

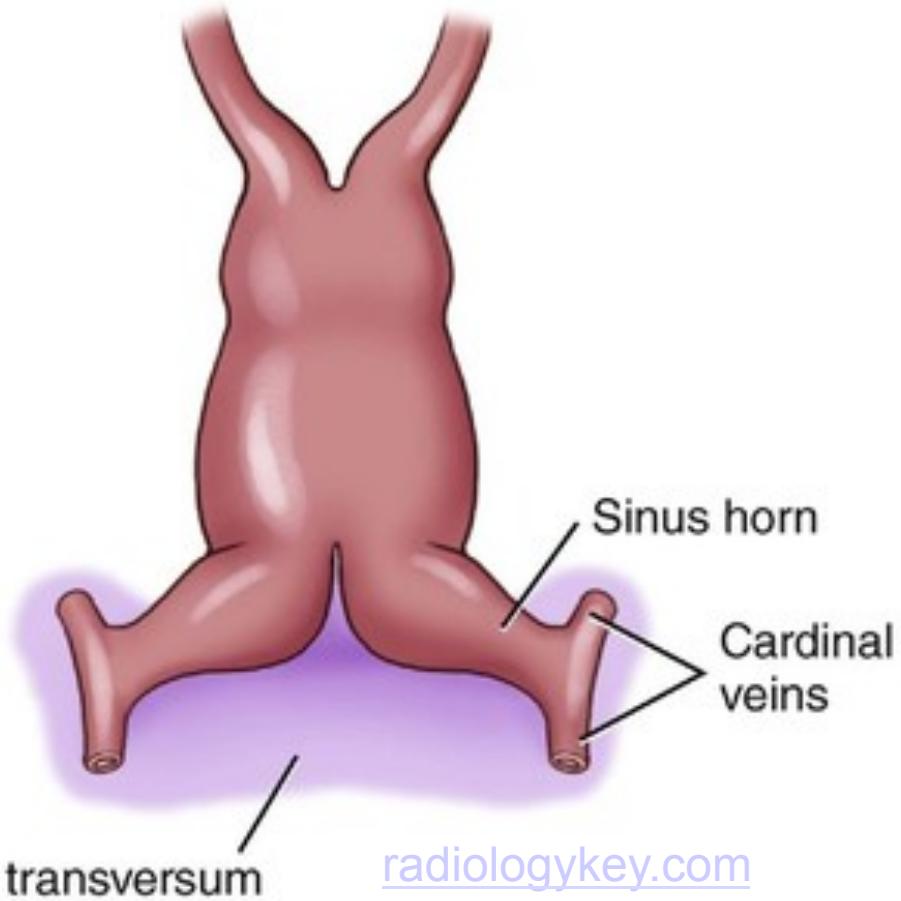
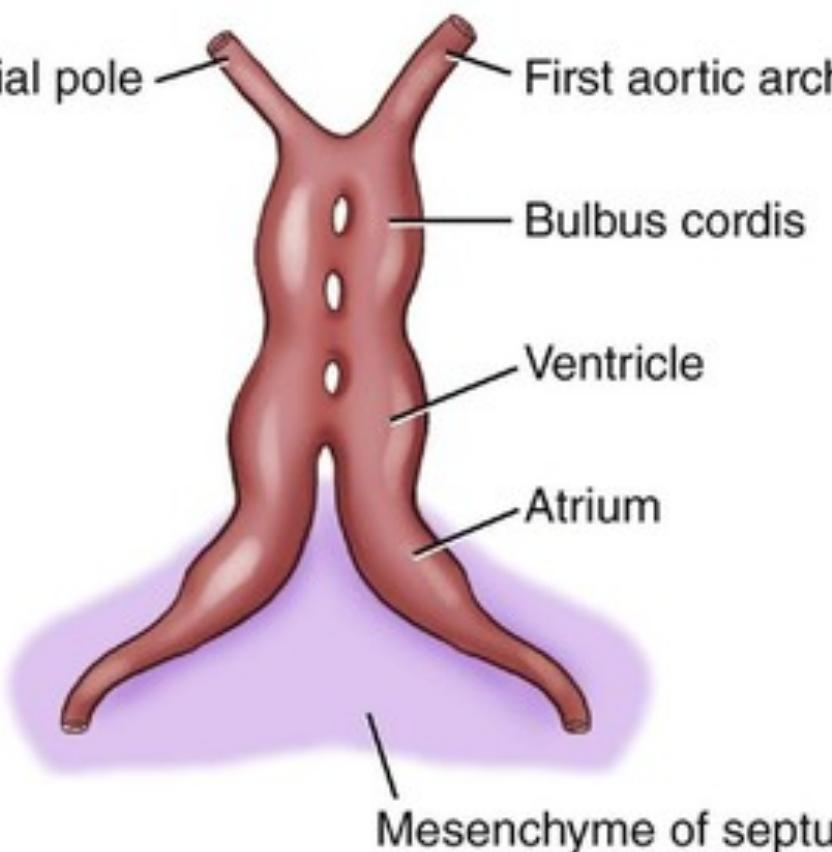
Cardiac Embryology

