

22nd Annual Obstetric Ultrasound Setting the Standard for 2019
Feb 22-24, 2019

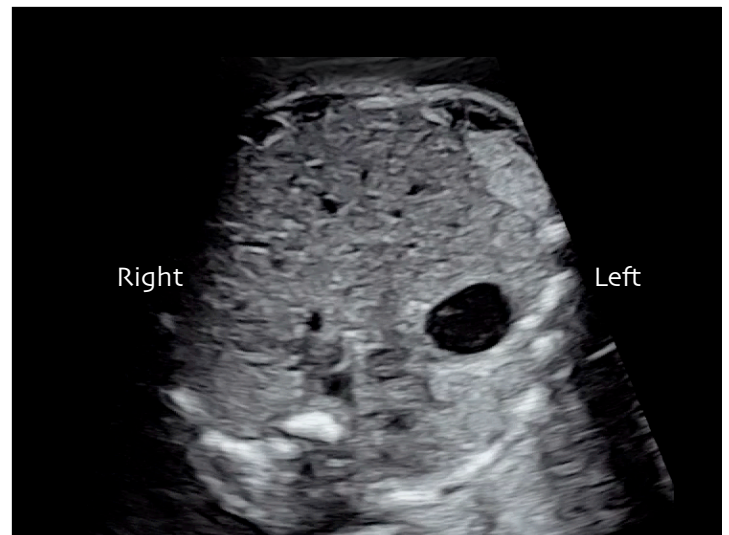
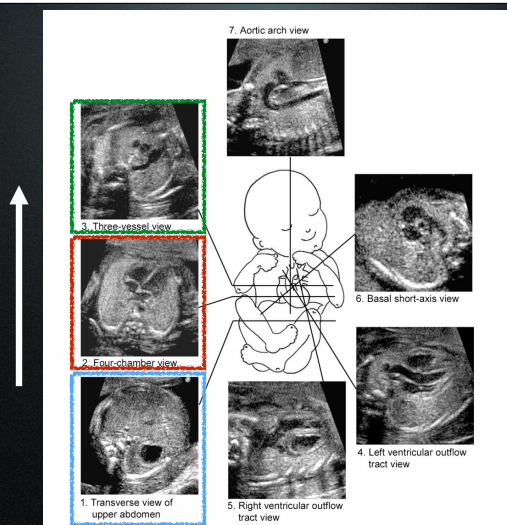
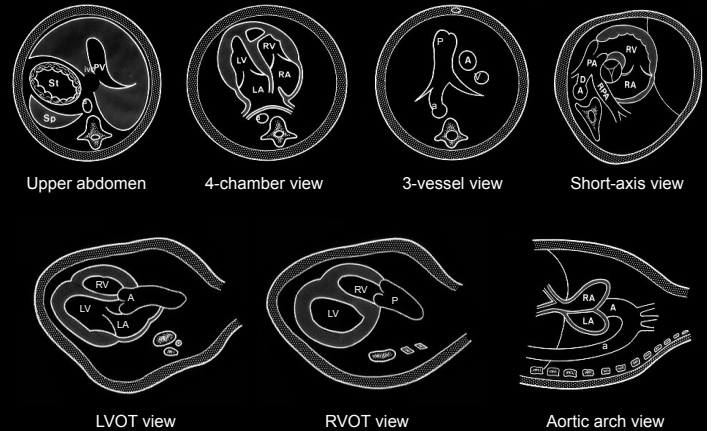
Cardiac Anatomy Scanning

