

3<sup>rd</sup> **IMAGING & PHYSIOLOGY Summit 2009**

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# - A misfortune turns into a blessing -

## Evaluation of Dissection for True Lumen and False Lumen in Chronic Total Occlusion

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Heart Center



# *IVUS Guided CTO intervention*

## ***Overview***

IVUS guided wiring is a feasible and effective method

Not standard technique for CTO lesions

Final method to a misfortune turns into a blessing of CTO

PCI, when other methods failed

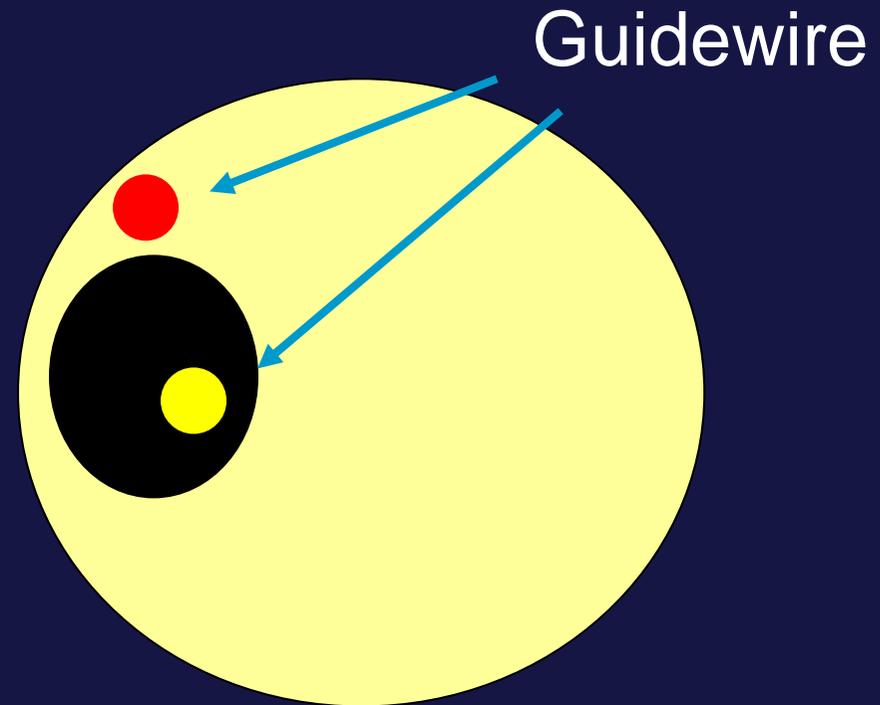
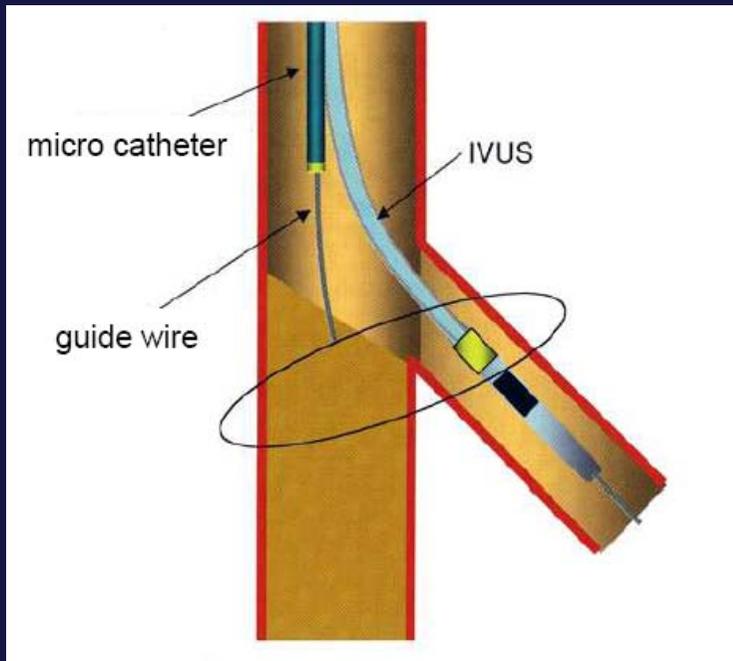
## ***Role in CTO intervention***

Identification of the guidewire entry

Navigate the guidewire from false lumen to true lumen

Assess complication

Adjust stent expansion



Courtesy Dr.

