



# Best case and worst case of LAA occlusion

*Saibal Kar, MD, FACC, FAHA, FSCAI  
Director of Interventional Cardiac Research  
Cedars Sinai Medical Center, Los Angeles, CA  
Email: [karsk@cshs.org](mailto:karsk@cshs.org)*



CEDARS-SINAI MEDICAL CENTER

# ***Case summary***

***Patient: 76-year-old man***

***Past Medical History:***

- ✓ ***Atrial fibrillation***
- ✓ ***Hypertension***
- ✓ ***Hyperlipidemia***

***Past Surgical History:***

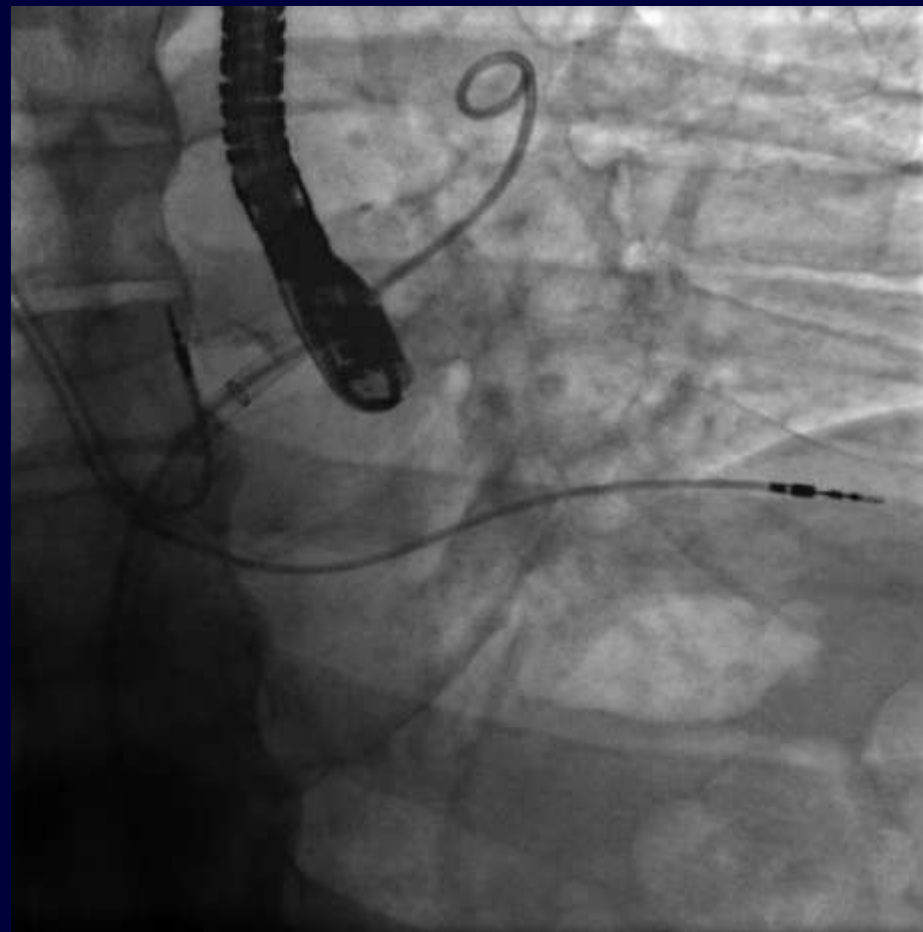
- ✓ ***Pacemaker implantation [2004]***

***CHADS<sub>2</sub> score: 2***

***Enrolled in the CAP registry***

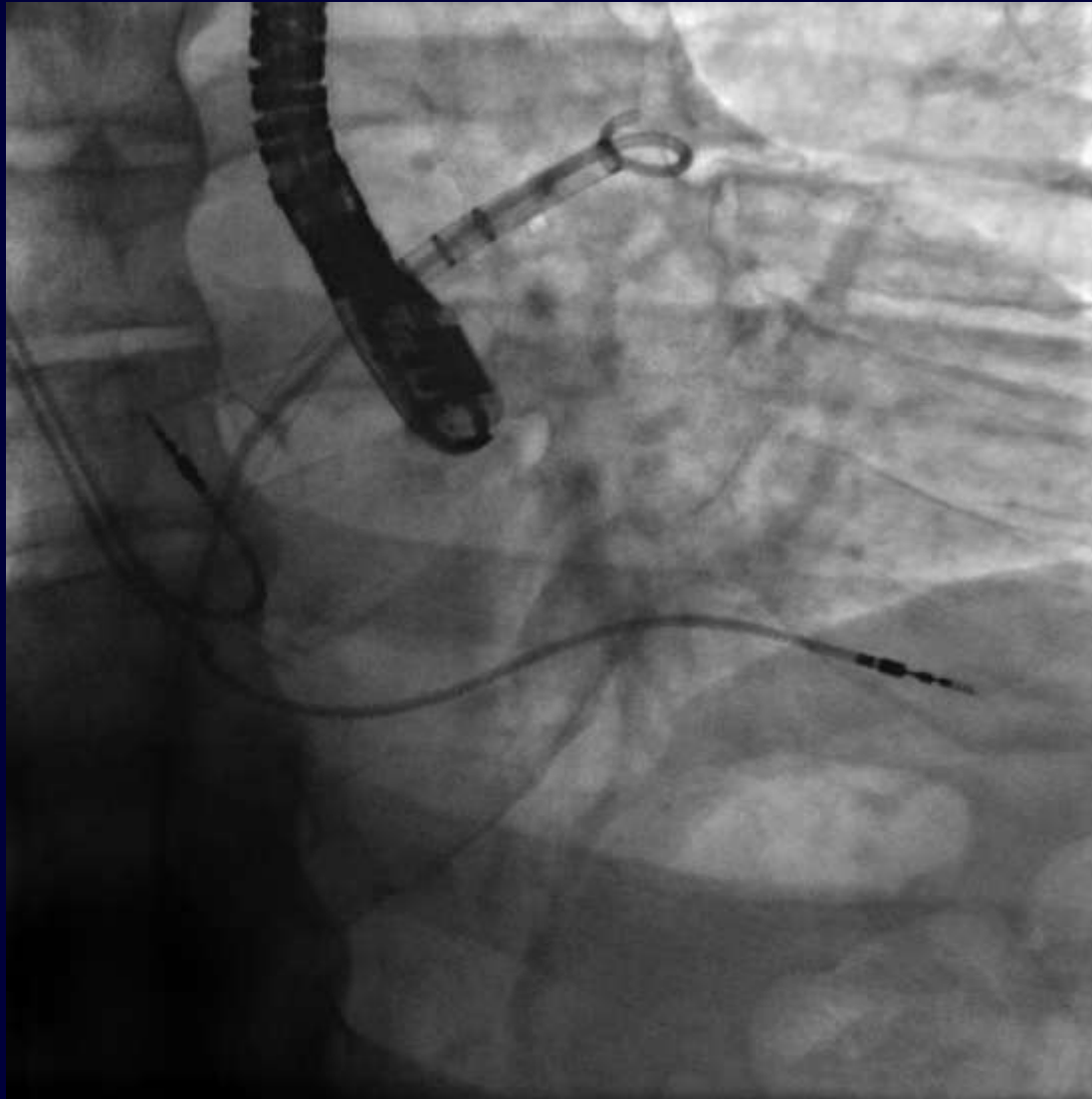


# ***Baseline TEE and LAA angio***



***Max diameter was 19 mm***

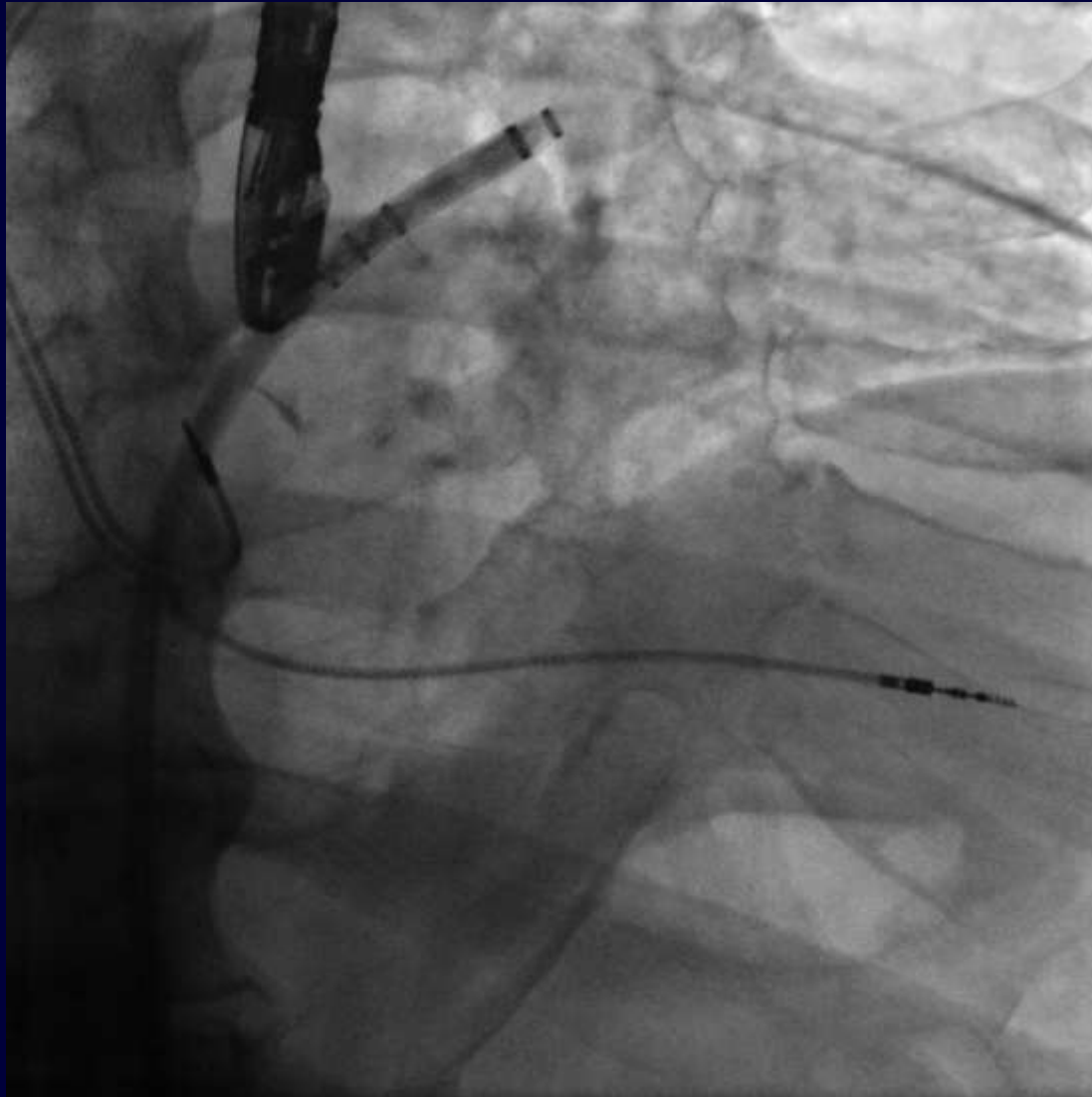
# *Delivery sheath advanced into LAA*



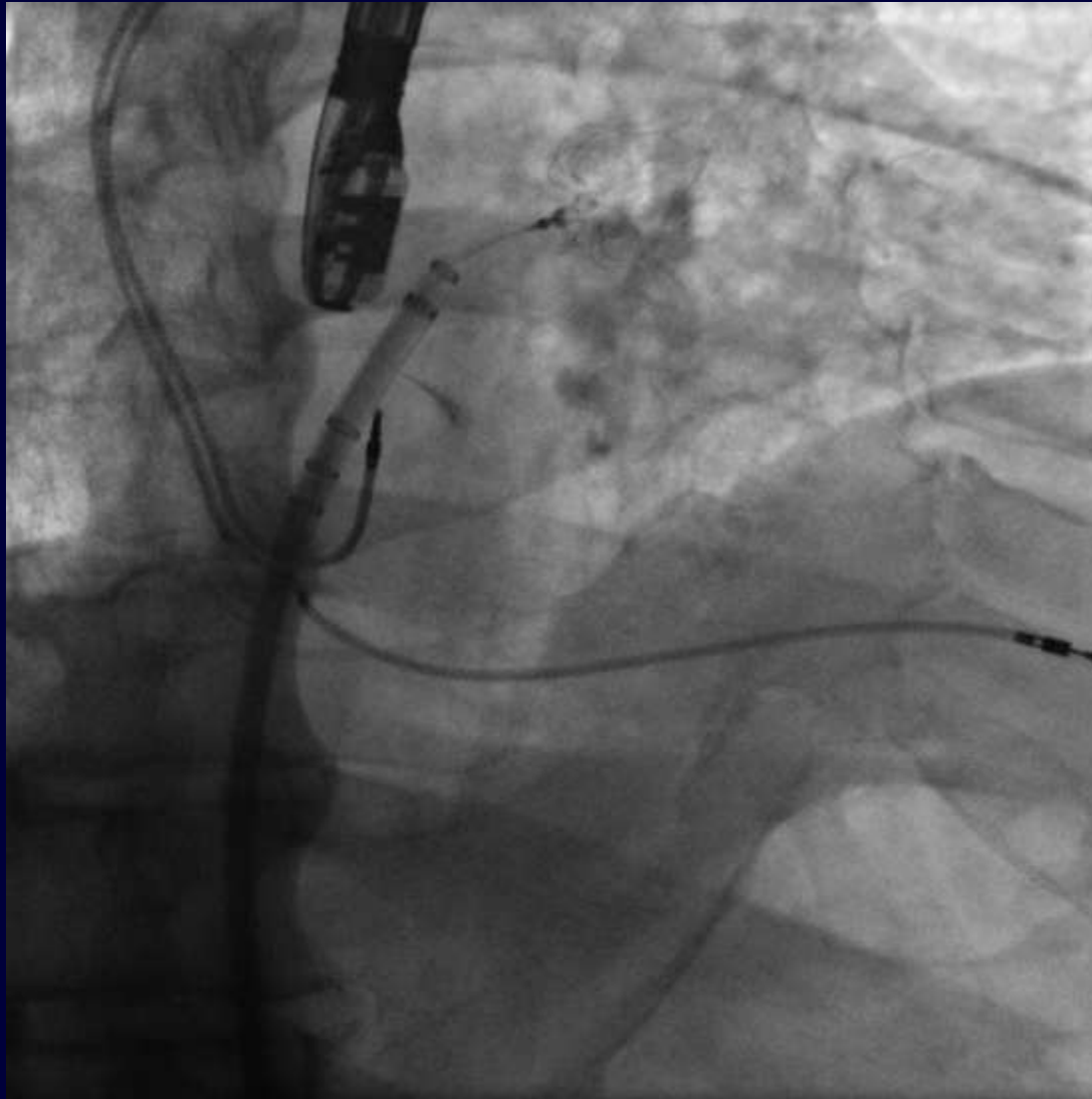
# ***24-mm Watchman device advanced through Delivery sheath***



