



45TH
 45th Annual International Congress of the
EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt 2018

Basics of 3D-TEE “image acquisition & display”

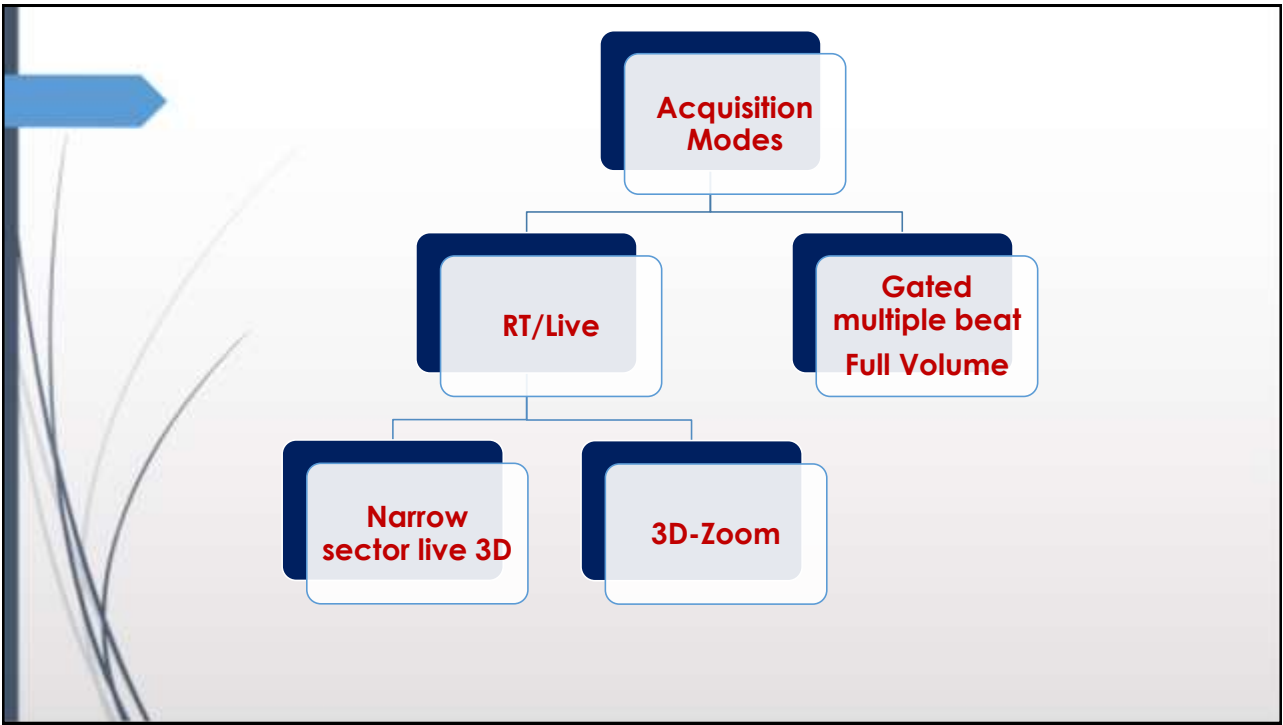
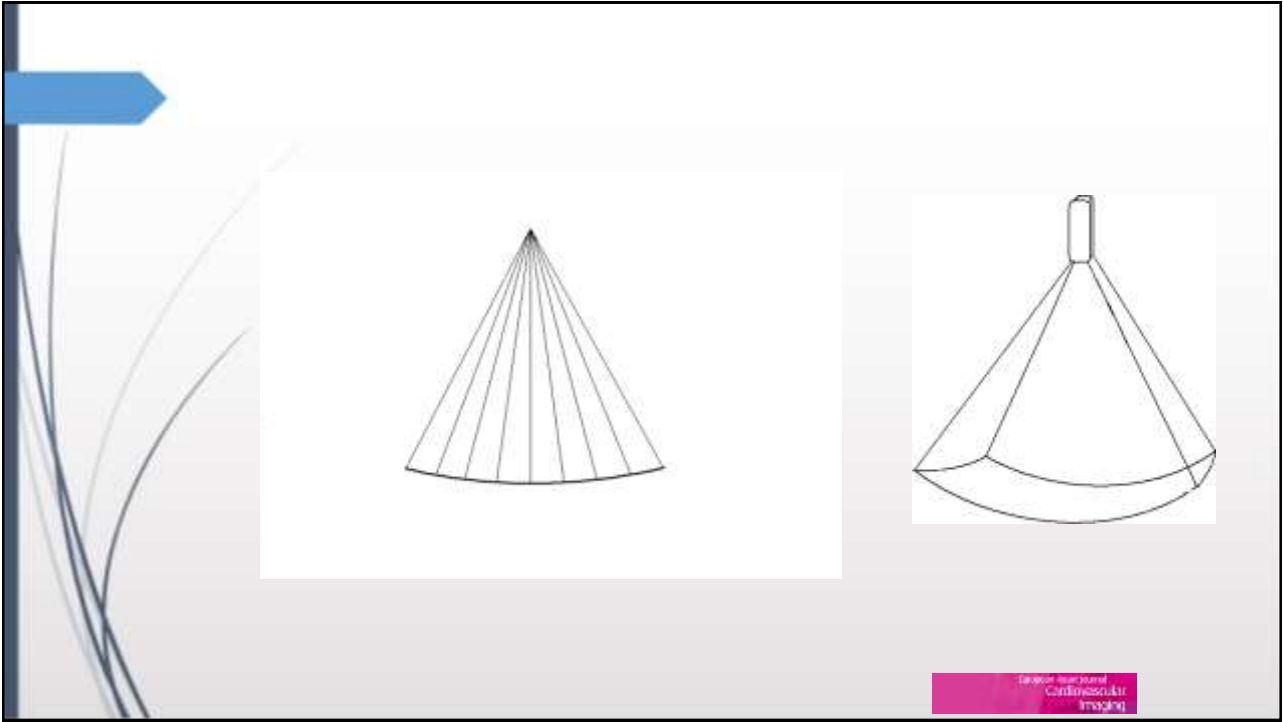