### ***IVUS guiding during CTO PCI***

Looking for echo free space: lumen

Identification of intima and media

Wire position

## ***Practical Tips for CTO PCI***

Keep the wire inside “the External Elastic Membrane” and to bring it to the true lumen distally

Pre-dilatation with a small balloon is essential to put an IVUS catheter into the sub-intimal space

Especially recommended before the enlargement of the subintimal space

Volcano catheter with short tip preferable (10 mm)

Atlantis Pro 2 catheter - small vessel and side branch

## ***Disadvantages***

Long dissections

Dilatation of false lumen

Coronary perforation possible

**Male/69, Stable angina**

**Chief complaint:** effort chest pain

**P/I**

69 yr old male pt was transferred from private clinic due to effort related chest pain. OPD coronary angiography and PCI were performed

**Risk Factors:**

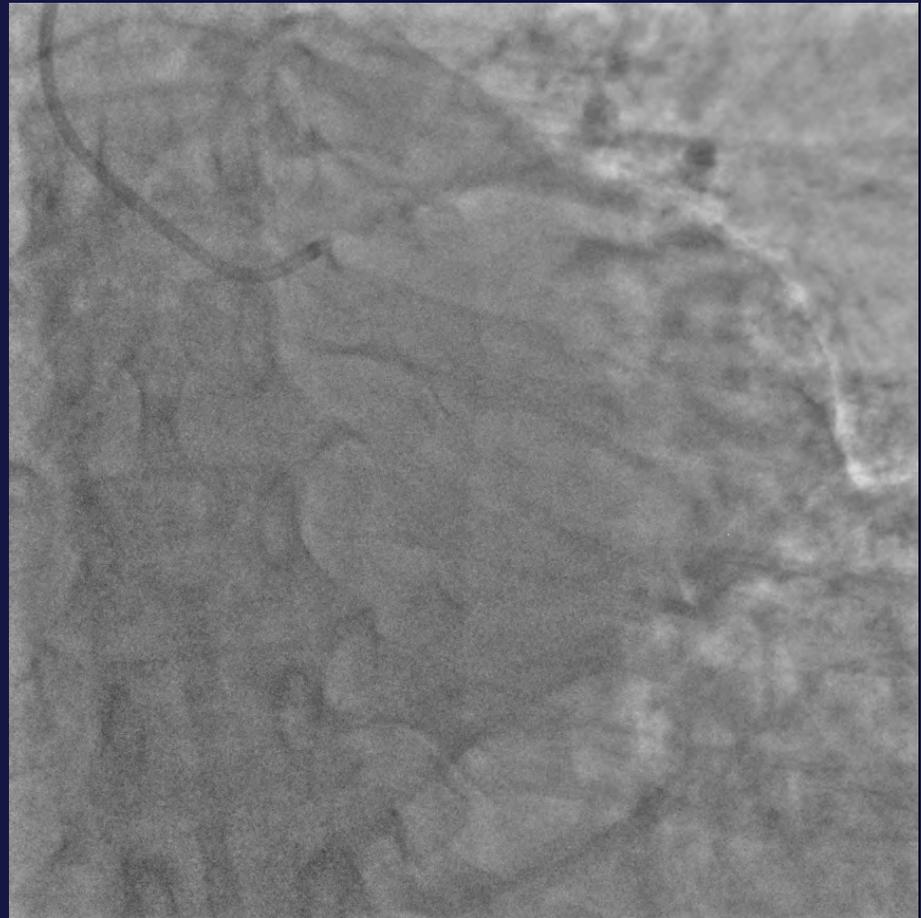
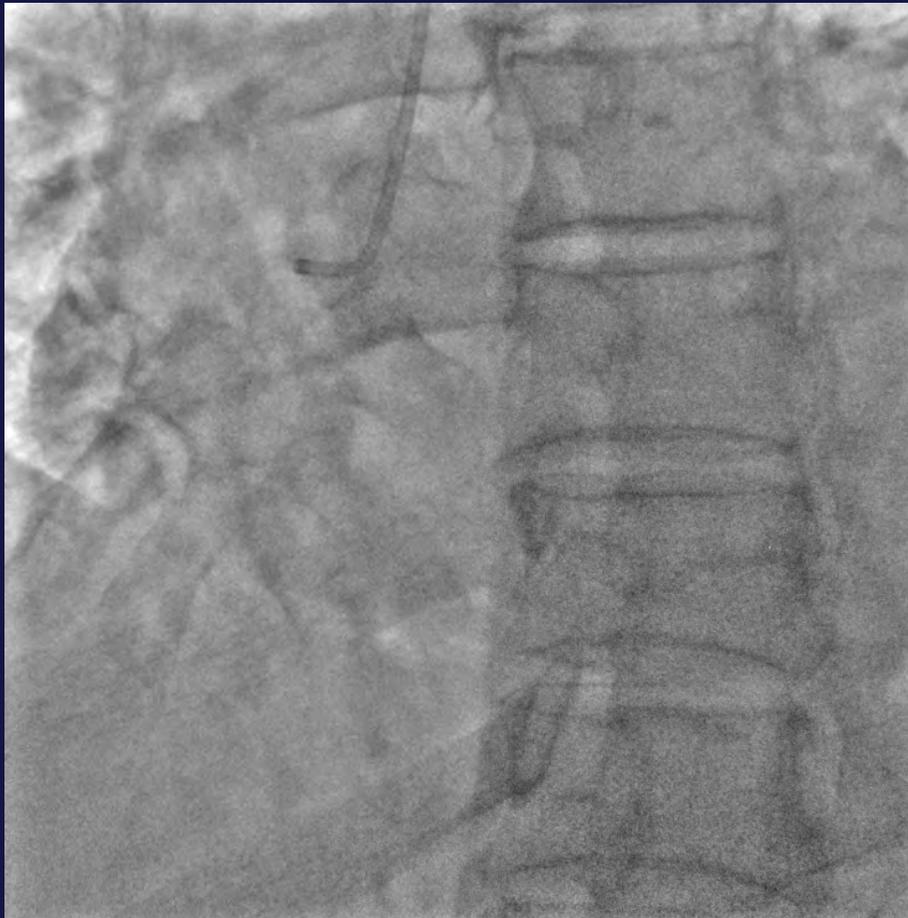
Hypertension (+)