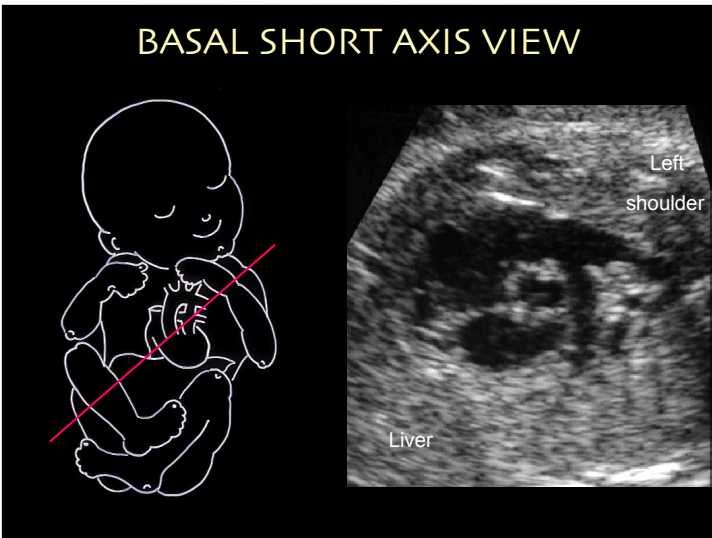
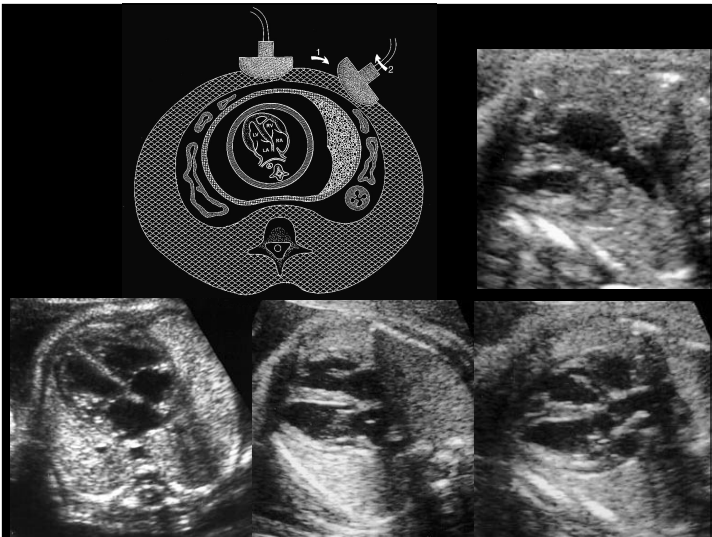
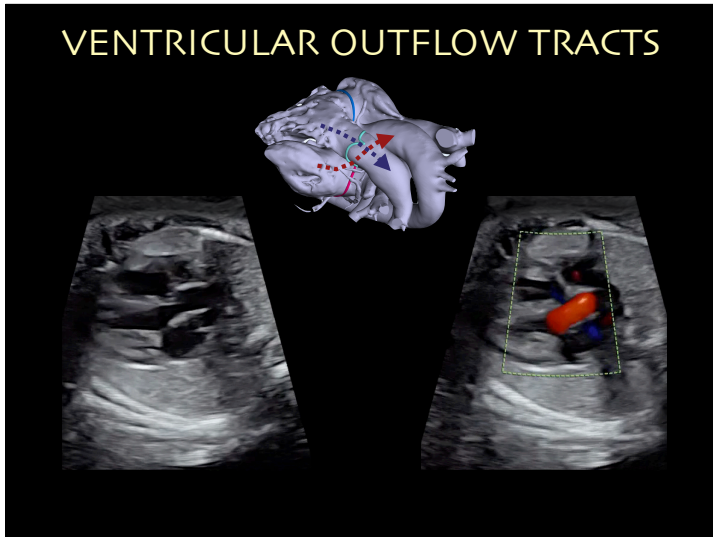
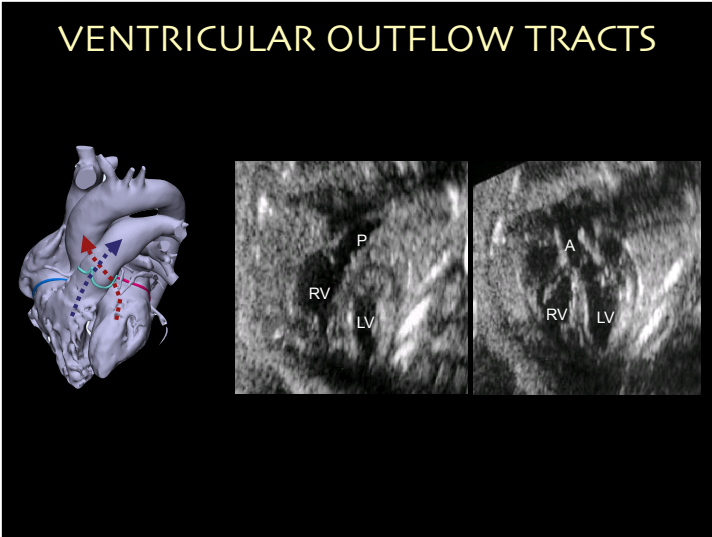
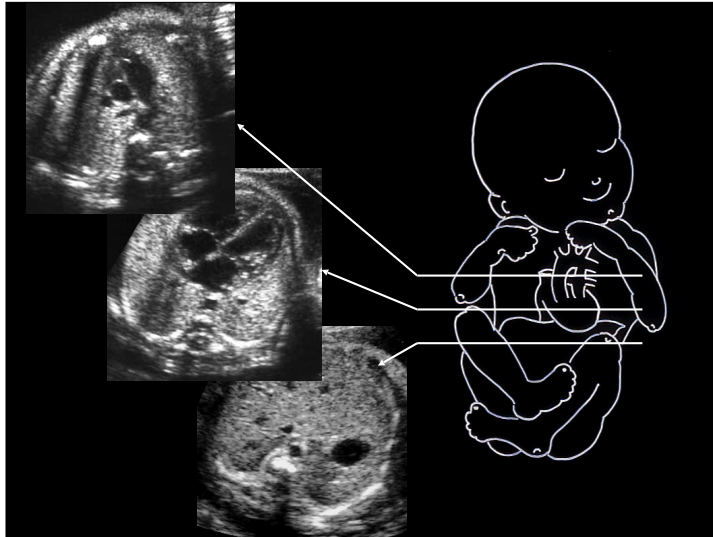
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OUTLINE

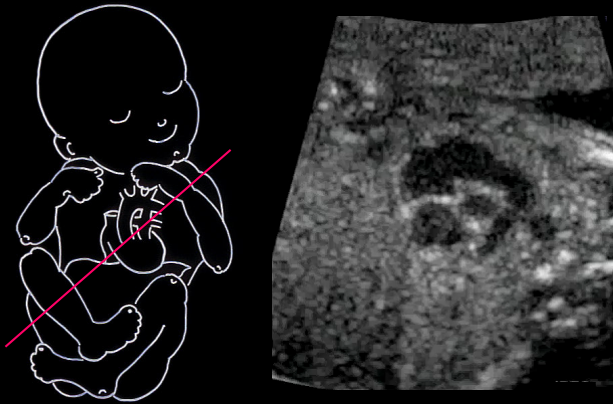
- Basic views for cardiac anatomy scanning
How to obtain them
- Major abnormalities you don't want to miss at each view

