

Action Plan

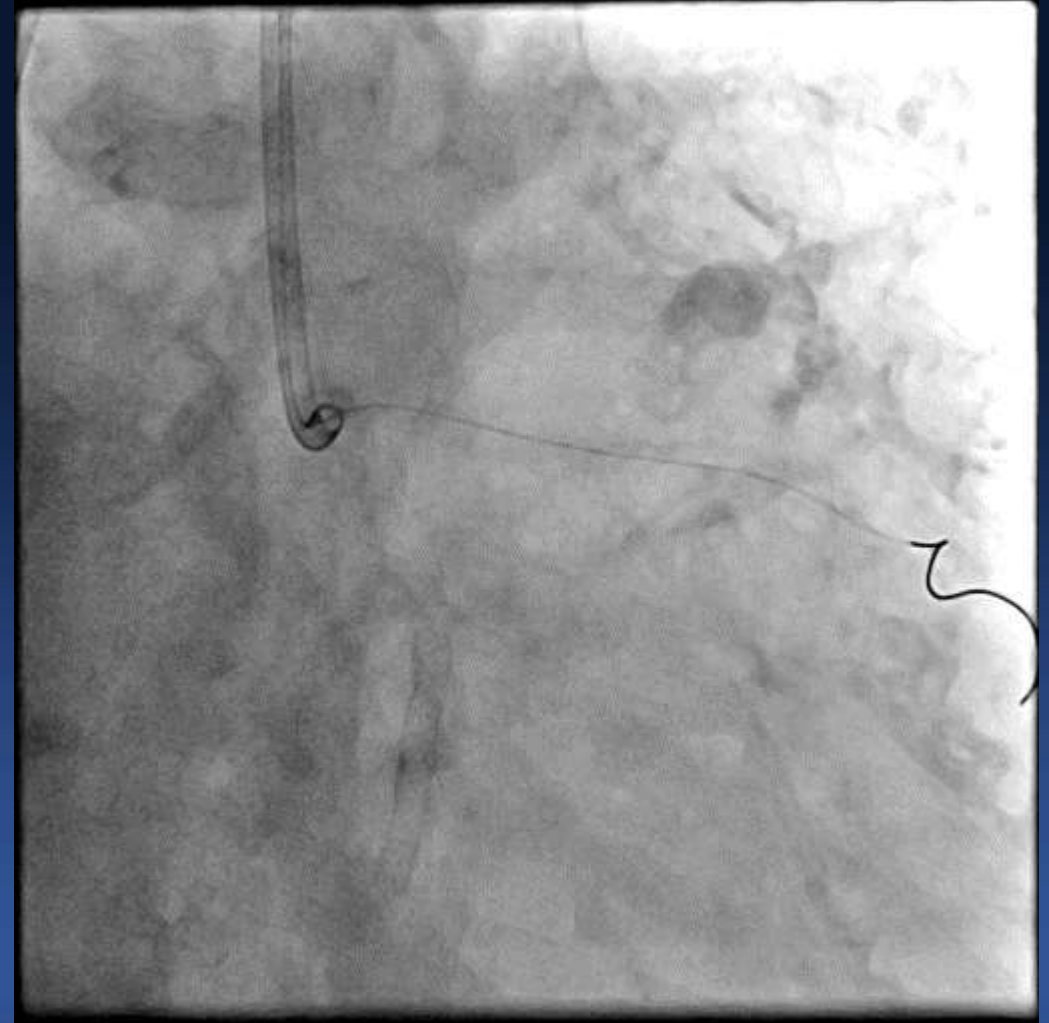
: Device Stuck During PCI

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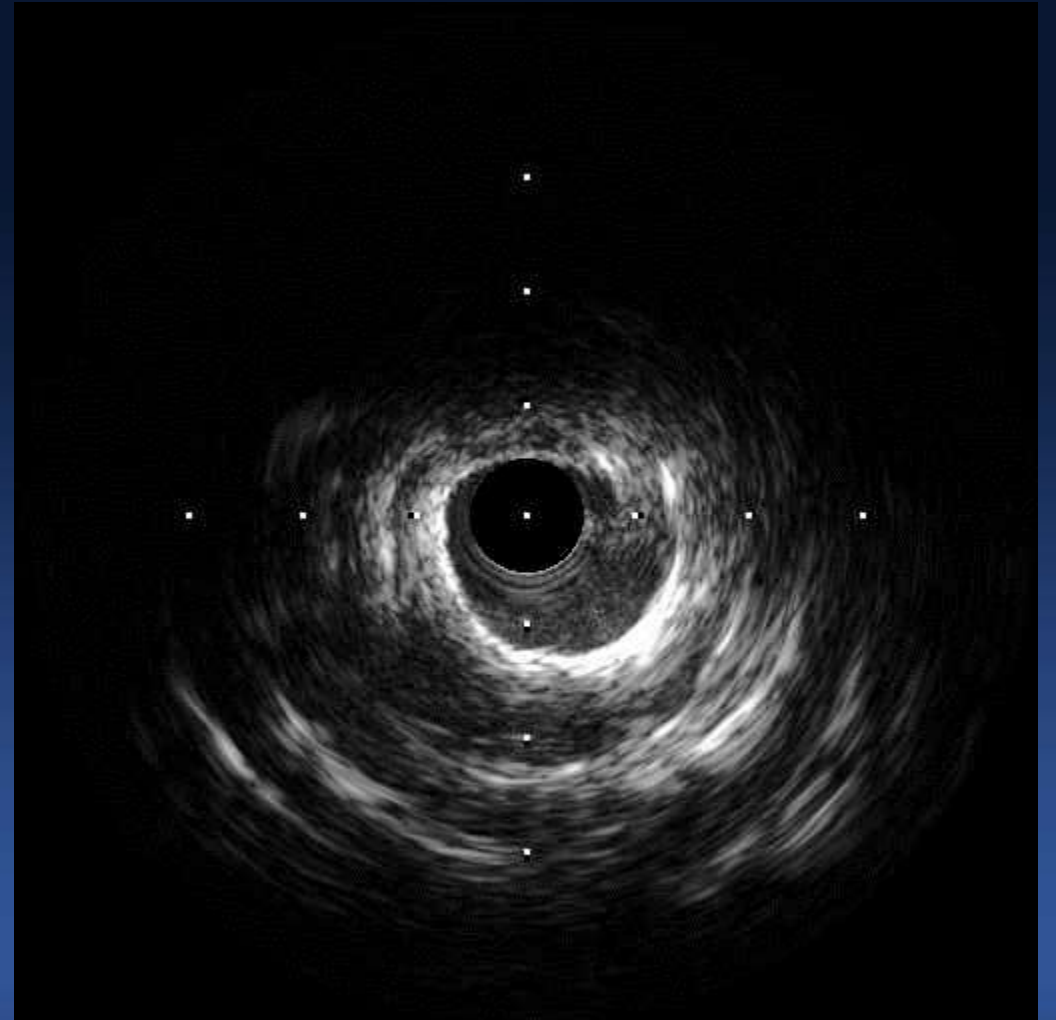
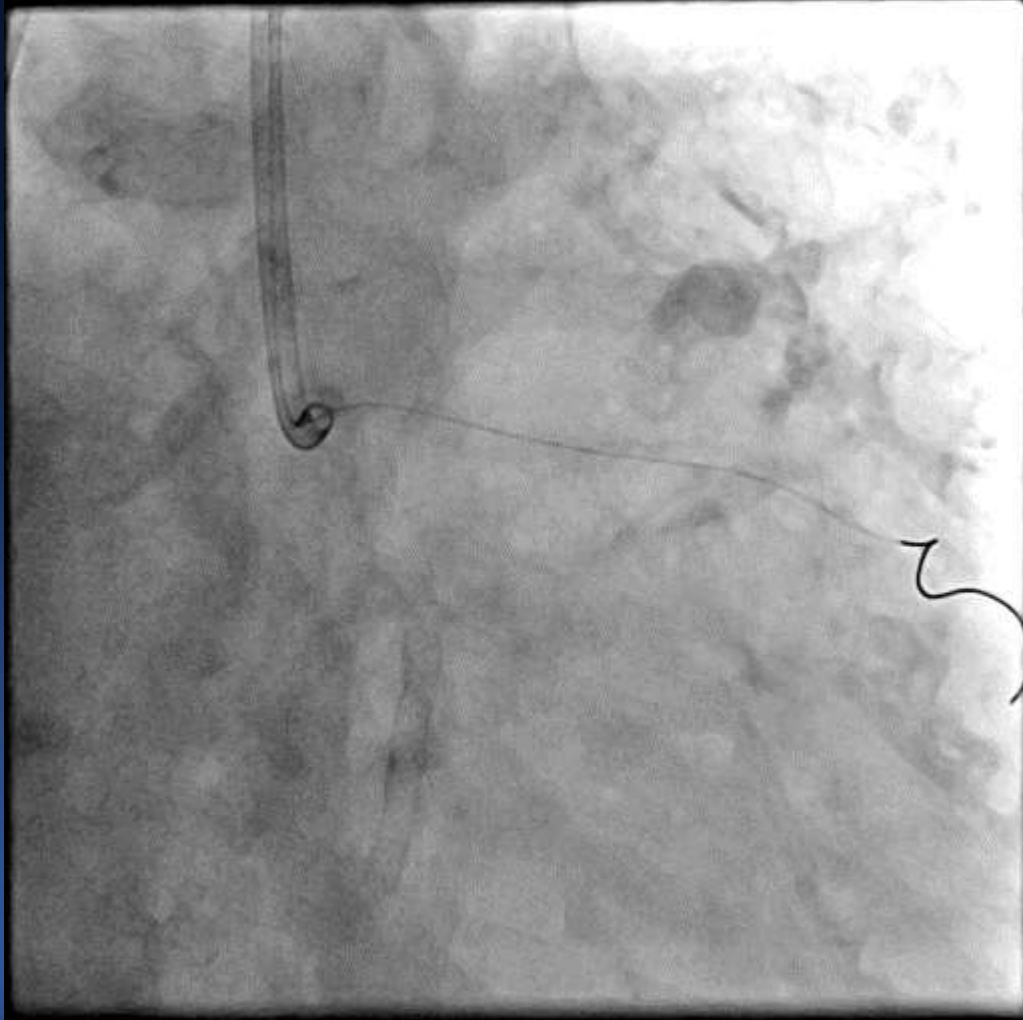
I, Do-Yoon Kang, have nothing to disclose.

F/76, Angina, 2VD

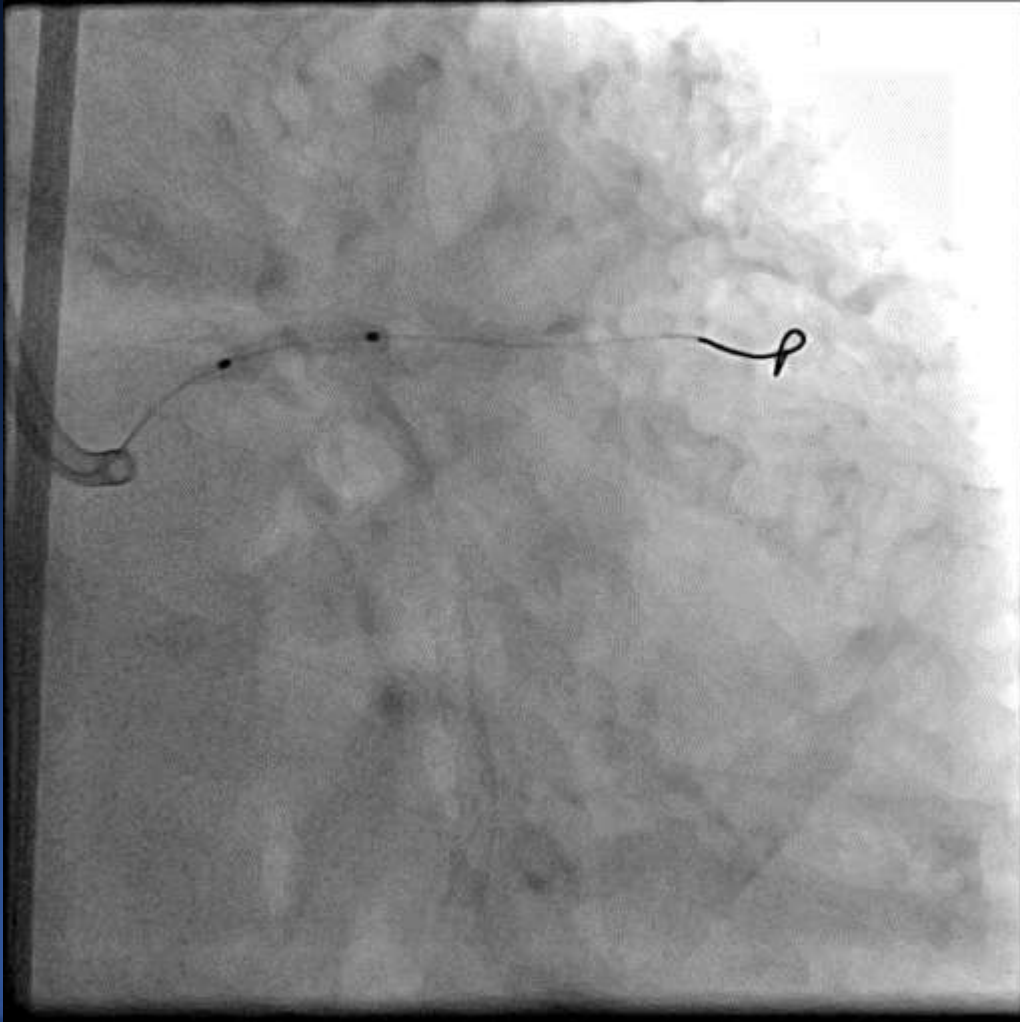


Distal LCX Resolute Onyx 2.75(22)

