

HOW TO SCAN THE ATRIAL SEPTUM

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NO DISCLOSURES



OBJECTIVES



- Visualizing the atrial septum
- Types of ASD and where to find them
- The big picture- what else to look for
- Critical situations
- Tips and tricks

VISUALIZING THE ATRIAL SEPTUM



Subcostal

- Transverse
- Sagittal
- Right anterior oblique

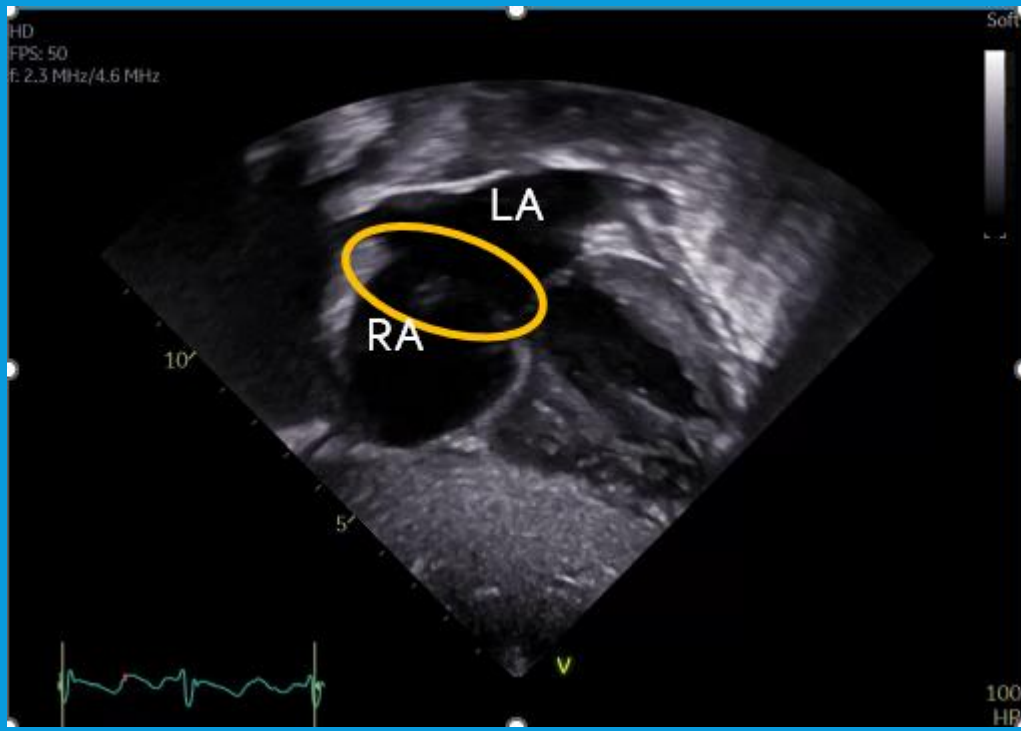
High Right parasternal

Parasternal Short axis

SUBCOSTAL TRANSVERSE: SUBCOSTAL 4C



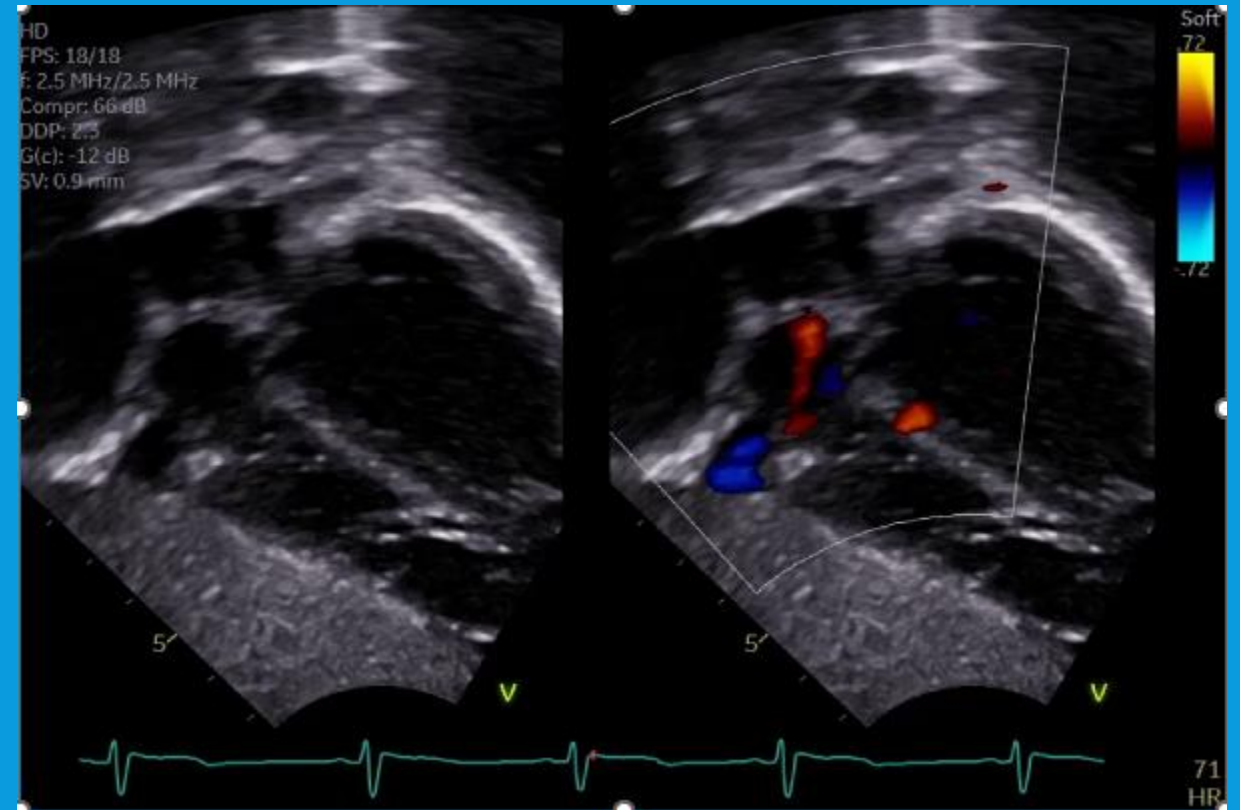
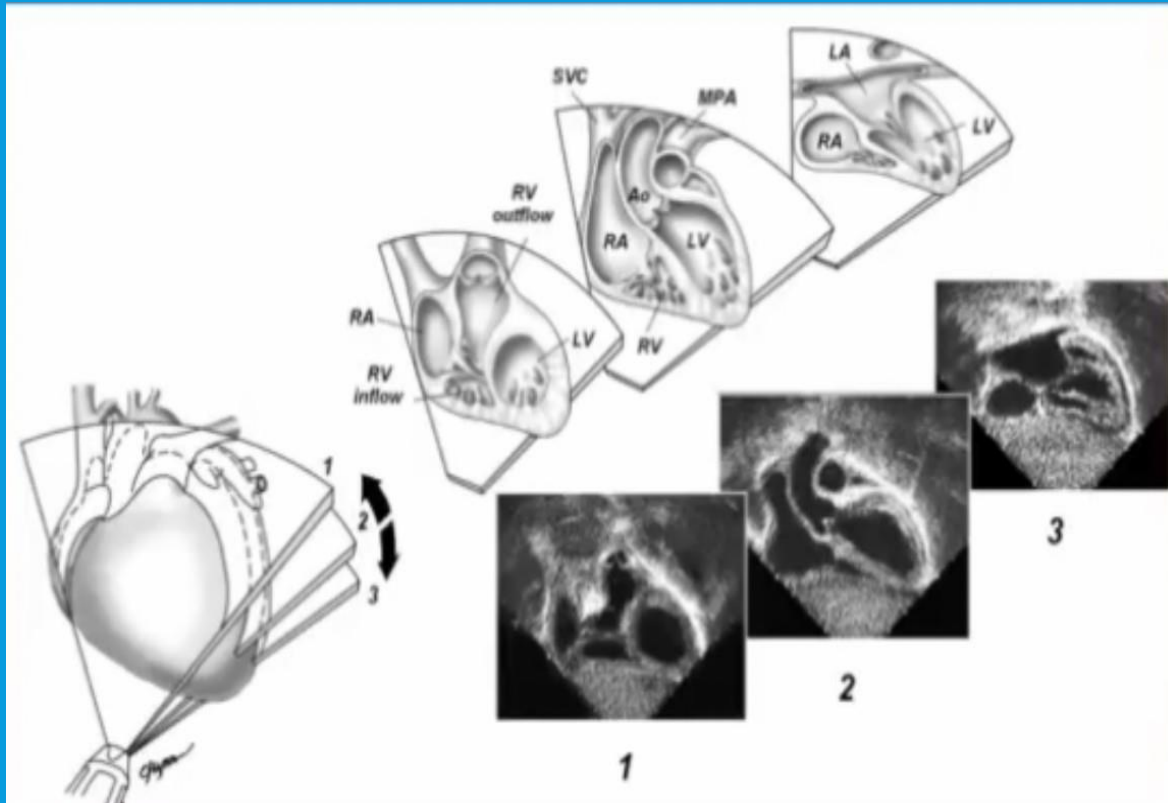
- Index marker at 3 o'clock
- Patient lying supine
- Invert your image



