Anatomy and Conduction System of Atrioventricular Septal Defects

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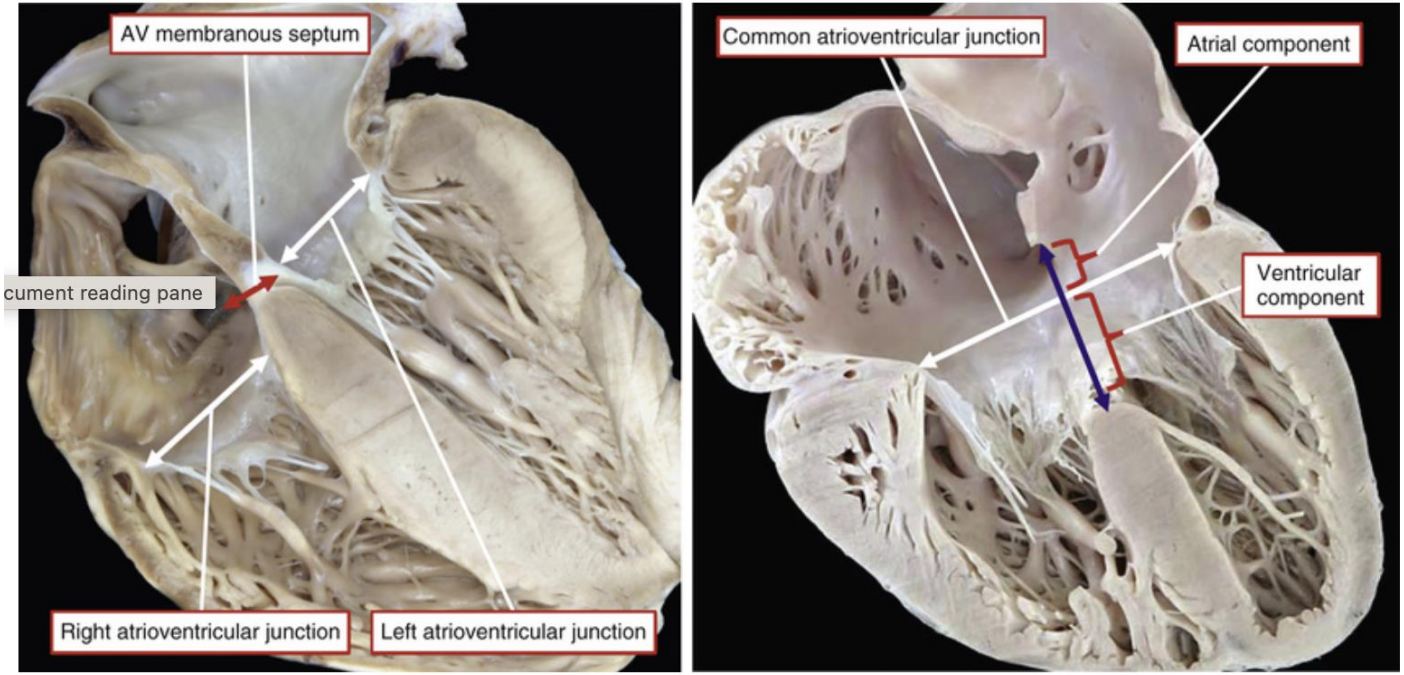
COI

- Nothing to disclose

Question

- Can you tell the difference between the “cleft” and the “commissure”?

Common Atrioventricular Junction



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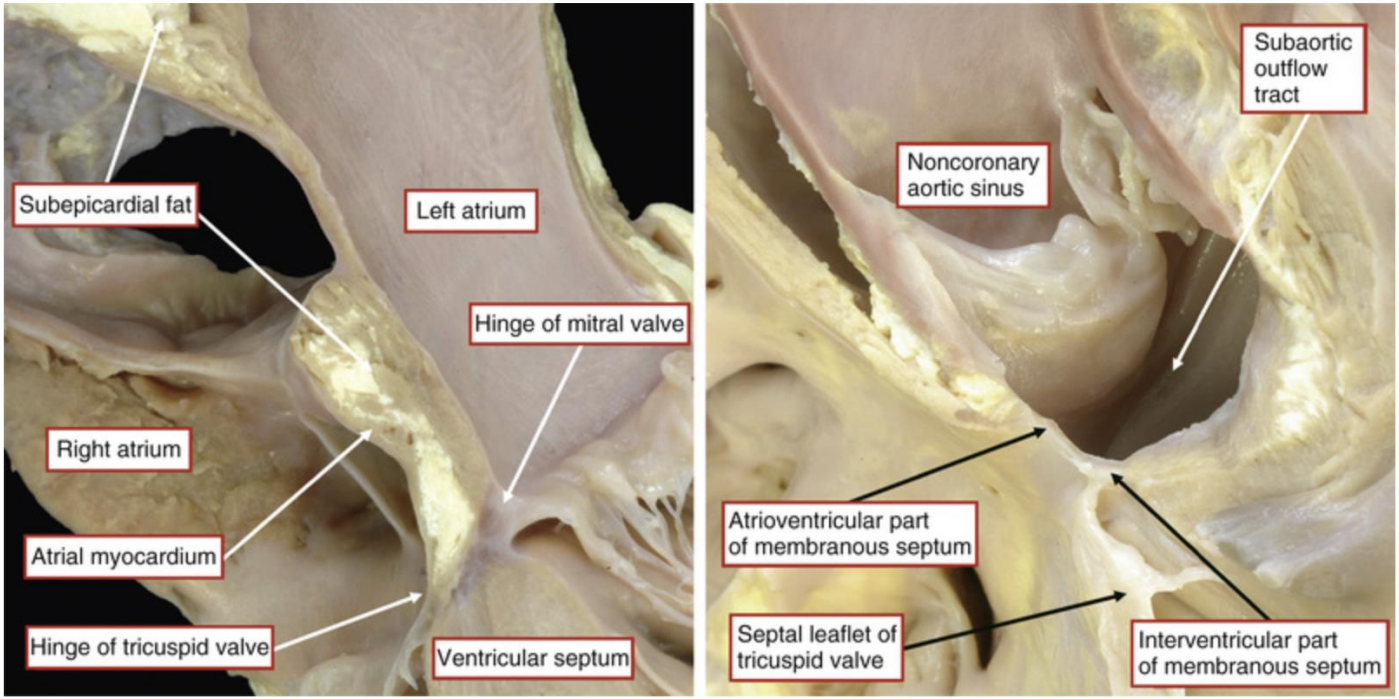
Difference between anterior and posterior component