BASIC ECHO VIEWS

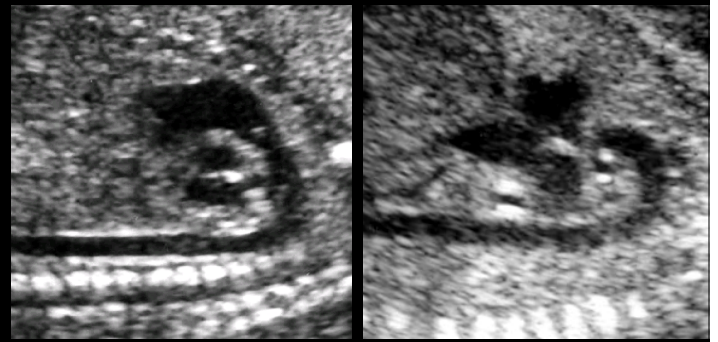




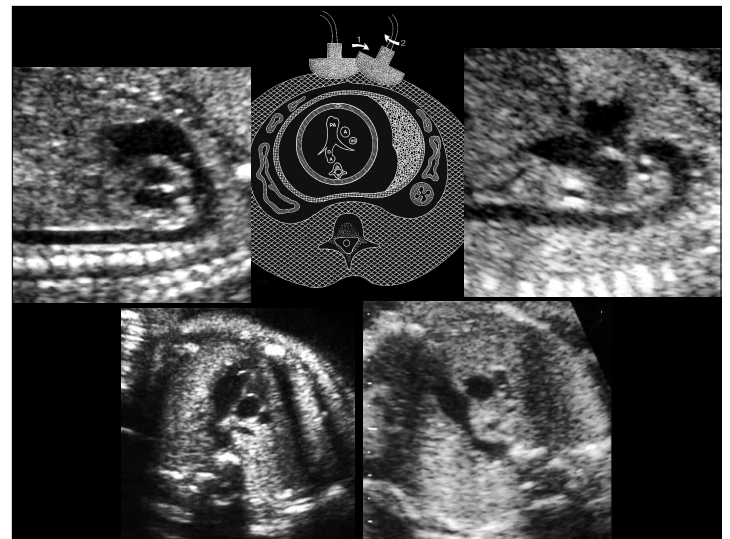
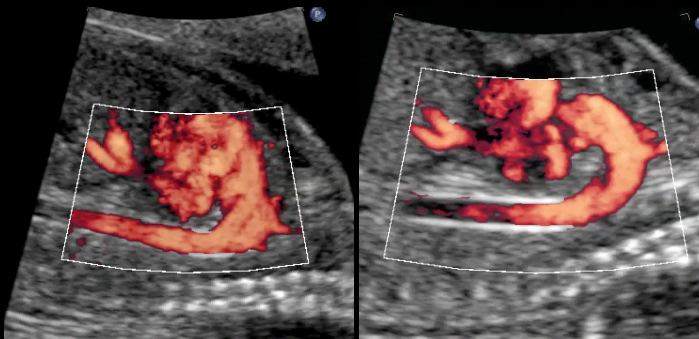
BASAL SHORT AXIS VIEW



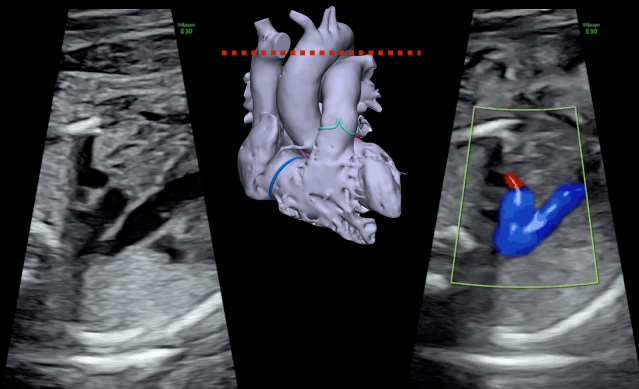
DUCTAL AND AORTIC ARCHES



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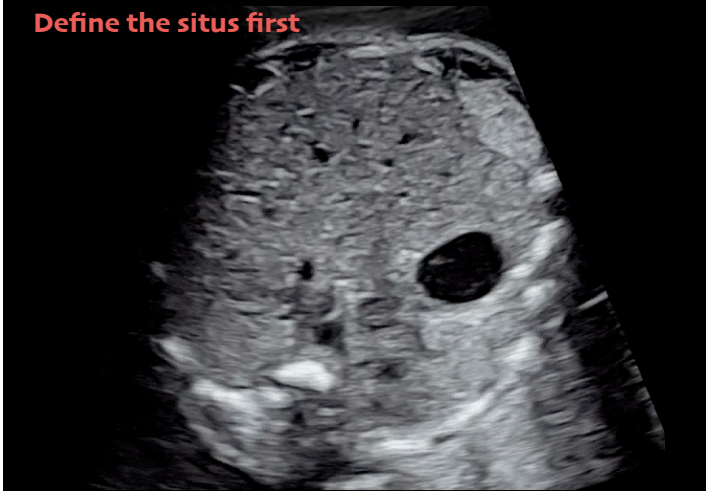
DUCTAL AND AORTIC ARCHES



