

VIDEO: ORIENTATION: VIEWING HEART IN AXIAL CT AND MRI 2017

Summary - Orientation of heart in CT and MRI is complex; rarely appears to have 4 chambers.

1. Position and Orientation of heart - **Heart is rotated and tilted so Right Ventricle is anterior and inferior**; this makes **functional sense**; as a result, **Left Atrium is located in midline and receives blood symmetrically from Pulmonary Veins**.

2. Sequence of **Structures Inferior to Superior** - Pulmonary Veins, Pulmonary artery, Arch of Aorta; **order of structures on heart is same as at root of lung (Pulmonary Veins enter inferior to Pulmonary Arteries)**.

3. Confusing images in CT and MRI

a. **Y Shape: Pulmonary artery** - arises from Conus arteriosus (Infundibulum) of Right Ventricle; ascends toward left and crosses anterior to Aorta; Pulmonary artery then bifurcates (appears Y shaped in axial CT and MRI).

B. **Structure in Center of heart: Aorta** - arises from Left Ventricle and first courses in middle of heart (Heart appears to have 5 chambers in axial CT and MRI at this level).

5. **Order of Structures in Superior Mediastinum - Veins** (R and L Brachiocephalic) **are anterior to Arteries** (Brachiocephalic, L Common Carotid, L Subclavian) arising from Arch of Aorta.