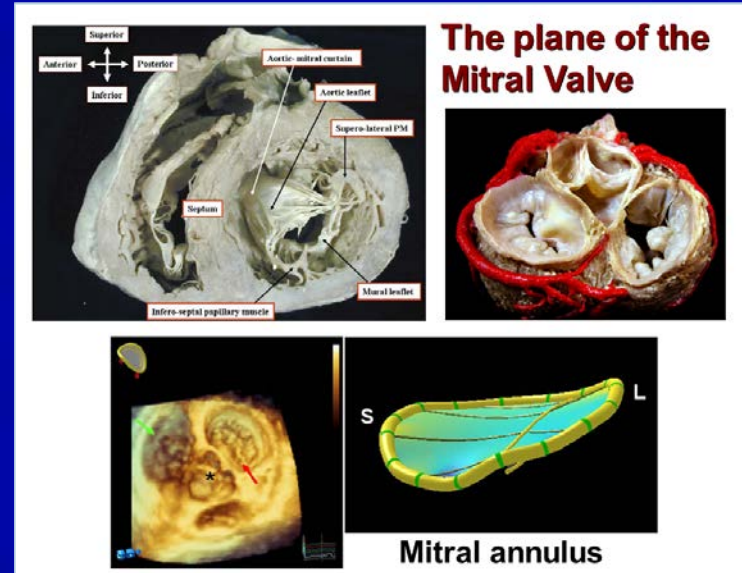
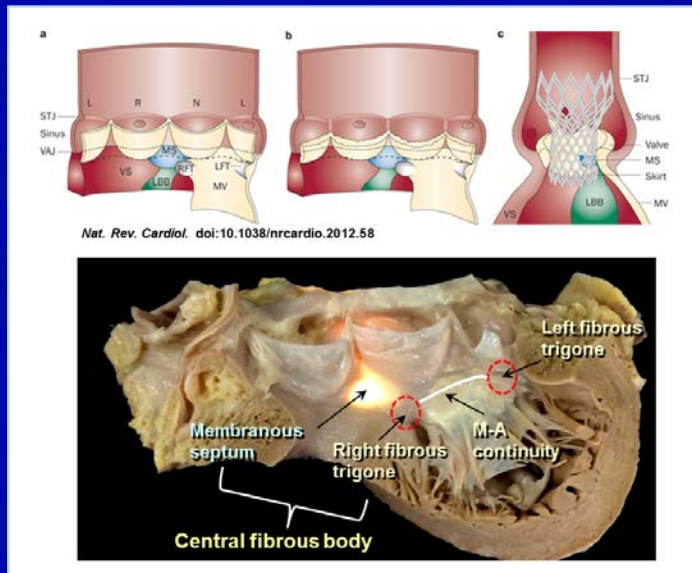


Percutaneous treatment of valvular heart disease

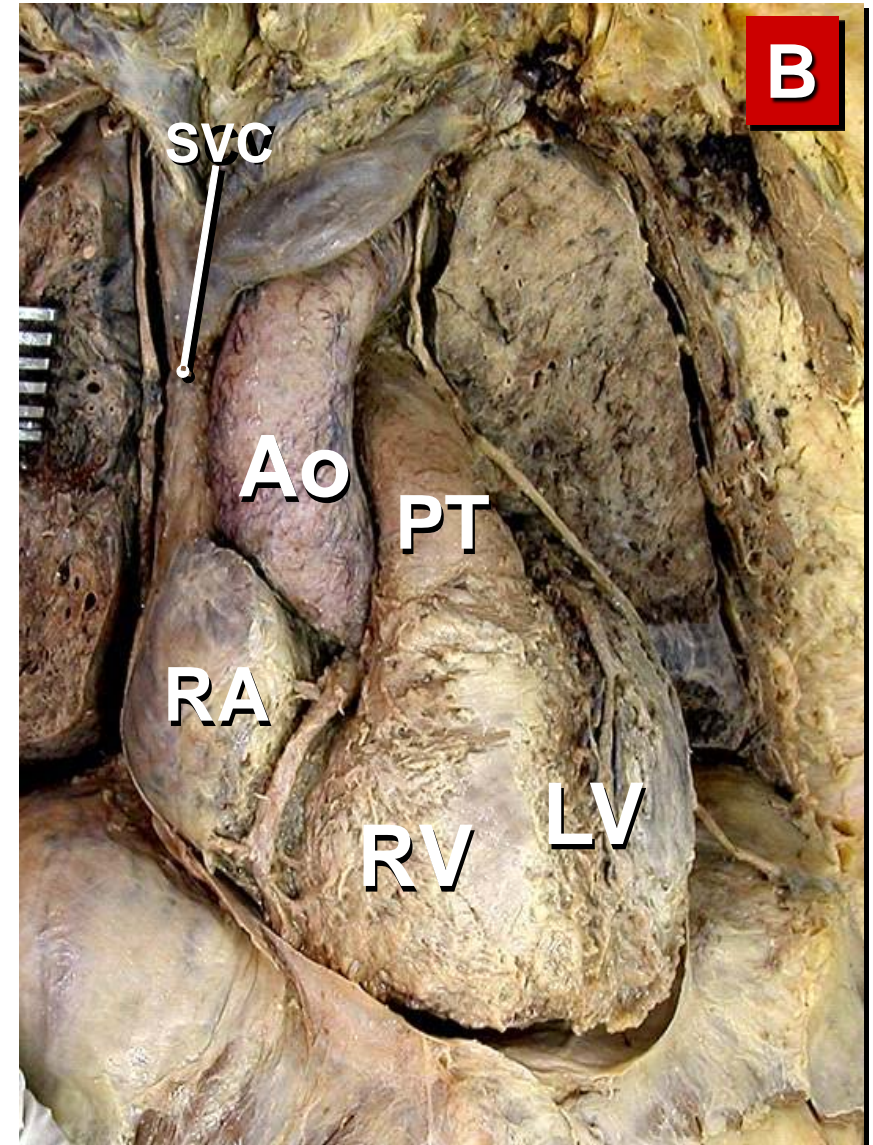
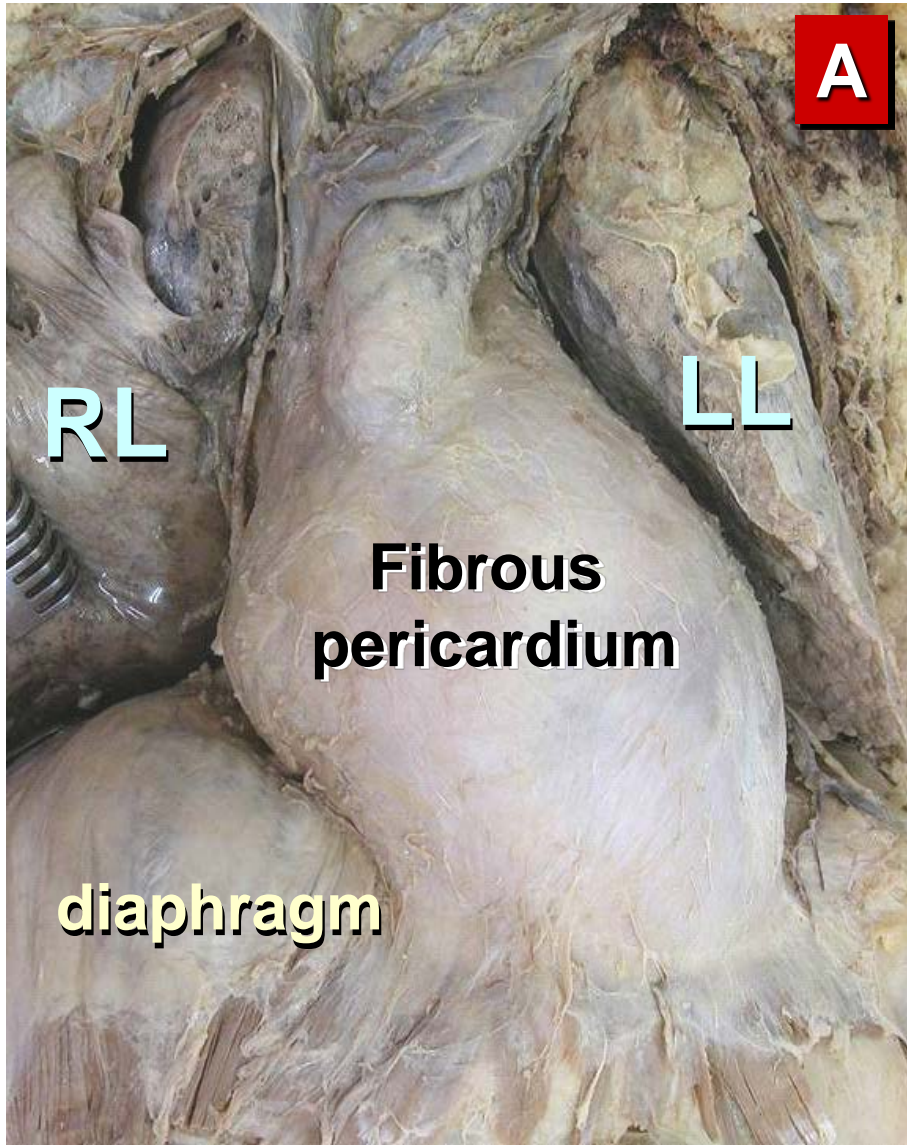
Anatomical bases

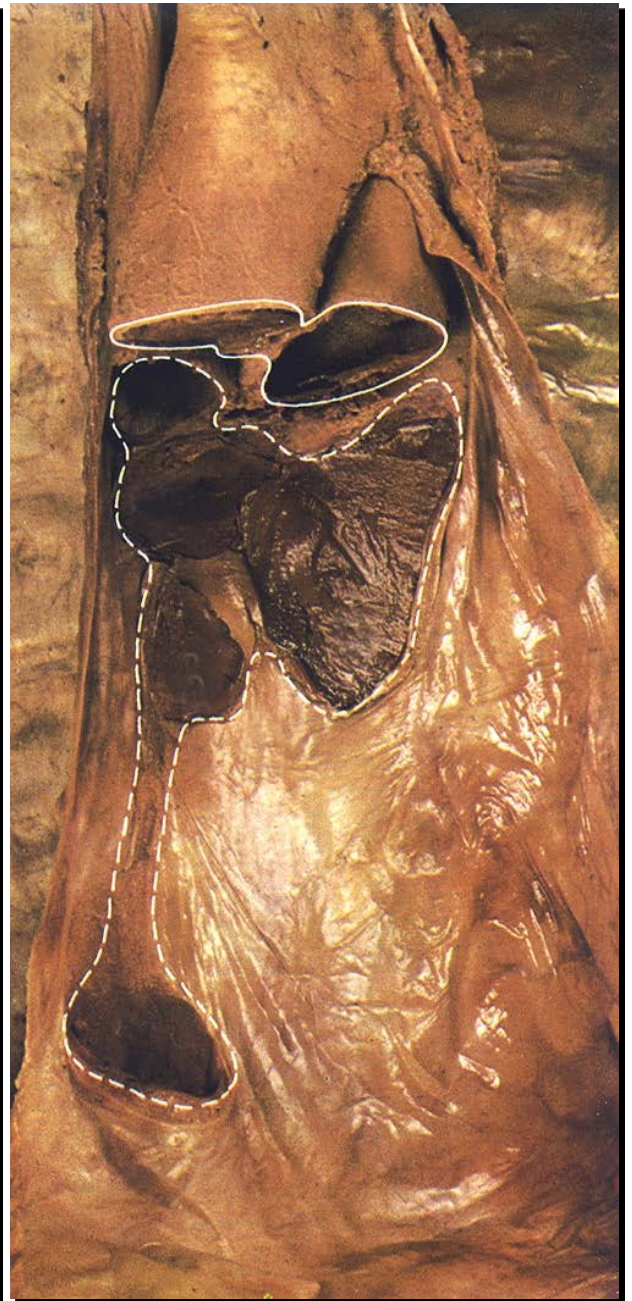
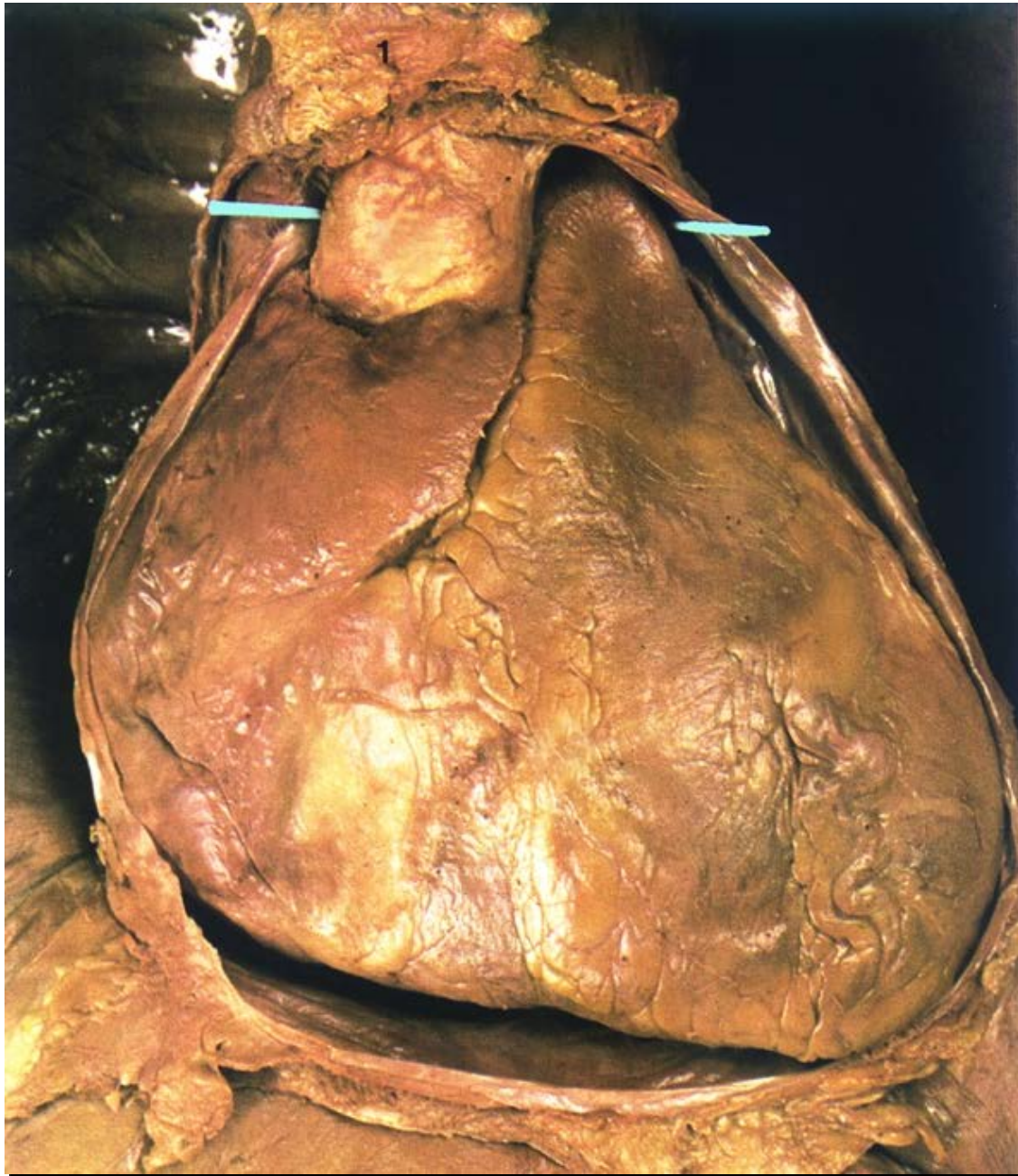


José Angel Cabrera. MD
Hospital Universitario Quirón-Madrid
Universidad Europea de Madrid

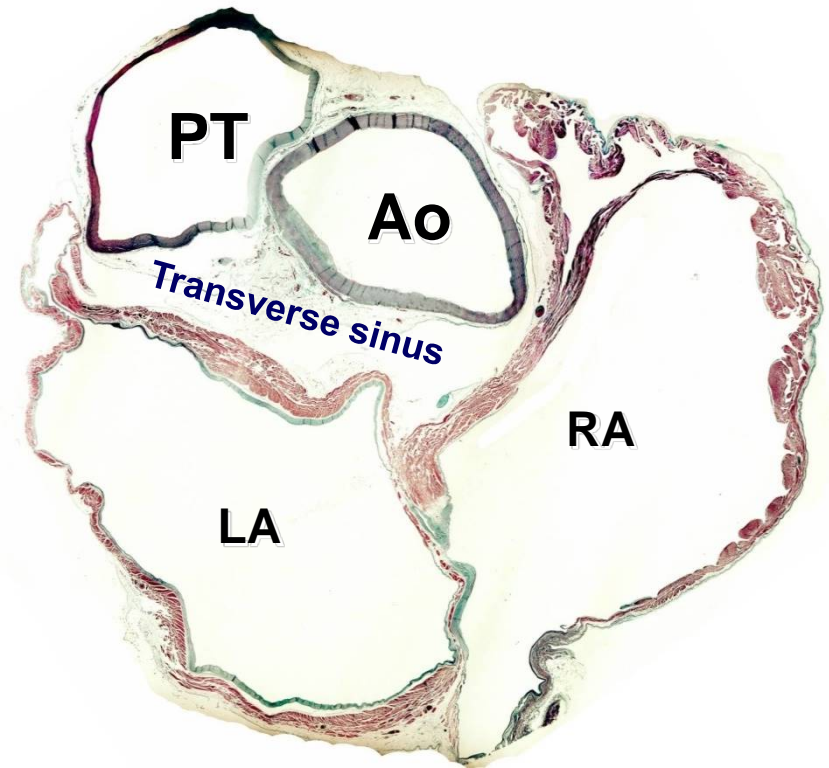
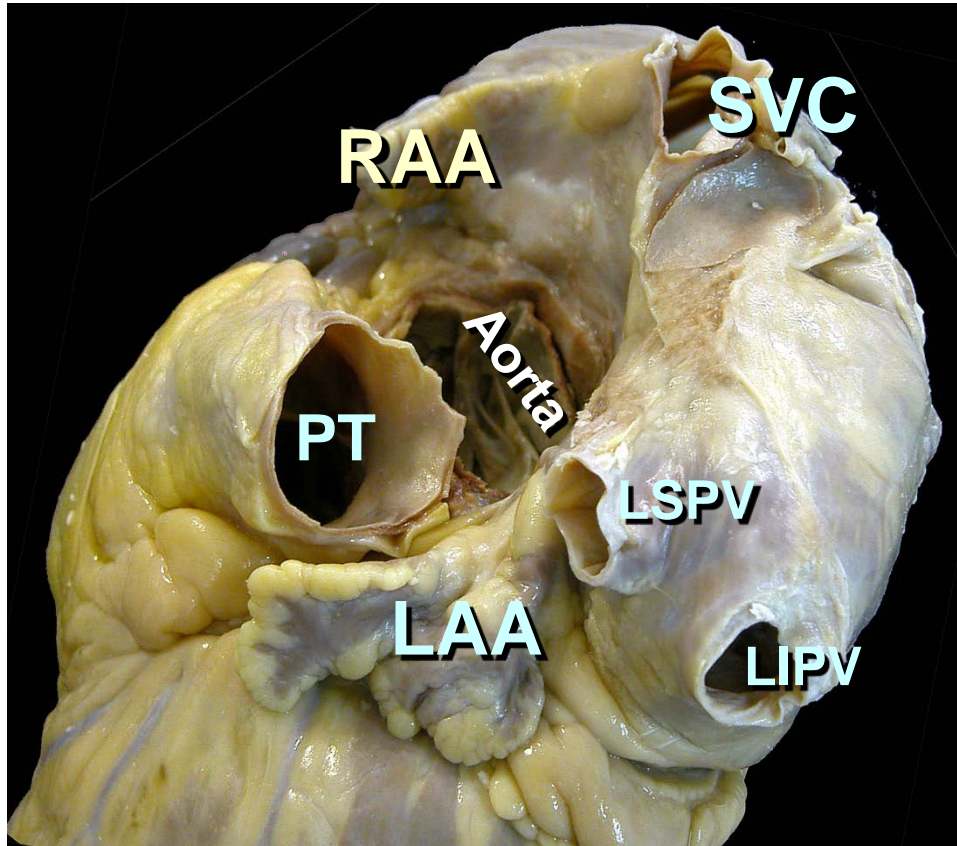