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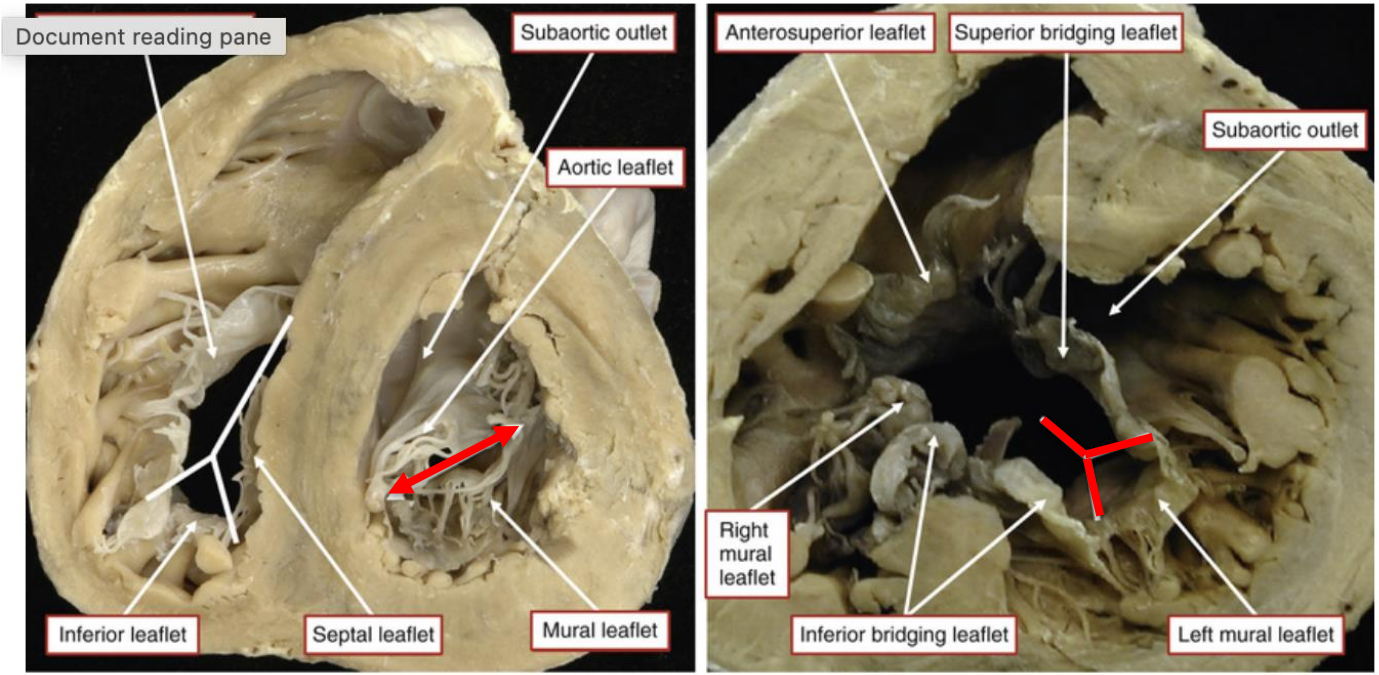
Left AV valve in short-axis



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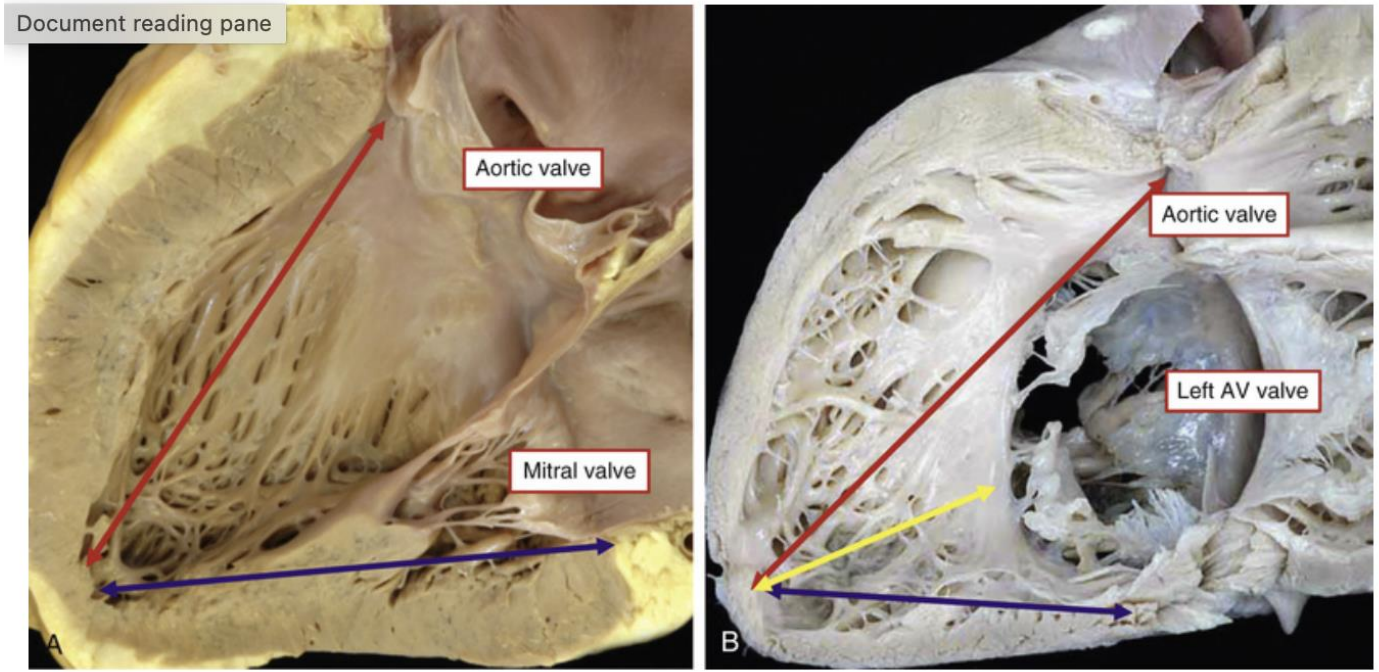
Long-axis view of LV inlet and outlet