Himesh Vyas



Children's
HOSPITAL
UF&Shands
The University of Florida Health System



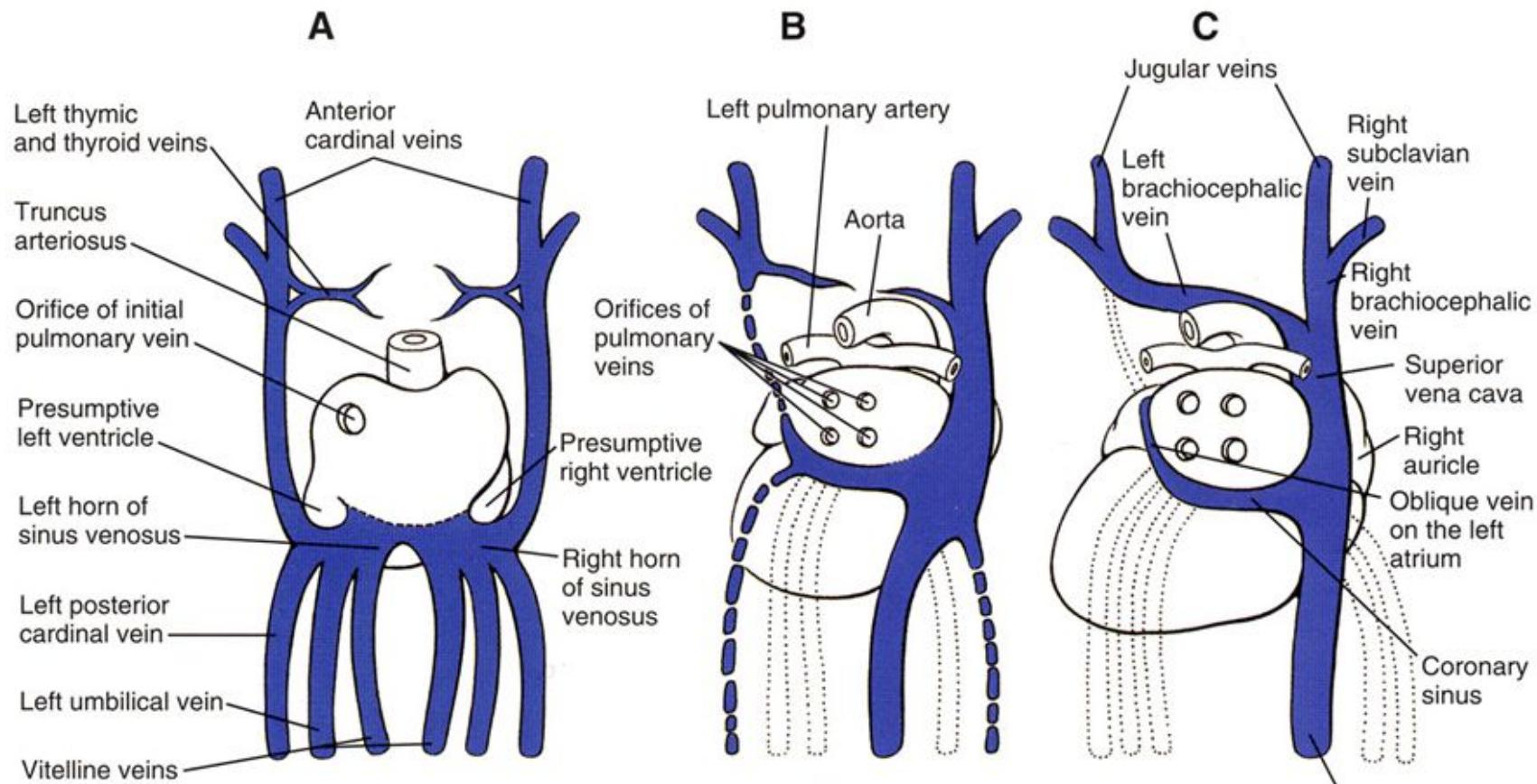


radiologykey.com

- Heart and blood vessels are mesodermal origin
- Two endothelial heart tubes fuse
- Sinus venous has 2 horns: right and left
- Bulbus cordis has proximal conus and distal truncus arteriosus

Sinus Venosus

SINUS VENOSUS AND THE CORONARY SINUS



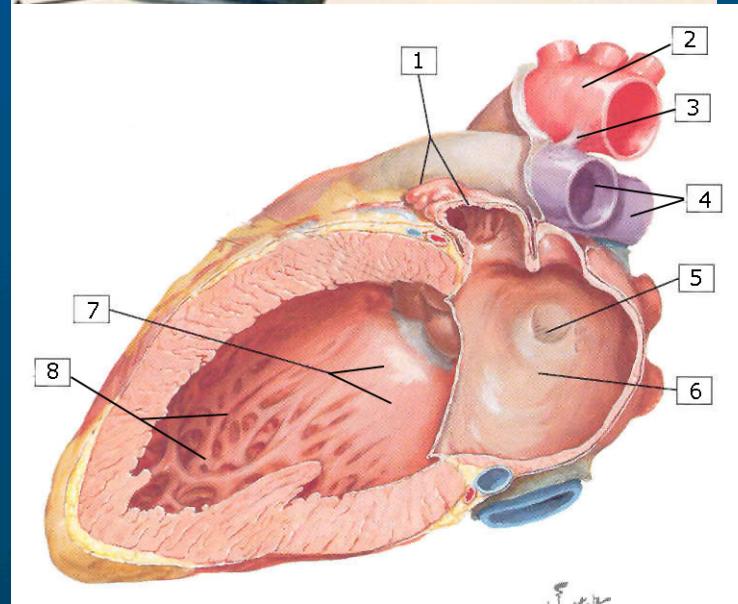
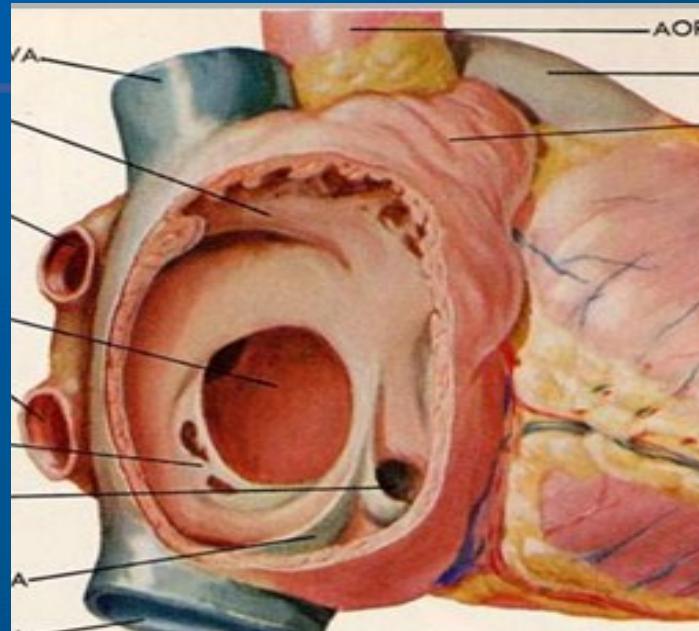
Cardiac Looping



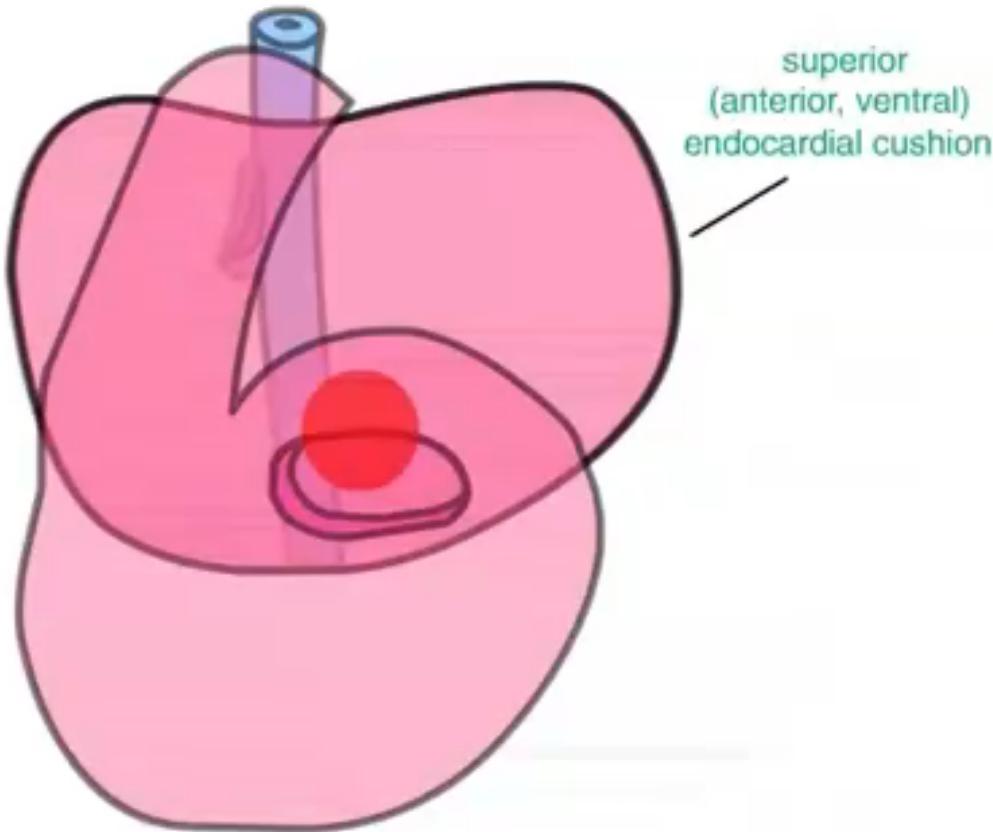
<http://www.indiana.edu/~anat550/cvanim/>