The aorta & pericardium



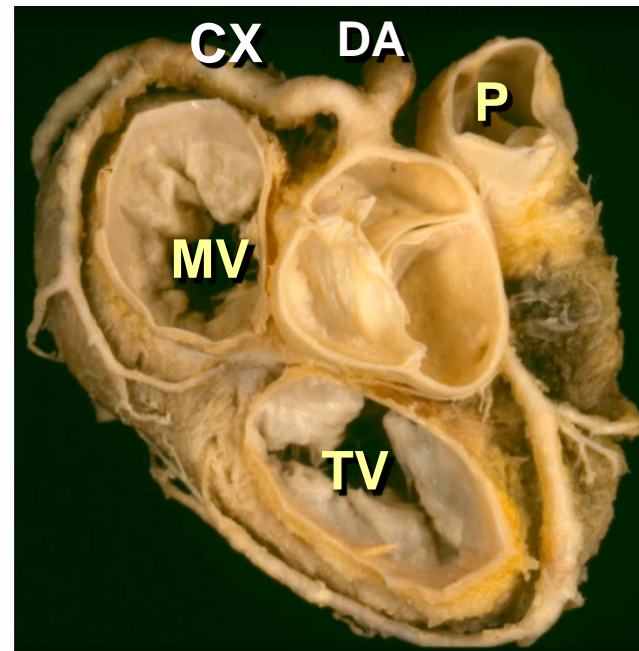
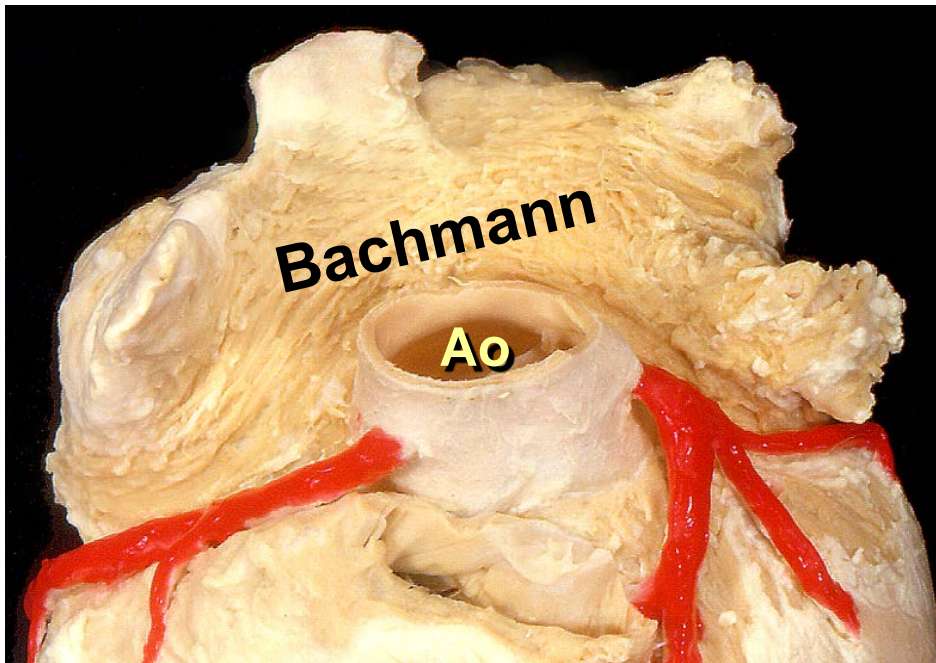
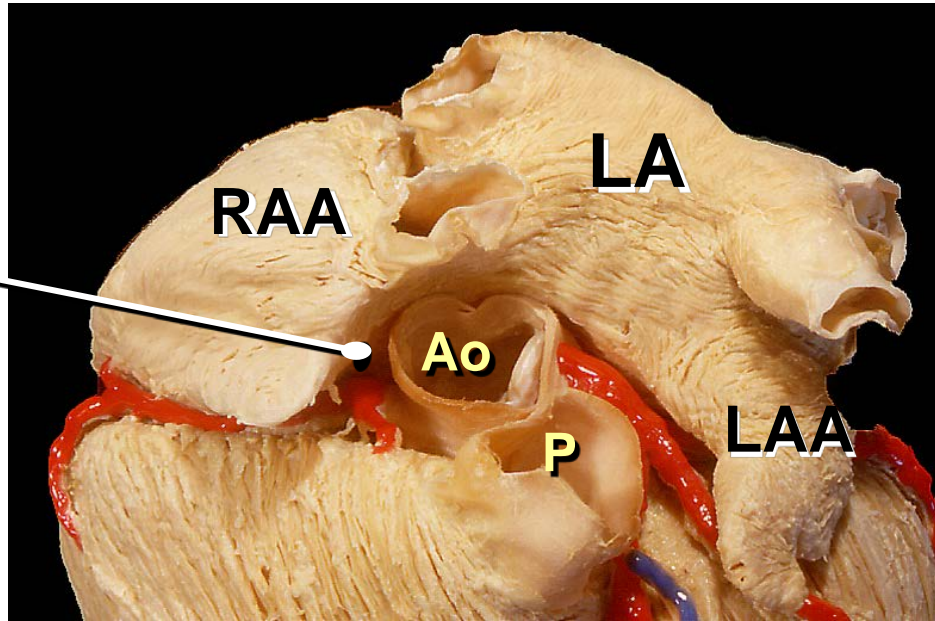


Aorta: anatomic relationship

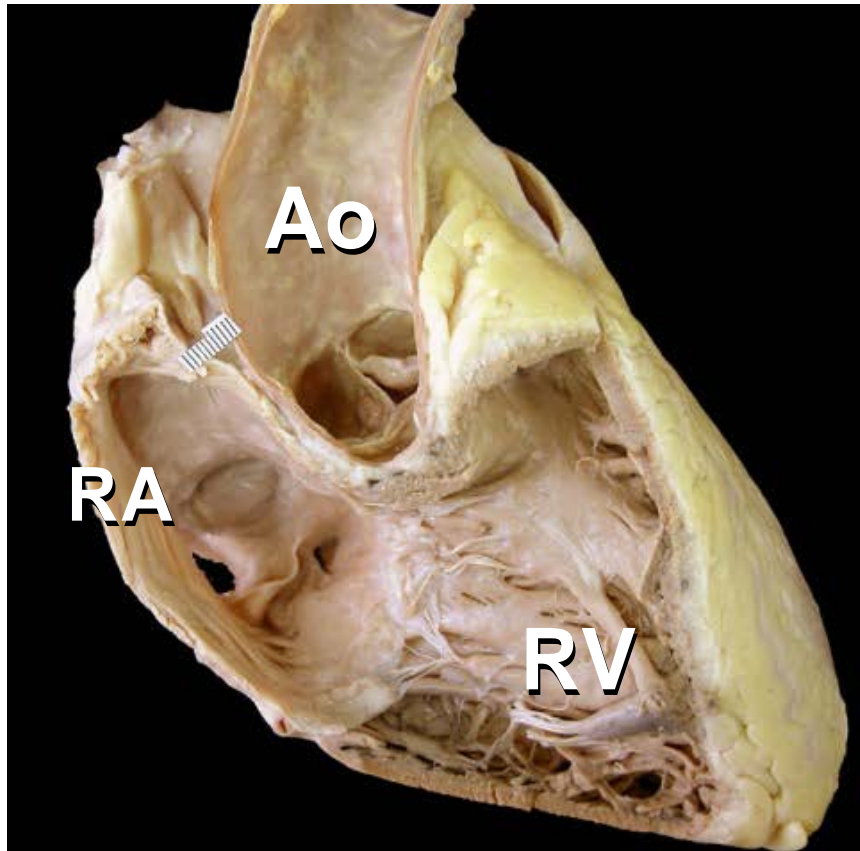


Left supero-lateral view

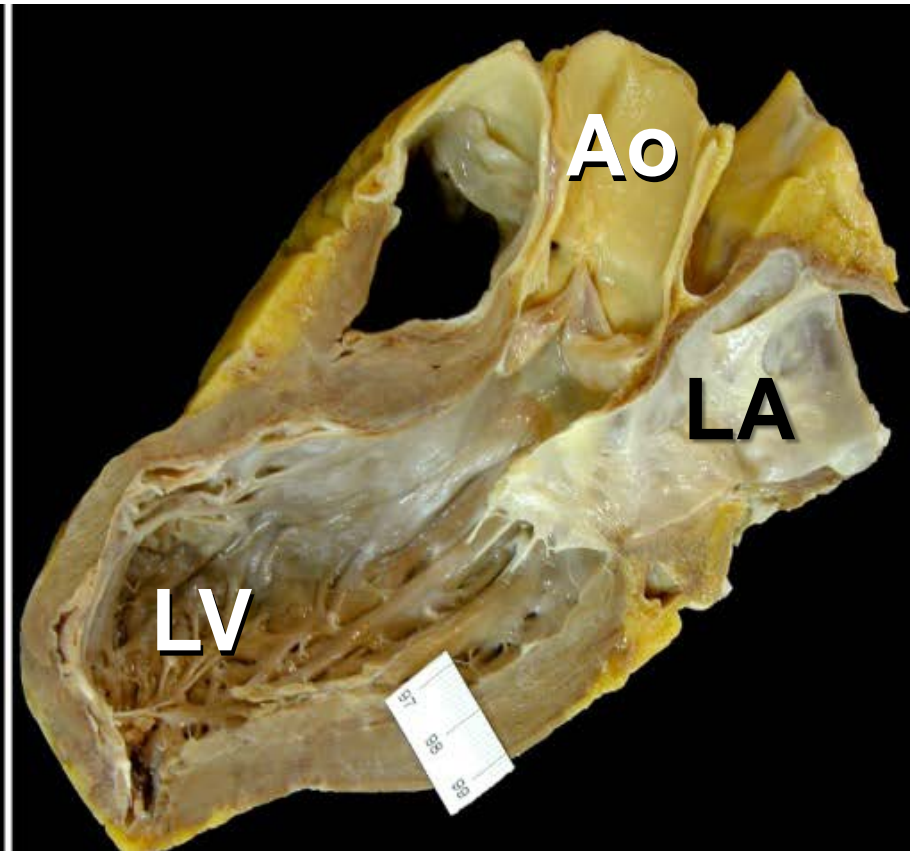
Transverse sinus



Aorta: anatomic relationship

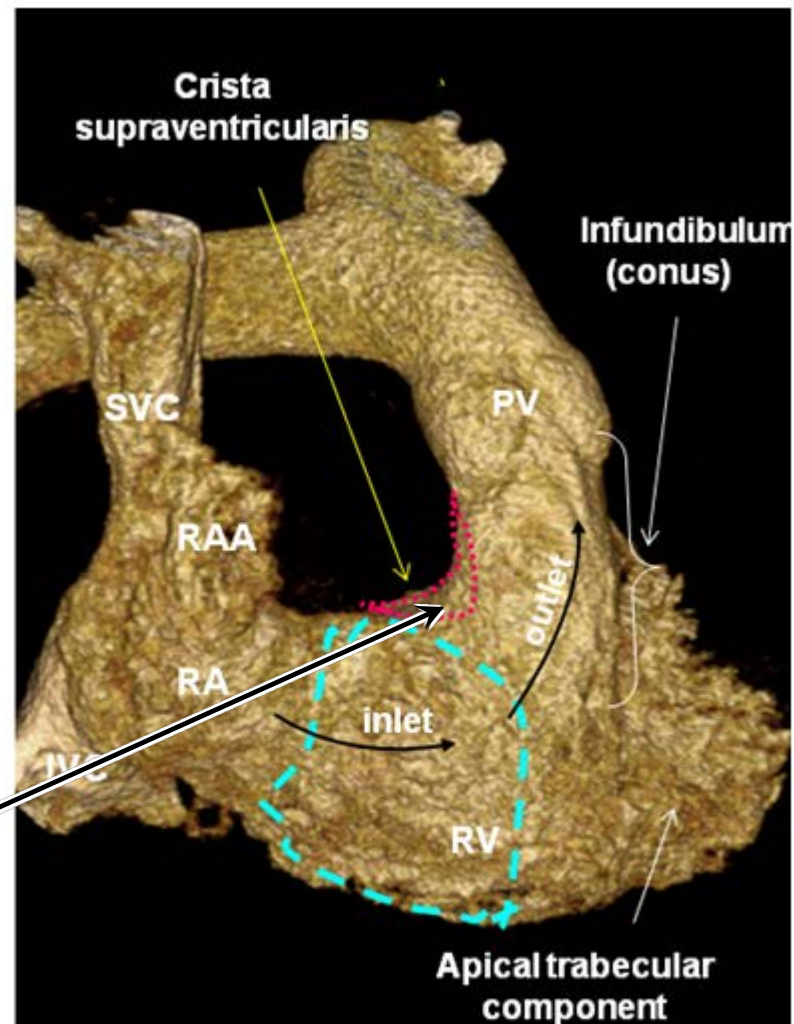
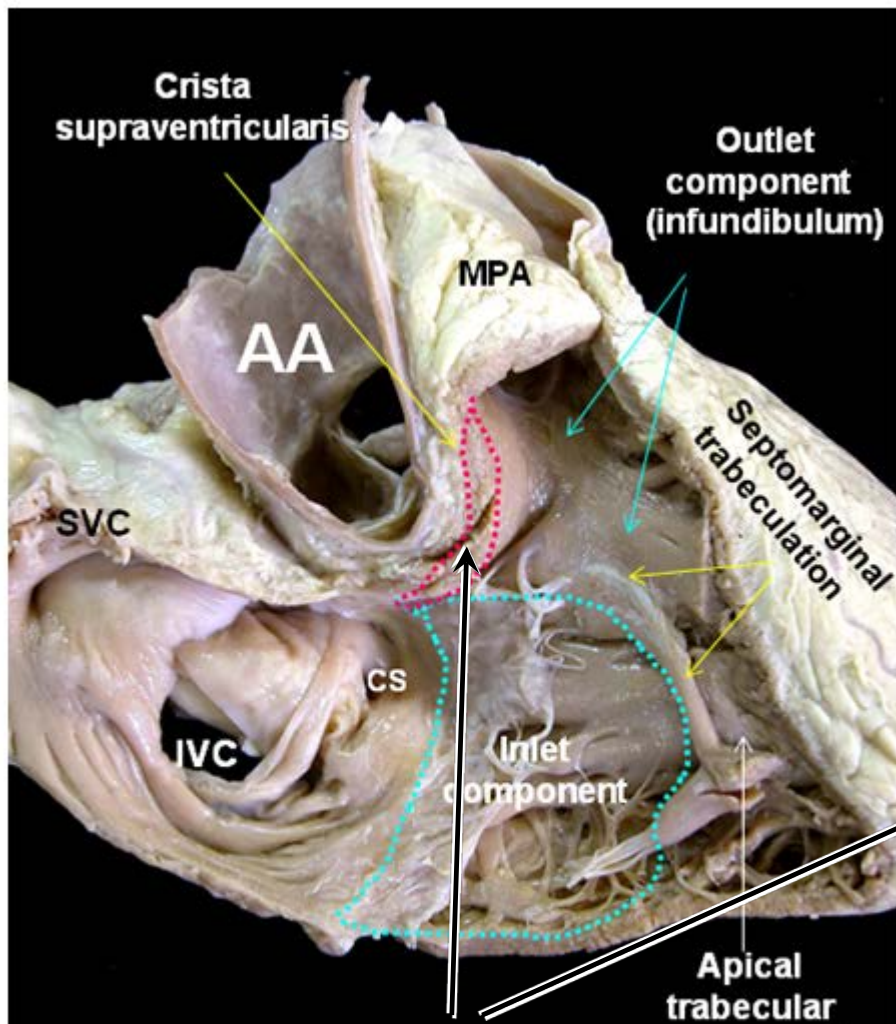


Right ventricle



Left ventricle

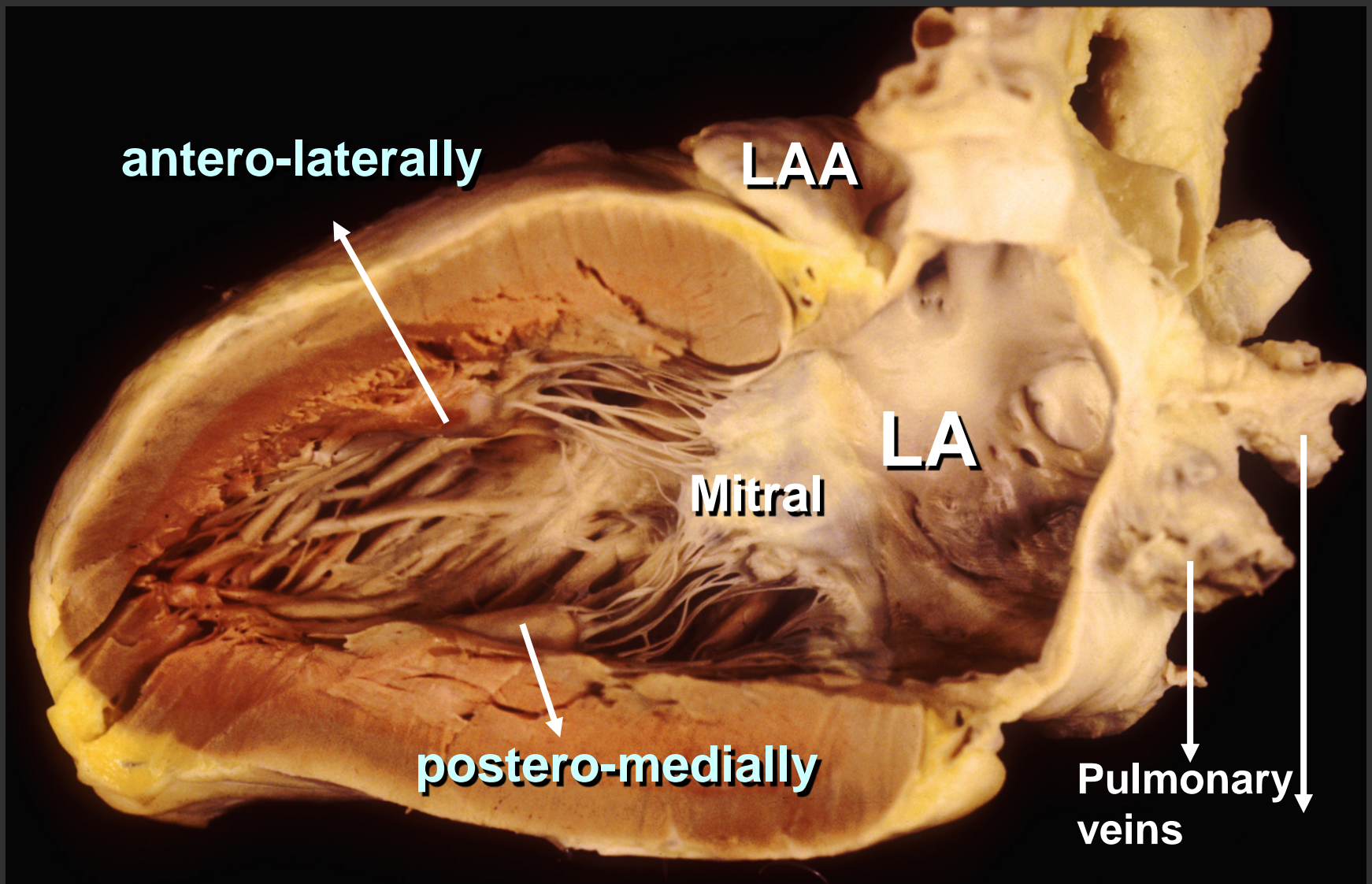
The aorta & crista SV



Ventriculo-infundibular fold



Internal morphology of the LV





Components of the LV

Inlet component

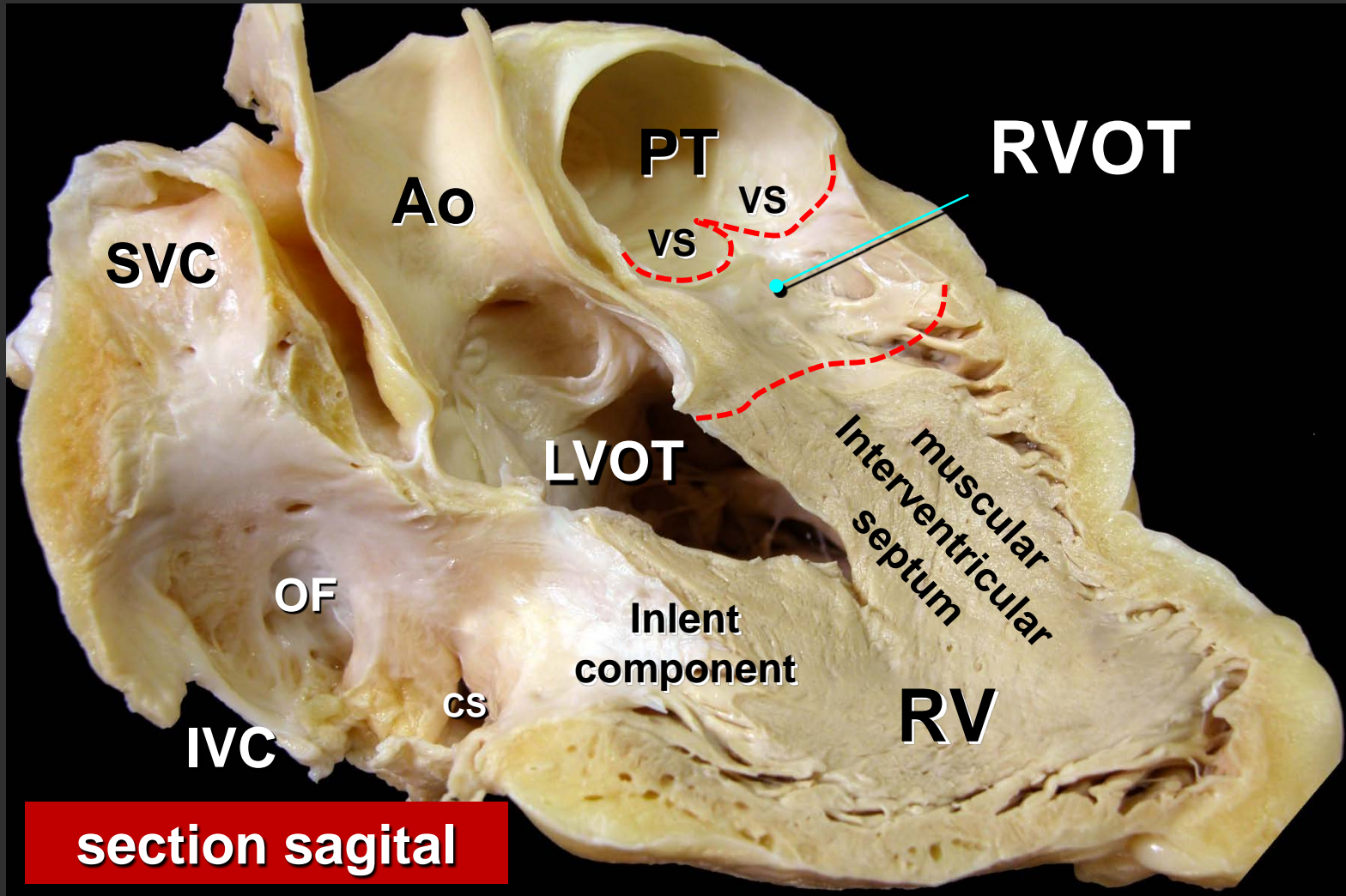
Outlet component

LV outflow tract (LVOT)

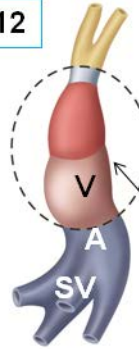
Apical component



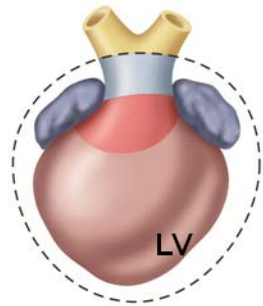
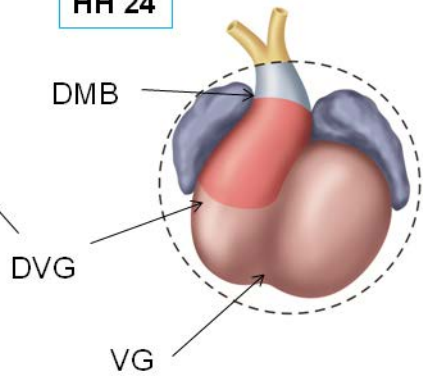
Left ventricular outflow tract