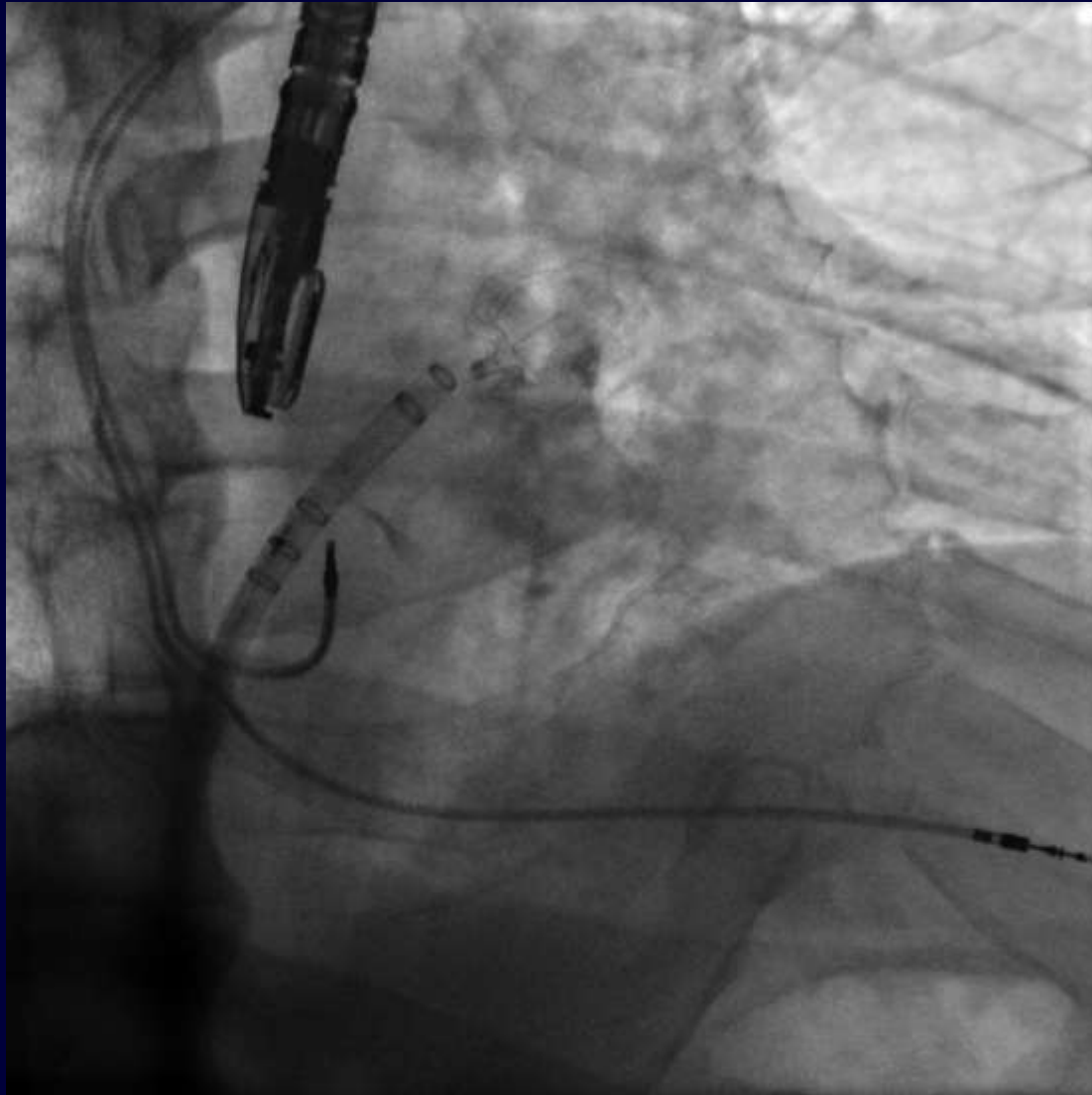
# *Device deployment*



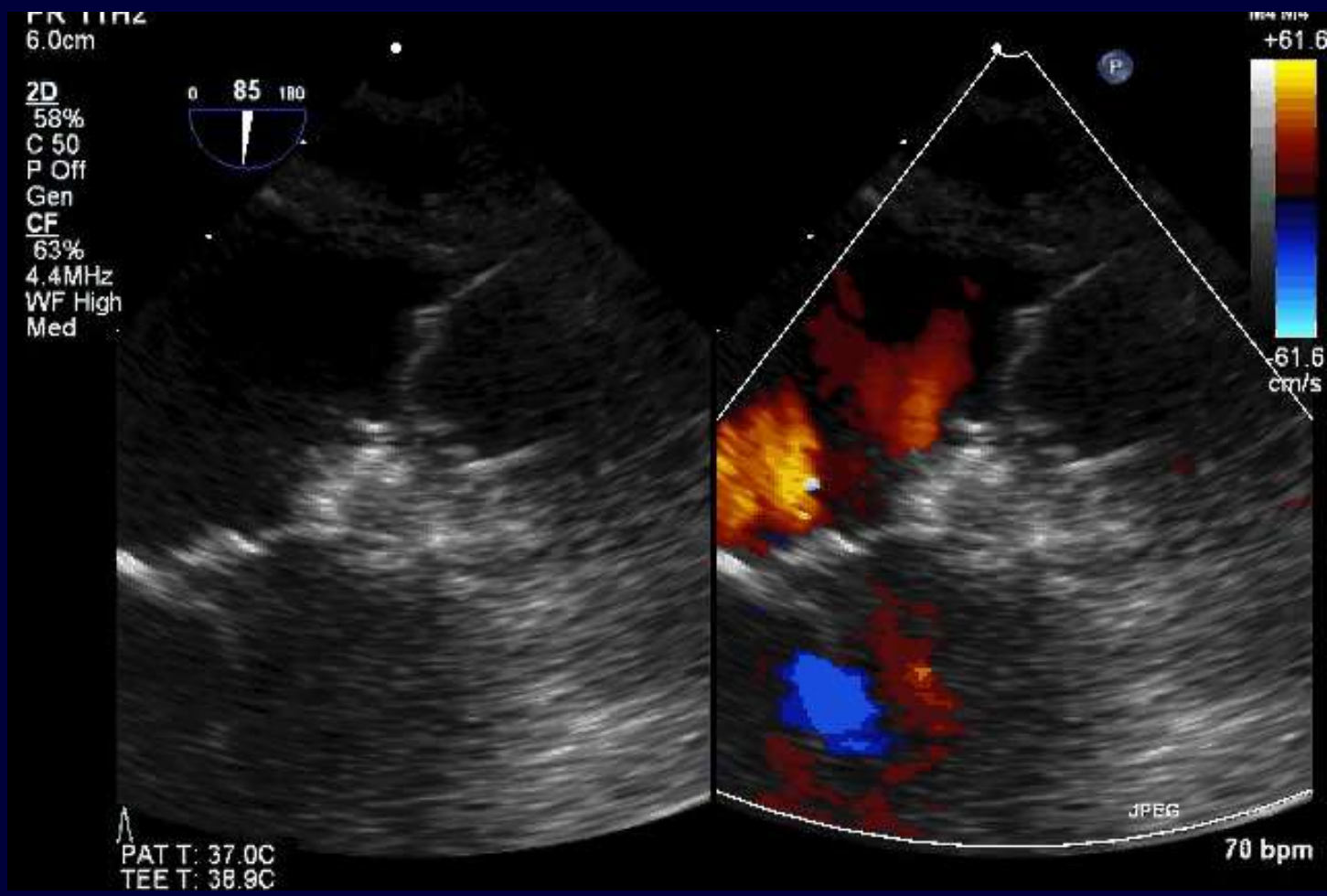
# *Tug test*



# *Final LAA Angiogram*





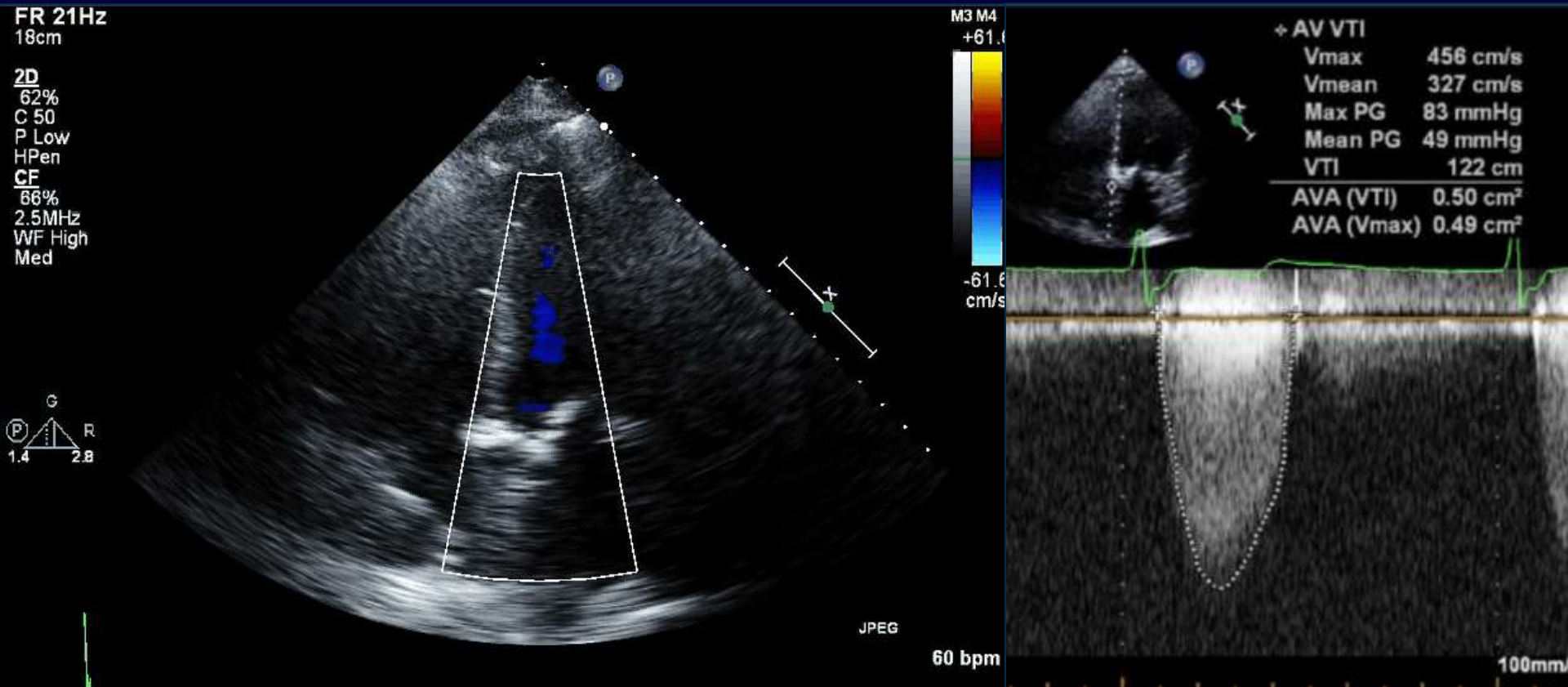


# 4 years later

- **No strokes or TIA**
- **Developed worsening shortness of breath**
- **No bleeds**