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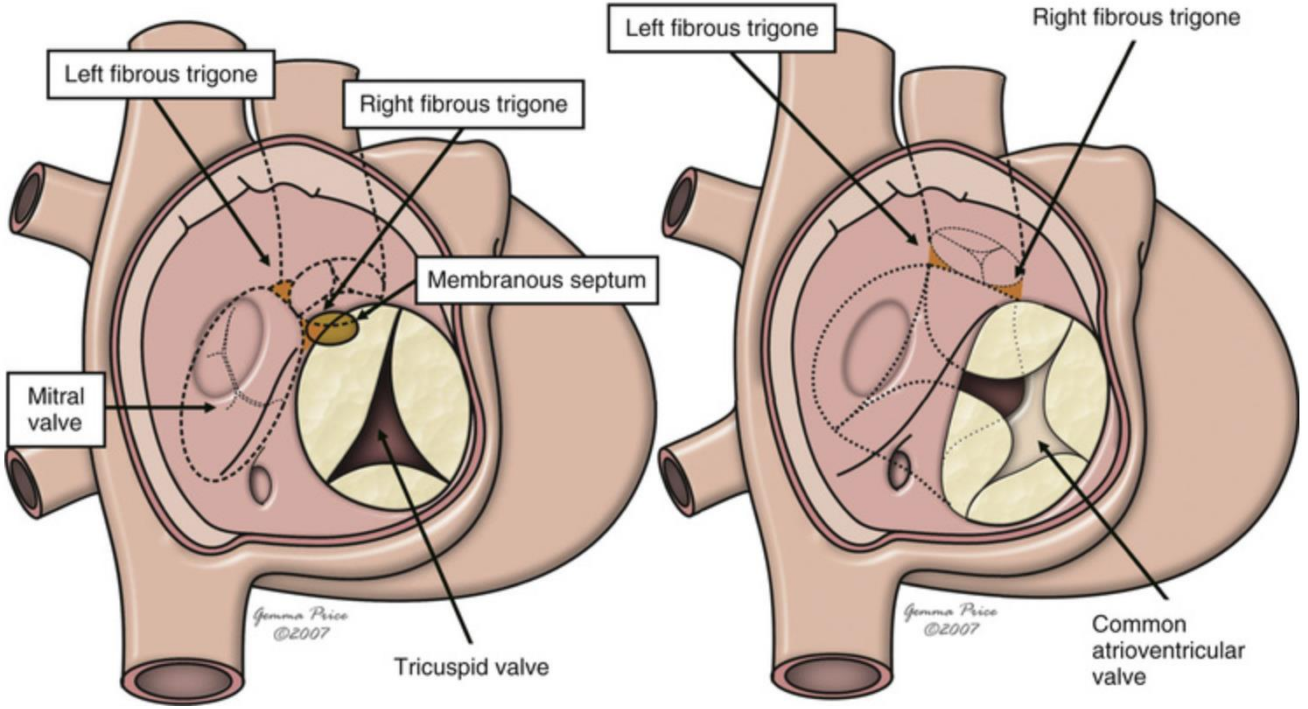
Arrangement of fibrous skelton



Normal

AVSD

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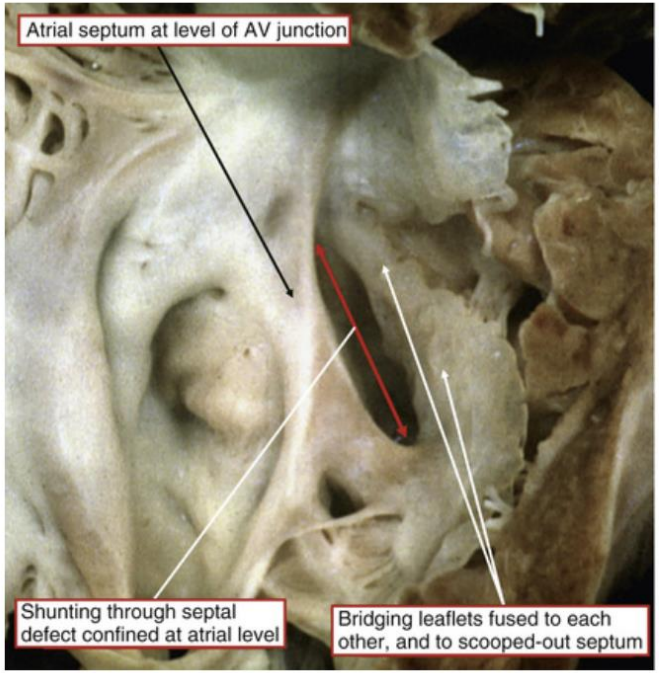
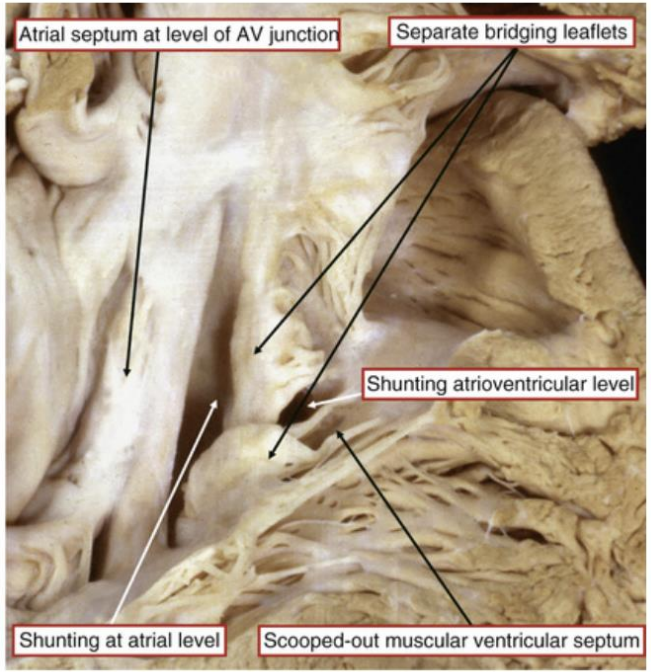
Junction architecture