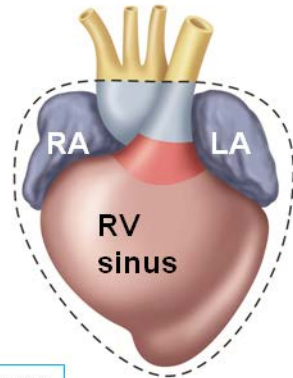
HH 12



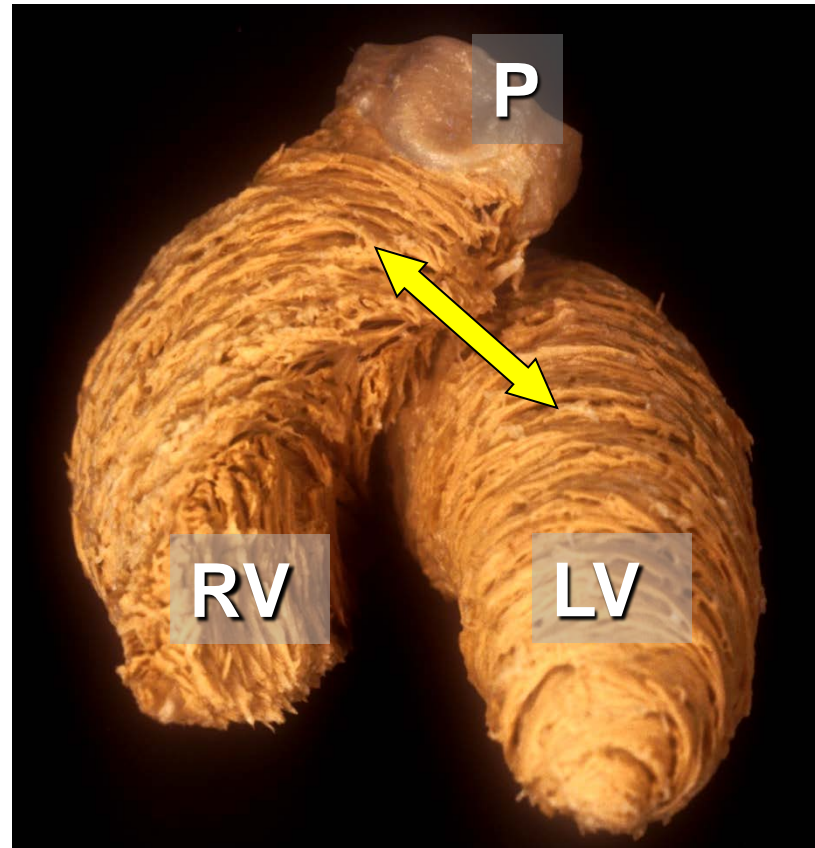
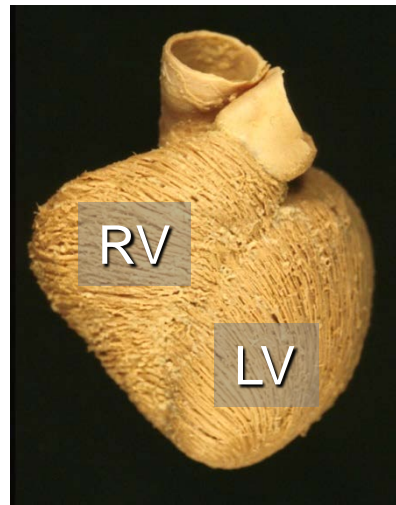
HH 24



HH 30



HH 36

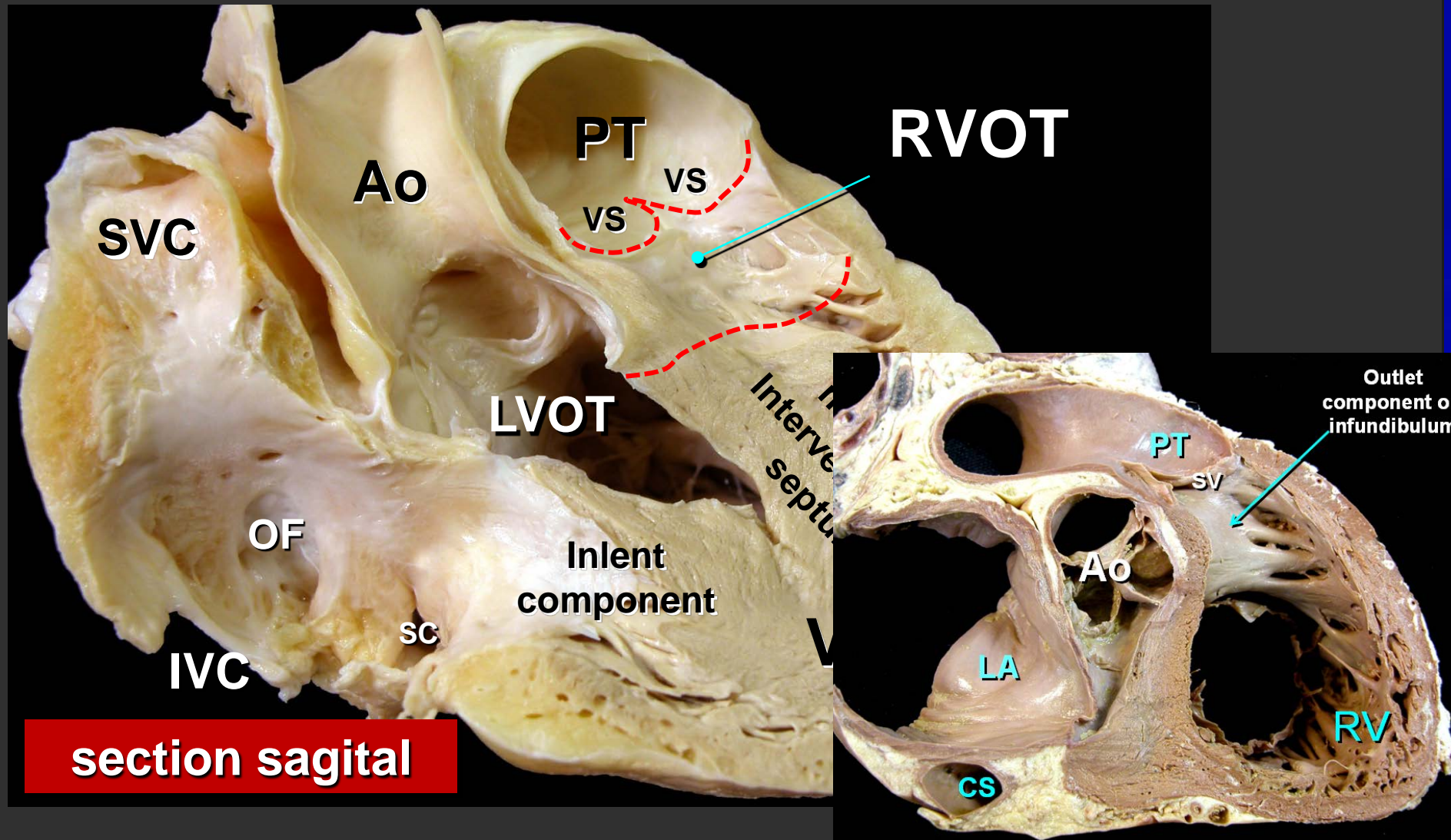


Developing right & left outflow tracts



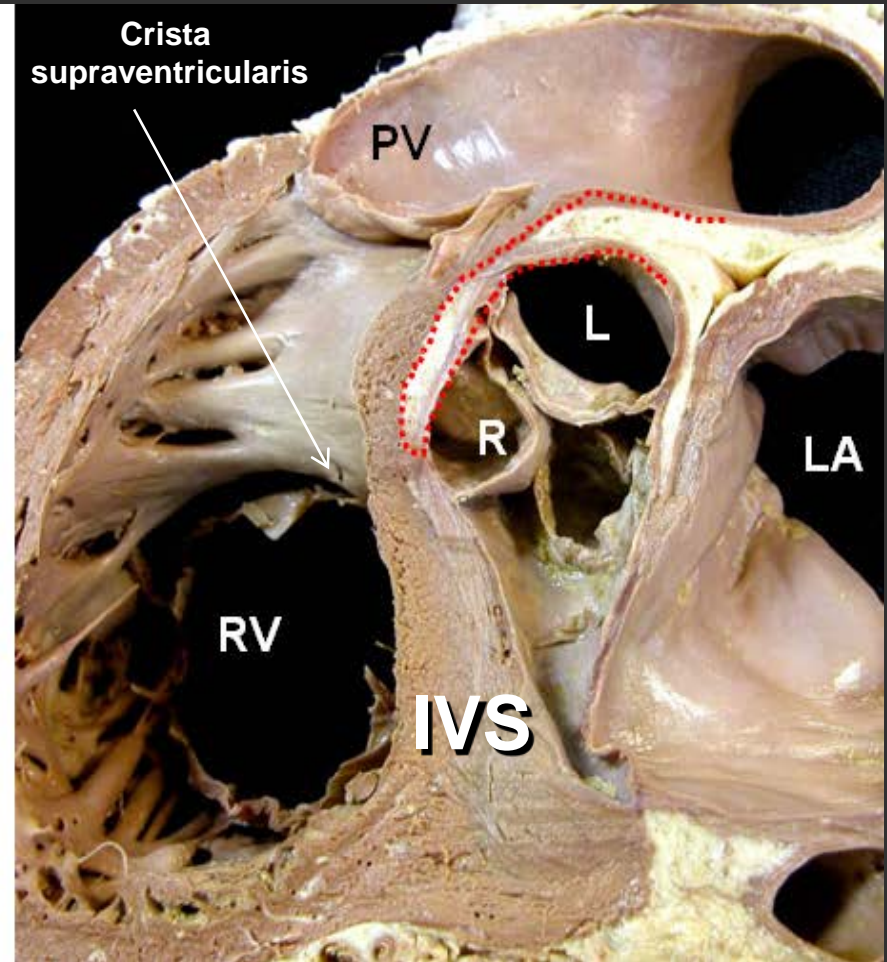
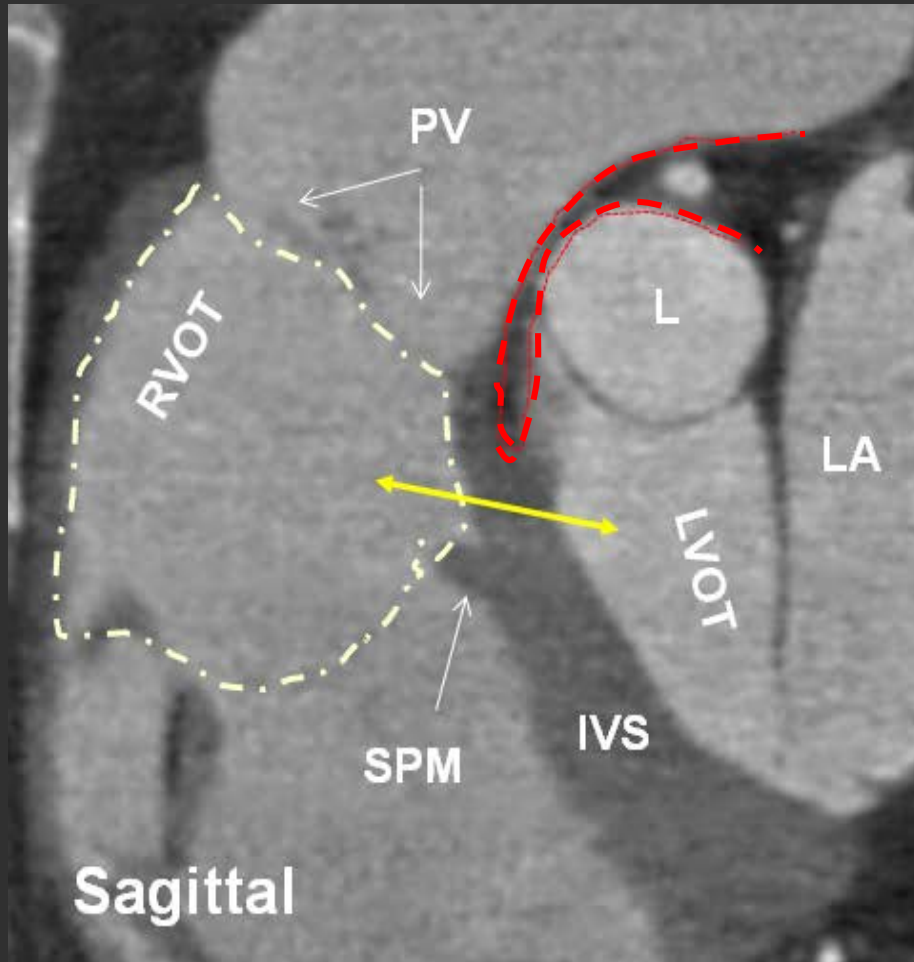


Right & left ventricular outflow tract





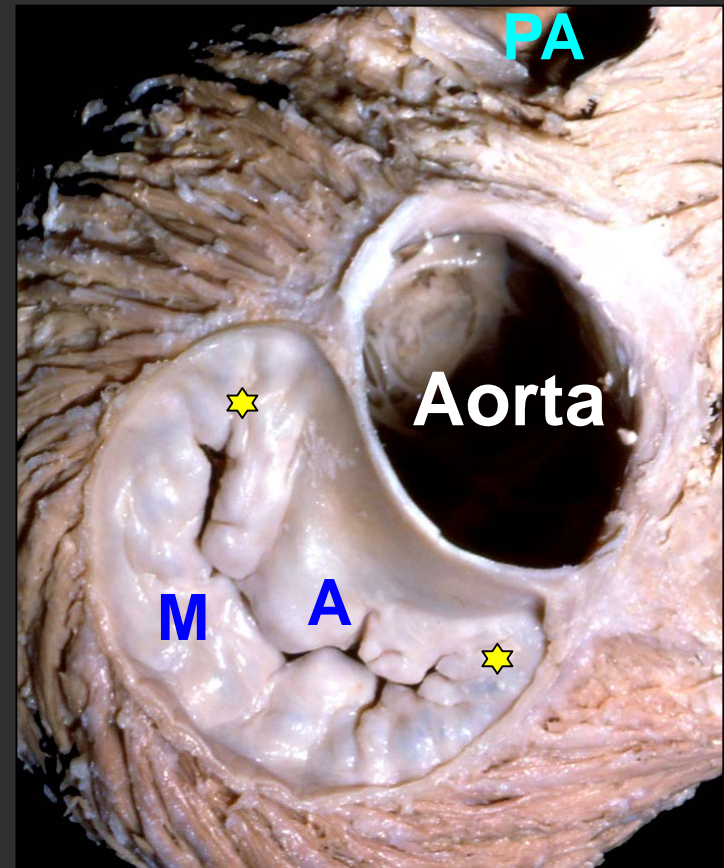
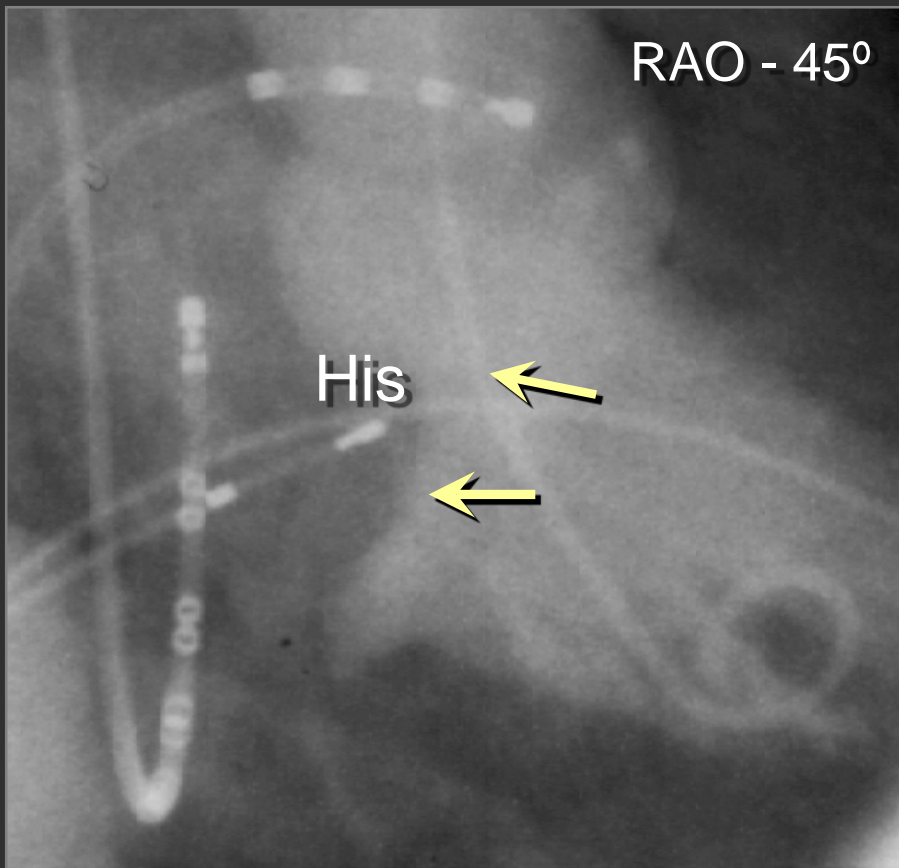
Right & left outflow tracts





