


**PATIENT**

Bowser Osumek

**PRESENTING CLINICAL SIGNS**

History: Grade 2/6 heart murmur. Has been on a grain-free diet in the past.

**SPECIES**

Canine

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Severe left ventricular dilation with diminished systolic function. Decreased LV wall thickness with increased sphericity. Severe left atrial enlargement. The mitral valve appears normal in form and function, with no obvious prolapse into the left atrial lumen. Mild central mitral regurgitation secondary to annular stretch. Moderate tricuspid regurgitation. Moderate right atrial and ventricular dilation. TR velocity is normal. The aortic valve is normal in morphology and mobility. No subvalvular ridge present; normal LVOT velocity. No aortic insufficiency. Normal pulmonic valve with trace pulmonic insufficiency seen. No pericardial or pleural effusion noted. No obvious cardiac tumors.

**BREED**

OESD Mix

**SEX**

Male Neutered

**CARDIAC CHART**
**AGE**

2 years

**WEIGHT**

70.5bs

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

 Sixteen Mile  
 Veterinary Clinic

**REFERRING VET**

Dr. Bile

**INVOICE**

30278

**DATE**

4/17/23

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	4.1	2.1	2.1	2.4	10	22	>2.0
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	190	2.0	1.2	32.0	4.7	7.4	6.7
*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)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Unfortunately, this patient has significant cardiomyopathy and systolic dysfunction. This is causing dilation and volume overload of both the left and right heart resulting in insufficiency of the mitral and tricuspid valves. The severity of dysfunction and pump failure is severe, and the patient is at high risk for decompensating into congestive failure. Patient will always be at risk for right and/or left-sided CHF, development of arrhythmias/syncope and/or sudden death going forward.



**PATIENT**

Bowser Osumek

**SPECIES**

Canine

**BREED**

OESD Mix

**SEX**

Male Neutered

**AGE**

2 years

**WEIGHT**

70.5bs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Sixteen Mile  
Veterinary Clinic

**REFERRING VET**

Dr. Bile

**INVOICE**

30278

**DATE**

4/17/23

Systolic failure can be primary in nature (DCM) or secondary to taurine deficiency, myocarditis, hypothyroidism, tachycardia-induced cardiomyopathy, diet-related or infiltrative disease such as lymphoma. While primary disease is always possible, consider treating for contributing causes that may be treatable in a 2-year-old dog. The diet is of great concern in this case and switching to a traditional option (such as Purina, Hills or Science diet) is strongly recommended. Additionally, a taurine level may be helpful; however, regardless of result a Taurine supplement is recommended. A thyroid level can also be considered if not recently assessed.

Regardless of cause, prognosis is poor at this stage in the disease process, with an average survival time of <6 months. The only treatable cause of systolic failure is diet/taurine deficiency, which is uncommon on commercially formulated dog foods. If the diet is of concern, highly recommend immediate diet change and taurine supplement regardless of blood taurine results. Please see the FDA website for more information.

Immediate institution of full cardiac supportive medications is recommended as below due to high risk for decompensation. This includes low dose therapy. Cases of systolic failure are at high risk for malignant tachyarrhythmias (such as VT or rapid AF) and sudden death, and this should be expressed to the owner. Activity restriction is advised, and a baseline ECG recommended.

Elective anesthesia is not advised due to high risk for complications.

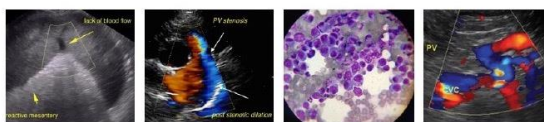
Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, worsening labored breathing, abdominal distention, exercise intolerance or collapse episodes in the future. Monitoring of sleeping breathing rates at home is recommended to assess response to medications and recurrence of CHF in the future.

**PLAN:**

Baseline BP/ECG recommended. Immediate diet change as discussed. Initiate aldosterone antagonist Spironolactone 1-2mg/kg PO q12h. Institute furosemide 1mg/kg PO q12h. Institute Pimobendan 0.3mg/kg PO q12h. Institute taurine 1000mg PO q12h.

Monitor a renal panel and blood pressure in 1-2 weeks to ensure tolerance. If BP >130mmHg, institute ACEI 0.5mg/kg PO q12h. Consider taurine level, thyroid status as discussed above.

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



**PATIENT**

Bowser Osumek

**SPECIES**

Canine

**BREED**

OESD Mix

**SEX**

Male Neutered

**AGE**

2 years

**WEIGHT**

70.5bs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

**IMAGING  
PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

Sixteen Mile  
Veterinary Clinic

**REFERRING VET**

Dr. Bile

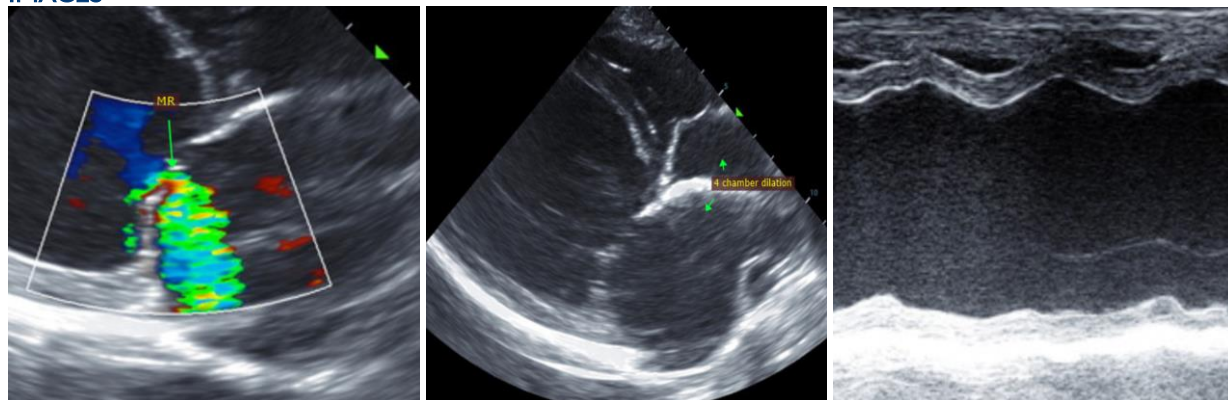
**INVOICE**

30278

**DATE**

4/17/23

**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.

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