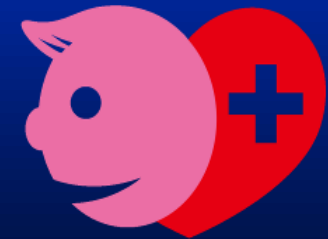
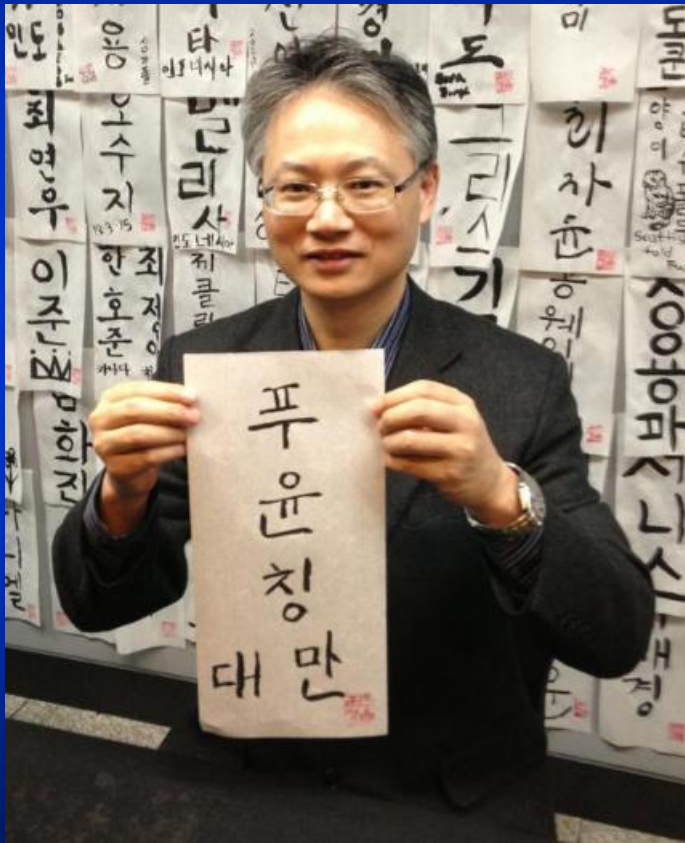


Multiple Defects with/without Septal Aneurysm

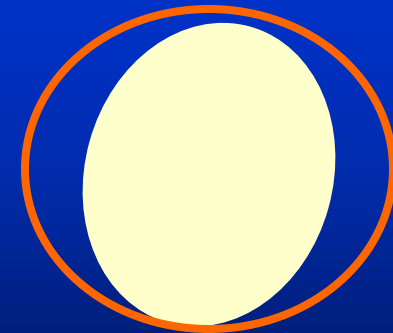
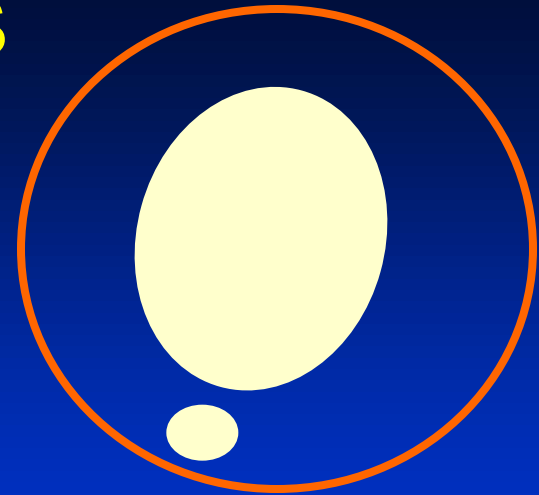
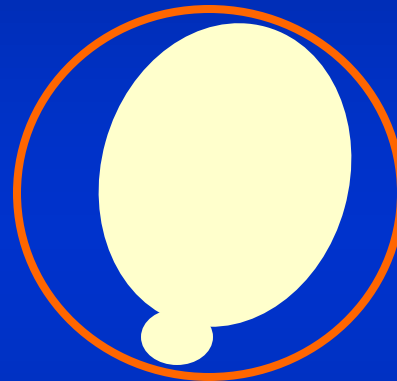
Yun-Ching Fu

Taichung VGH
Veterans General Hospital
Taichung, Taiwan



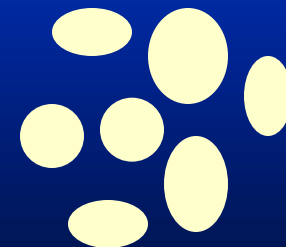
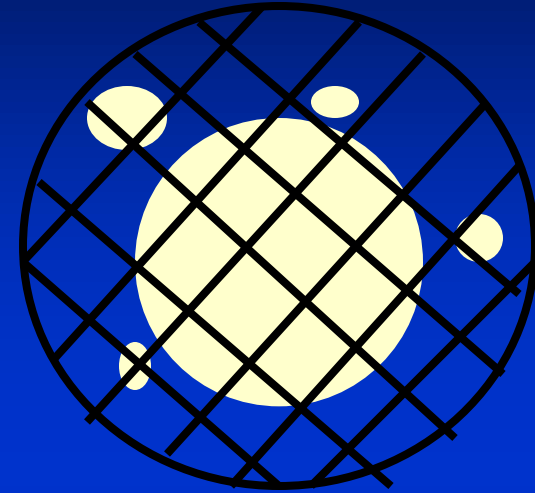
Two ASDs

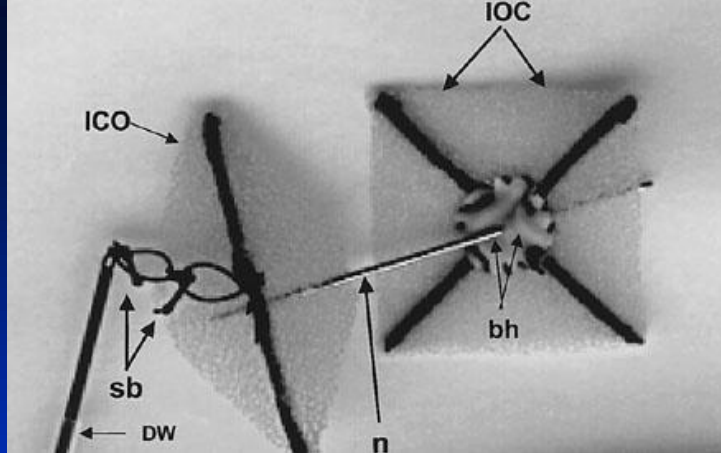
- Distance $< 6-8$ mm
 - An device from the bigger hole to cover the smaller hole
 - Balloon sizing to fuse into one hole
- Distance $> 6-8$ mm
 - use 2 separate devices



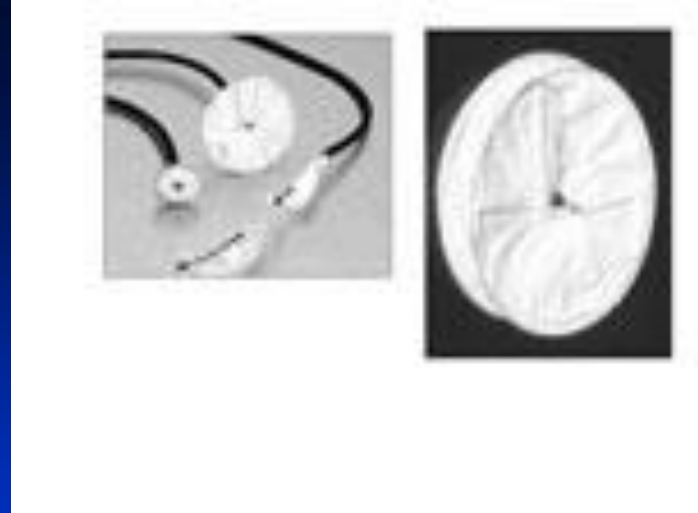
Multiple ASDs

- A central big hole surrounded by multiple small holes
 - A big Amplatzer septal occluder hopefully covers all holes
- Multiple small holes
 - “patch-type” devices

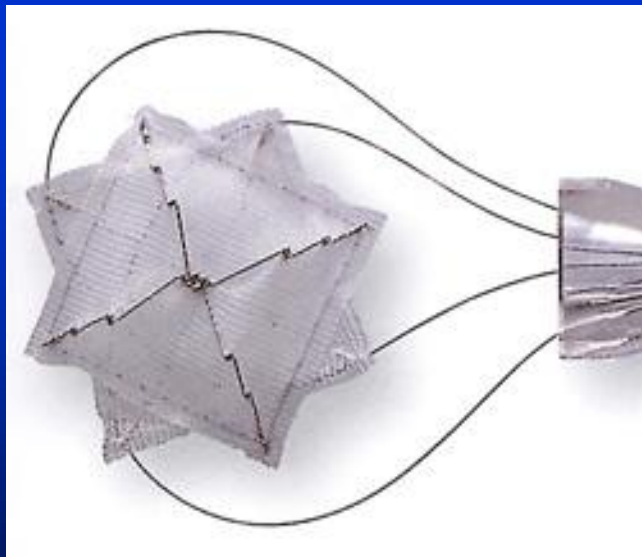




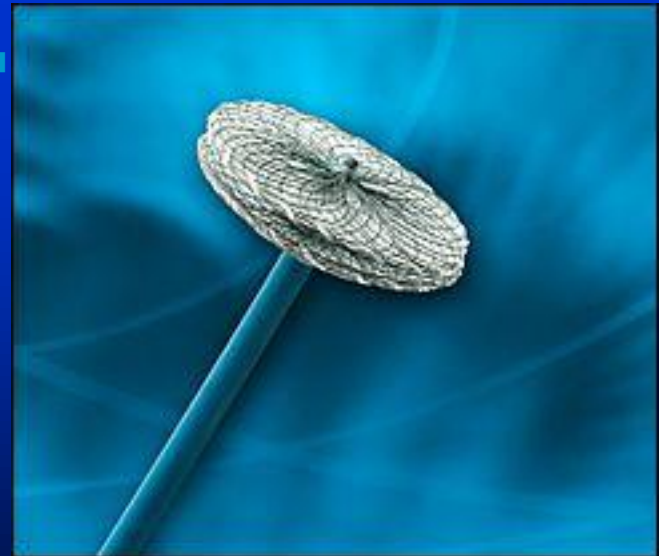
Buttoned device



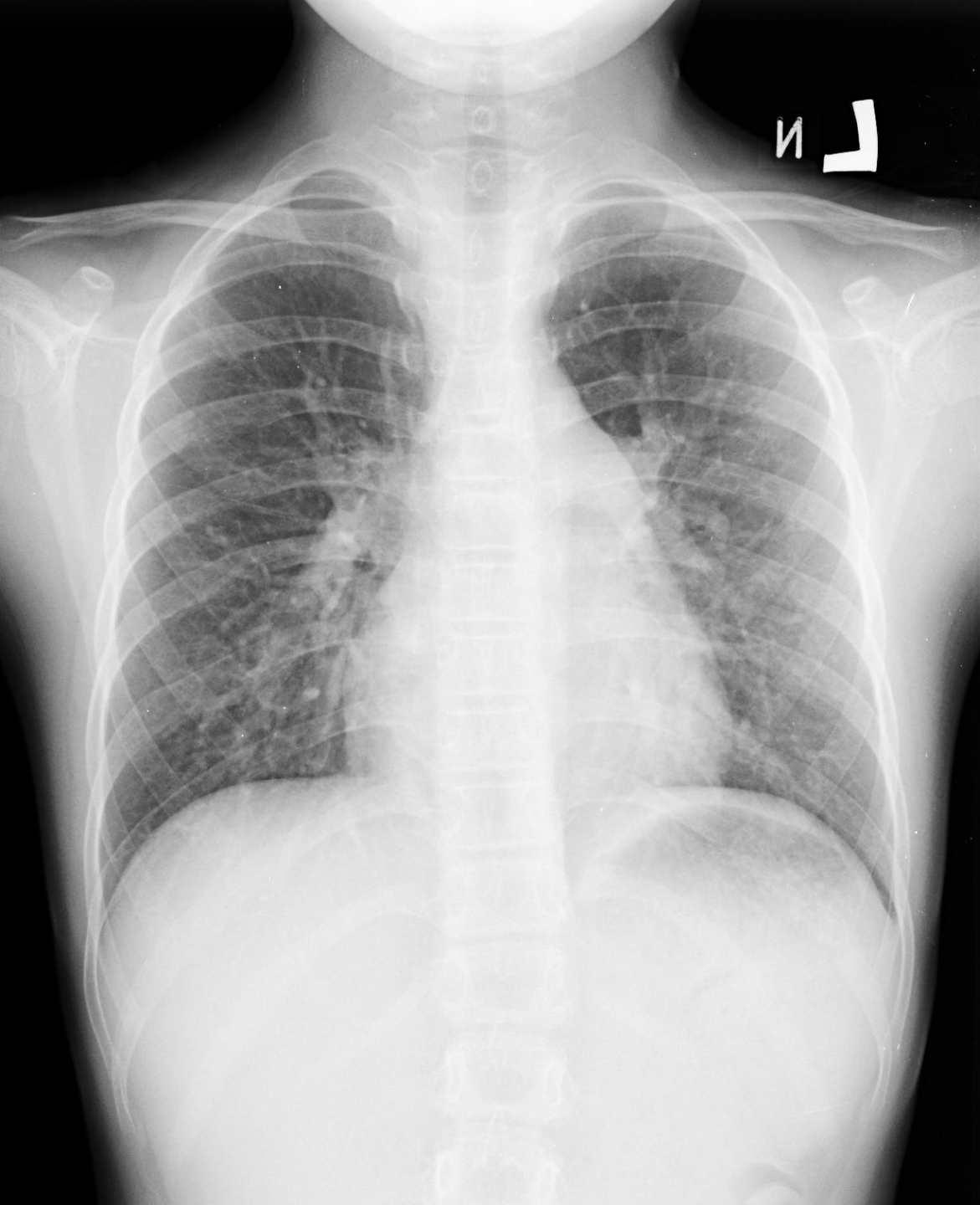
Helex Device



CardioSEAL



Amplatzer cribriform

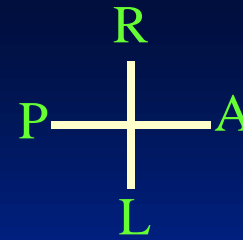


- 9 y/o girl
- 24 kg
- Multiple fenestrated ASDs
- $Q_p/Q_s = 2.45$
- exercise intolerance

