



## Case Studies

### Details

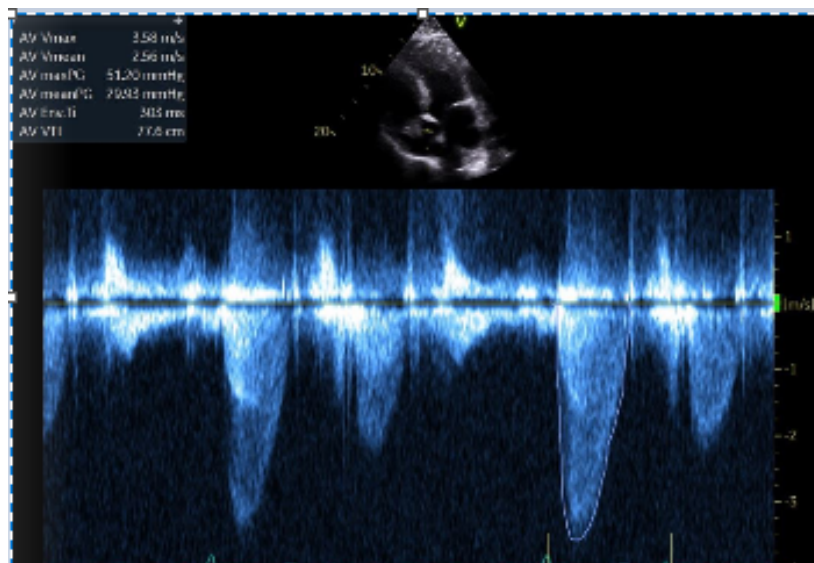
Test Date: **2021-04-07**  
Pathology: **AS**  
Patient ID: **1867406**  
Physician: **Dr. Gonzalez, J**  
Sonographer: **Jensen, P**  
Location: **Main**

### Summary

- Missing an Aortic stenosis specific view
- Measurement issue

### Comments

#### Doppler Issues:



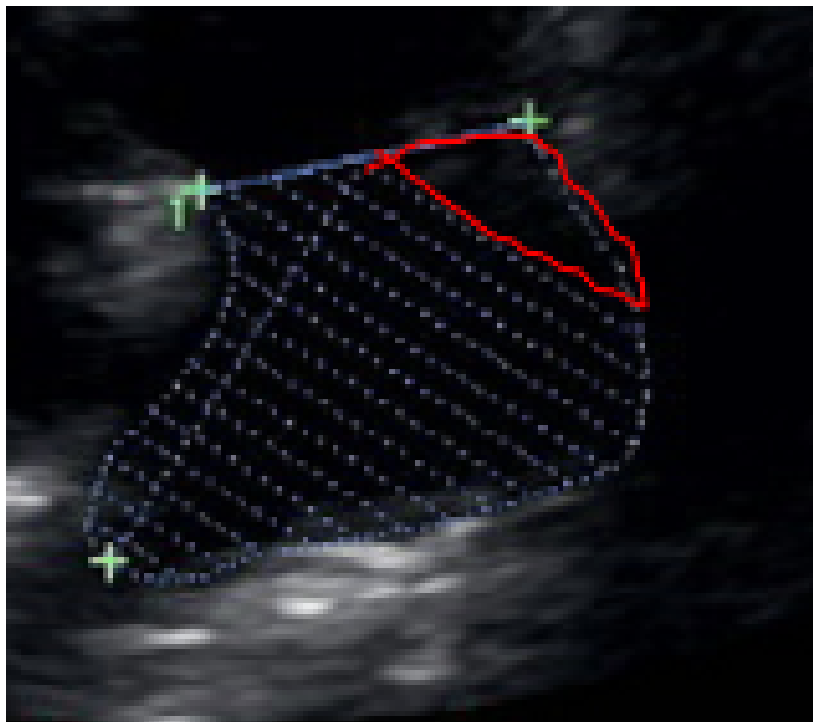
- Pedof was only performed in the apical window only
- Aortic stenosis cases require a minimum of two pedof windows (apical, ssn, right)



parasternal)

- Patient had an irregular heart rate and only the highest velocities were measured. Multiple waveform measurements should have been performed and averaged

### 2D Measurement Errors:



- LA volume trace - incorrect placement of length creating 'dead' space which underestimates LA volume
- Significant difference in LA length between the 4C and 2C views. Recommend performing LAVI in 4C & 2C back to back to ensure the same plane is used
- This study the LA 4C length = 5.4, 2C length = 4.7

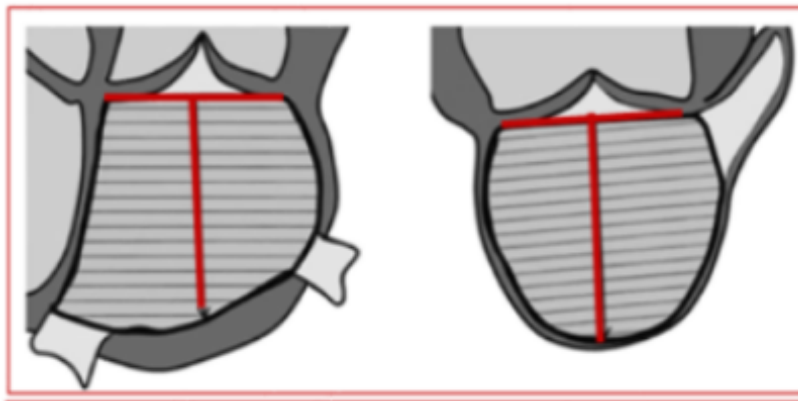
### Correct LA Measurement Education:

#### *Correct length measurement*

1. The length should be measured from the mid-point of the mitral annulus to the mid-point of the superior wall
2. Don't search for the longest length but rather focus on the midpoints



3. Make sure the length is perpendicular to the annular plane as the software that calculates the volume assumes this perpendicular relationship
4. Any deviation from this creates a region of dead space that is not calculated in the final volume value (which underestimates the true volume size)



*Maintain the plane when rotating from a 4C to a 2C view*

1. The length of the LA should never change by more than 5mm between the 4C and 2C views
2. If the length difference is greater than 5mm, repeat both your 4C and 2C views to ensure accuracy
3. It may help to obtain these 2 views sequentially within your scanning protocol