Development of atria

- Right atrium: Primitive atrium anterior to crista terminalis. Smooth part (entrance of great veins) derived from sinus venosus
- Left atrium: Almost entirely from common pulmonary vein, only appendage from primitive atrium

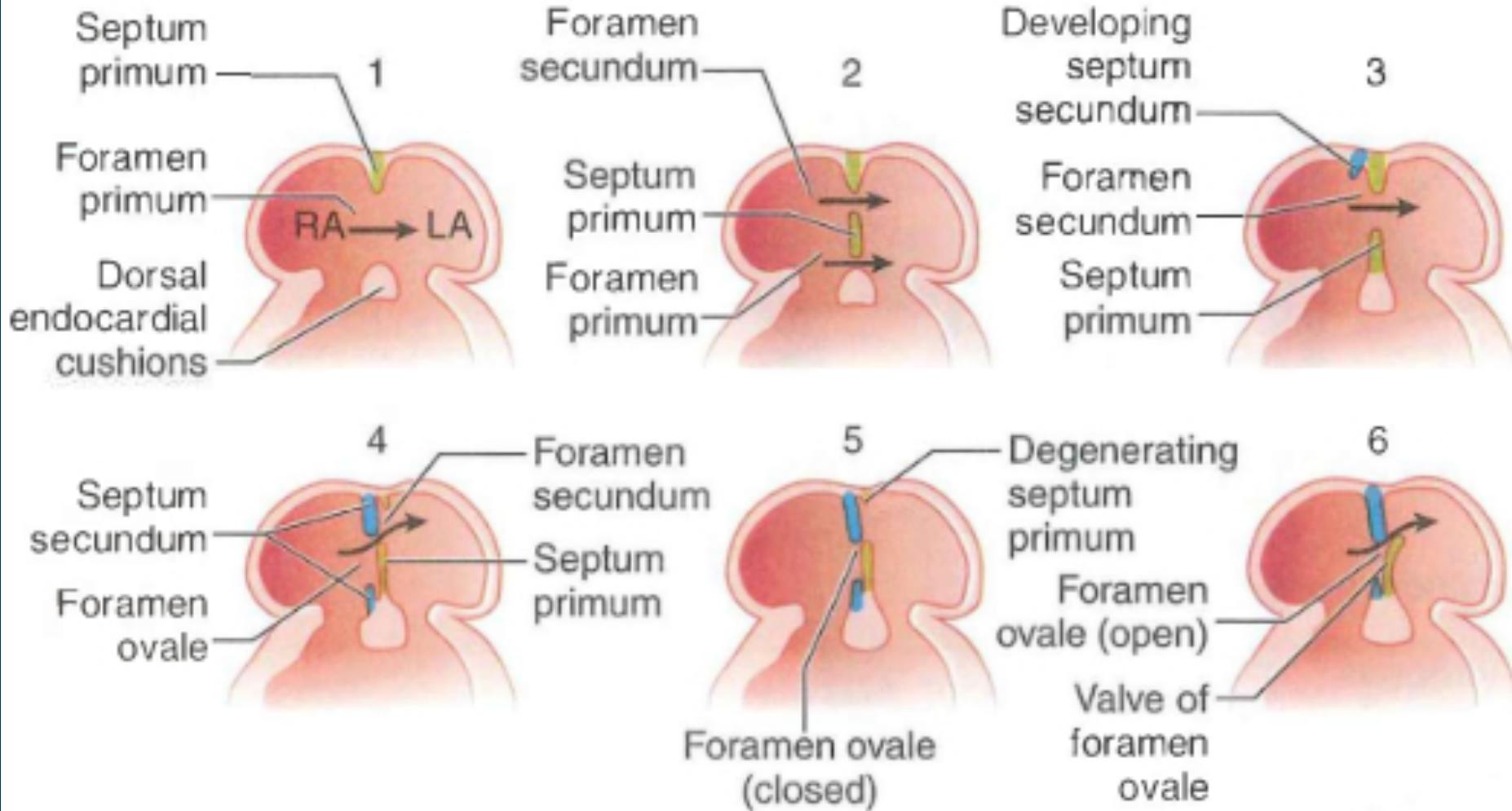


AV Canal Development

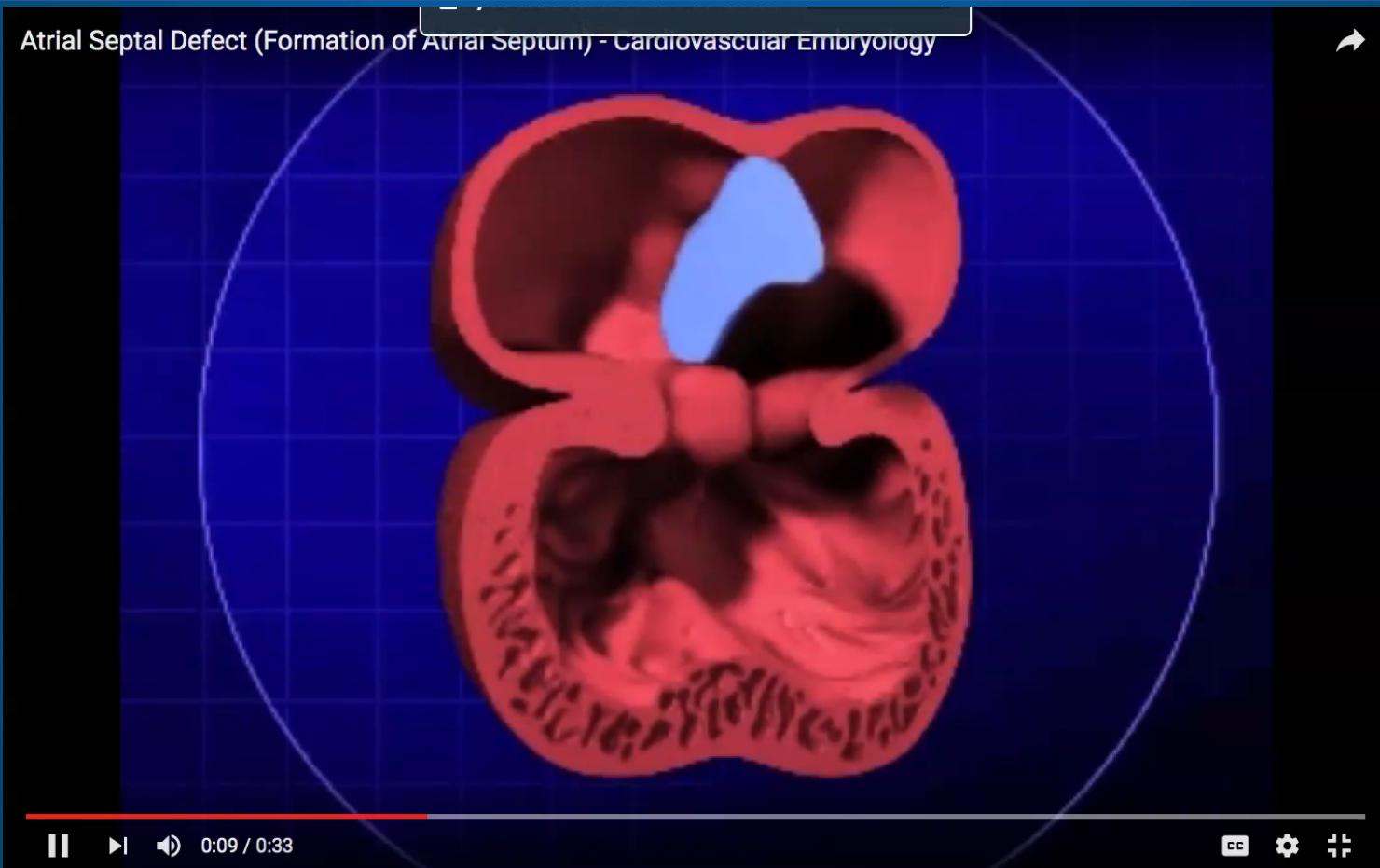


Masses of tissue called **endocardial cushions** grow from the sides of the atrioventricular canal to partition it into two separate openings.