ICE (bi-caval view)



ICE (short axis)

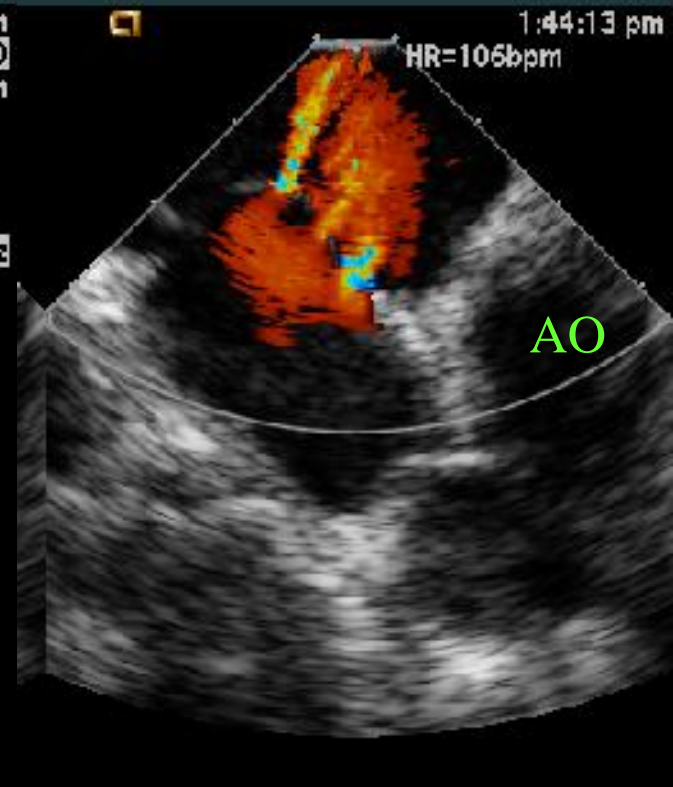
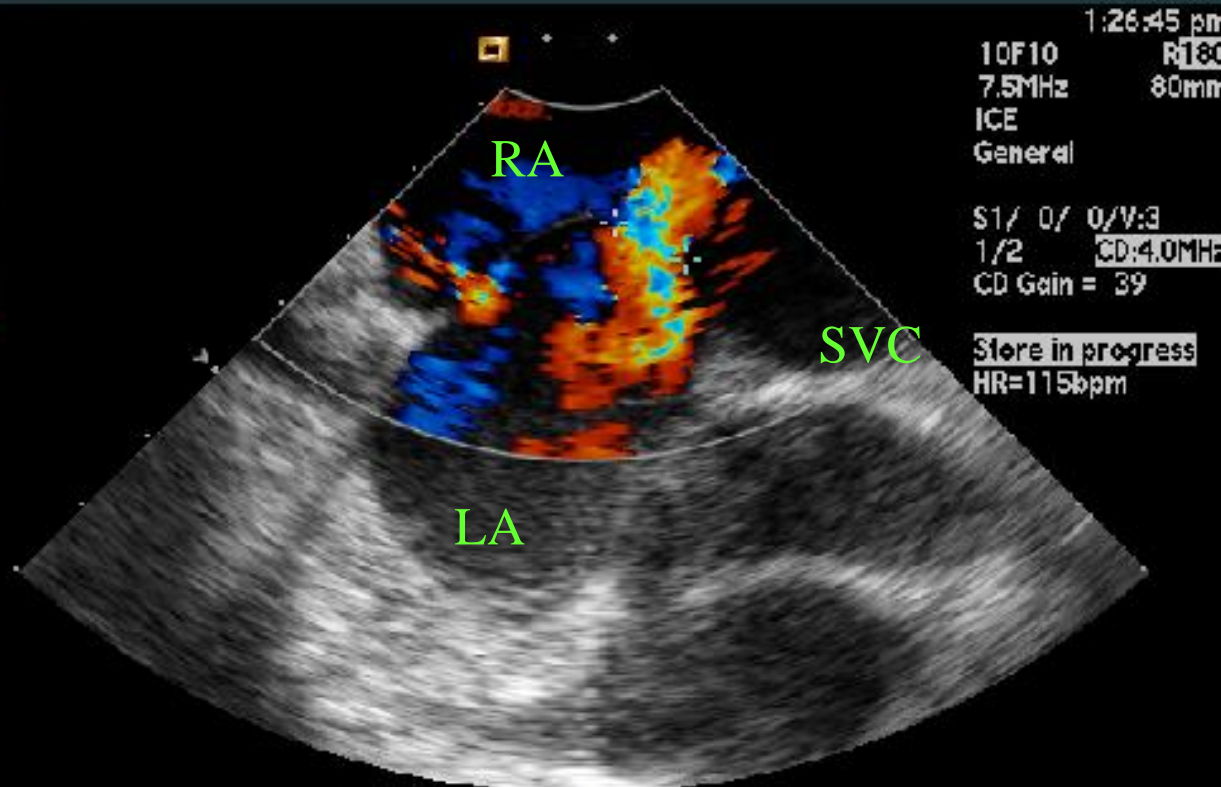