Separate orifice



Common orifice

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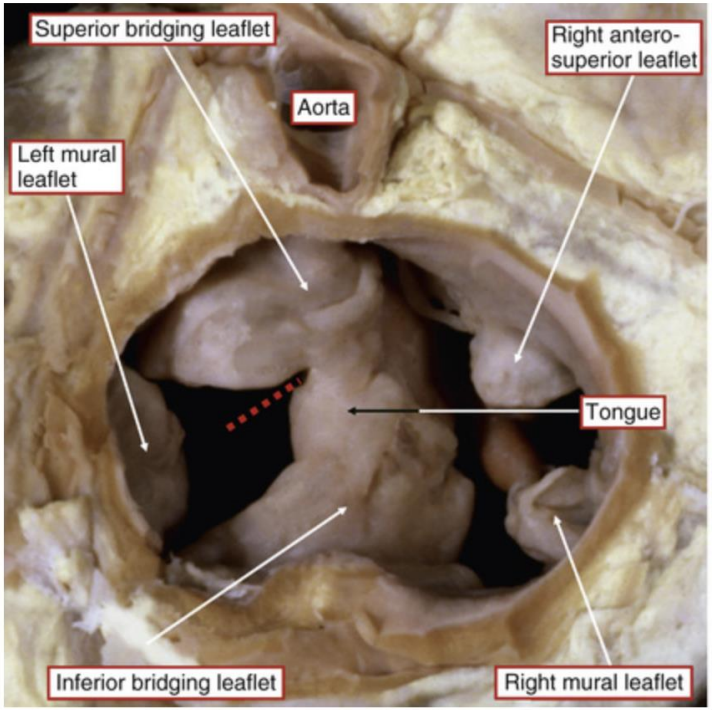
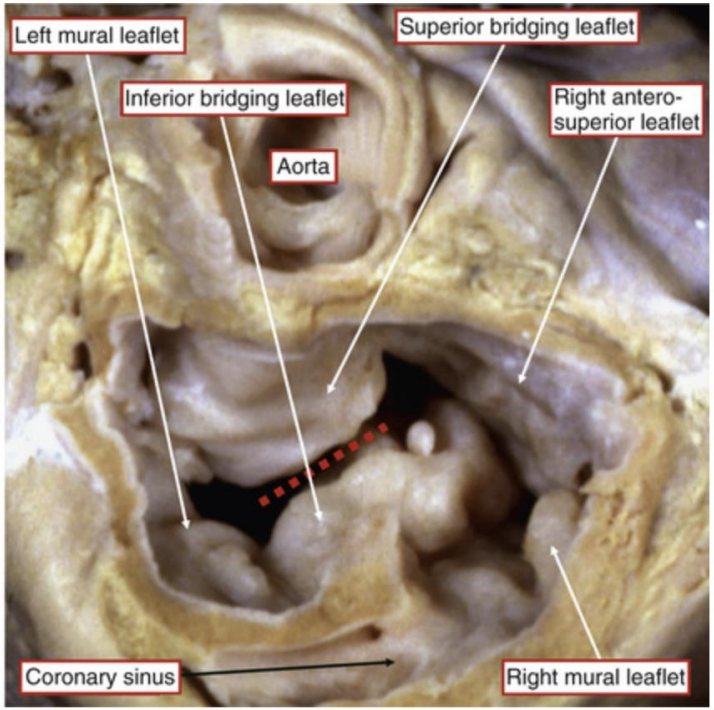
Junction architecture (short-axis)



Separate orifice



Common orifice

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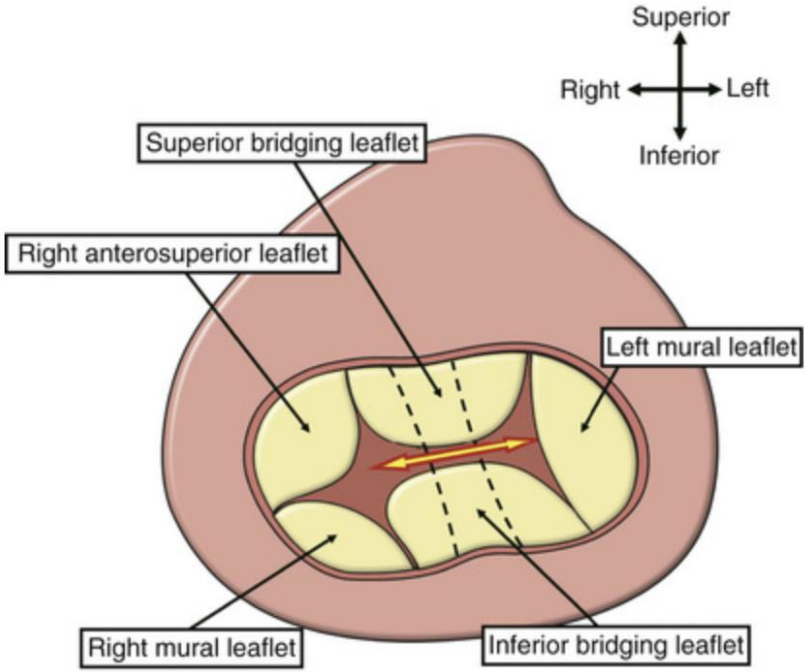
Arrangement of the leaflets