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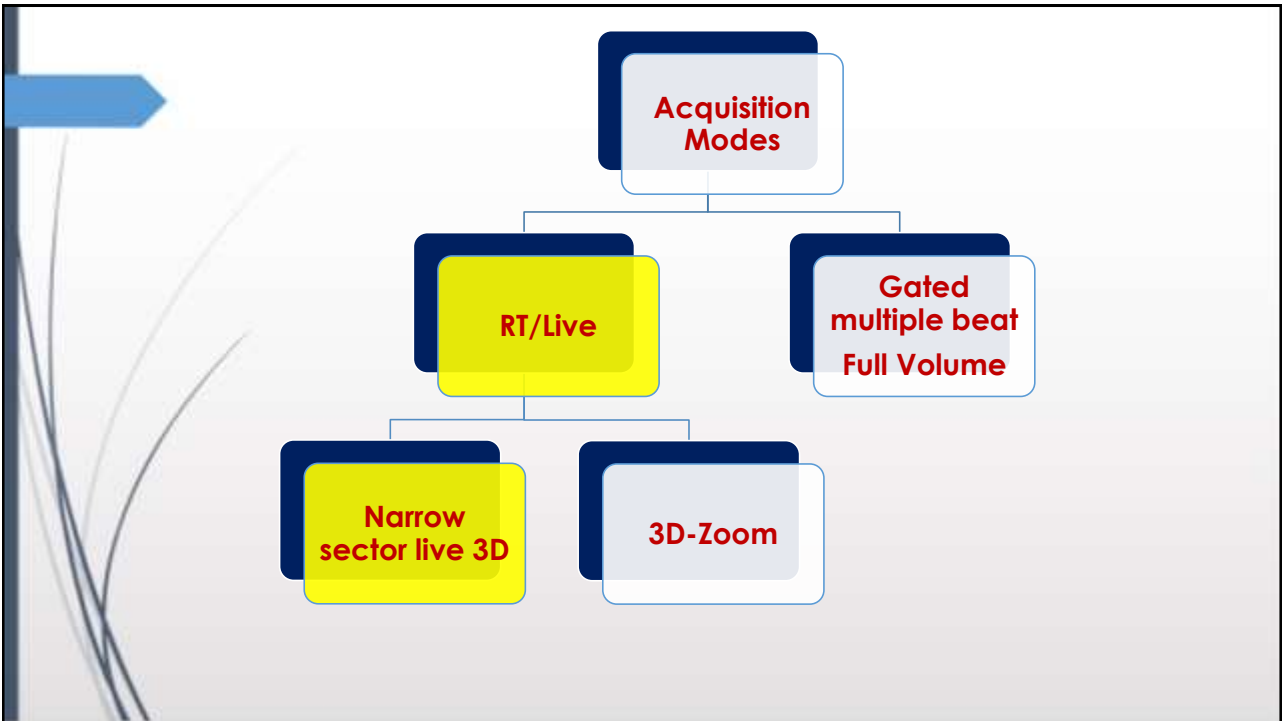
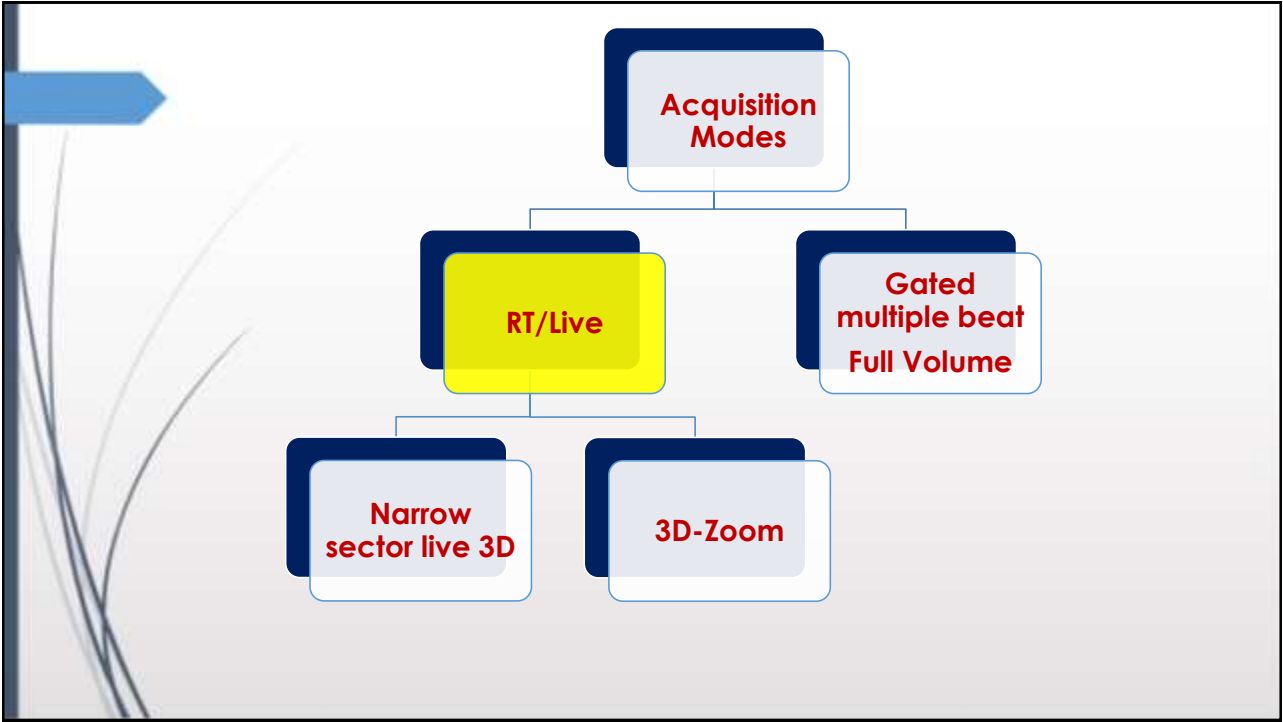



