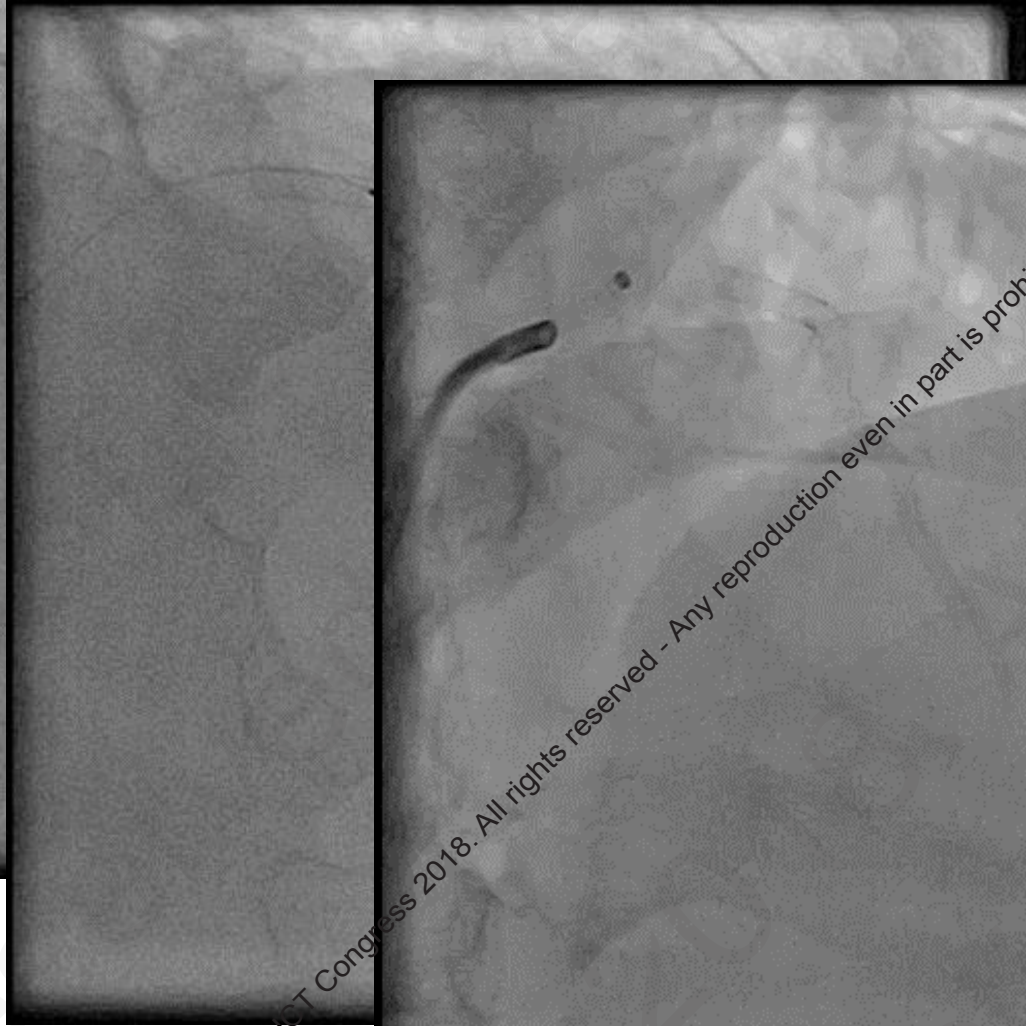
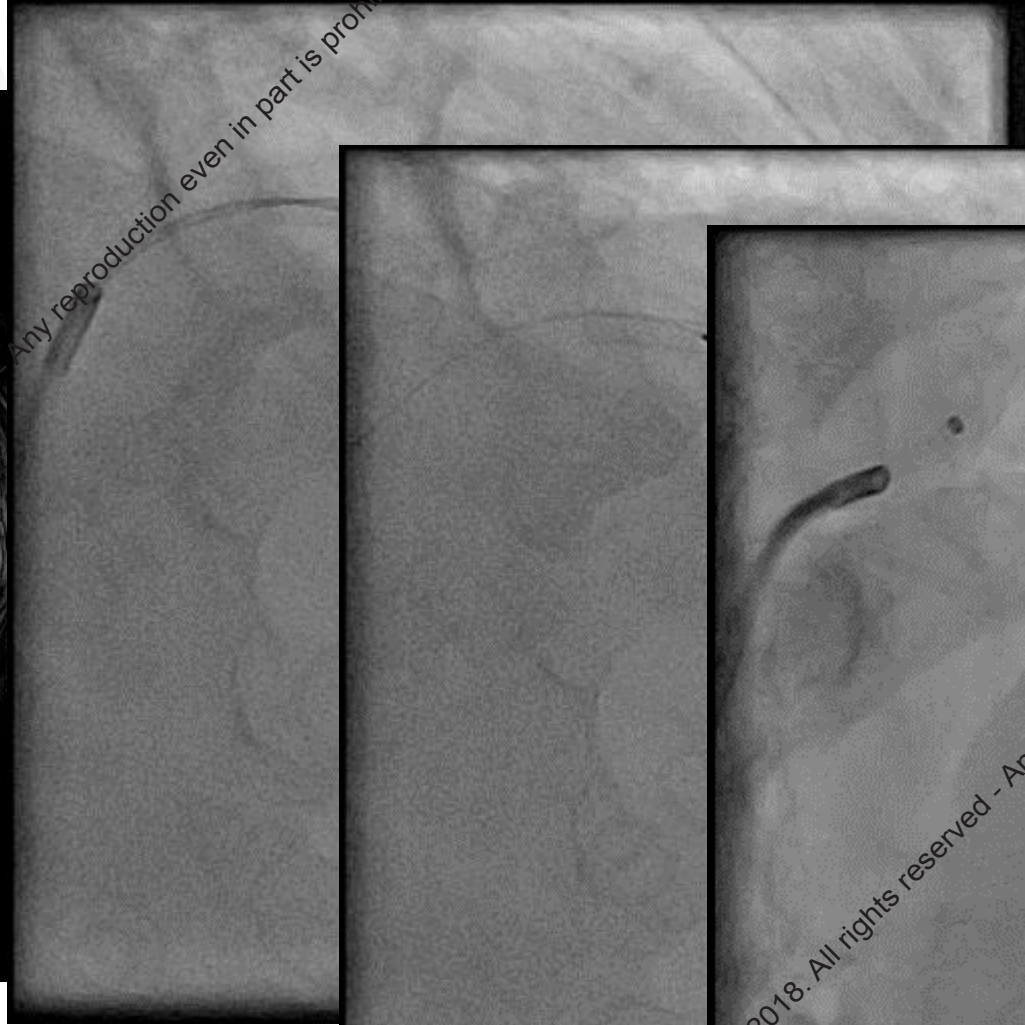