SUBCOSTAL TRANSVERSE: SUBCOSTAL 4C



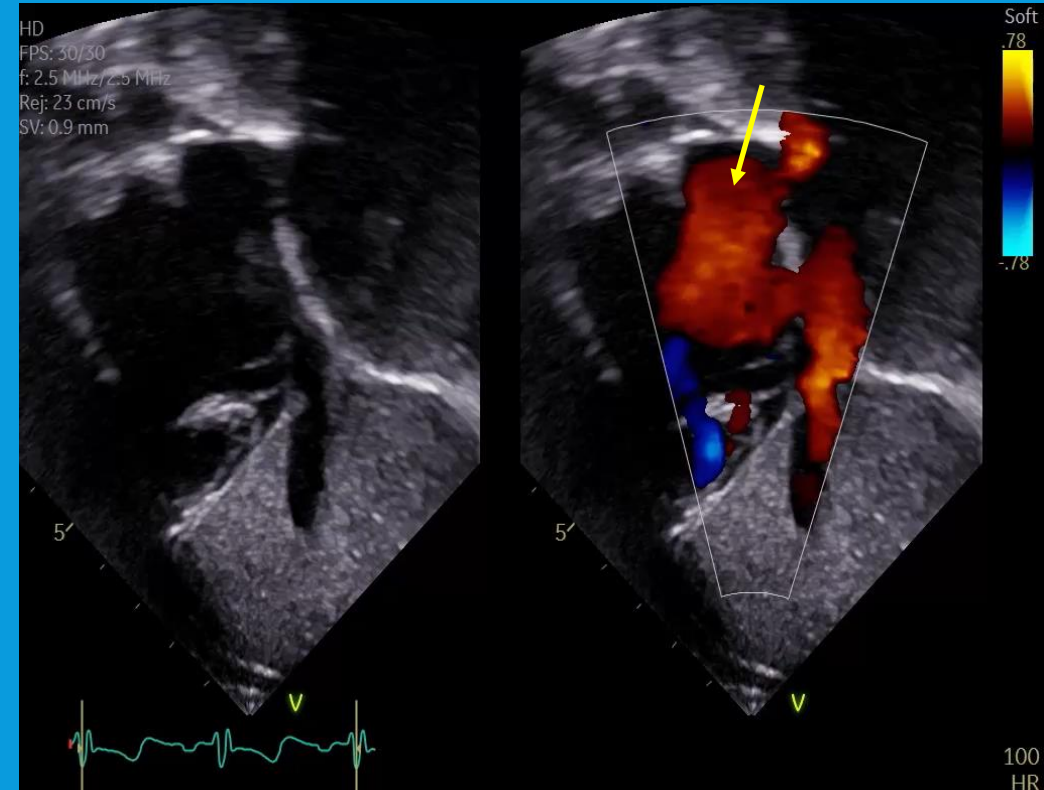
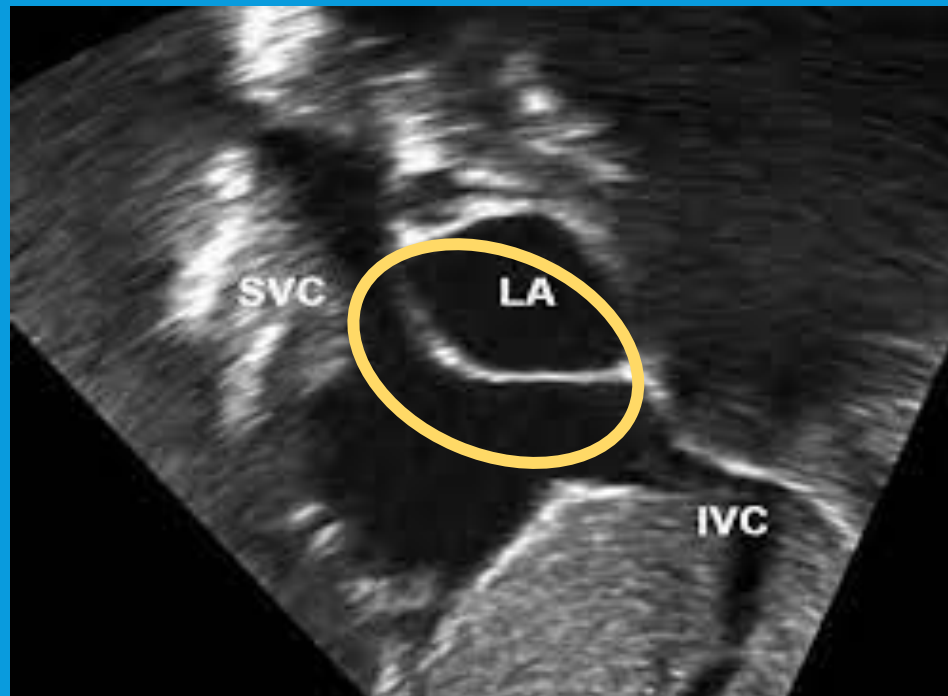
Sweep posterior to anterior



SUBCOSTAL SAGITTAL (SUBCOSTAL SAX)



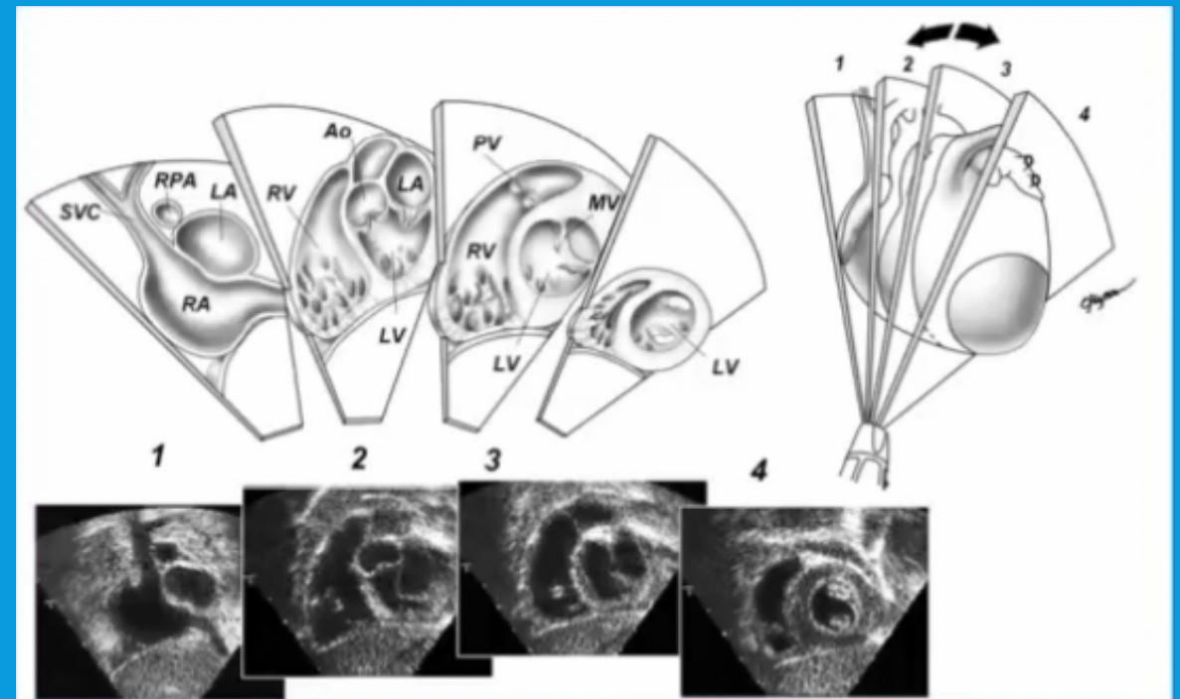
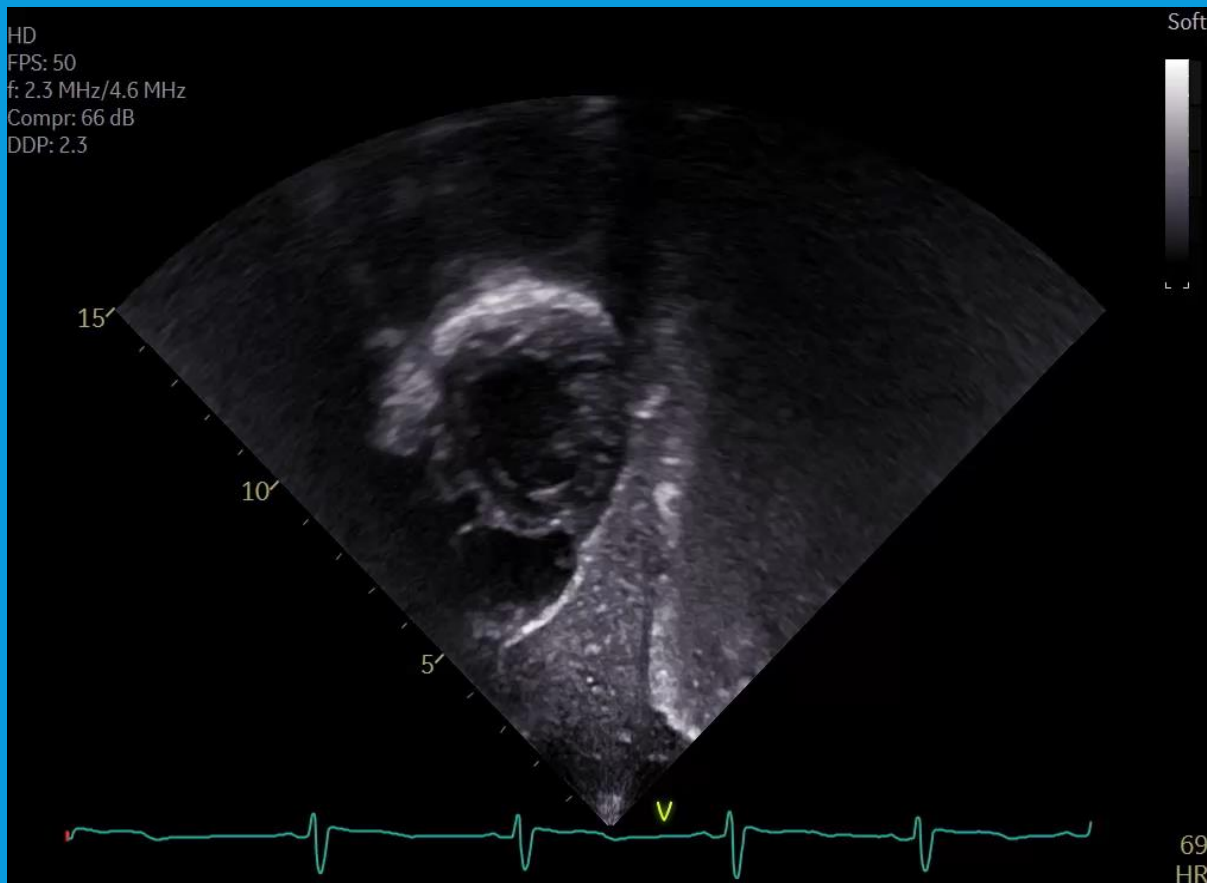
- Index marker at 6 o'clock
- Patient supine
- Invert image
- Bicaval



SUBCOSTAL SAGITTAL (SUBCOSTAL SAX) CONT.