Atrial Septal Development

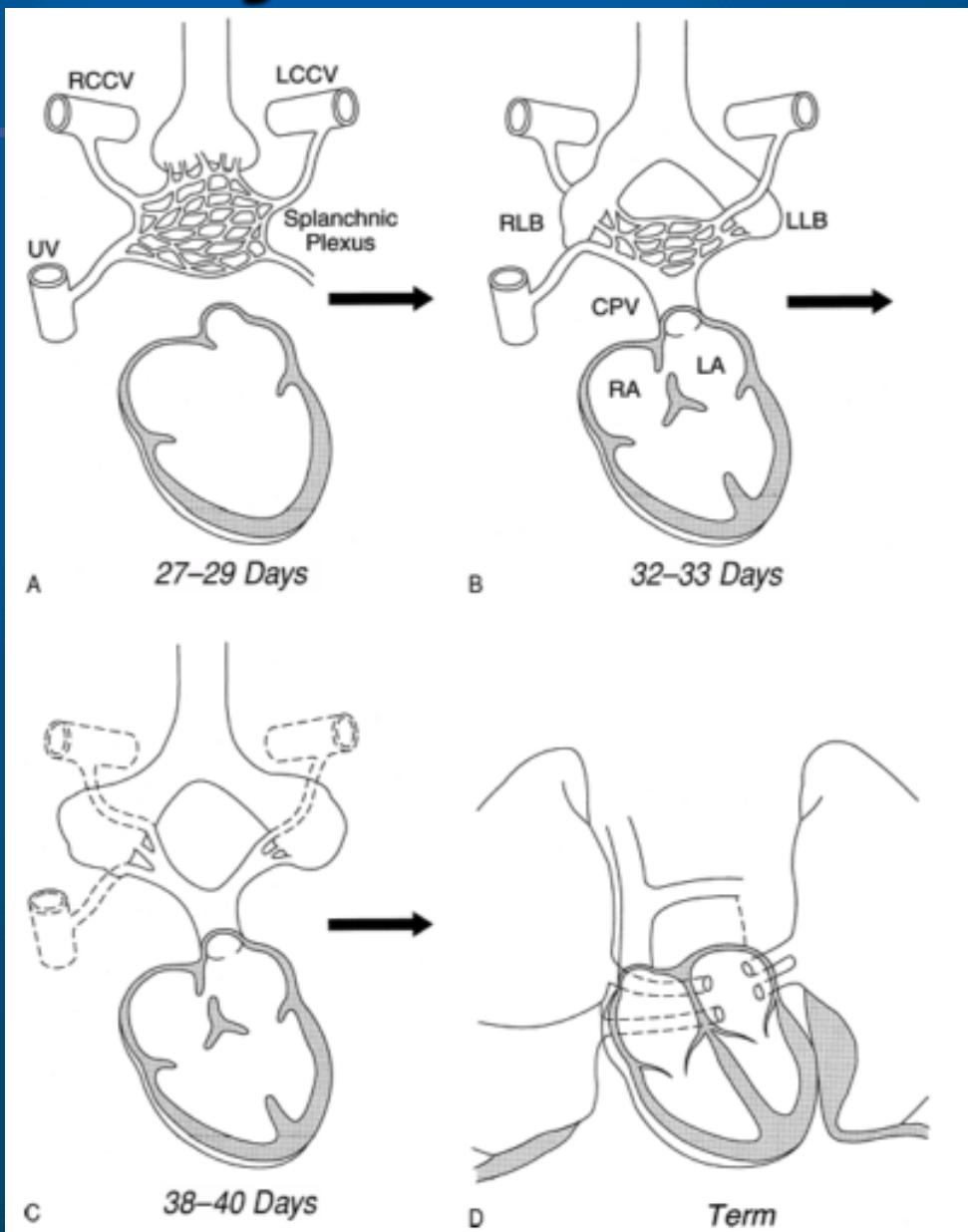


Atrial Septal Development

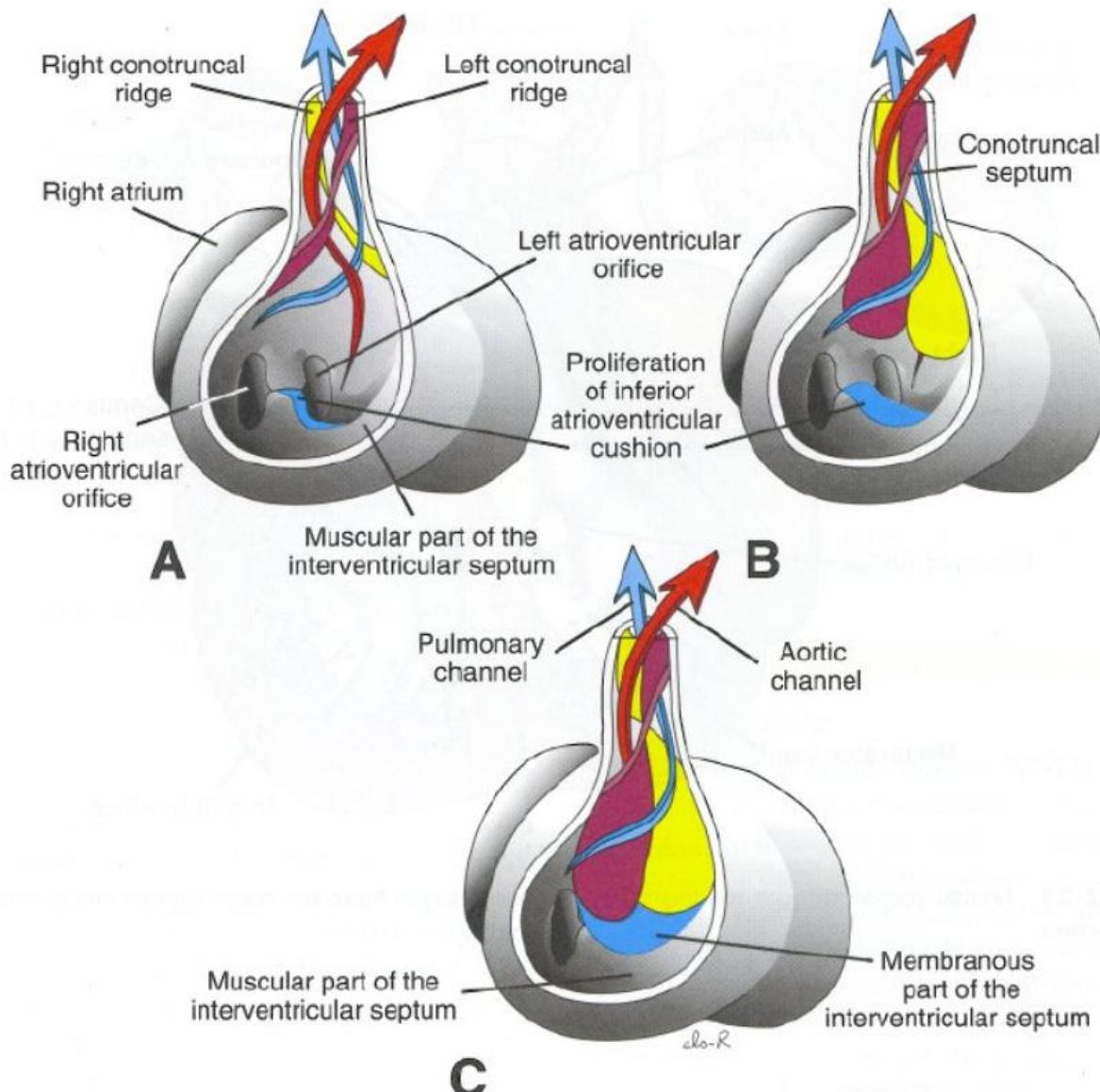


https://www.youtube.com/watch?v=haVjdJhTT_M