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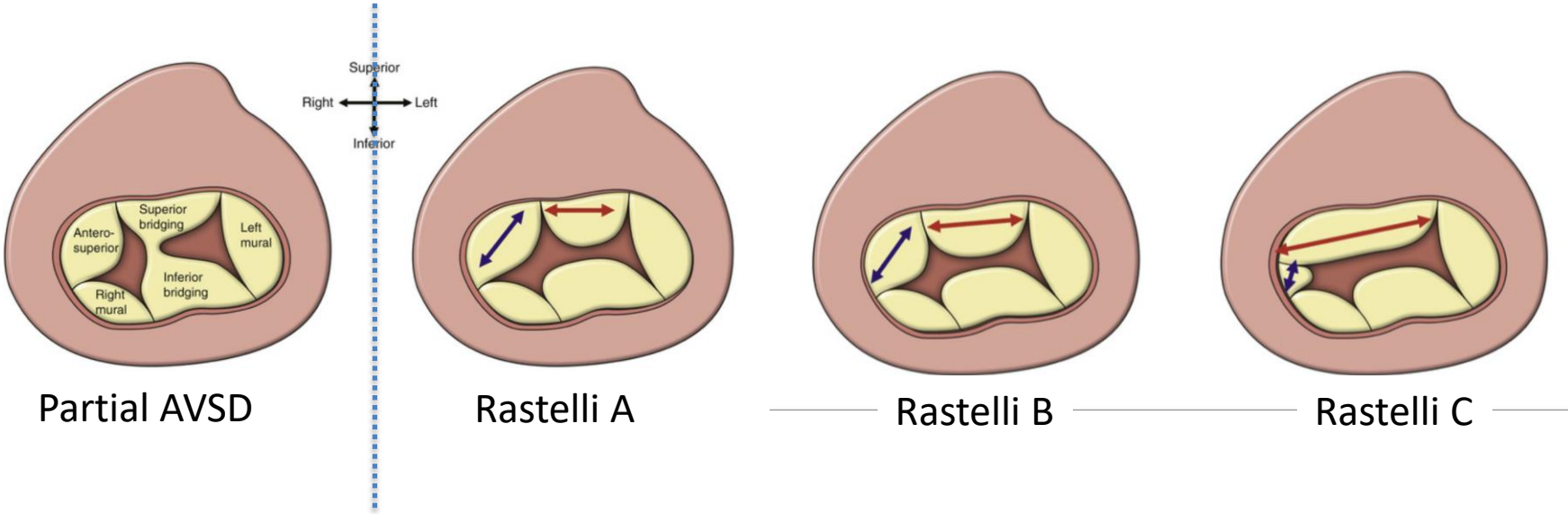
Variety of the valve leaflets



Partial AVSD

Rastelli A

Rastelli B

Rastelli C

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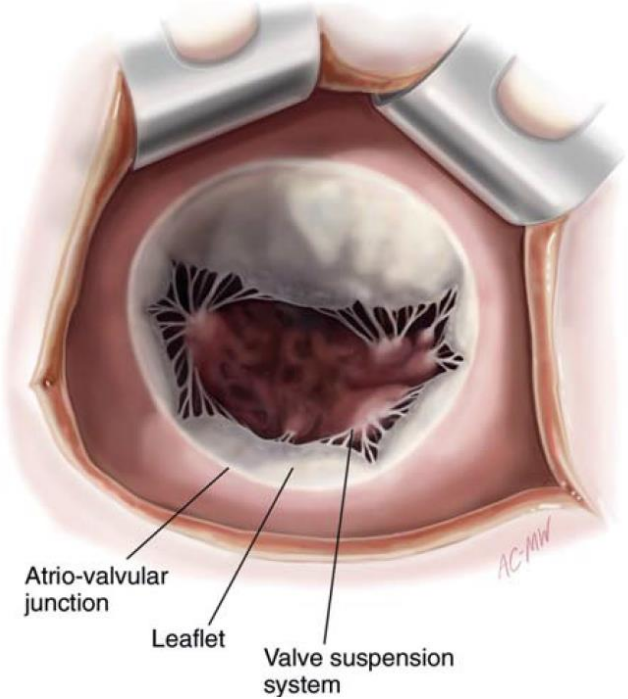
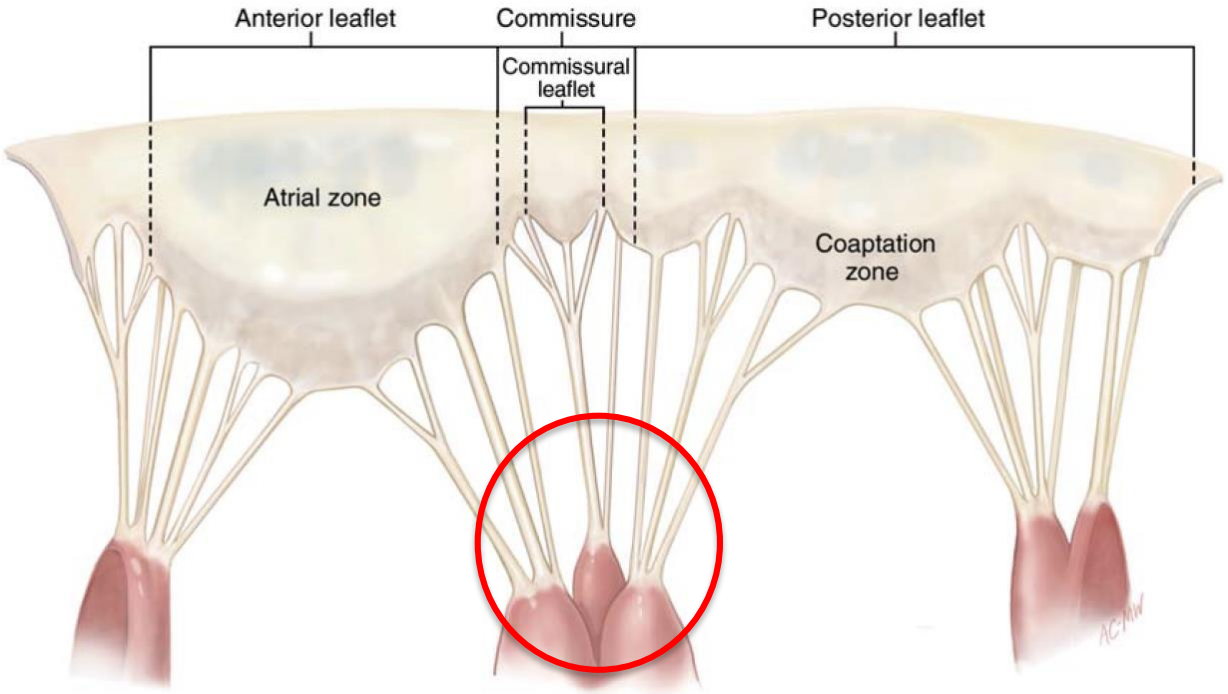
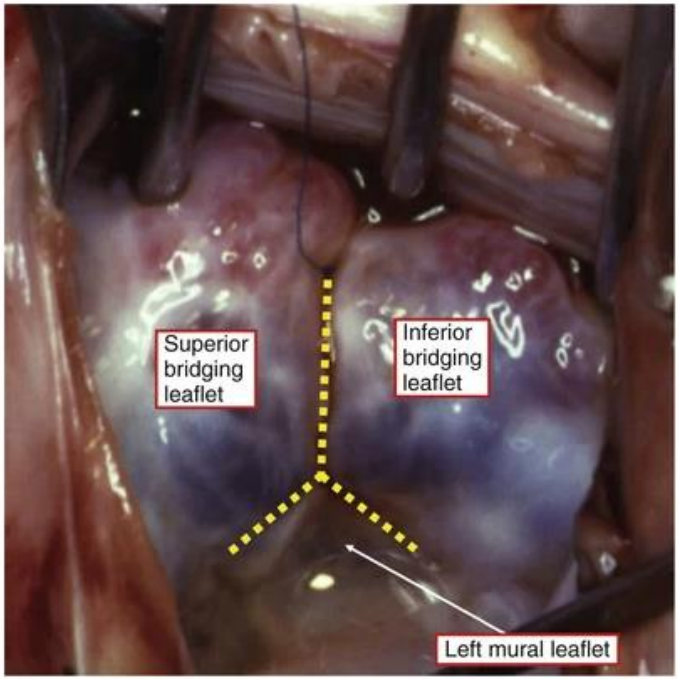
Normal mitral valve and papillary muscles