ICE (intracardiac echo): multiple fenestrated ASDs

ASD LIN YZ: 1360282J: SUN
VGH-TC

12 Aug 05

12 Aug 05



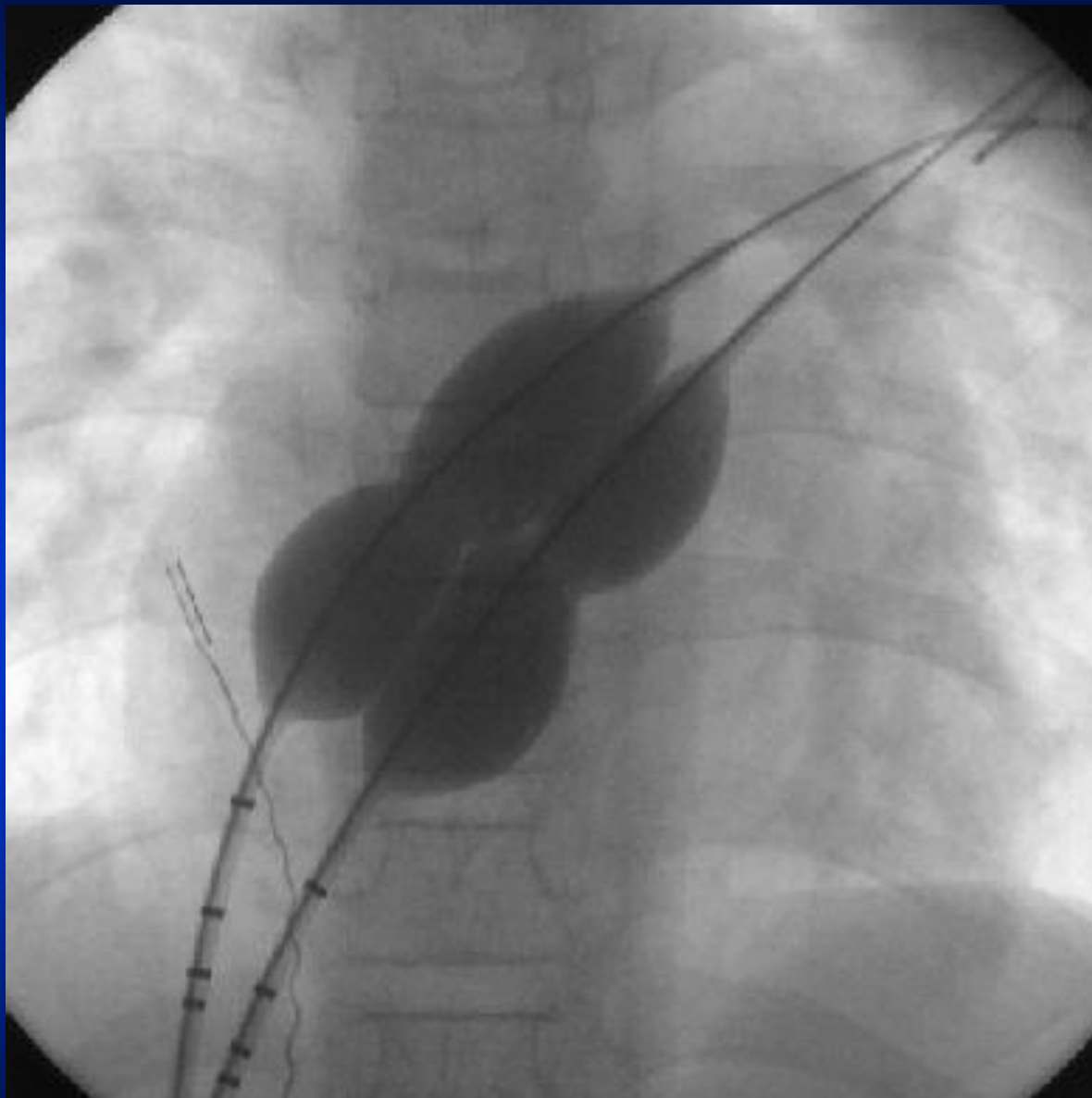
Dist = 0.86cm



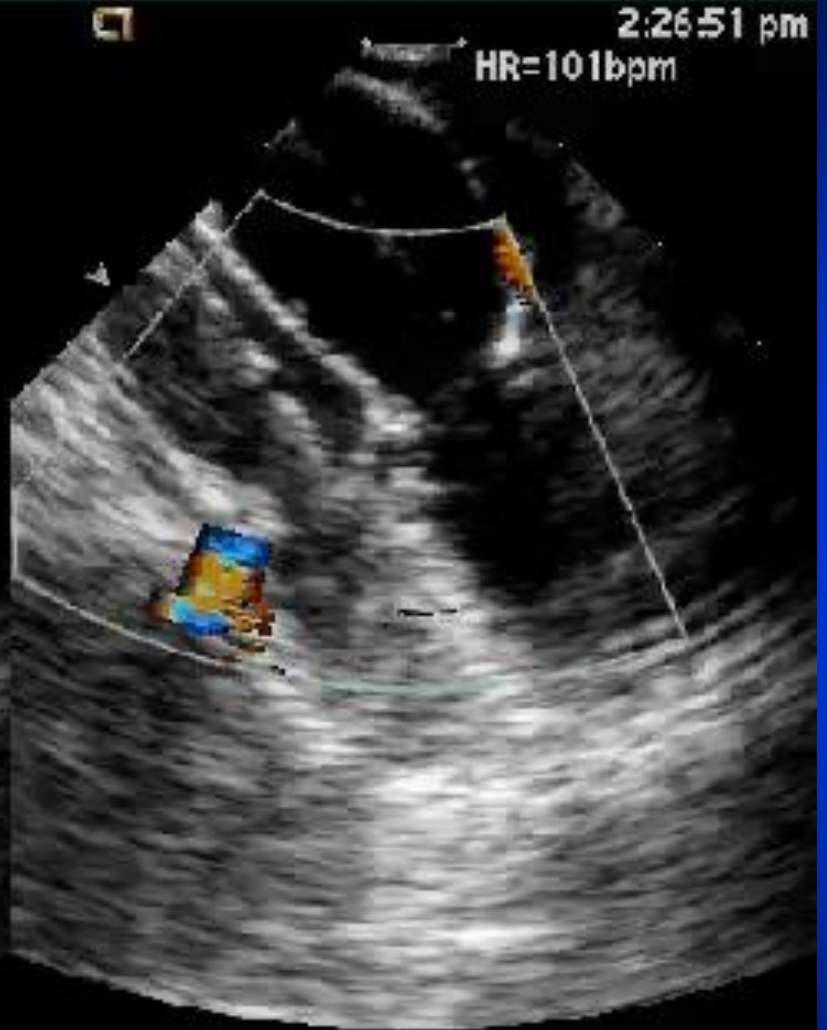
Delete Set

