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# **BIOSKILLS ONE**

# THE TRICUSPID AND MITRAL VALVE COMPARATIVE ANATOMY

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### **Disclosure Statement of Financial Interest**

I, Mark Reisman, MD, DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.

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- Anatomical Differences between the tricuspid and mitral valve
- Relational anatomy
- Pathology of mitral valve



## THE TRICUSPID AND MITRAL VALVE



## **RELATIONSHIP OF TV TO MV**



Non coronary Cusp of Aortic Valve

Septal leaflet Of tricuspid valve

- Coronary sinus

## **LEFT ATRIUM VS RIGHT ATRIUM**







### THE RIGHT ATRIUM



#### **UW** Medicine

Triangle of Koch

## THE LEFT ATRIUM

artery



## Ventricular relationship







### **UW** Medicine

#### Pulmonary valve

The mitral valve with the Aortic valve backlit



### RELATIONAL ANATOMY OF THE MITRAL VALVE





## MITRAL AND TRICUSPID LEAFLETS



# THE MTRAL LEAFLETS



### SEPARATION OF ANTERIOR AND SEPTAL LEAFLET OF THE TRICUSPID LEAFLET



Optimal location for mitraclip



### CHORDAL STRUCTURE OF THE TV AND MV



## **CHORDAE AND PAPILLARY MUSCLES**



CT more typical

#### PAPILLARY MUSCLES OF THE TRICUSPID AND MITRAL VALVES











### CHORDAL/LEAFLET ATTACHMENTS OF THE MITRAL VALVE



Similar insertions on the tricuspid valve

## PATHOLOGY



## **MITRAL ANNULAR CALCIFICATION**



#### Impact on several TMVR devices

### CHORDAL RUPTURE AND LEAFLET THICKENING OF THE MITRAL LEAFLET







## CONCLUSION

- Both valves are excellent targets for percutaneous therapy
- Both valves has unique set of challenges due to anatomy and relational anatomy
- I anticipate there will be percutaneous solutions to the majority of pathologies affecting both the tricuspid and mitral valve