Ex-smoker 30 pack year

**ECG:** non-specific ST-T changes

**Echo:** Normal, EF= 59 %

# Initial CAG





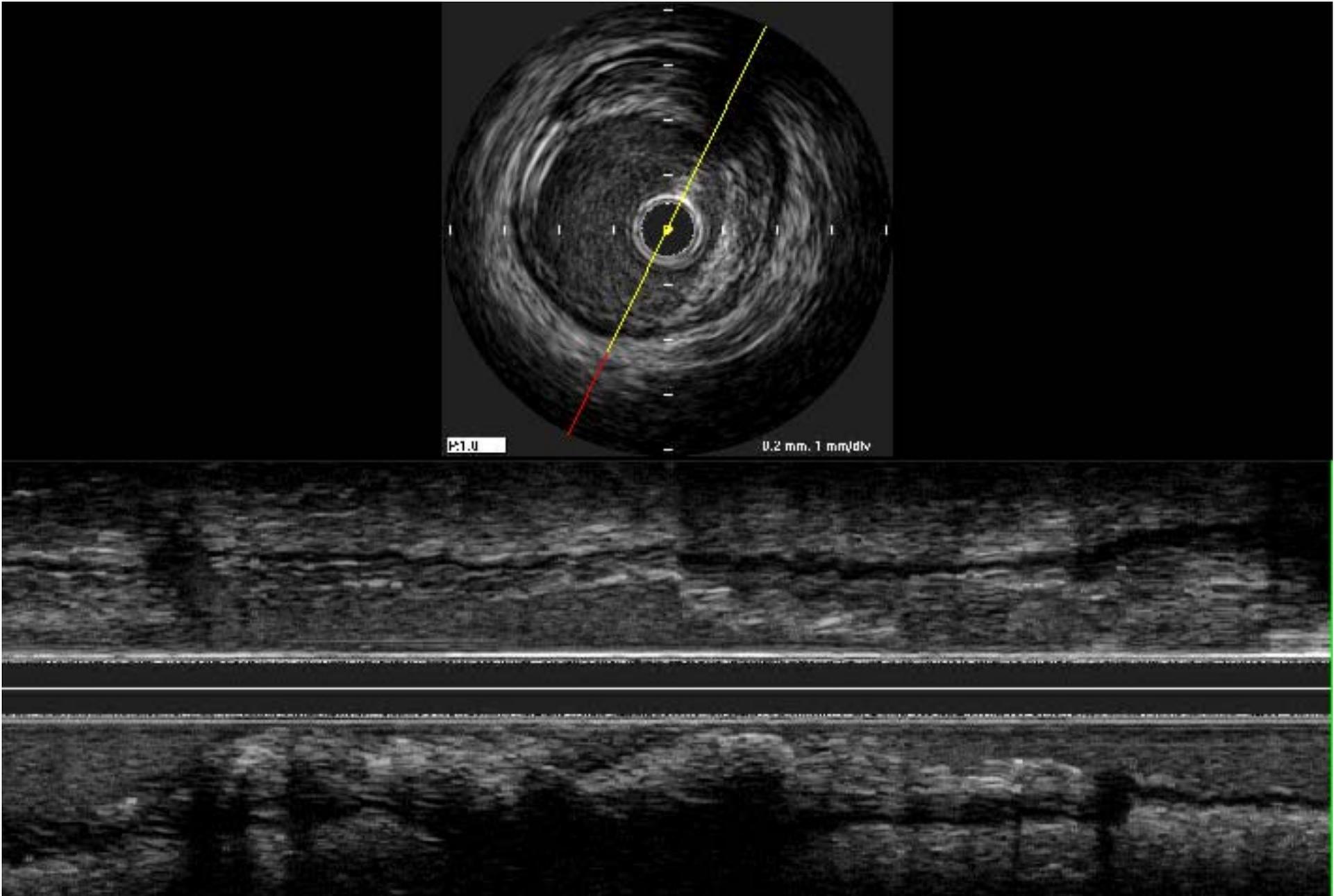
6F JRG 4.0 guiding catheter

Fielder guidewire

Miracle 3 guidewire with Progreat microcatheter support

Conquest Pro guidewire with Progreat microcatheter support

Lacros balloon 1.3x10 mm



True lumen vs False lumen

**Male/39, Stable angina**

**Chief complaint:** effort chest pain

**P/I**

39 yr old male pt was transferred from private clinic due to effort related chest pain. OPD coronary angiography and PCI were performed