Introduction

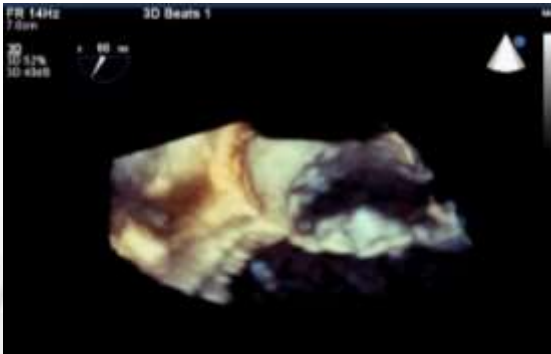
- ❑ fully sampled matrix-array transducers had made it possible for us to get excellent real-time imaging of the beating heart in three dimensions.
- ❑ There were significant technological developments in both hardware and software, including transducer design, microelectronic techniques, and computing.
- ❑ 3D-TEE matrix-array transducers are composed of nearly 3,000 piezoelectric elements with operating frequencies ranging from 5 to 7 MHz.







Narrow sector Live 3D mode



- ✓ Narrow sector (300 x 600 pyramidal volume)
- ✓ Live
- ✓ Reasonable frame rate
- ✓ No stitch artifacts

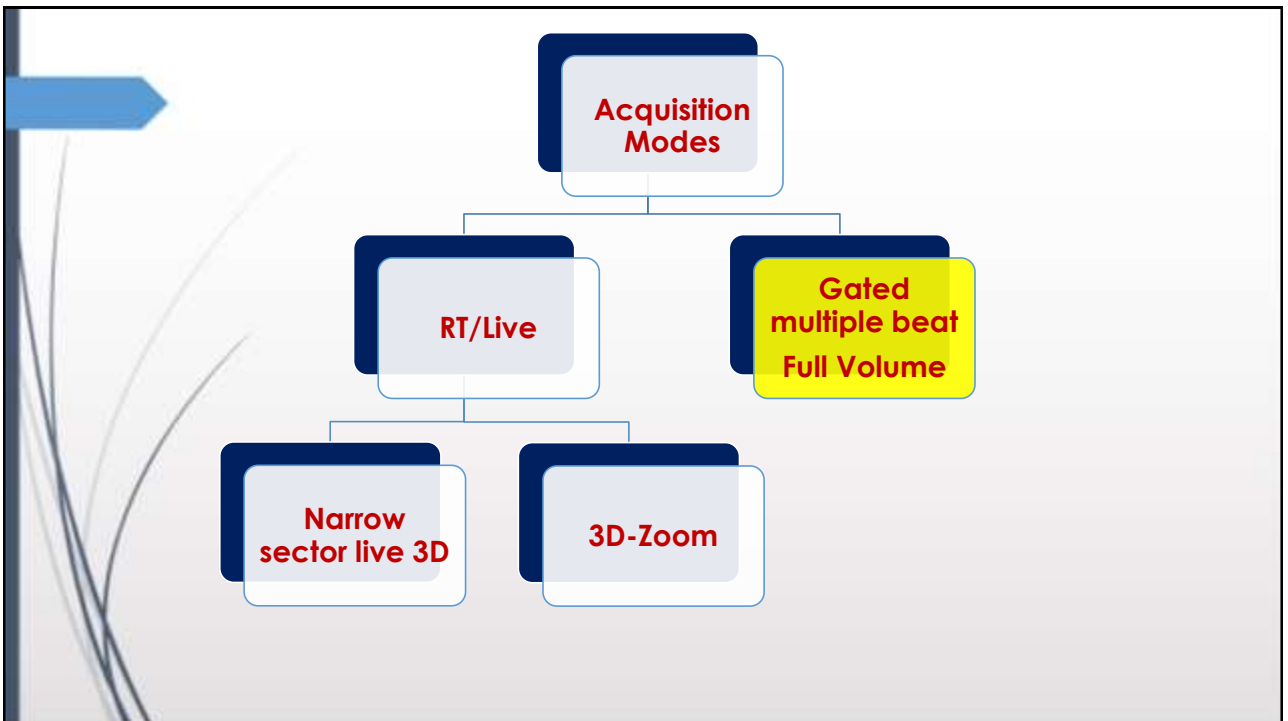
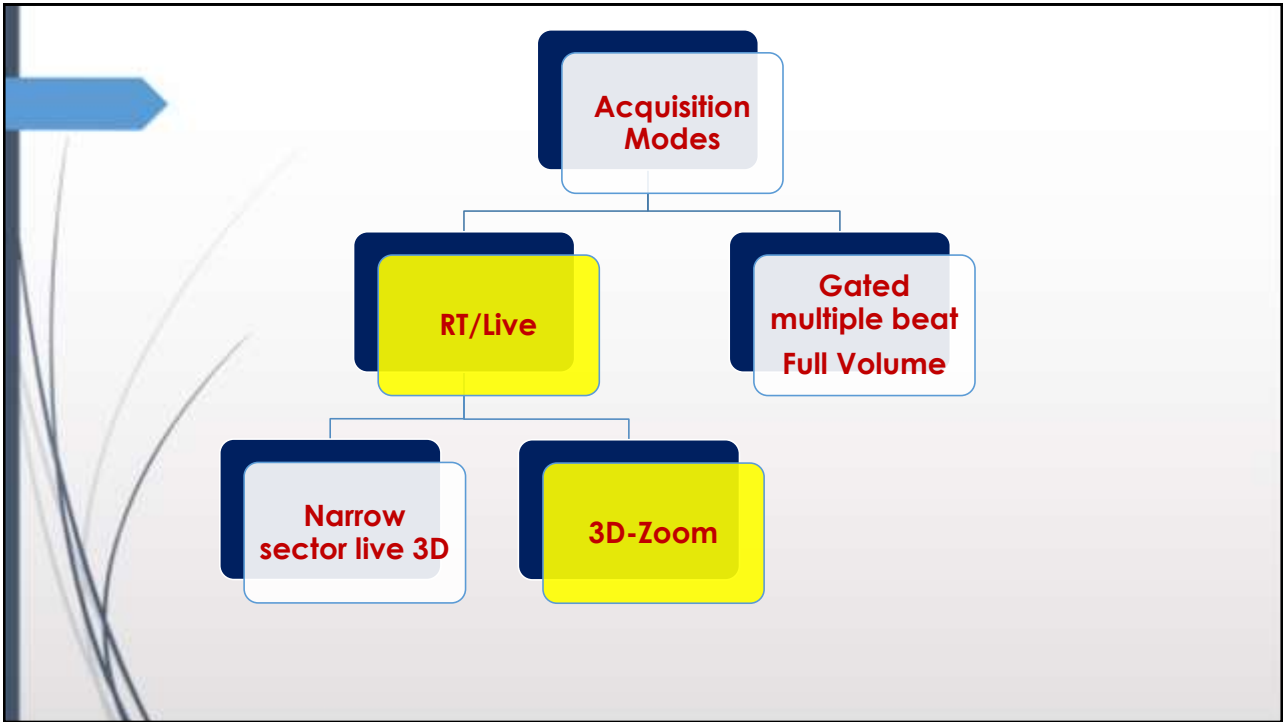
Acquisition Modes