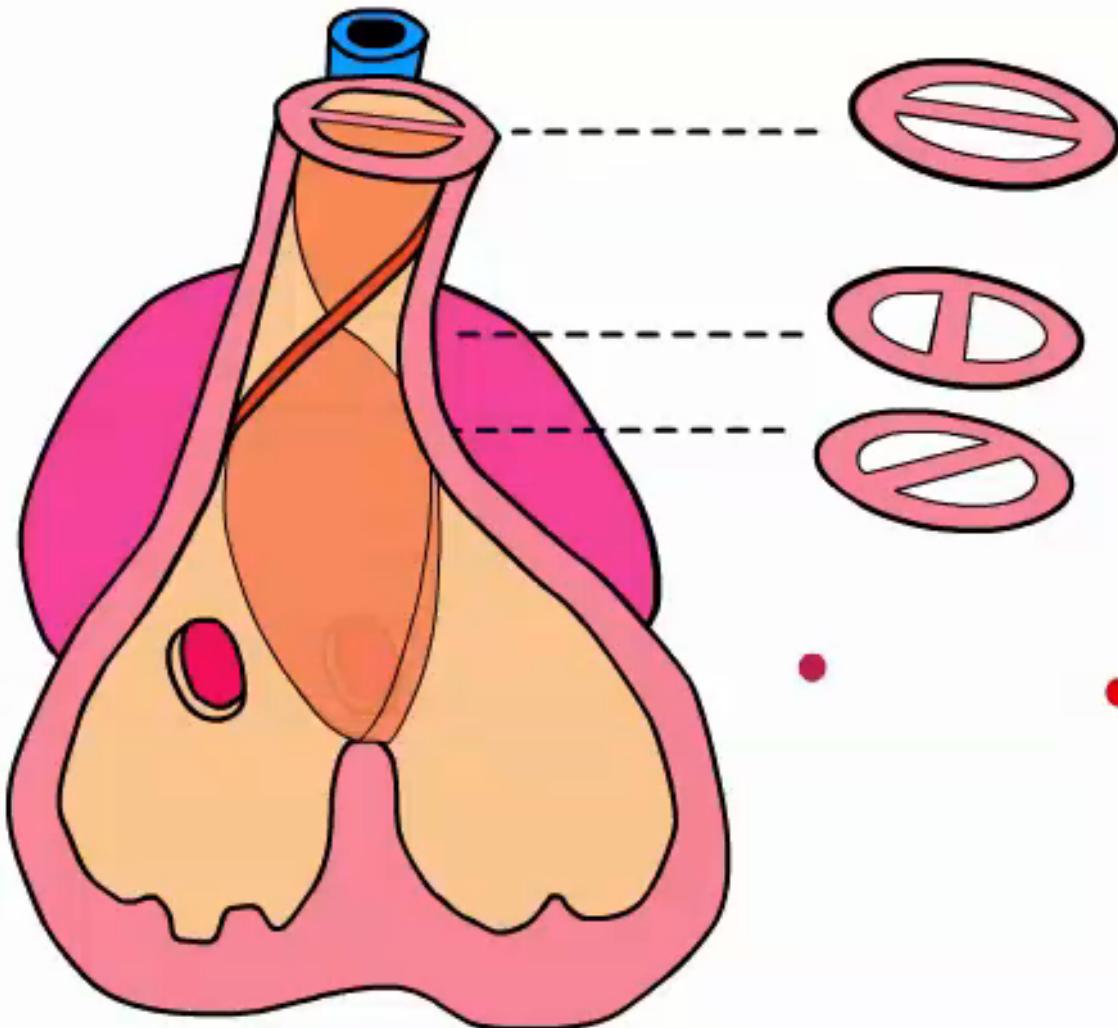
Pulmonary Vein Development



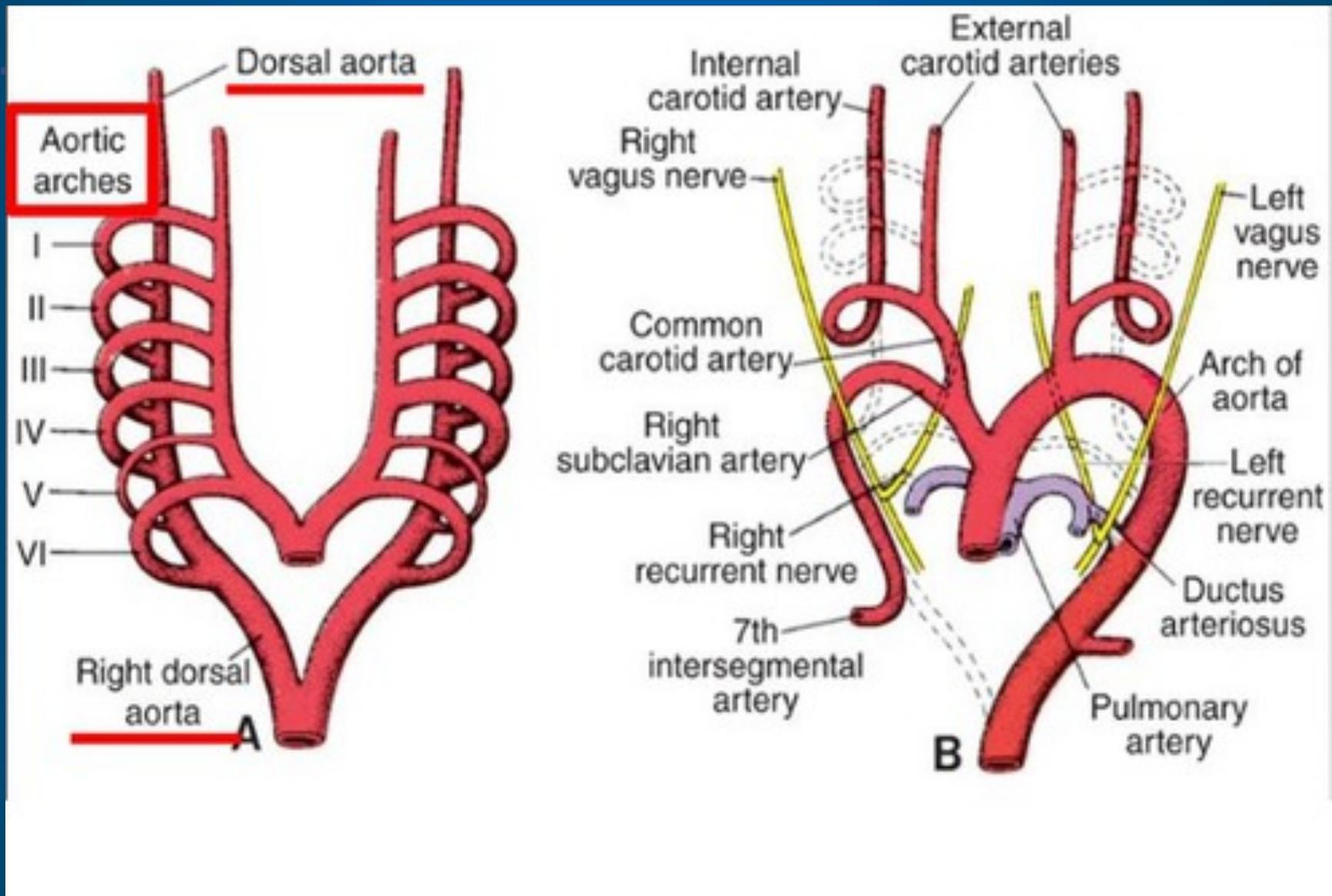
Ventricular Septum and Outflow Tracts