**Risk Factors:**

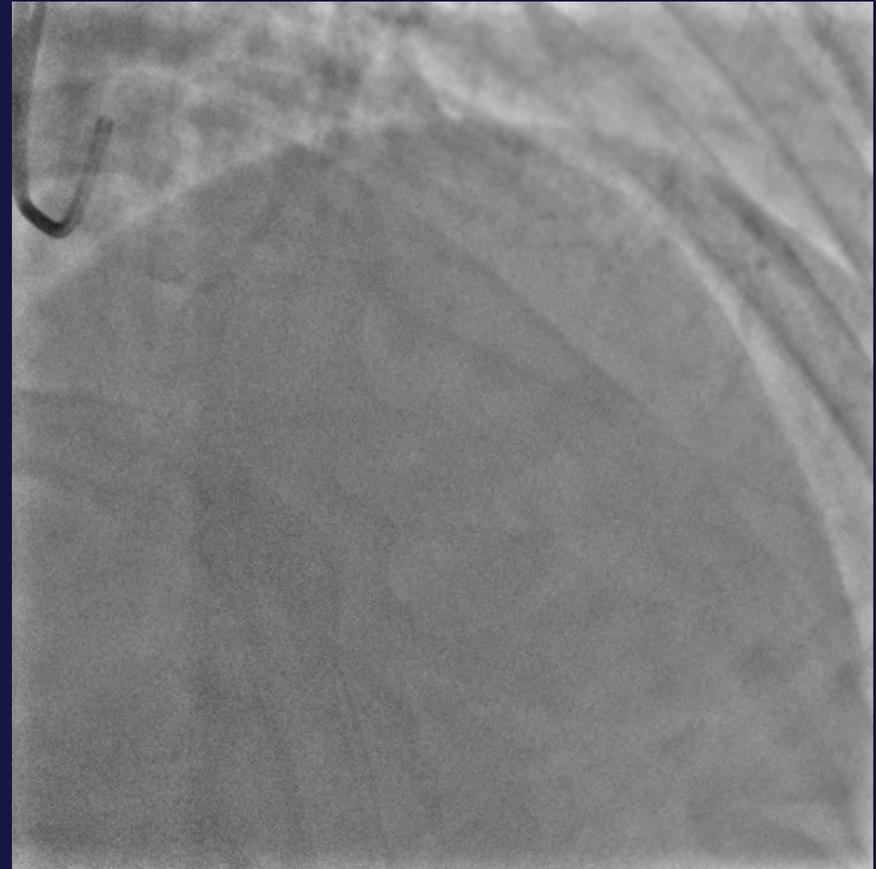
Smoking(+) 20 pack year

**ECG:** WNL

**Echo:** Normal, EF= 61 %

**Treadmil test:** positive study, stage 3

# Initial CAG



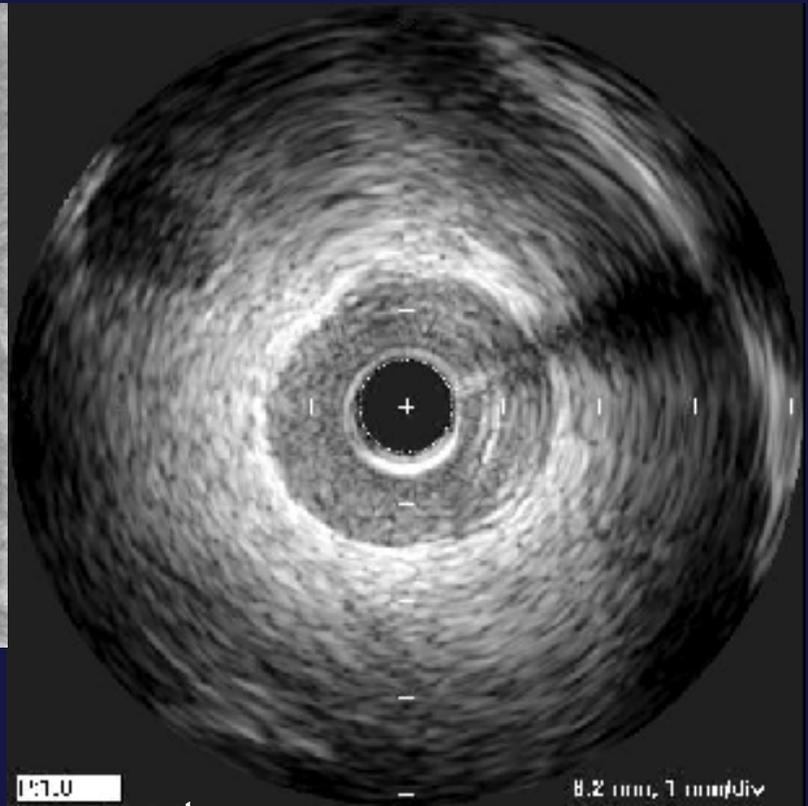
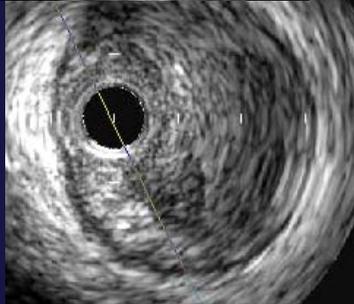
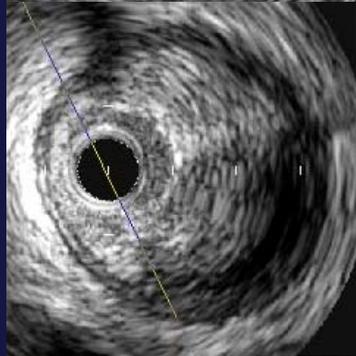
