



**PATIENT** Patron Vasil  
**PRESENTING CLINICAL SIGNS**  
History: Chronic heart murmur. Previously diagnosed with CVD and full medications were recommended.  
-Current Medications: Pimobendan, Benazepril, Spironolactone, Lasix.  
**SPECIES** Canine  
-Pertinent previous echo findings (3/2021 Goodwin): LVIDd: 3.1, LVIDs: 1.4, LA/AO: 2.3.

**BREED** Yorkie Mix  
**ECHOCARDIOGRAM FINDINGS**  
2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with minimal prolapse into the left atrial lumen. Mild to moderate eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Minimal LV dilation with adequate myocardial function. The tricuspid valve appears subjectively normal, with trace tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

**AGE** 14 years  
**CARDIAC CHART**

WEIGHT	CANINE CARDIAC PARAMETERS		MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
	13.5lbs	NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
	PATIENT	5.3	NM	1.2	1.46	62	92	0.13	
INTERPRETED BY	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)
	Maggie Machen Lamy, DVM, DACVIM (Cardiology)	NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
	PATIENT	106	1.9	1.2	6.1	1.9	2.7	1.1	
	*Normal chamber parameters expressed as a mean value (SD)					3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
IMAGING PERFORMED BY	BODY WEIGHT DEPENDENT PARAMETERS		*Note: All measurements based upon multi-modal images and methods. An average value is reported.						
	Rebekah Jakum, CVT ARDMS/RVT	5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)	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)				

**HOSPITAL NAME** Alburdis Animal Hospital  
Adapted from June Boon, Veterinary Echocardiography, 1998  
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435  
Hansson et al, Vet Rad and Ultrasound 2002  
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

**REFERRING VET** Dr. Smith

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INVOICE** 22957  
Chronic degenerative valve disease persists with mild to moderate mitral and trace tricuspid regurgitation. Mild left atrial enlargement indicates there is relatively low risk for imminent complication at this time. No concurrent issues are identified, such as pulmonary hypertension.

**DATE** 3/7/22  
These findings are dramatically improved compared to the 2021 study. It is difficult to explain improvement, and some degree of interobserver variability may be contributing. Regardless, it is noted that the patient was asymptomatic both previously and currently. Given a lack of symptoms



**PATIENT**

Patron Vasil

and what is seen here, there is **no obvious indication to continue Lasix or Spironolactone at this time**. Reasonable to continue Benazepril and Pimobendan until serial exams show persistent stability. Discussion with the owner is advised. Continued assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).

**SPECIES**

Canine

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

**BREED**

Yorkie Mix

Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

**SEX**

Male Neutered

**AGE**

14 years

**PLAN**

Continue Pimobendan 0.3mg/kg PO q12h. Continue Benazepril 0.5mg/kg PO q12h. Discontinue Lasix and Spironolactone given no historical or current report of CHF. Baseline BP is recommended.

**WEIGHT**

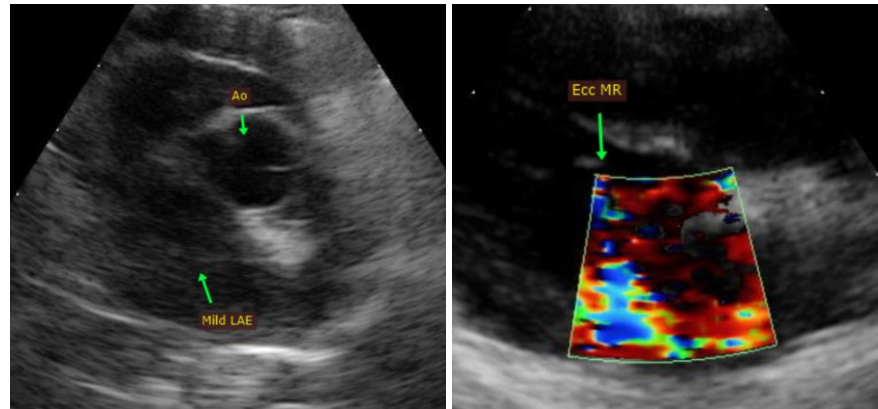
13.5lbs

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGES**



**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Alburtis Animal  
Hospital

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.

**REFERRING VET**

Dr. Smith

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.

**INVOICE**

22957

Maggie Machen Lamy, DVM  
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**DATE**

3/7/22