

MYOCARDIAL DISEASE, CARDIOMYOPATHYModerators: *B. Khandheria, S. Little*

2:00 PM	Hypertrophic Cardiomyopathy: State-of-the-Art 2018 <i>B. Khandheria</i>
2:20 PM	Variants of Hypertrophic Cardiomyopathy: Lateral Wall, Hypertrophy Papillary Muscle, Mid Ventricular <i>S. Lester</i>
2:40 PM	Case Studies: Thick Walls, Is this Hypertrophic Cardiomyopathy? <i>M. Umland</i>
3:00 PM	Case Studies: Athlete's Heart <i>R. Lang</i>
3:20 PM	Case Studies in Systemic Illness and the Heart: Sarcoid, Hemachromatosis, Hypereosinophilia <i>M. Saric</i>
3:40 PM	Right Ventricular Dysplasia, Right Ventricular Hypertrophy Due To Pulmonary Hypertension <i>S. Little</i>
4:00 PM	Common Adult Congenital Heart Disease: Atrial Septal Defect, Ventricular Septal Defect, Ebstein <i>M. Saric</i>
4:30 PM	Question and Answer

31st Annual State of the Art Echocardiography | San Diego, CA

February 19, 2018 | 4:00 – 4:30 PM | 30 min

ASD, VSD, Ebstein Anomaly

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 Associate Professor of Medicine



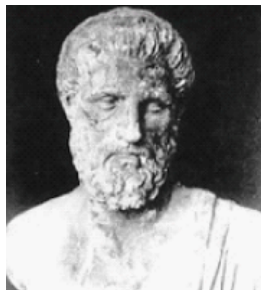
Disclosures

Speakers Bureau (Philips, Medtronic)
Advisory Board (Siemens)

Ebstein Anomaly

Anatomy of Normal Tricuspid Valve

Tricuspid valve has been described and named more than 2,000 years ago!



Erasistratus | Έρασίστρατος
(304 BC – 250 BC)
Greek physician from Alexandria

- The tricuspid valve was discovered, described, and named by Erasistratus.
- Tricuspid, in Greek, is **trigloch**in - **τριγλώχιν**
- The meaning of **gloch**in – **γλώχιν** was any projecting point, such as the end of a yoke strap or the barb of an arrow.
- The Greek glochin was translated into Latin as **cuspis**, meaning a point, especially of a spear. (*Chest.* 1983 Oct;84(4):462-8).

He was the first to establish that the heart is a pump, a concept unknown to Hippocrates (c. 460 BC – c. 370 BC).

He was also the first to describe heart valves (ὕμηνες | hymens).

Anatomic Specimen Drawing of Tricuspid Valve

Probably the first drawing of a dissected tricuspid valve was done by Leonardo da Vinci.



Leonardo da Vinci
(1452 – 1519)
Self-portrait c. 1512

Leonardo probably drew an **ox heart**.

Leonardo did **not** use the term 'tricuspid valve' as it has not been invented yet.

He referred to valves as '**heart sieves**'.



Drawn circa 1512-13
British Royal Collection



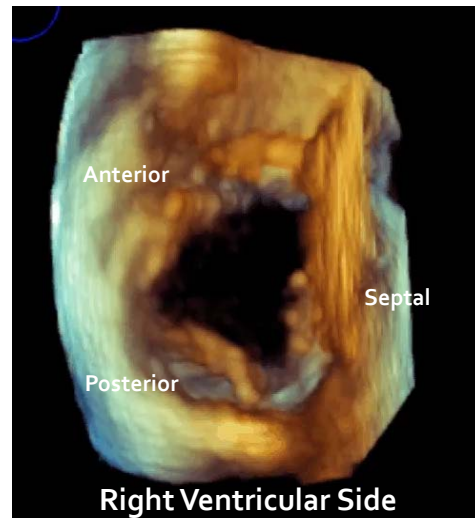
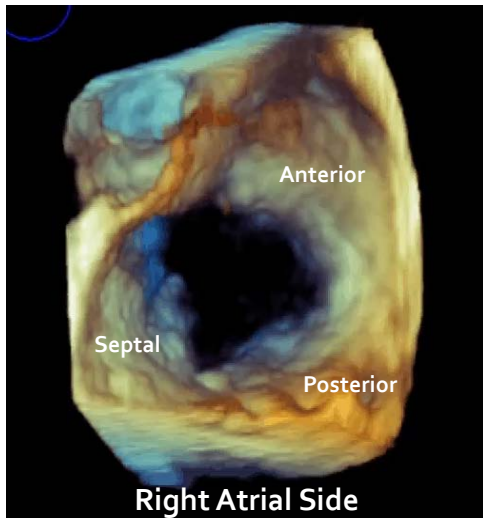
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Tricuspid Valve Videography

Intracardiac video recordings performed after the blood is replaced with a transparent, oxygen-carrying fluid.



