



**PATIENT**

Bella Abed

**SPECIES**

Canine

**BREED**

Jack Russell Mix

**SEX**

Female Spayed

**AGE**

12.5.09

**WEIGHT**

NP

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Everhart WellPet

**REFERRING VET**

Dr. Key

**INVOICE**

24749

**DATE**

6.13.22

**PRESENTING CLINICAL SIGNS**

History: Recheck from echo 2/24. Pet doing much better on cardiac medications.

-Pertinent abnormal PE/Chem/CBC/UA Results: NSF on March labs.

-Current medications: Since beginning of March- Pimobendan 2.5mg TID, Benazepril 5mg BID, - Furosemide 10mg BID, Sildenafil 20mg ½ TID, Spironolactone 25mg ½ TID.

-Blood pressure: Systolic BP on doppler WNL- 136, 138, 140. In hospital prior to scan 120mmHg.

-Sedation used: Not required to complete full diagnostic ultrasound.

-Pertinent previous ultrasound results (2/2022 MML): Marked MR with LHE, moderate RHE, moderate TR, severe PAH: 4.5m/s. LA: 3.7, LV: 4.2

-STAT: Declined.

-Imaging performed by: Stephanie Pearce RDCS, RVT.

**RADIOGRAPHIC FINDINGS \*NOTE: Images submitted for supplemental information only.**

Significant cardiomegaly. No obvious evidence of CHF.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The mitral valve is diffusely thickened with significant prolapse into the left atrial lumen. There is marked mitral regurgitation present. The MR velocity is normal. Severe left atrial enlargement. There is mild left ventricular dilation. Left ventricular systolic function is hyperdynamic. There is normal systolic flow velocity across the aortic valve. The aortic valve appears trileaflet with normal mobility. The main pulmonary artery is dilated. Mild right atrial and ventricular dilation. The tricuspid valve is thickened with septal prolapse and moderate tricuspid regurgitation. Velocity consistent with moderate pulmonary hypertension. Mild pulmonic insufficiency and no aortic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

**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	5.2	3.5	NM	2.4	52	83	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	180	1.2	0.8	NP	3.8	4.5	2.2
*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

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease persists with relative stability. Severe mitral and moderate tricuspid regurgitation are unchanged with stable yet severe left heart enlargement. The pulmonary pressures are slightly improved due to medications and no obvious additional issues are identified. No effusions are visualized in this study.

Given these findings, continued full lifelong cardiac support is rerecommended as prescribed. It is certainly encouraging that this patient is doing well; however, the risk will always remain for recurrent clinical signs.

Monitoring of sleeping breathing rates is recommended as the best way to screen for progression to CHF at home. Unfortunately, there is high risk for spontaneous CHF, worsening cough and/or malignant arrhythmias and sudden death in the future. The prognosis with this degree of disease is poor, with most dogs able to maintain a good QOL on medications for an average of 8-12 months.

Elective anesthesia is not advised.

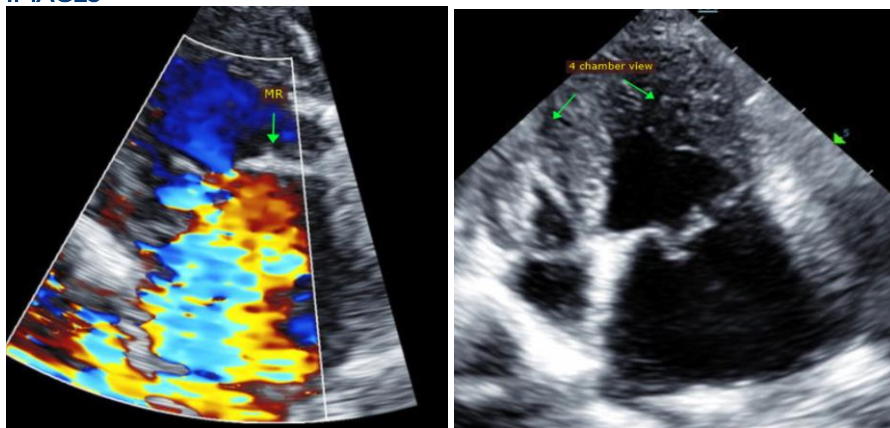
## PLAN

Repeat abdominocentesis as needed for discomfort/inappetence. Continue all medications as prescribed.

Monitor renal values and BP every 3-4 months lifelong.

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

## 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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