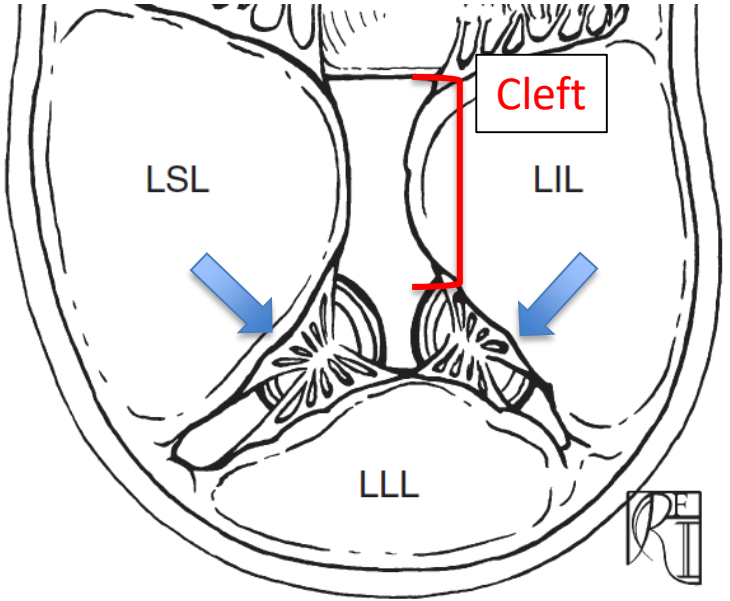


Commissure and papillary muscle



Left atrioventricular valve





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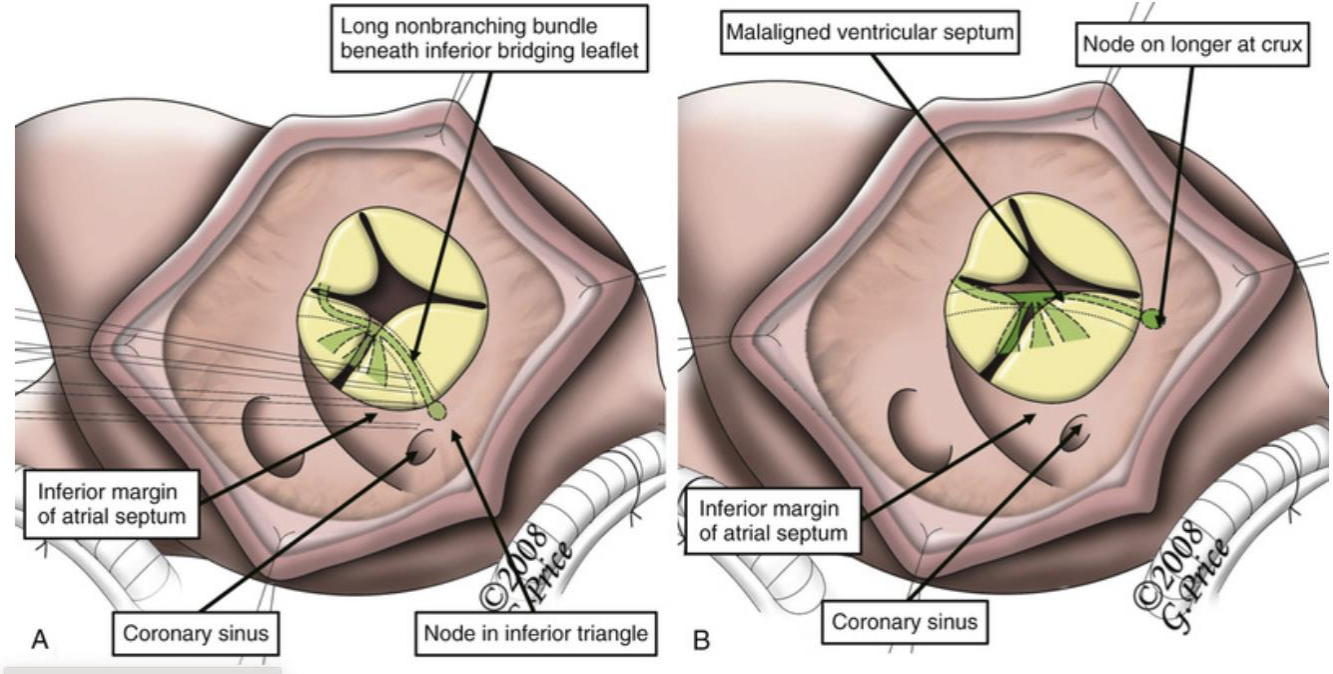
Conduction system in AVSD



