


**PATIENT**

Gilbert Beraleo

**PRESENTING CLINICAL SIGNS**

 Grade 3-4/6 heart murmur, coughing. No meds currently.  
 Abnormal PE/Chem/CBC/UA Results: n/a

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**
**BREED**

Schnauzer X

**SEX**

MN

**AGE**

12 years

**WEIGHT**

12.65 kg

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.6	2.3	1.9	1.93	46.5	81.4	0.2
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	82	2.1	1.6		5.3	4.3	

**INTERPRETED BY**

 R. McKenzie Daniel,  
 DVM, DABVP

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

 Beatties PH Stoney  
 Creek

**REFERRING VET**

Dr. Baskin

**INVOICE**

13250

**DATE**

2/3/22

**Cardiac Presentation**

The echocardiogram in this patient demonstrated moderate to severe enlarged **left atrial** size based on 3 different LA measurement methods. Deviation of the interatrial septum towards the right atrium consistent with elevated left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated eccentric measurable insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle volume. 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 normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated mild vegetative thickening with mild TV insufficiency on color doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was



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noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

**SPECIES**

Canine

- Chronic mitral valve disease (ACVIM B2-C)
- Mild TR

**BREED**

Schnauzer X

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

MN

The cardiac presentation is most consistent with mild chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The moderate to severe LA enlargement combined with increased left ventricle volume indicates that the current risk and future risk going forward of clinical signs secondary to mitral valve insufficiency and left heart volume overload are elevated.

**AGE**

12 years

Potentially, current pulmonary edema may be possible, given the degree of left atrium enlargement. Correlation with three view chest radiographs is recommended.

**WEIGHT**

12.65 kg

The estimated pulmonary pressure gradient based on TV insufficiency was not overtly consistent with clinical pulmonary hypertension. No other clinical issues such as DCM criteria or systolic dysfunction were noted. The coughing in this patient may be secondary to pulmonary edema or mainstem bronchi irritation or compression secondary to LA enlargement. However, some contribution of concurrent lower airway disease may be possible.

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Pimobendan 0.3 mg/kg PO BID is recommended. If no evidence of pulmonary edema, Spironolactone 1.0-2.0 mg/kg PO BID is recommended, yet if evidence of pulmonary edema given the strong concern for potential emerging decompensation, Lasix 1.0-2.0 mg/kg PO BID would be appropriate. Mild salt restriction and Omega Fatty Acids supplementation may prove beneficial. Baseline monitoring of resting respiration rate is recommended. Hydrocodone at the appropriate dose is recommended owing to the cough. Anesthesia is not advised in this patient given the elevated anesthetic risk. Recheck echocardiogram is suggested in 4-6 months, sooner if clinical signs suggestive of left heart decompensation or development of pulmonary edema are noted.

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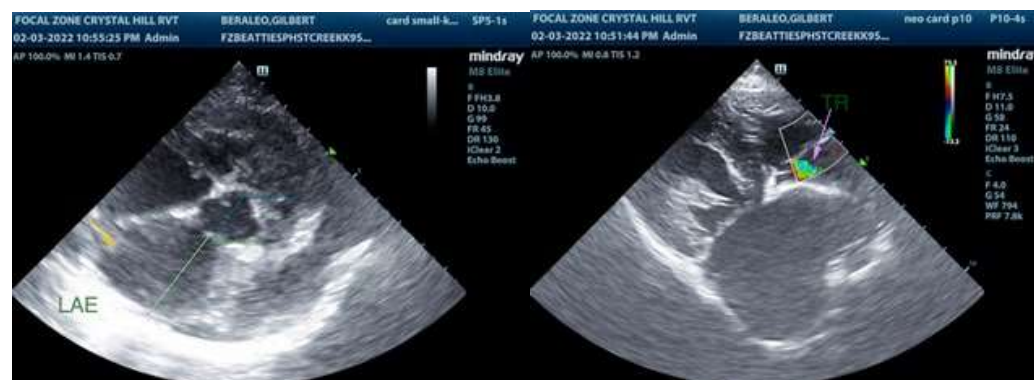
Dr. Baskin

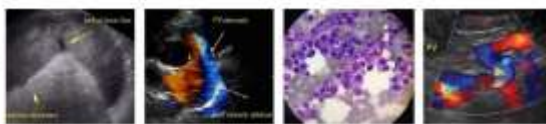
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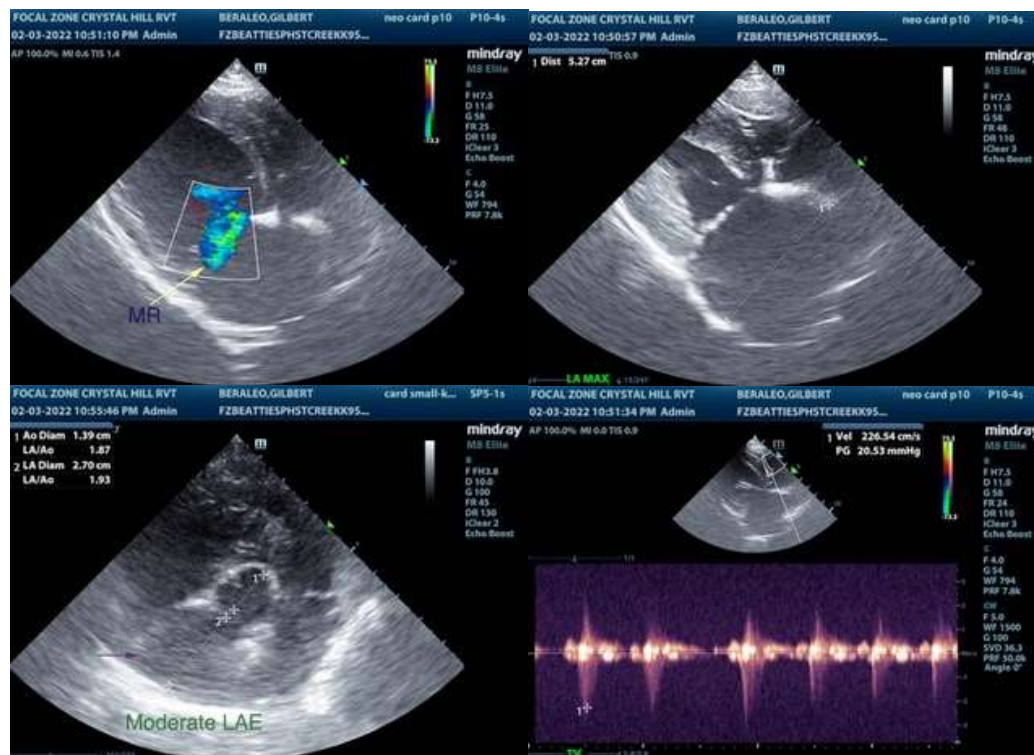
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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