



**PATIENT PRESENTING CLINICAL SIGNS**

Teddy VanGilder  
History: Recheck echo. Grade 4/6 heart murmur.  
-Current medications: Vetmedin.  
-Pertinent previous echo findings: Moderate LVE, severe LAE, severe MR, moderate TR, mild to moderate PAH.

**SPECIES**

Canine

**BREED**

Cairn Terrier Mix

**SEX**

Male Neutered

**AGE**

14 years

**WEIGHT**

15.2lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

Pocono Peak  
Veterinary Clinic

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. The MR velocity is normal. There is severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. Normal right heart. Mild thickening of the tricuspid valve with no TR. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is normal in diameter. The pulmonic valve is normal in appearance. No pericardial/pleural effusion or cardiac masses are seen.

**CARDIAC CHART**

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	5.5	NM	NM	2.1	49	81	0.9
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	68	1.9	0.9	6.9	2.6	3.6	1.8
*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)

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 INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Dr. Thompson  
Chronic degenerative valve disease causing severe mitral regurgitation persists. Compared to the prior study, the left heart disease appears stable to mildly progressed. No pulmonary hypertension is identified in this study. No additional issues are documented.

**INVOICE**

27966

**DATE**

12/13/22

Given these findings, continue Pimobendan as previously prescribed. An ACE-I and Spironolactone may also be of some long-term benefit as well, even without reported symptoms. Assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (late B2). Unfortunately, the patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future.



**PATIENT**

Teddy VanGilder

Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home.

**SPECIES**

Canine

Elective anesthesia is not advised, as there is high risk for complication. If necessary, cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, iso or sevoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction and recover in O2 cage. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Moderate IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

**BREED**

Cairn Terrier Mix

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit.

**SEX**

Male Neutered

**PLAN**

A screening BP is recommended. Continue Pimobendan 0.3mg/kg PO q12h. Institute ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h.

**AGE**

14 years

Monitor renal values in 1-2 weeks, then every 3-4 months lifelong to ensure tolerance of medications.

**WEIGHT**

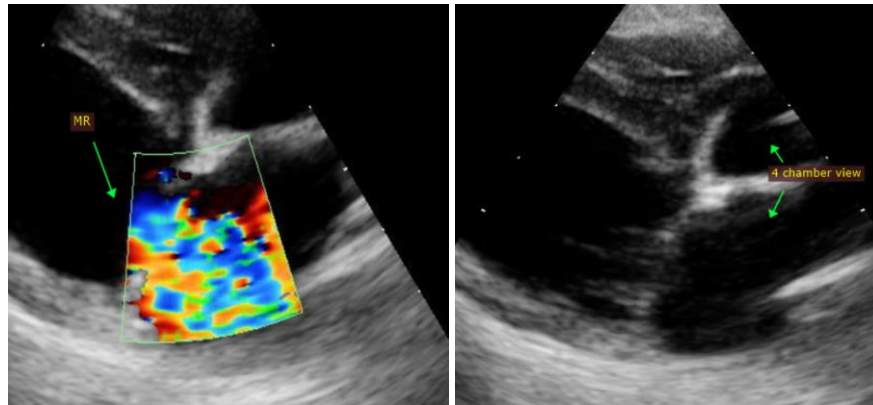
15.2lbs

A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.

**INTERPRETED BY**

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

**IMAGES**



**IMAGING PERFORMED BY**

Rebekah Jakum, CVT ARDMS/RVT

**HOSPITAL NAME**

Pocono Peak Veterinary Clinic

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. Thompson

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**

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Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)

**DATE**

12/13/22