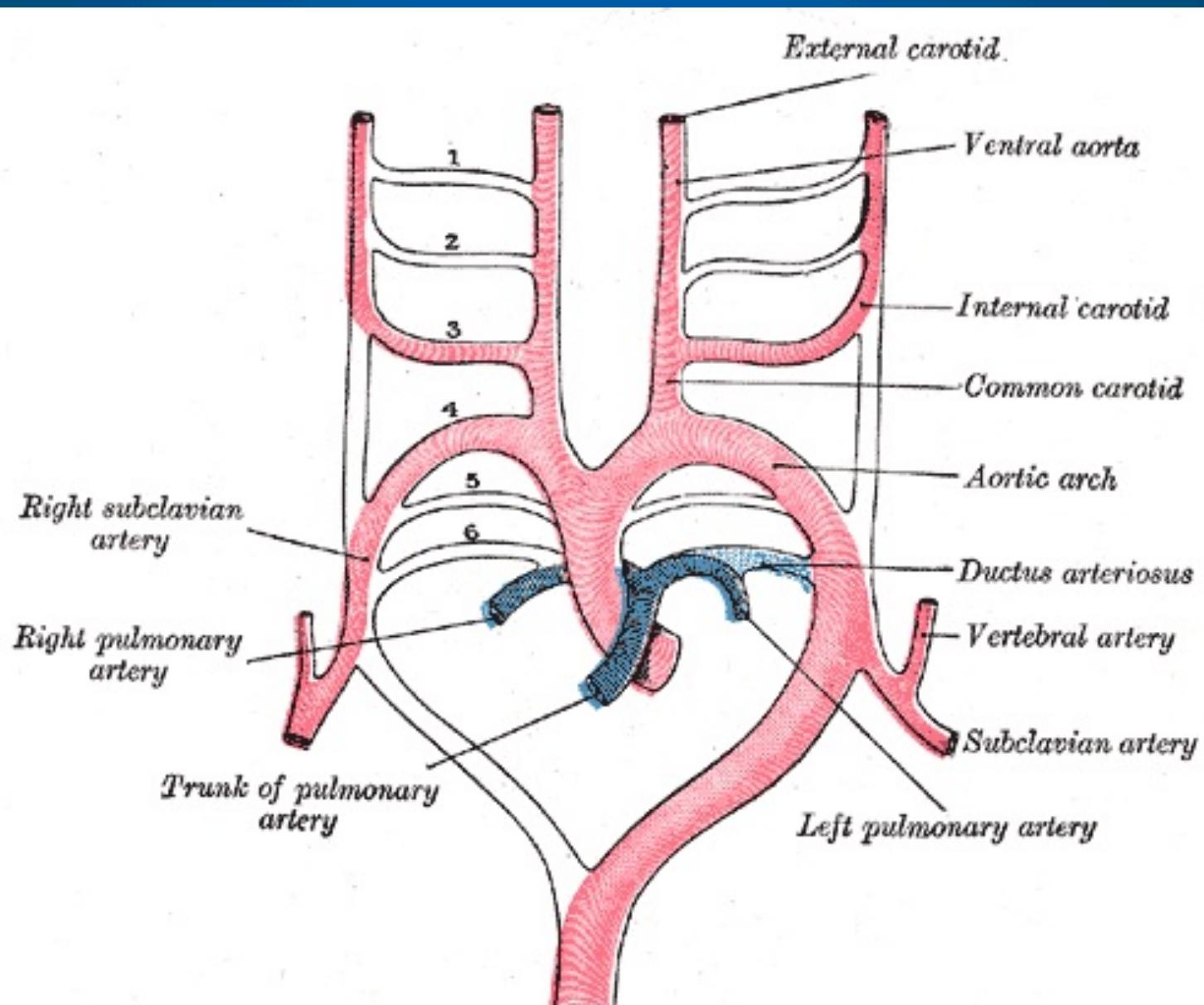
Ventricular Septum and Outflow Tracts



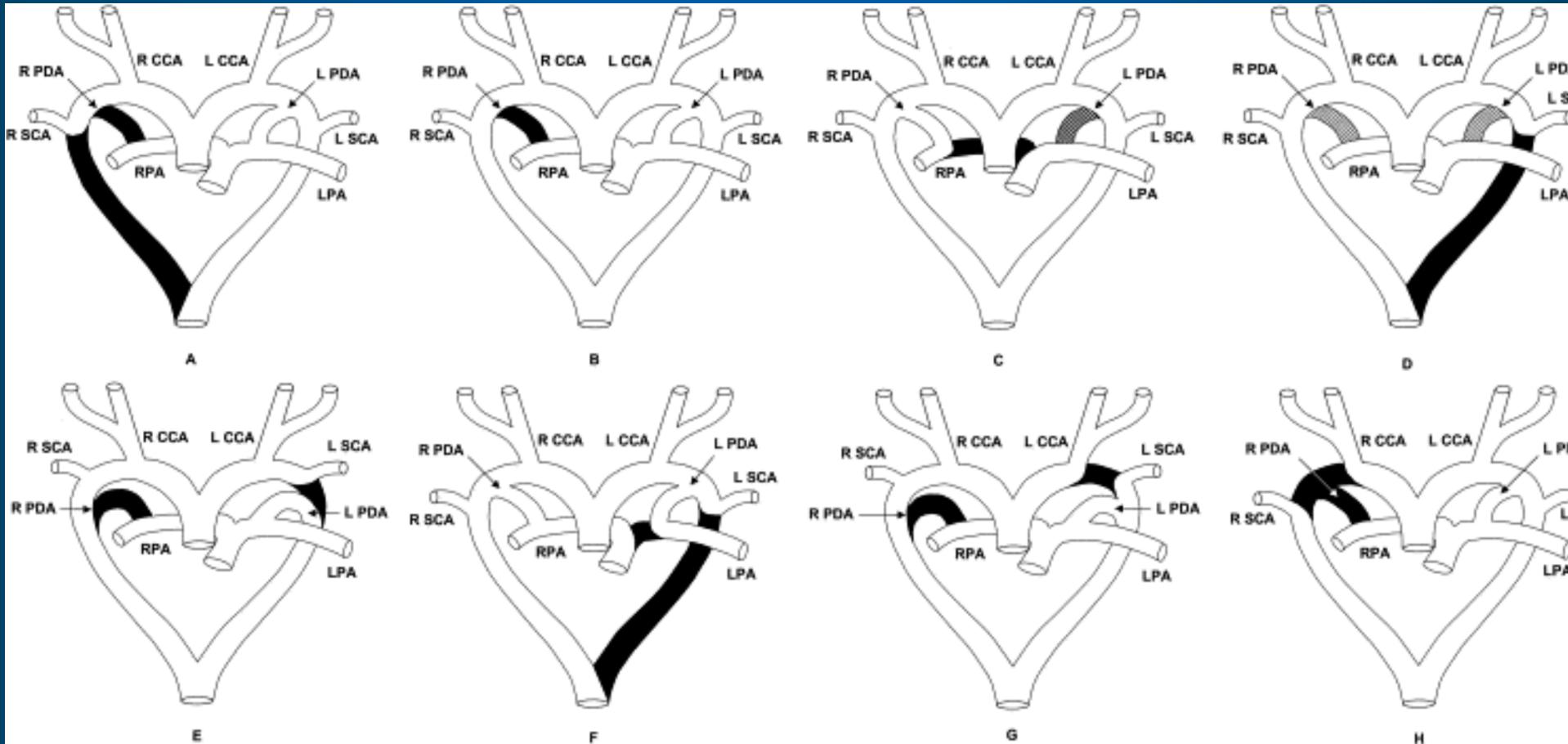
Aortic Arch Embryology



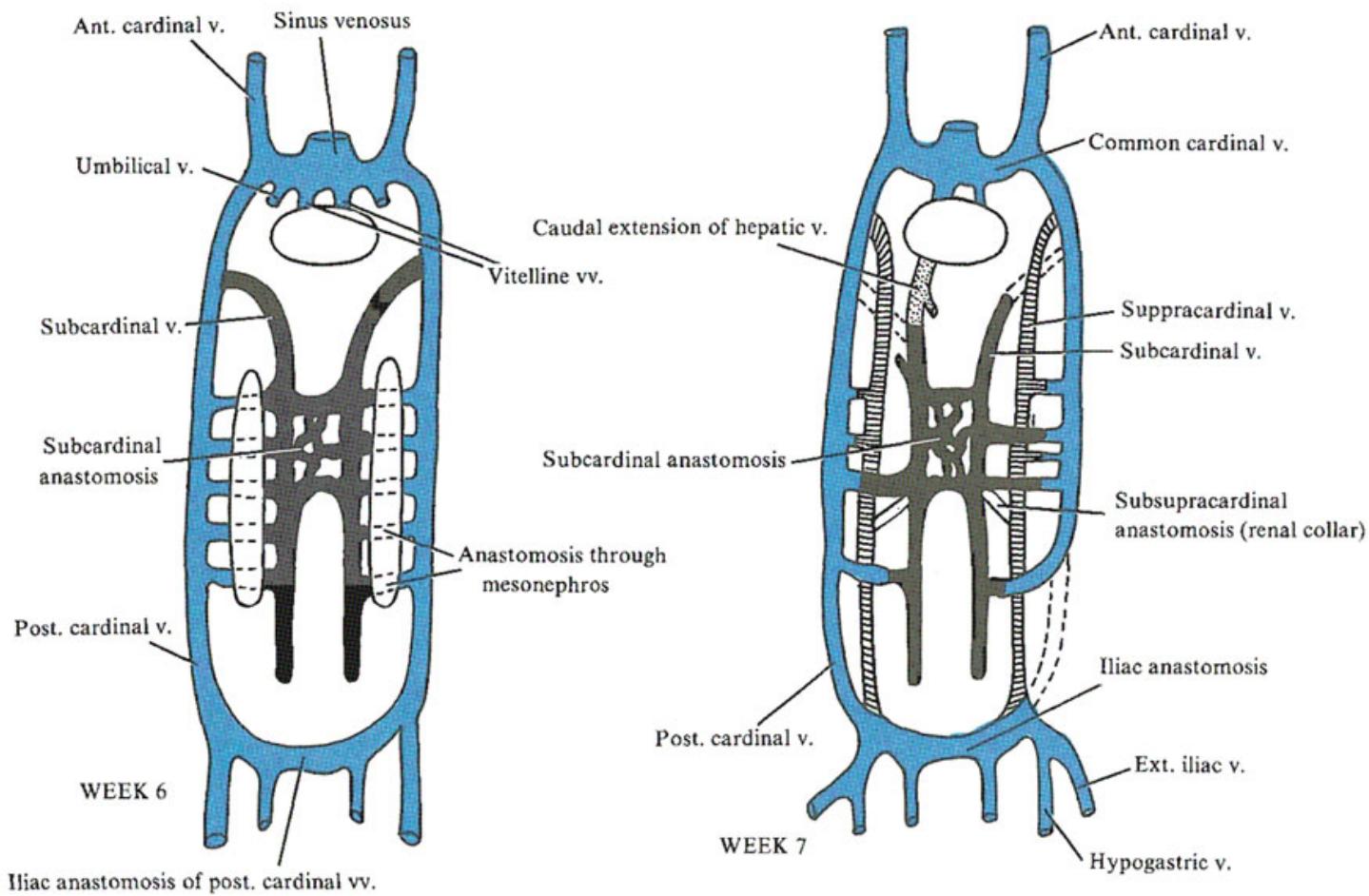
