



**PATIENT**

Zoey Dryden

**SPECIES**

Canine

**BREED**

Rat Terrier

**SEX**

Spayed Female

**AGE**

7 Years

**WEIGHT**

18 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV

DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Kitz

**HOSPITAL NAME**

Woodlands AH

**REFERRING VET**

Dr. Kitz

**INVOICE**

42418

**DATE**

10/31/22

**PRESENTING CLINICAL SIGNS**

presented as a new patient a few months ago with Grade V left and Grade III right systolic murmurs, history of cough radiographs indicated CHF secondary to heart failure pet has responded ok to current management but did not want to add anything else until echo completed  
 Abnormal PE/Chem/CBC/UA Results: Doppler BP - 140 ECG normal sinus rhythm Pet is currently on Vetmedin 2.5 mg BID and Furosemide 20 mg BID but no other meds

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

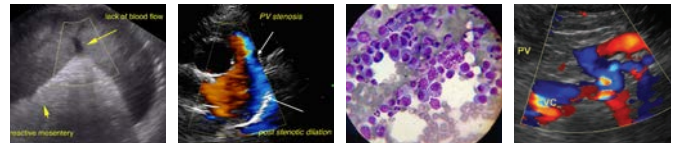
CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.8		1.9	2.5	48	80	0.1
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short 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	BELOW	BELOW	BELOW	BELOW
PATIENT	--	1.5	1.0		4.0	4.09	

**Cardiac Presentation**

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurements. Complete filling of the left atrium noted on color flow assessment. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable 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 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** insufficiency noted at 2.9 m/sec. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Minor **pulmonic** insufficiency noted. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

**ULTRASONOGRAPHIC FINDINGS**

- Mitral and tricuspid insufficiency
- Moderate left atrial enlargement, consistent with advanced stage B2 valvular disease
- Concurrent pulmonic insufficiency



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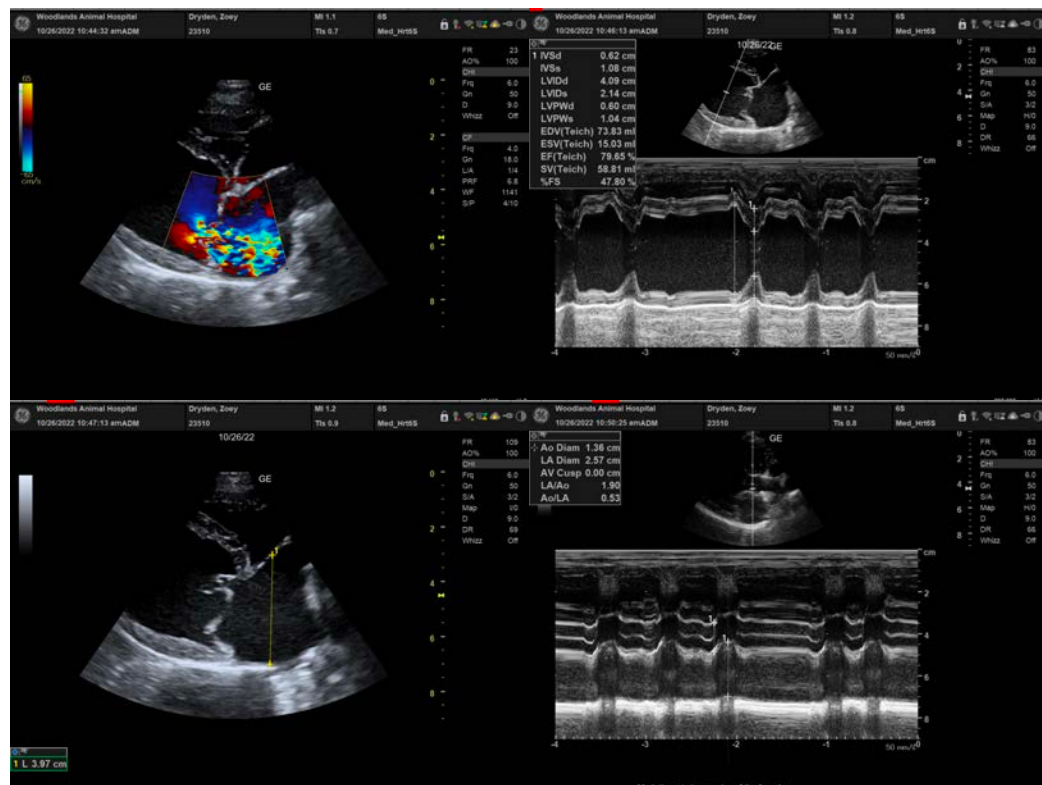
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