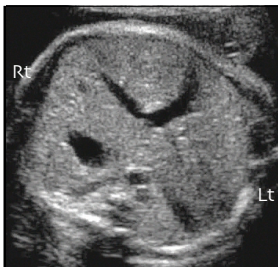
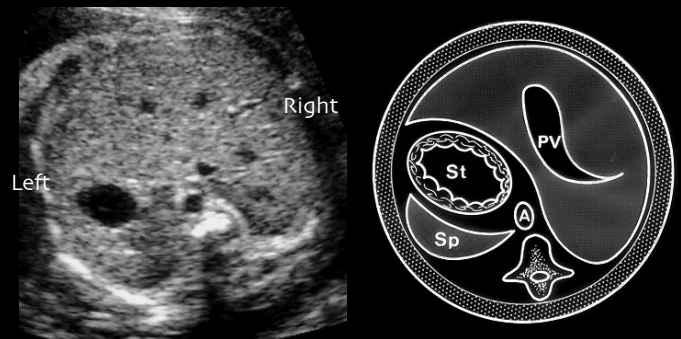
What you don't want to miss

FETAL CARDIAC SCREENING

Define the situs first



TRANSVERSE VIEW OF UPPER ABDOMEN



- Stomach on the right
- Two vessels on the back



- Levocardia
- Two vessels on the back

Heterotaxy with IVC interruption
Most likely left isomerism



- Aorta and IVC on the right (juxtaposed)
- Liver extending to the left behind the stomach

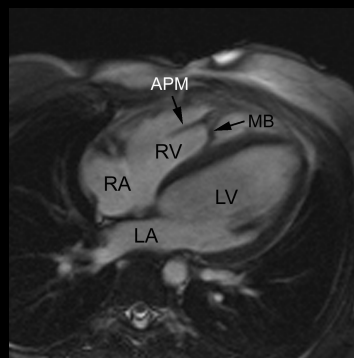
- Heterotaxy with asplenia, most likely right isomerism -

4-CHAMBER VIEW

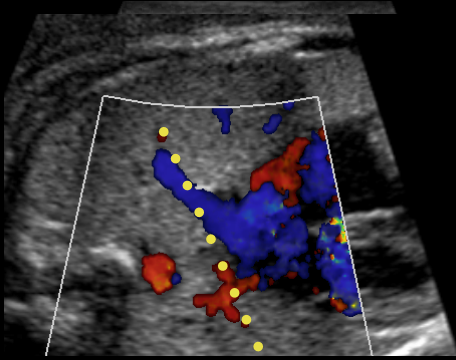


- Heart position / size
- RV versus LV
- Chamber size
- Septal integrity
- Patent foramen ovale
- Pulmonary veins

MODEARTOR BAND



PULMONARY VEINS

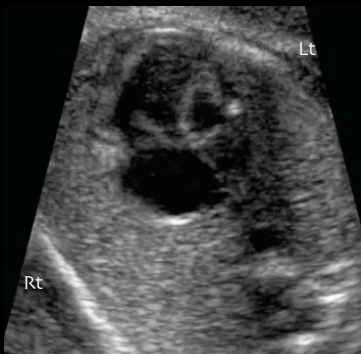


The lower pulmonary veins head forward, the upper pulmonary veins don't.



- Not levocardia
- RV on the left
- RA-LV and LA-RV

- Congenitally corrected TGA (L-TGA) -



- Small LV with bright echogenecity
- Atrial septum not moving

- Hypoplastic left heart syndrome with endocardial fibroelastosis -



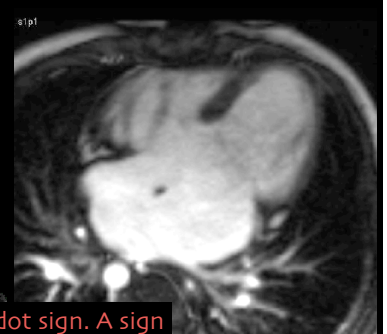
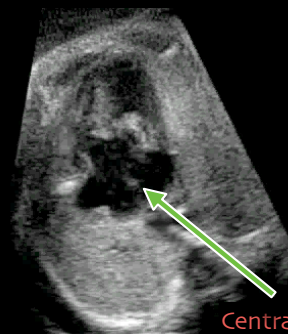
- Large septal defect at AV junction
- Bridging AV valve