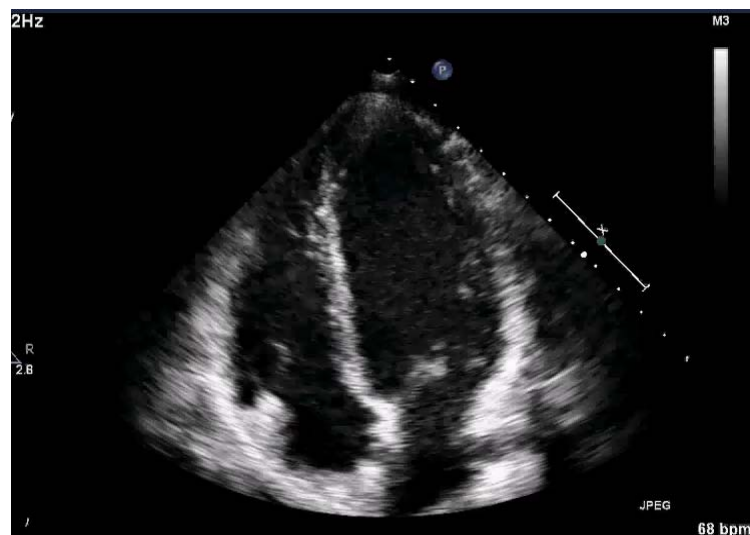
3D TEE: Tricuspid Valve



Apical 4-Chamber View: Normal TV

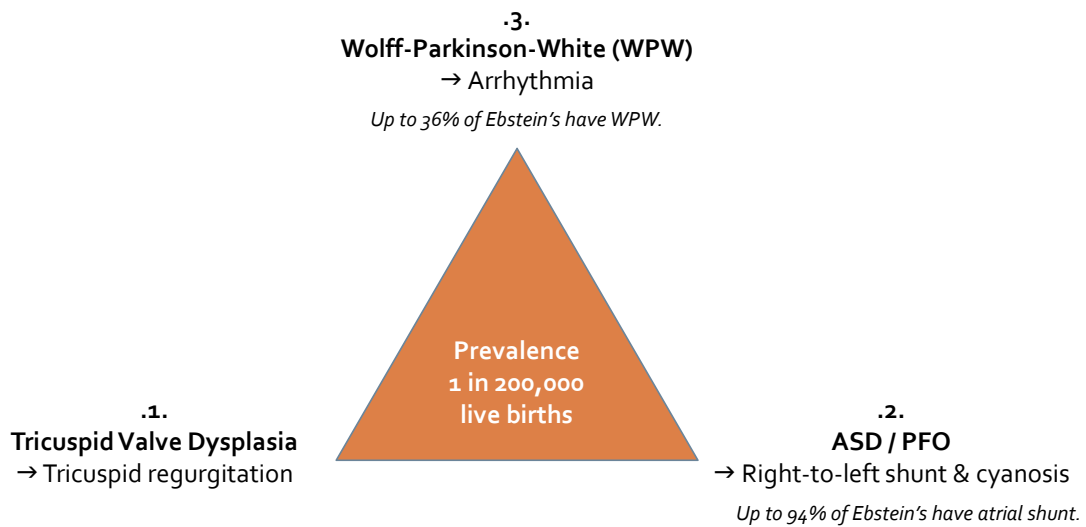
Tricuspid valve annulus is normally more apical than the mitral annulus...

... but not by much
($< 0.8 \text{ cm/m}^2$)

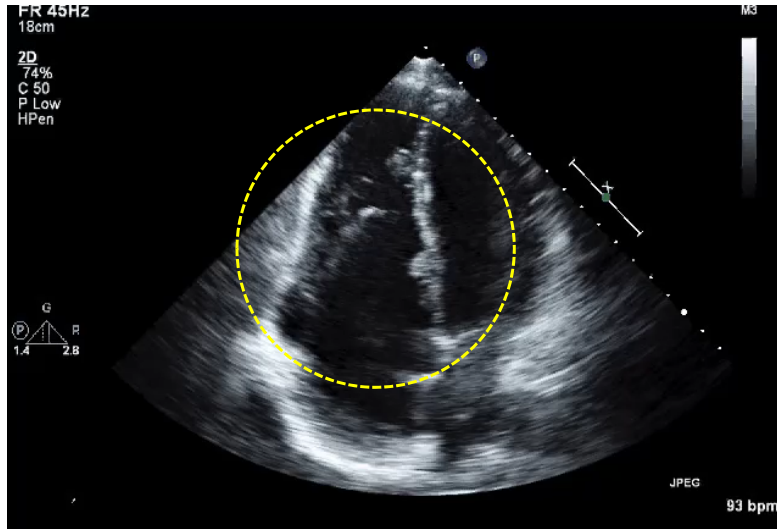


Ebstein Anomaly

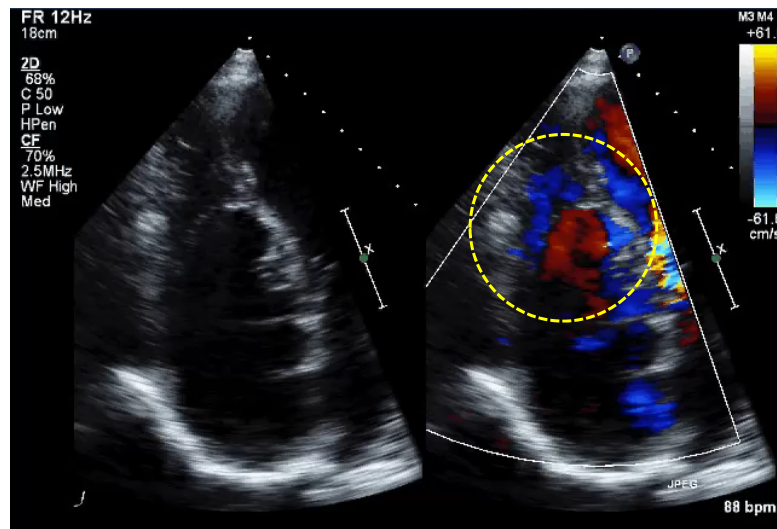
Ebstein Anomaly



Primary TR: Ebstein's Anomaly



Primary TR: Ebstein's Anomaly



Thank You!



New York University Langone Medical Center