

Echocardiographic assessment of the aortic valve

Recommendations for data measurements and aortic stenosis (AS) quantification^{1,2}

Echocardiographic images



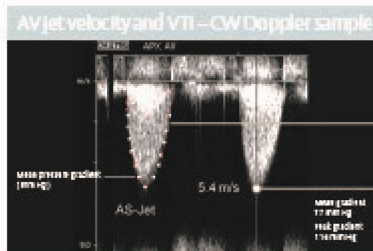
Valve anatomy

- Identify number of cusps in systole, raphe if present
- Assess cusp mobility and commissural fusion
- Assess valve calcification



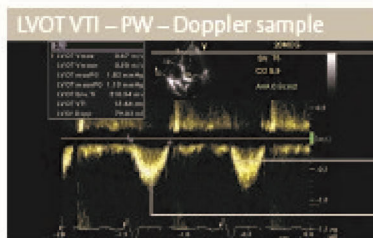
LVOT diameter CSA

- LVOT diameter measurements should be made at the same anatomic level as the velocity recording
- Diameter is used to calculate a circular cross-sectional area (CSA)
- Inner edge of the septal endocardium and the anterior mitral leaflet in mid-systole
- Parallel and adjacent to aortic valve or at the site of velocity measurement



AV jet velocity and VTI - CW Doppler sample

- Misalignment of the ultrasound beam with the AS jet can result in significant underestimation of the jet velocity and pressure gradient
- Velocity time integral (VTI) traced from modal velocity
- Maximum velocity from peak of dense velocity curve



LVOT VTI - PW - Doppler sample

- Report window where maximum velocity and mean gradient are obtained
- VTI traced from outer edge of dense signal
- Maximum velocity at peak of dense velocity curve. Avoid noise and fine linear signals

Anatomical reference images