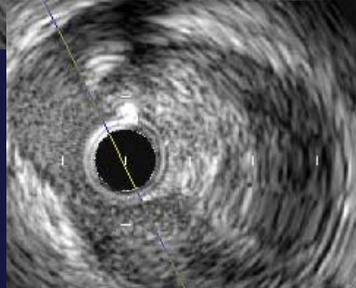
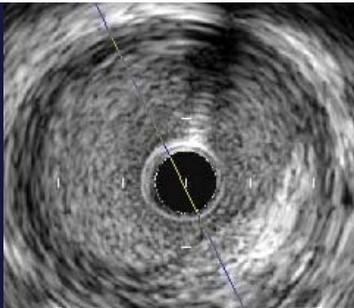


6F XB 3.5 guiding catheter

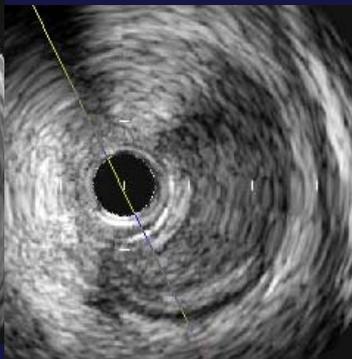
Fielder guidewire

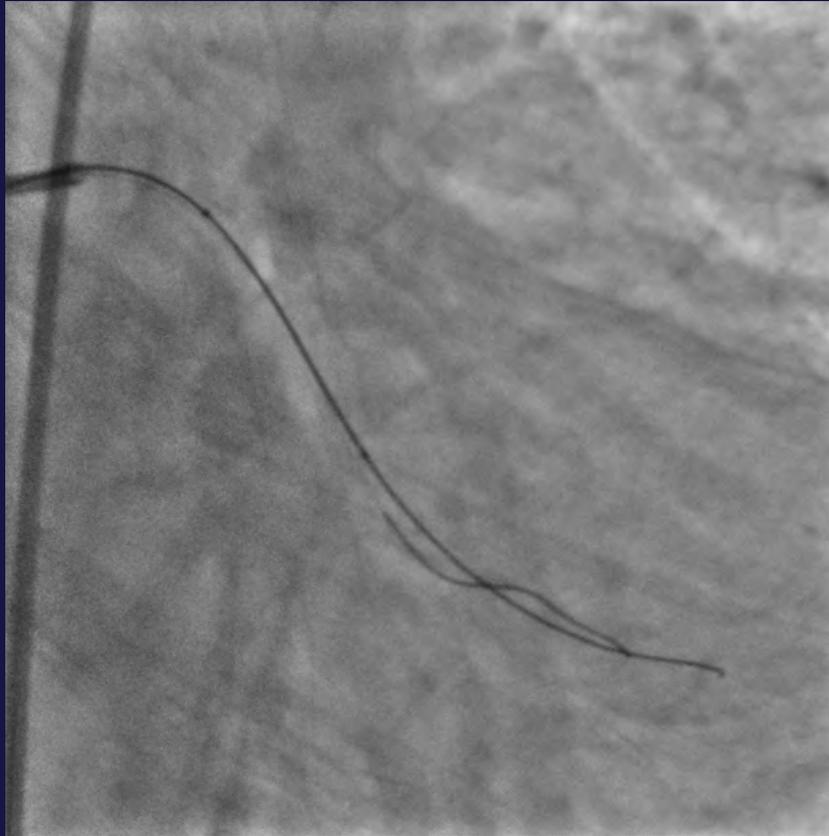
Miracle 3 guidewire with Excelsior microcatheter support

