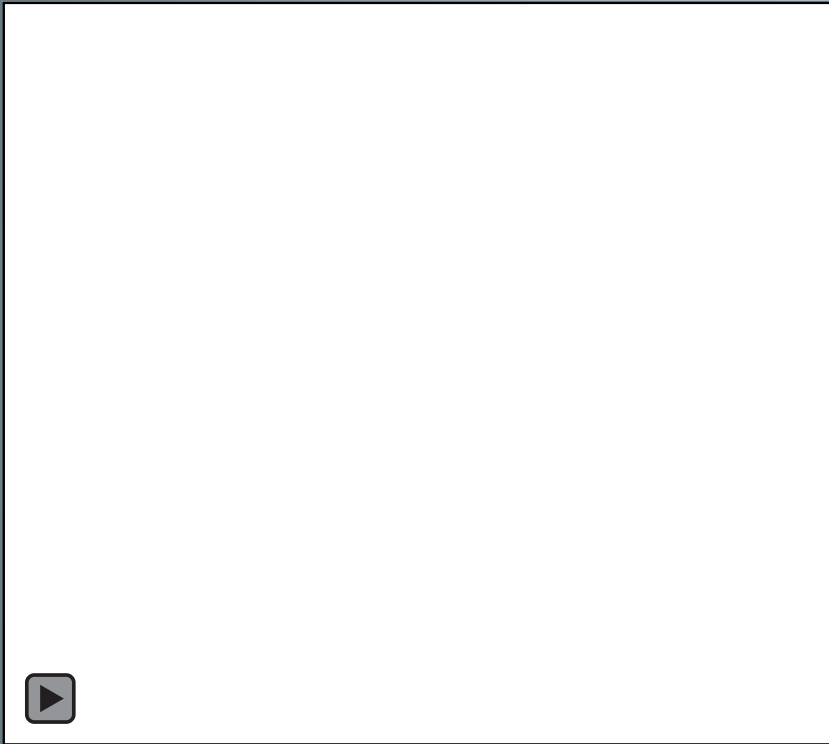
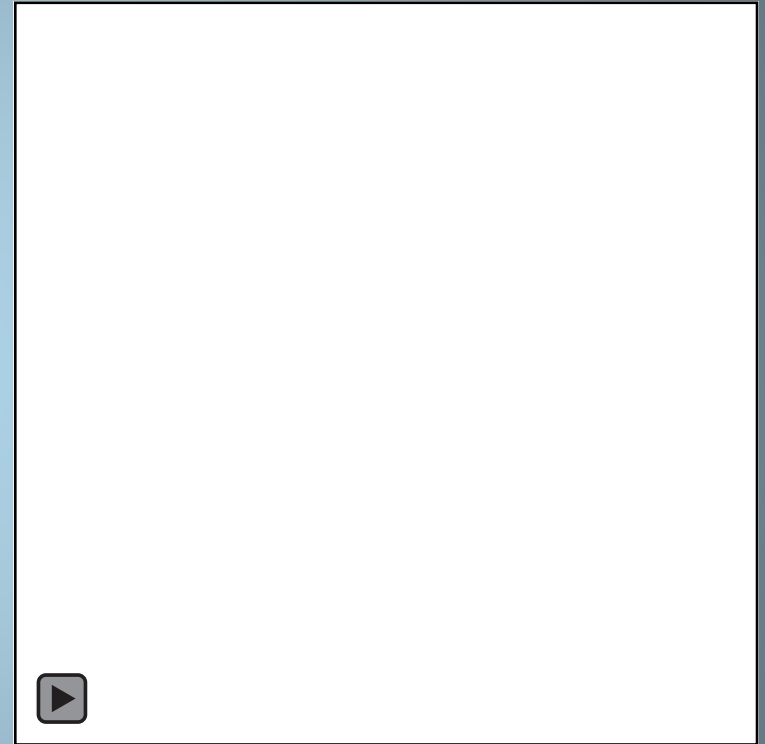


Pulmonary artery dilation



Right ventricular outflow tract
(RVOT)