EKG and blood pressures recommended. Pimobendan indicated at 0.3 mg/kg BID. If systolic blood pressure is >160, then ACE inhibitor therapy could be considered. This is advanced Stage B2 valvular disease. Therefore, some proactive benefit may theoretically be achieved with Spironolactone, especially if sleeping respiratory rate is >25/min.

The heart has some volume overload and is working to compensate for the valvular insufficiency. Target respiratory rate is < 20 resp/minute after therapy. After initiating therapy, I recommend recheck on the clinical exam, BUN, Creatinine, USG, Chest radiographs & Blood pressure in 5-7 days. Recheck echo in 1 month. Earlier if clinical decompensation is occurring. I do not recommend anesthesia at this time until stabilization has occurred on the recommended medications. Repeat preanesthetic echo is ideal if anesthesia is eventually necessary. There is moderate anesthetic risk for this patient. I recommend cardiac treatment prior to sedation unless only light opioids are utilized which would have minimal effect on heart function.





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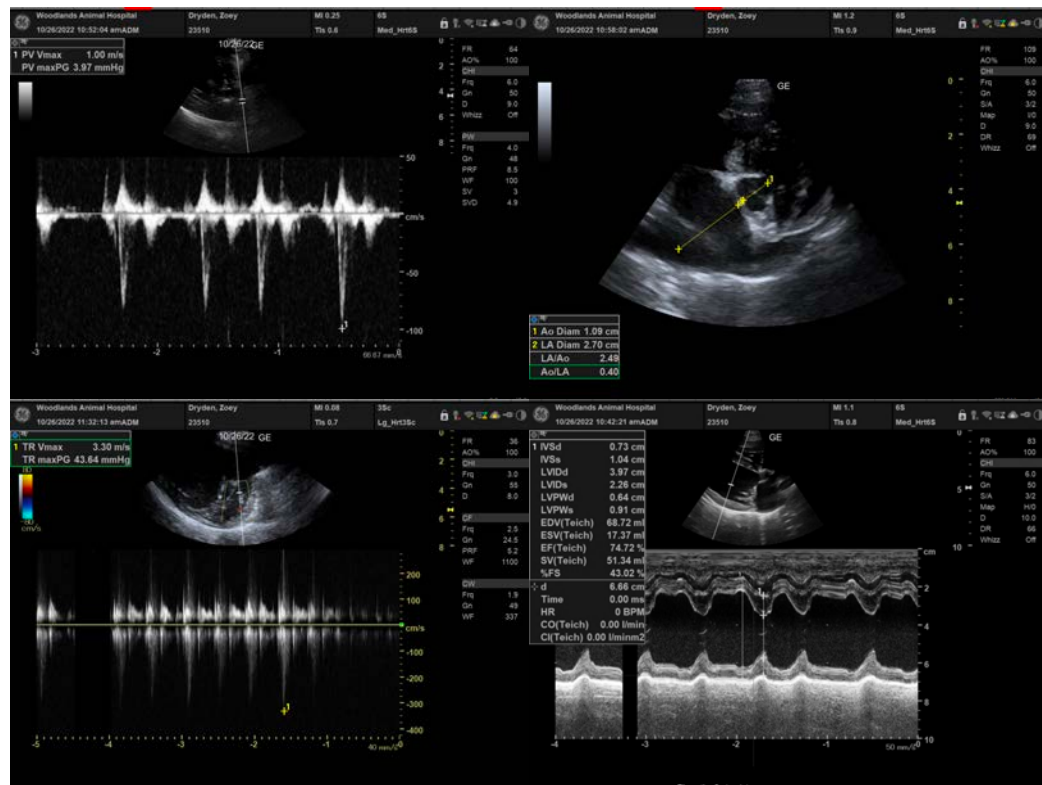
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

[info@SonoPath.com](mailto:info@SonoPath.com)