



**PATIENT**

Meeko Cusick

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Male Neutered

**AGE**

10 years

**WEIGHT**

15.5lbs

**INTERPRETED BY**

Maggie Machen  
 Lamy, DVM, DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Jenna Walsh, CVT

**HOSPITAL NAME**

For the Love of Paws

**REFERRING VET**

Dr. Jernstedt

**INVOICE**

21908

**DATE**

11/5/21

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. Overweight. Collapsing trachea.  
 -Blood Pressure: 131/91 (110)mmHg.  
 -Current Medications: Spironolactone 25mg Tablet 0.5-tab SID| Enalapril Tablet 2.5mg 1 tab BID| Furosemide Tablet 12.5 Mg 0.5-tab BID | Vetmedin Tablet 1.25mg 1 tab BID | Hills Metabolic + URI food.  
 -Pertinent previous echo findings (9/2020 MML): Severe MR, marked LAE, marked LVE, mild RHE. TR: 3.0m/s, LA: 3.0, LV: 3.3, FS: 40%.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode and Doppler imaging are available. Diffuse thickening of mitral valve leaflets (anterior > posterior) with mild prolapse into the left atrial lumen. Severe eccentric mitral regurgitation with marked left atrial dilation. Marked LV dilation with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened, with mild tricuspid regurgitation. Mild right atrial and ventricular dilation consistent with early pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No pulmonic or aortic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

**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	5.1	NM	NM	2.5	52	84	0.24
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	100	1.4	0.9	7.0	2.8	3.4	1.6
*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)
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				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)



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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease persists with evidence of relative stability. While severe, the left heart enlargement is unchanged compared to the prior study. No additional issues are identified, such as progressive right heart enlargement or systolic dysfunction.

Given these findings, continue all cardiac medications as previously recommended. The prognosis is poor with the average survival time of 8-9 months from the time of CHF diagnosis; however, this patient is reportedly doing well for over a year. Patient will always be at risk for recurrent CHF, development of arrhythmias/LA tear, syncope and/or sudden death in the future. Monitoring of renal values is recommended lifelong.

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

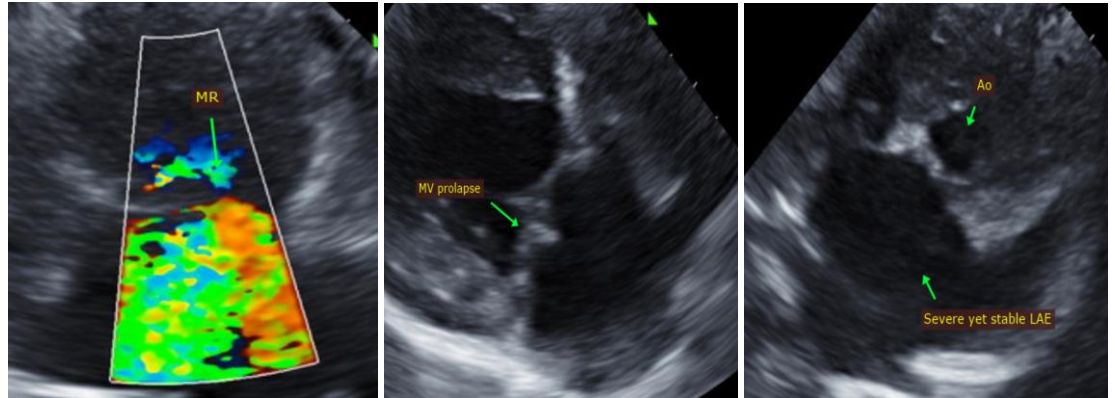
**PLAN**

Screening BP is recommended every 6 months. Continue Spironolactone, Enalapril, Furosemide and Pimobendan as prescribed.

A renal panel is recommended every 3-4 months on diuretics to ensure tolerance of medications.

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

**IMAGES**



**REFERRING VET**

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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.

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.

**Maggie Machen Lamy, DVM**  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com