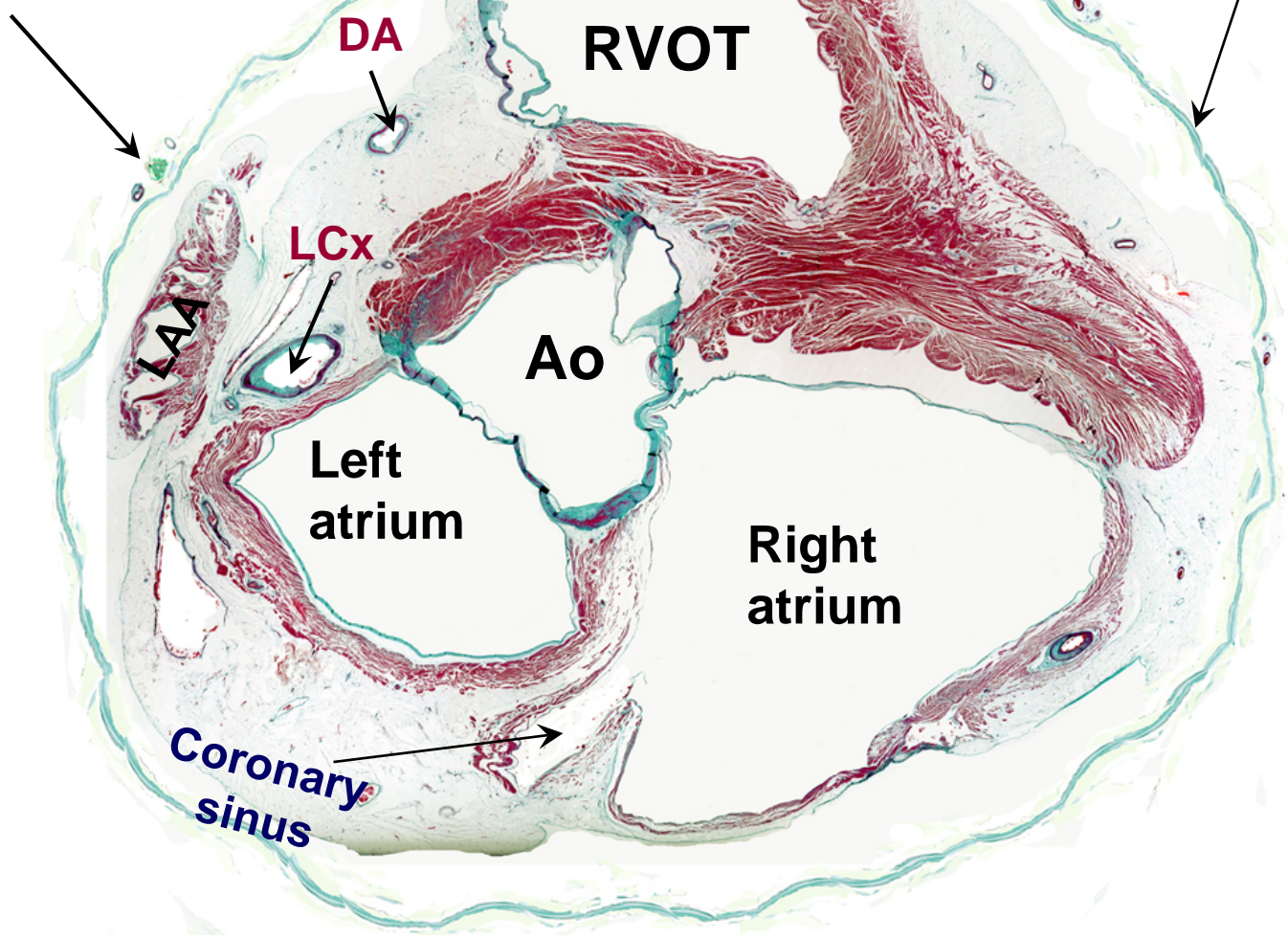
Mitral & aortic relations

Mitro-aortic continuity



**Left phrenic
nerve and vessels**

**Fibrous
pericardium**



DA

RVOT

LCx

LAA

Ao

**Left
atrium**

**Right
atrium**

**Coronary
sinus**

Horizontal seccion

Left atrial appendage

Major coronary vein

DA

RVOT

Cx

LVOT

Aorta

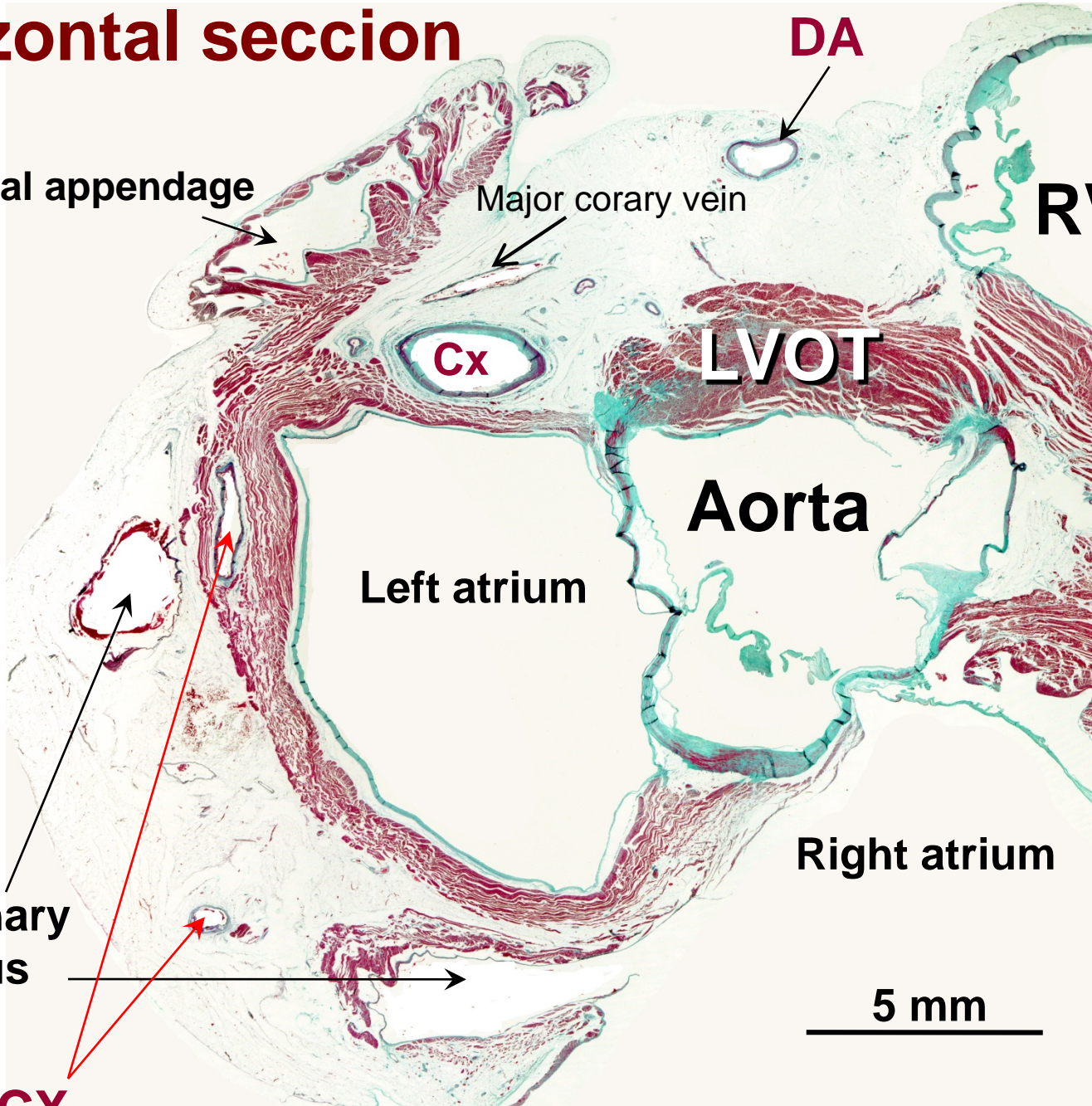
Left atrium

Right atrium

Coronary sinus

5 mm

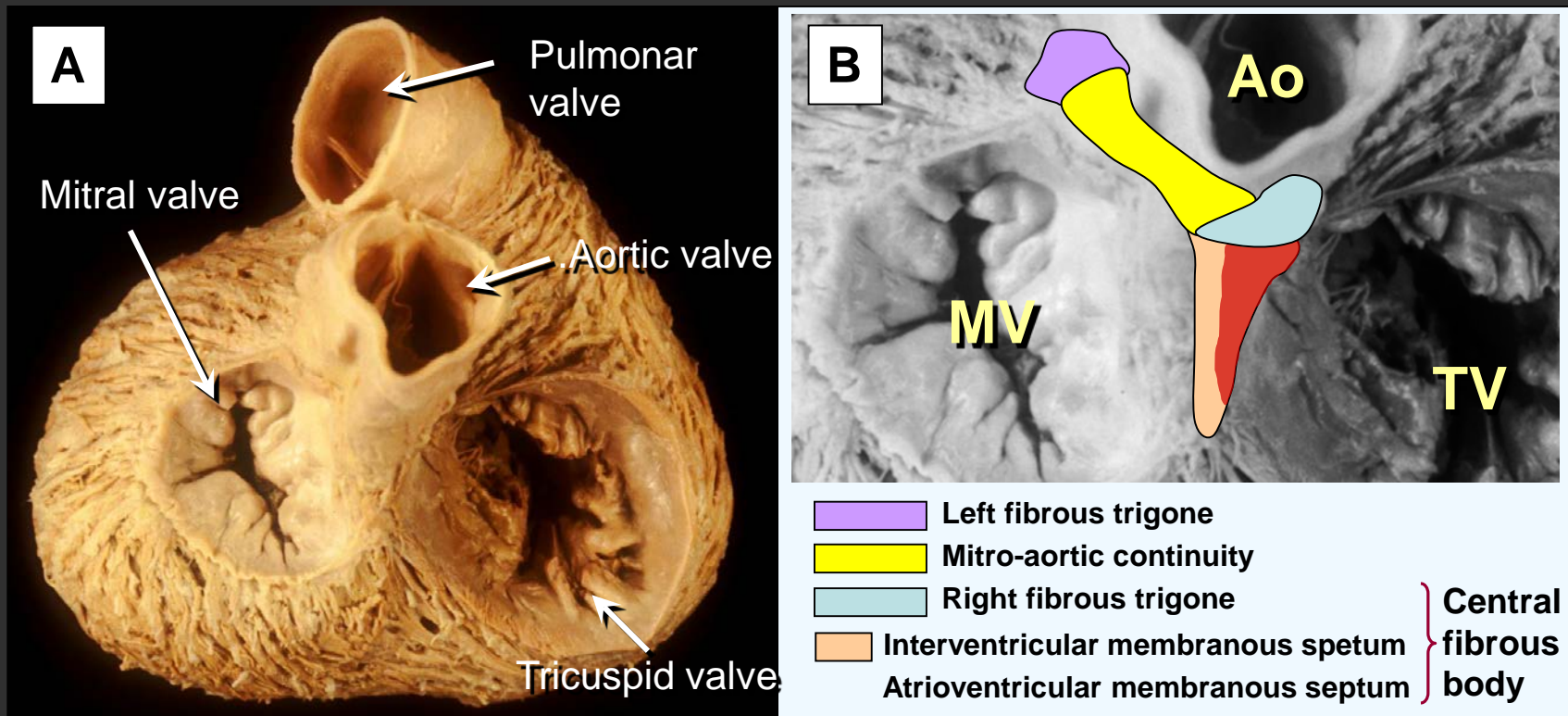
CX





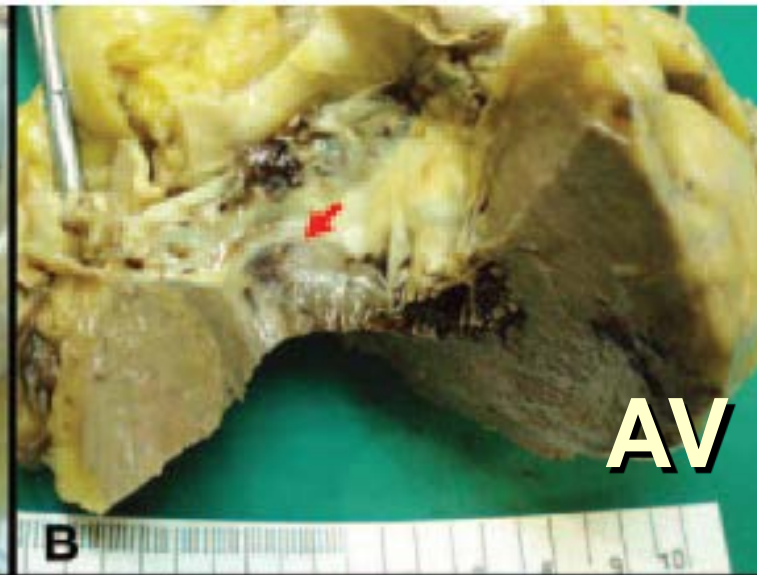
Fibrous skeleton of the heart

Central fibrous body Membranous septum & His

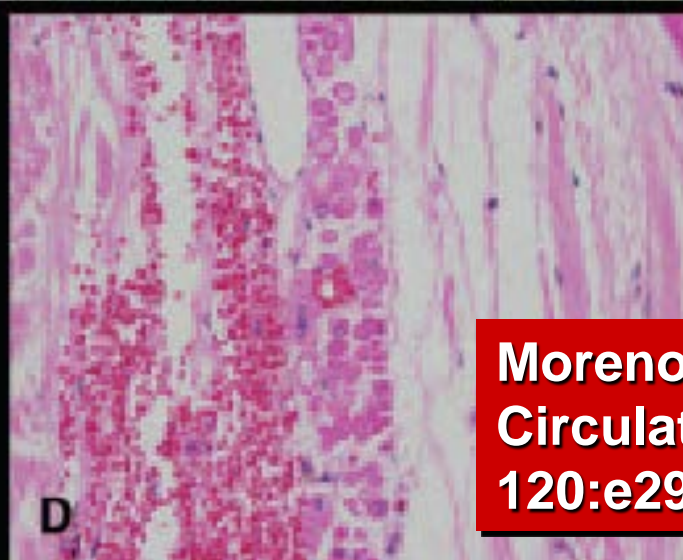
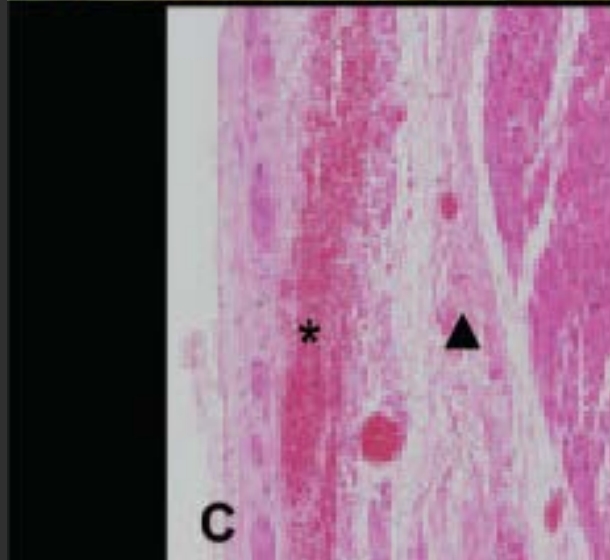




The risk of AV block



AV block

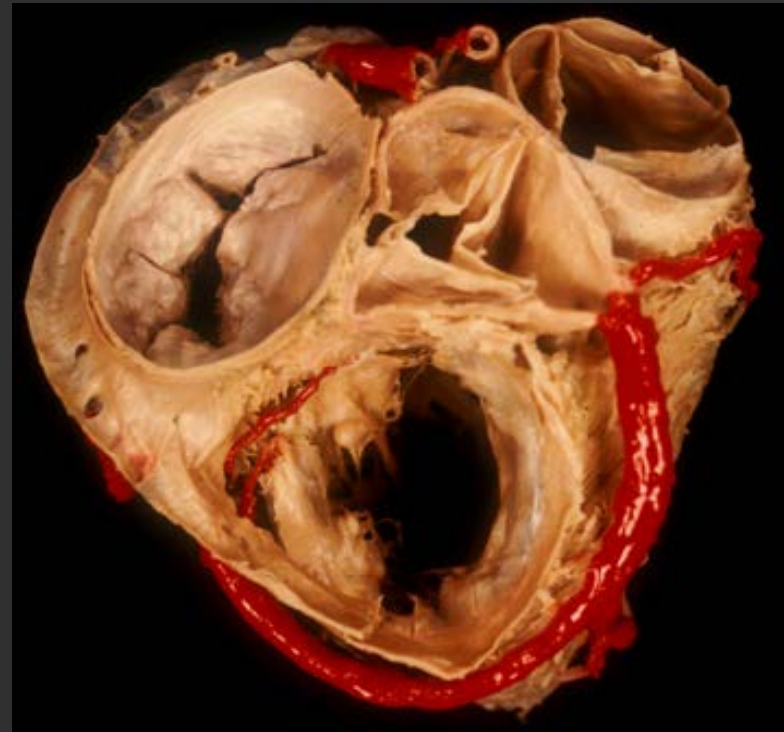
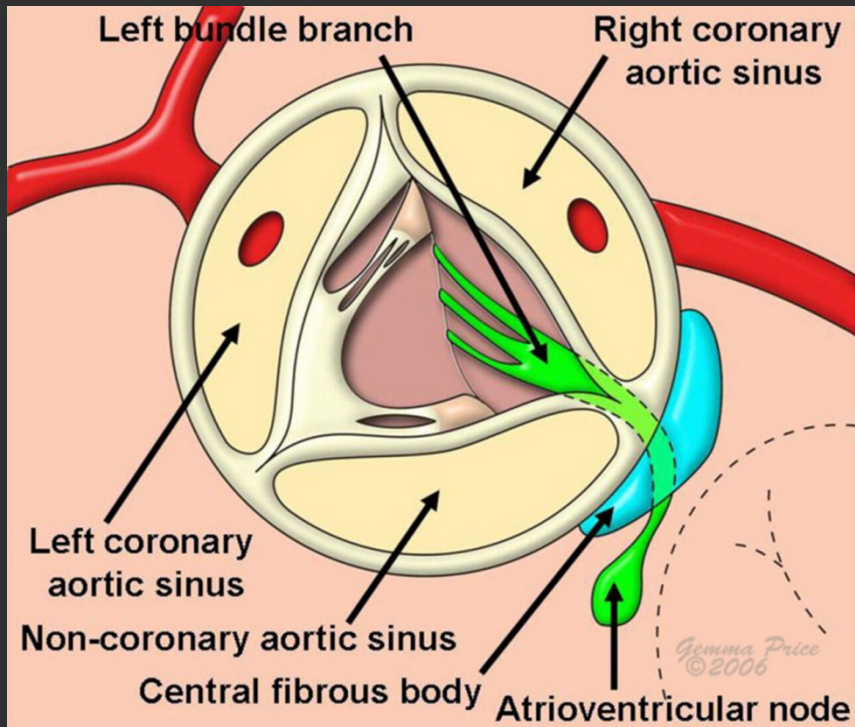


**Moreno R
Circulation 2009;
120:e29-e30**



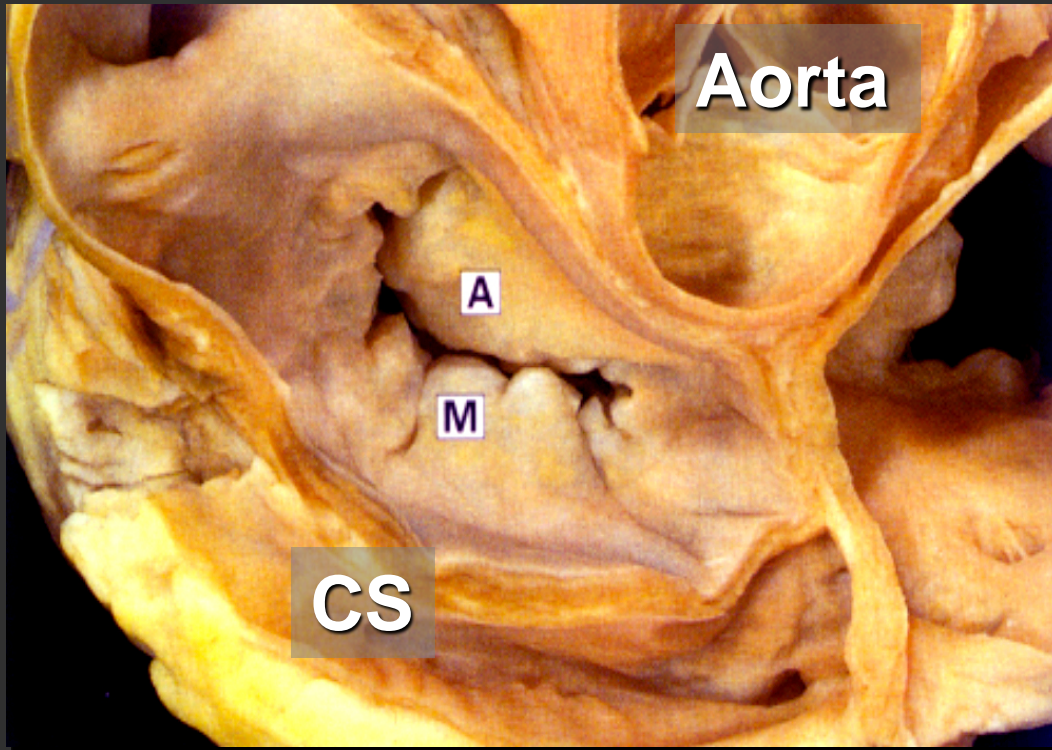
Penetrating His bundle

Central fibrous body Membranous septum & His

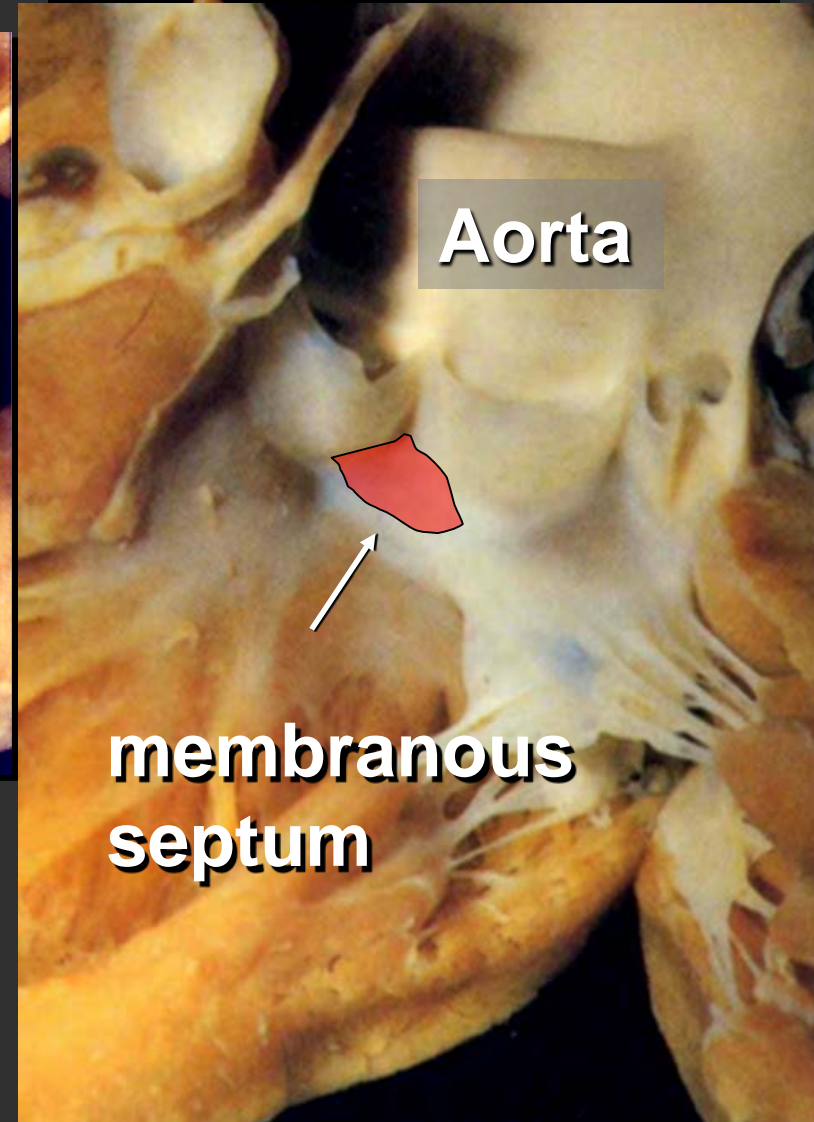




LV outflow tract

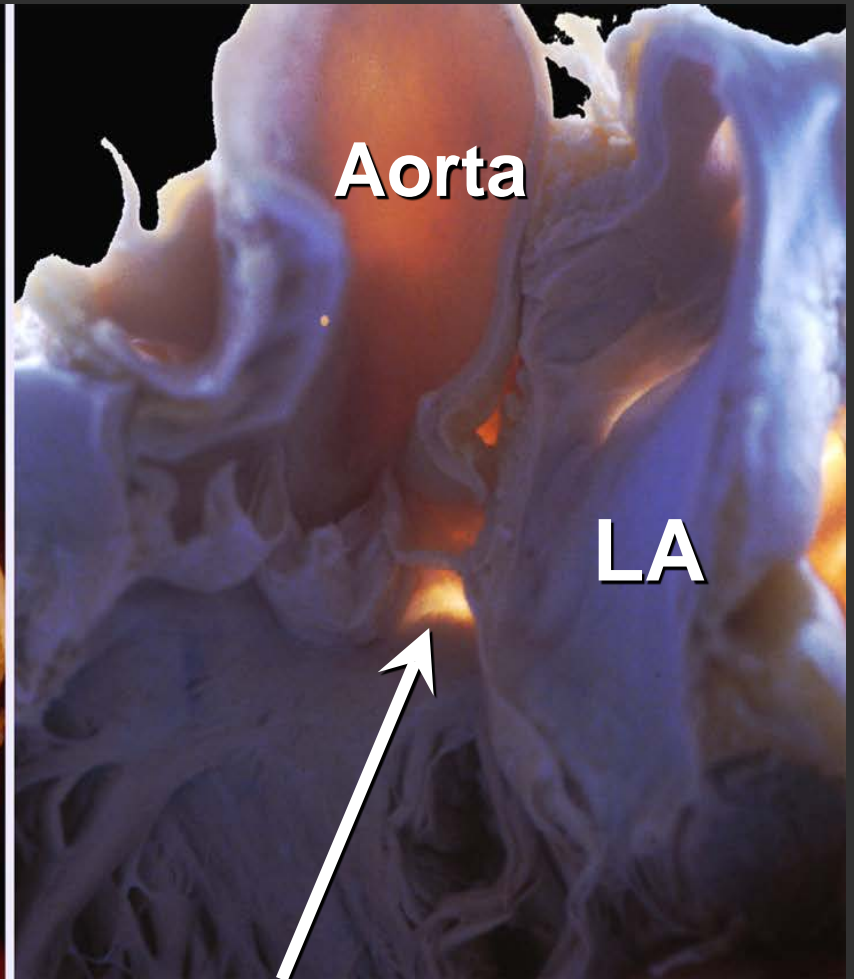
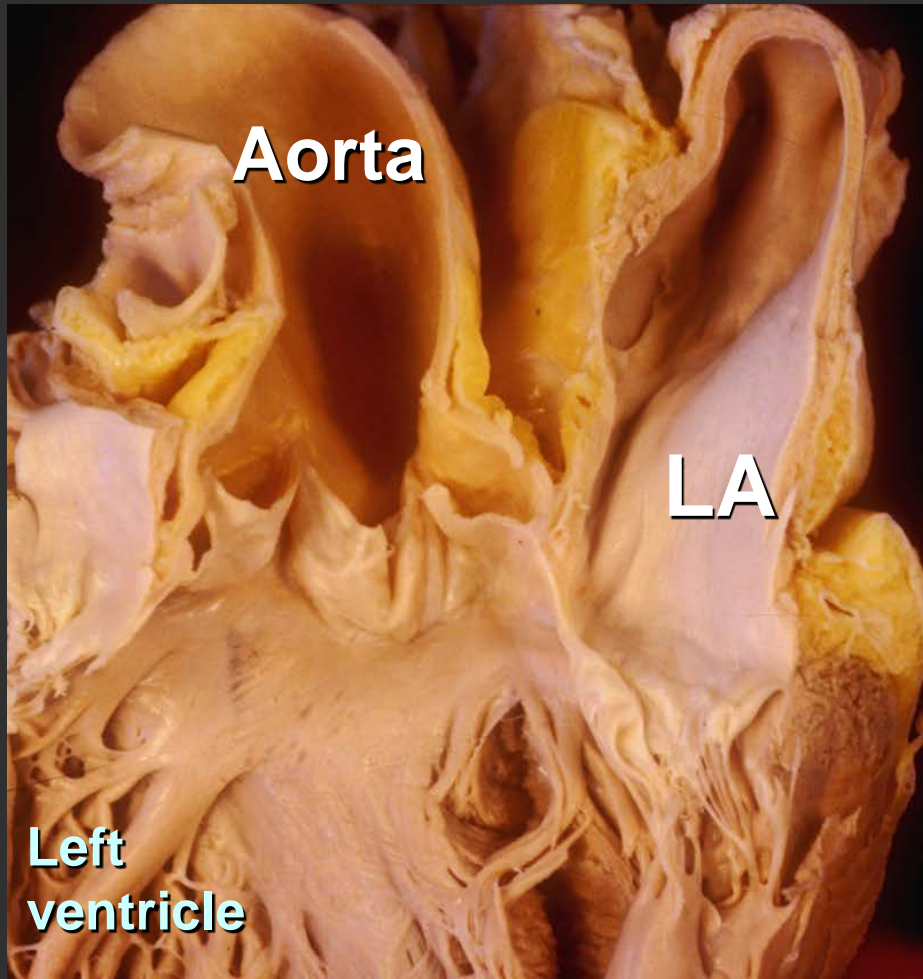


