



## PATIENT PRESENTING CLINICAL SIGNS

**Ziva Seits** Presented for first time at our clinic for exam and O wanted to pursue dental cleaning. PE - MLP grade 2 bilaterally, grade 3 dental disease with mobile incisors and heavy tartar on 109 and 209. Heart murmur auscultated (not noted severity, will recheck on exam day). BW and ECG done

**SPECIES** Abnormal PE/Chem/CBC/UA Results: ECG AND CLINICAL ASSESSMENT: There are no pathologic arrhythmias noted on this ECG tracing. The R wave amplitude is increased; this may suggest ventricular enlargement but can also be identified as a normal patient variant. The reported heart murmur noted in this patient raises concern for underlying structural heart disease. **DIAGNOSTIC RECOMMENDATIONS:** Given the reported heart murmur, additional diagnostics including thoracic radiographs and an echocardiogram (if possible) are recommended prior to anesthesia to assess anesthetic risk. Recommend a blood pressure if not previously performed. BW - WNL

**BREED** Pomeranian

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

### SEX

Spayed Female

### AGE

7 Years

### WEIGHT

7.6 Pounds

### INTERPRETED BY

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.3	1.5	45	79	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	162	3.8	1.5		2.19	2.14	

### IMAGING PERFORMED BY

Jenna Walsh, CVT

### HOSPITAL NAME

Ark Animal Hospital

### REFERRING VET

Dr. Jackson

### DATE

10/21/21

### INVOICE

26575

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. Aortic velocity was excessive in this patient at 3.8 m/sec. Aortic insufficiency noted at 3.0 m/sec. The aortic valve was mildly thickened. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum** and **pericardial** and **extra-cardiac** regions were free of masses in the visible window.



**PATIENT**

Some respiratory artifact was noted, interfering with the echocardiogram. However, all structures were adequately visualized. Hepatic veins were not dilated. No evidence of passive congestion.

Ziva Seits

**ULTRASONOGRAPHIC FINDINGS**

**SPECIES**

- Increased left ventricular outflow velocity – consistent with subaortic stenosis

Canine

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**BREED**

This appears to be compensated at this time. However, the velocities would suggest moderate subaortic stenosis. No significant secondary changes noted in the left ventricle. There is no significant anesthetic risk in this patient. However, prophylactic antibiotics are recommended 5 days prior to any dental procedure as well as 4 days post. Recheck echo in 6 months. Torbutrol pre-med, Propofol induction, Isoflurane maintenance recommended. I'm assuming that this patient has had this murmur its entire life. If not, acquired disease owing to past episodes of endocarditis is possible. However, structurally the thickened valve would suggest primary subaortic stenosis. The breeding line should be evaluated for similar lesions. Blood pressure measurements recomments.