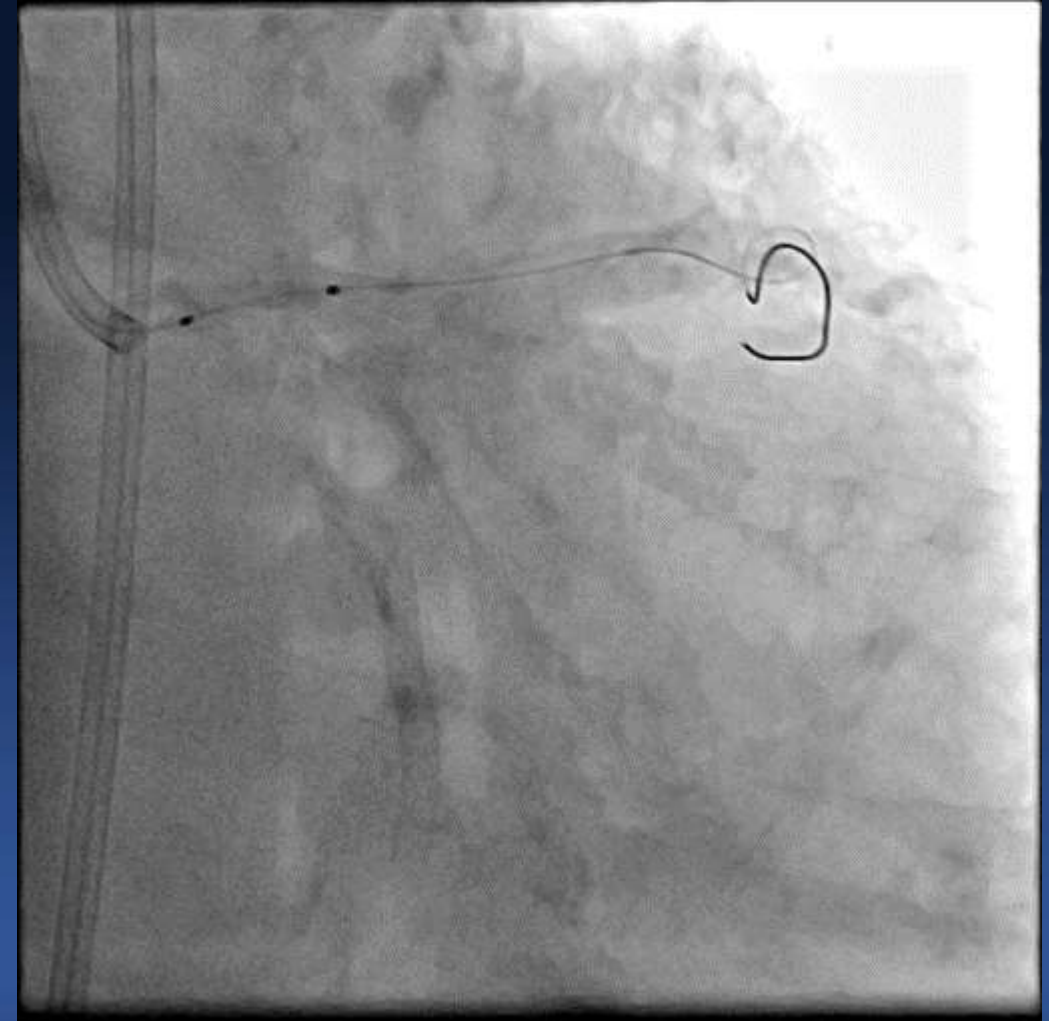
Severe Calcification at proximal LAD



Balloon Does Not Expand

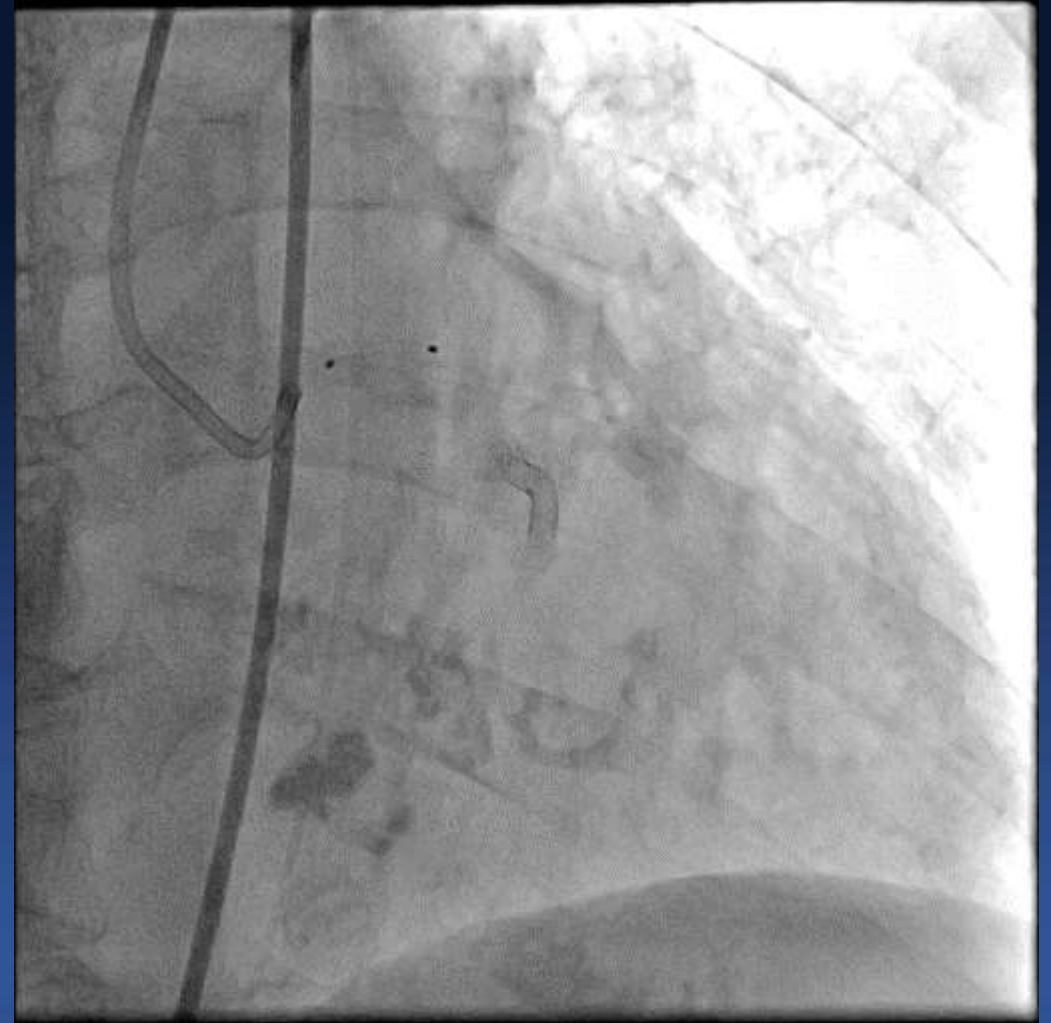
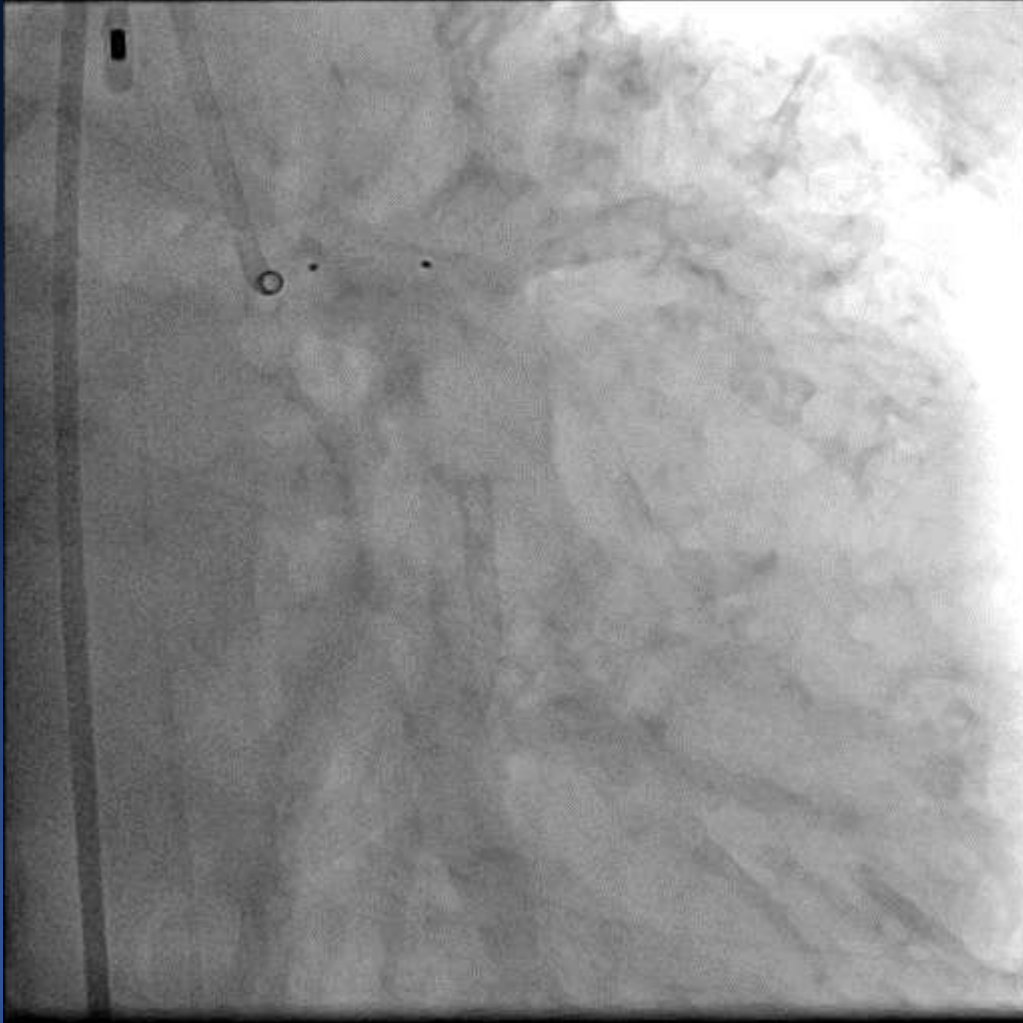