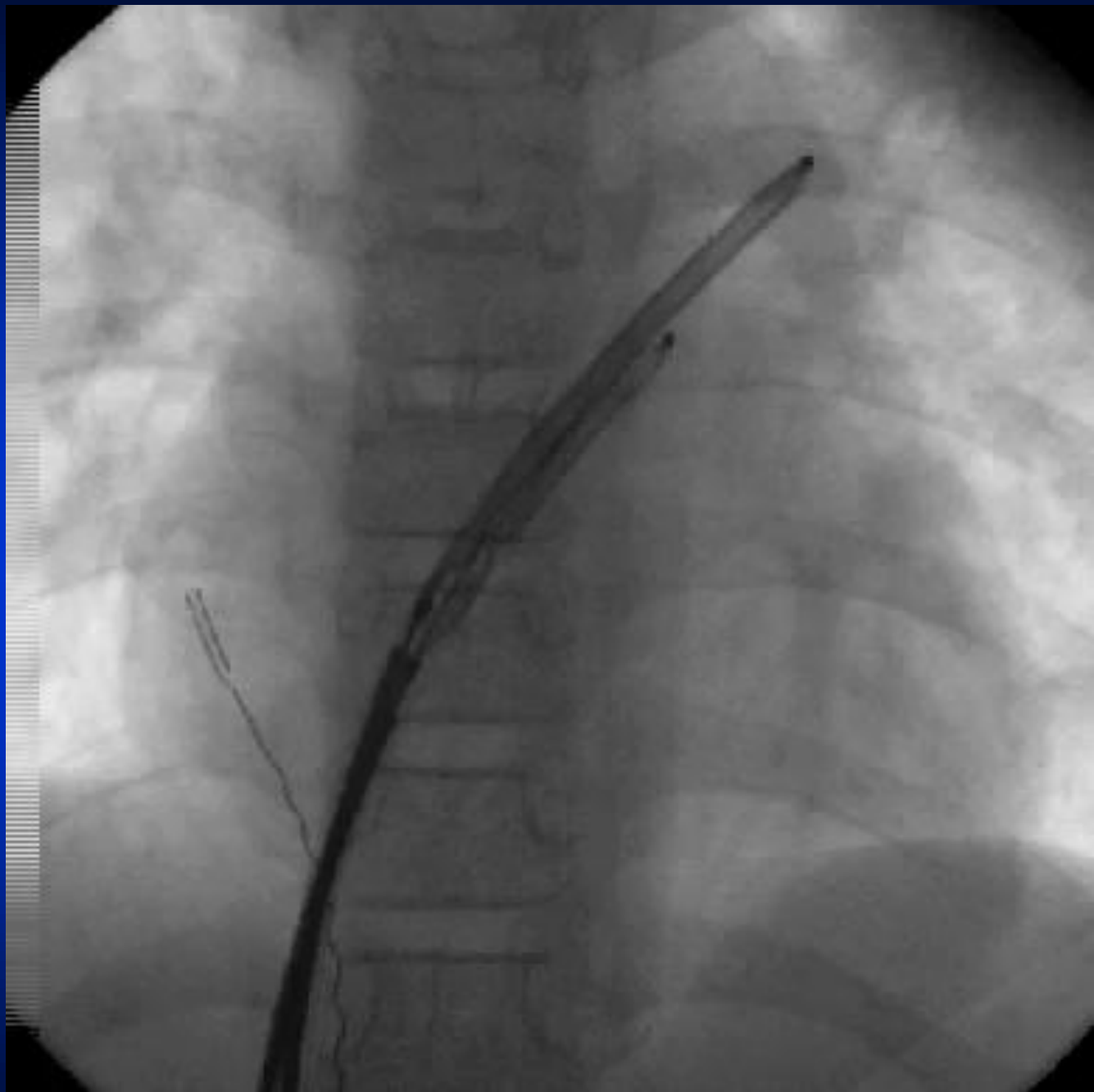
Lock Set

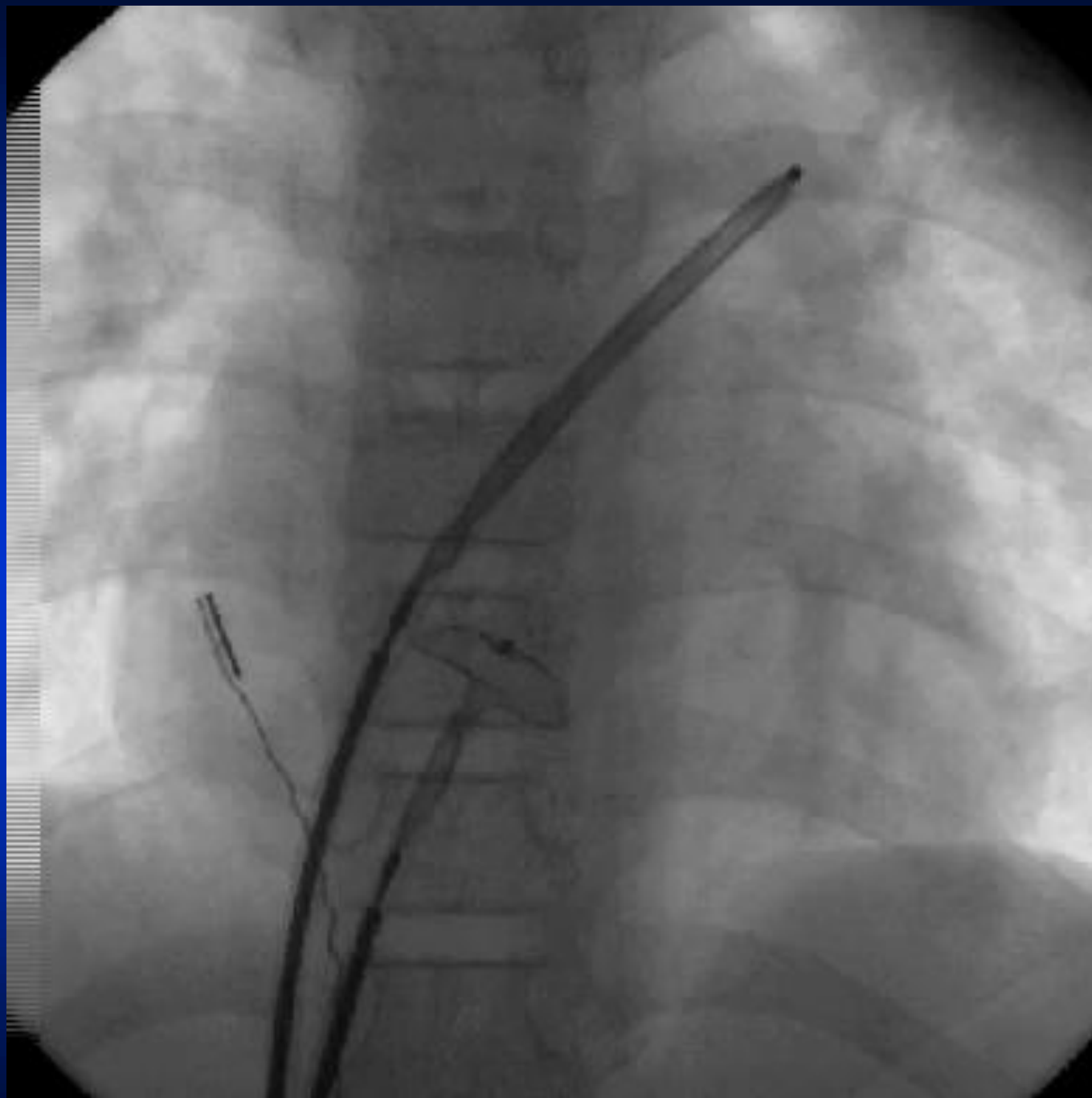
Dual L/R

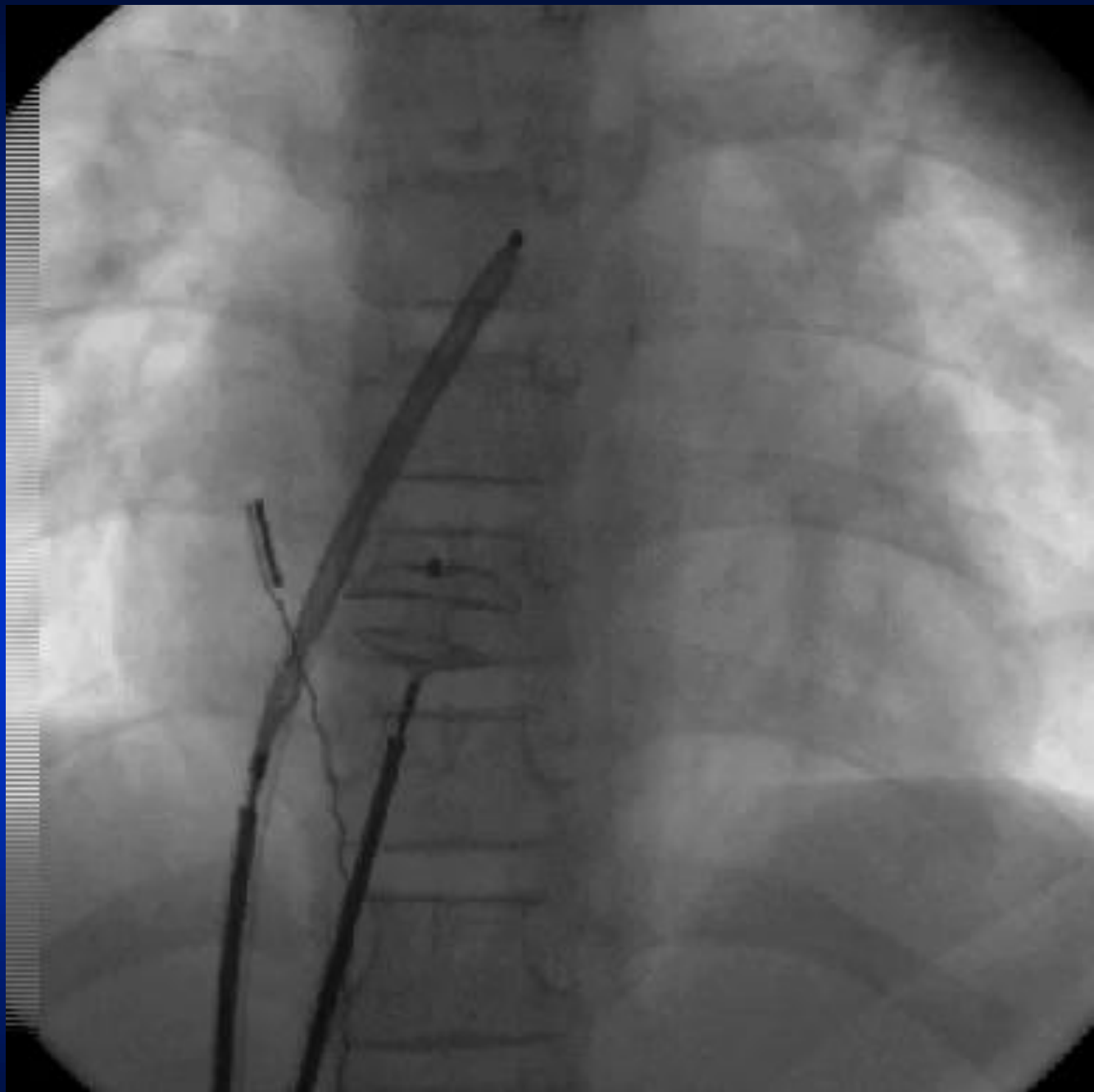


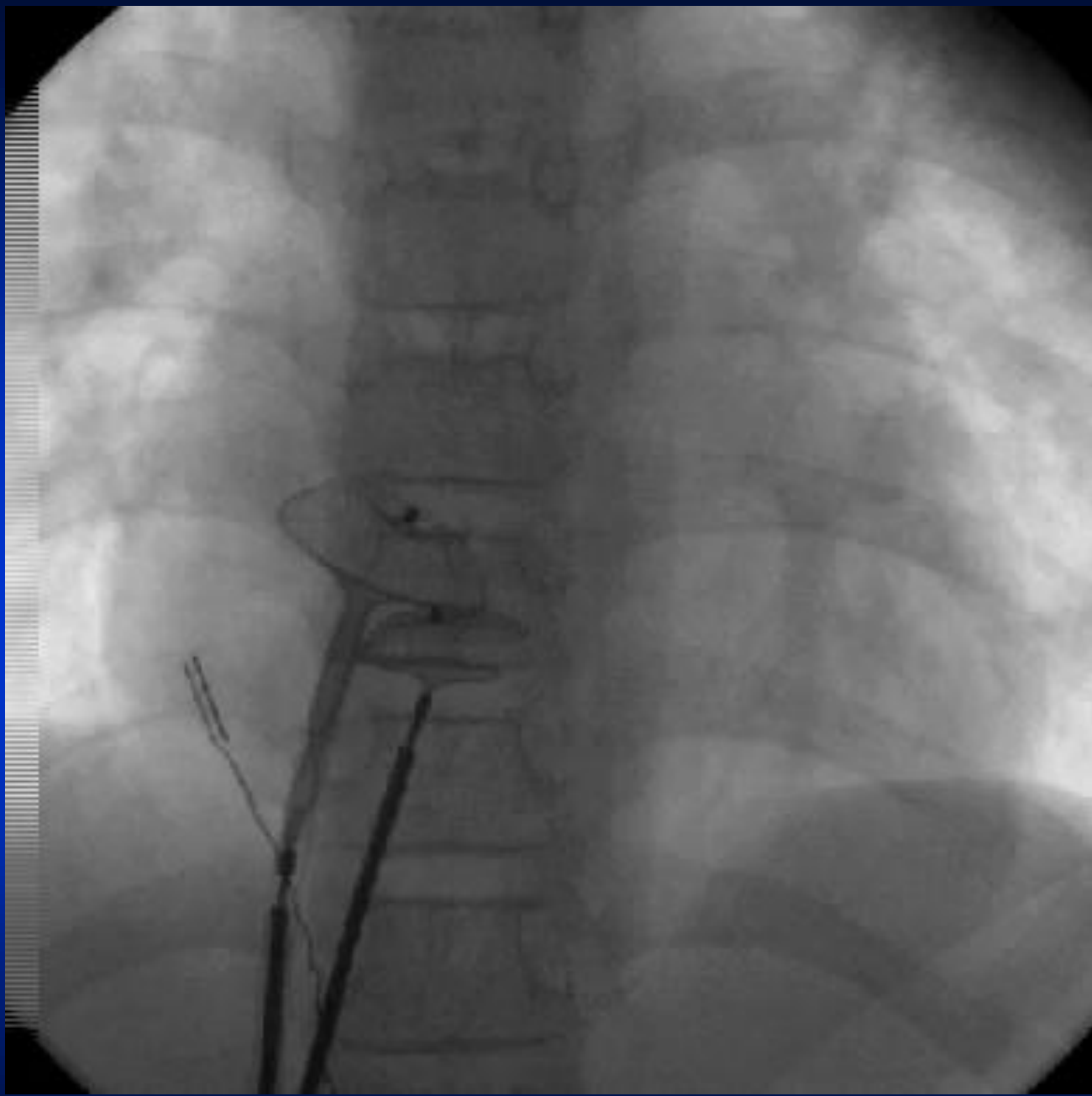
- **Sup-ant holes: biggest one 11 mm**
- **Inf-post hole: 7 mm**