- Sweep apex to base

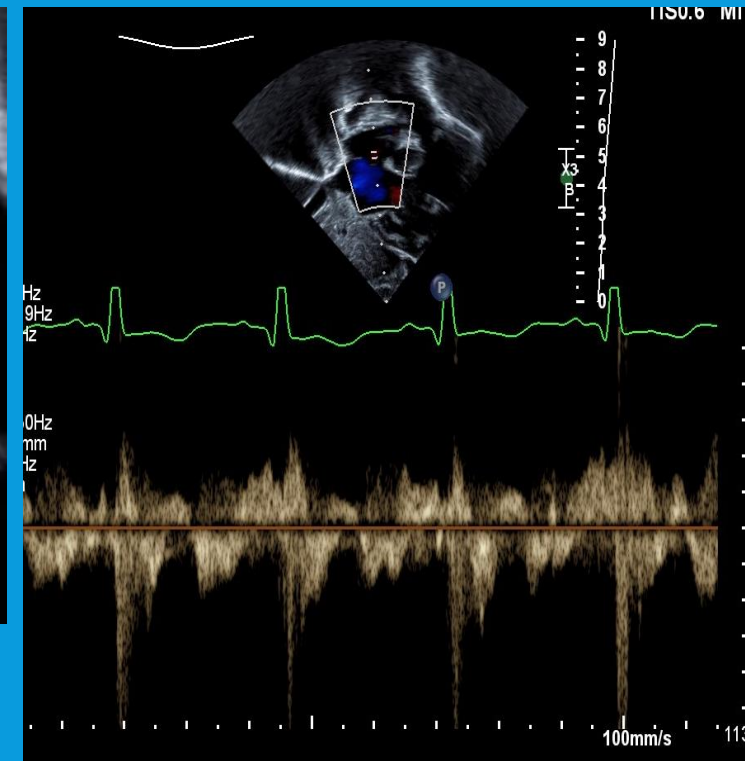
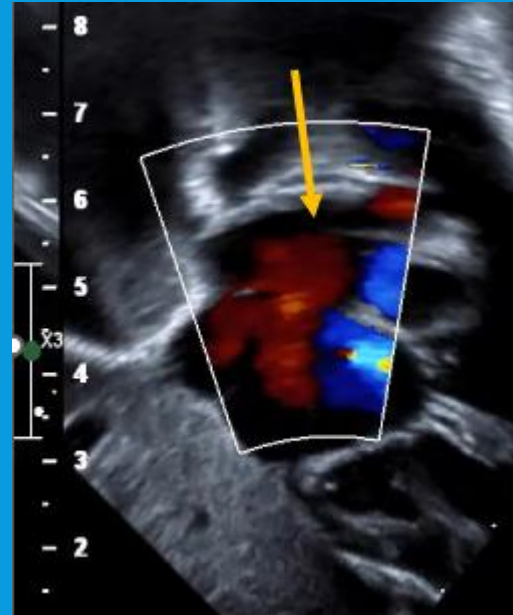
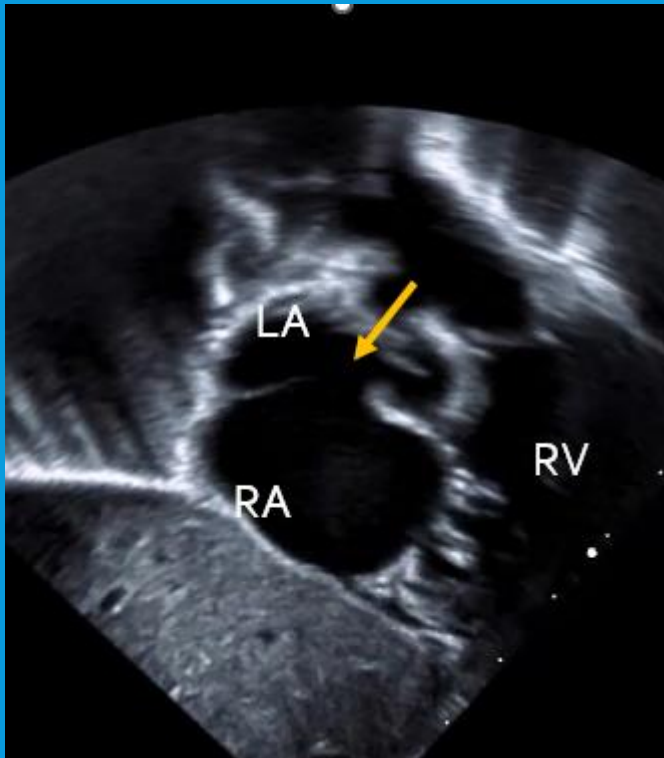


RIGHT ANTERIOR OBLIQUE



- Index marker at 2 o'clock
- Invert image

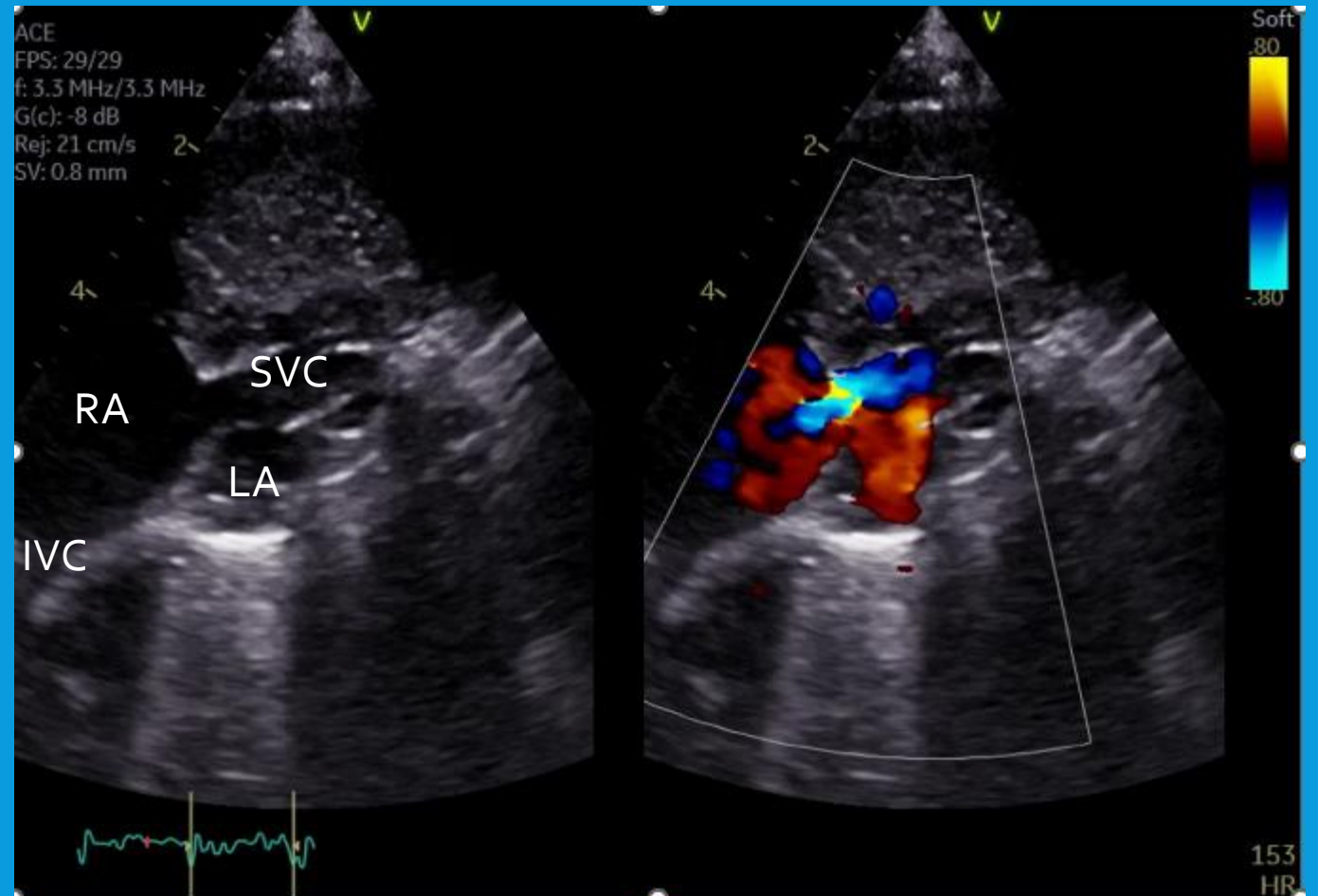
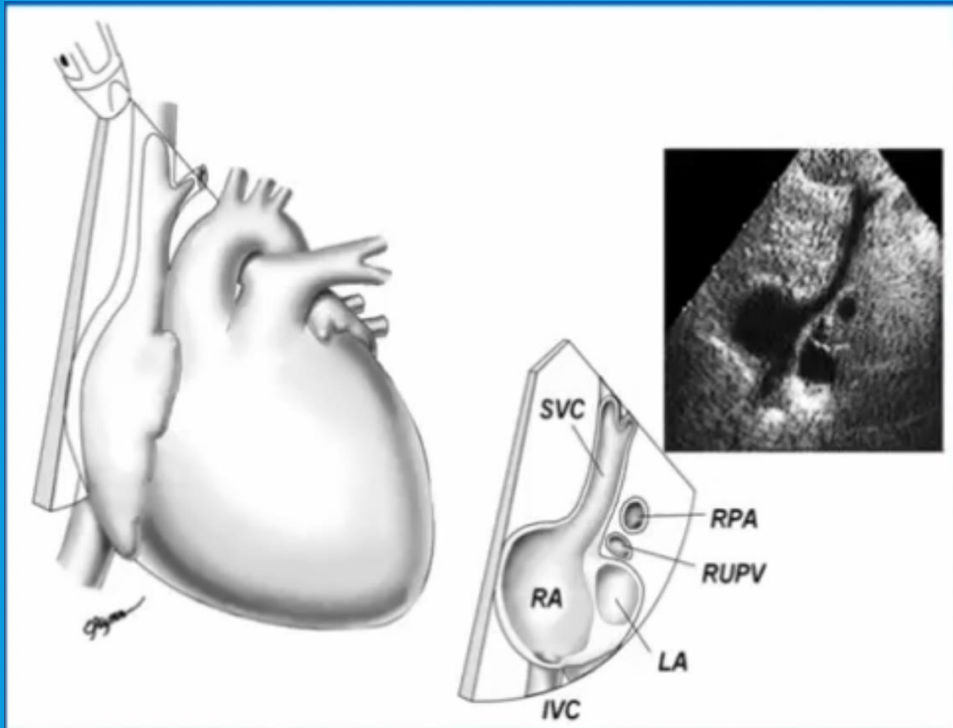
Bidirectional ASD