Conquest Pro guidewire with Excelsior microcatheter support

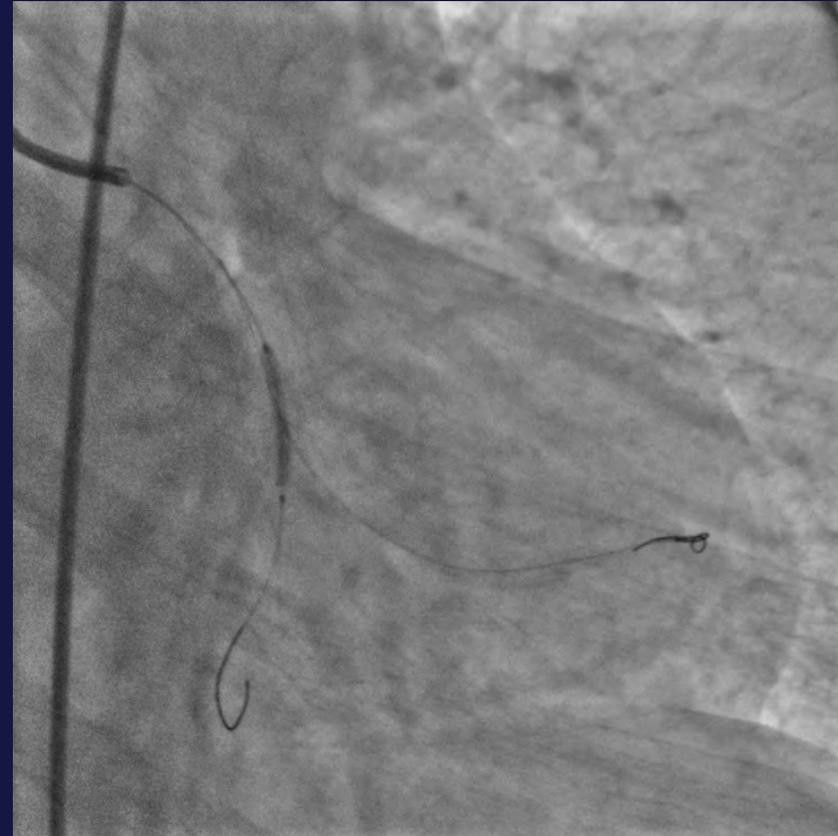


Miracle 3 guidewire  
with Excelsior microcatheter support

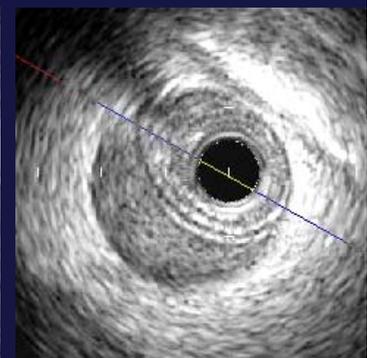
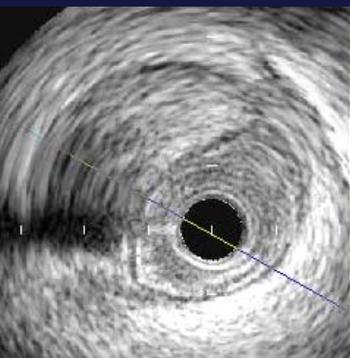
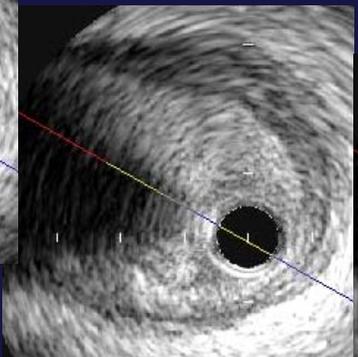