2.75 (10) NC balloon upto 26 atm



Cutting balloon 3.0 (10) at 10 atm

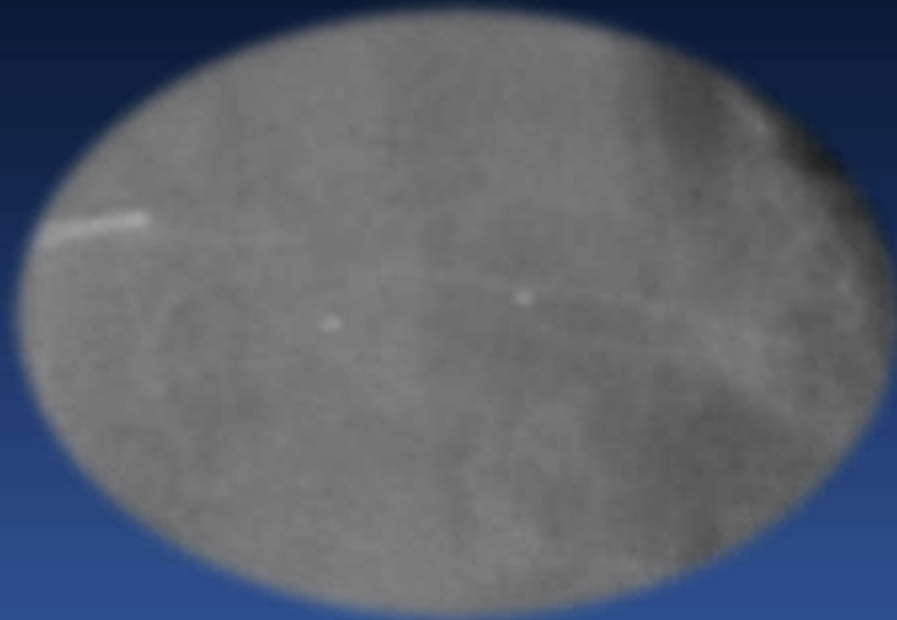
Cutting Balloon Stuck at proximal LAD



Pulling out, Snaring... all failed

Emergent CABG at LAD

Surgeon cut the balloon, because it did not move

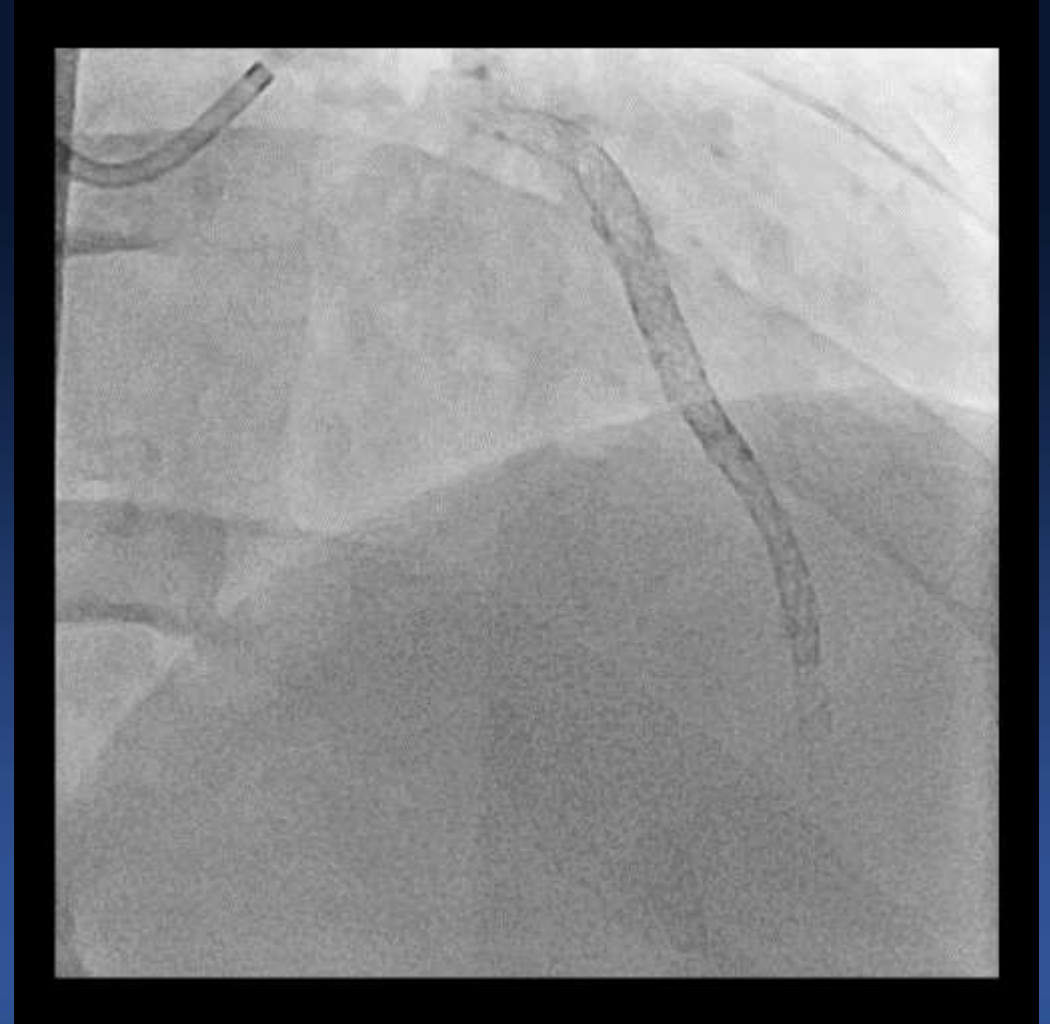
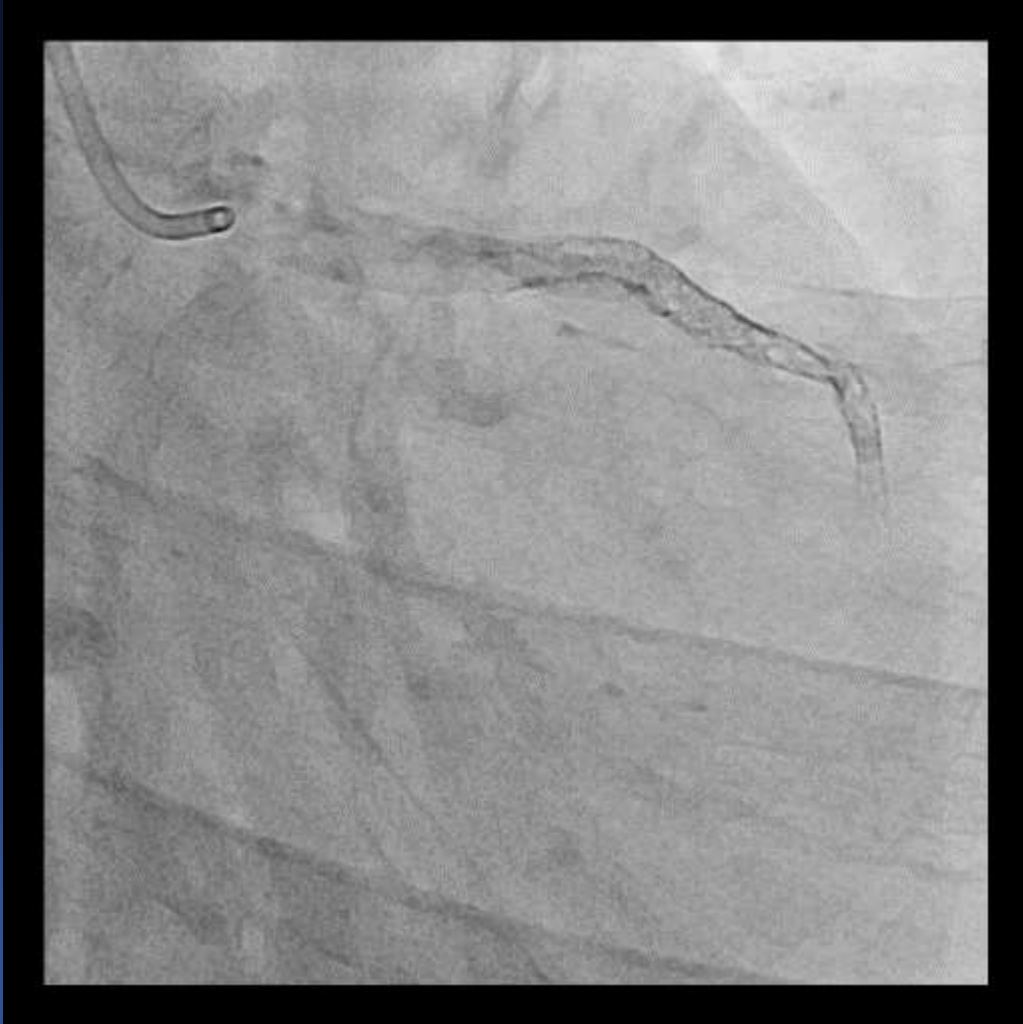


Device Entrapment during PCI

- Wire, Microcatheter, Balloon, Stent...
- Rotablator Burr
- Imaging catheter (IVUS, OCT...)
- Any Device can be stuck !