- Atrioventricular Septal defect -

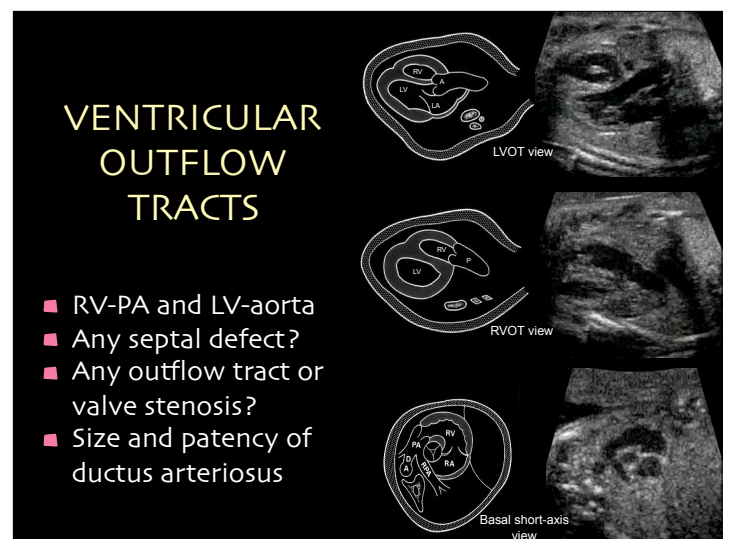
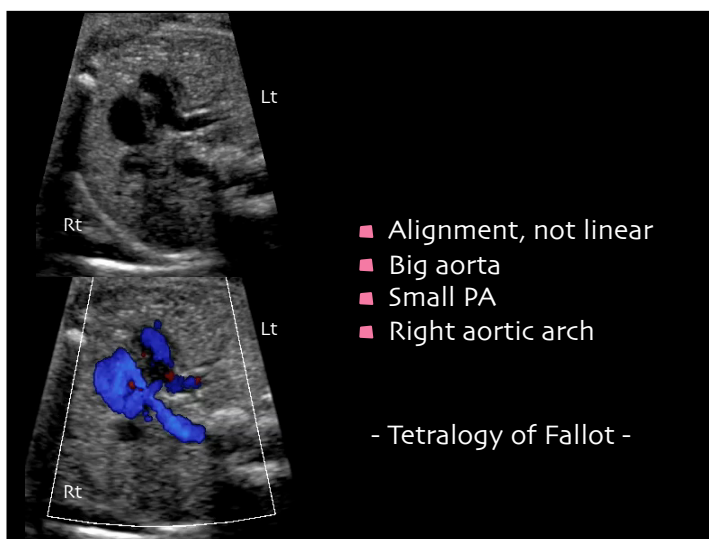
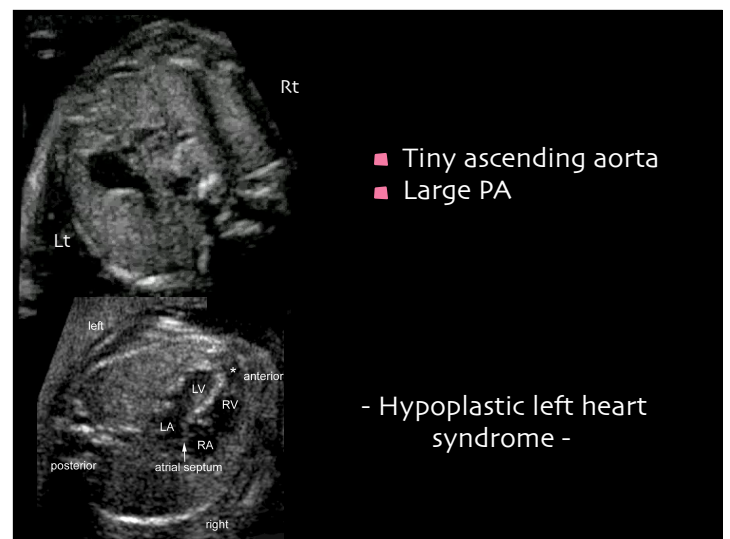
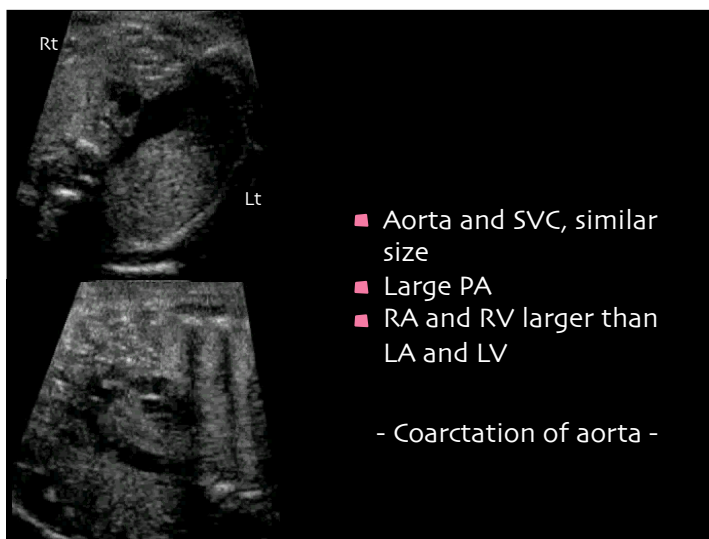
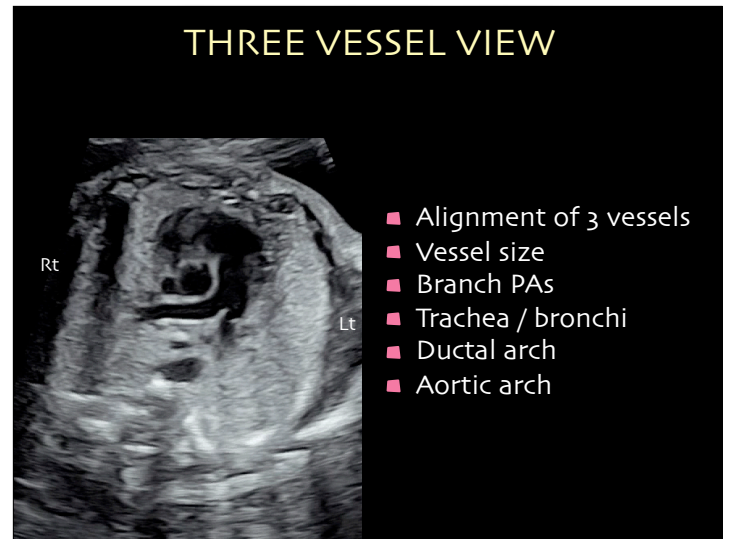
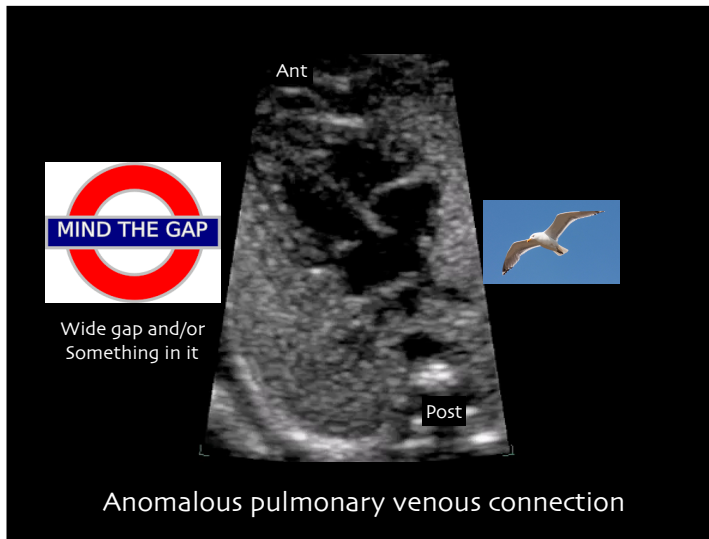