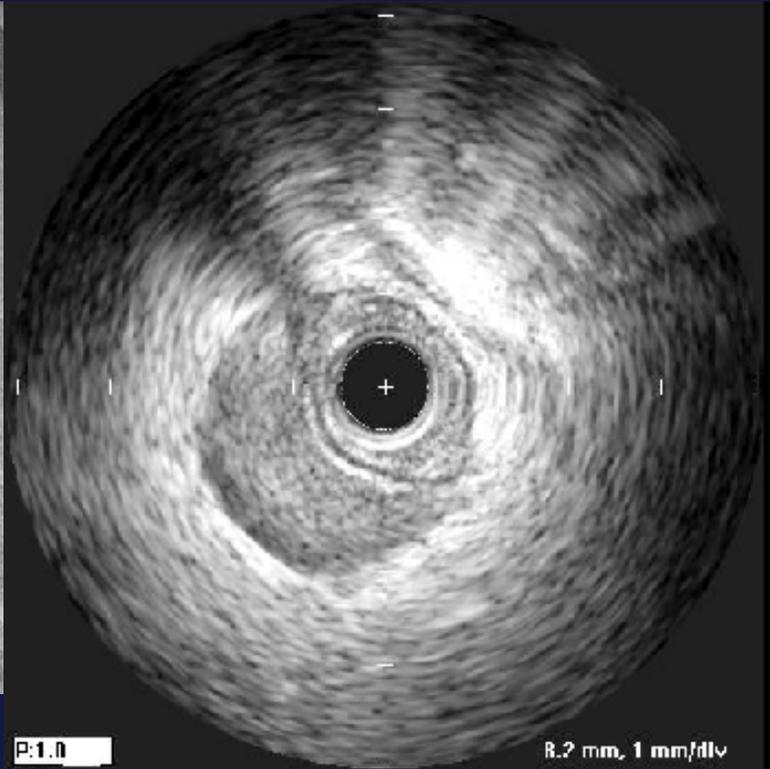
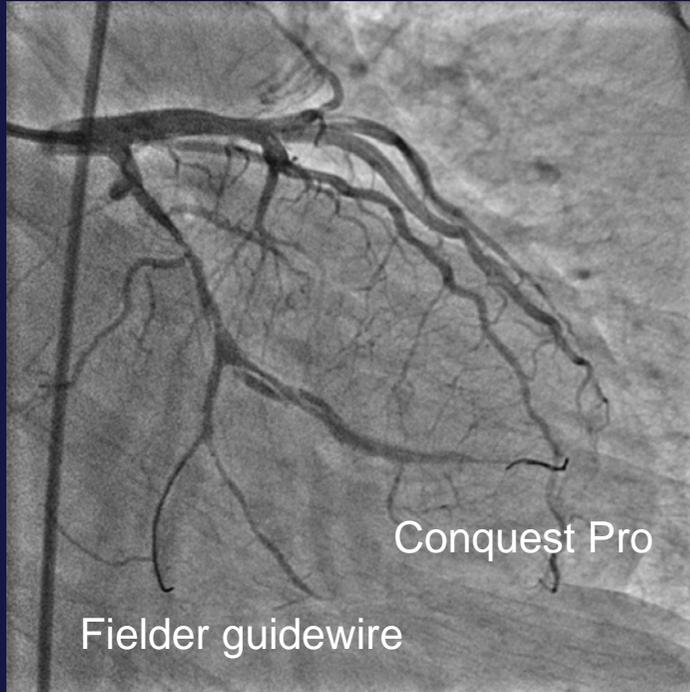
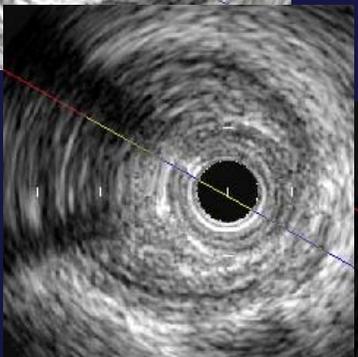
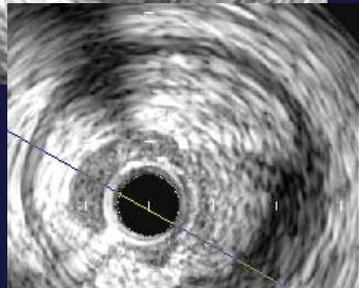
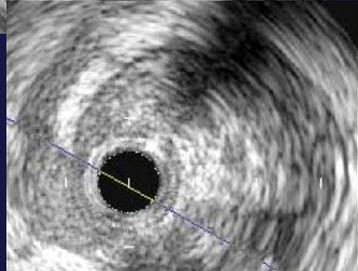
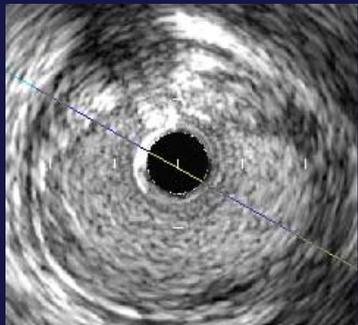