HIGH RIGHT PARASTERNAL



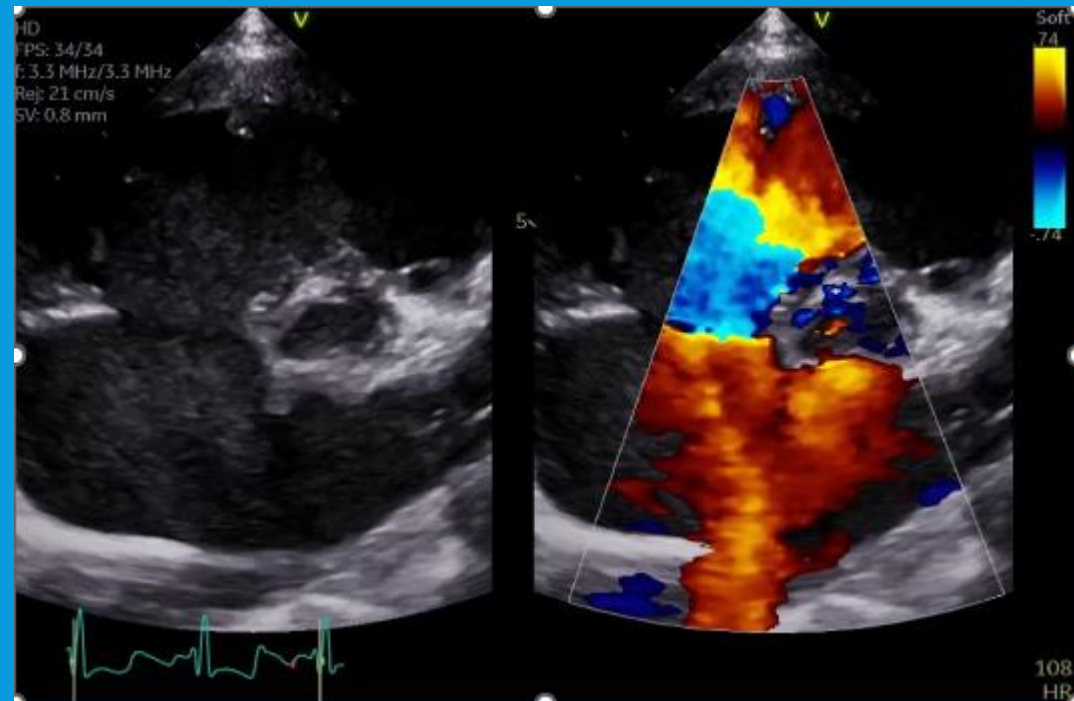
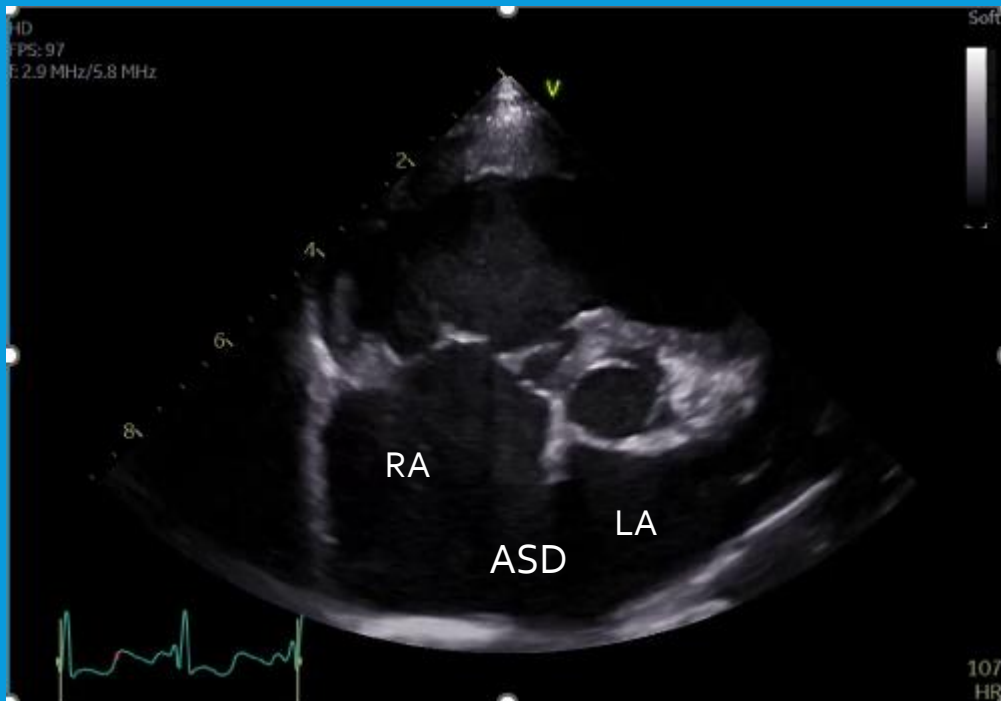
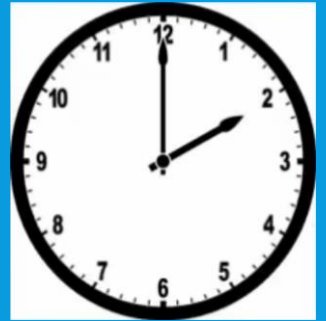
- Index Marker at 1 o'clock
- Right lateral decubitus position



PARASTERNAL SHORT AXIS



- Index marker at 2 o'clock
- Left lateral decubitus position

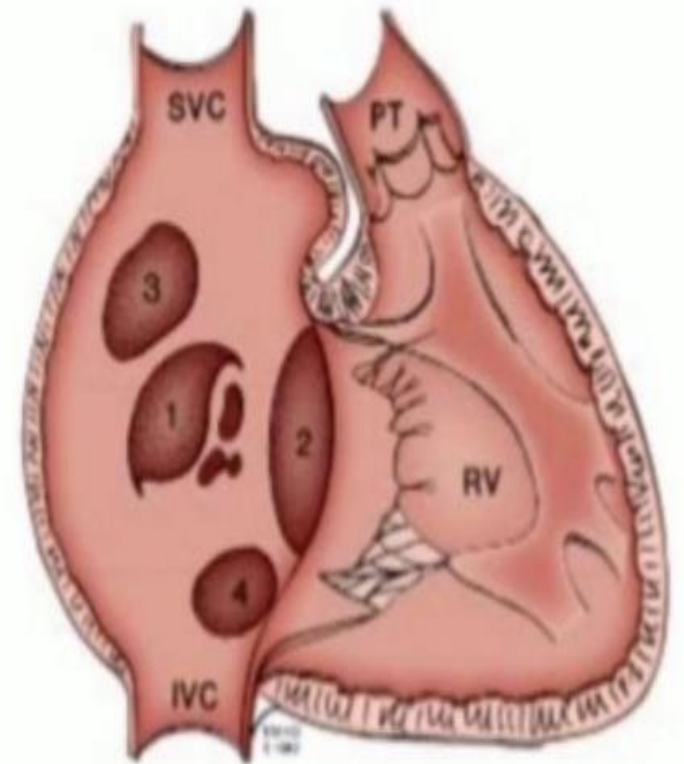


TYPES OF ATRIAL SEPTAL DEFECT:



- Secundum ASD
 - PFO vs ASD
- Primum ASD
- Sinus Venosus ASD
 - Superior
 - Inferior