Rotablator

F/64, Angina, previous LAD stenting



Rotablation at proximal LCX, but, trapped



Rotablator Burr Trapped at LCX

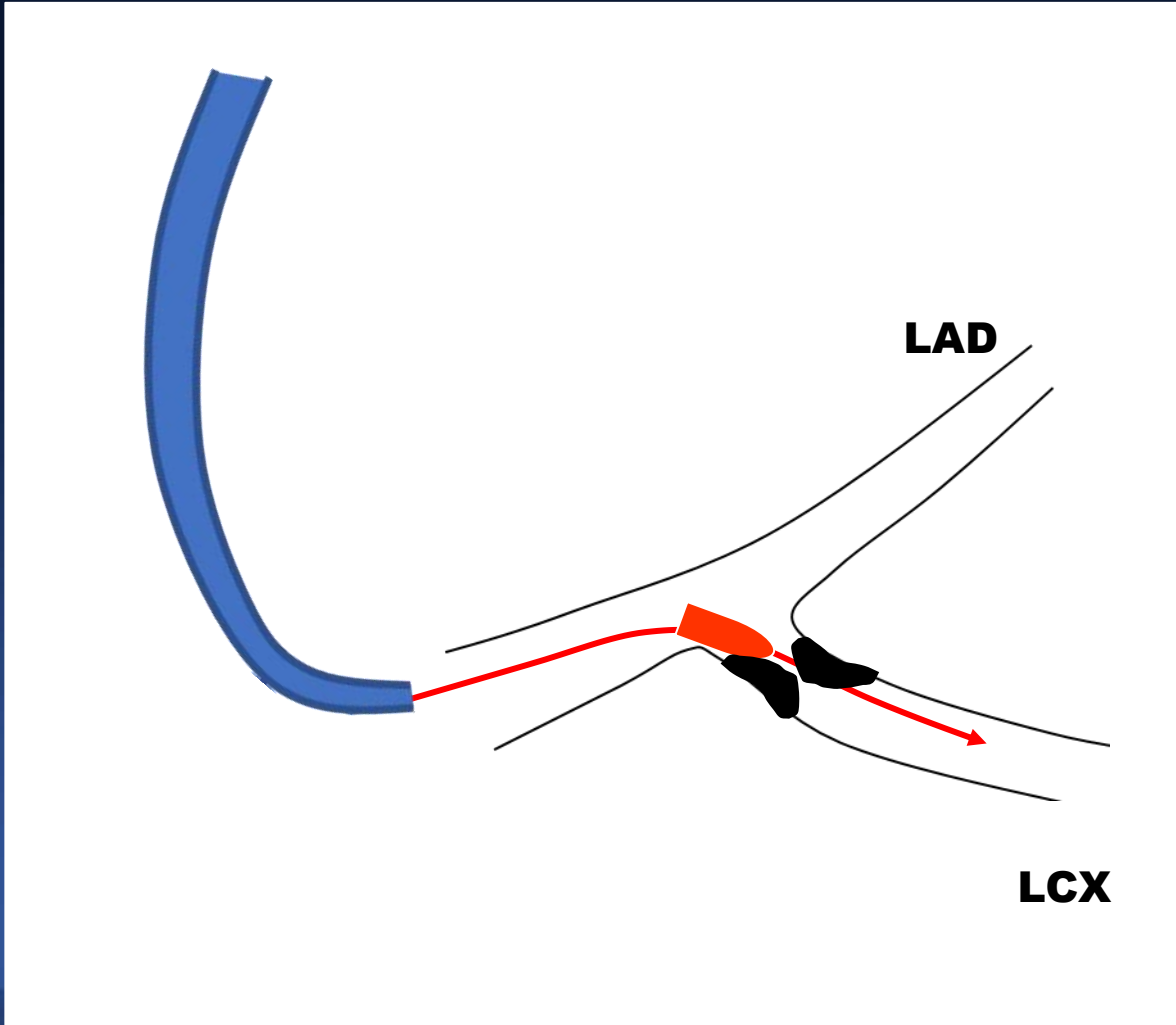


Ballooning at LAD

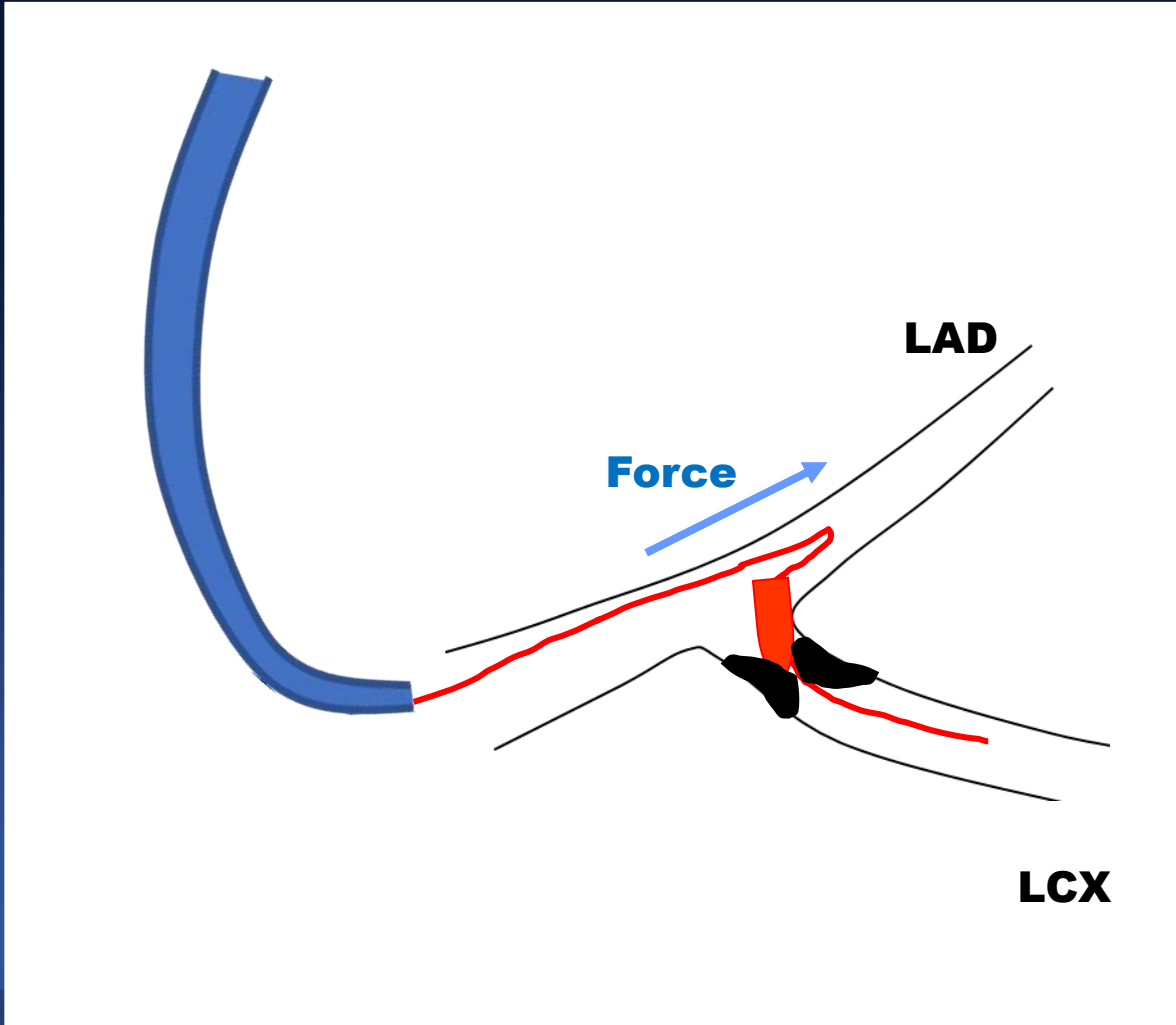


**Re-wiring at LCX &
Ballooning with 1.0, 2.0, 3.0 NC Balloon**

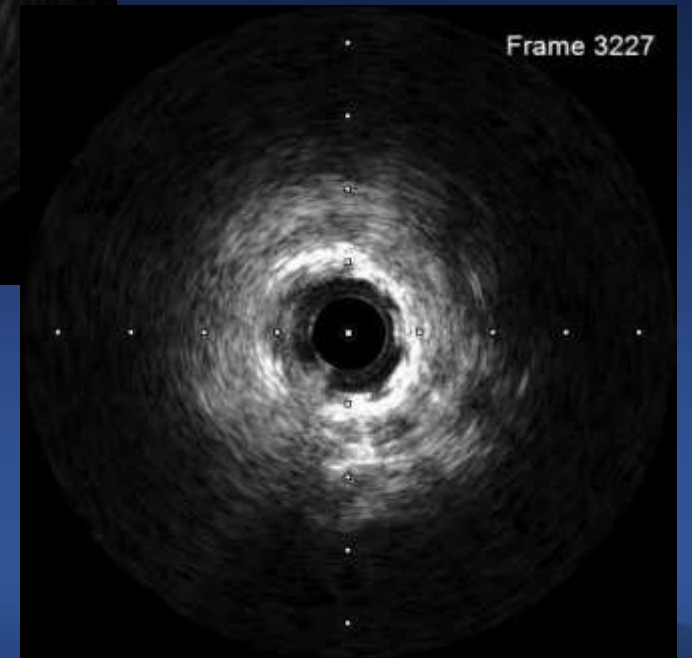
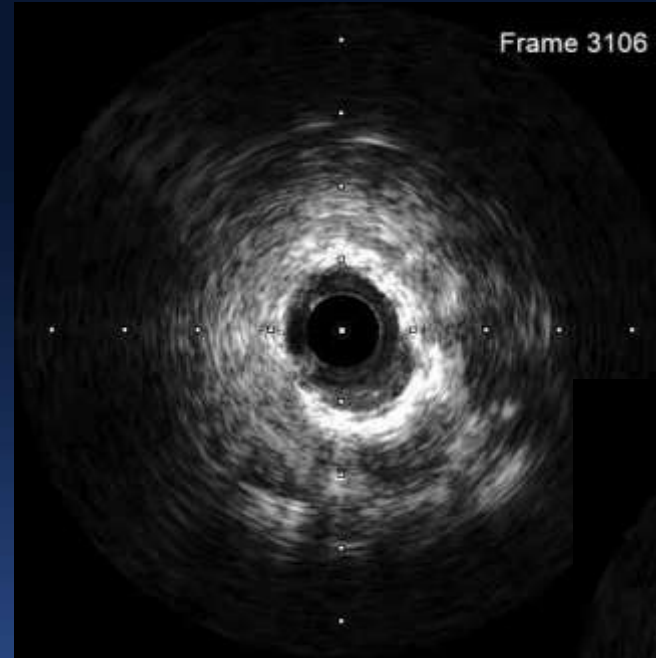
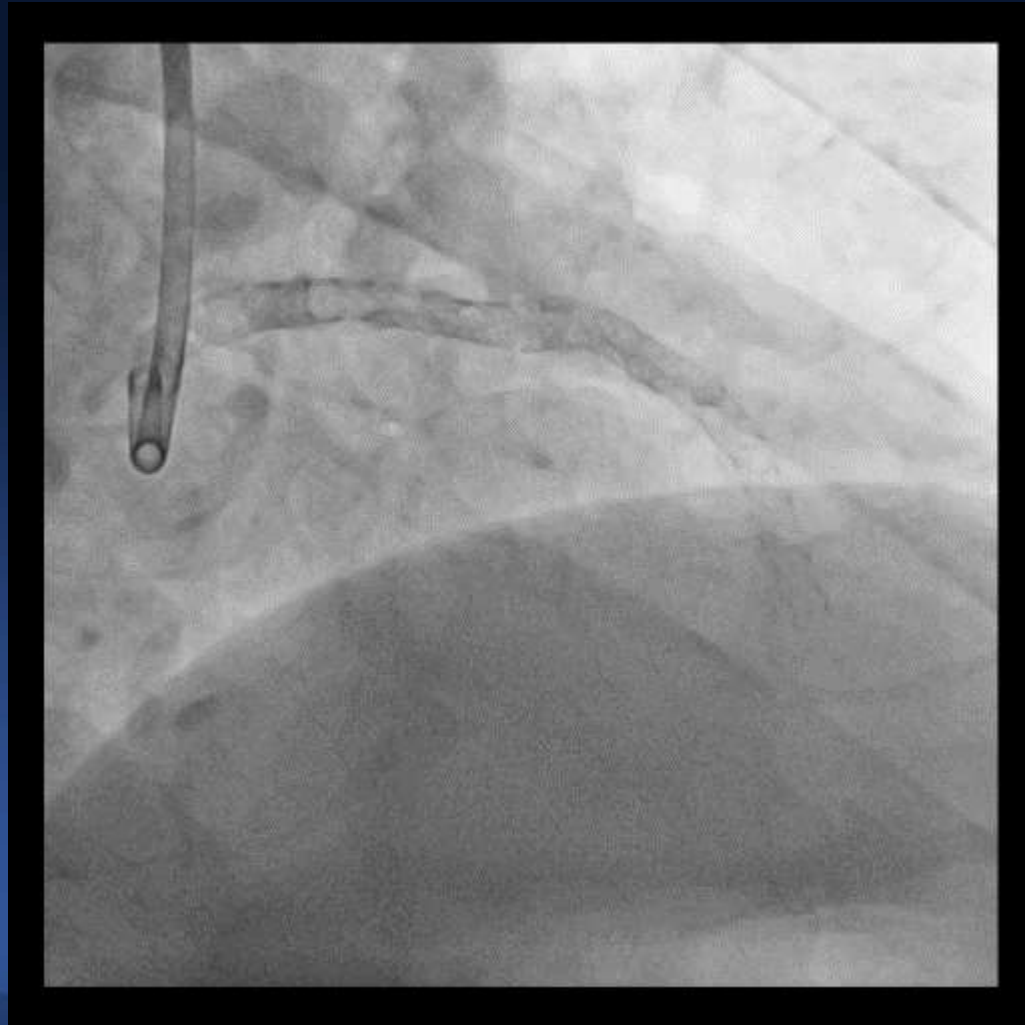
Rotablator Burr Trapped at LCX



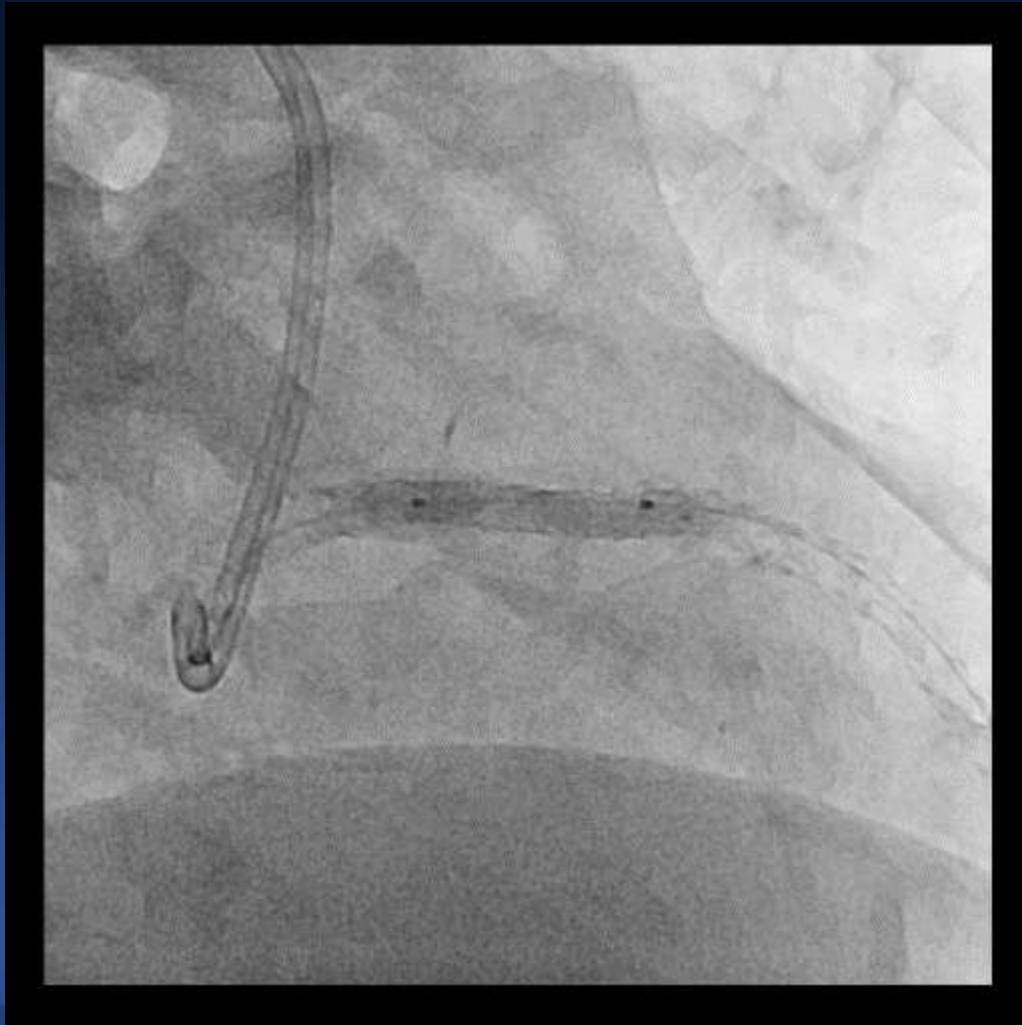
Rotablator Burr Trapped at LCX



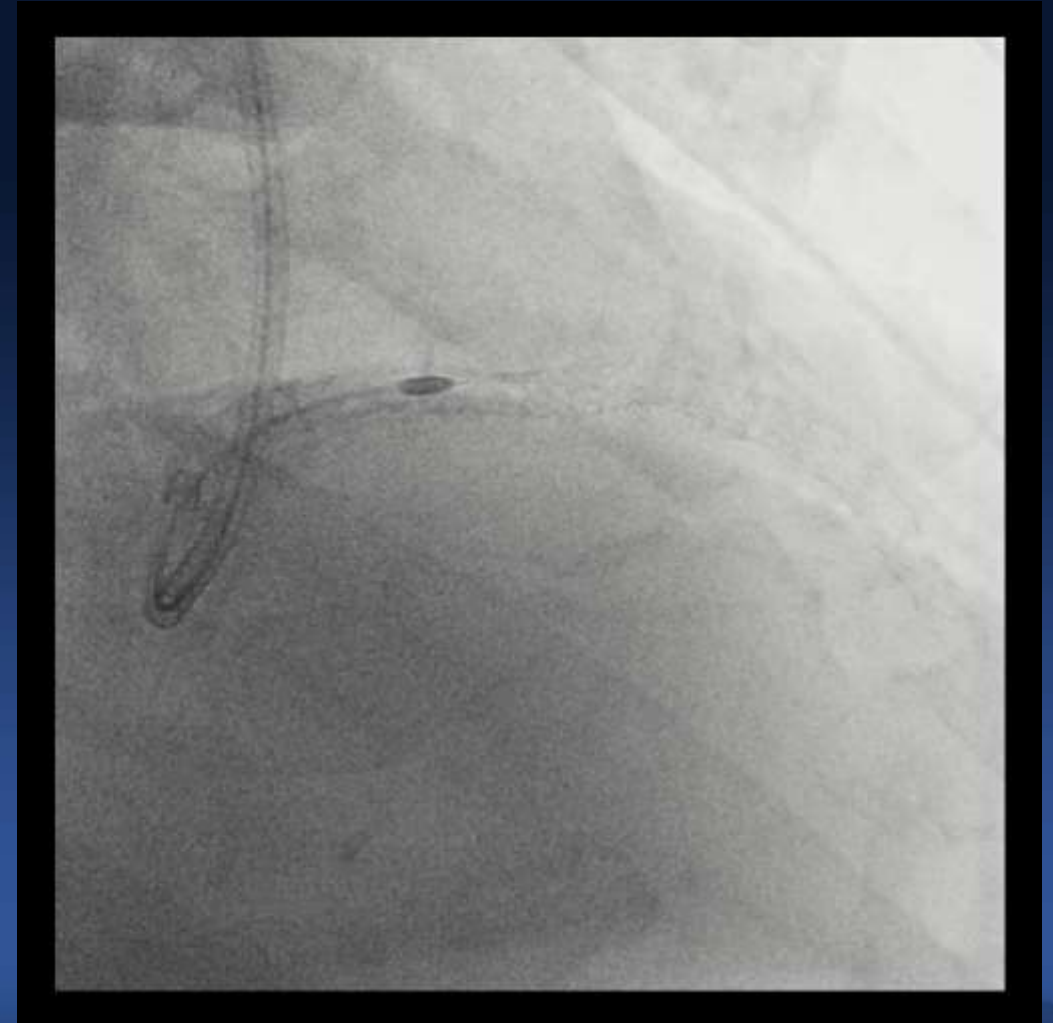
M/64, Angina, previous LAD multiple PCI (4 times, 5 stents)