- Defect in the lower part of the atrial septum
- AV valves at same level
- No VSD component

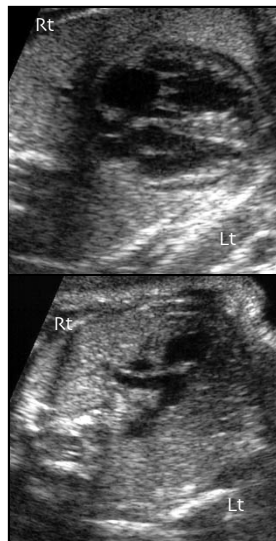
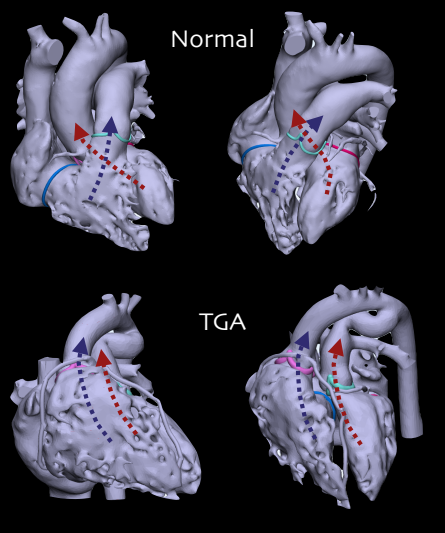
- Primum ASD or partial AVSD -



Central dot sign. A sign of right isomerism with AVSD.

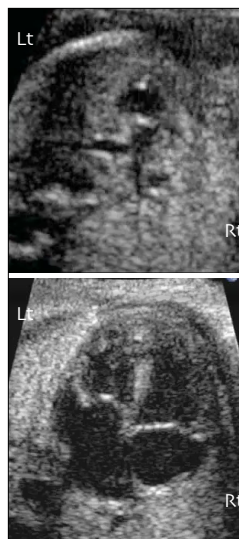
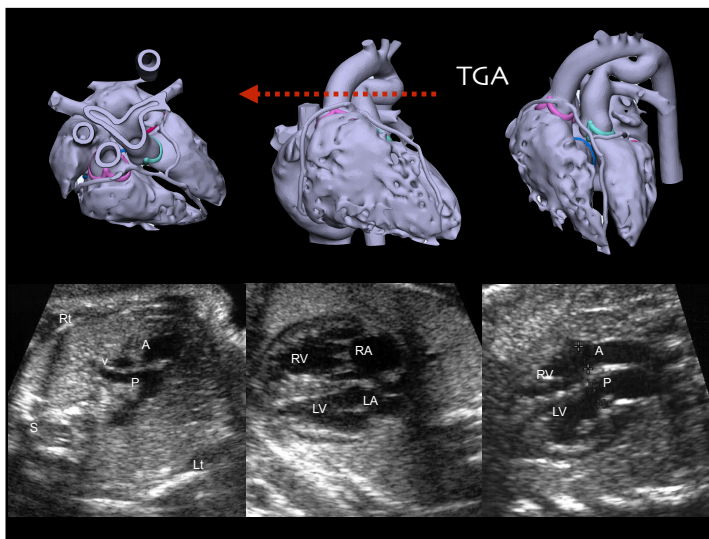