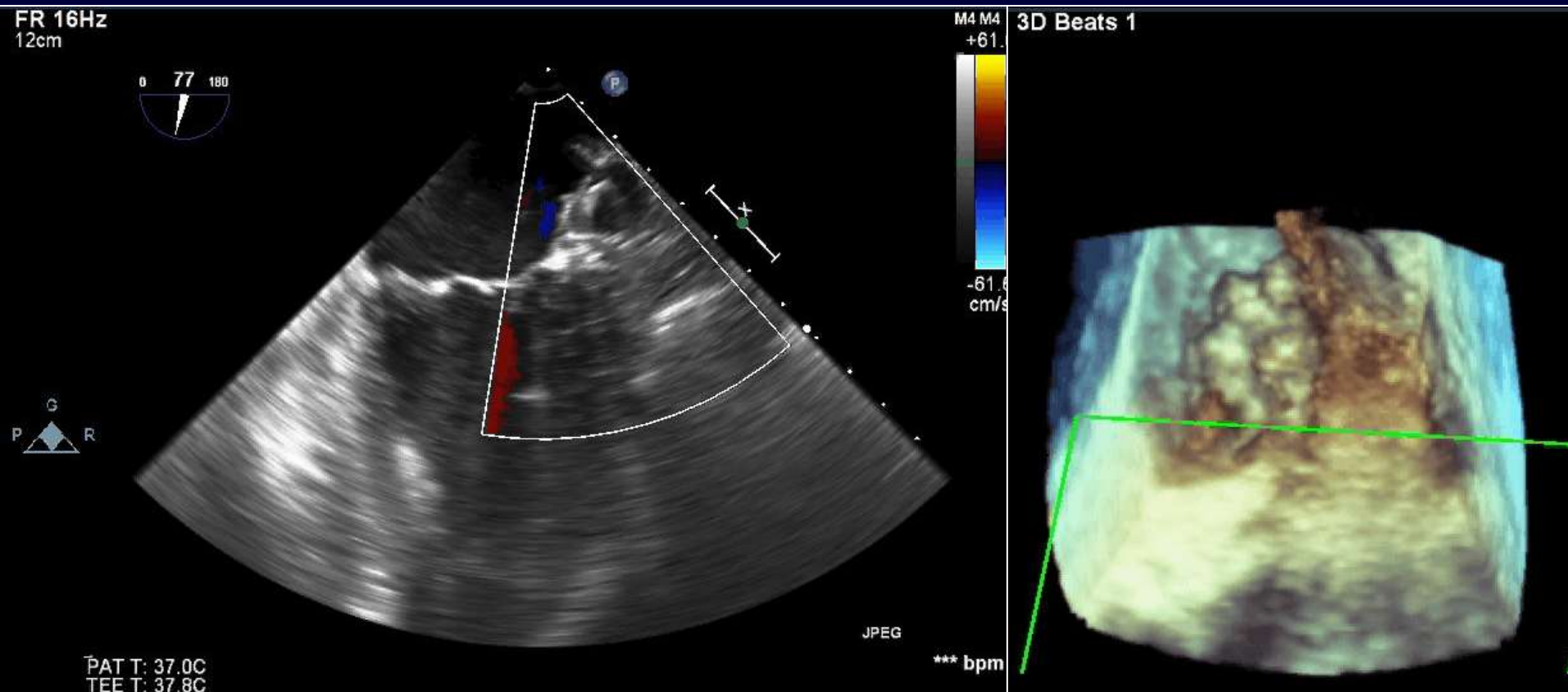


# 4 years follow-up

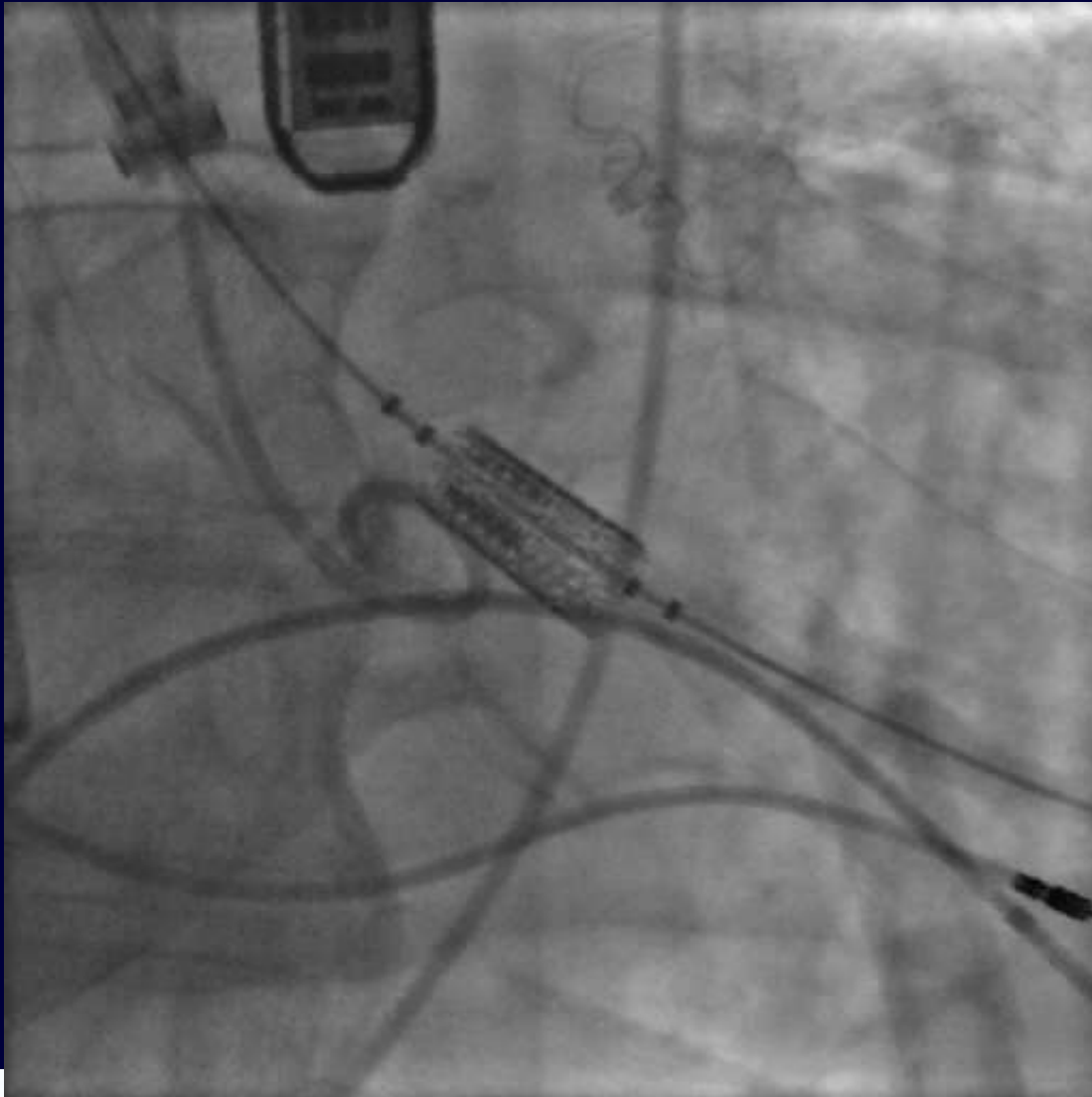


# 4 years follow-up

No Thrombus no leak



# *TAVI using 26-mm SAPIEN valve*



- 8 month later
- NYHA I
- No strokes
- No bleeds

# Take home message

- **There is long term benefit reduction of stroke using LAA closure**
- **Evidence of device healing without thrombus formation at 4 years**
- **In patients with AS undergoing TAVI, the risk of stroke might be reduced if patients have LAA occlusion also**



# Case History

- 82 yr old male
- Chronic AF
- History of stroke
- CAD: History of MI and PCI
- CHADS Vasc Score: 4
  