Under-expanded Stent Does Not Expand

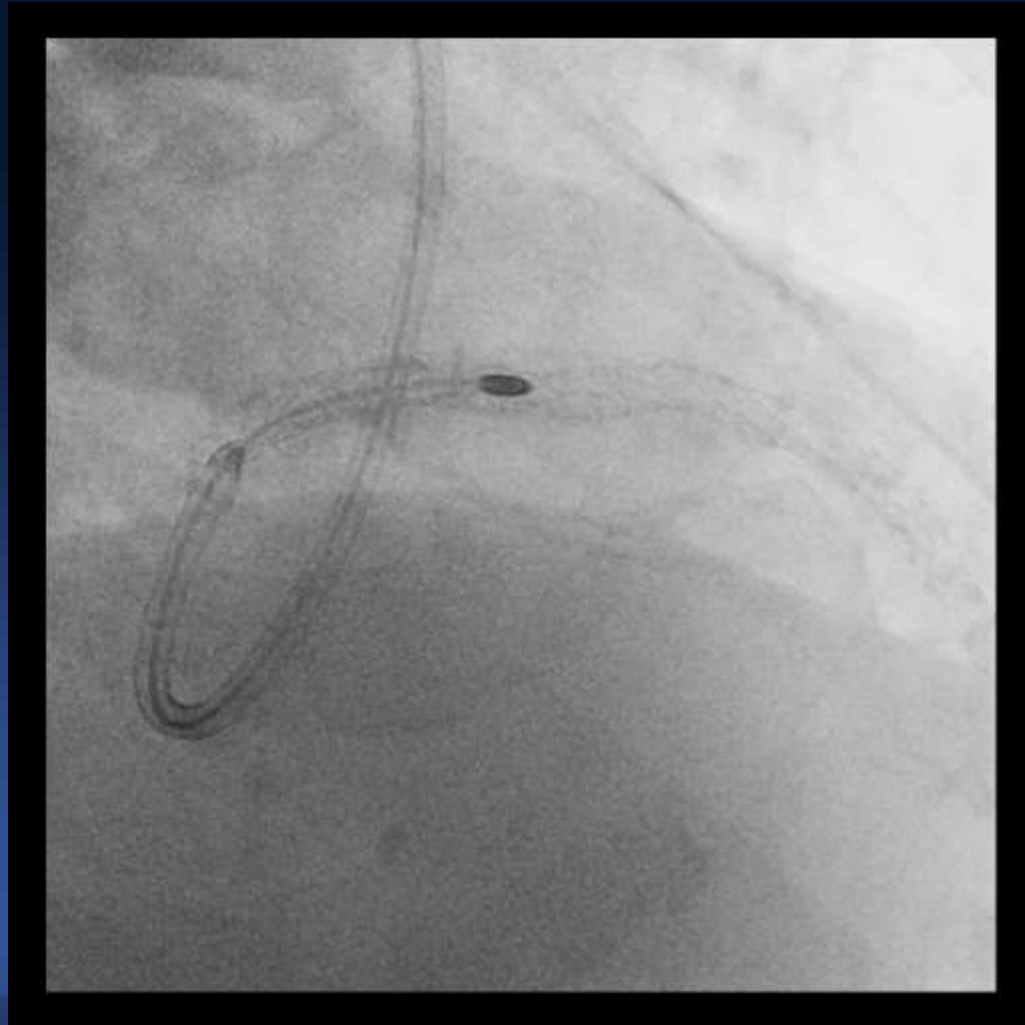


3.0, 3.5 NC Balloon upto 28 atm

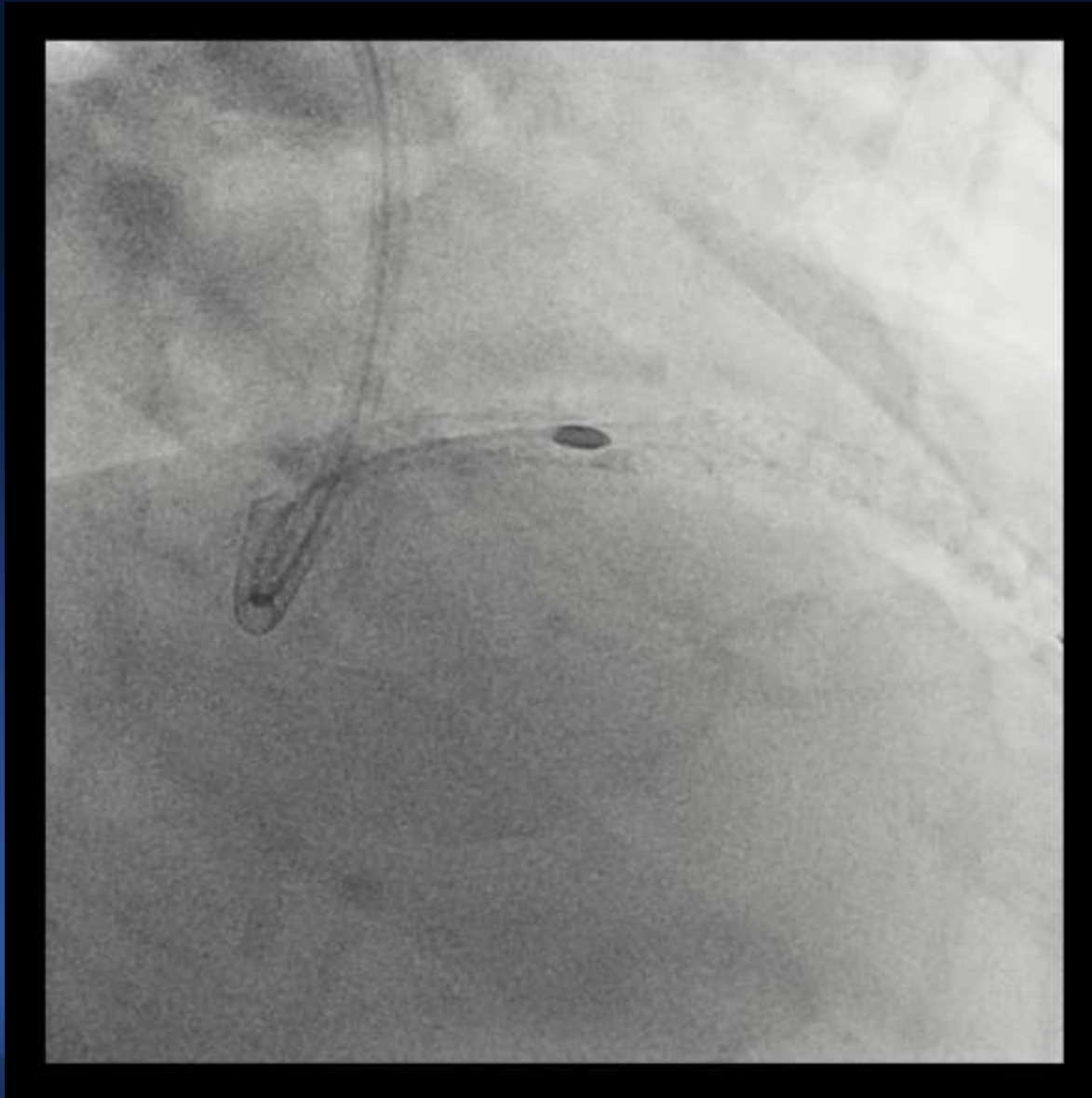


1.5 mm burr does not pass


1.75 mm burr was stuck at LAD under-expanded Stent



The Moment of Escape

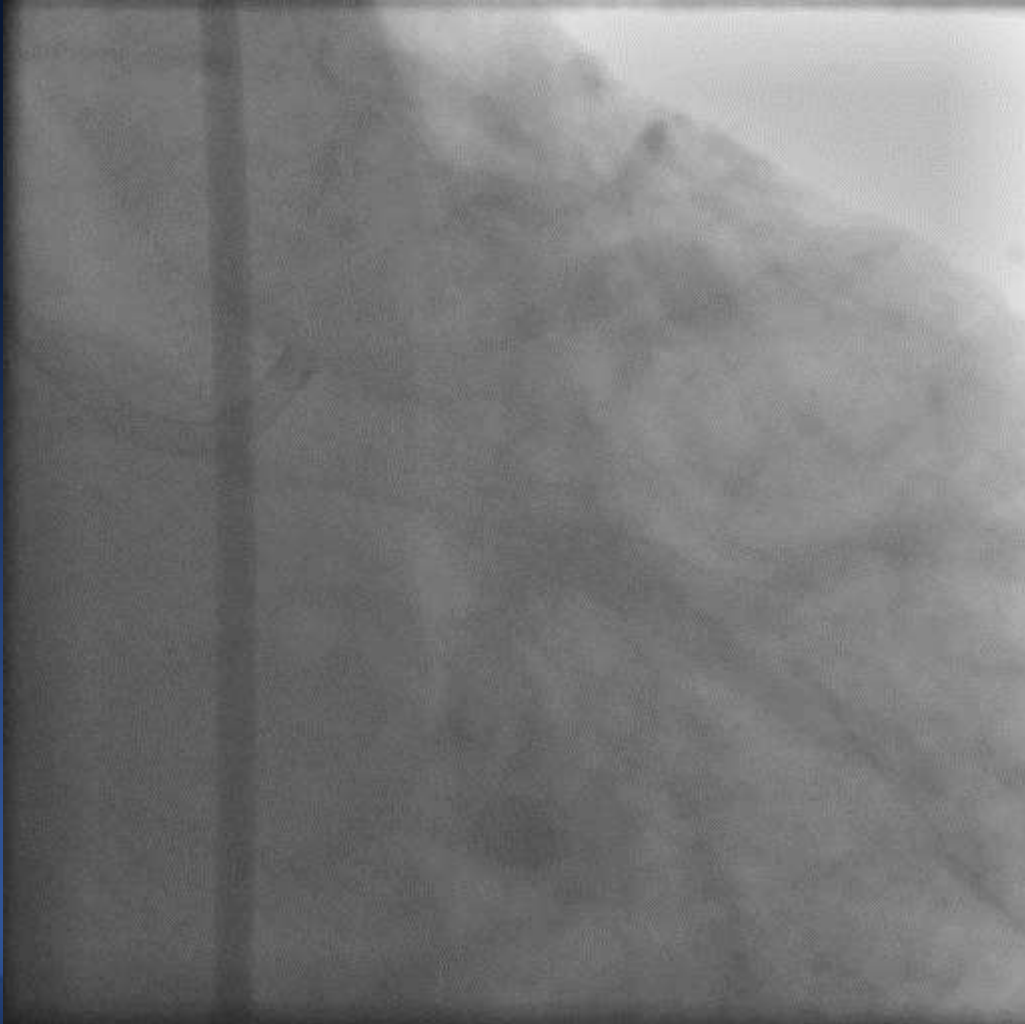


Rotablator Entrapment

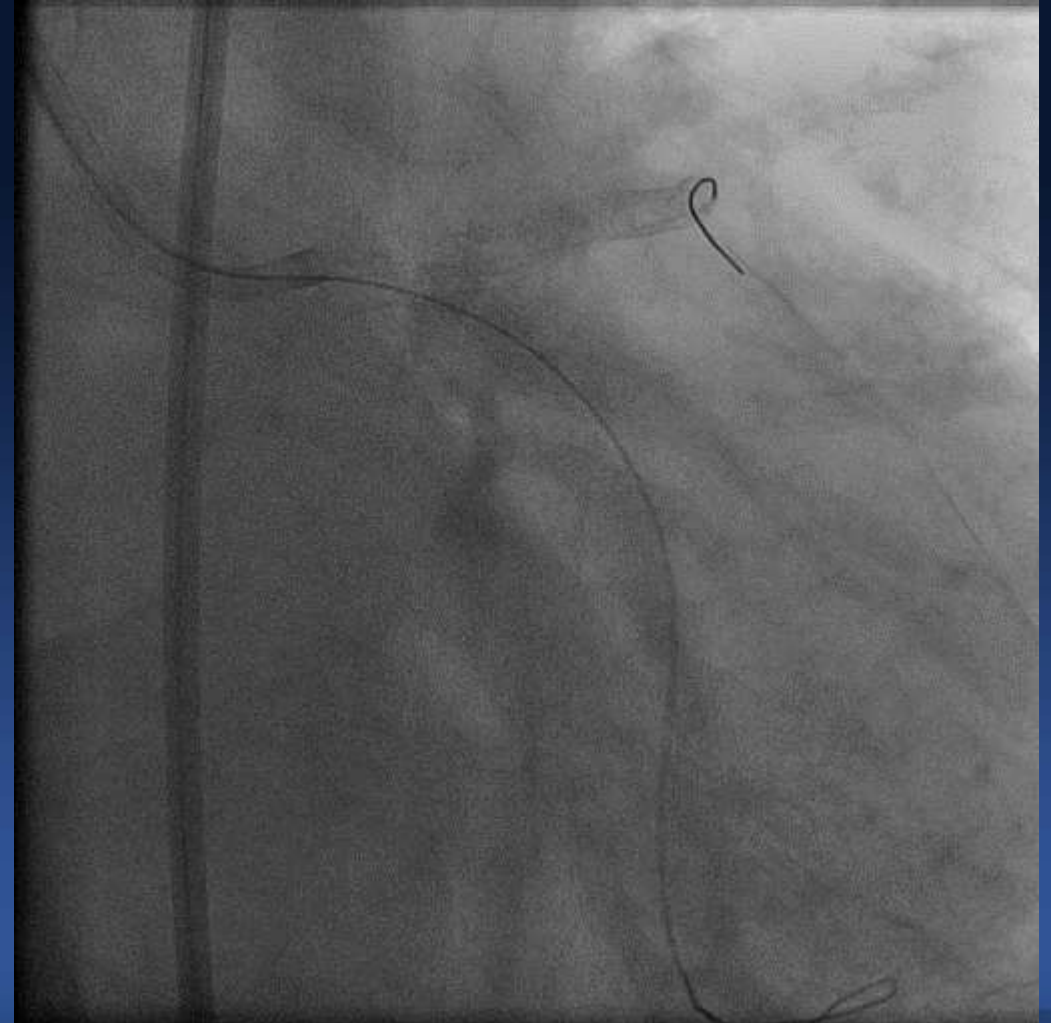
- Do not push the burr forcefully during ablation, especially at the angulated vessels or branches.
- If trapped (noise sound), take your foot off the pedal ASAP.
- Do NOT pull it gently. It stretches. A diagram showing a red vessel bifurcating into two branches. A blue rotablator burr is positioned at the junction. A red circle