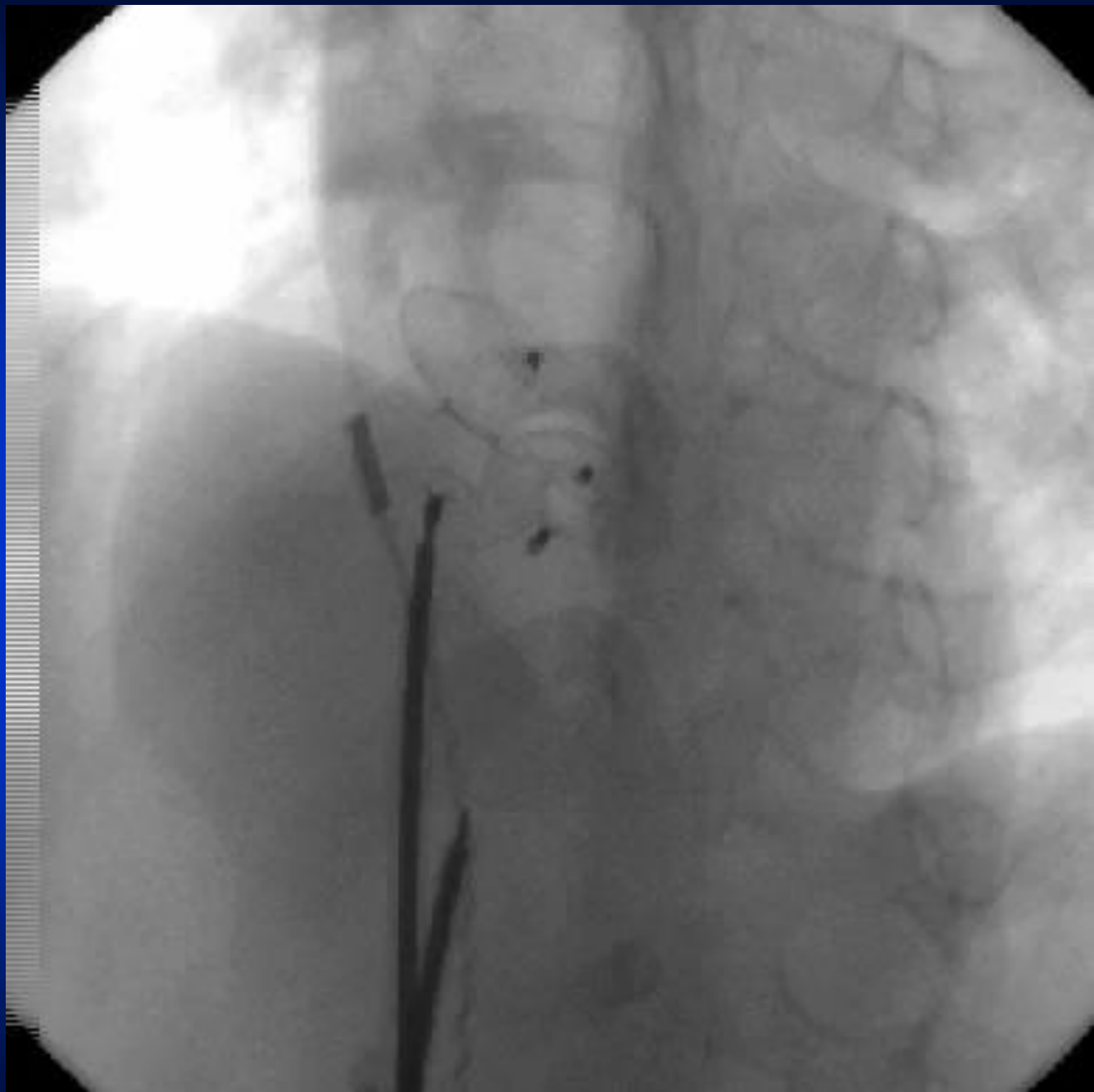


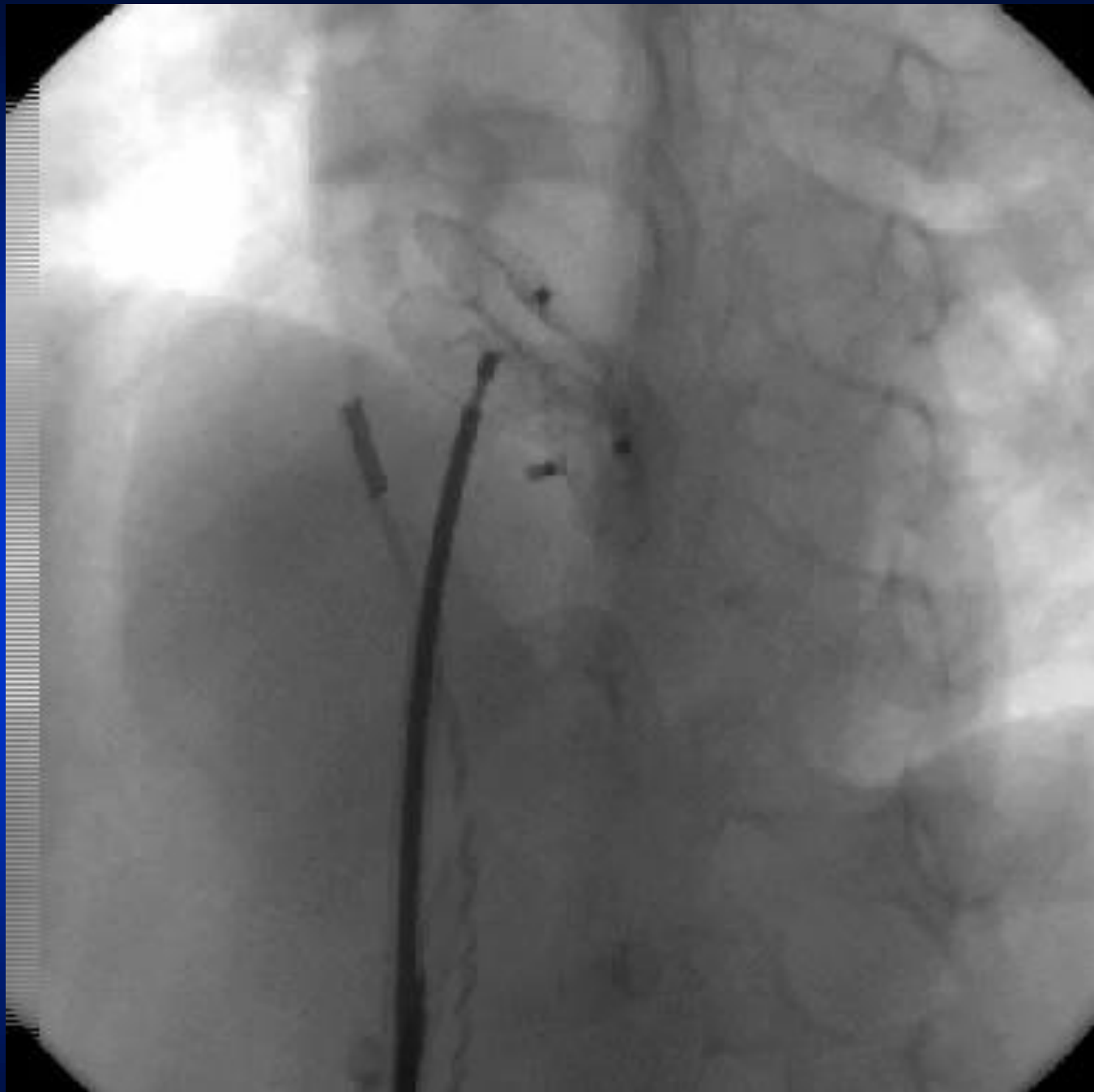




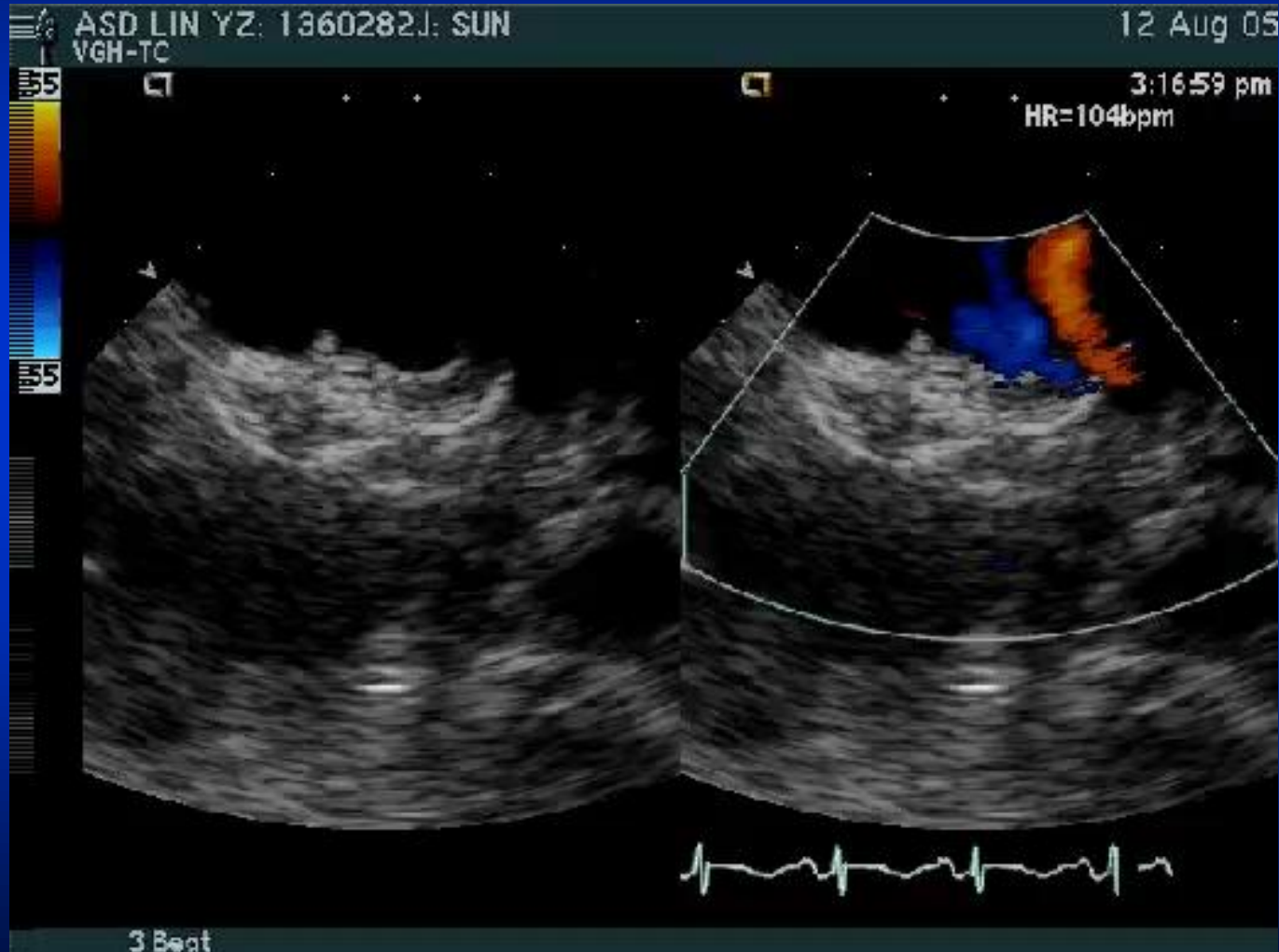




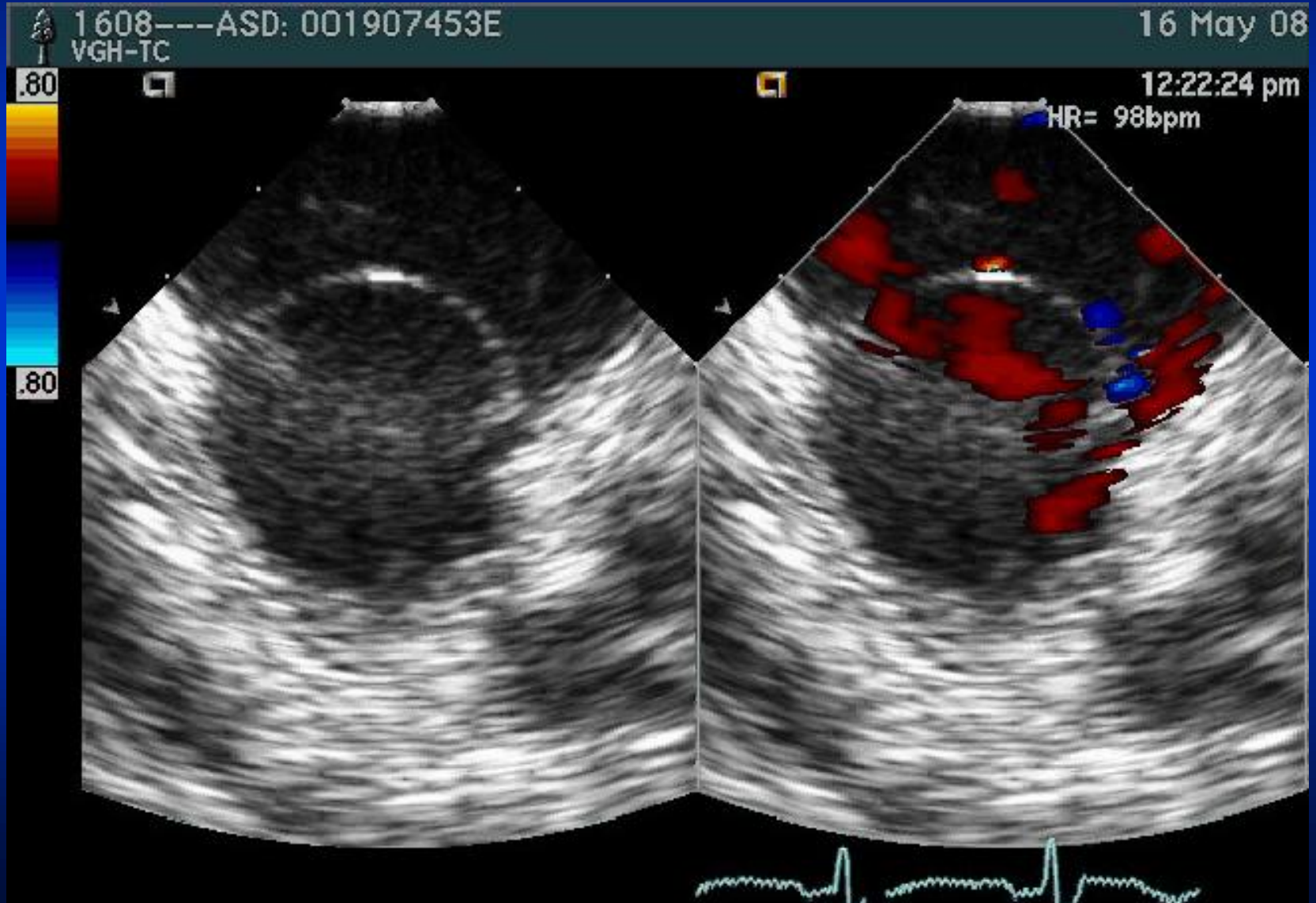
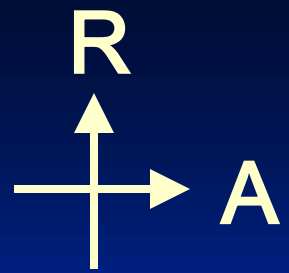




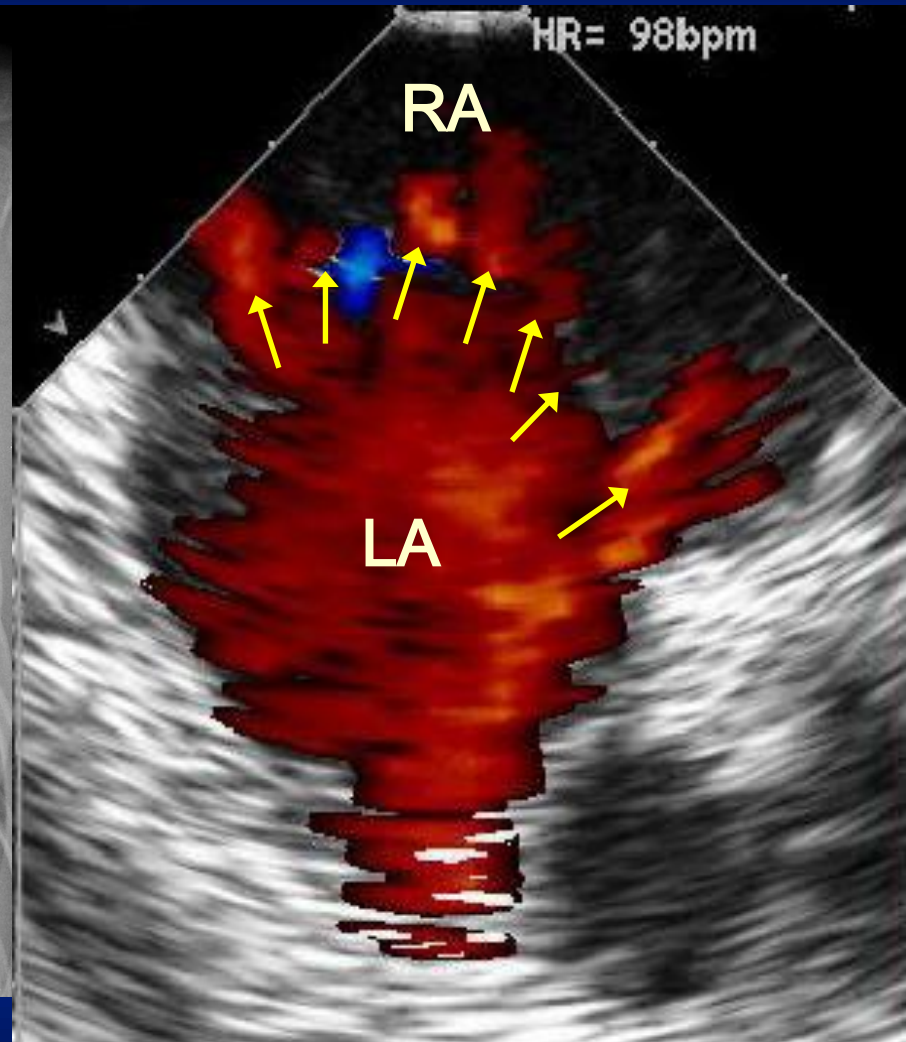
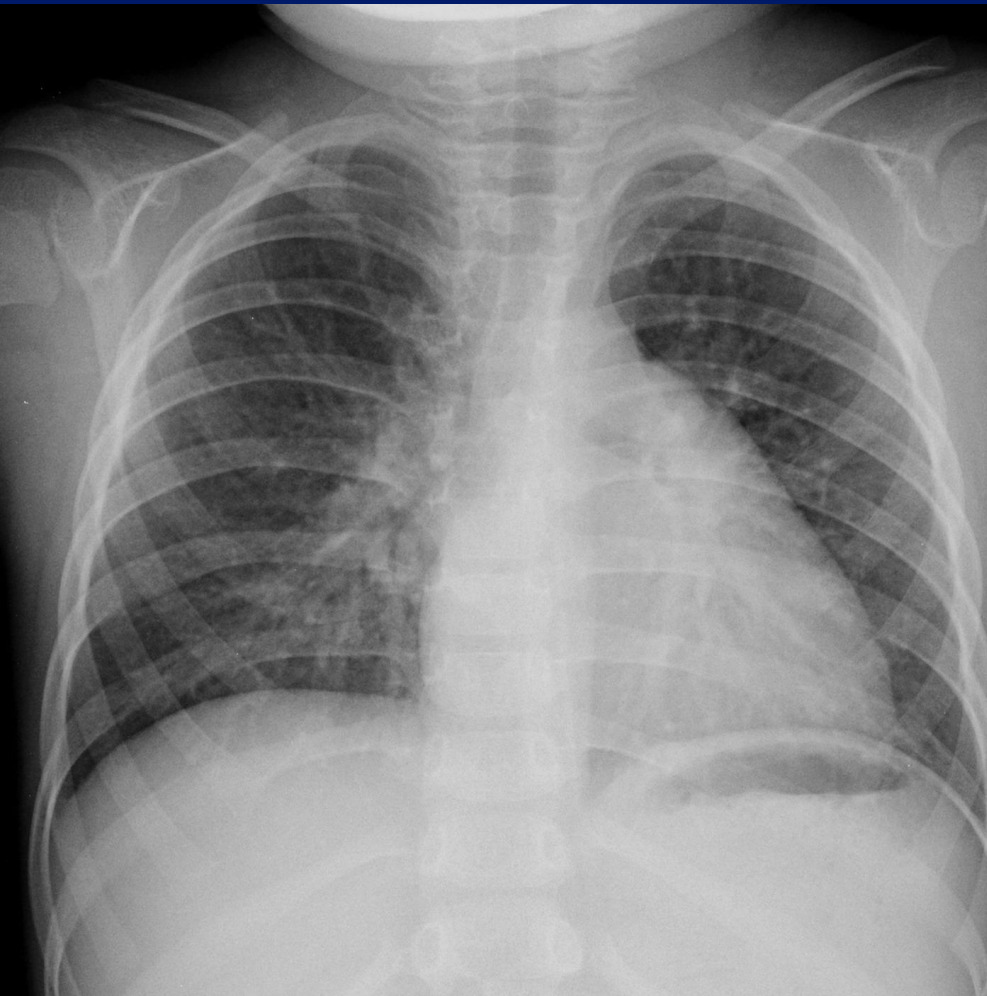
Multiple defects were completely closed with 2 devices (7 + 12 mm)



4 y/o boy ICE (short axis view)