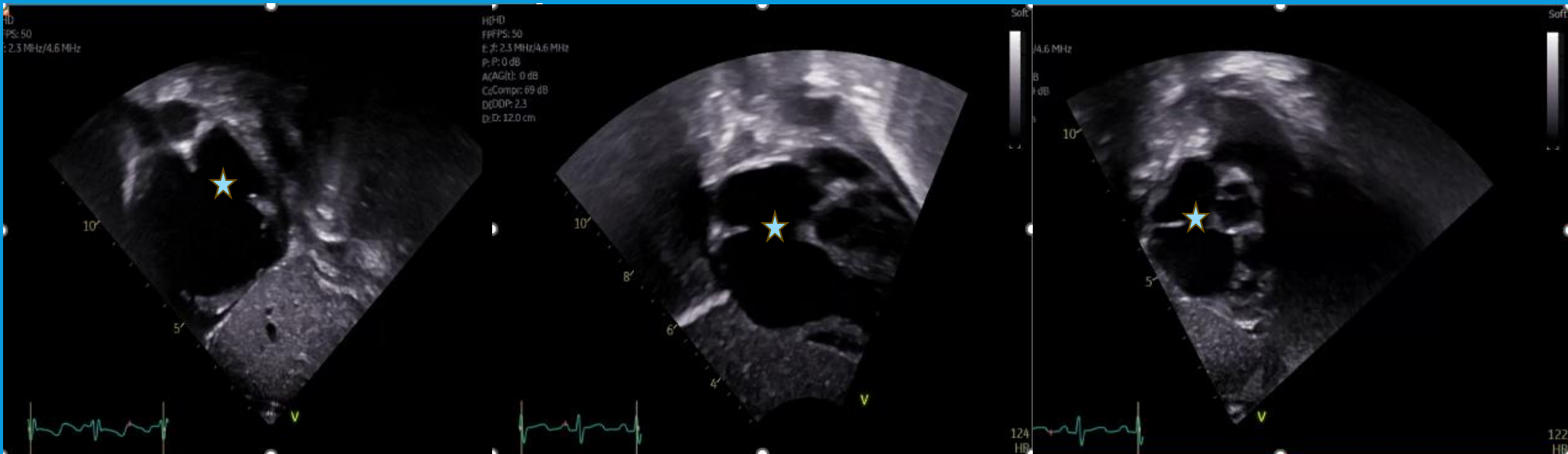
1. Secundum ASD (75%)
2. Ostium primum ASD (20%)
3. Sinus venosus ASD (5%)
4. Coronary sinus ASD (<1%)



OSTIUM SECUNDUM ASD



- Most common type, 70-90 % of all atrial level communications
- Best imaging windows: Subcostal 4 chamber, subcostal sagittal, RAO and parasternal SAX



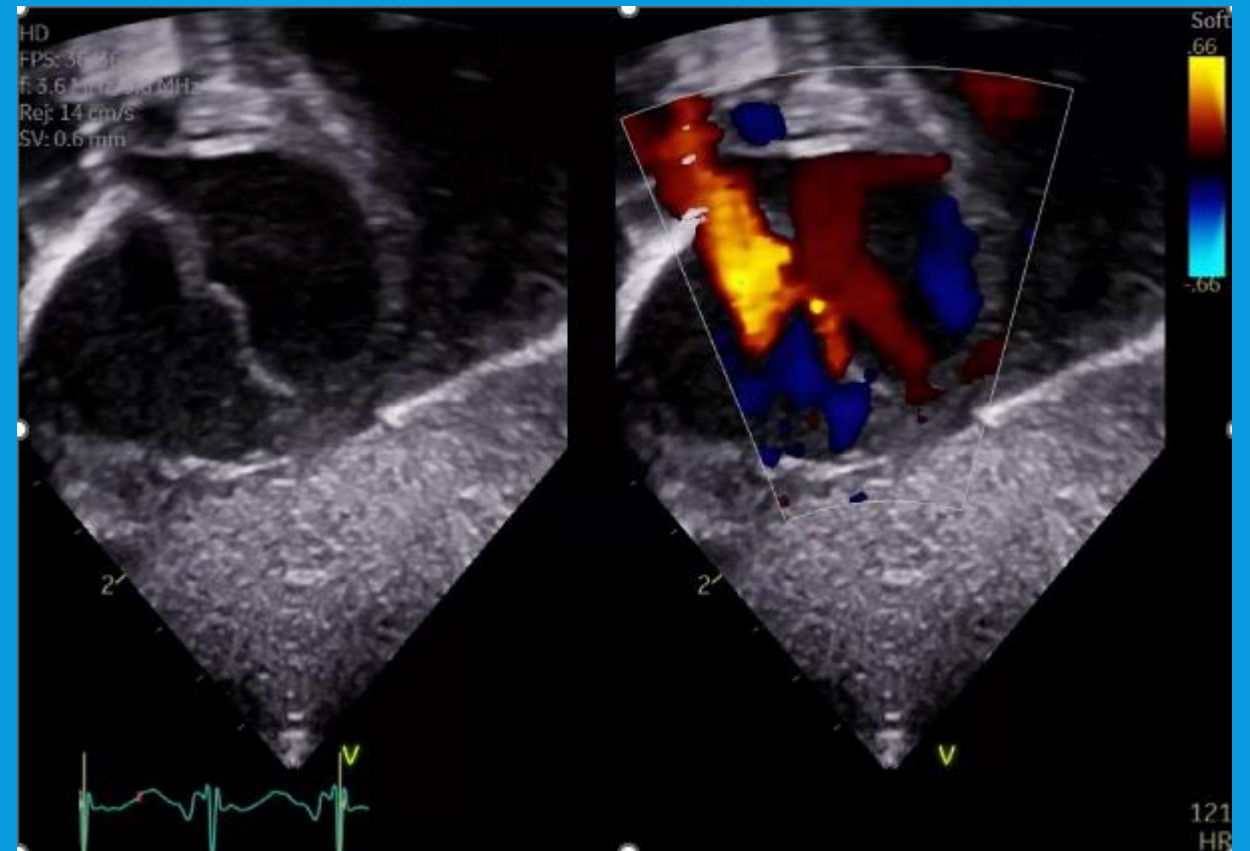
PFO VS SECUNDUM ASD



ASD



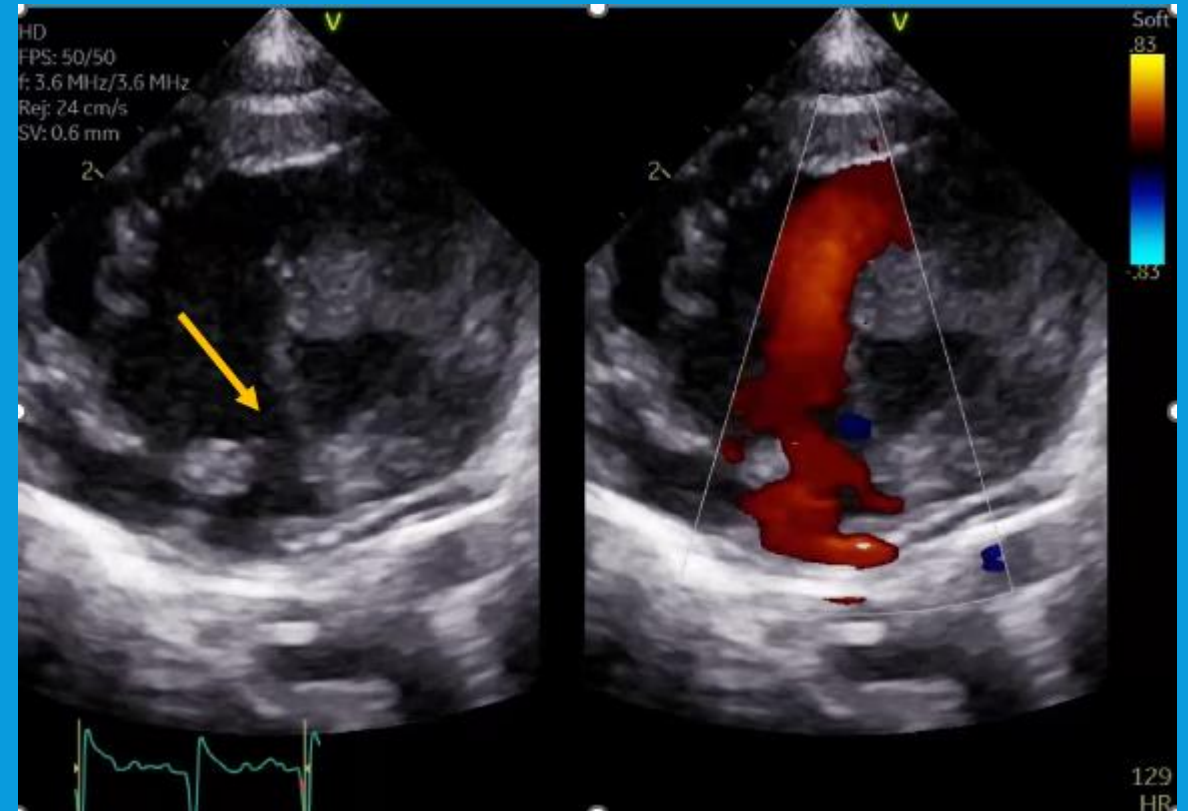
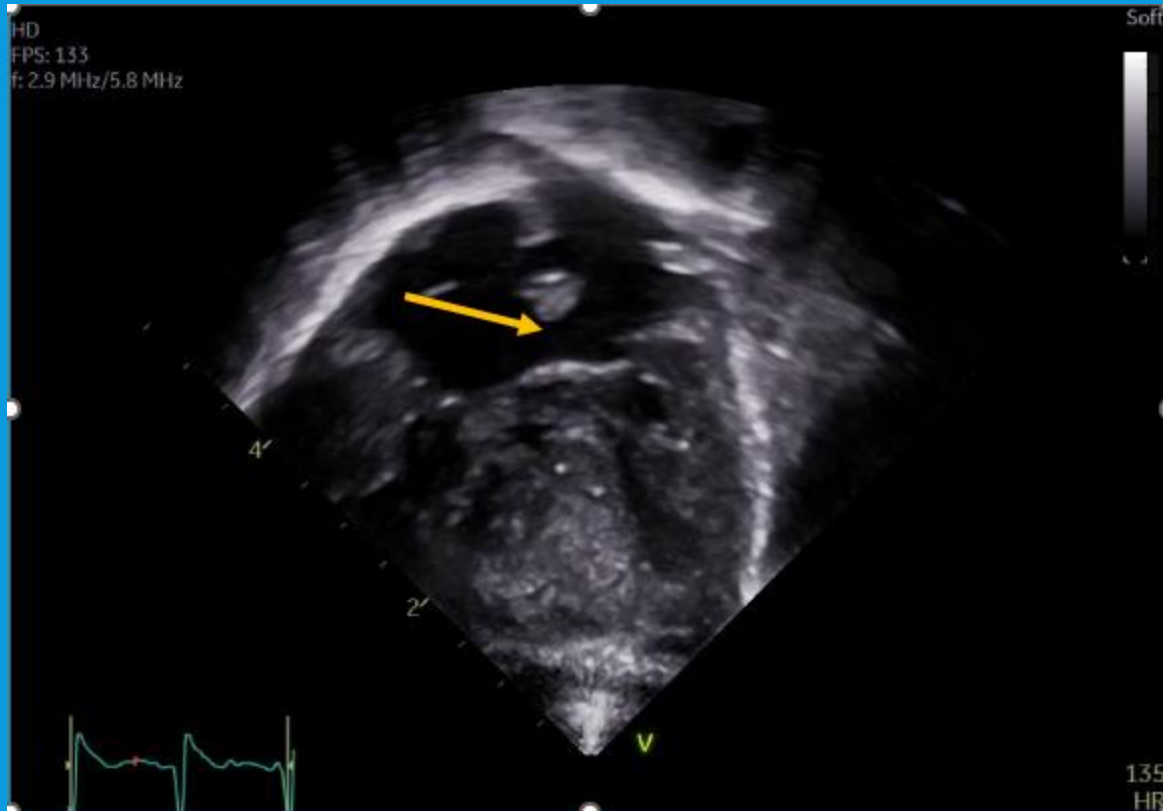
PFO