Aligned AV septum

Rightward malaligned AV septum

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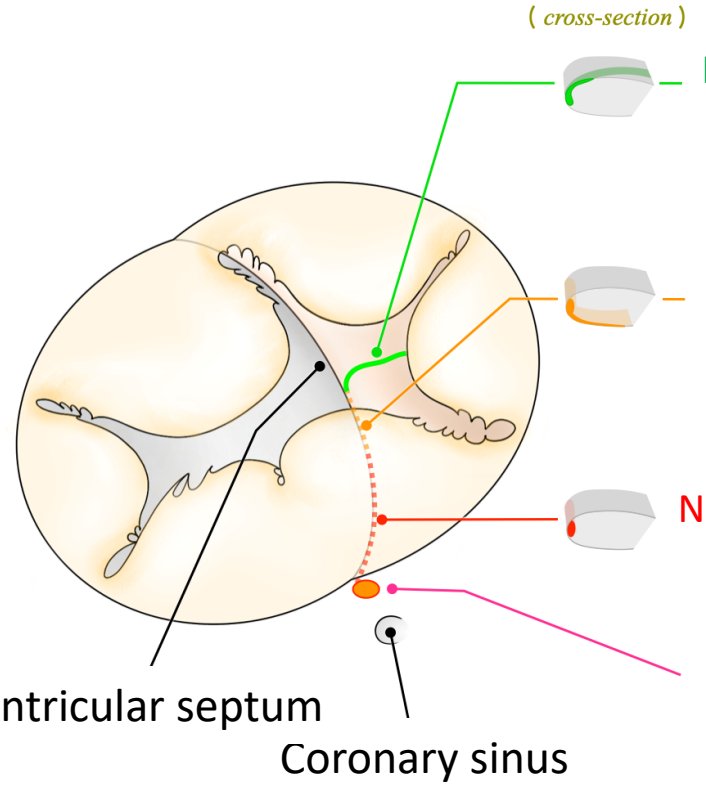
Important anatomy of conduction system



Right bundle branch (RBB)

RBB runs in the trabecular septomarginalis from subendocardial portion at approximately the center of the superior border of the ventricular septum toward the apex.

Branching bundle (BB)

BB runs subendocardially on the ridge line of the ventricular septum
left bundle bundle (LBB) branches broadly to the left ventricular subendocardium.

Non-penetrating , non-branching bundle (NPNBB)

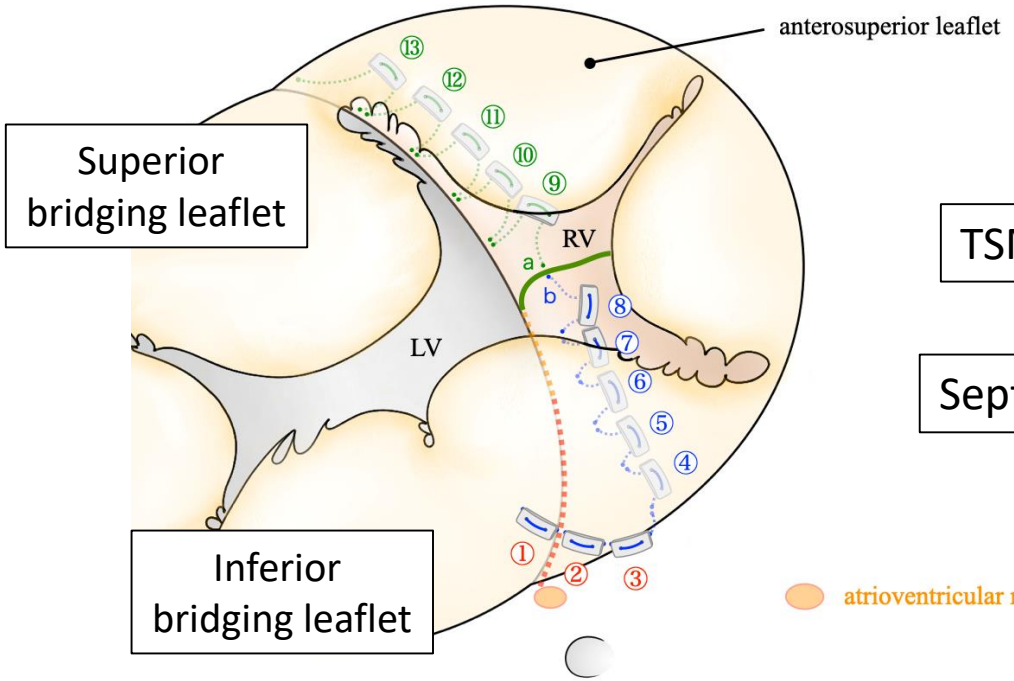
NPNBB runs long subendocardially at the ridge line of the ventricular septum without branching LBB.

