



**PATIENT**

Chewy Benson

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Male Intact

**AGE**

17 years

**WEIGHT**

9.12lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Dana Alterman,  
RDCS, LVT

**HOSPITAL NAME**

Eubank Animal Clinic

**REFERRING VET**

Dr. Gardner

**INVOICE**

29418

**DATE**

3/6/23

**PRESENTING CLINICAL SIGNS**

History: Heart murmur and syncope. Coughing more. Lungs auscult clear today.  
-Current medications: 1.25mg hydrocodone BID, vetmedin 1.25mg BID, furosemide 6.25mg BID, enalapril 2mg BID.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with marked prolapse into the left atrial lumen. There is severe eccentric mitral regurgitation present. There is severe left atrial enlargement. There is moderate left ventricular dilation and increased sphericity indicative of volume overload. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. No AI. The main pulmonary artery is mildly dilated. Normal pulmonic outflow velocity with laminar profile. No pulmonic insufficiency. Mild right atrial and right ventricular dilation. The tricuspid valve is difficult to visualize; however, there is mild to moderate tricuspid regurgitation. The velocity is elevated, indicative of moderate pulmonary hypertension. Scant pericardial effusion. No obvious pleural effusion. No 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	4.3	4.0	NM	2.9	54	86	NM
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	NM	0.96	0.5	4.3	3.1	3.3	1.5
*Normal chamber parameters expressed as a mean value (SD)							
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>							
*Note: All measurements based upon multi-modal images and methods. An average value is reported.							
					1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
				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)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing severe mitral and mild to moderate tricuspid regurgitation. Batrial and ventricular enlargement in addition to severe MR/TR and pulmonary hypertension indicates the risk for spontaneous congestive heart failure is high. Scant pericardial effusion is concerning for congestion, and full cardiac support is recommended including sildenafil therapy. An alternative explanation would be a small tear in the left atrial wall, and the amount of effusion should be reassessed if the patient further decompensates despite therapy. If



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the patient appears unstable, highly recommend overnight hospitalization for supportive care at a 24-hour facility.

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Reported syncope is presumably secondary to active congestion and/or left atrial tear; however, should they persist in the future consider other causes (arrhythmias, BP swings, etc.).

**BREED**

Chihuahua

Unfortunately, with this degree of heart disease and congestion, the prognosis is guarded to poor with an average survival time of 6-12mo at this point. Most dogs are able to maintain a good quality of life for some time however with medications. Going forward, patient will remain at high risk for recurrent CHF (left or right sided), collapse episodes and/or development of malignant arrhythmias in the future.

**SEX**

Male Intact

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit once stabilized. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes. Monitoring of sleeping breathing rates is recommended as the best way to screen for improvement/recurrent CHF at home.

**AGE**

17 years

**PLAN**

Consider hospitalization for O2 support if needed, for Lasix therapy and monitoring. Continue furosemide 1-2mg/kg PO q12h. Institute sildenafil 1-2mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Continue Pimobendan 0.2-0.3mg/kg PO q12h. Continue Hydrocodone. Pending BP >130mmHg, continue ACE-I 0.5mg/kg Po q12h.

**WEIGHT**

9.12lbs

Recheck a kidney panel and BP in 10-14 days, then every 3-4 months. If the patient declines in the interim, reassessing degree of pericardial effusion is recommended.

**INTERPRETED BY**

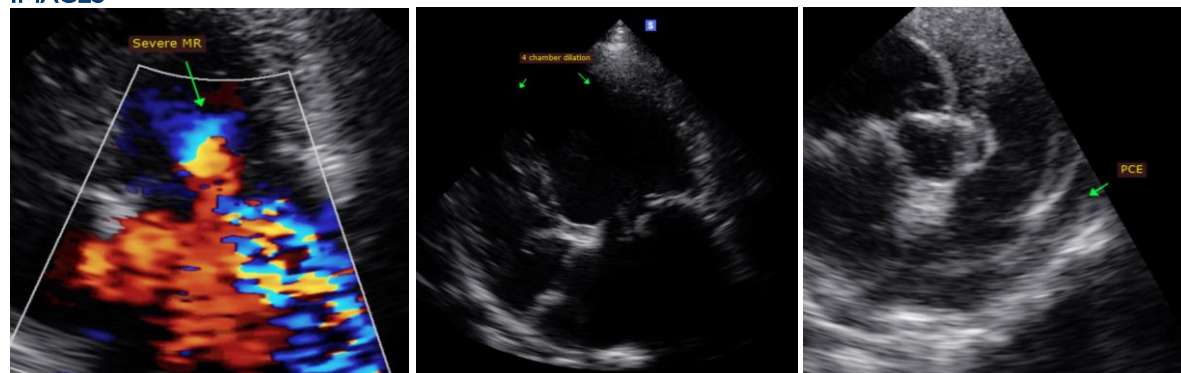
Maggie Machen Lamy,  
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A recheck echocardiogram is recommended in 4-6 months to screen for progression, sooner if clinical signs arise.

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**IMAGES**



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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.

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Canine

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.

**BREED**

Chihuahua

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info@sonopath.com

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