- Randomized to Amplatzer Cardiac Plug in the Pilot study in US





# Baseline TEE

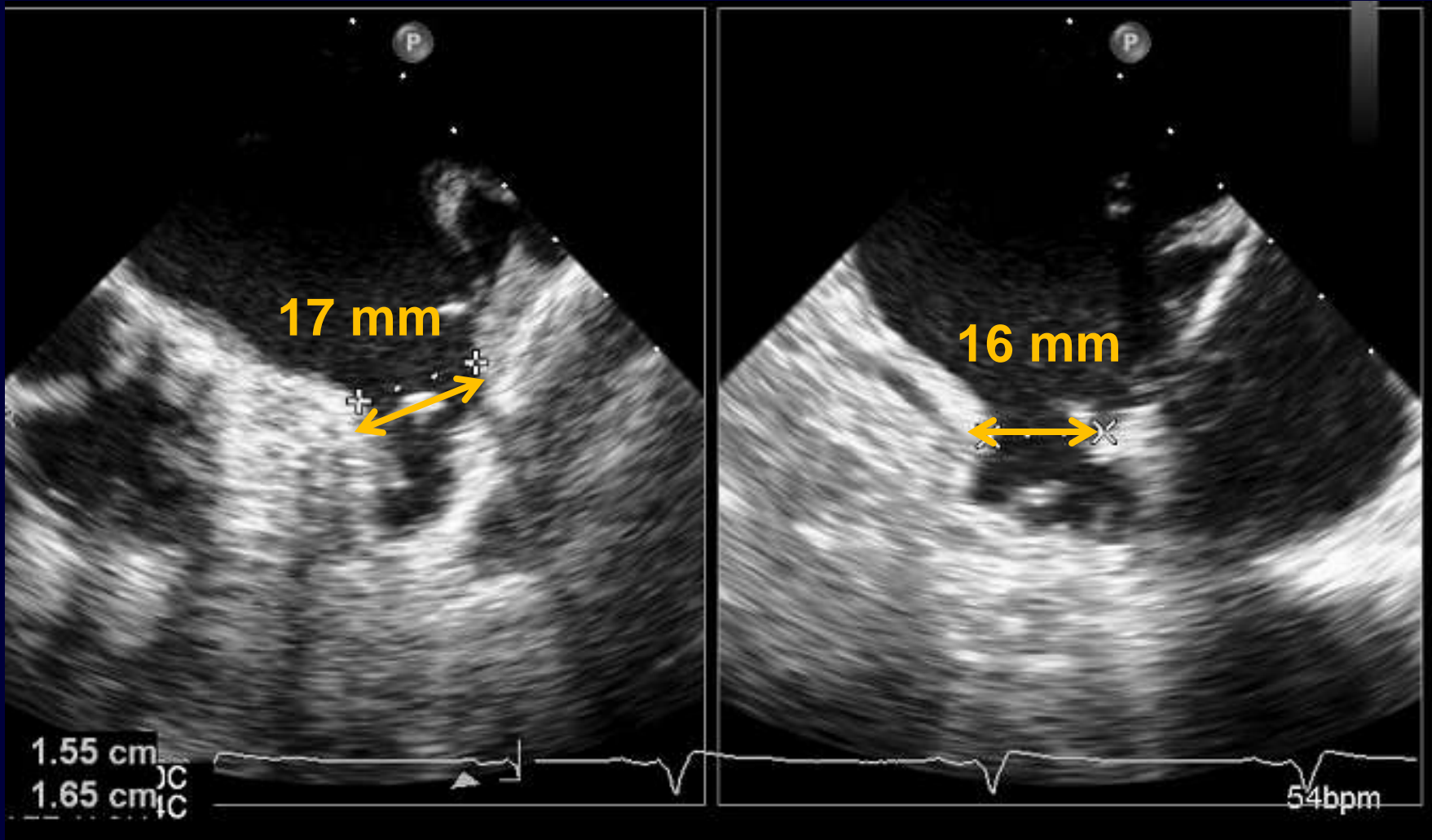
*45 degrees*

*135 degrees*

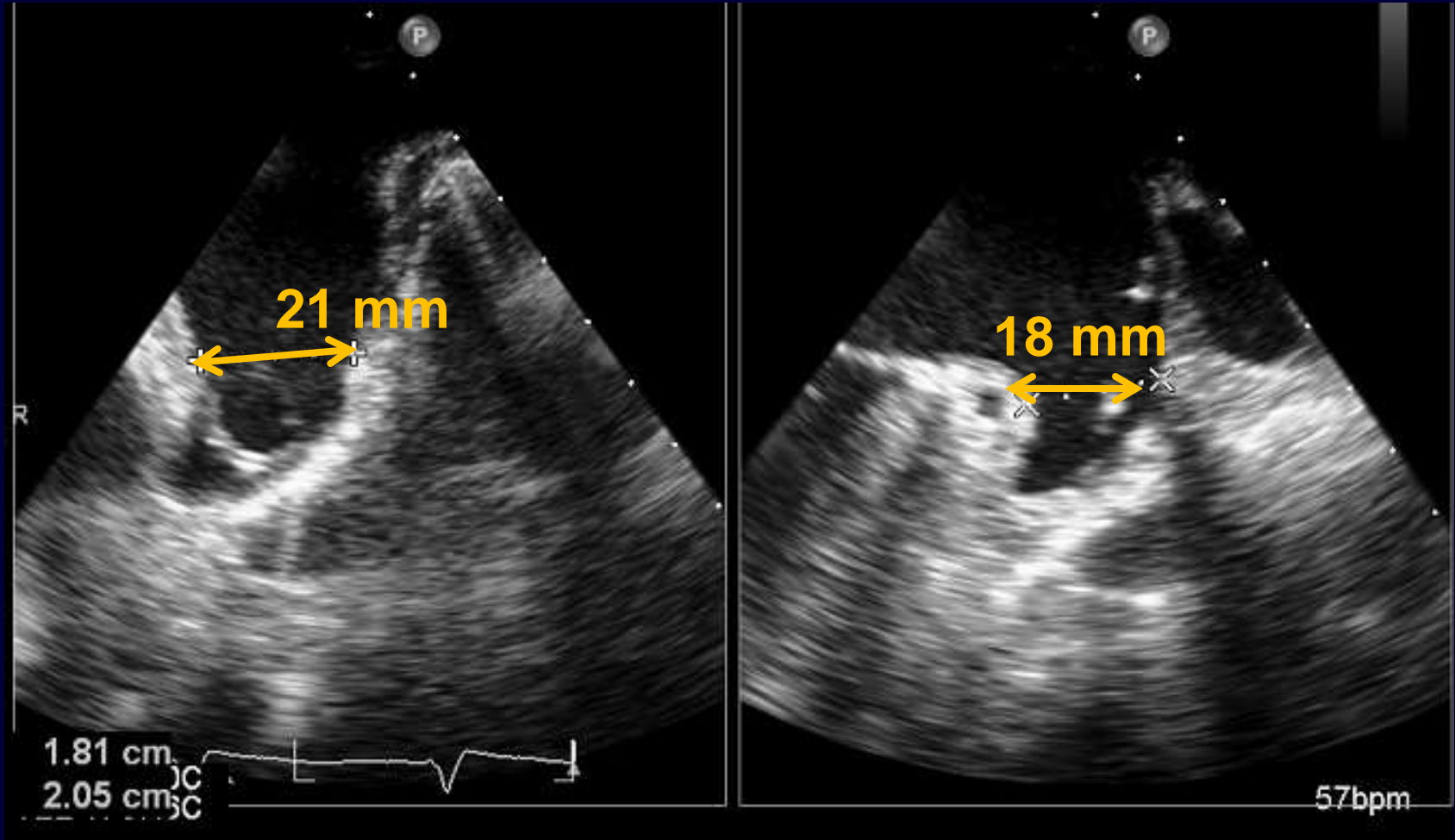




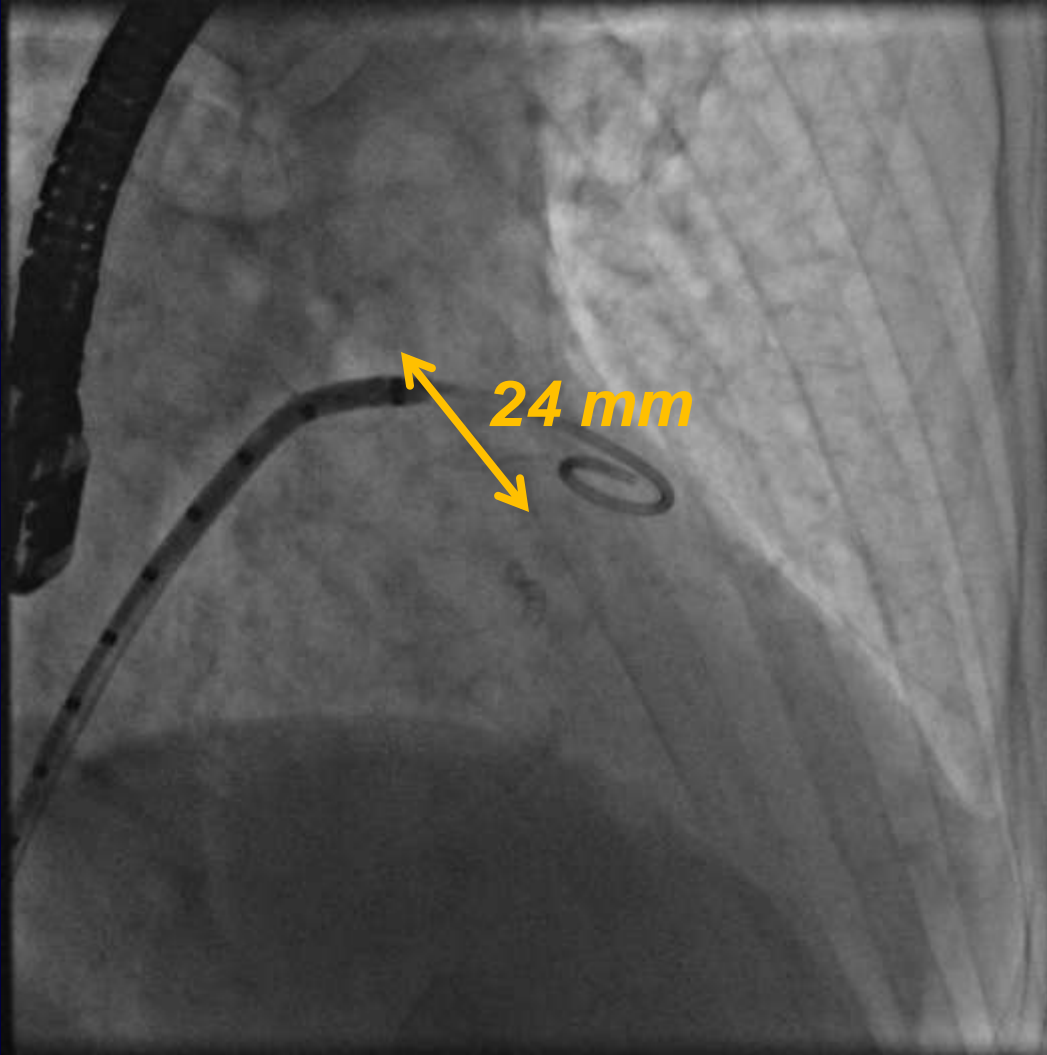
# Baseline TEE: measurement of Landing zone



