



**PATIENT**

Rere McCreary

**SPECIES**

Canine

**BREED**

Papillon

**SEX**

Female Spayed

**AGE**

11.11.11

**WEIGHT**

10lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Bayside Animal  
Medical Center

**REFERRING VET**

Dr. Oliver

**INVOICE**

28748

**DATE**

2.2.23

**PRESENTING CLINICAL SIGNS**

History: Chronic heart murmur. Assess prior to dental.  
 -Current medications: Clindamycin.  
 -Sedation used: Not required to complete full diagnostic ultrasound.  
 -Pertinent previous ultrasound results: No previous.  
 -STAT: Not requested.  
 -Imaging performed by: Stephanie Warga RDCS, RVT.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Marked diffuse thickening of mitral valve leaflets (anterior>posterior) with prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Elevated MR velocity. Mildly increased LV diameter with adequate myocardial function. The tricuspid valve appears thickened with septal prolapse and trace tricuspid regurgitation. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. Mild to moderate aortic insufficiency. No pulmonic 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	6.5	NM	NM	1.76	34	65	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	110	1.3	1.0	4.5	1.94y	2.9	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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and trace tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is elevated. An elevated MR velocity and aortic leak may suggest systemic hypertension and a BP is recommended. No additional issues are identified.

Given the risk for progression and results of the EPIC trial, Pimobendan is indicated in this patient as below. Additionally given AI an ACEI is also recommended pending BP assessment. Assessment of progression in the future will help predict long term outcome; however, prognosis is guarded at this stage (B2).

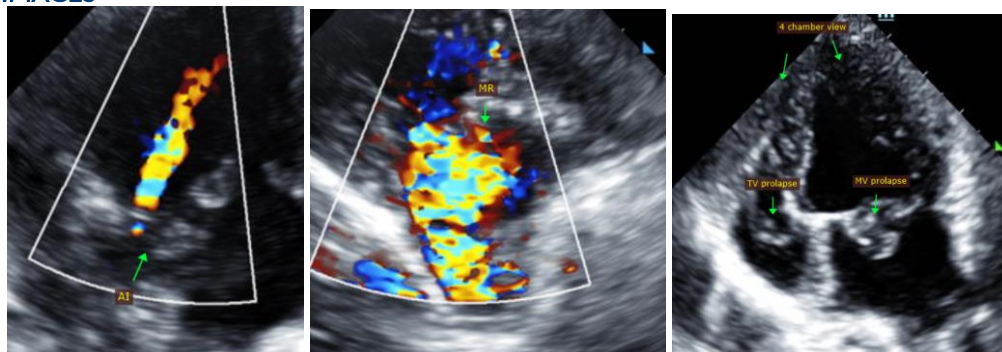
Omega fatty acid supplementation and mild salt restriction may also be of some long term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

Once on the medication for 3-5 days, 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.

Plan: Institute heart muscle support Pimobendan 0.25-0.3mg/kg PO q12h. Baseline BP recommended. If BP >130mmHg, institute ACEI 0.5mg/kg PO q12h.

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

## IMAGES



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.

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