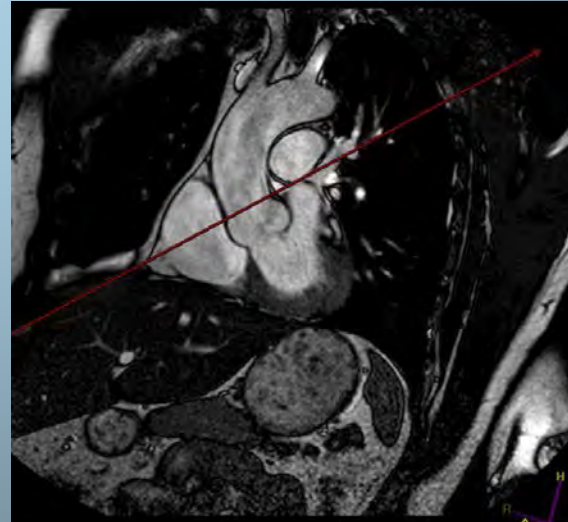
Pulmonary bifurcation

Q-flow - Quantitative flow analysis

- Results per RR-interval
- Forward flow volume (FFV)
- Backward flow volume (BFV)
- Regurgitant fraction ($\text{FFV} \div \text{BFV}$)
- Stroke volume ($\text{FFV} - \text{BFV}$)
- Mean velocity (cm/s)

Q-flow - Quantitative flow analysis

- Aorta
- Pulmonary vessels
- Valves
- Septal defects



Contrast-enhanced MR angiography (CEMRA)

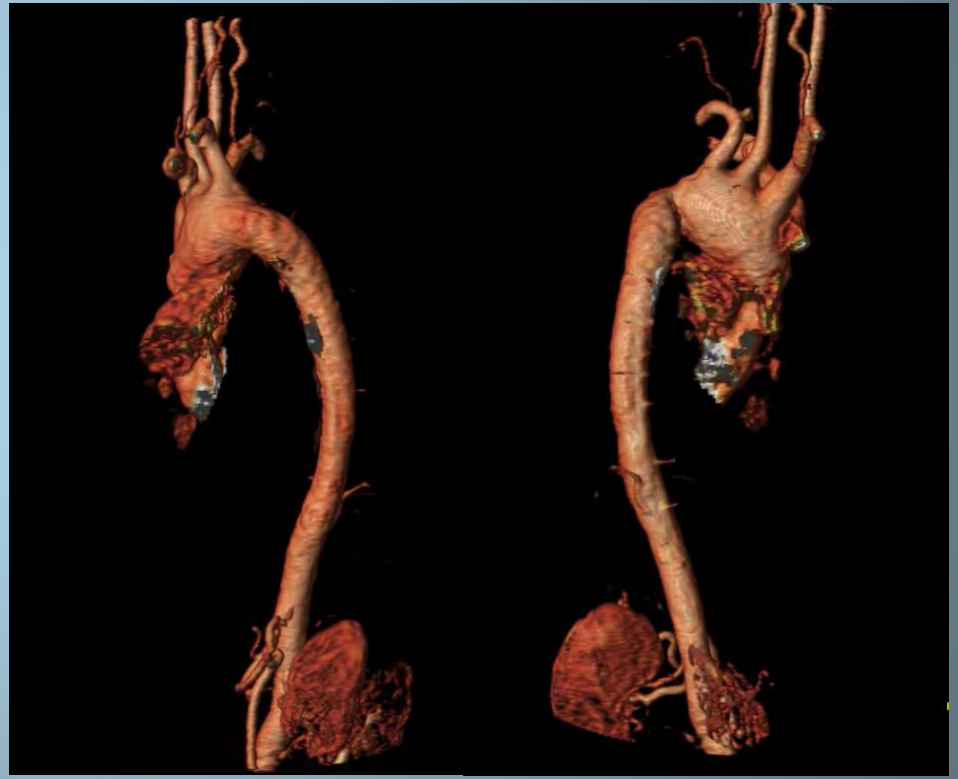
- Bolus IV gadolinium and saline
- 3 dimensional – isotropic voxels
- Approx. 30 second sequence
- Ability to manipulate / reconstruct

