Fetal Echocardiography

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Some major cardiac malformations can be detected from 11 weeks of gestation, when the nuchal translucency is performed. This is particularly true if the examination is done with a high frequency transvaginal transducer (TVS). Using TVS at 14-15 weeks of gestation, almost all cardiac malformations can be detected, with the exception of growth dependent cardiovascular abnormalities such as coarctation of the aorta, or abnormal diameters of cardiac chambers and great vessels, which may sometimes be developmental.

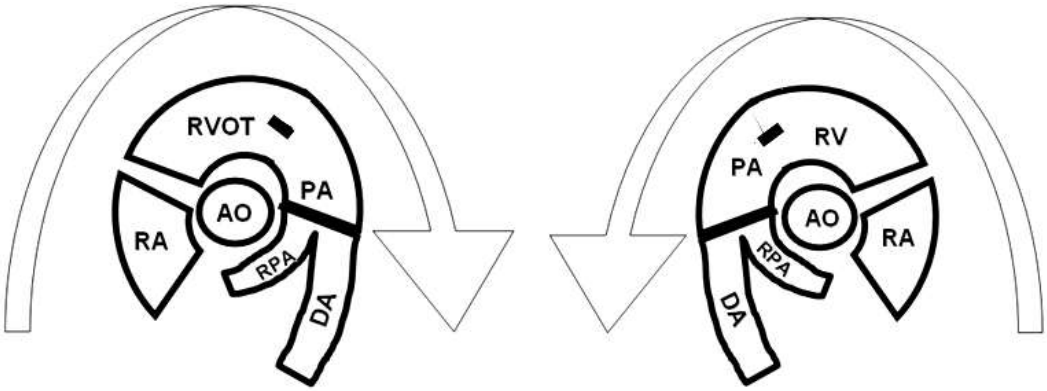
We shall discuss the rules for standard fetal echocardiography that includes the situs, great arteries and veins and five views that should be applied in all fetal cardiovascular examinations. The lecture is based mainly on video clips, but a drawing of the standard views can be seen in the following pages (continue to page 2).

Short Axis View

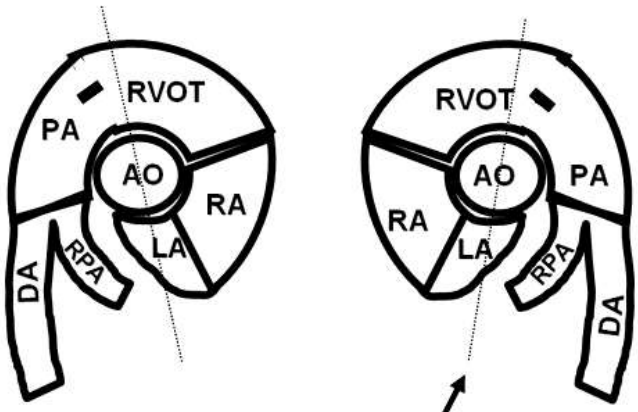
Remember the location of the cavities by comparing to the **direction of the blood flow** (arrow)

Right Atrium (RA)→ RV Outflow Tract (RVOT)→Pulmonary Artery (PA)→Ductus Arteriosus (DA) and the Right Pulmonary Artery

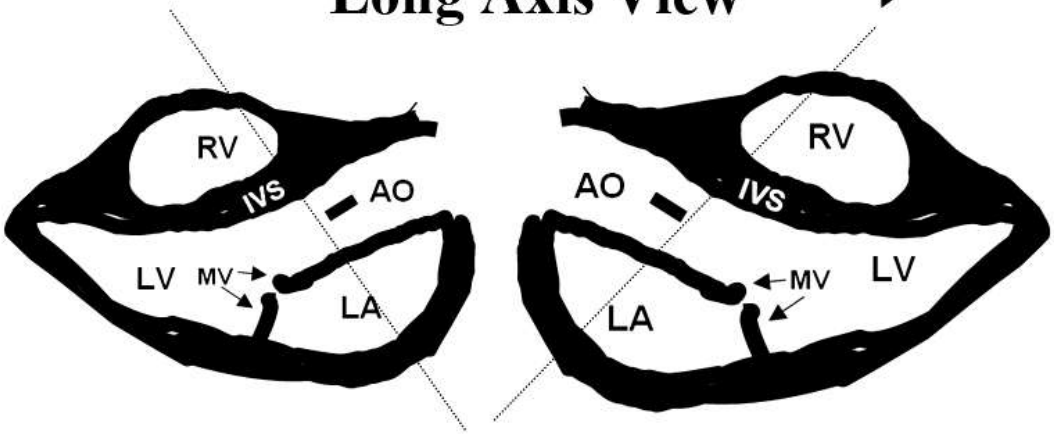
<u>Short axis view NOT containing the left atrium:</u>



