

## PATIENT PRESENTING CLINICAL SIGNS

**PATIENT** Zeke Wallace  
**PRESENTING CLINICAL SIGNS** Panting a lot on walk. Grade 3/6 systolic murmur same intensity both sides. several episodes of intense panting/wheezing per owner

## SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

### BREED

Bulldog

### SEX

Neutered Male

### AGE

16 Months

### WEIGHT

46 Pounds

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			1.24	1.21	46.2	81	0.3
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	126	2.7-3.0	1.6		3.77	3.9	

### Cardiac Presentation

### INTERPRETED BY

R. McKenzie Daniel,  
 DVM, DABVP  
 (Canine and Feline)

### IMAGING PERFORMED BY

Dr. Gromalak

### HOSPITAL NAME

SVS Imaging

### REFERRING VET

Dr. Schnuelle

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. Color doppler assessment of the mitral valve leaflets revealed minor, primarily eccentric insufficiency. 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. The **left ventricular outflow** tract demonstrated subjective turbinate flow with overall normal subjective structural integrity. 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.

### ULTRASONOGRAPHIC FINDINGS

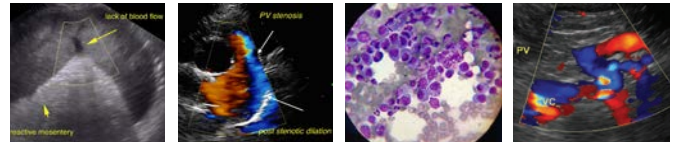
- Subaortic stenosis
- Mild concurrent mitral valve insufficiency

### INVOICE

24794

### DATE

8/19/21



**PATIENT**

Zeke Wallace

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given the elevated LVOT velocity and in light of the breed, the cause of the murmur is most consistent with mild subaortic stenosis based on estimated pressure gradient (approximately 36 mmHg). Mild concurrent mitral valve insufficiency was also present, yet not considered clinically significant at this time, and not likely audible. No overt evidence of left ventricular hypertrophy associated with the subaortic stenosis. No other issues such as systolic dysfunction, clinical pulmonary hypertension, additional stenotic disease, or evidence of a shunt noted.

Given the lack of structural or functional cardiomyopathy and the subjective mild subaortic stenosis, clinical signs associated with the subaortic stenosis are considered unlikely. However, the possibility of exercise intolerance associated with the subaortic stenosis cannot be definitively excluded. Consideration for possible breed associated causes of panting and wheezing may be indicated. No overt indication for medical therapy at this time. However, serial sonographic monitoring with initial recheck in 4-6 months is needed for further assessment and prognosis. Referral to a local cardiologist for further assessment and clarification may be considered.

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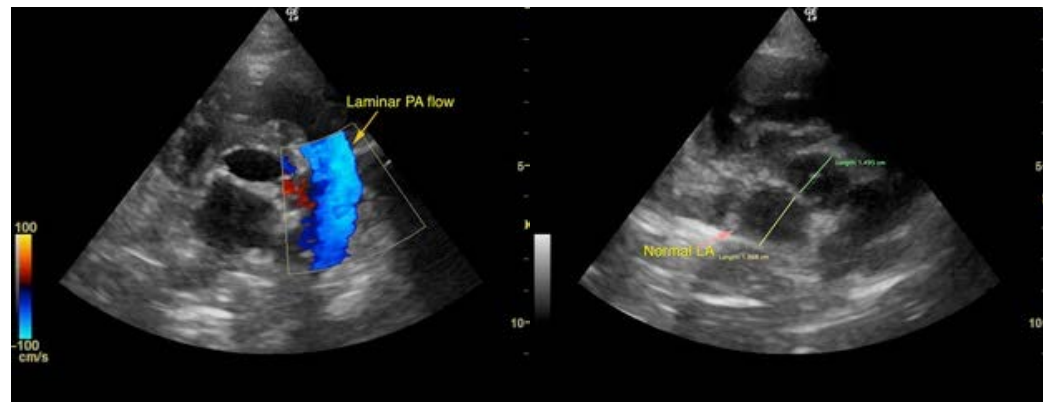
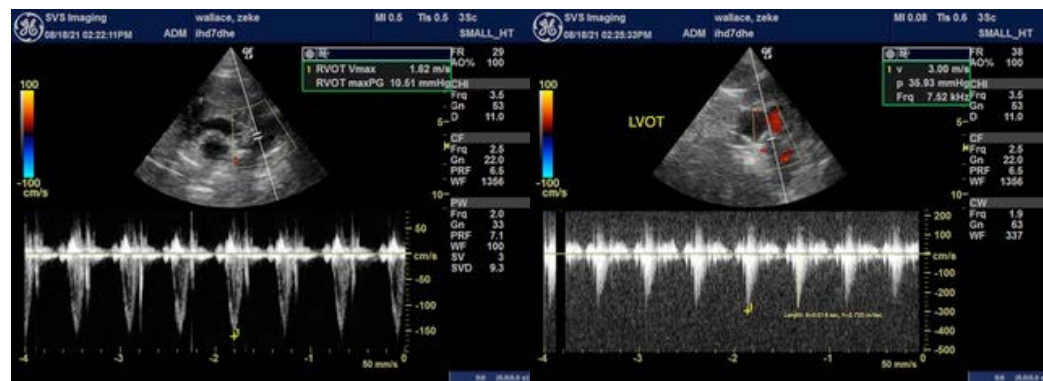
Dr. Schnuelle

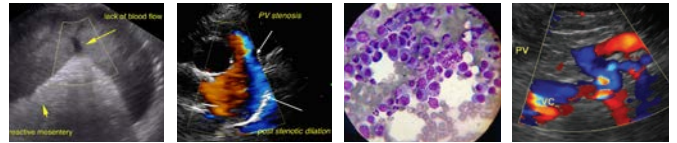
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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