highlights the burr's position, indicating it is trapped or stretched across the vessel wall. A white guidewire is visible within the vessel lumen.
- 2nd guidewire & ballooning to modify the anatomy.
- Pull it HARD at once under strong backup (GC impaction, guide-extension catheter...).

Imaging Catheter

M/62, Angina, LM Bifurcation disease

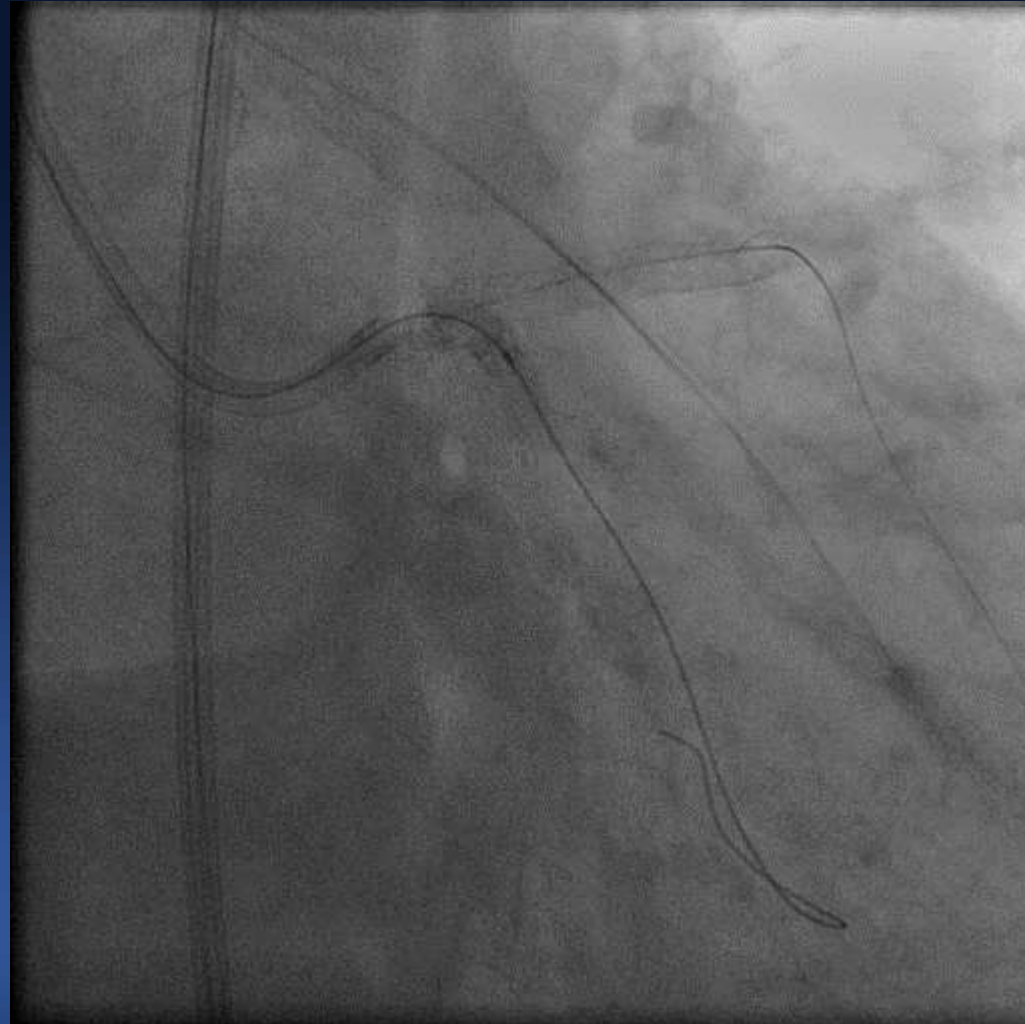


M/62, Angina, LM Bifurcation PCI with Crush technique

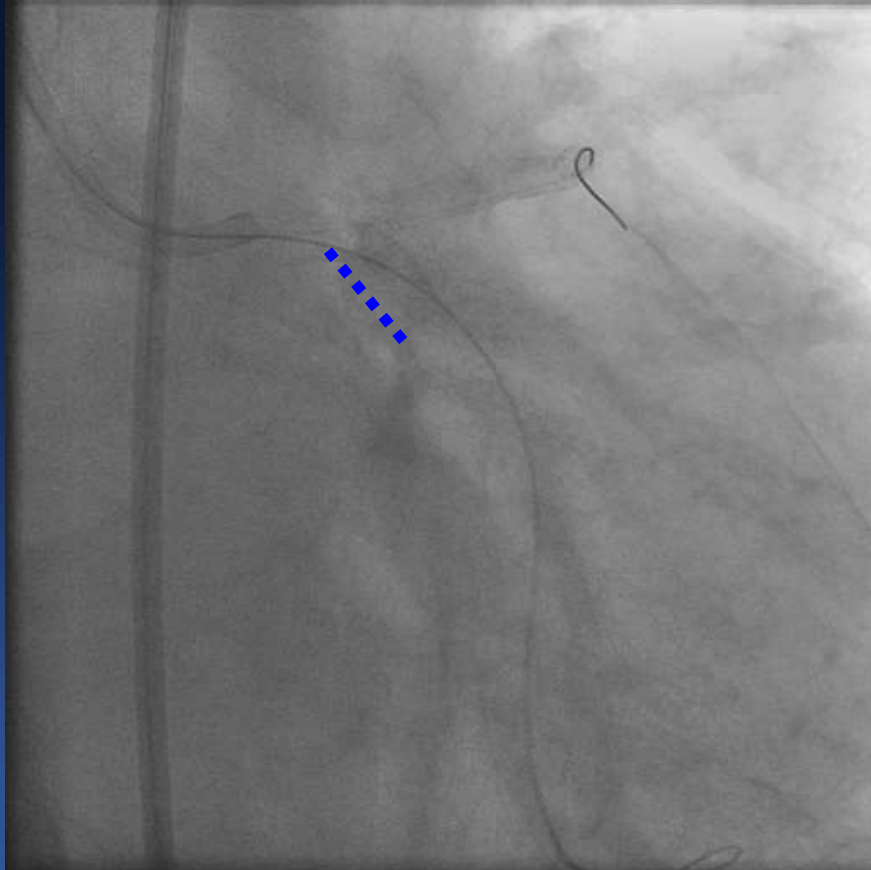


Xience 3.5 (28) & 3.5 (18), FKB with two 3.5 NC Balloons

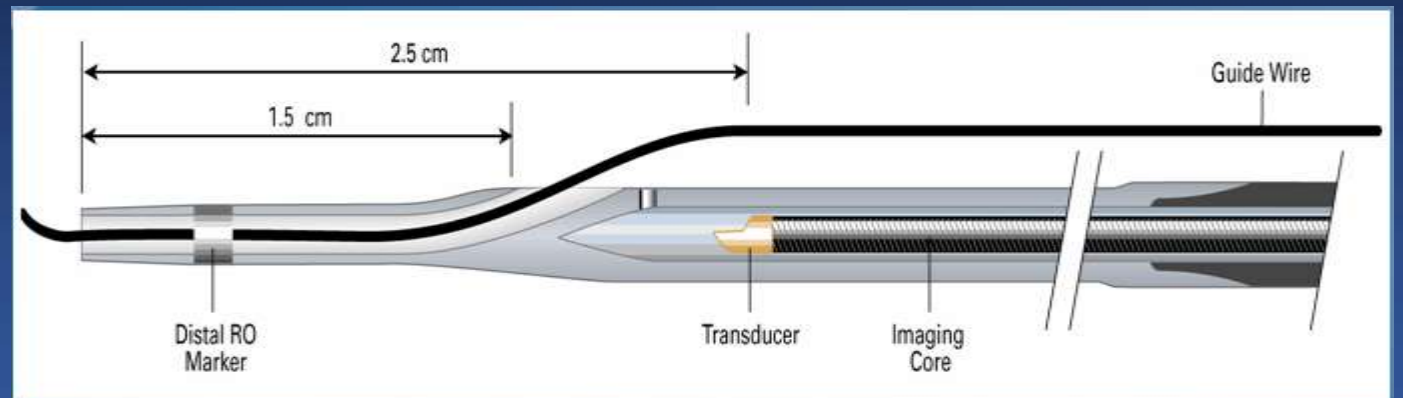
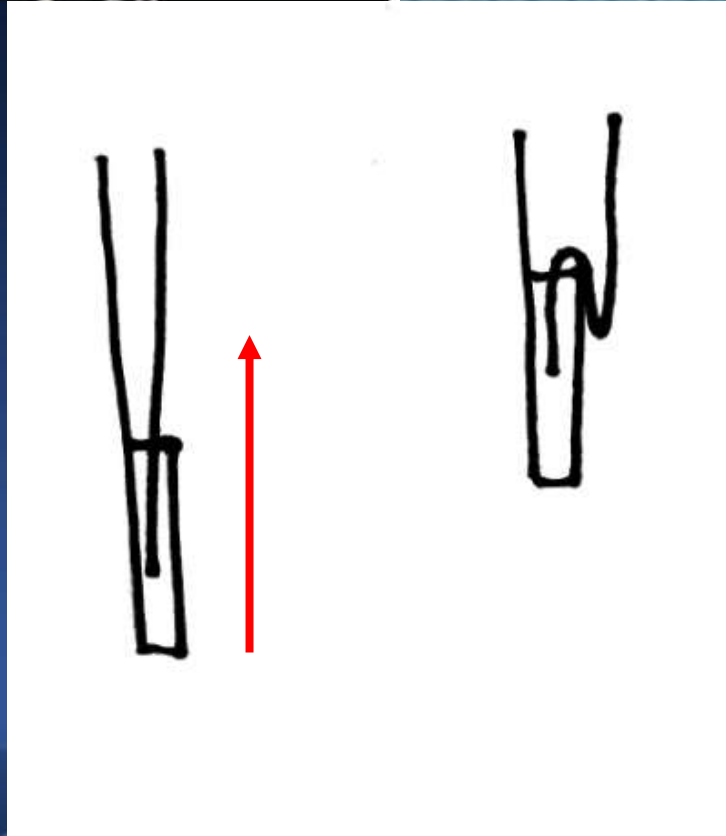
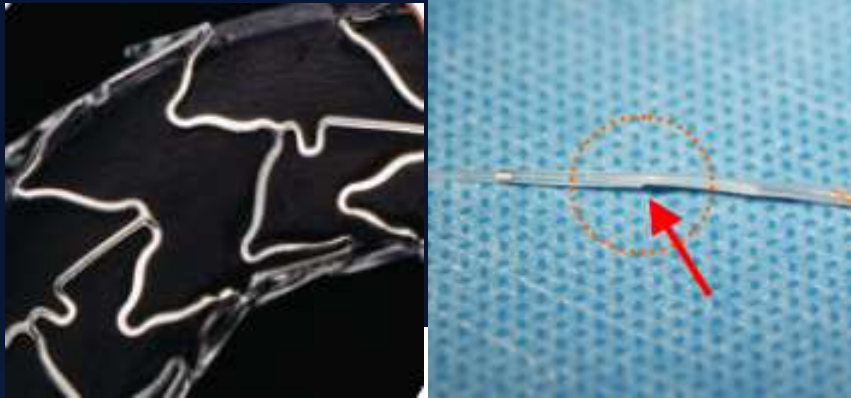
IVUS trapped at LCX stent !