Multiple fenestrated ASDs



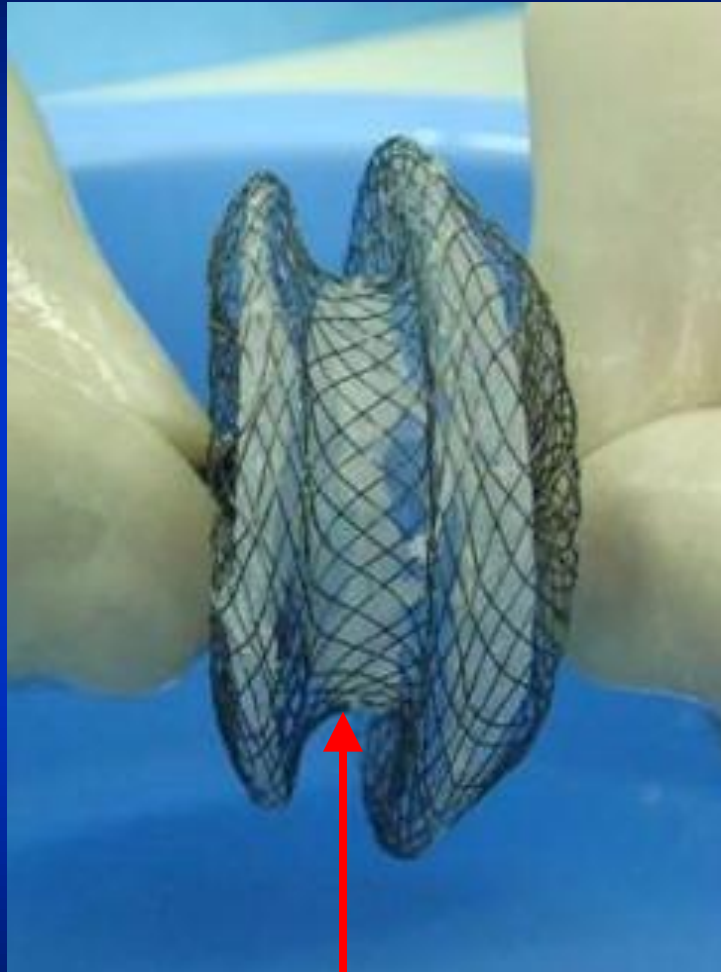
Two beauties in the ancient China

楊貴妃

趙飛燕

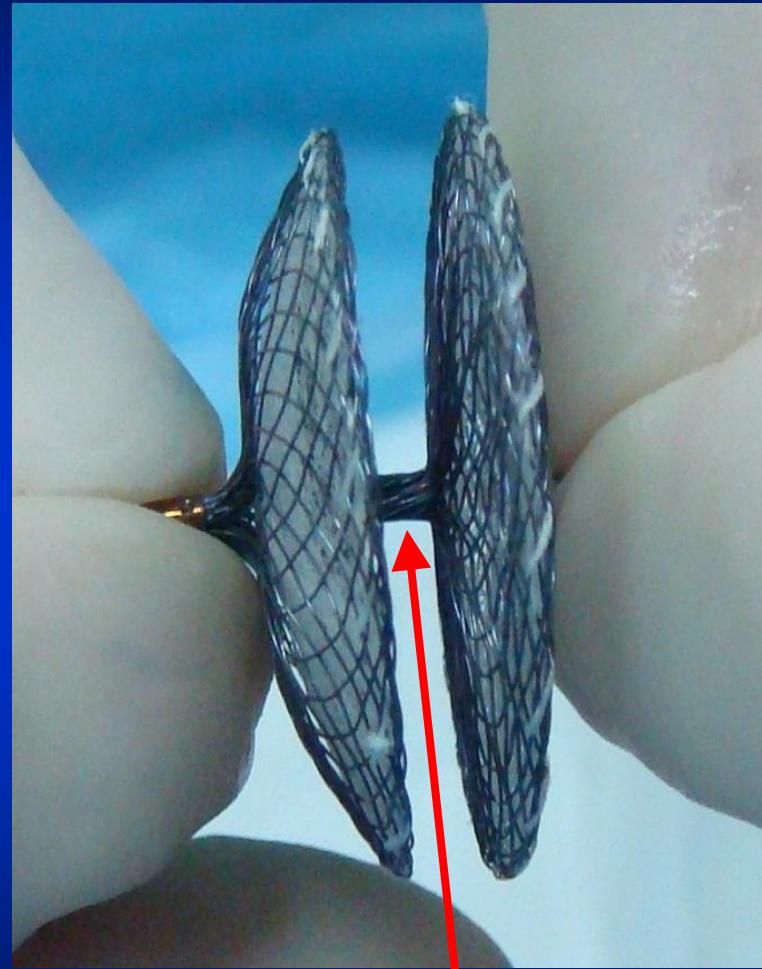


Amplatzer septal occluder



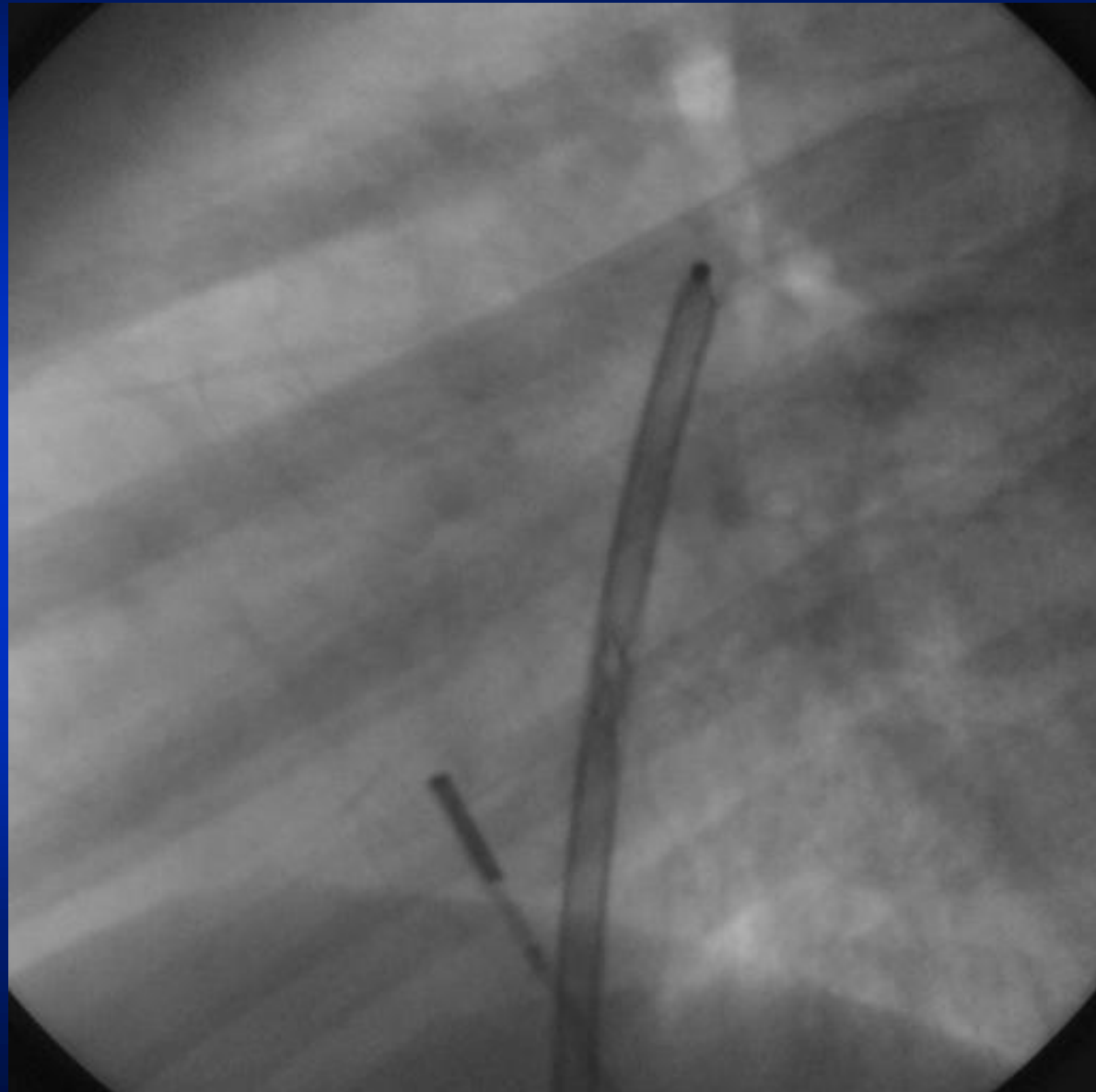
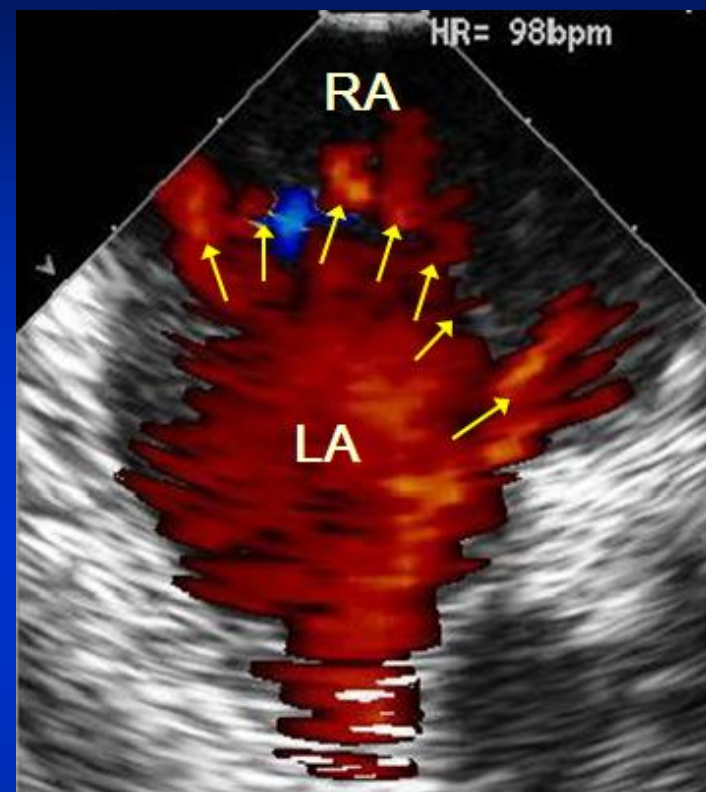
環肥