# Baseline TEE: measurement of Landing zone



# ACP implantation procedure: Baseline LAA angio in RAO 30 Cr 10 view

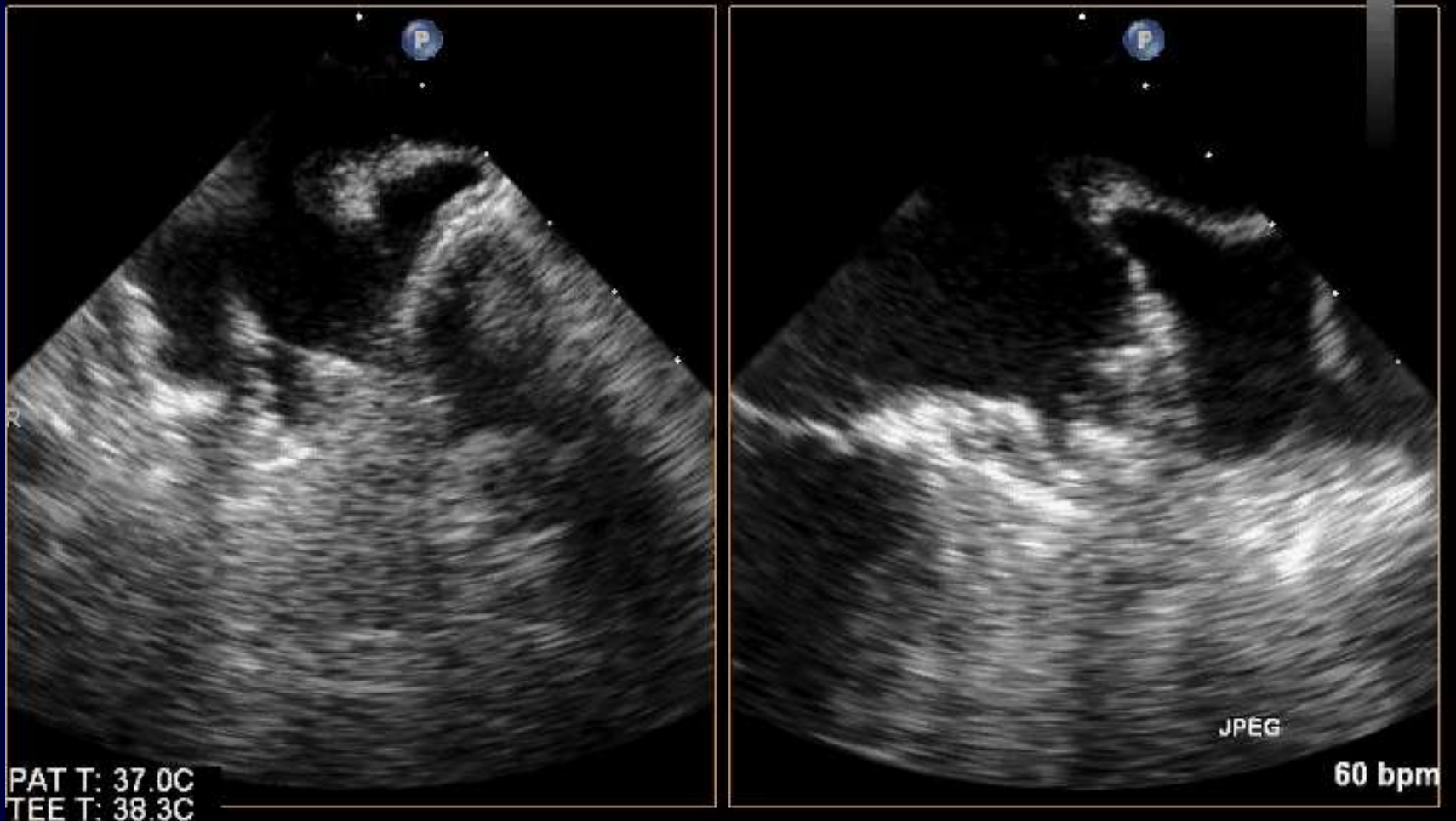


# What size device

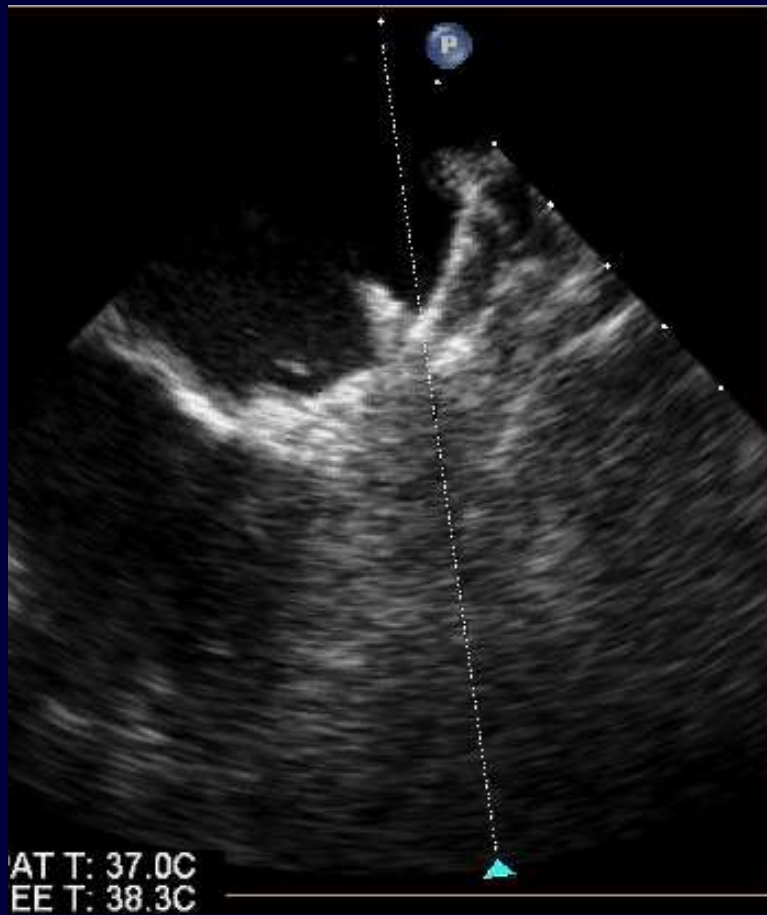
- **ACP 26 mm**
- **ACP 28 mm**
- **ACP 24**
- **Watchman 24 mm**