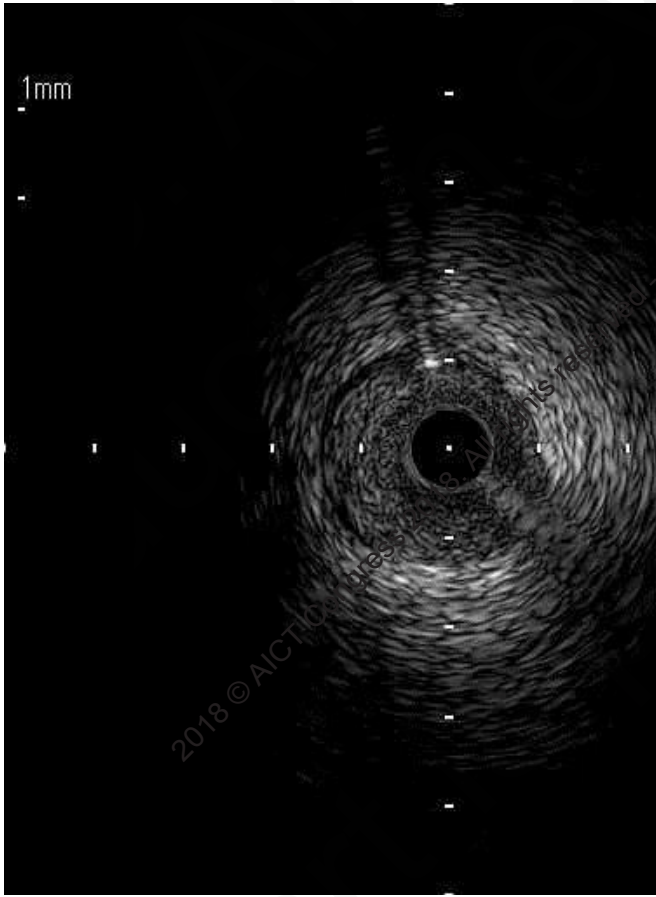
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LAO