Normal vs Parallel arterial trunks



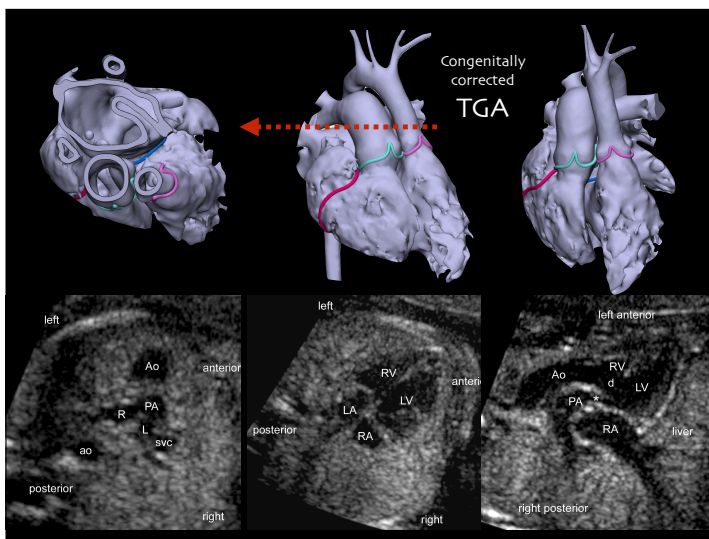
- Normal 4-chamber view
- Aorta right and anterior
- PA left and posterior

- Transposition of the great arteries -



- Aorta, left anterior to PA
- RV on the left / LV on the right
- Discordant AV connection