# Implantation of the Lobe of 26 mm ACP

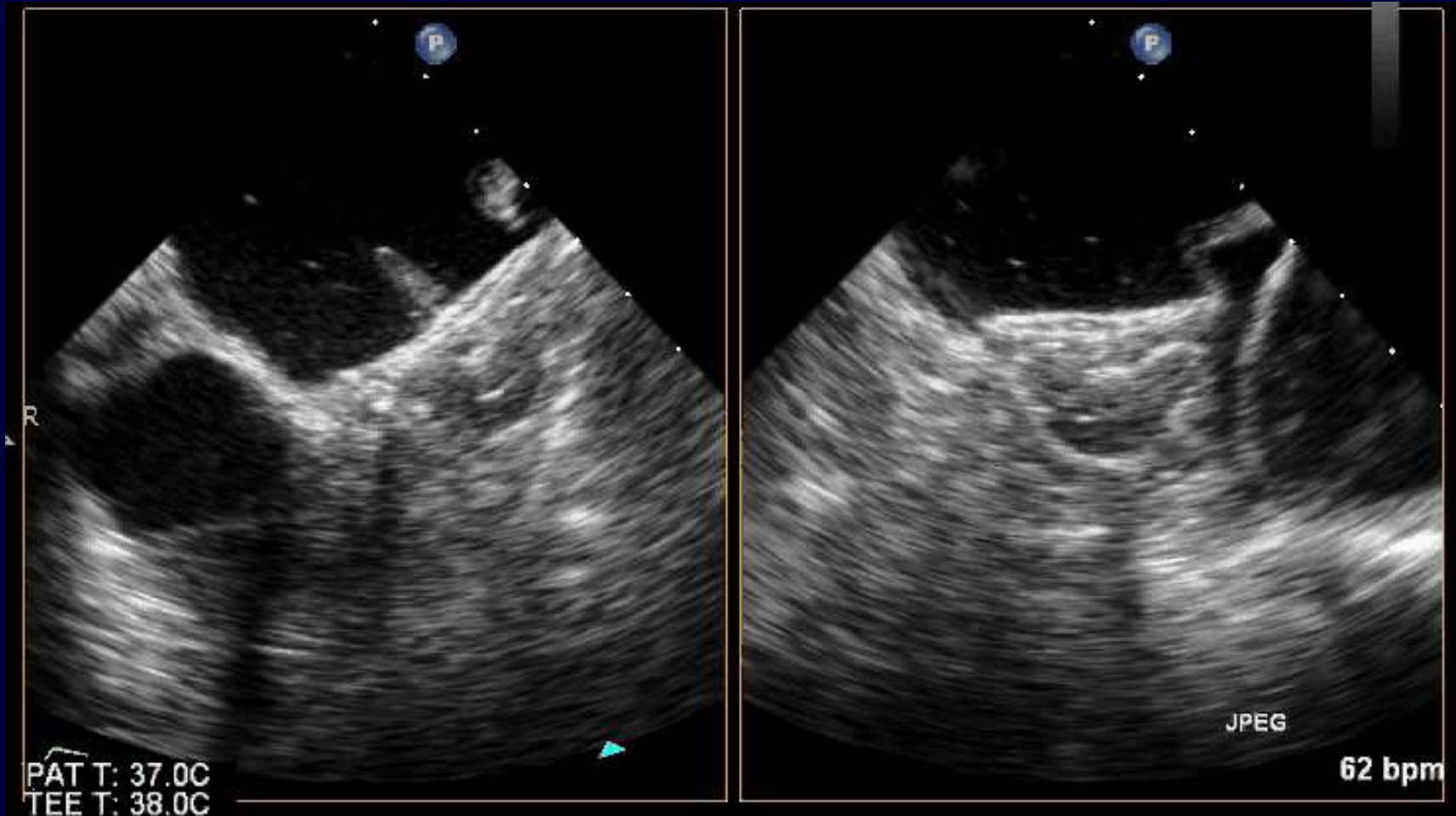


# Attempted implantation of 26 mm ACP





# Final deployment after several attempts



# Implantation of 26 mm ACP Plug after several attempts





# 45 day routine follow up

*Patient was asymptomatic for 45 days*

*No chest pain, No stroke or TIA*



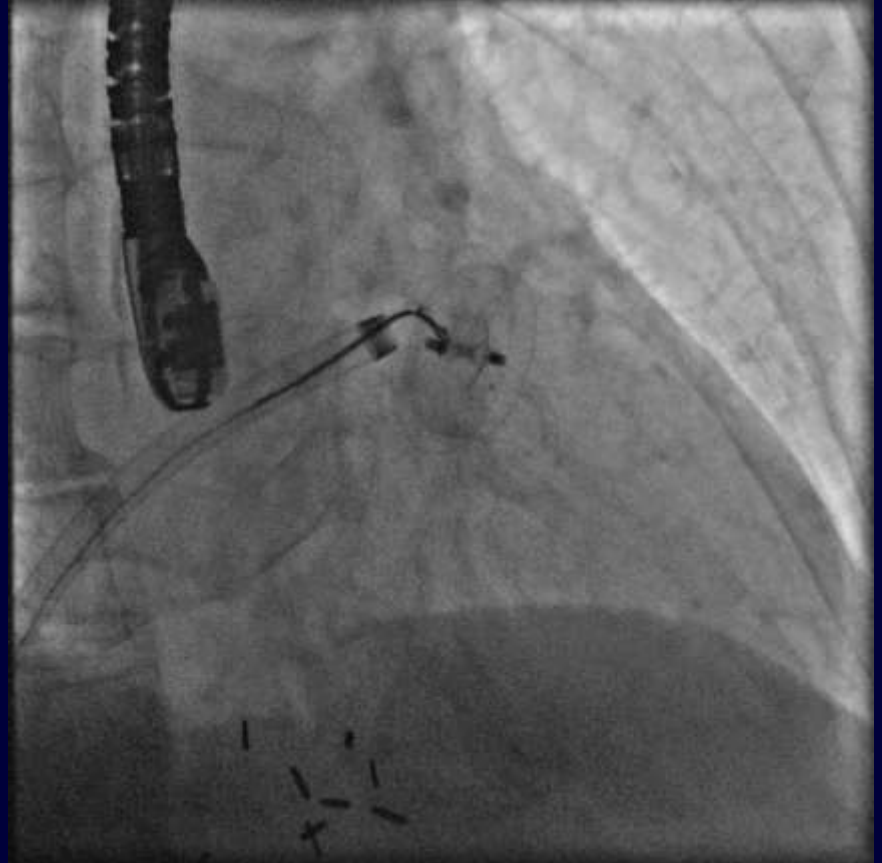
# TEE at 60 degrees



# Elective procedure to retrieve the device using 25 mm goose neck snare



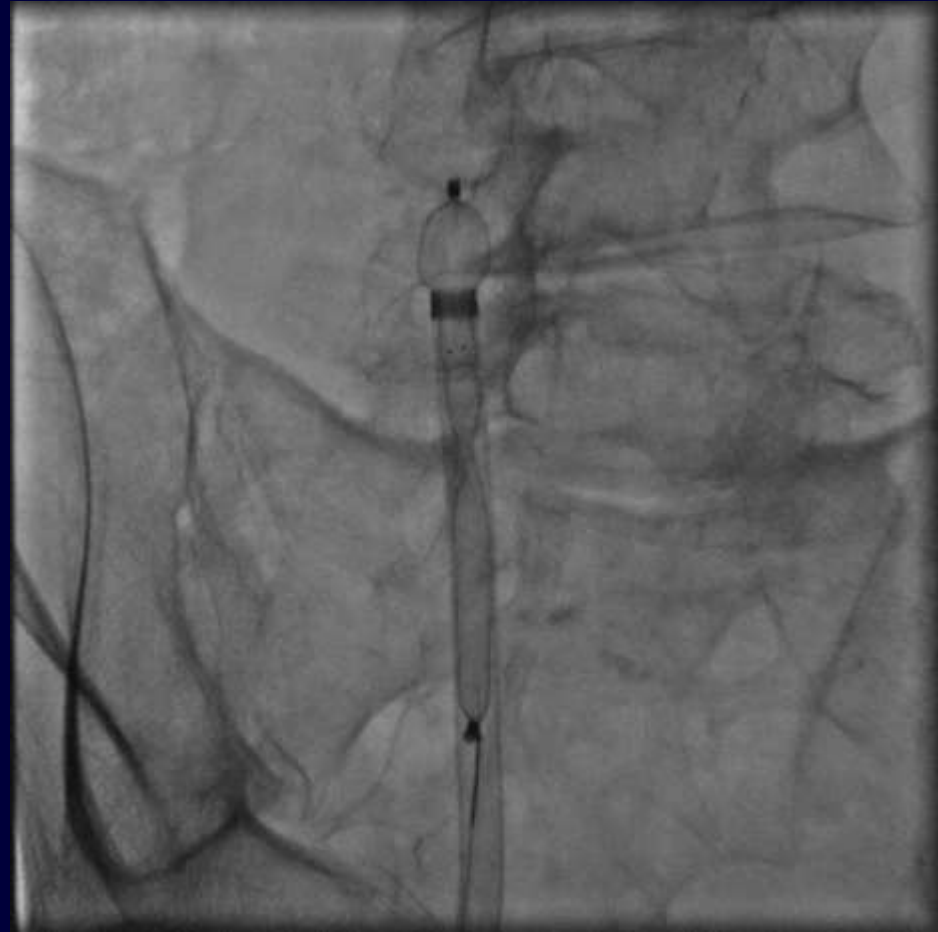
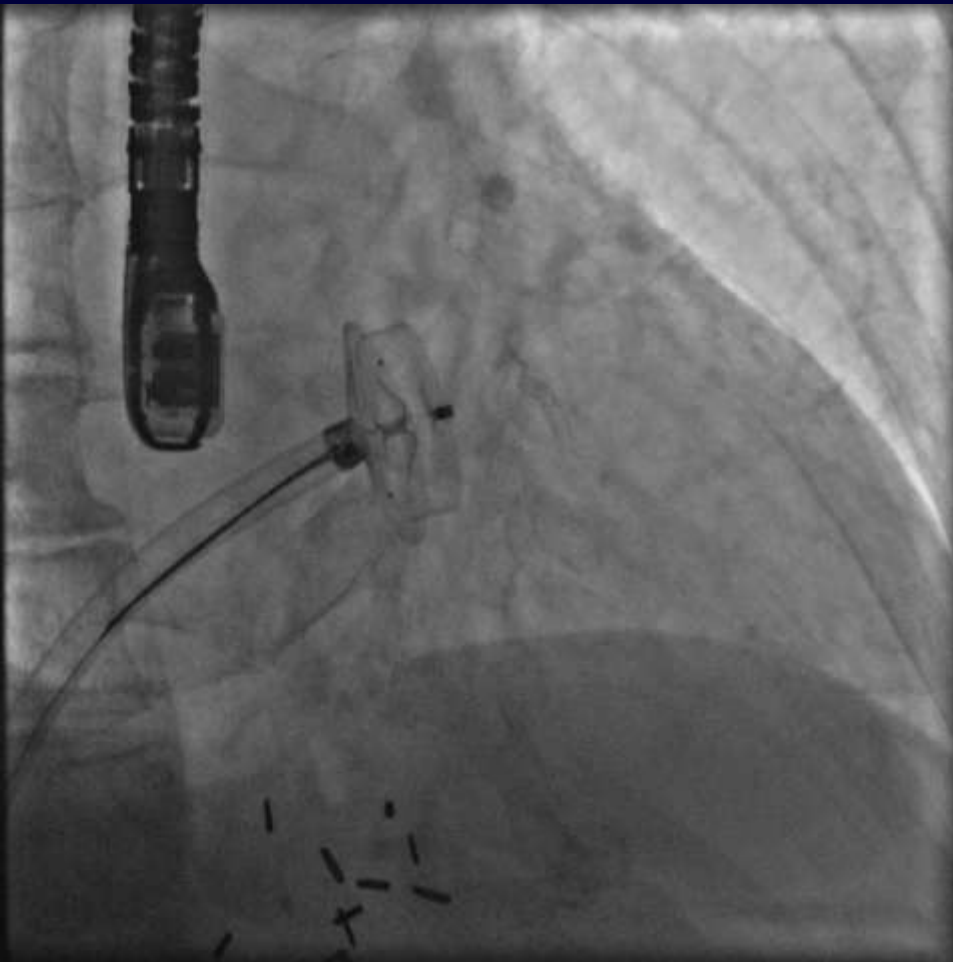
*14 sheath in LA*