IVUS Entrapment with Stent Shortening



IVUS Entrapment



Courtesy of KS Jung

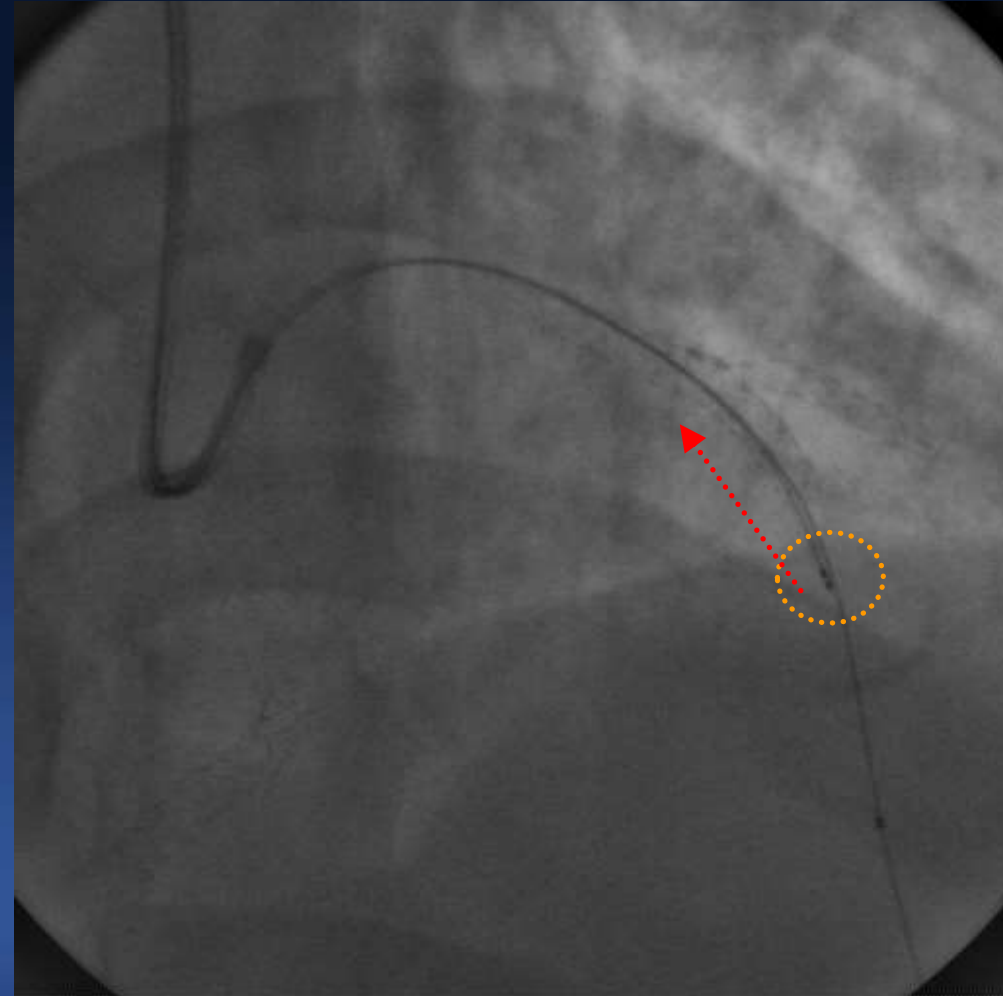
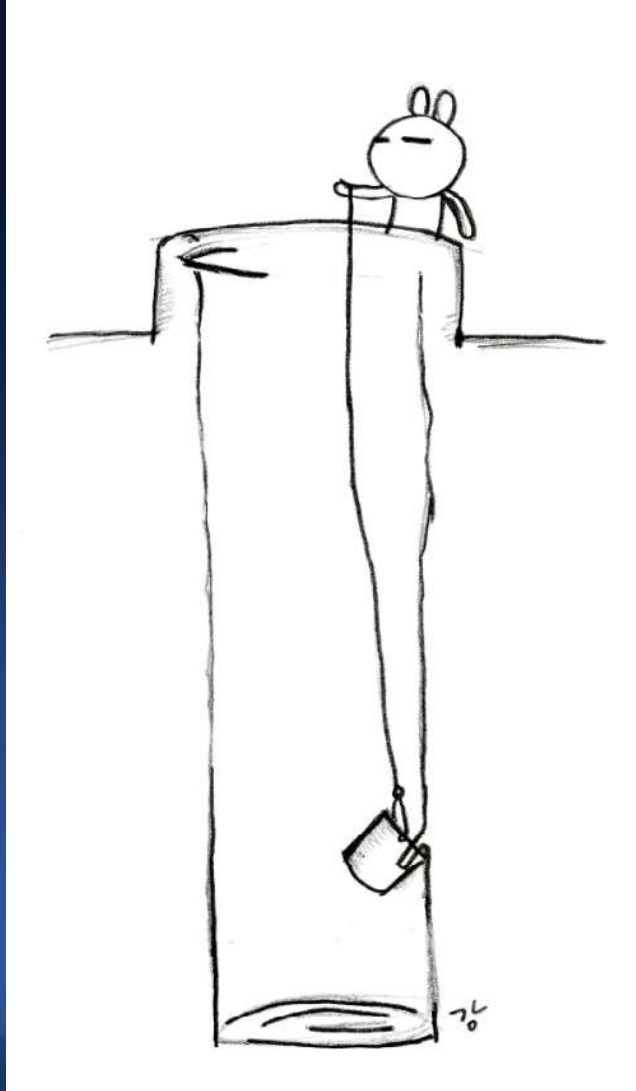


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Medical Center

IVUS Entrapment



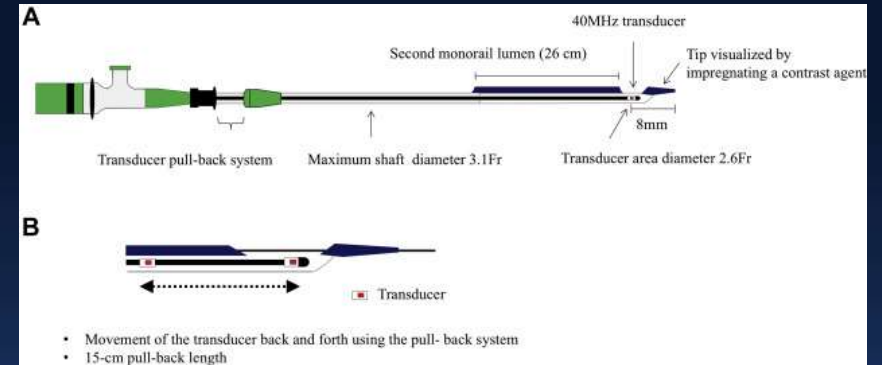
Courtesy of KS Jung

Why?

- Distal stent incomplete apposition
- Side branch, Calcium...
- Angle between IVUS catheter tip & Catheter tip.
(Tortuous vessel, distal vessels...)

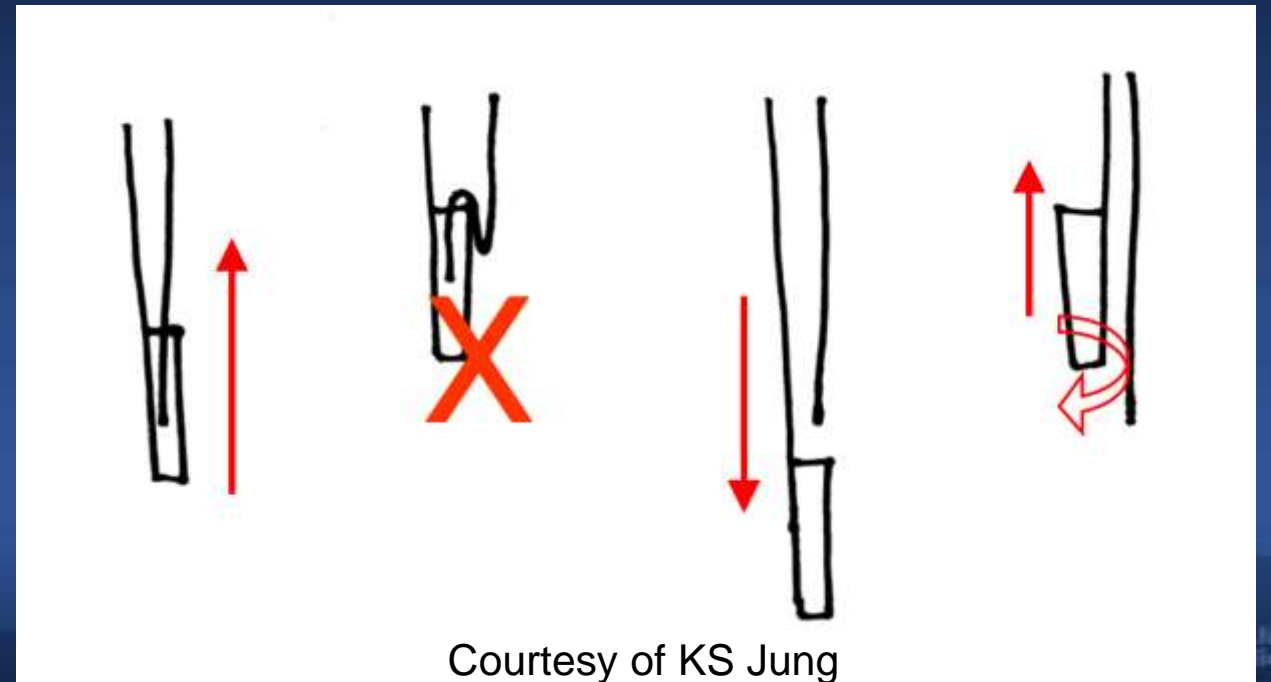
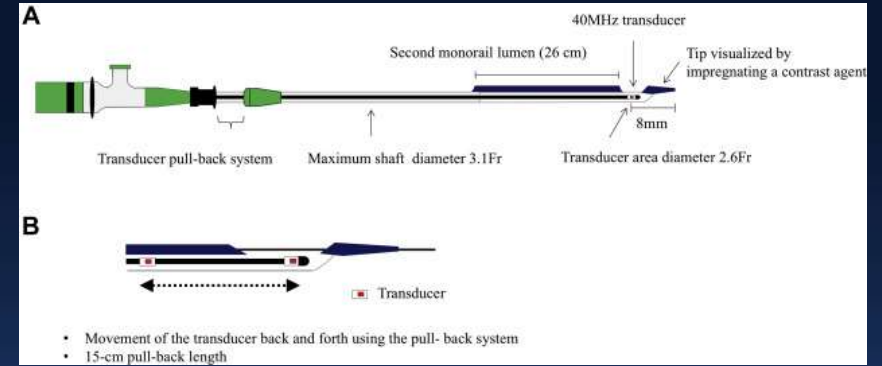
How to Overcome?

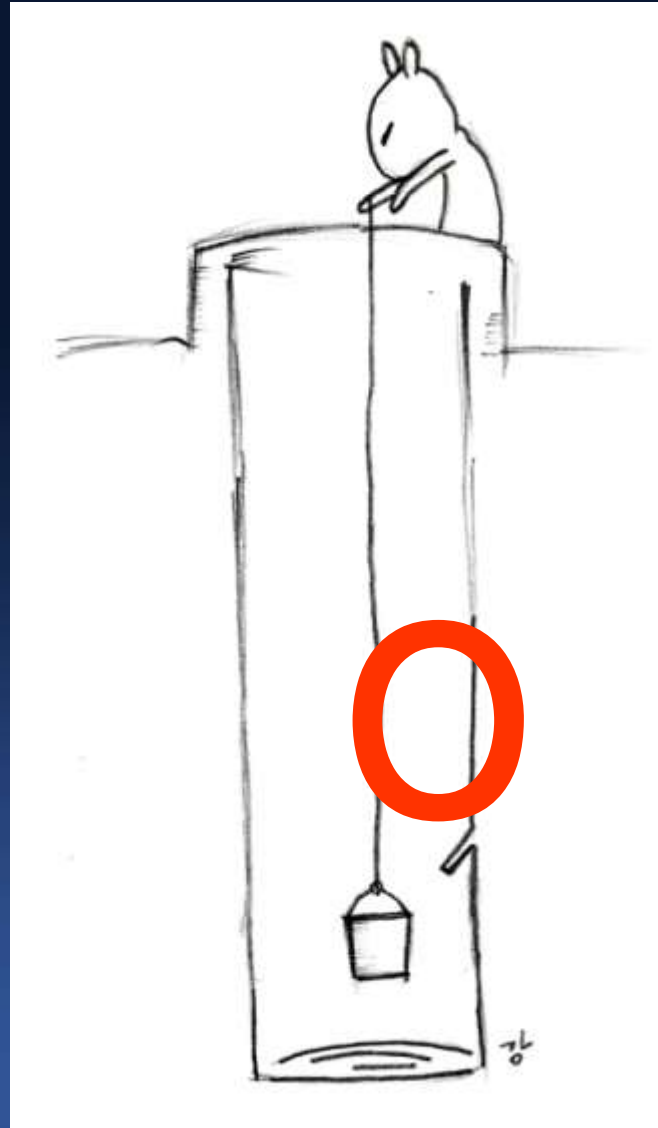
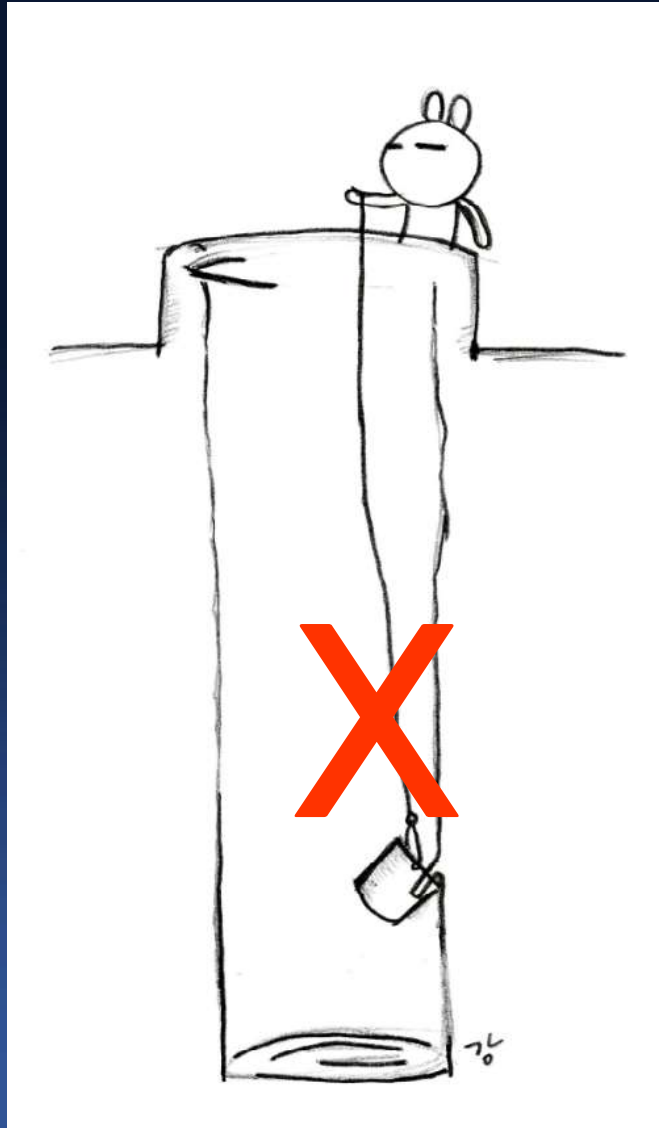
- Do not pull back. It stretches.
- Push in the image transducer to the tip