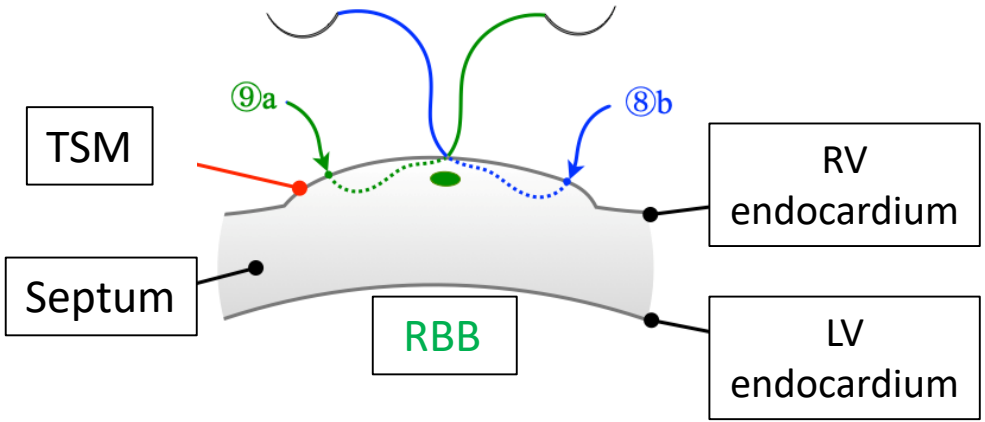
AV node

Deviated posteriorly, located at the junction of the posterior inferior margin of the ventricular septum and the atrioventricular valve ring.

Yamagishi, Surgical treatment for congenital heart diseases

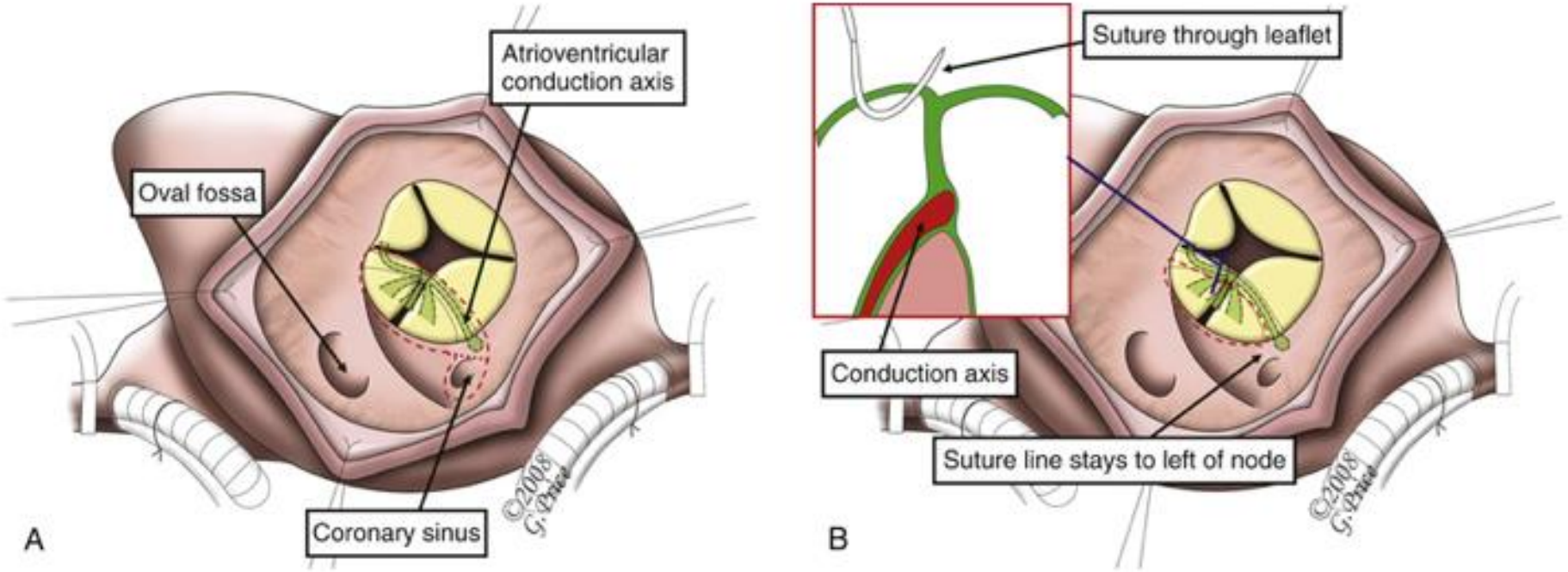
Avoid RBB block in VSD closure





Yamagishi, Surgical treatment for congenital heart diseases

Avoidance of AV block in ASD closure



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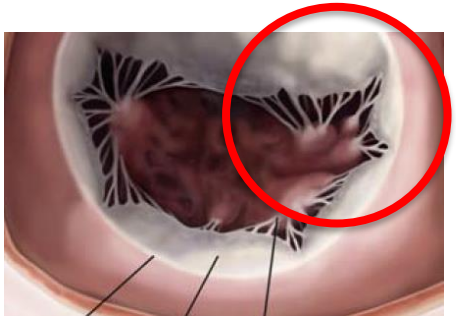
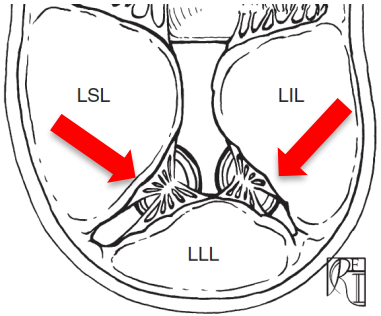
Answer

- Can you tell the difference between the “cleft” and the “commissure”?

Chords of the commissure go to the same papillary muscle.

Chords of the cleft goes to the different papillary muscle.





Thank you for your attention!