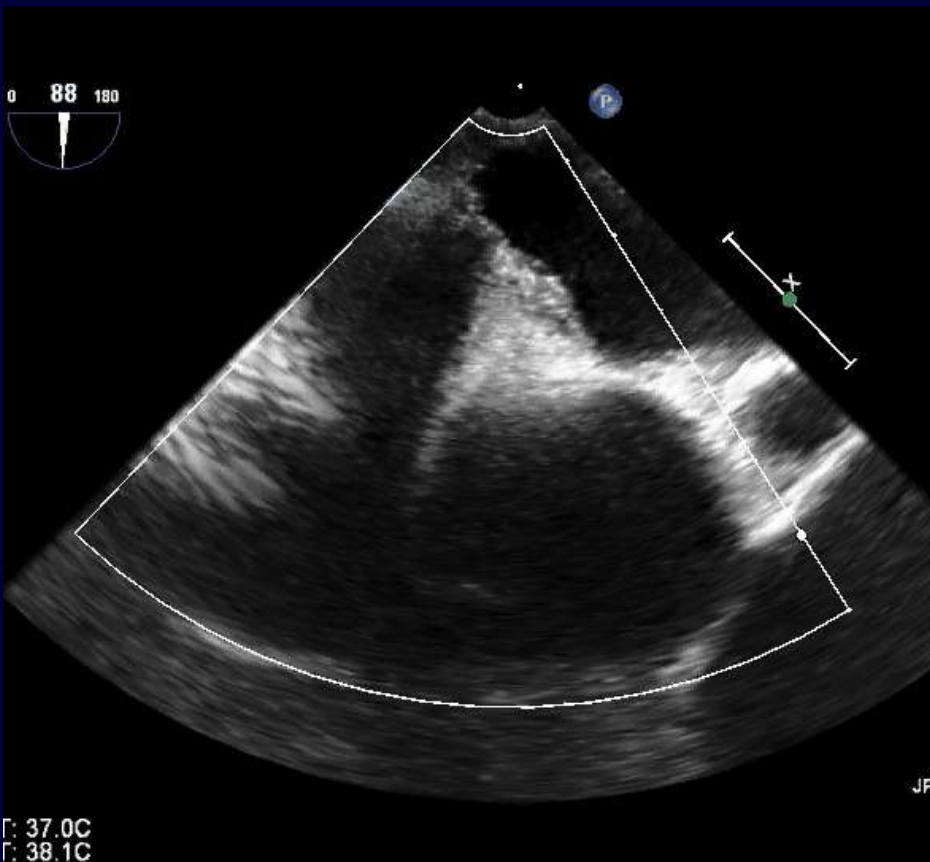
*Snared the proximal screw*



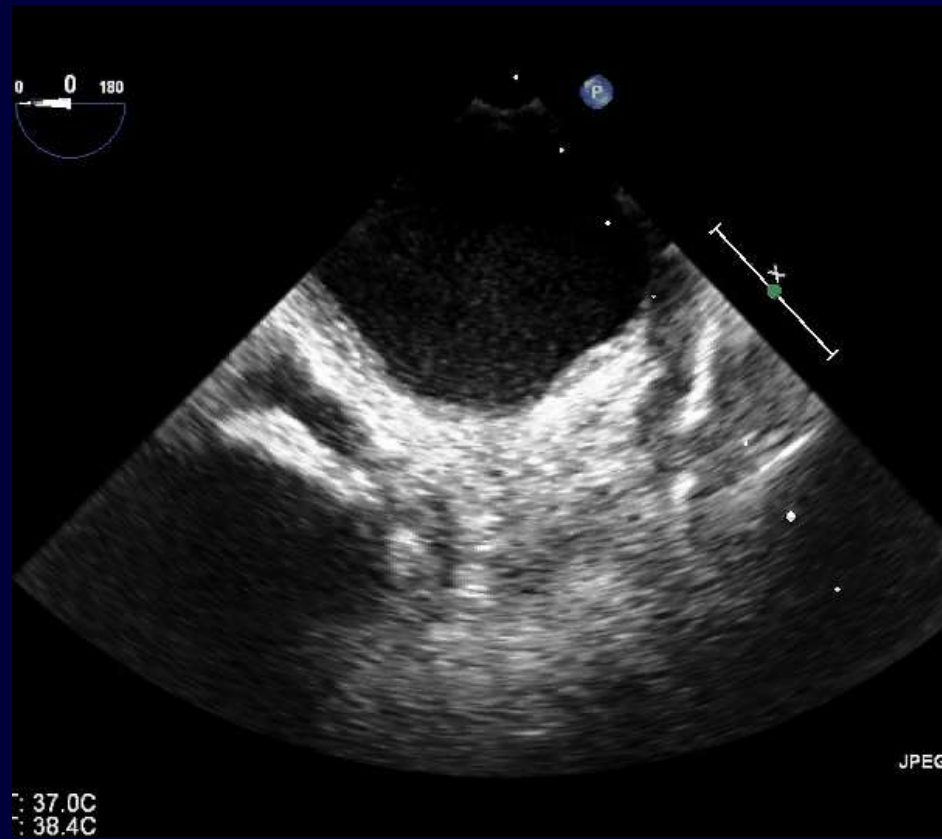
# Successful retrievable of the device



# TEE post retrievable

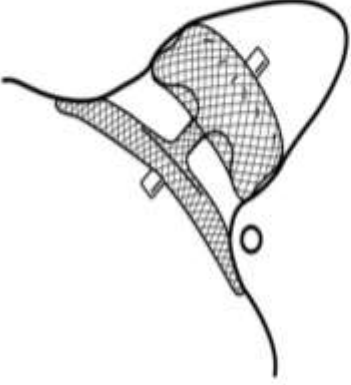
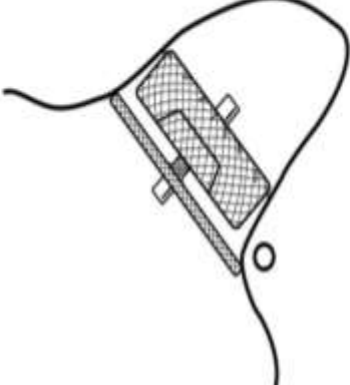
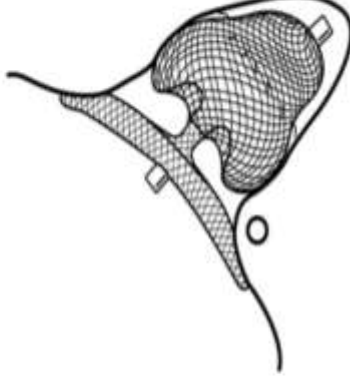


***Small ASD***

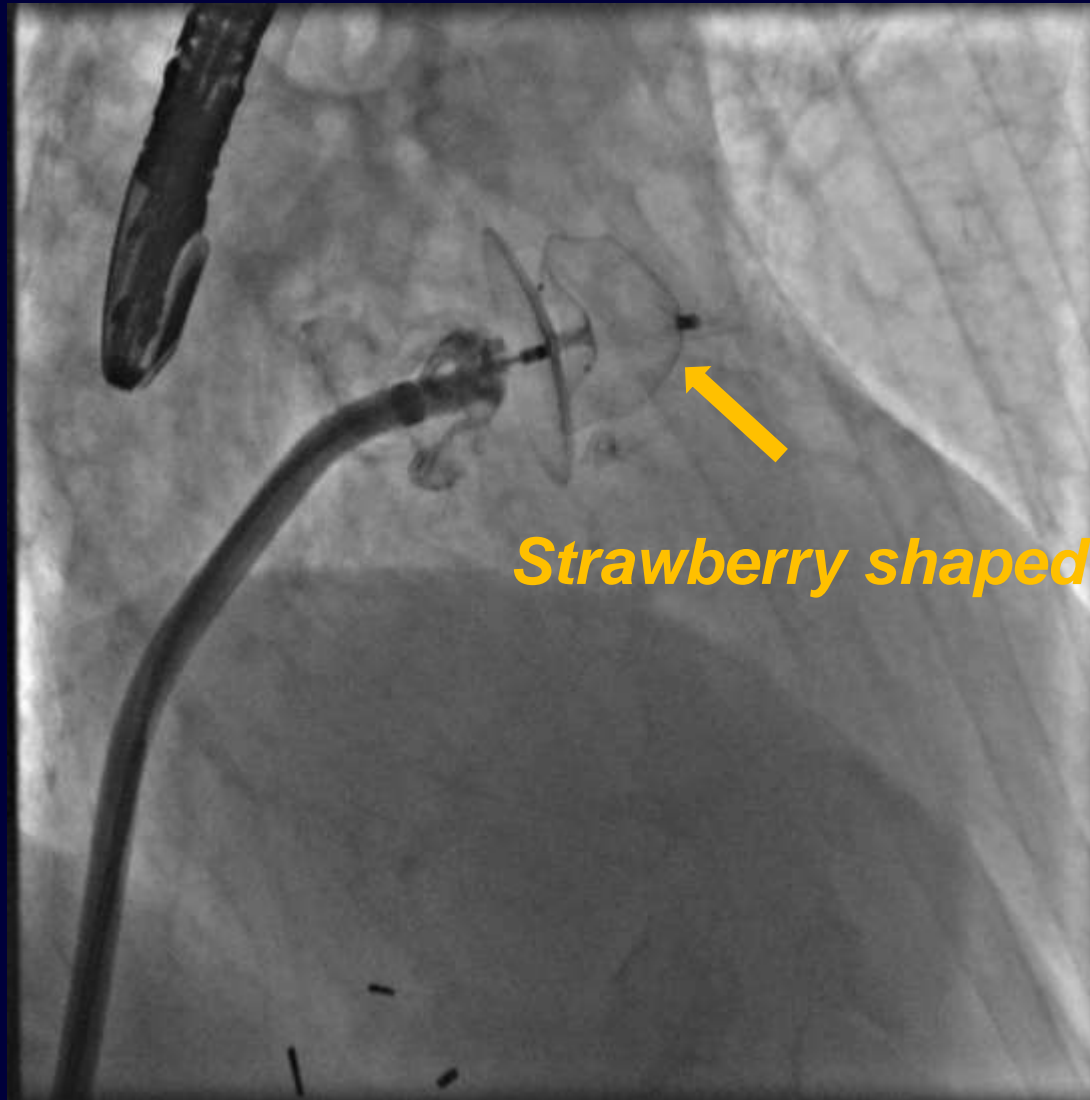


***No thrombus in LAA***

# Why did device embolize: Importance of proper sizing

		
Tire Shaped	Puck Shaped	Strawberry Shaped
Stable Stabilizing wires engaged	Unstable Stabilizing wires unengaged	

# Oversized ACP plug



*Strawberry shaped lobe*





# Take home message

- **LAA closure can be a complex procedure**
- **Proper sizing of the LAA by TEE is critical**
- **Oversizing or undersizing or malpositioning can lead to embolization**