RT/Live

Gated
multiple beat
Full Volume

Narrow
sector live 3D

3D-Zoom

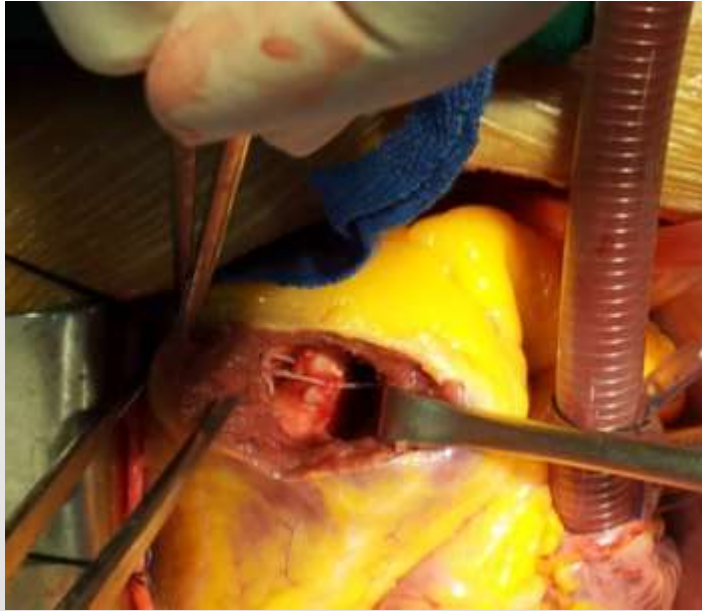


ECG gated multiple beat mode

- ✓ Wide sector
- ✓ The highest frame rate & temporal resolution. (>30 Hz)
- ✓ The best for offline analysis (cropping , MPR, Quantifications, etc.)
- ✓ Stitch artifacts

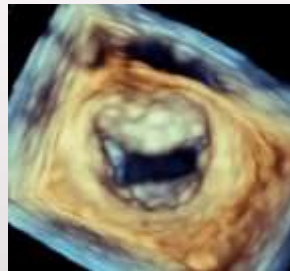
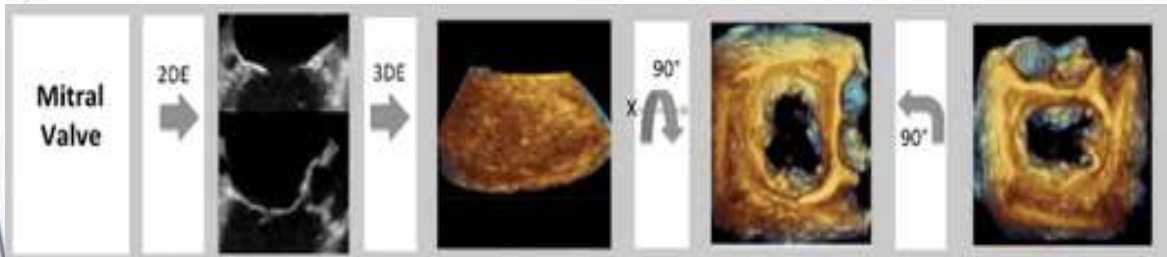


Full volume acquisition (LV mass)