Pomeranian

**SEX**

Spayed Female

**AGE**

7 Years

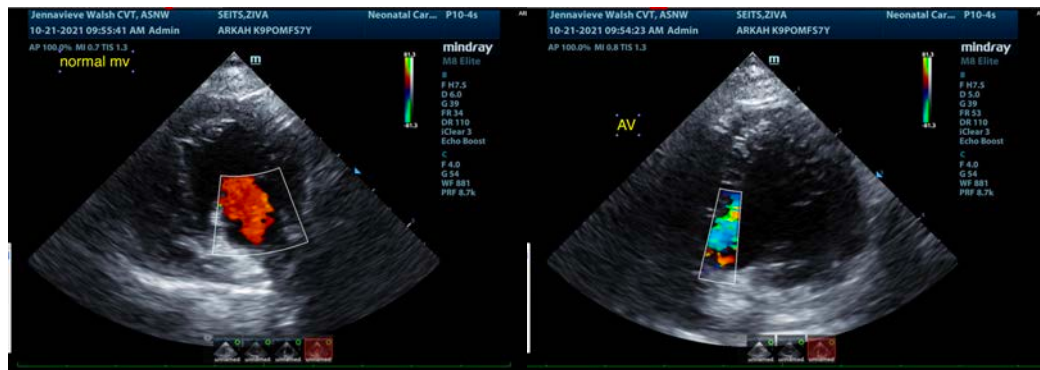
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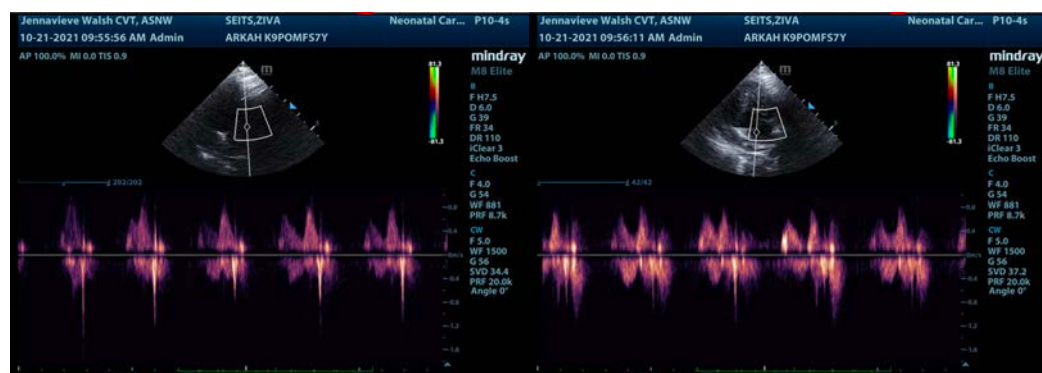
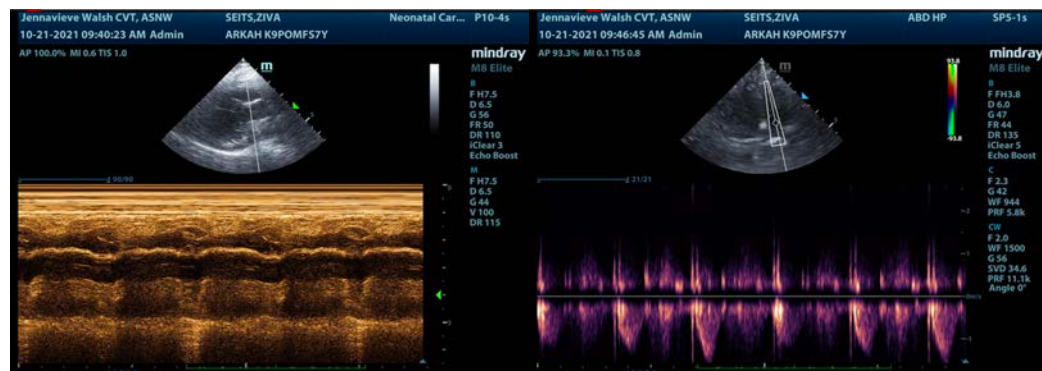
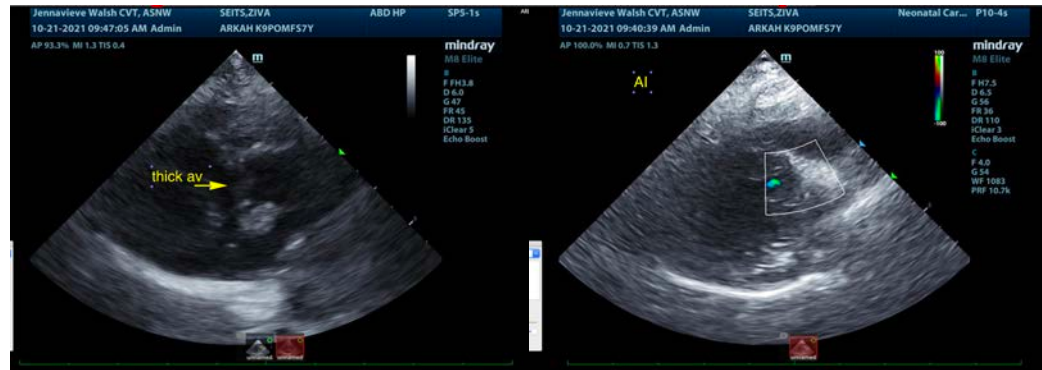
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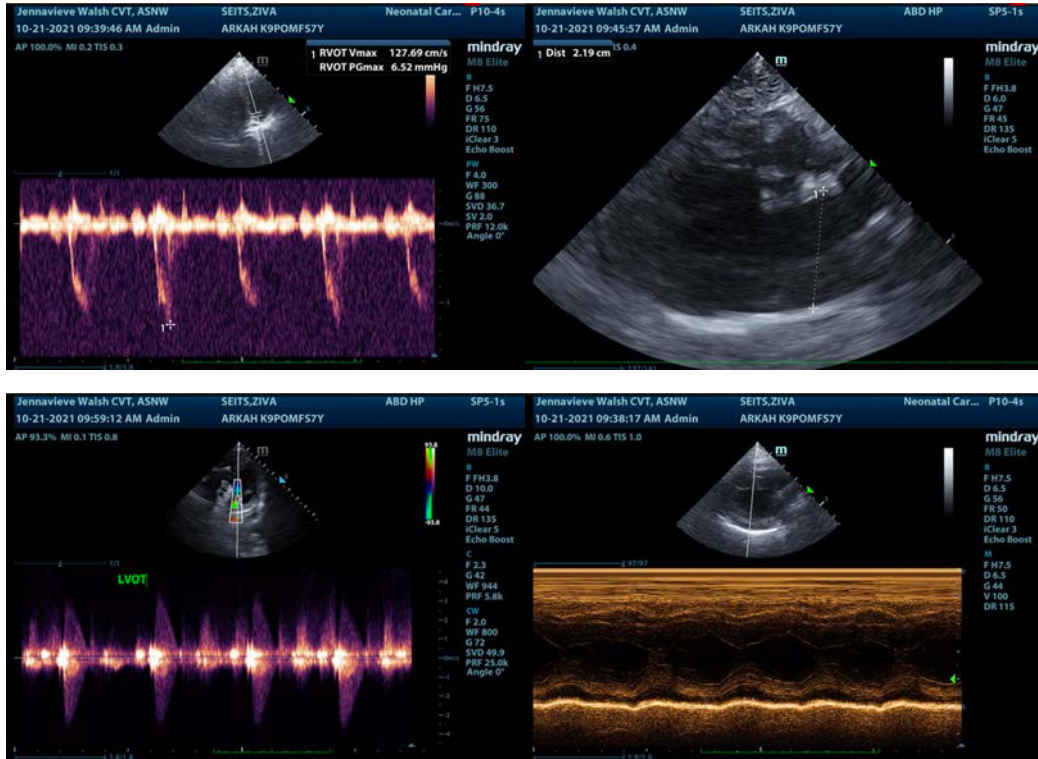
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

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