**mitro-aortic
continuity**





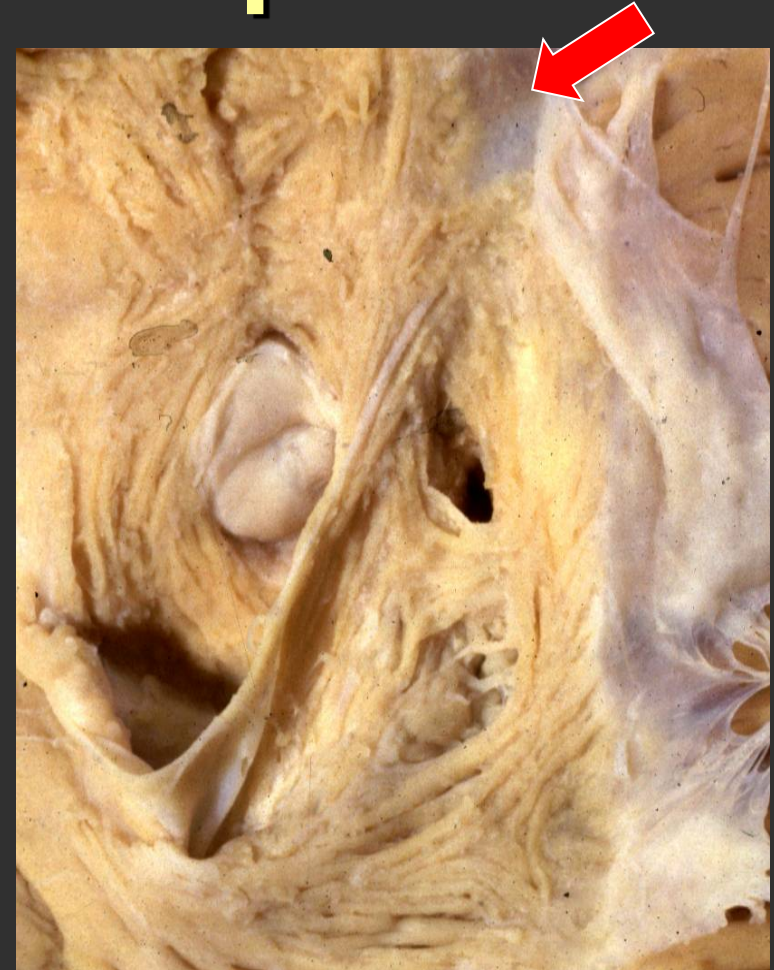
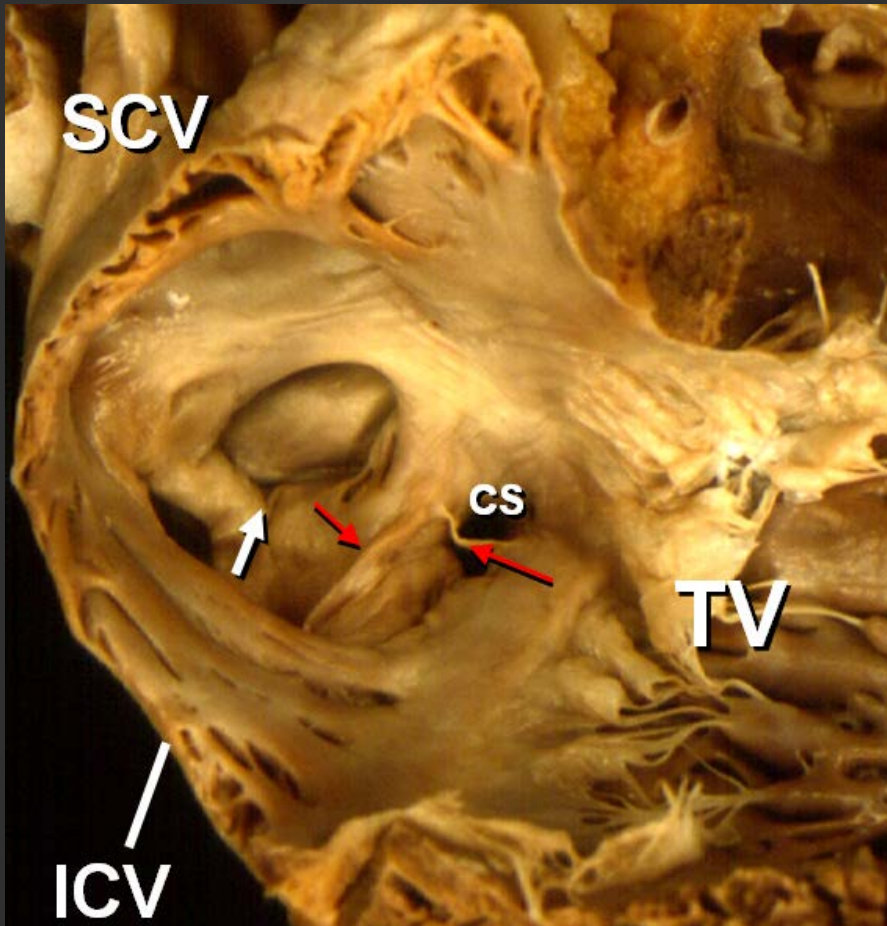
Penetrating His bundle

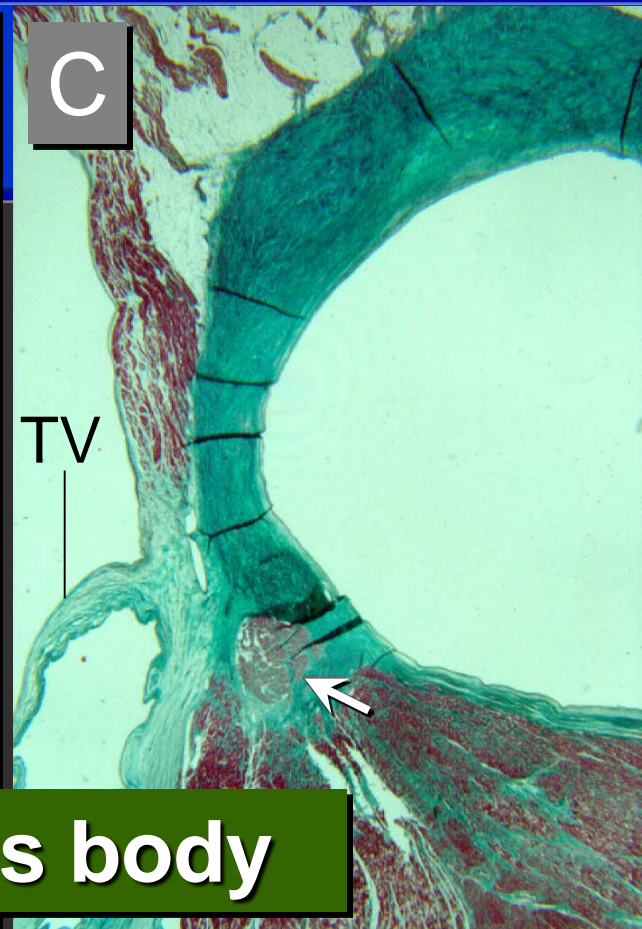
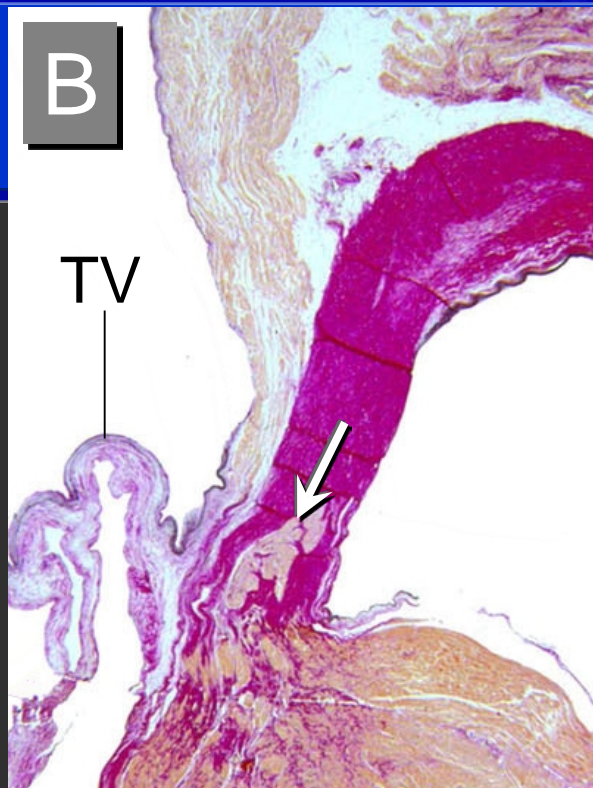
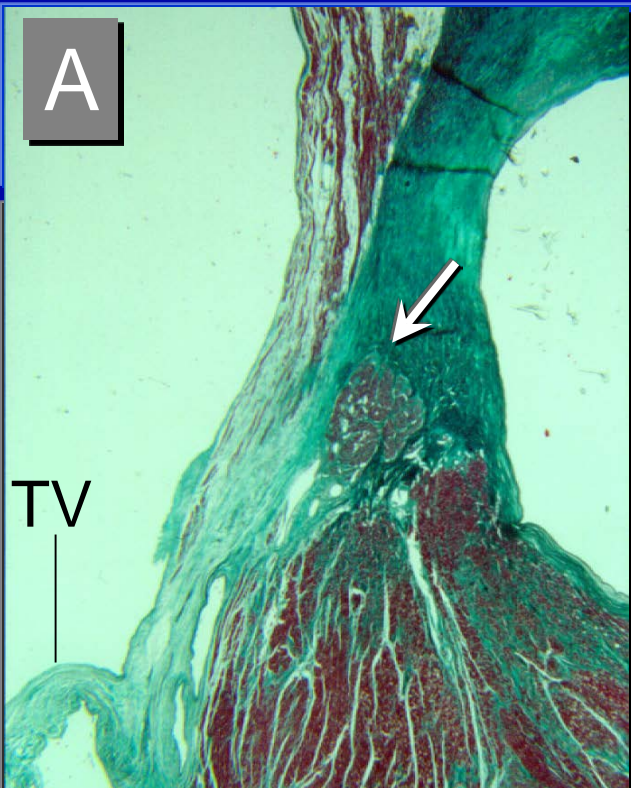




The AV junction

Membranous septum





The variable central fibrous body

Post / Sup to TV
His

51 %

TV level

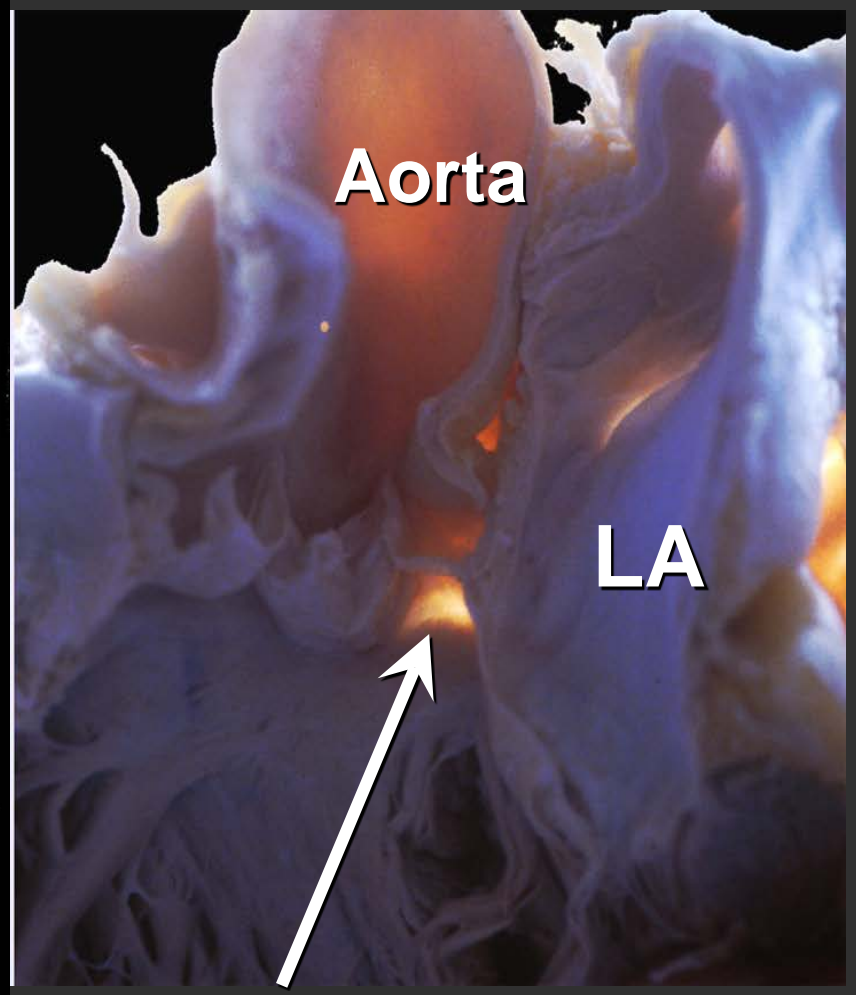
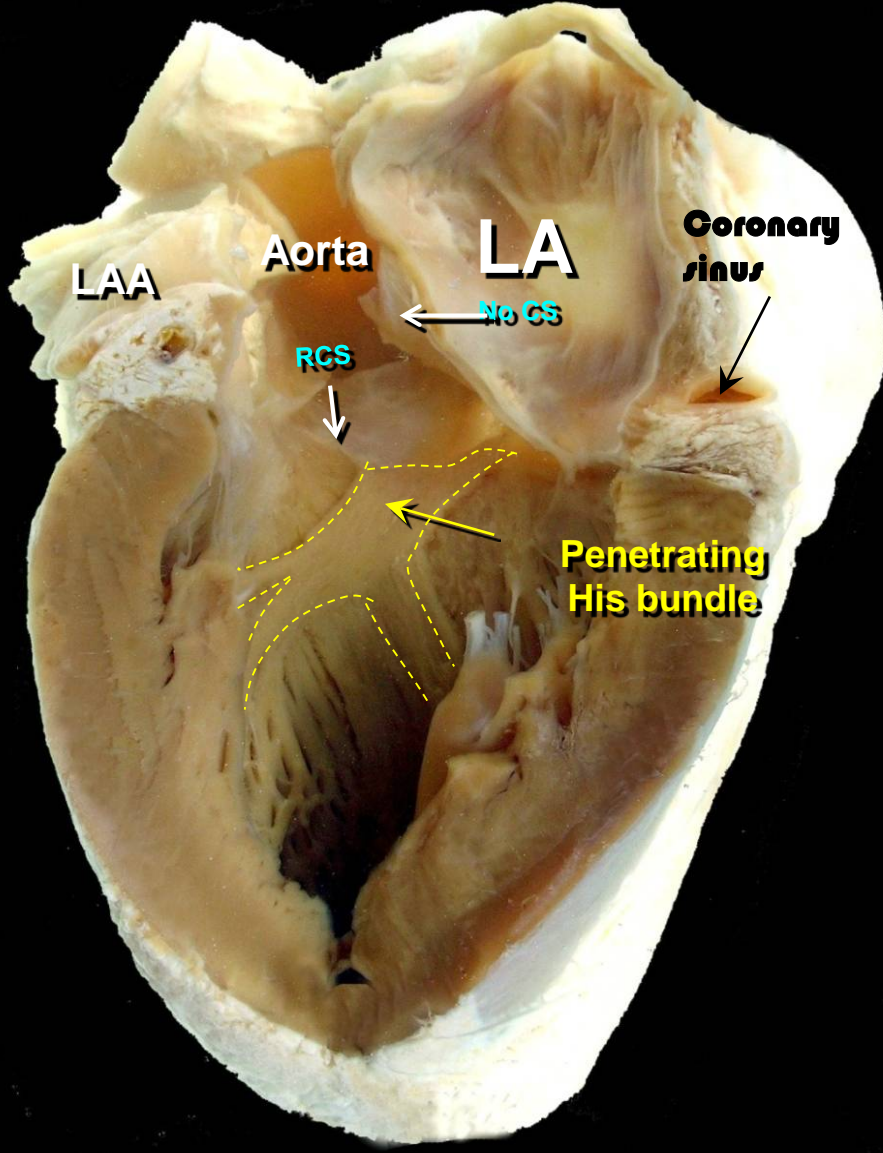
15 %

Ant / Infer to TV

34 %



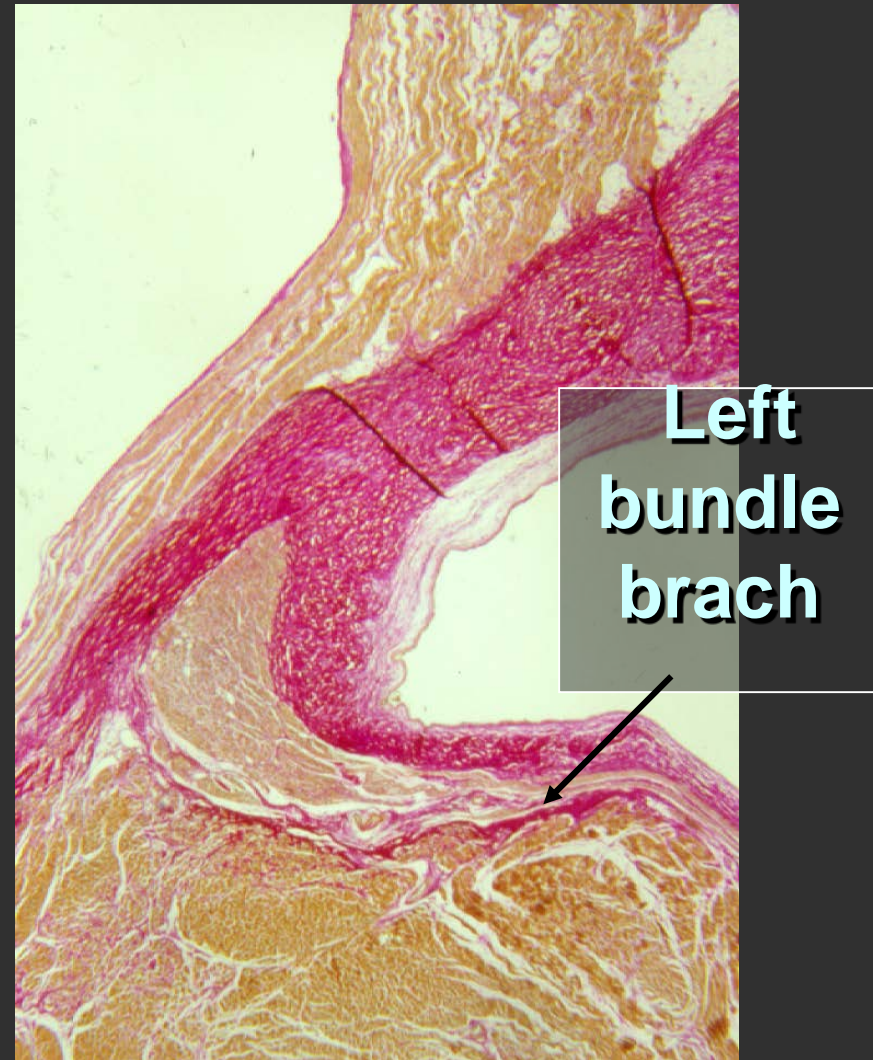
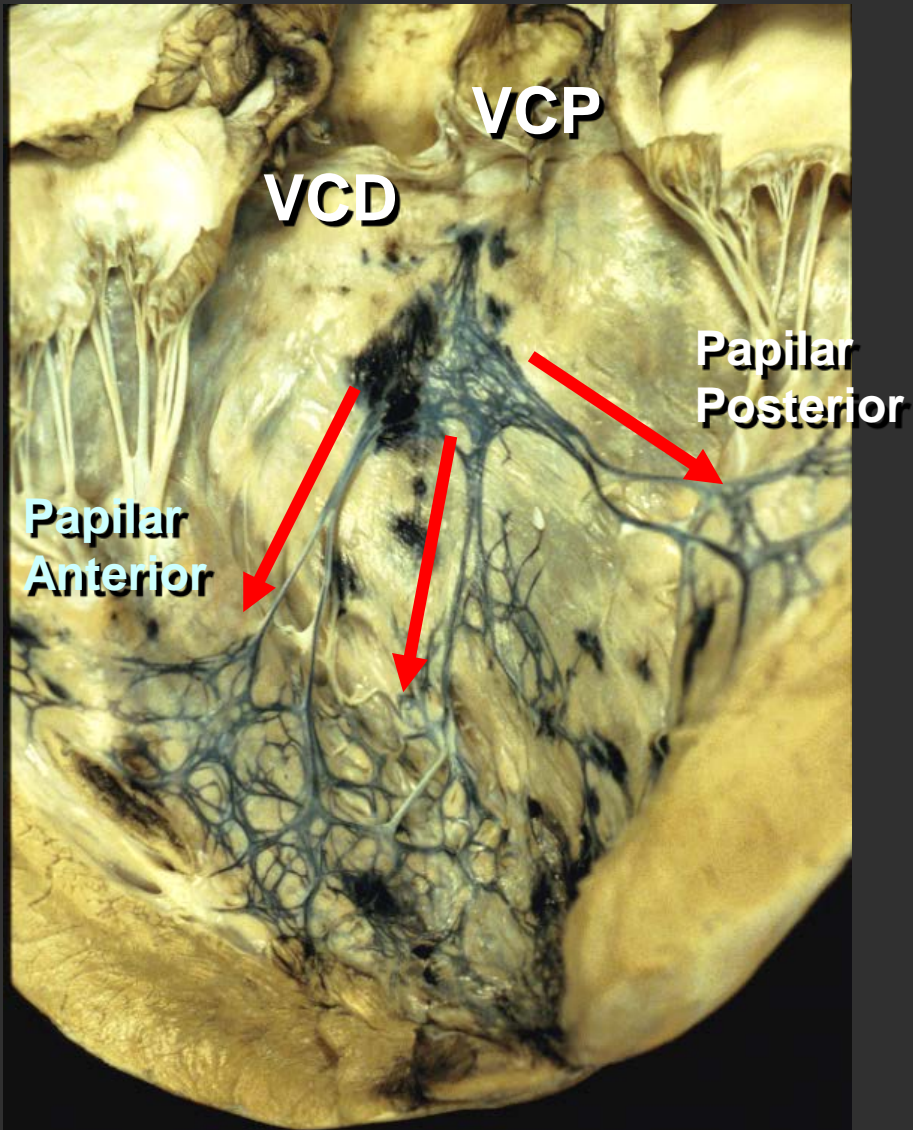
Penetrating His bundle