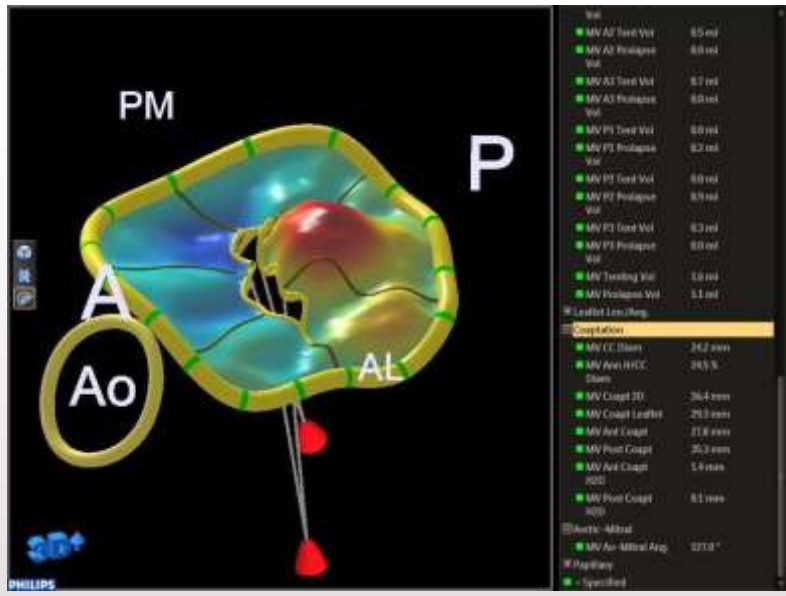


Mitral Valve

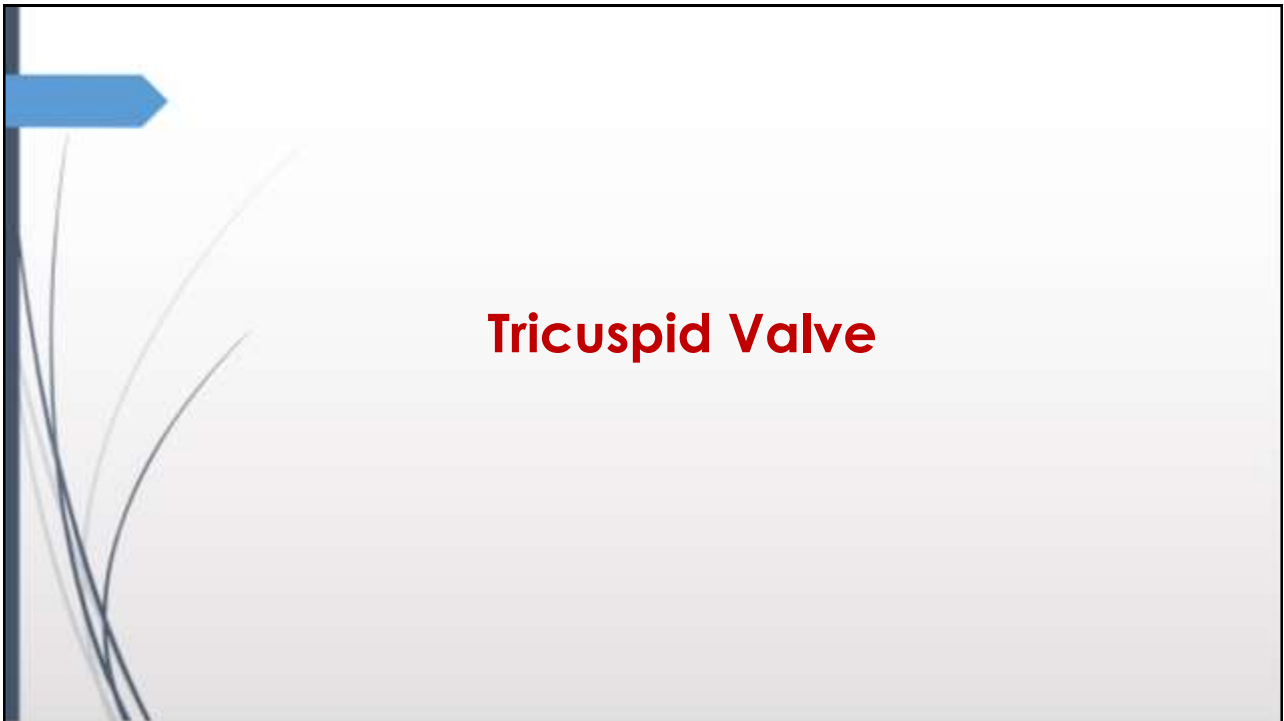
Mitral Valve



Mitral Valve



Case

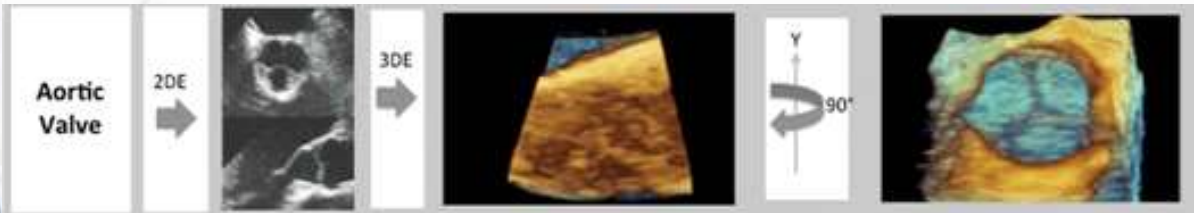


Case



Aortic Valve

Aortic Valve







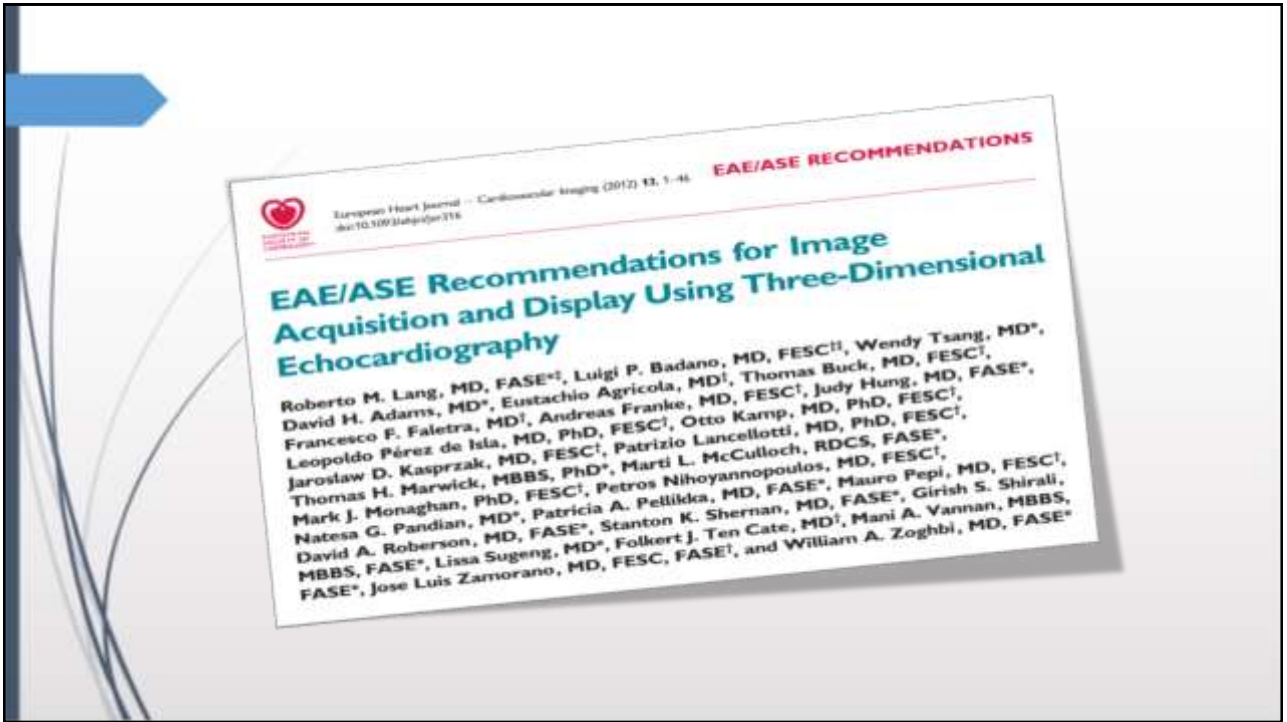
Aortic Root & Thoracic Aorta



Aortic Root & Thoracic Aorta

Acquisition:

120 degrees-Mid esophageal (LVOT view) for Aortic root & any view for the thoracic aorta. Then activate the 3D-Zoom or Multiple beat acquisition.



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of Tomorrow

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securing excellence tomorrow!

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