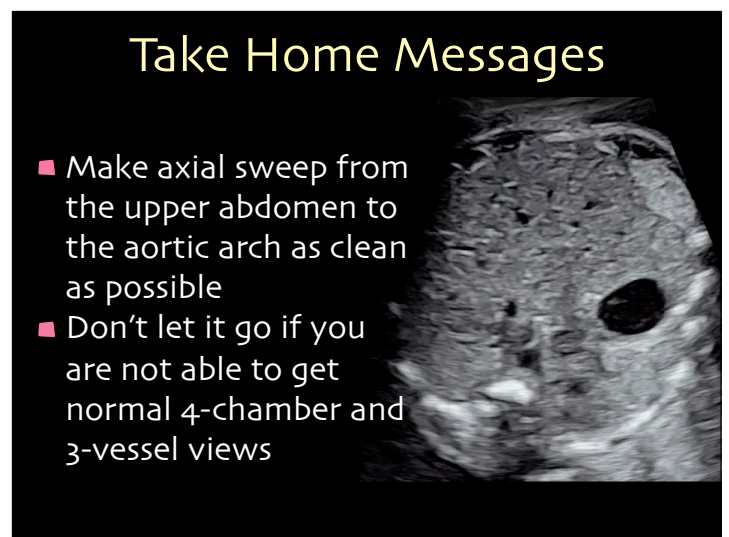
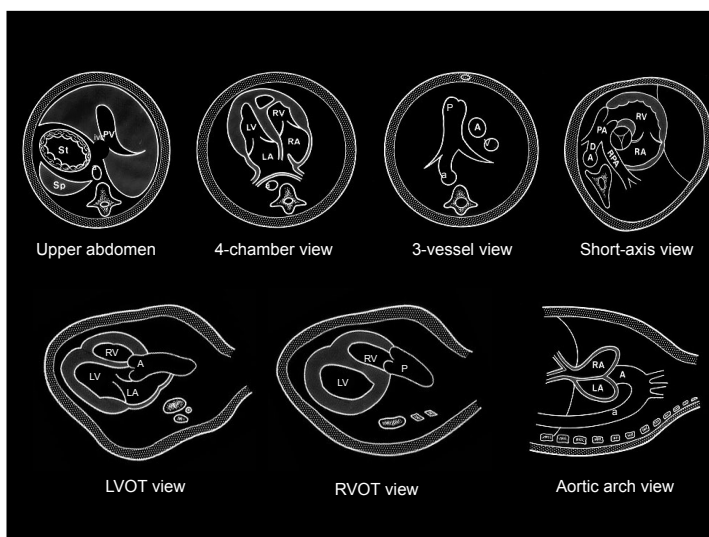
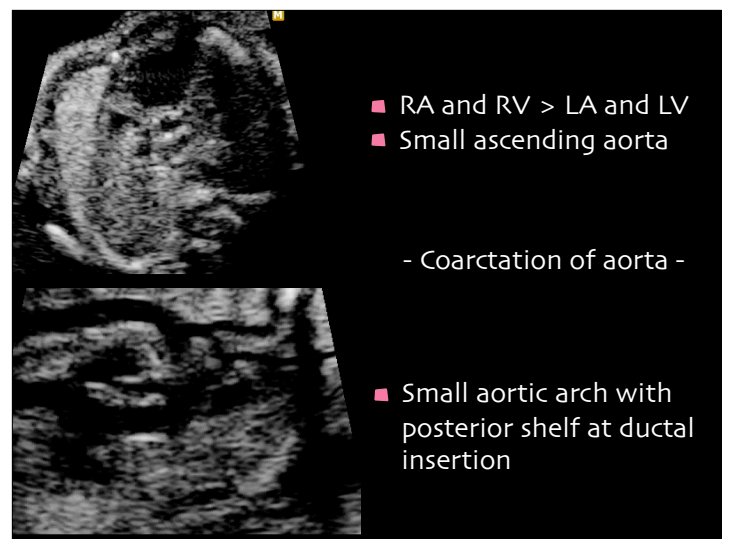
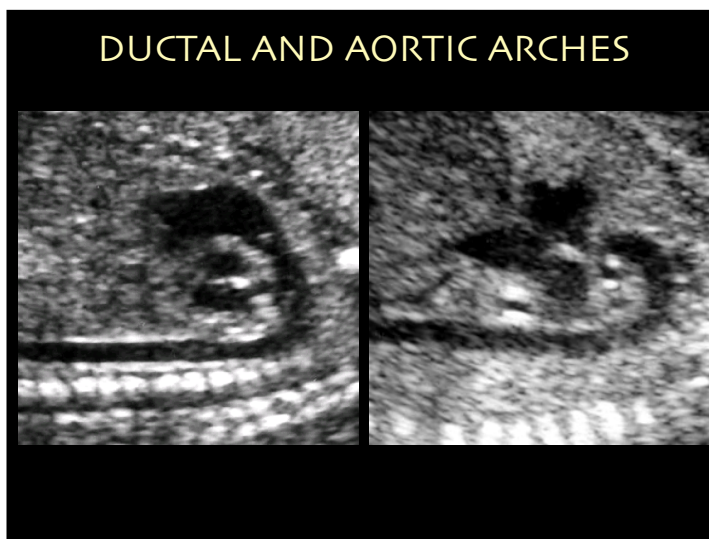
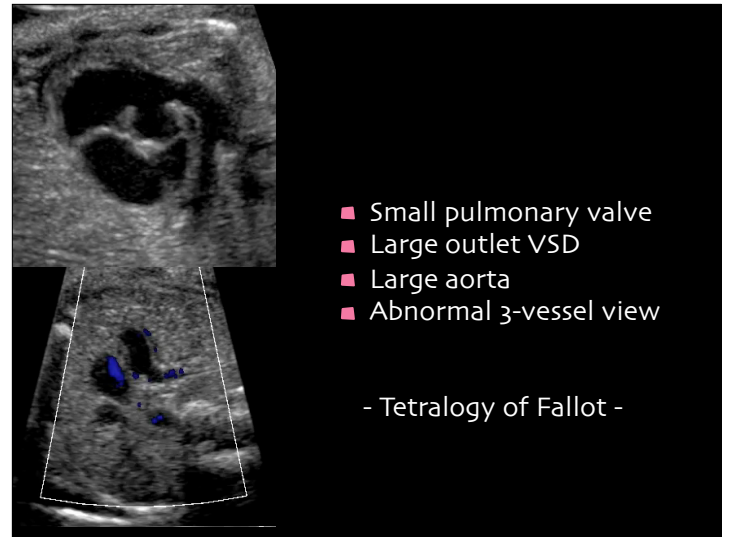
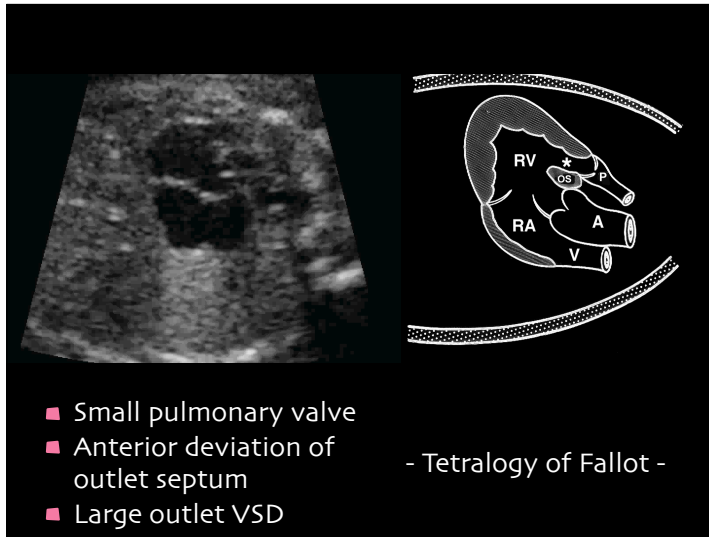
- Congenitally corrected TGA -



BASAL SHORT AXIS VIEW

- RA-RV-RVOT-MPA wrapping around the aorta in the middle
- Outlet septal integrity





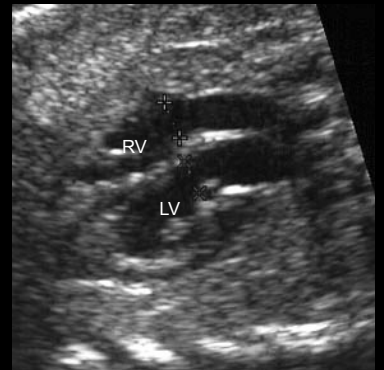
Take Home Messages

- Too small ascending aorta or MPA is highly suggestive of ductus dependant circulation after birth.



Take Home Messages

- Both aortic and pulmonary outflow tract in a single imaging plane is not normal.



Take Home Messages

- Posterior indentation in the aortic arch/descending aorta suggests coarctation of aorta.



Thank you!