Membranous septum

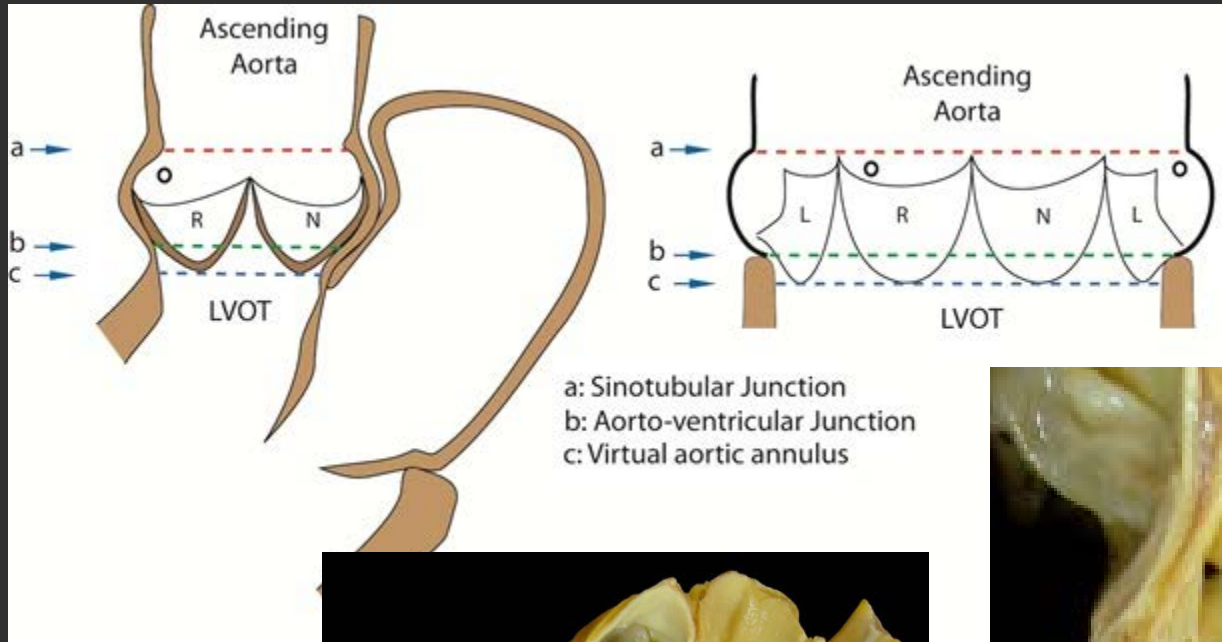


LVOT & the left bundle branch





The aortic valve

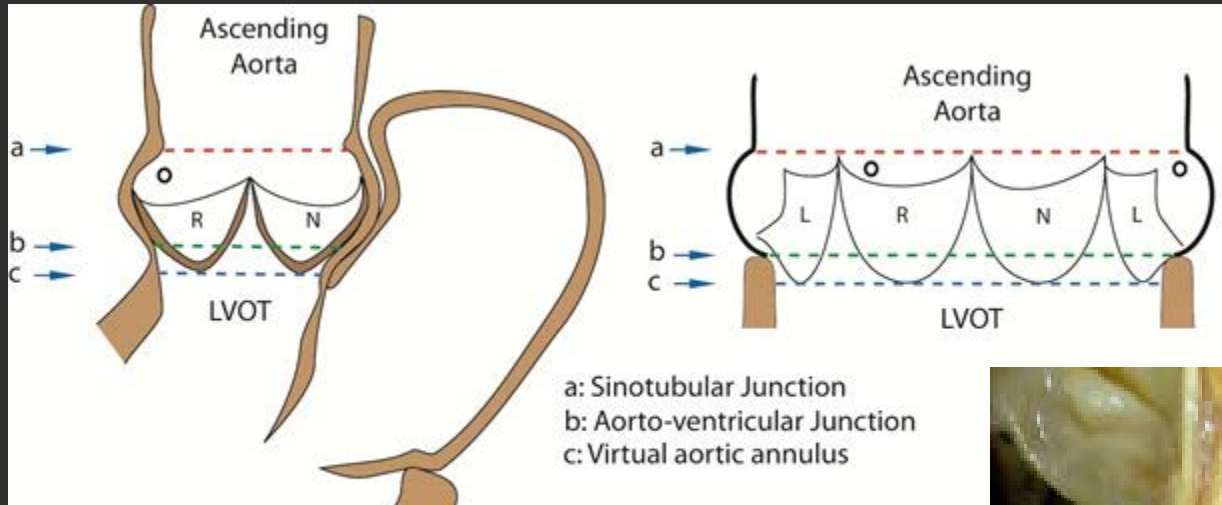


LVOT

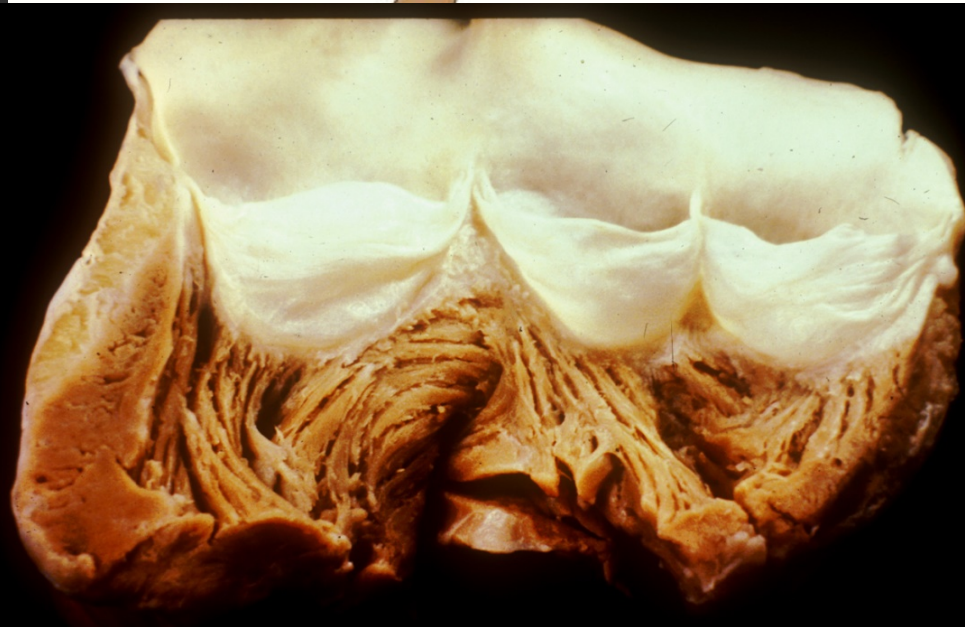




Virtual aortic annulus

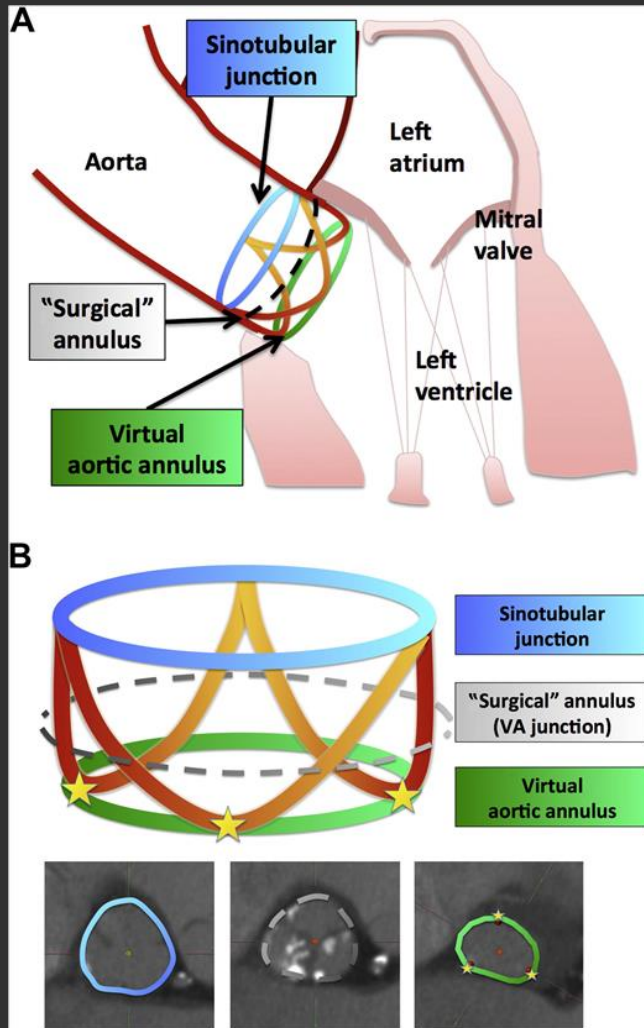


LVOT



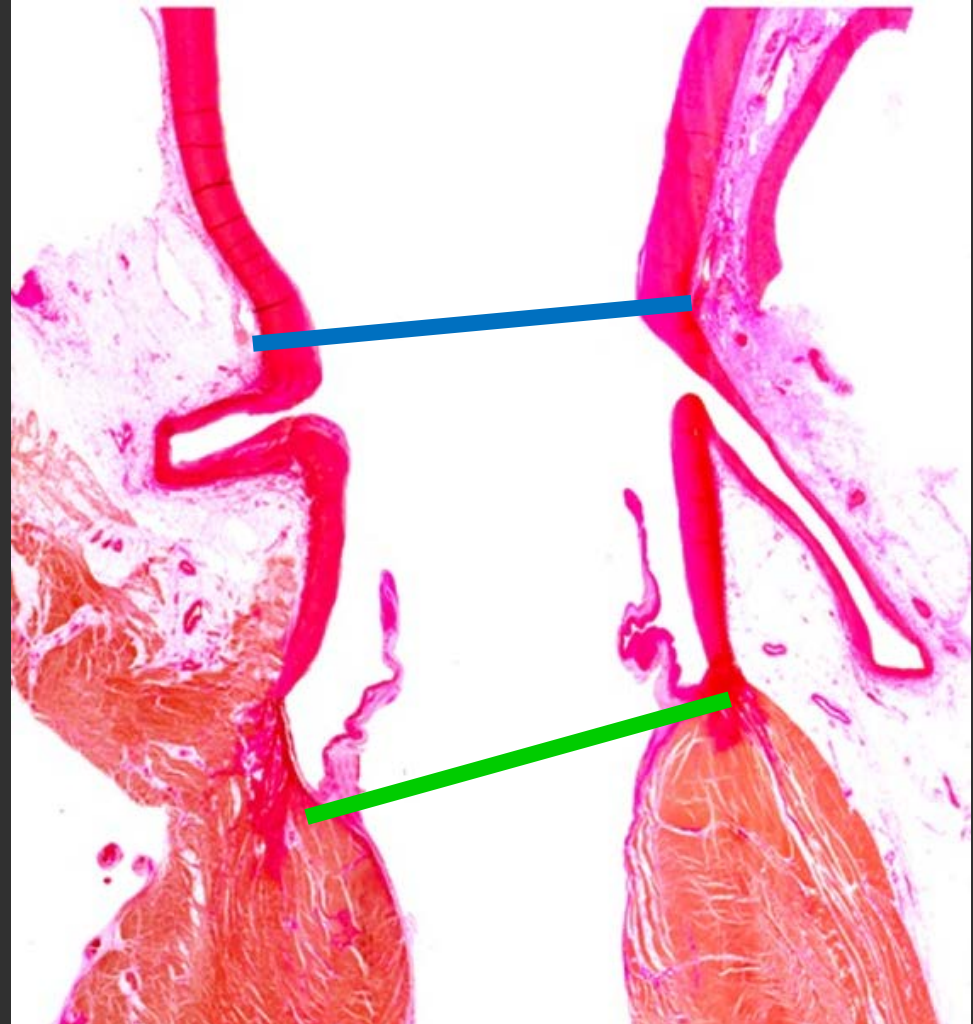
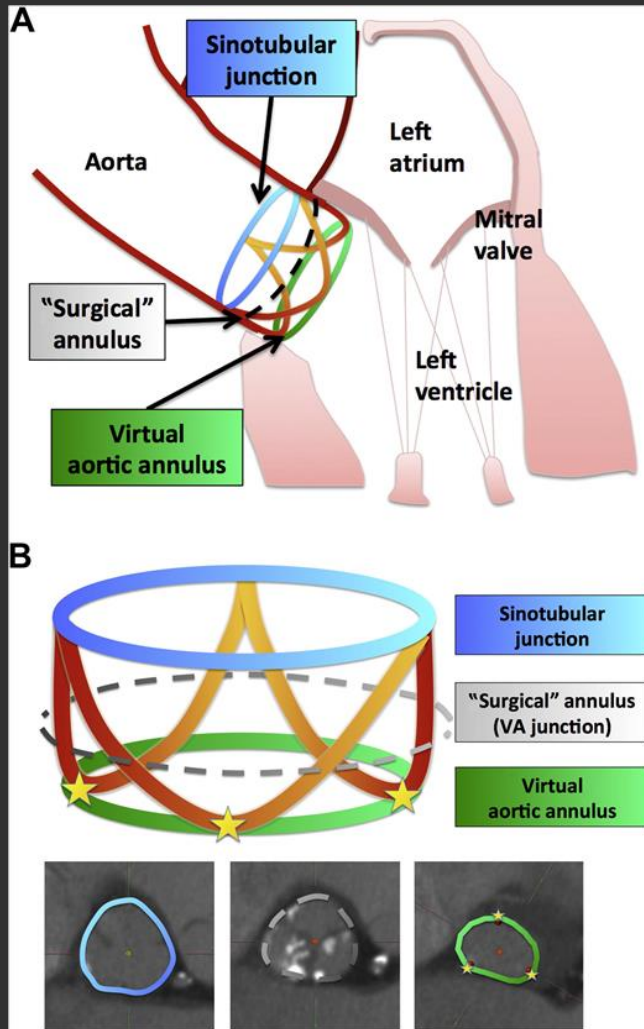


Virtual aortic annulus



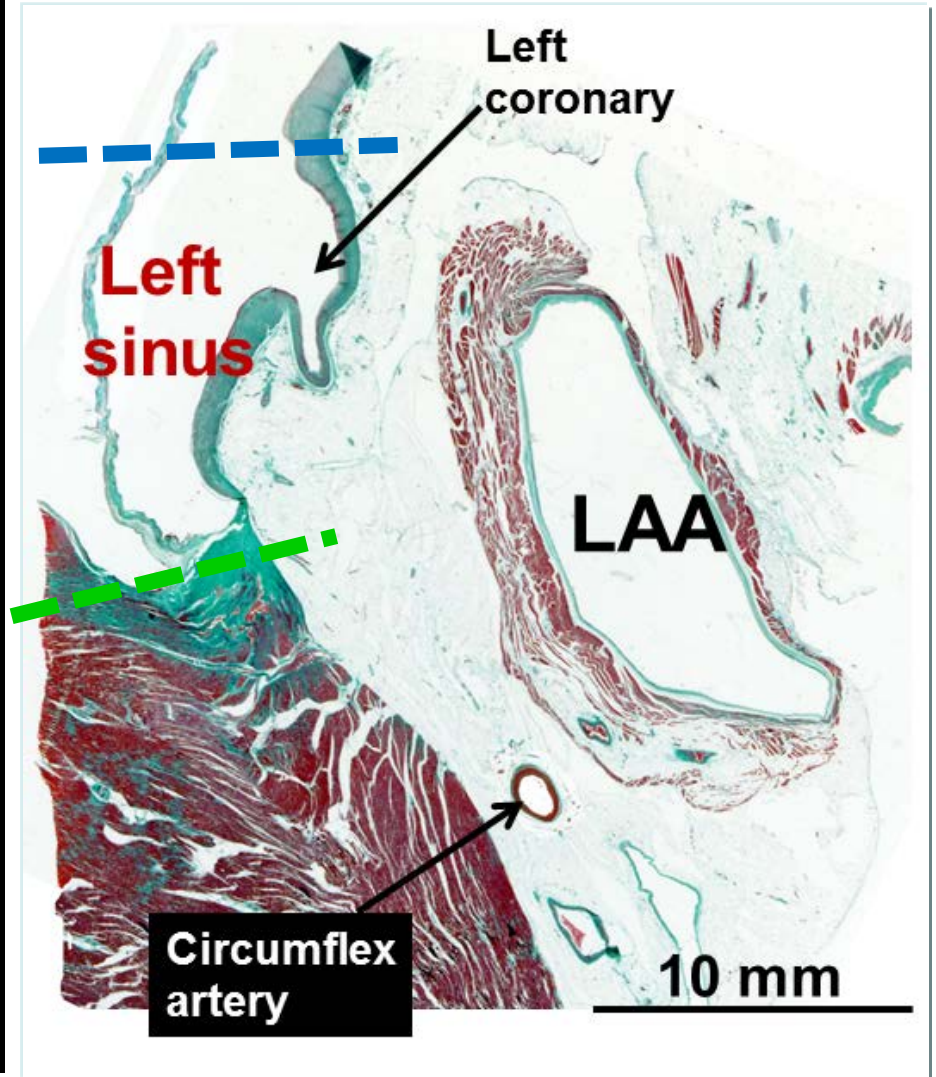
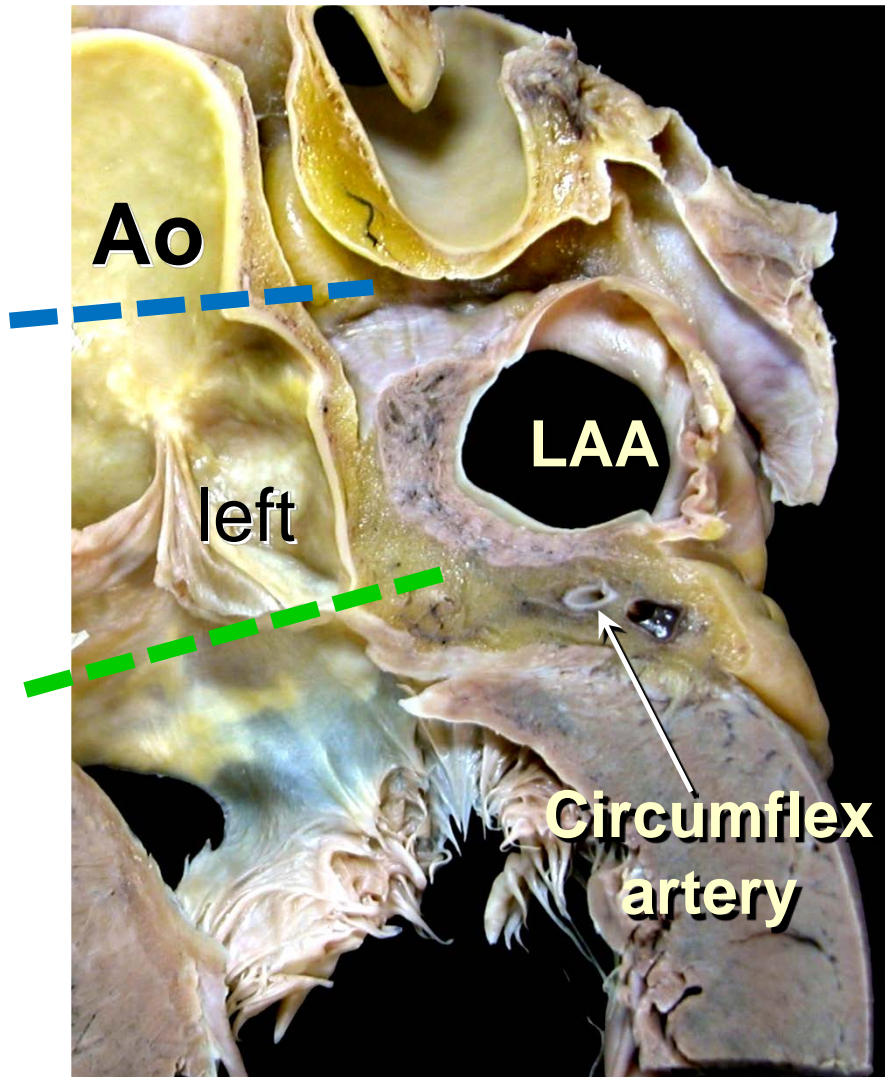