Cribriform

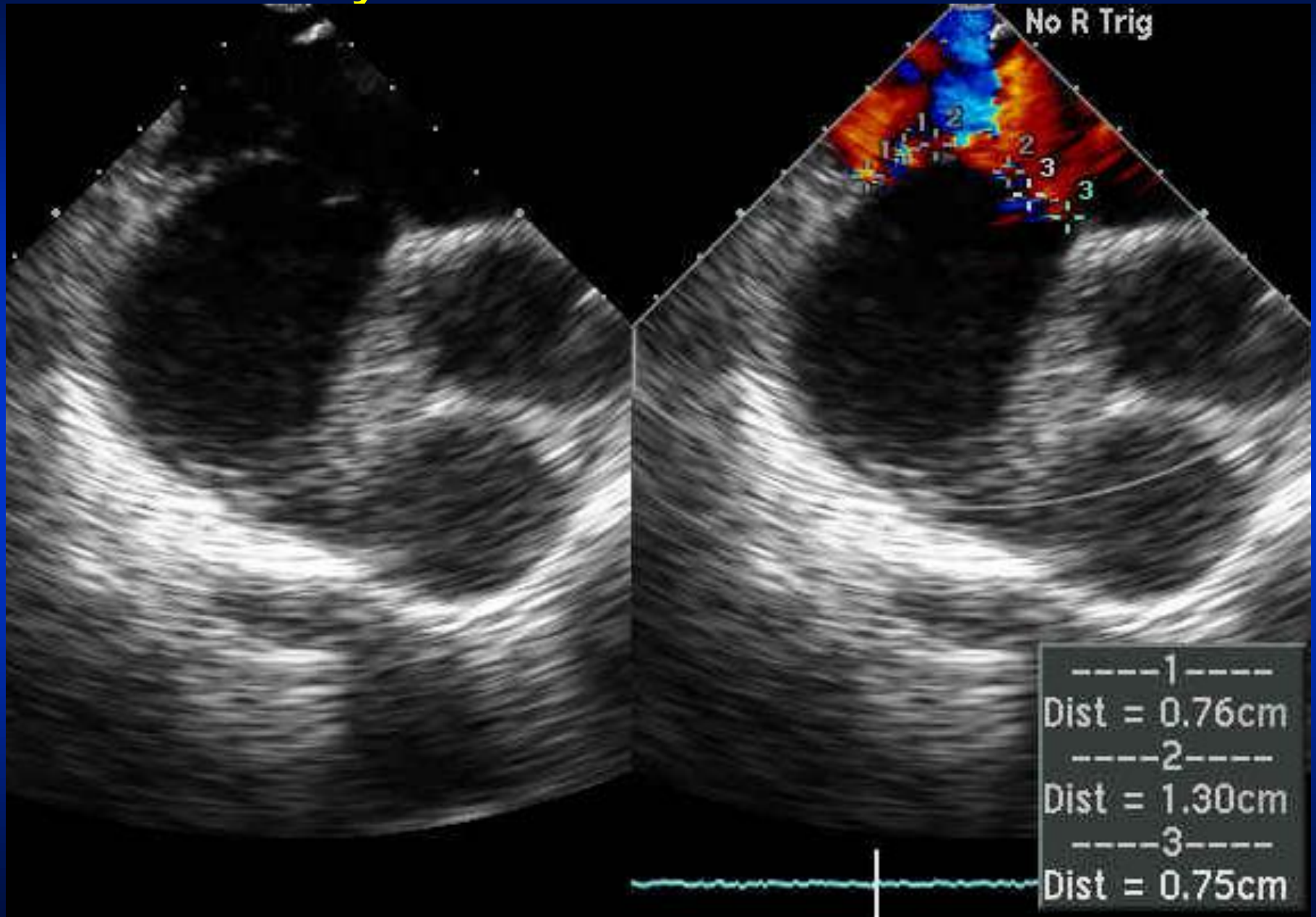


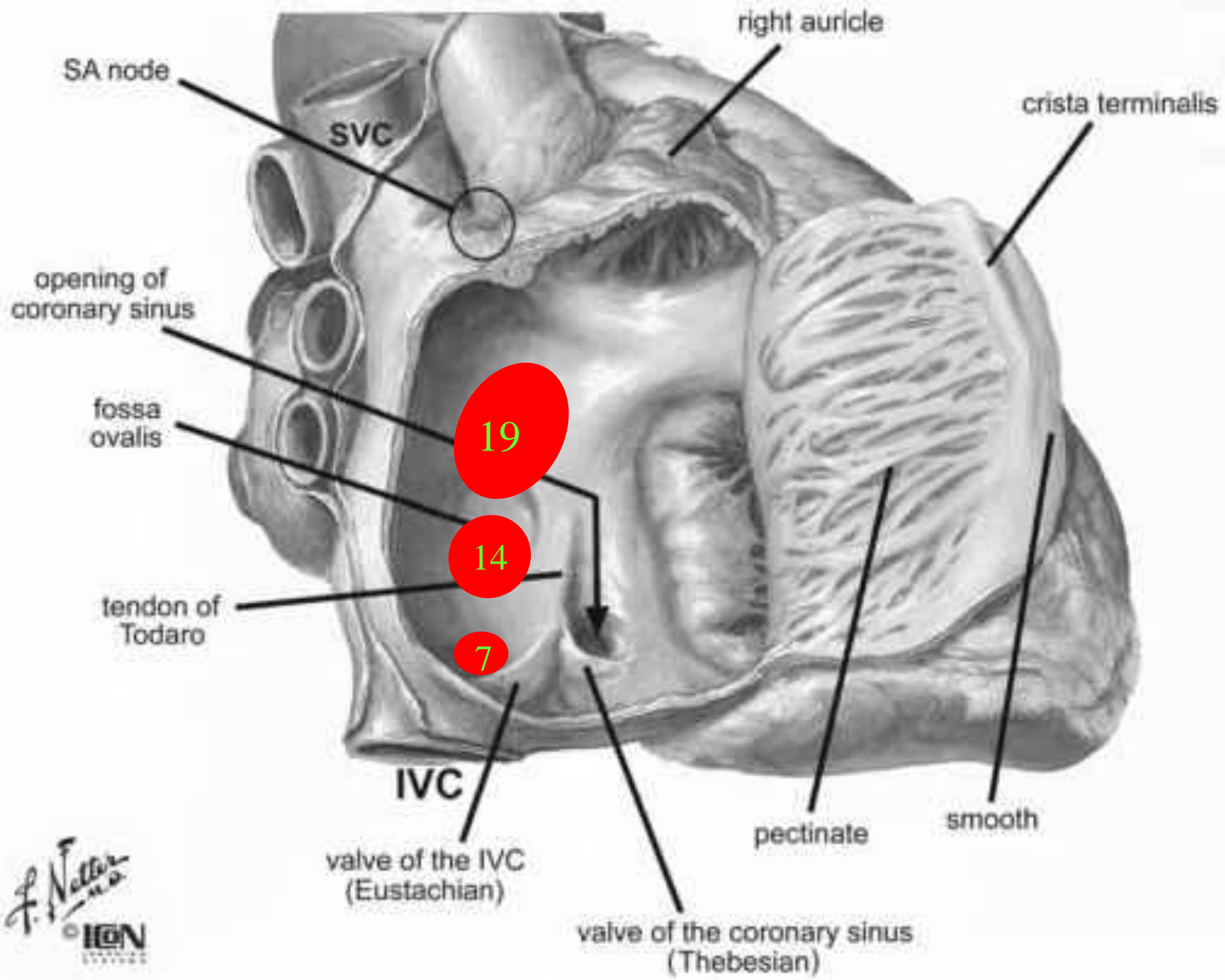
燕瘦

25 mm cribriform device

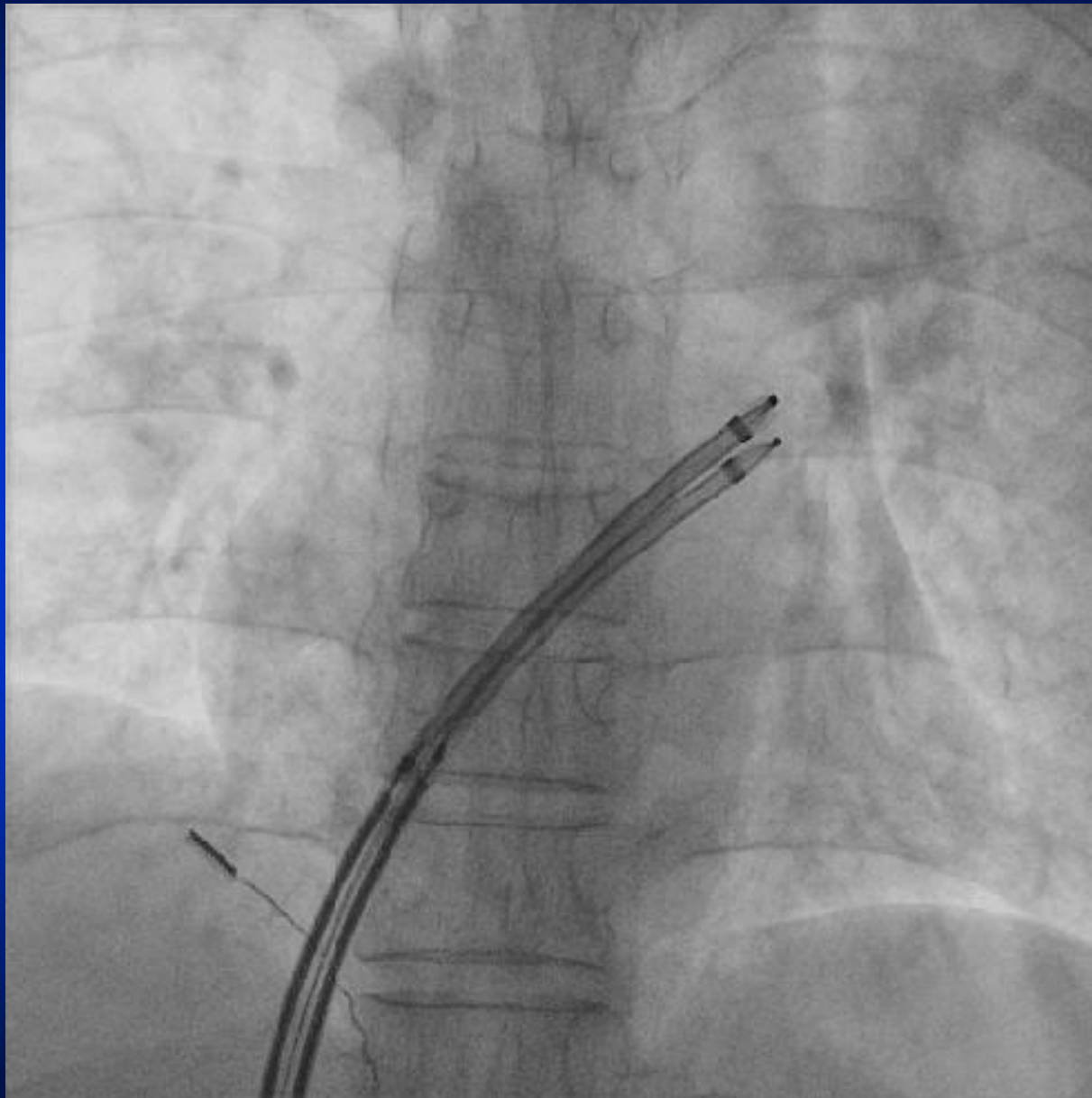


65 y/o woman with 3 holes

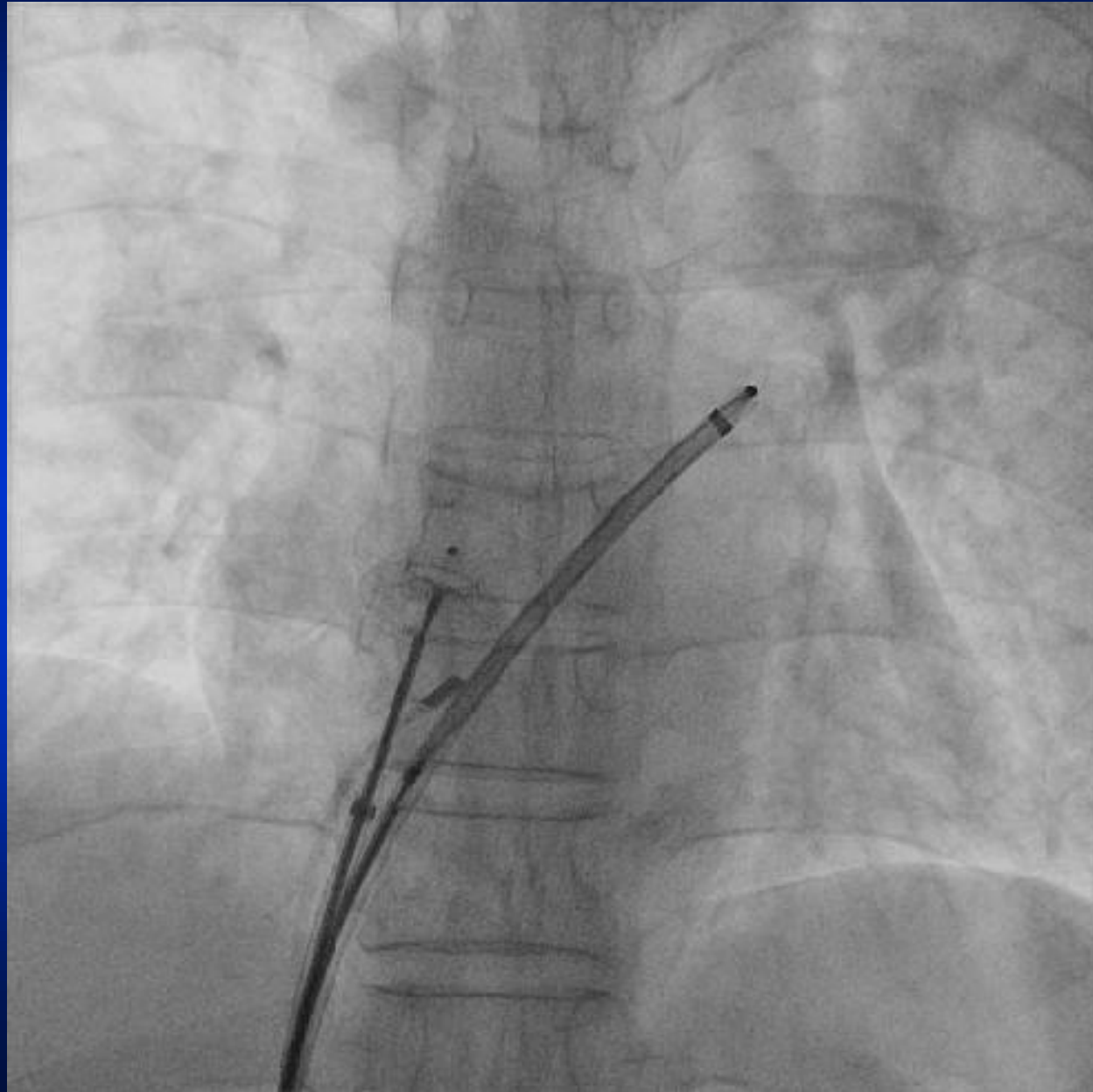




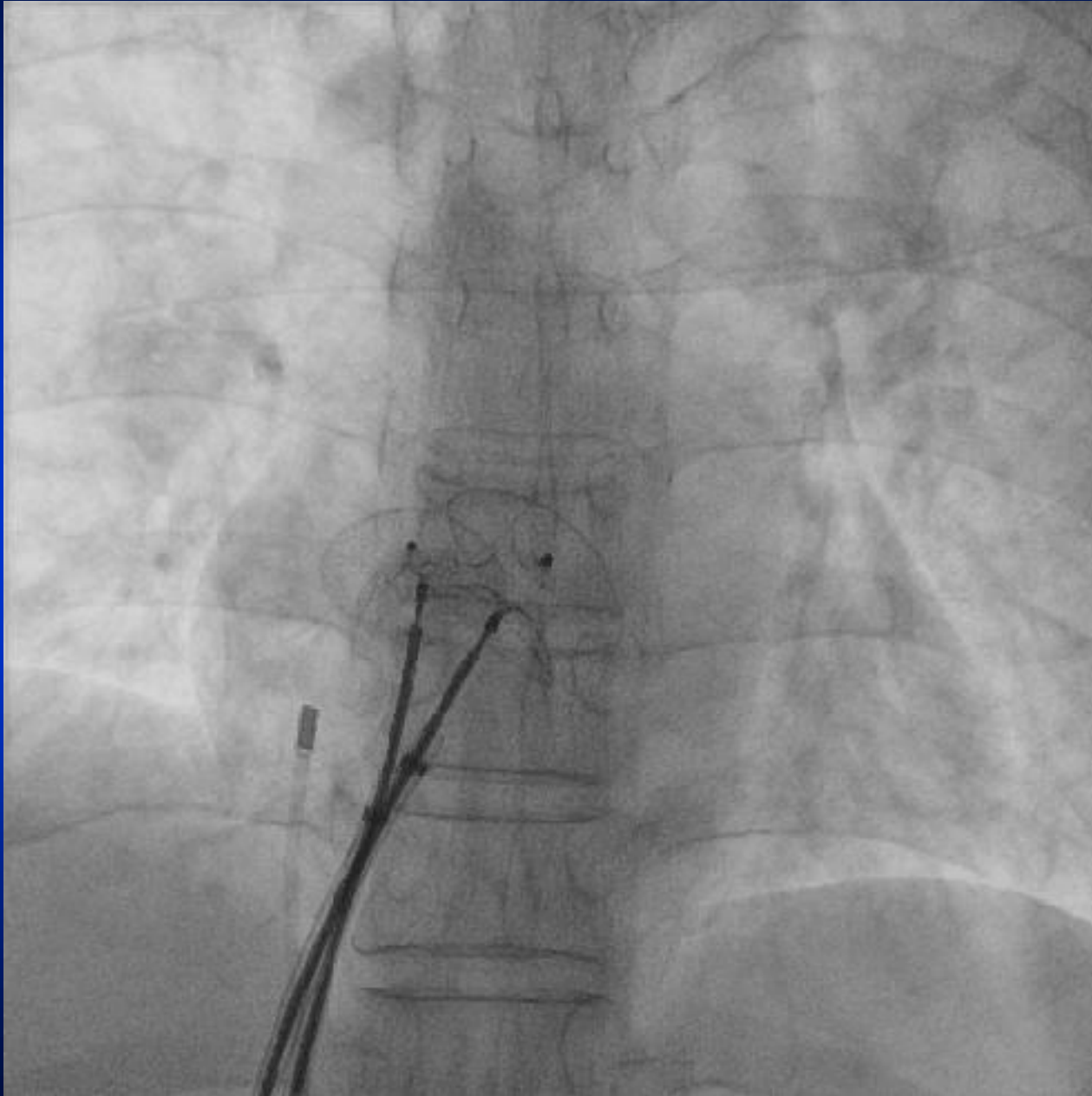
Deployed 1st device (14 mm)