CEMRA



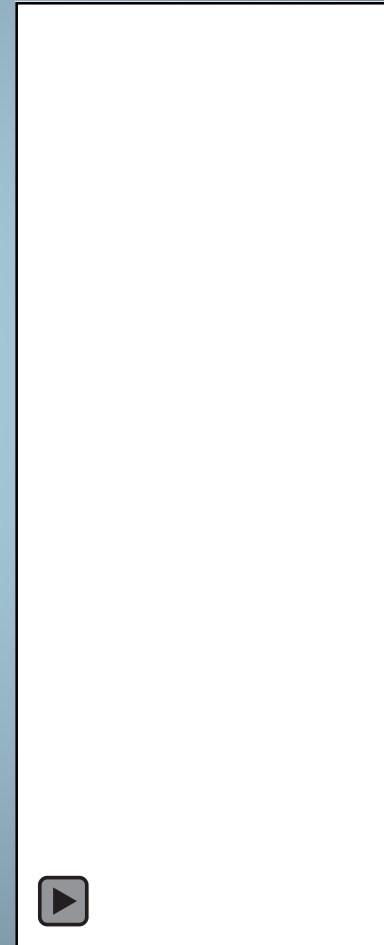
3D contrast-enhanced maximum intensity projection (MIP)

Volume-rendered CEMRA

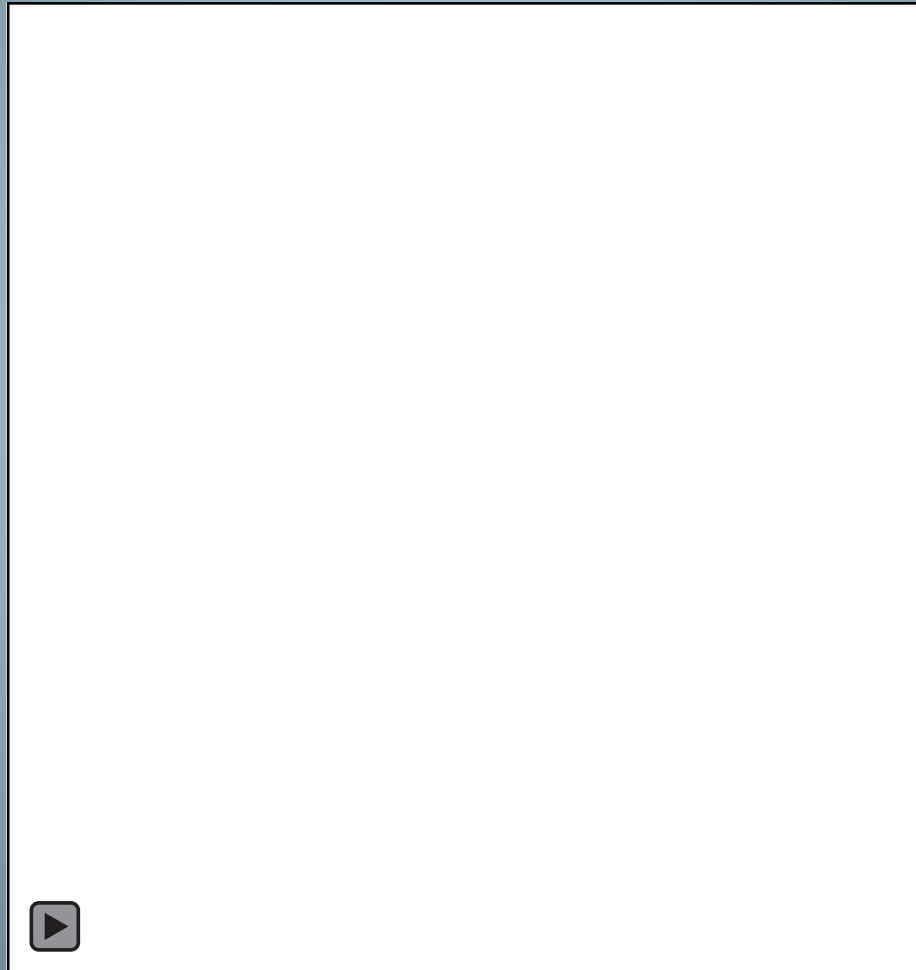


Coarctation

- Narrowing
- Congenital
- Insertion of ductus arteriosus
- Signs and symptoms vary
- Related to blood flow and heart enlargement
- Upper limb hypertension



CEMRA – aortic dissection



Summary

- Non-invasive imaging
- Appropriate for serial imaging
- Define cardiac and vascular anatomy and pathology
- Identifies structural and physiological abnormalities
- Provides quantitative information

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