OSTIUM PRIMUM ASD

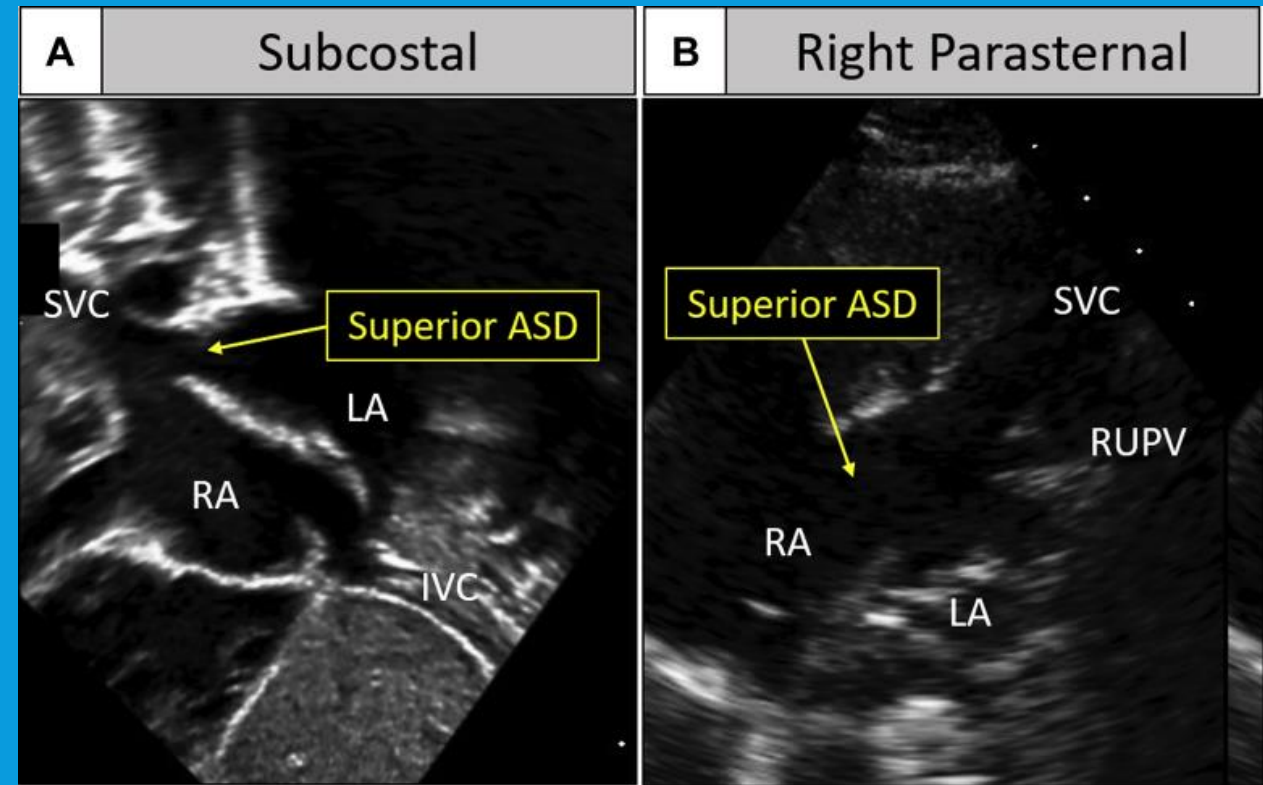
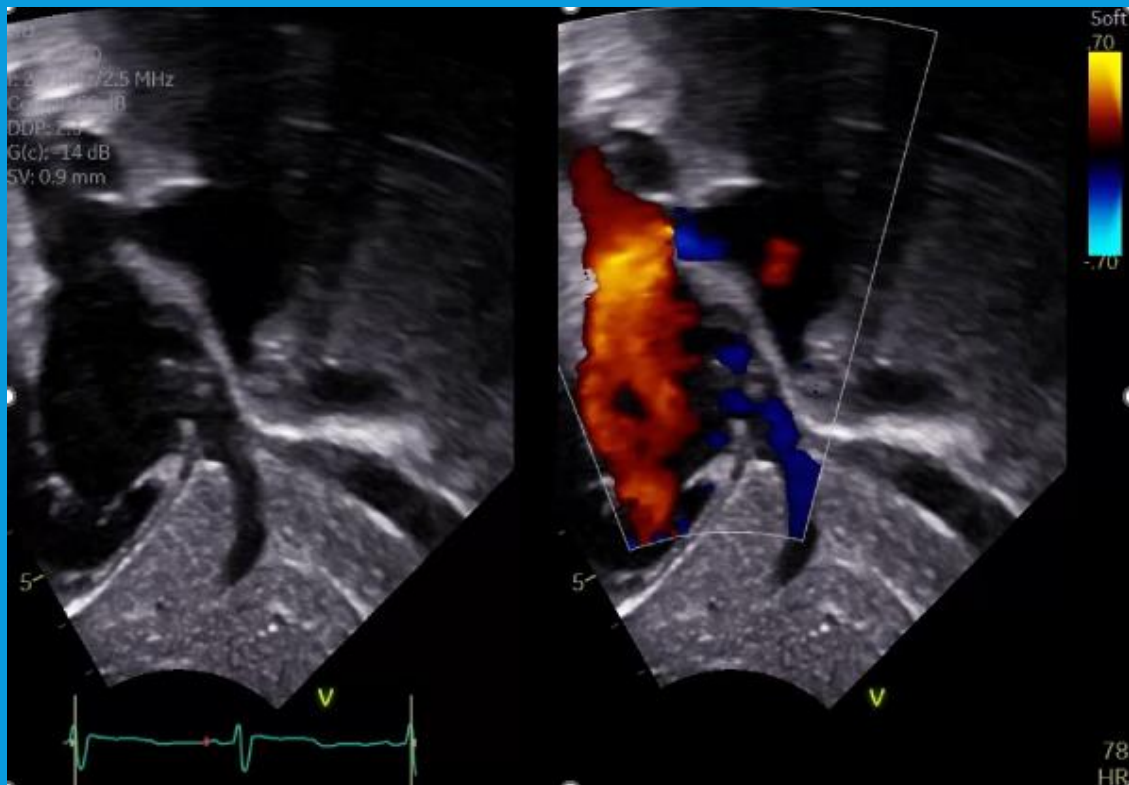
- 10% of all atrial level communications
- Best visualized in subcostal 4C, apical 4C and parasternal SAX