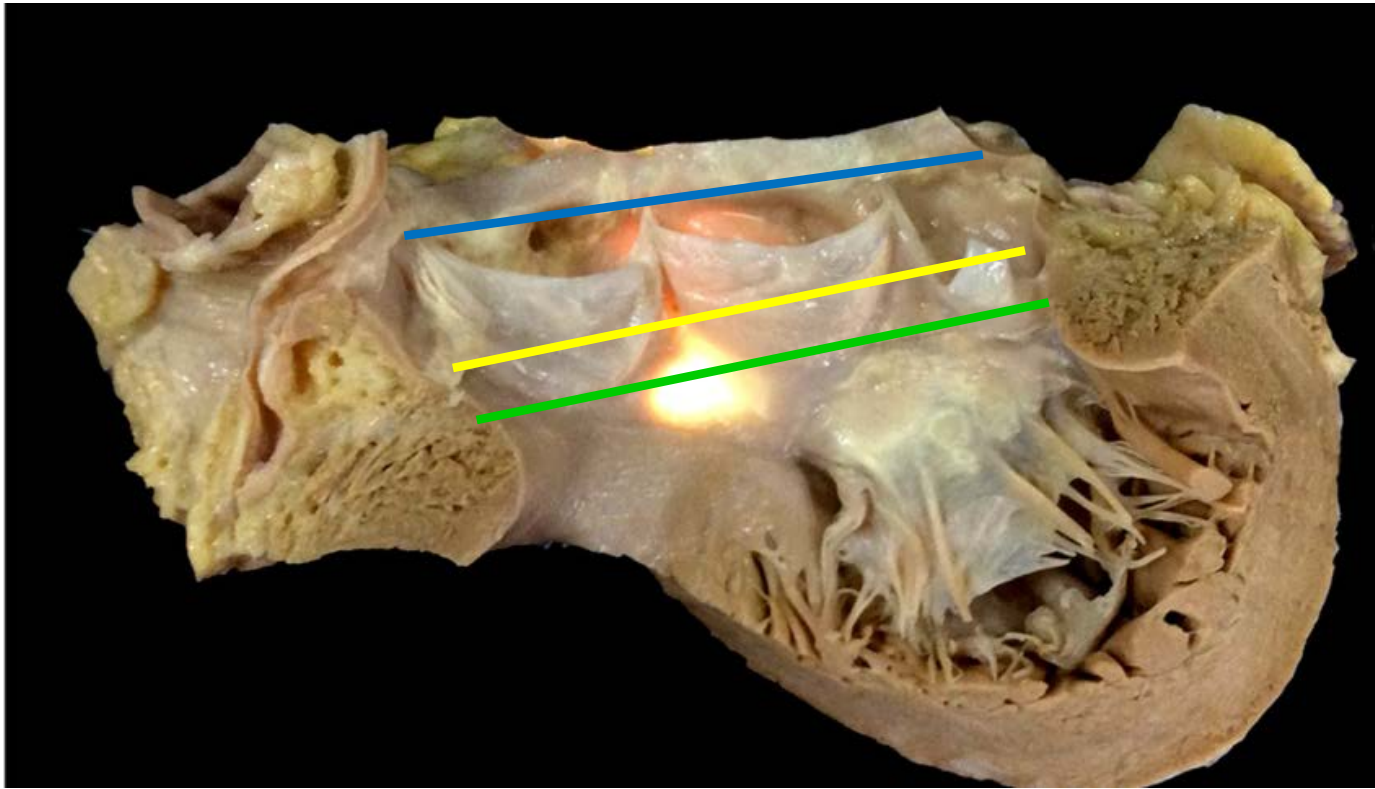
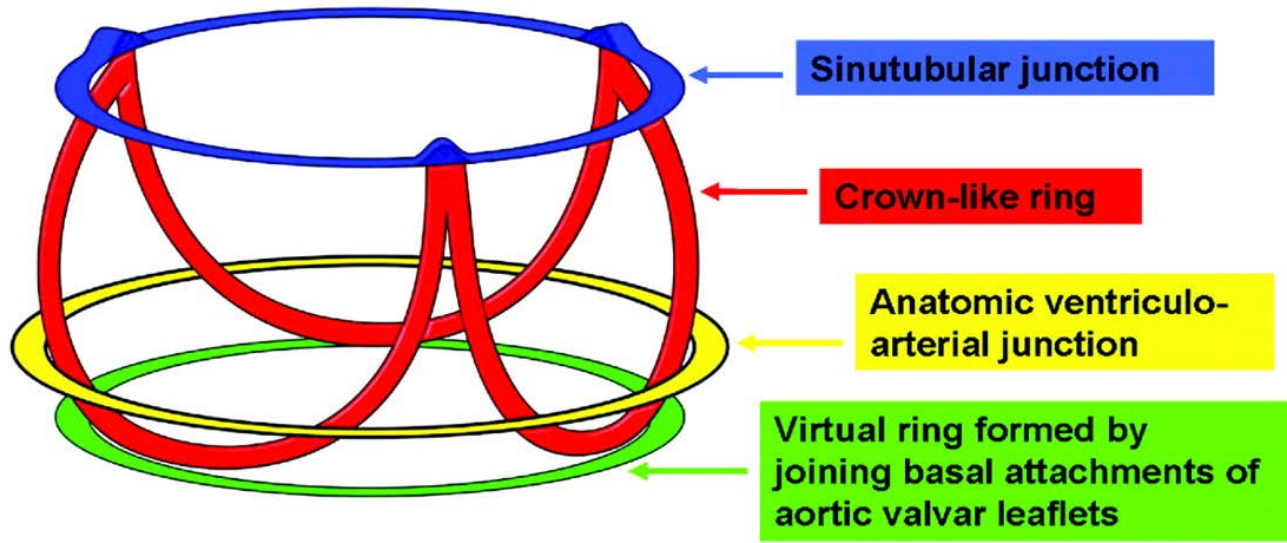
Virtual aortic annulus

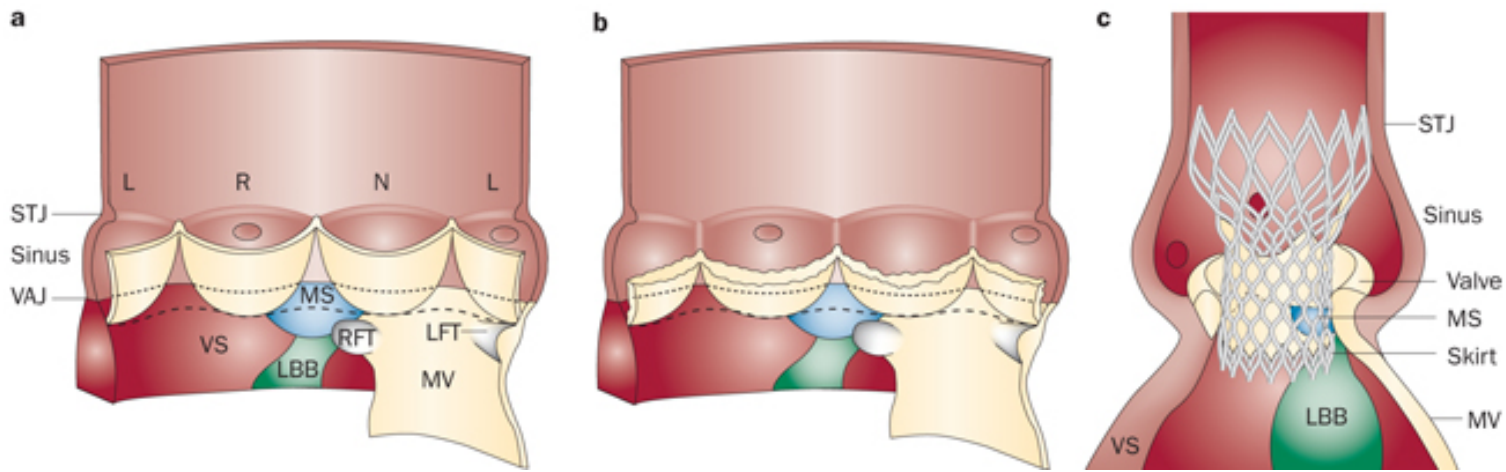


Sino-tubular junction

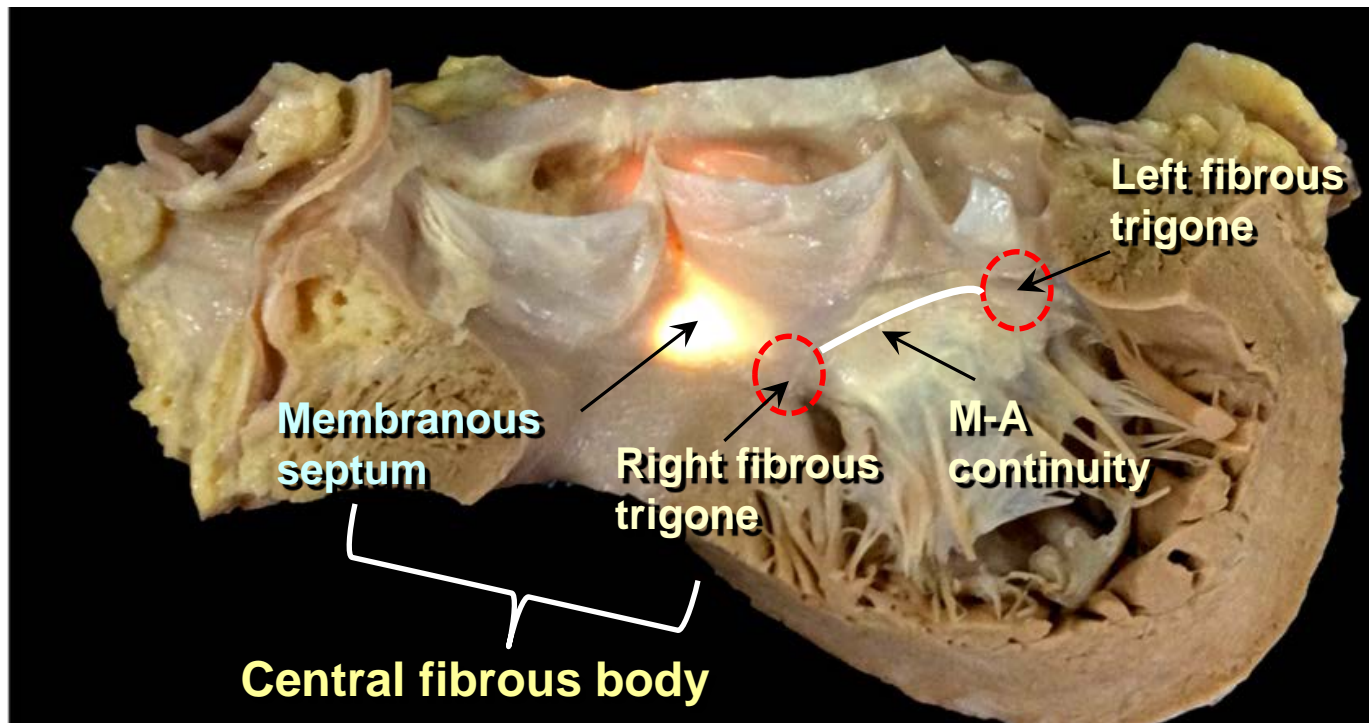
Virtual aortic annulus

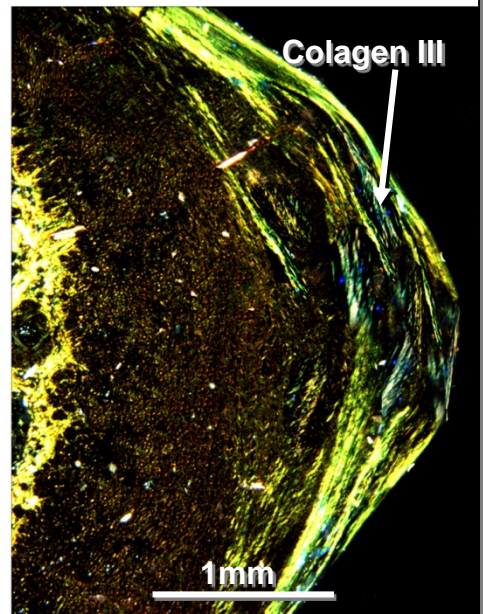
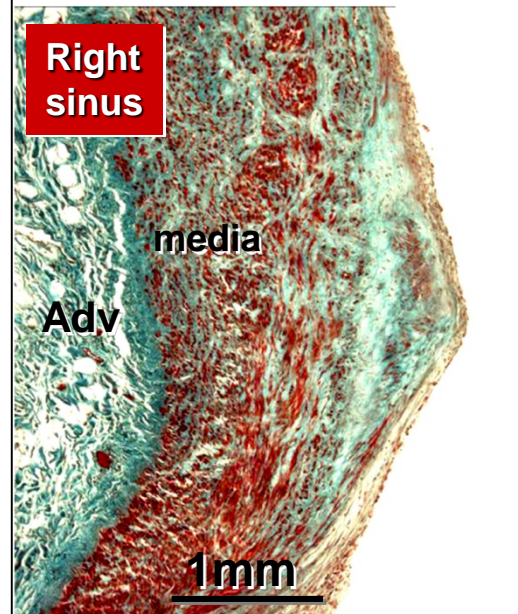
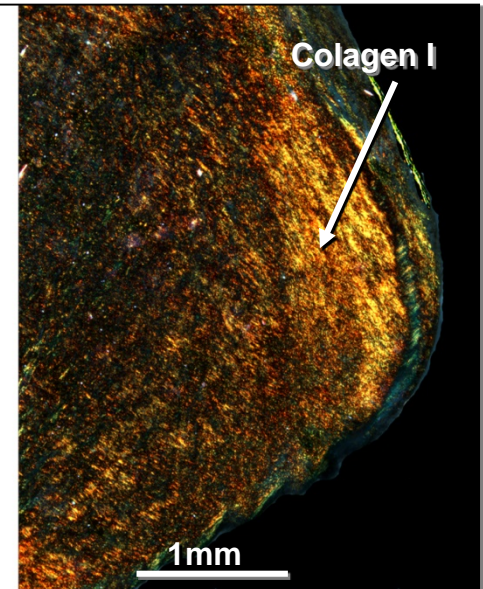
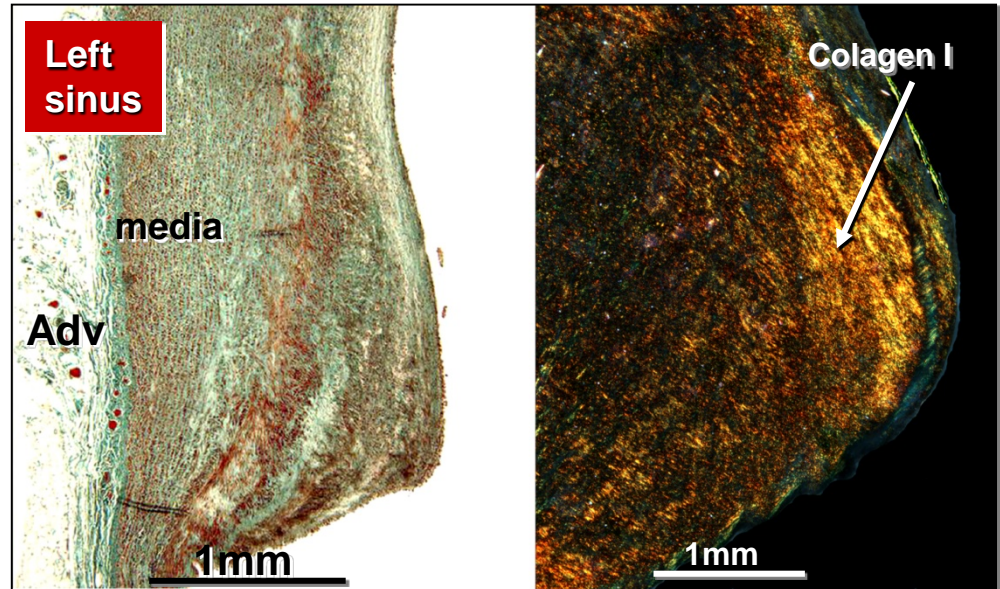
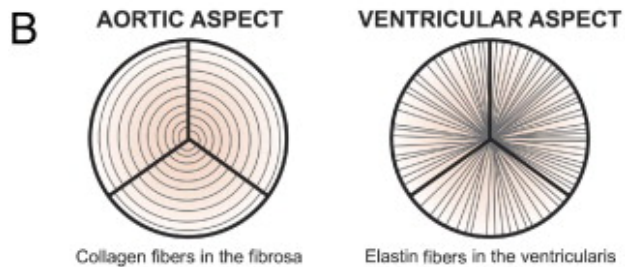
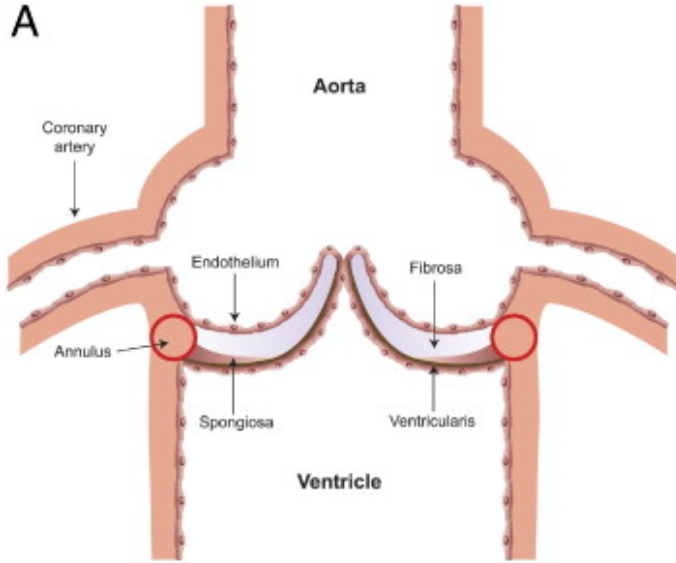
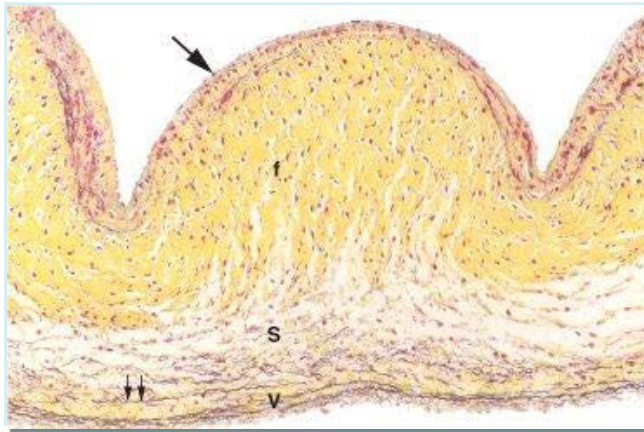






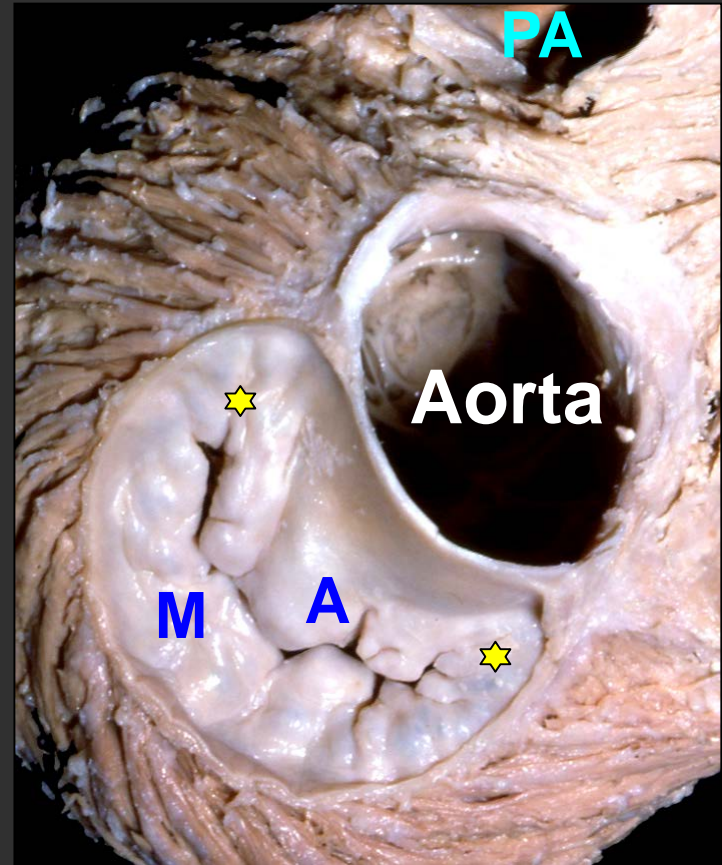
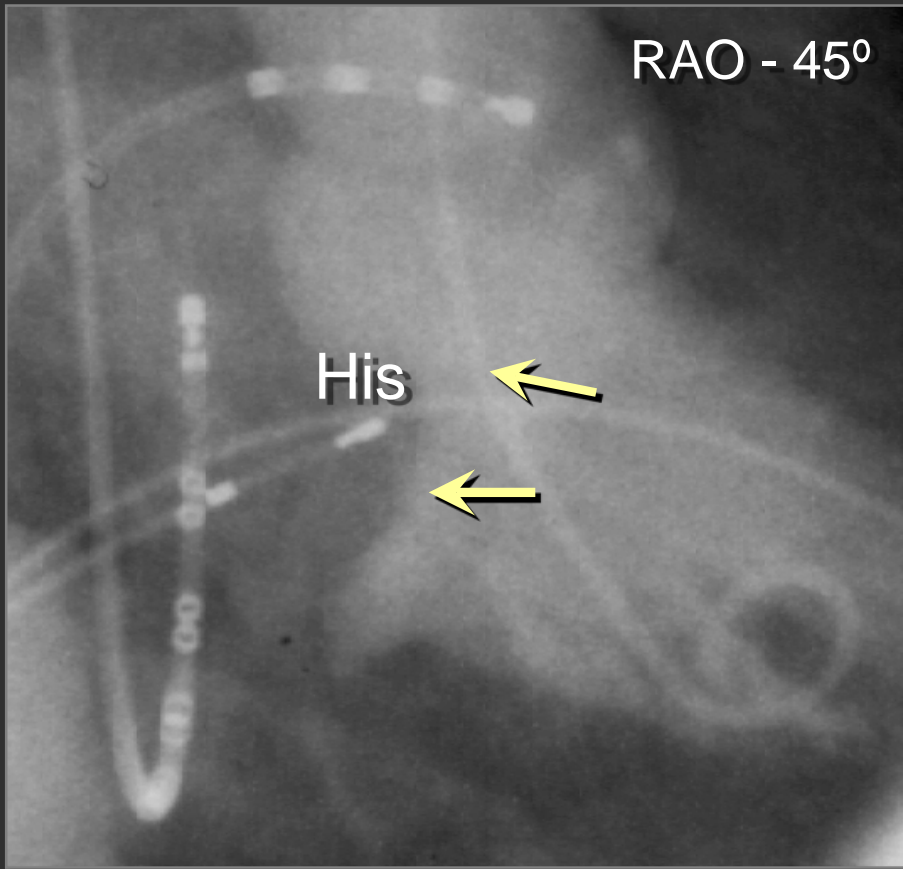
Nat. Rev. Cardiol. doi:10.1038/nrcardio.2012.58