<u>Short axis view containing the left atrium:</u>

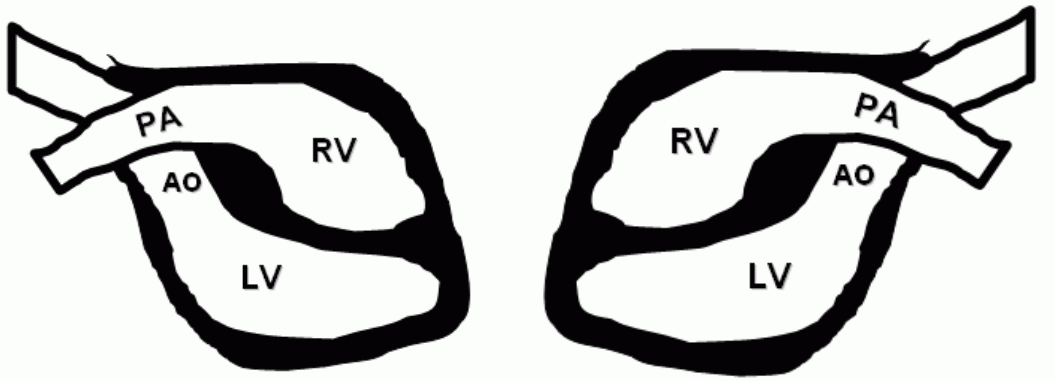


Long Axis View

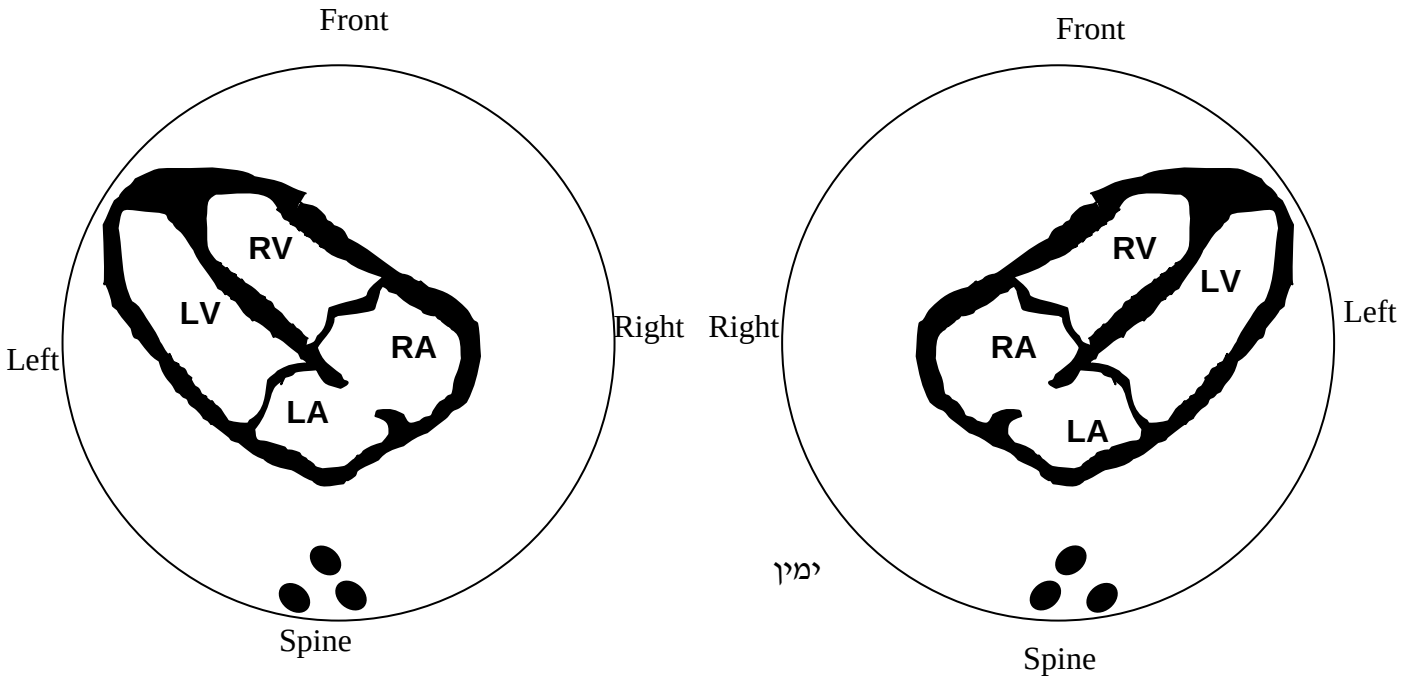
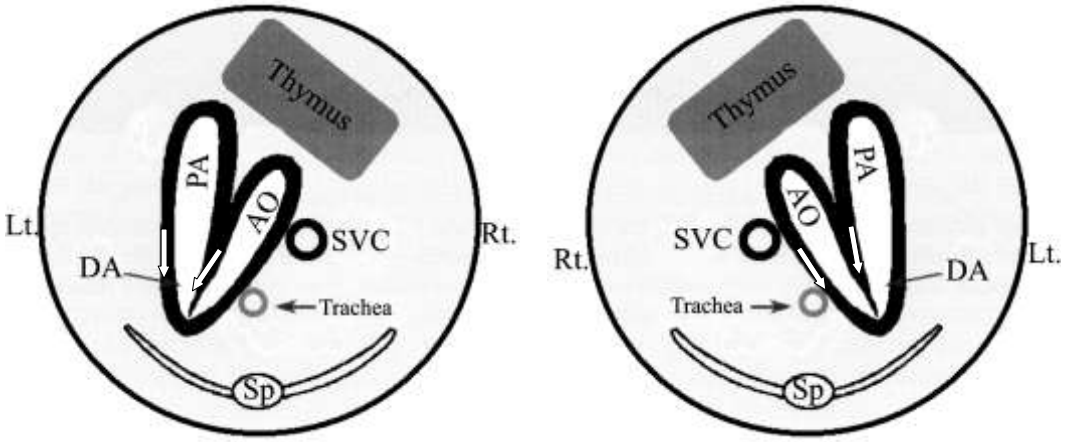


Crossing of Aorta and Pulmonary Artery

Slight tilting of the transducer is required in order to move from aortic to PA planes



Four Chamber View



3-Vessel and Trachea View (3VT)