SINUS VENOSUS ASD



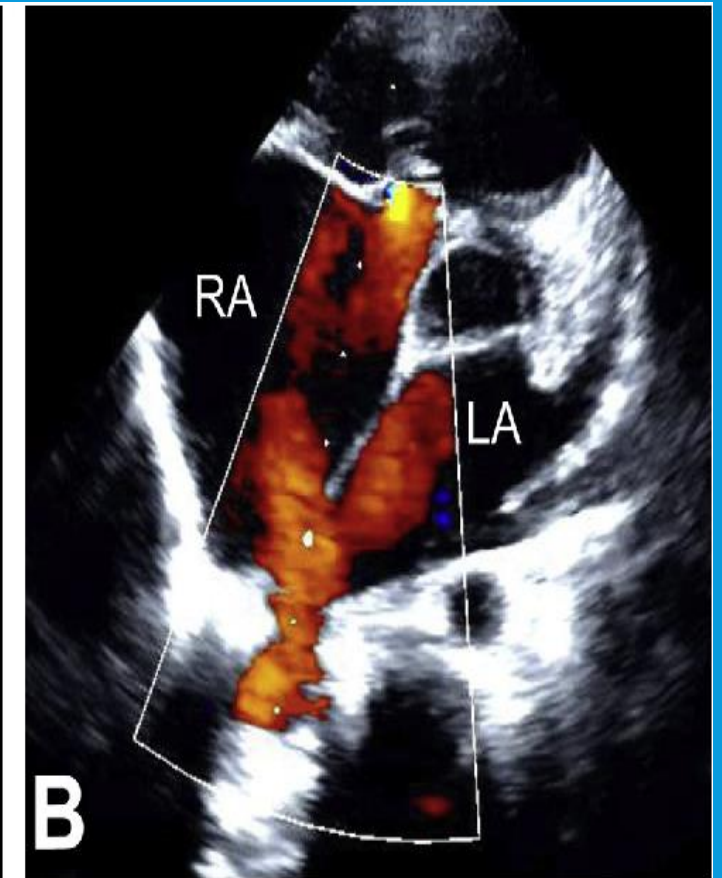
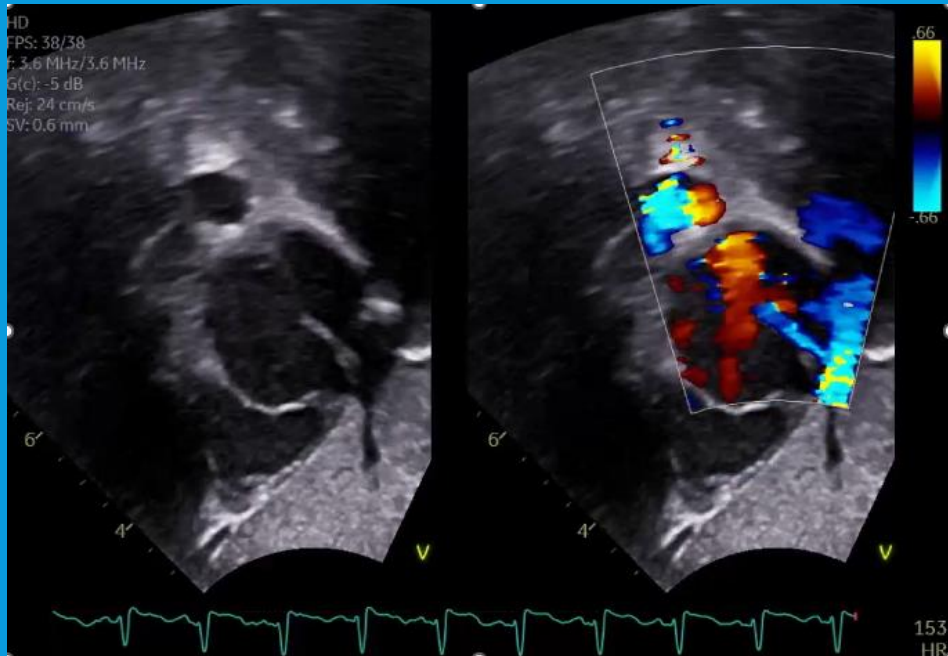
- Superior
- Best visualized from the subcostal sagittal and high right parasternal



INFERIOR SINUS VENOSUS ASD

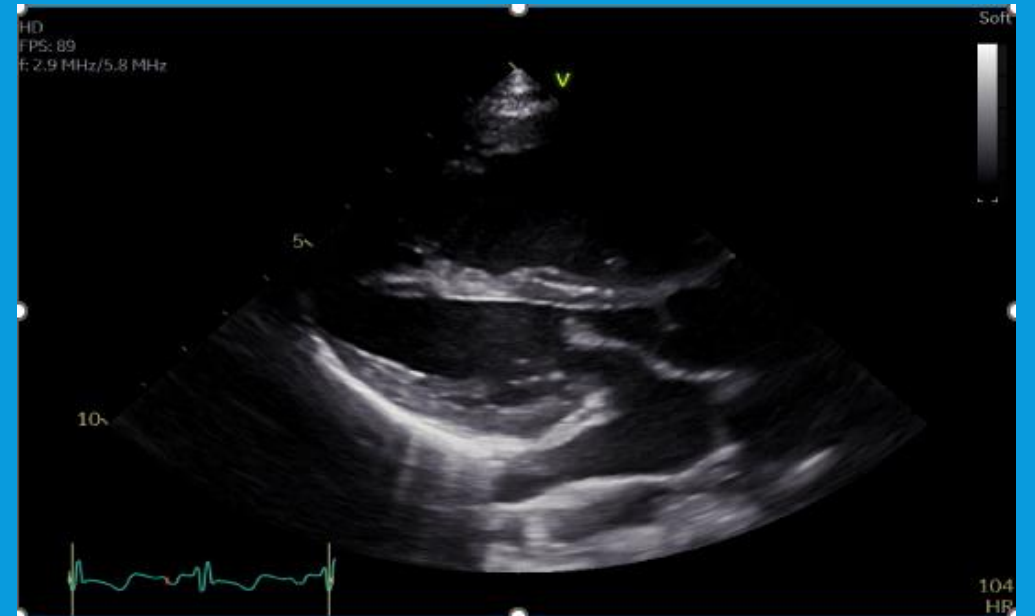


- Inferior
- Best visualized from the subcostal sagittal view and parasternal SAX





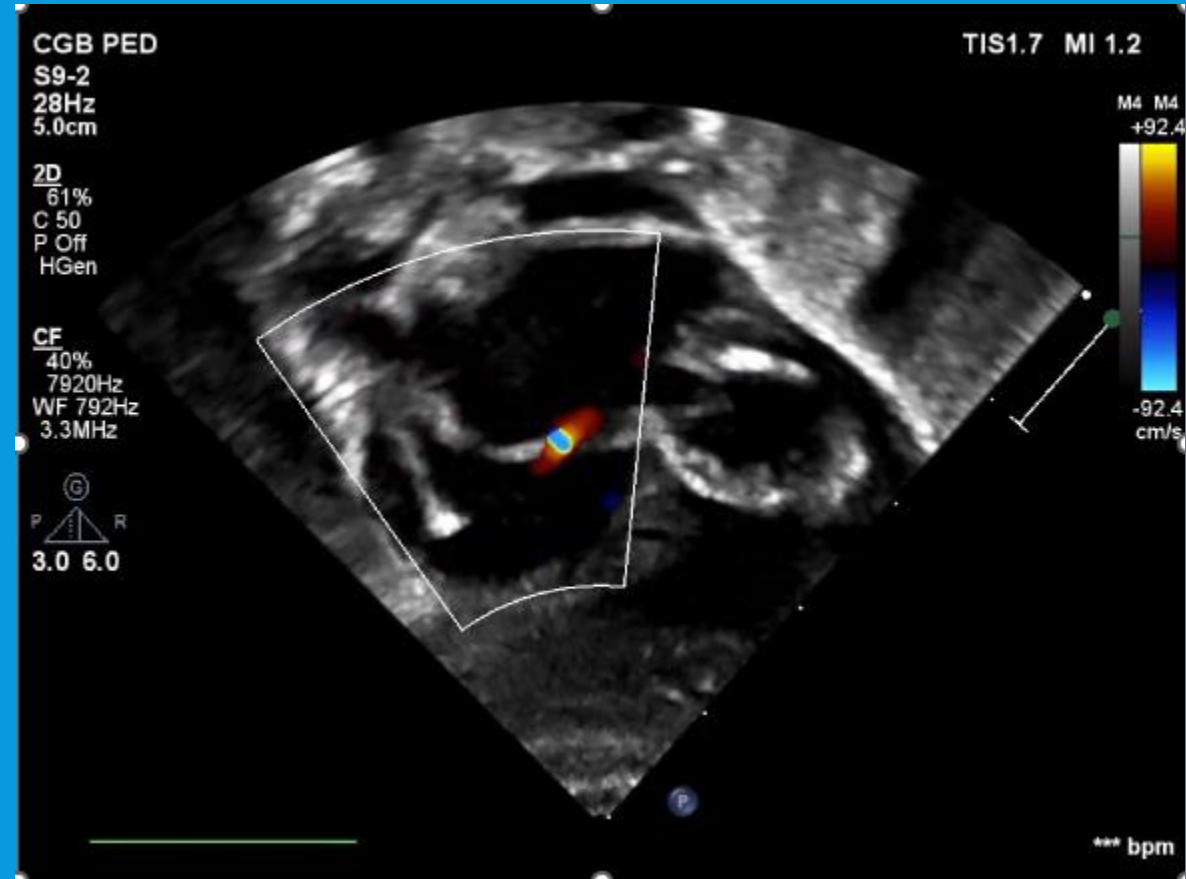
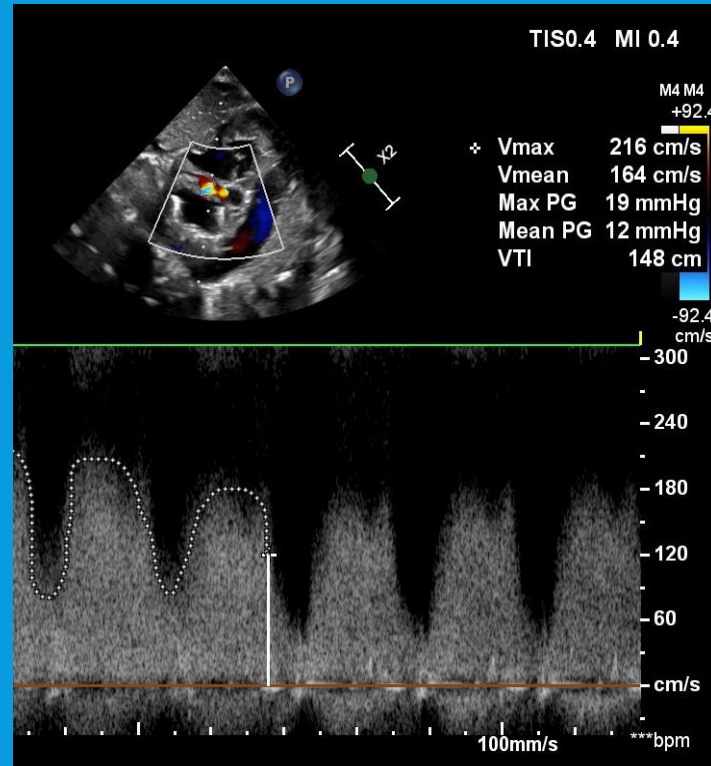
THE BIG PICTURE