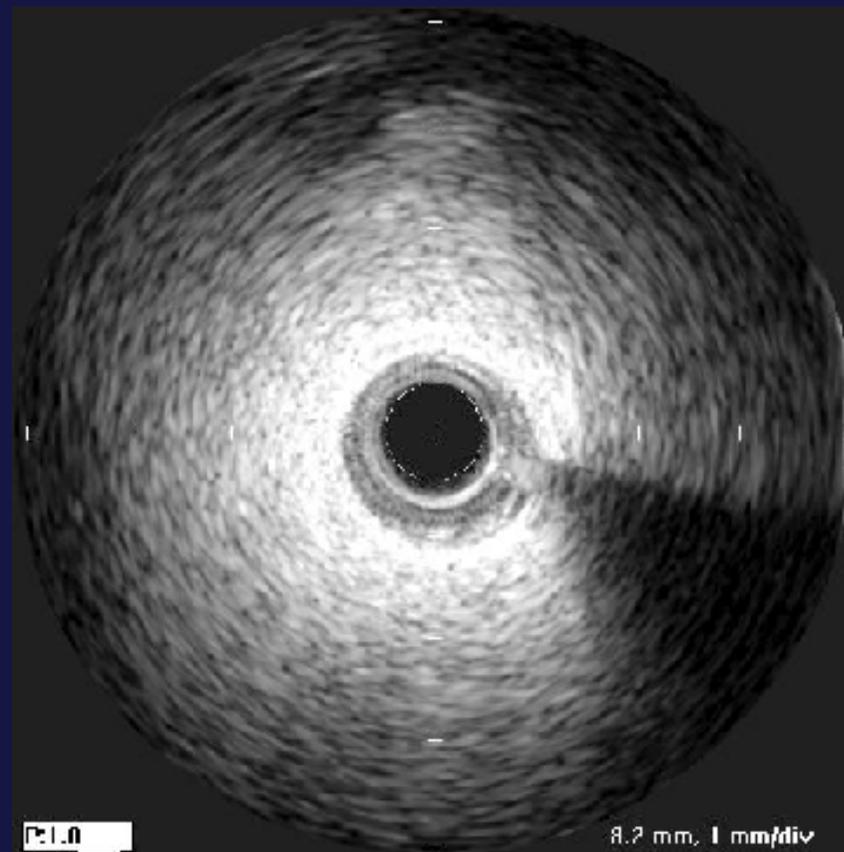
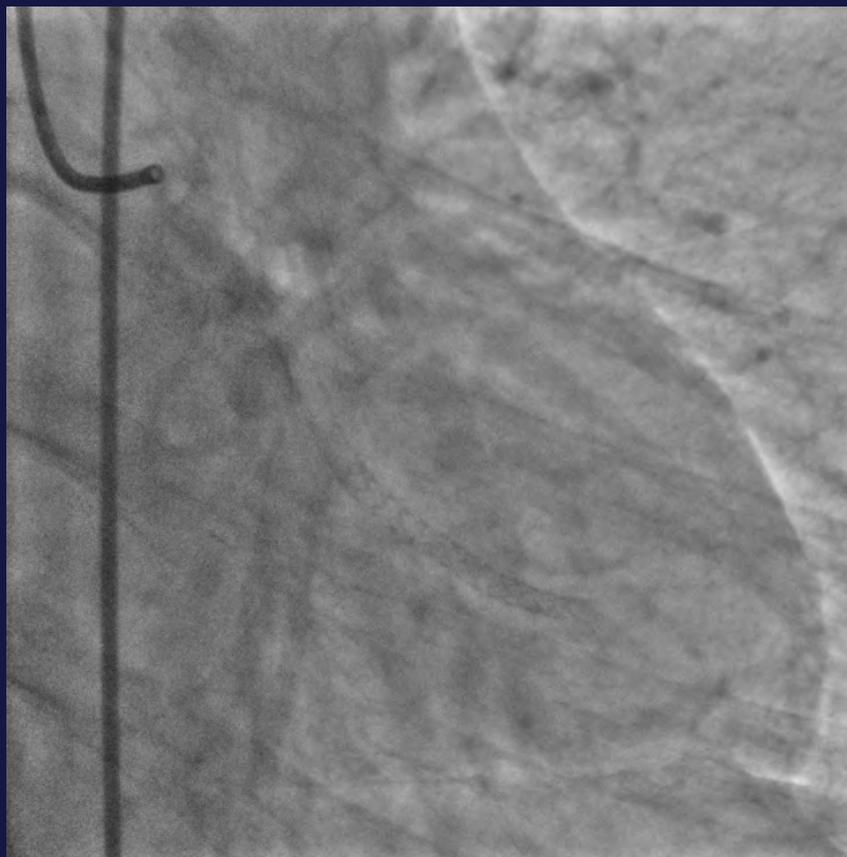
Parallel wire technique  
: Fielder guidewire in false lumen  
Conquest Pro guidewire in true lumen



Apollo Balloon 1.5x15 mm



# Final CAG and IVUS





감사합니다.  
Thank you for your attention