Aortic Arch Embryology



Aortic Arch Anomalies



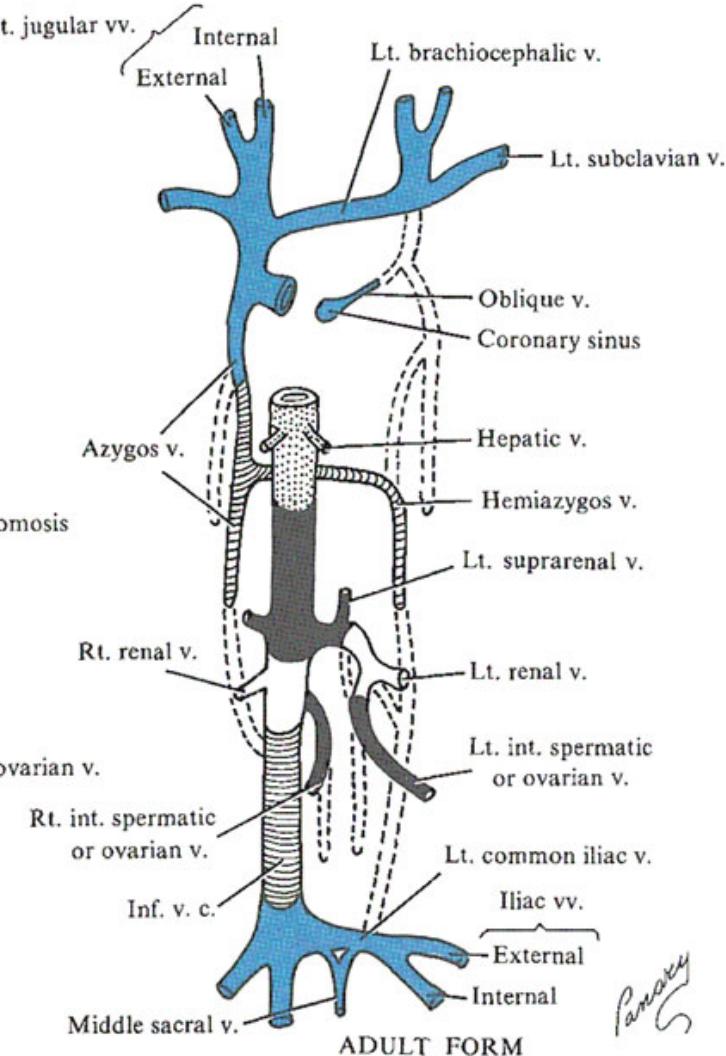
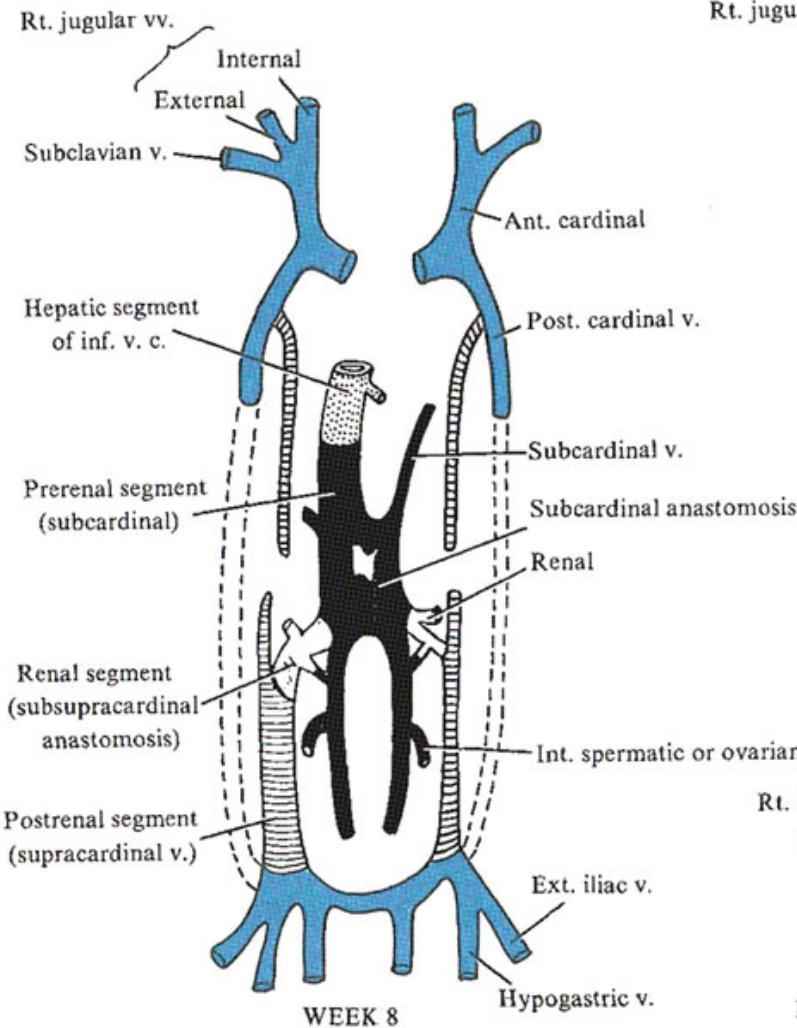
Systemic Veins