CRITICAL SITUATIONS

- Transposition of the great arteries (TGA)
- Hypoplastic left heart syndrome (HLHS)
- Total anomalous pulmonary venous return (TAPVR)

- What to look for:
 - 2D
 - Color Doppler
 - Spectral Doppler



TIPS AND TRICKS



Choose the right transducer



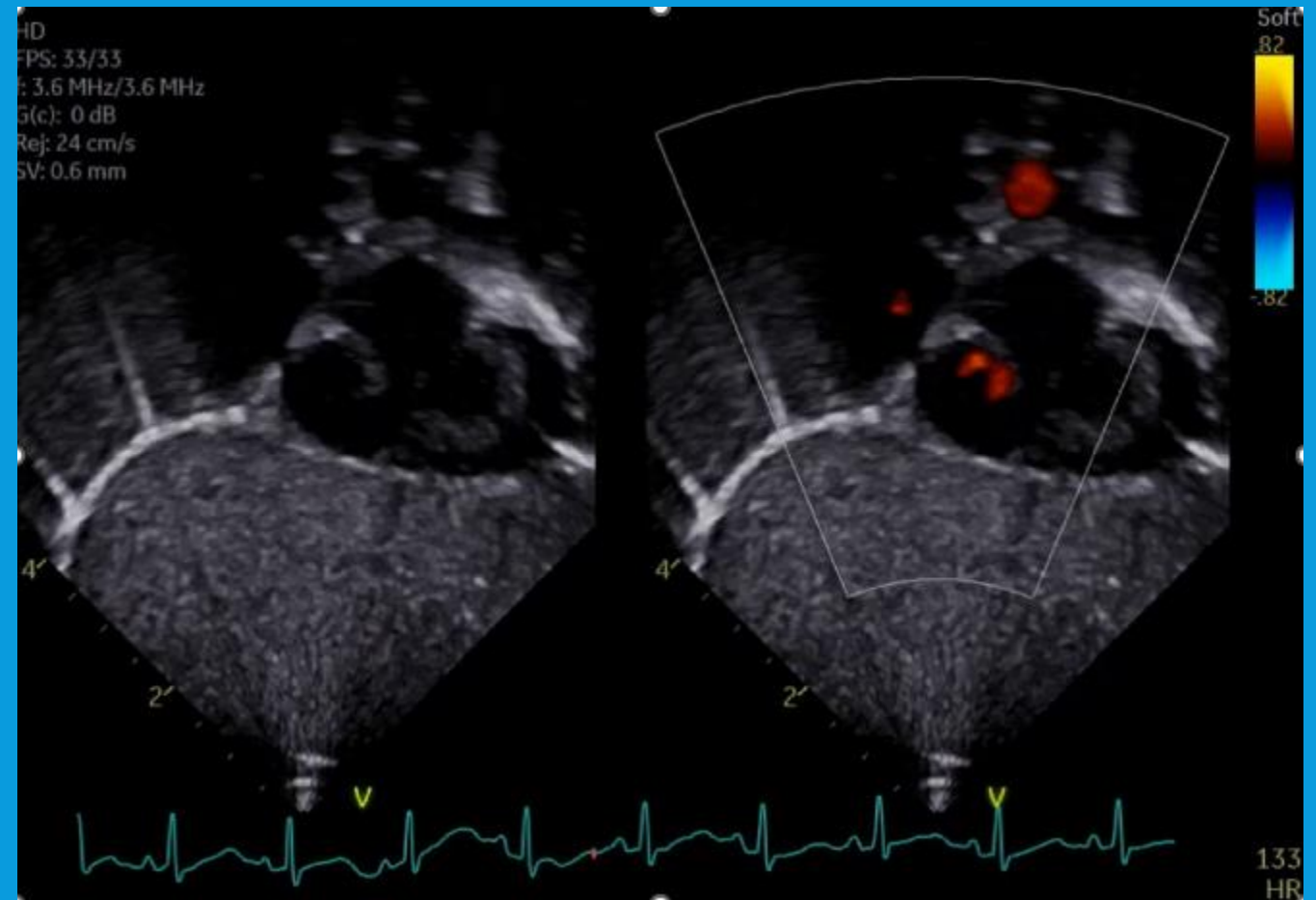
Adjust your color scale



TIPS AND TRICKS



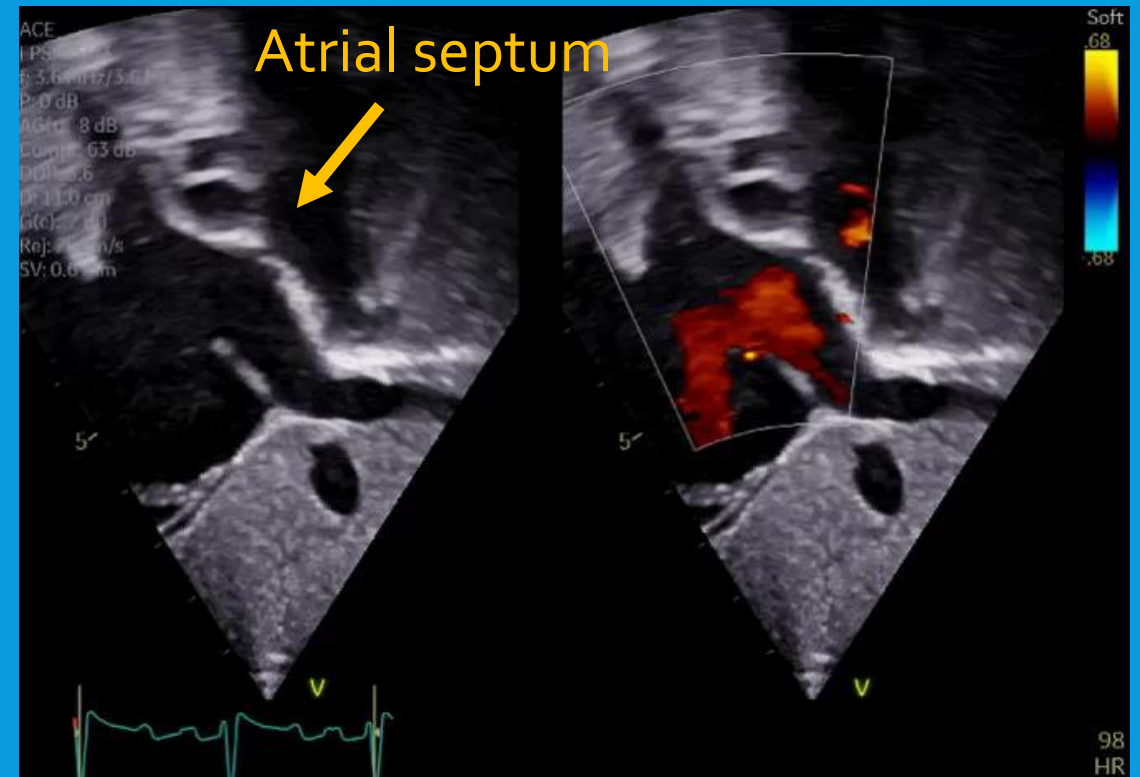
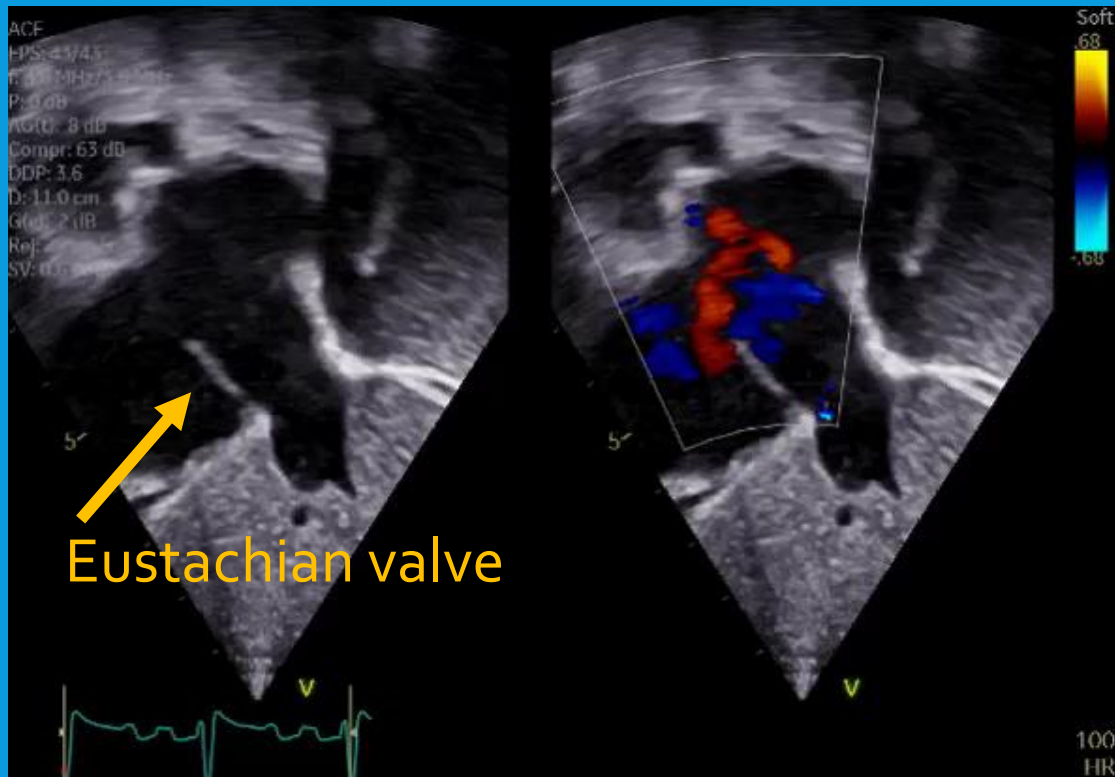
- Zoom in
- Slow sweeps
- Multiple views



TIPS AND TRICKS



Prominent Eustachian valve





THANK YOU