



**PATIENT PRESENTING CLINICAL SIGNS**

Louie Christianson

History: Recheck echo. Heart murmur, systolic, grade 4/6. Recent onset of coughing and lethargy.  
 -Sedation: Torbugesic IV.  
 -Pertinent previous echo findings (12/2020 MML): mod MR, mild/mod LAE, mild LVE, mild TR; LA 2.2, LV 2.7

**SPECIES**

Canine

**ECHOCARDIOGRAM FINDINGS**

**BREED**

Shih Tzu

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Moderate to severe eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. LV dilation with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter and morphology. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

**SEX**

Male Neutered

**AGE**

9 years

**CARDIAC CHART**

**WEIGHT**

14.6lbs

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	5.4	2.1	NM	1.9	47	79	0.12
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	96	1.2	0.42	6.6	2.9	3.6	1.9
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Dr. Karen Ebersole

**HOSPITAL NAME**

Scanvet

**REFERRING VET**

Dr. Bennett

**INVOICE**

21411

**DATE**

10/7/21

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease persists with evidence of progression. MR/TR are increased comparatively, with LA and LV dilation. Given these findings, recommend institute Pimobendan as below for long term benefit. Prognosis is guarded long term, with risk for progression to clinical signs/CHF in the future (stage B2).

While mainstem bronchi compression may certainly be contributing to a chronic increase in coughing, other primary airway contributions should also be considered (tracheal collapse,



## PATIENT

Louie Christianson

COPD/chronic bronchitis, etc). Consider hydrocodone for any mechanical component due to cardiomegaly. **Screening chest radiographs are recommended.**

## SPECIES

Canine

Continued monitoring for progression is advised life-long. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

## BREED

Shih Tzu

Once on the medication for 3-5 days, anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

## SEX

Male Neutered

Plan: Institute Pimobendan 0.3mg/kg PO q12h. Consider CXR/hydrocodone as discussed. Baseline BP recommended.

## AGE

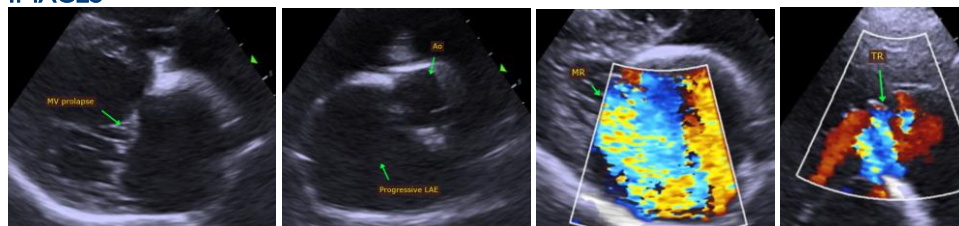
9 years

Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

## WEIGHT

14.6lbs

## IMAGES



## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

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.

## IMAGING PERFORMED BY

Dr. Karen Ebersole

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

## HOSPITAL NAME

Scanvet

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## REFERRING VET

Dr. Bennett

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