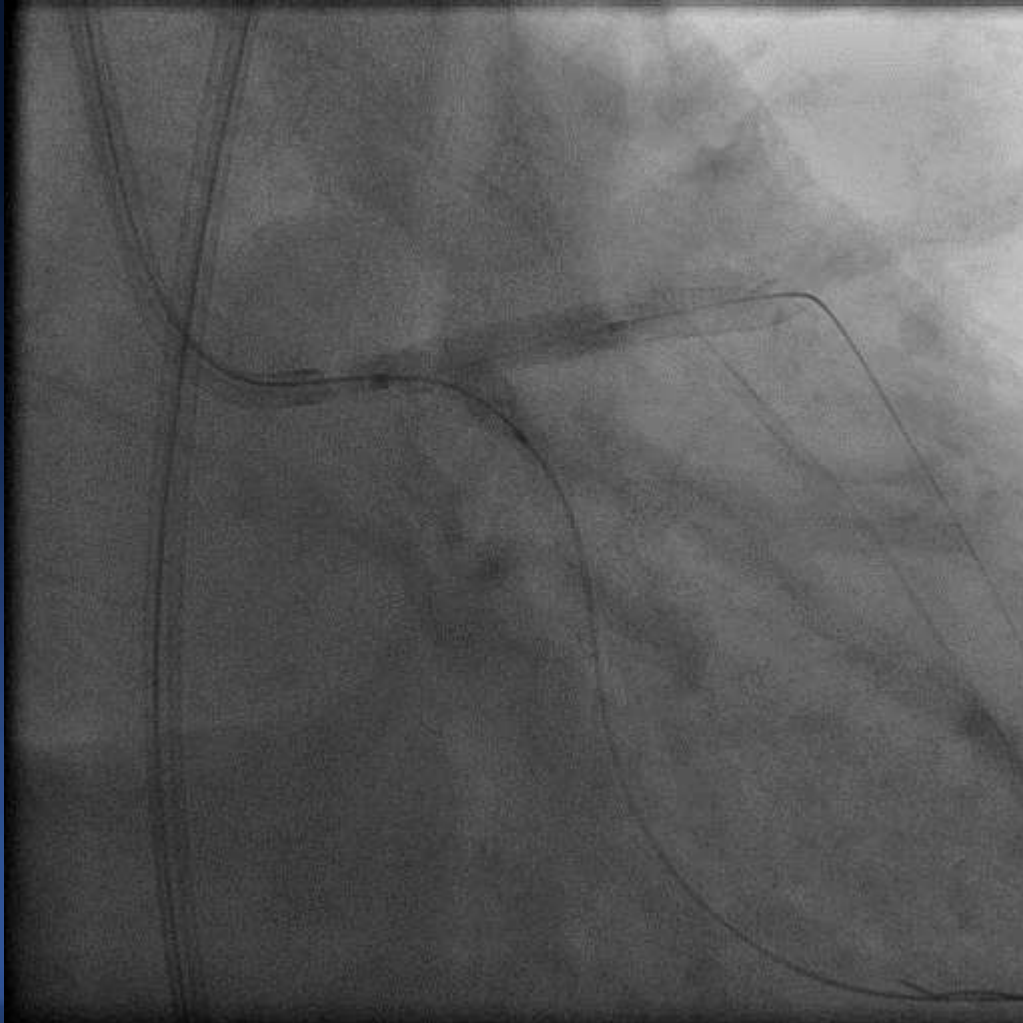
How to Overcome?

- Do not pull back. It stretches.
- Push in the image transducer to the tip
- Push the catheter in.





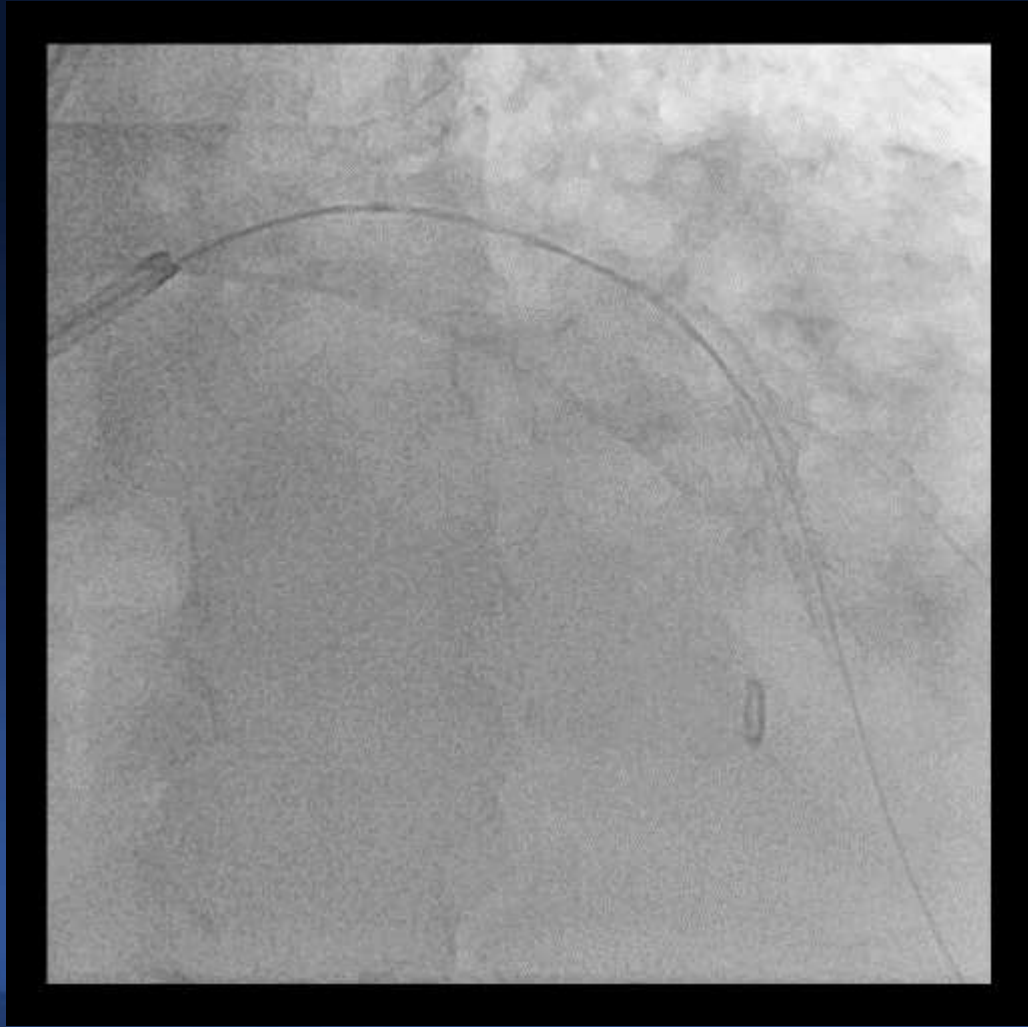
Additional Kissing Balloon & Final results



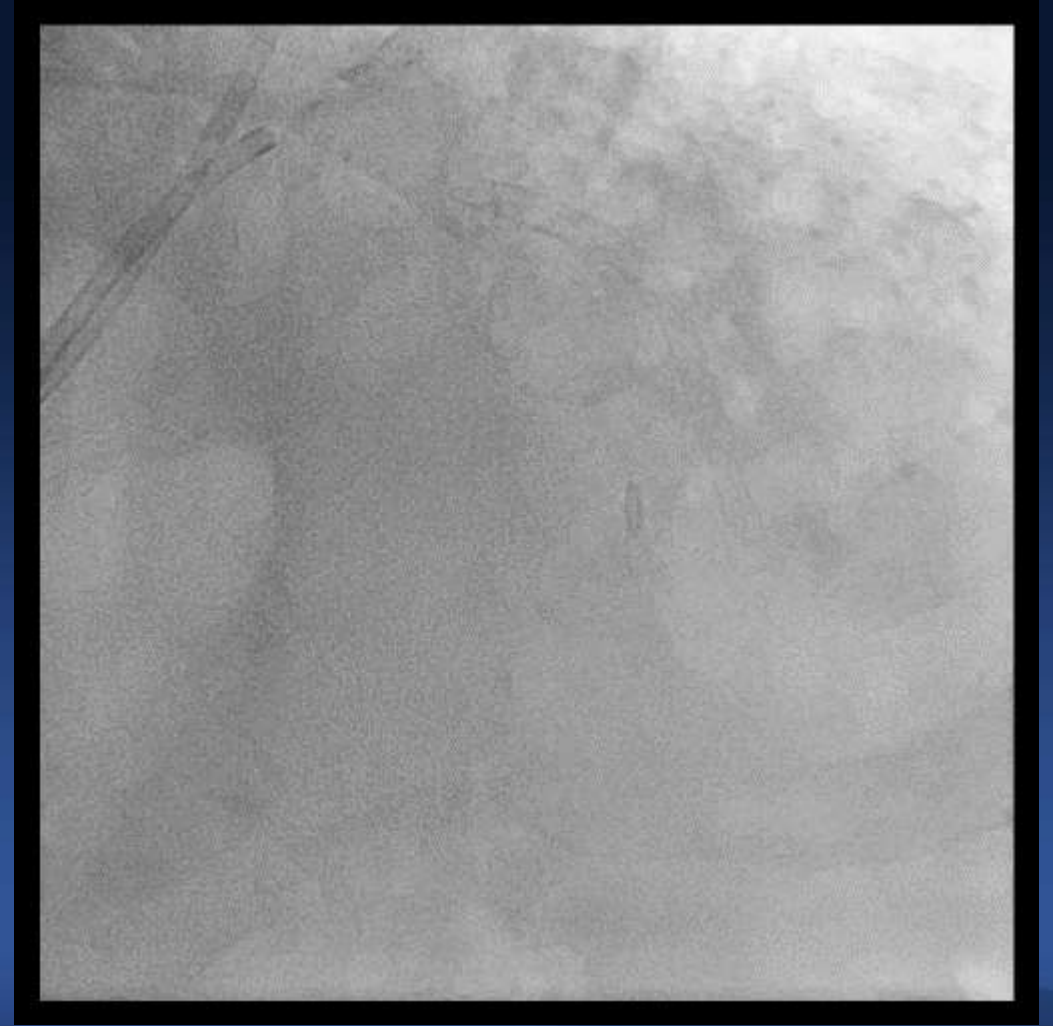
How to Overcome?

- Do not pull back. It stretches.
- Push in the image transducer to the tip
- Push the catheter in.
- 2nd guidewire & ballooning to modify the anatomy.

M/71, Angina, LAD PCI



Trapped IVUS after mid-LAD stenting



Rewiring & 1.0, 1.5, 2.5 NC Balloon

Conclusions

Device Entrapment during PCI

- Device entrapment occurs during complex PCI.
- Stay Calm, Keep Vital Sign, Call for Help.
- Think about the Mechanism of Entrapment, then Overcome.
Choice of appropriate strategy is more important than technique.
- Prevention is Always Better. Gentle Manipulation during your Procedure can Prevent those Disasters.