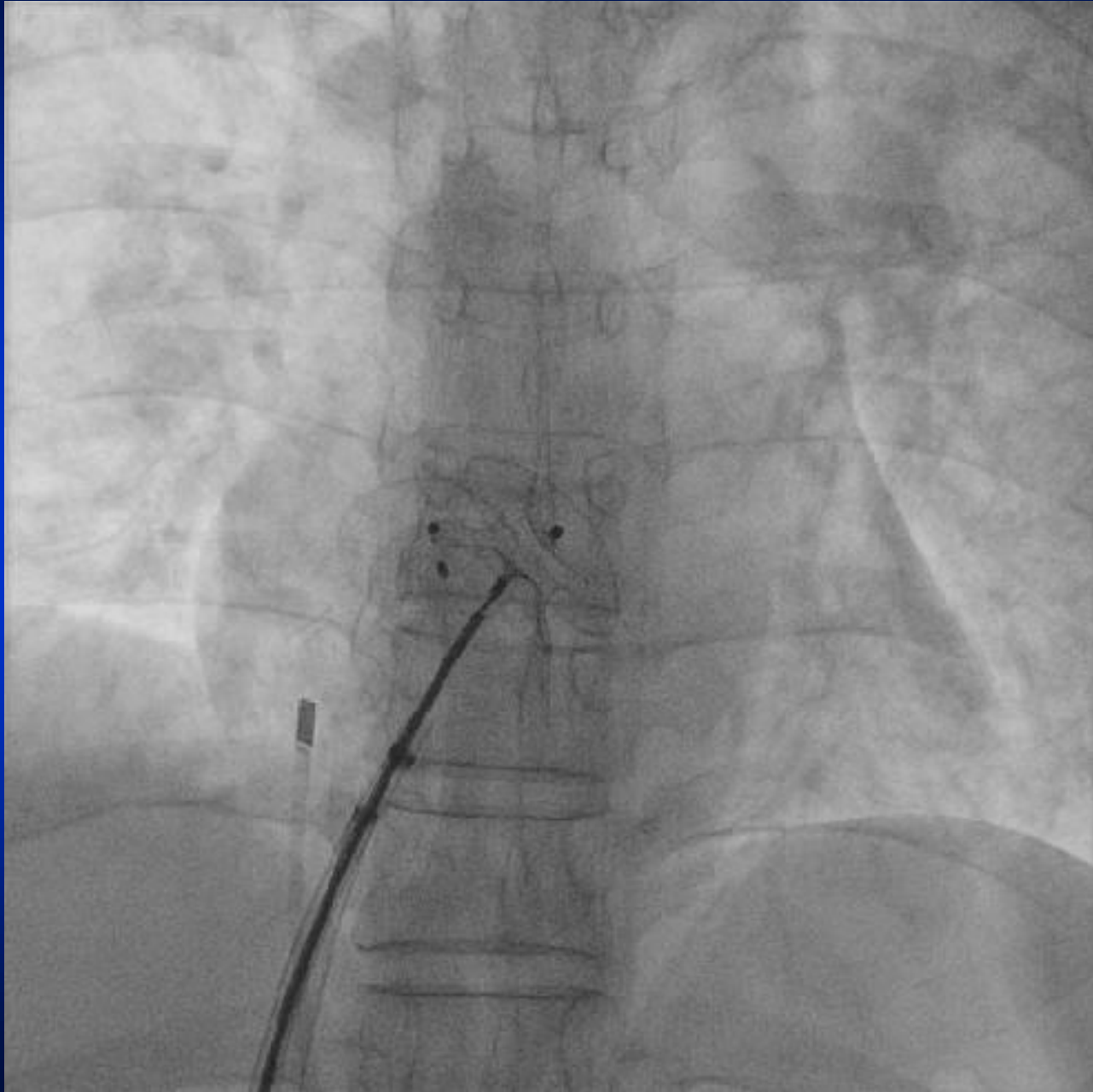
Deployed 2nd device (19 mm)



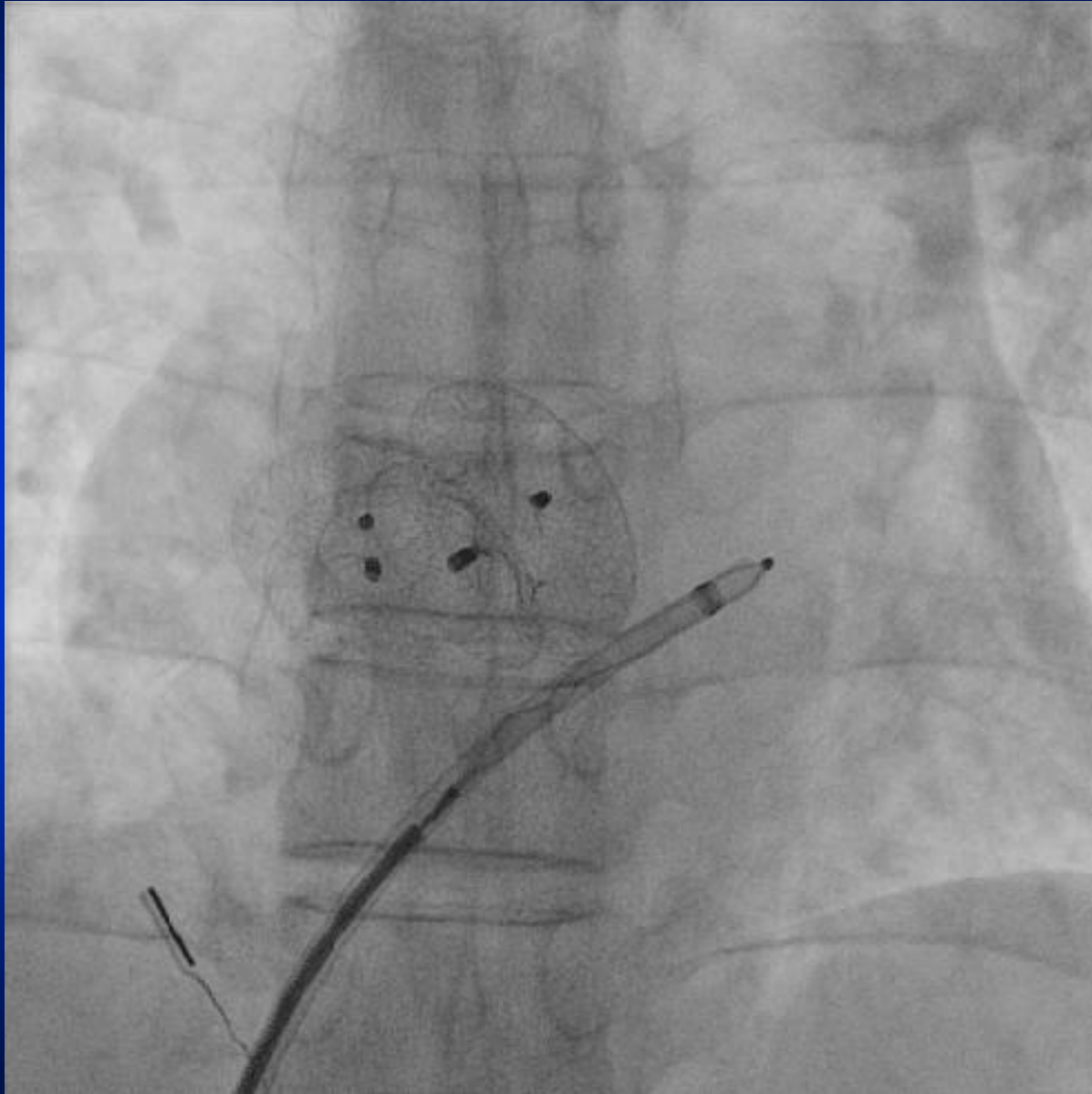
Released 1st device



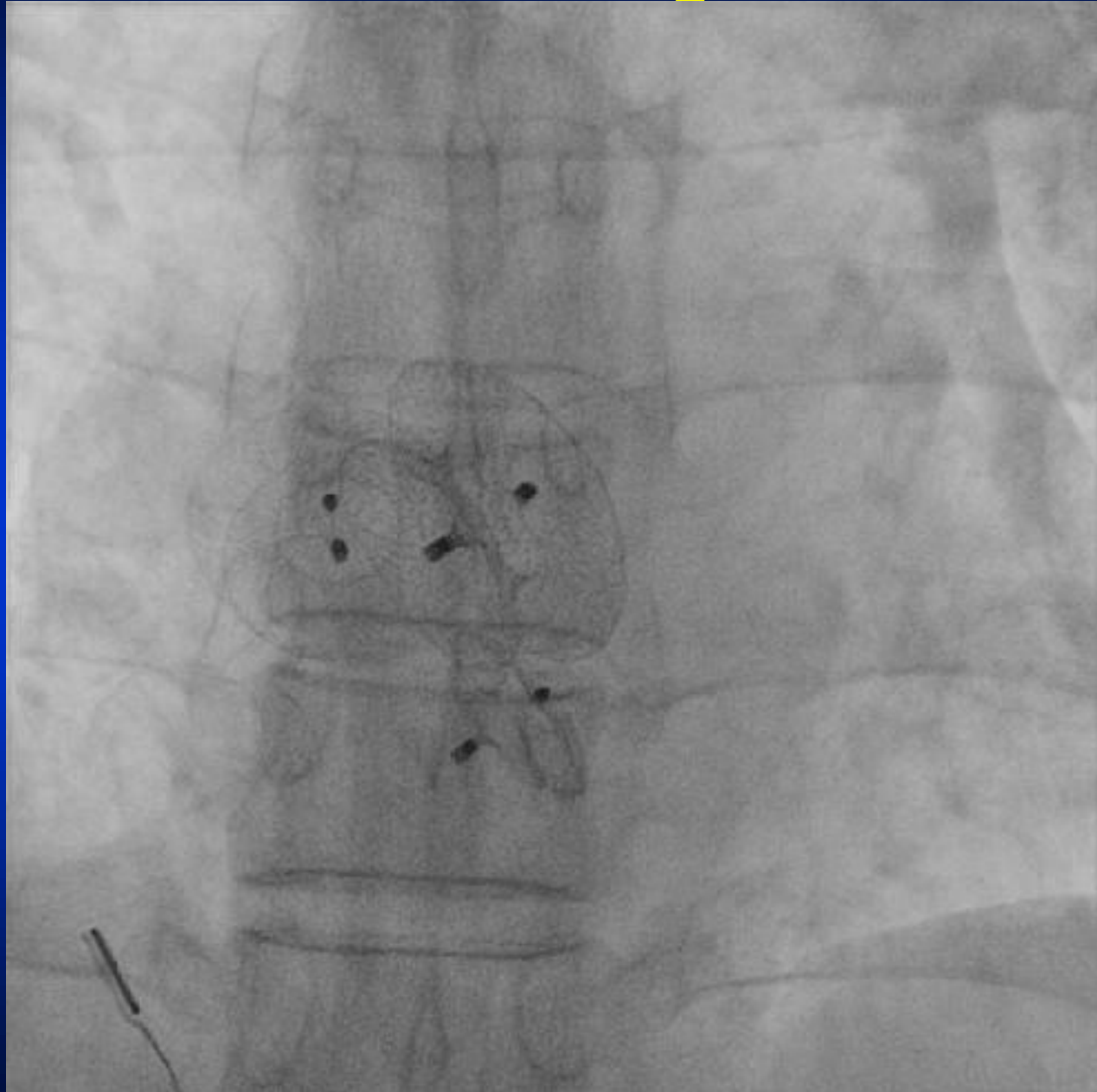
Released 2nd device



Deployed 3rd device (7 mm)



Final cine showing 3 devices



Conclusion

- **With meticulous evaluation and plan, most multiple ASDs with or without septal aneurysm can be closed safely and effectively using one or multiple devices.**