RAO



IVUS from subintimal wire



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IVUS in CTO lesions

Antegrade approach

1. Check the entry of CTO located at bifurcation
Guidewire manipulation to the right direction
2. Guidewire position: Subintimal space or intra-plaque?
3. IVUS-guided wiring

Retrograde approach

1. Position of the retrograde wire and IVUS
2. Appropriate balloon size for r-CART
3. Stent landing zones without contrast

Through the procedure

1. Extravasascular damage (hematoma, perforation)
2. Verify guidewire passage

Courtesy of Dr. Junko Honye

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Peri-medial high-echoic band

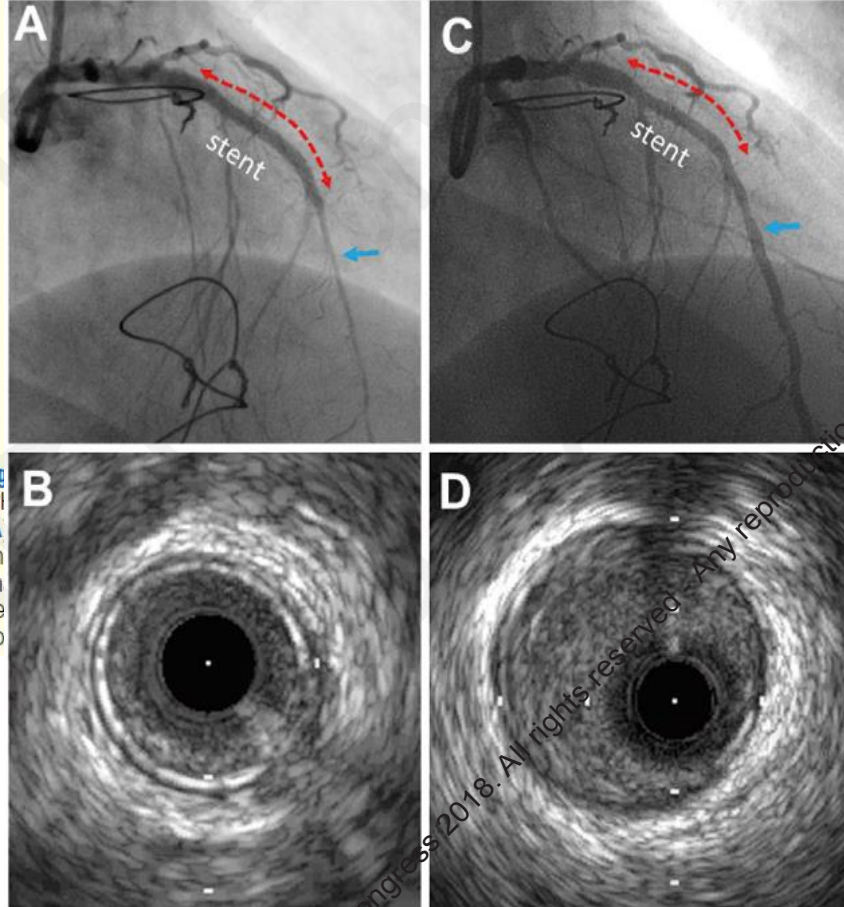
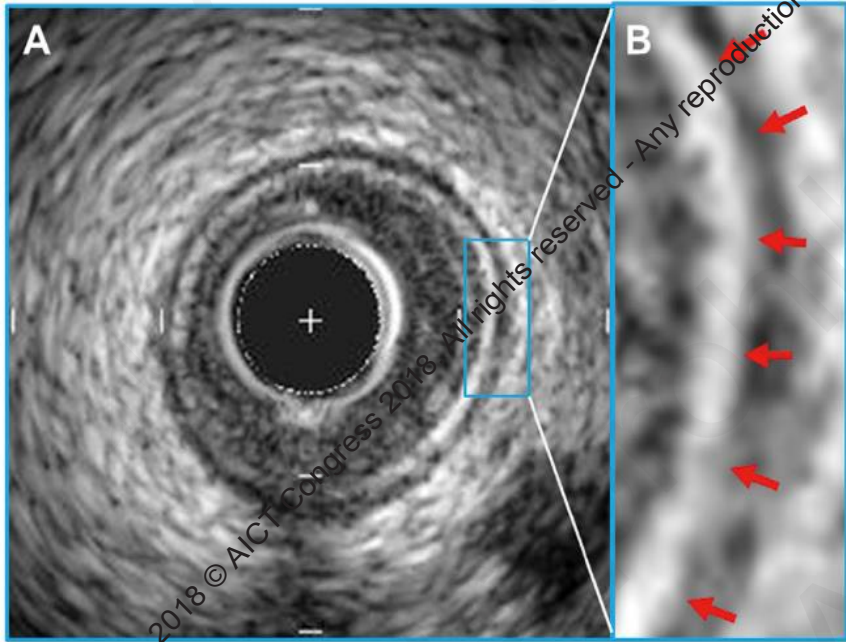


Figure 3. Representative case of peri-medial high-echoic band (PHB). (A) Angiography after PCI shows diffuse luminal narrowing (arrow) distal to the target lesion. (B) IVUS image after PCI to the target lesion shows PHB with minimal amount of plaque burden. (C) Angiography at 9-month follow-up shows remarkable lumen enlargement without additional intervention. (D) IVUS image at 9-month shows increased vessel size. PHB was not observed, suggesting resolution of vessel shrinkage. IVUS, intravascular ultrasound; PCI, percutaneous coronary intervention.



Take home message

1. Combine both CAG and IVUS images into 3D in your brain.
2. Comprehensive understanding of both images is required to achieve successful results of CTO-PCI.
3. Think and predict.
4. Think and understand the reason why to proceed to the next step.
5. Think logically, then you will be a winner!

Courtesy of Dr. Junko Honye

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