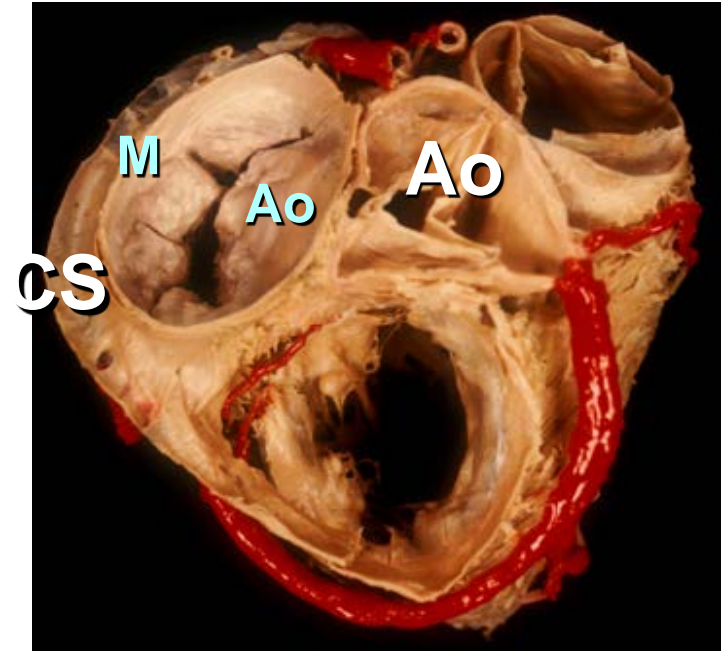
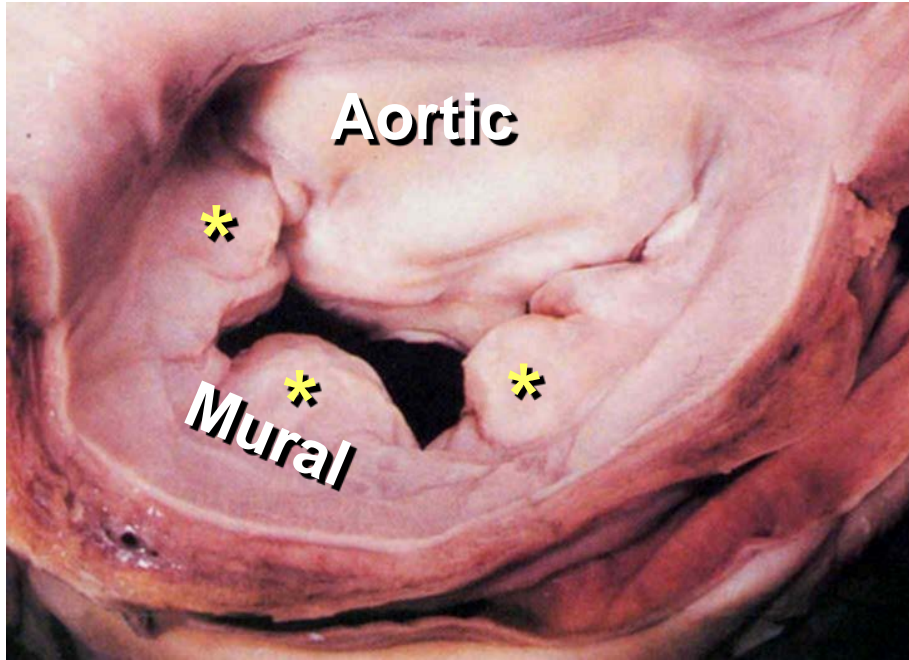




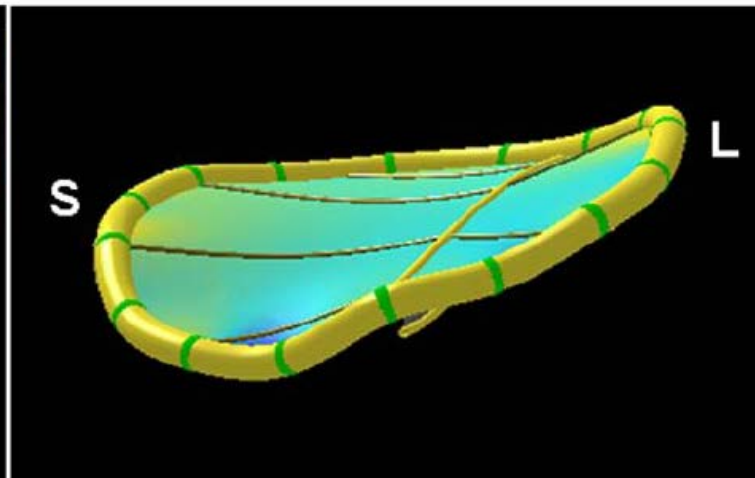
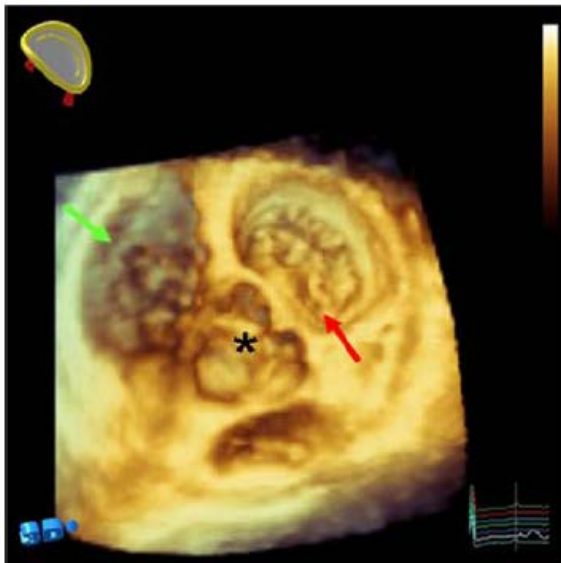
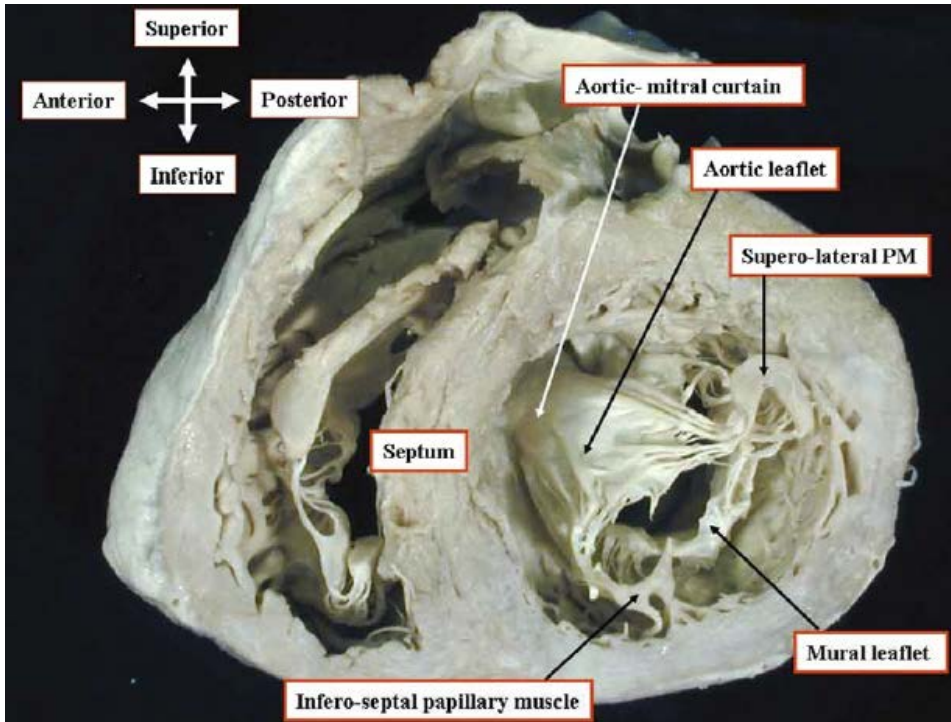
The mitral valve



Mitral valve



The plane of the Mitral Valve



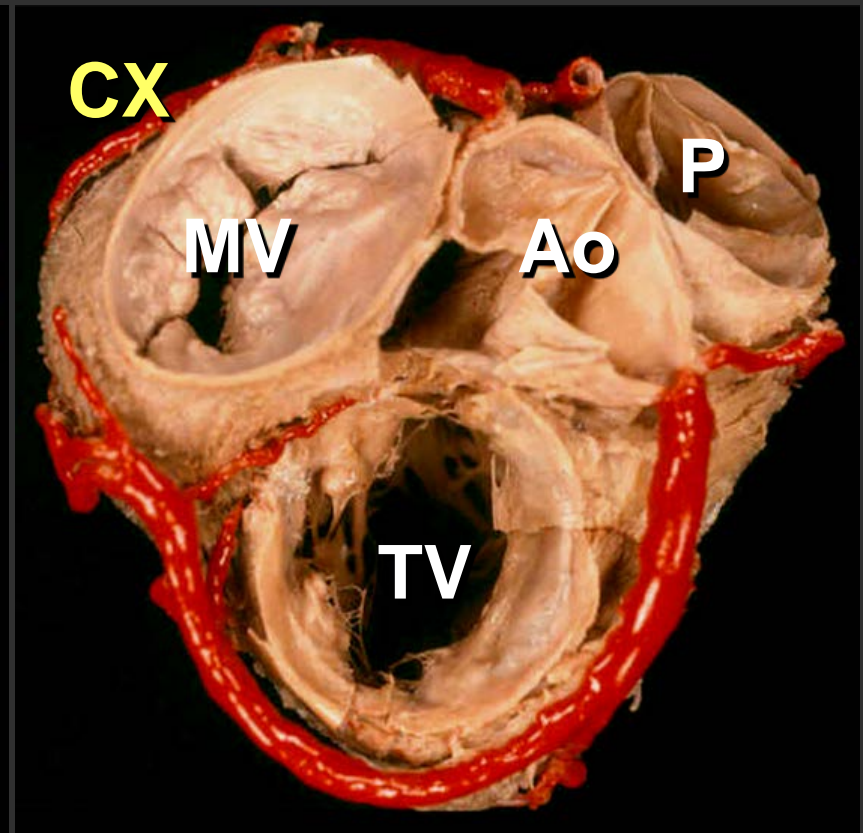
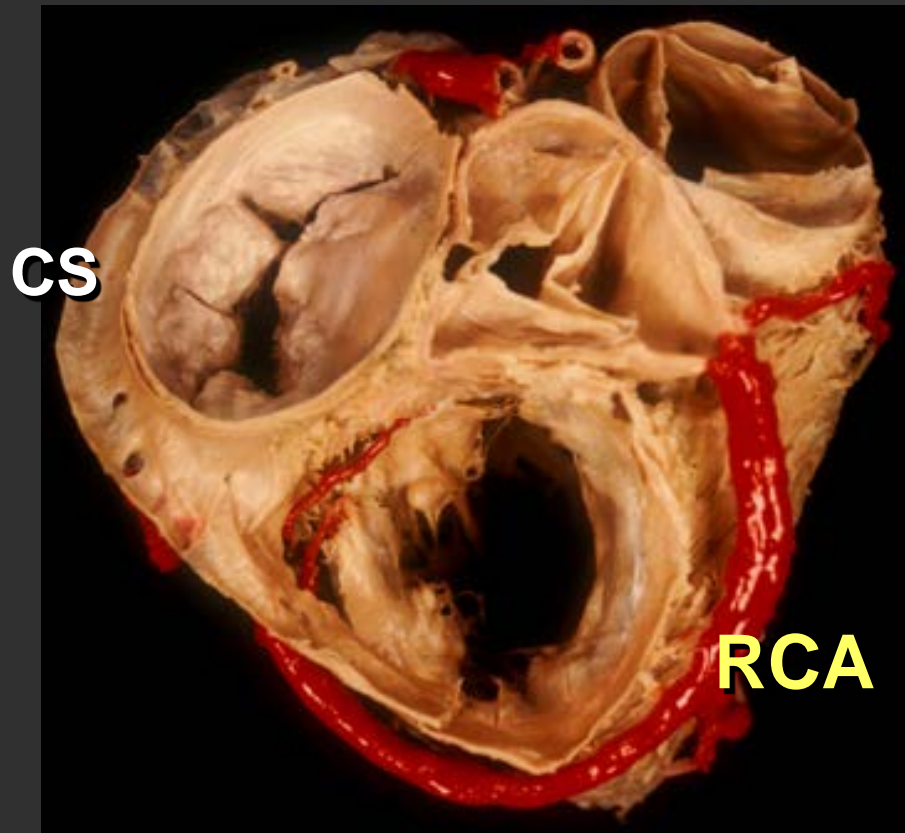
Mitral annulus



Percutaneous treatment for mitral valve

Mitral annulus

Coronary sinus / coronary artery



**Myocardium
of the CS**

10 mm

**Epicardial
fat**

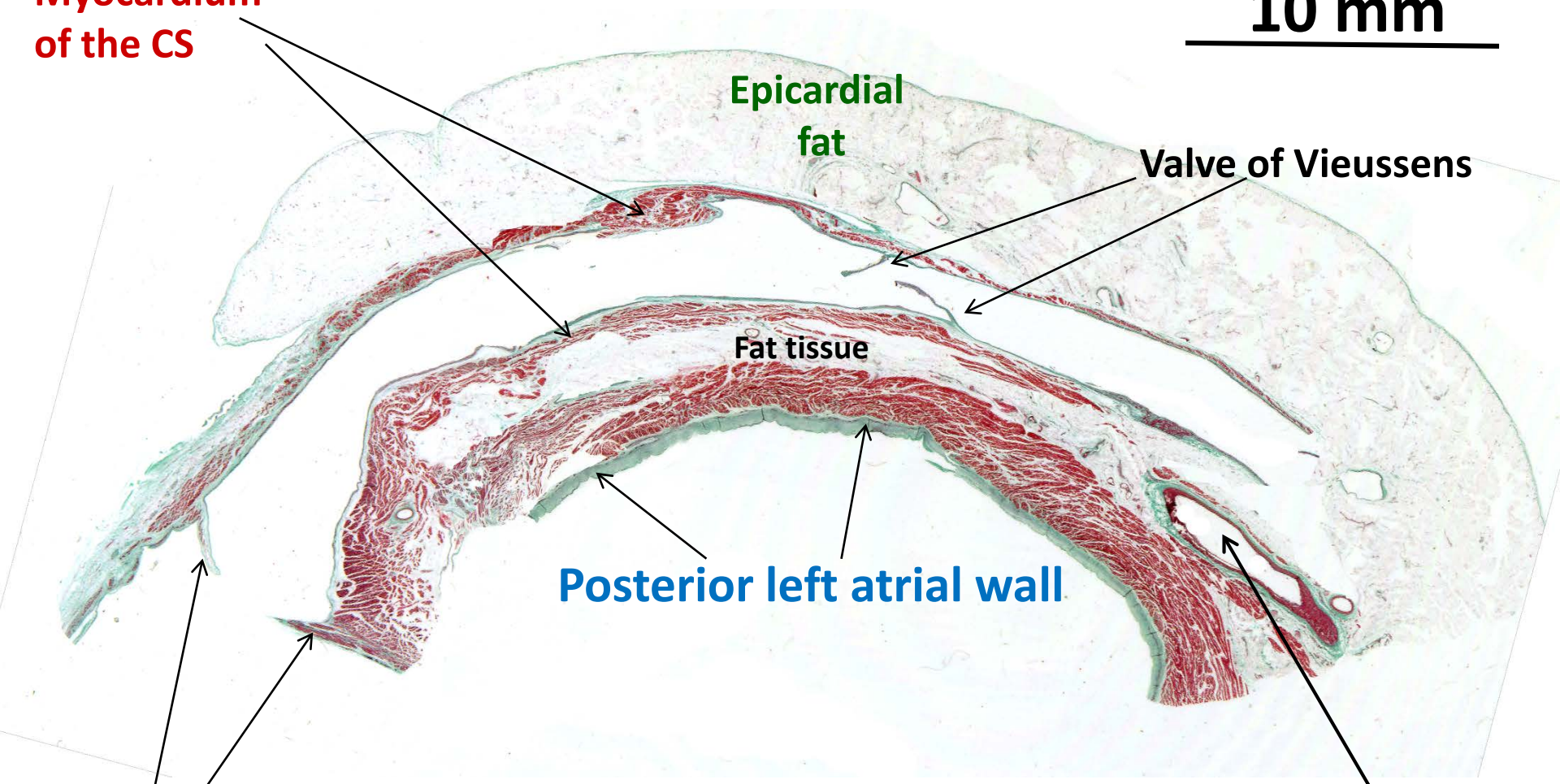
Valve of Vieussens

Fat tissue

Posterior left atrial wall

Thebesian valve

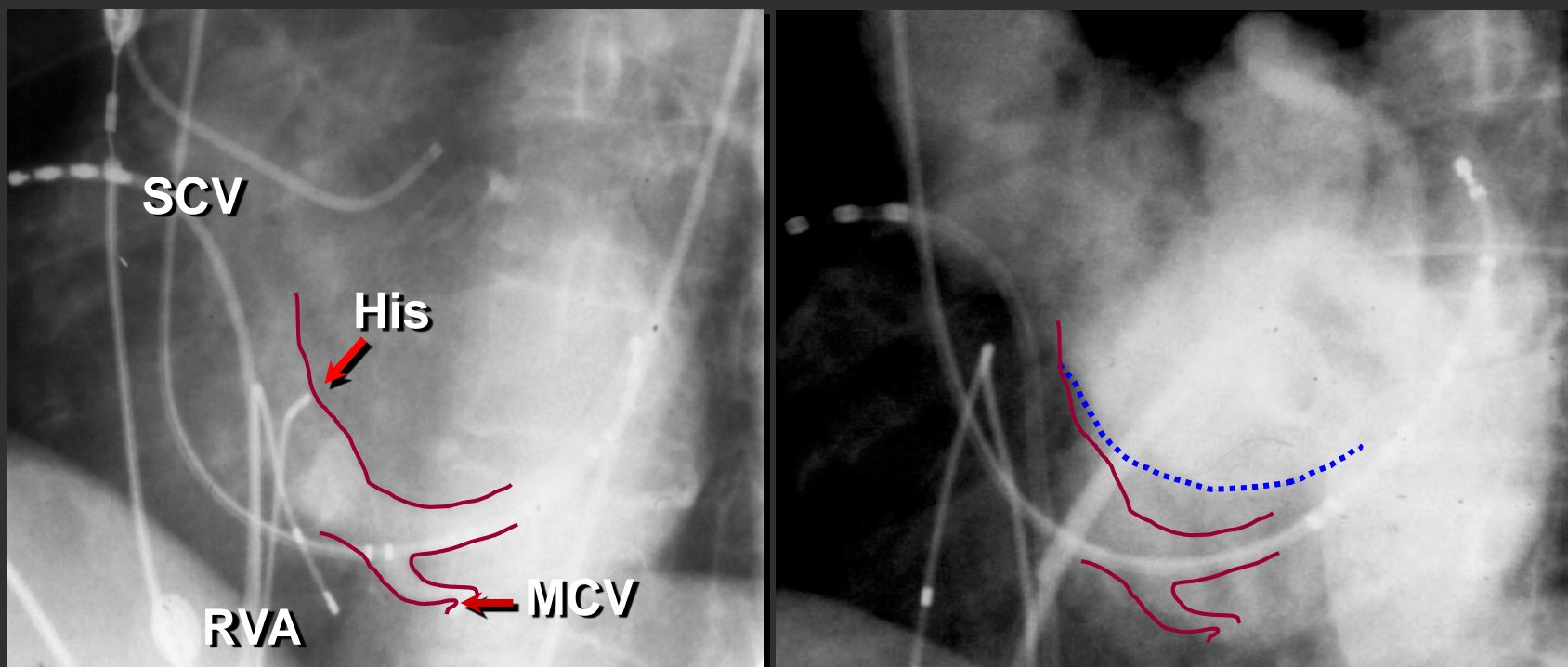
**Circumflex
artery**





Percutaneous treatment for mitral valve

Mitral annulus & coronary sinus

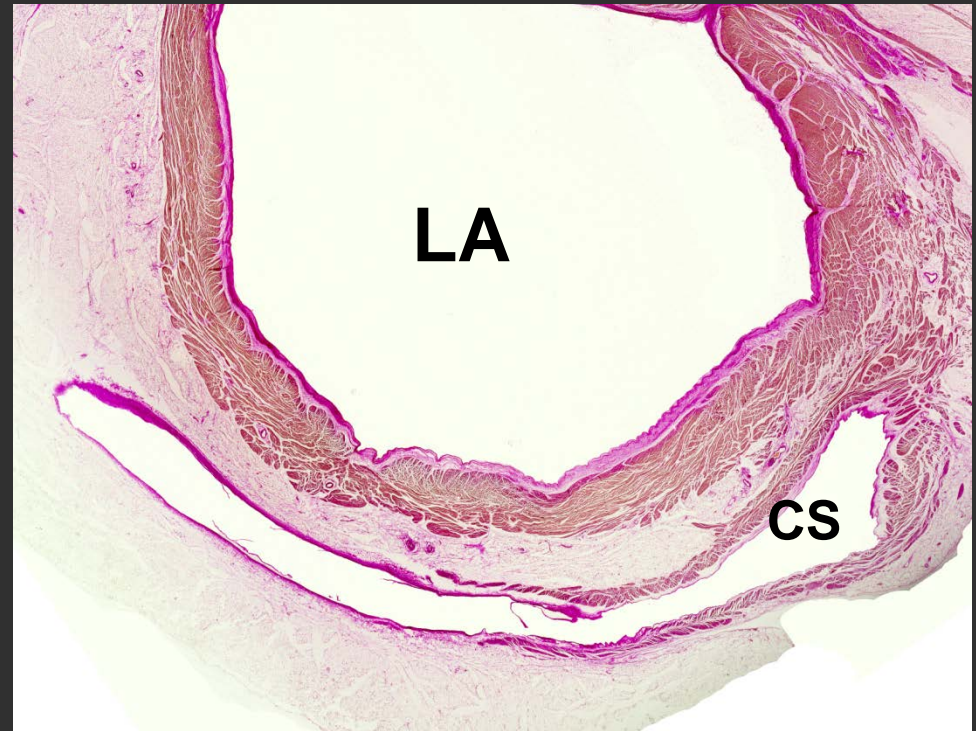
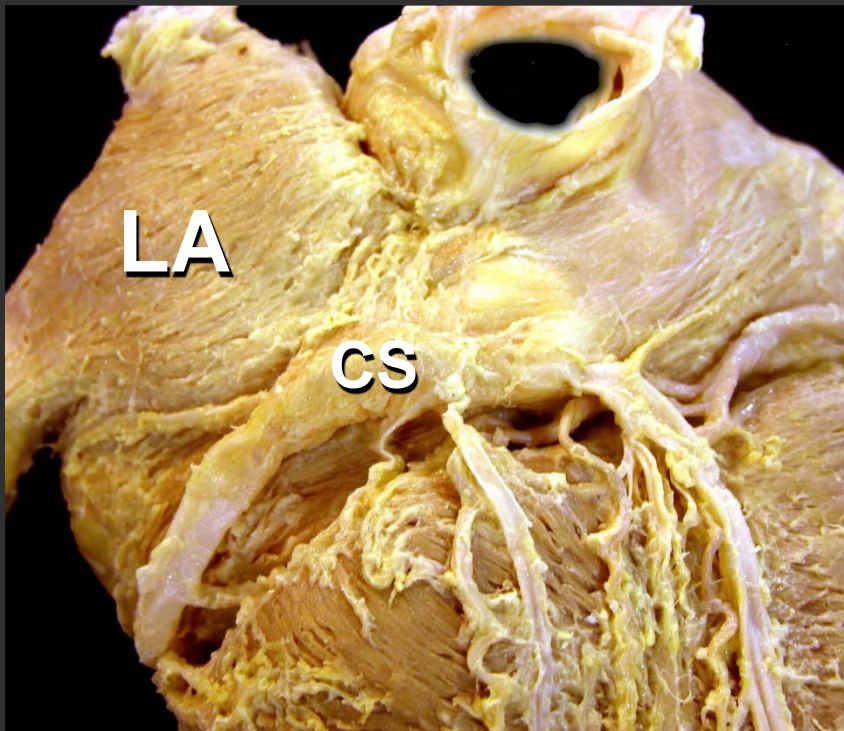


Variable distance along the mitral annulus



Percutaneous treatment for mitral valve

Mitral annulus & coronary sinus



Variable distance along the mitral annulus

Percutaneous treatment of valvular heart disease

Anatomical bases

Thank you for your attention