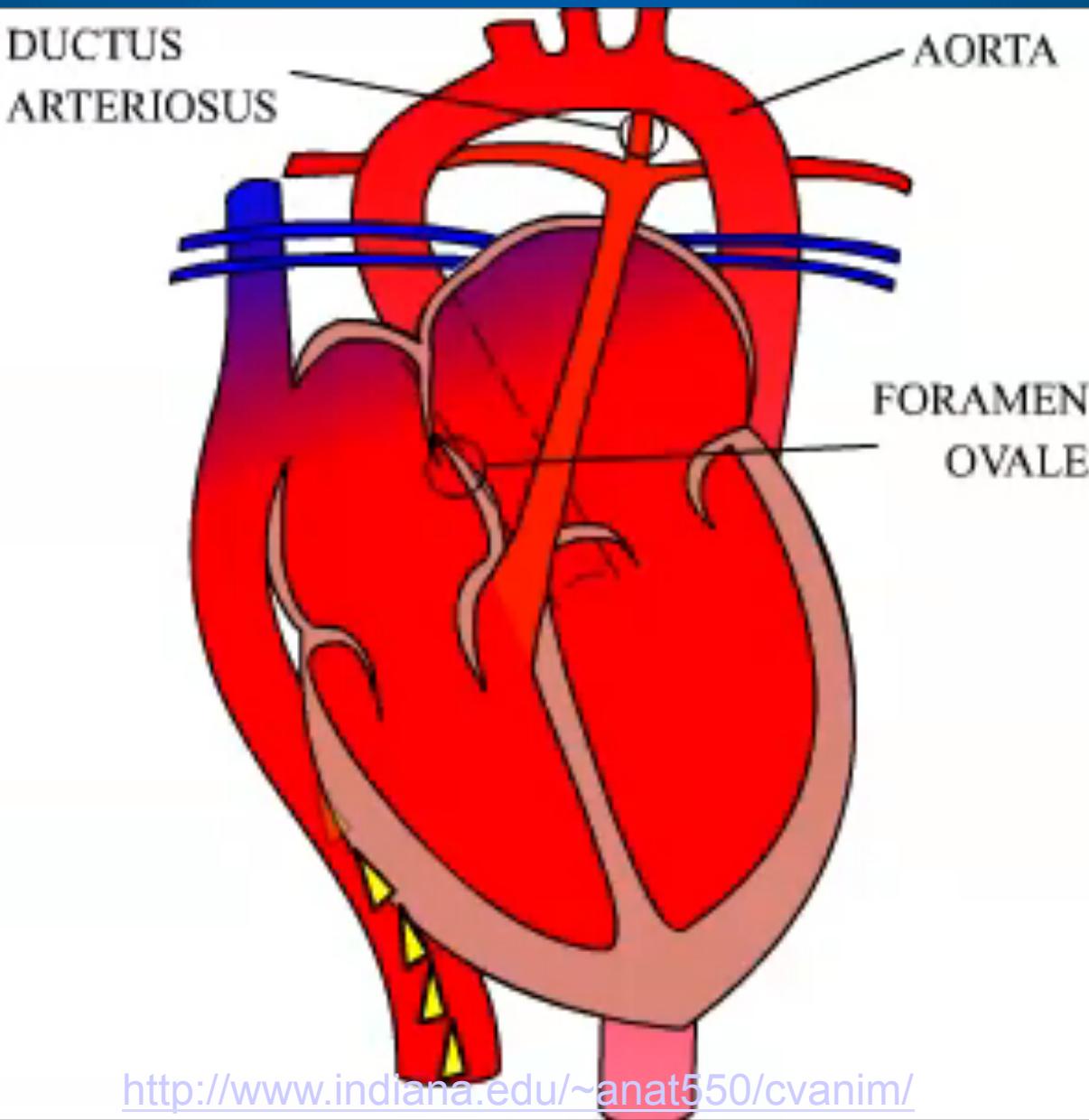
Systemic Veins

DEVELOPMENT OF INFERIOR VENA CAVA

(After McClure, Butler, and Arey)



Fetal Circulation



Anatomy of Ductus Venosus

