


**PATIENT**

Zoomer Miller

**PRESENTING CLINICAL SIGNS**

 History: Shallow fast breaths. Respiratory distress. Extra abdominal effort. Gallop rhythm.  
 -Current medications: Theophylline LA 100mg tab.  
 -Abnormal PE/Chem/CBC/UA Results: Creatine Kinase (CK) 466 Hi 25 - 336 U/L.

**SPECIES**

Feline

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal with regions of borderline hypertrophy. There is a diffusely hyperechoic endocardium consistent with fibrosis. The LV is dilated with significant systolic dysfunction. The papillary muscles are mildly remodeled. The left atrium is markedly dilated. No obvious spontaneous contrast; no obvious thrombus. Mild central MR due to annular stretch. The right ventricle is normal. The RA is normal. No TR. Blood flow through the RVOT and LVOT is decreased velocity. Trace pericardial effusion. Large volume pleural effusion. No obvious cardiac tumors.

**BREED**

DSH

**SEX**

Male Neutered

**AGE**

12 years

**CARDIAC CHART**
**WEIGHT**

10.2lbs

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	4.6	185	0.58	1.74	0.55	29	59
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)		LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	2.8	2.2	1.8		0.45	0.7	NM

*\*Note: All measurements based upon multi-modal images and methods. An average value is reported.*  
 Adapted from June Boon, Veterinary Echocardiography, 1998  
 Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Kelly Reschny, RVT

**HOSPITAL NAME**

 Burlington Lakeshore  
 Veterinary Hospital

**REFERRING VET**

Dr. Aziz

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The finding of severe left atrial enlargement in the face of normal LV wall thickness and systolic dysfunction is most consistent with Restrictive Cardiomyopathy (RCM); however, DCM or some historical infectious or inflammatory insult to the myocardium cannot be definitively ruled out. Severe left atrial dilation is causing insufficiency of both AV valves, and severe systolic dysfunction has developed. An ECG is strongly recommended as arrhythmias are noted throughout the study.

The finding of this degree of biatrial dilation confirms the origin of the tachypnea and effusions is spontaneous congestive heart failure, and lifelong medications are warranted as below. Ideally discontinue theophylline unless clinically necessary. This patient is at high risk for thromboembolic events regardless of medications and this should be expressed to the owner (monitor for neurologic change, acute paralysis/lameness, etc.). Consider hospitalization for continued stabilization, oxygen and Lasix therapy. A thoracocentesis should also be considered due to effusion and instability. The prognosis is

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31834

**DATE**

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poor to grave, with a mean survival time for cats with CHF < 8-12 months, however most are able to maintain a good quality of life on medications if able to be stabilized. There will always remain risk for recurrent episodes of CHF, development of blood clots, arrhythmias, and/or sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

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**PLAN**

Consider thoracocentesis, hospitalization, oxygen, IV diuretic in hospital until stabilized due to effusion. Oral medications: furosemide 1-2mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute Pimobendan (off label use) 1.25mg PO q12h. Ideally d/c theophylline.

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Once stabilized, eating well at home and BP >130mmHg, consider addition of vasodilator ACE-I (benazepril or enalapril) 0.5mg/kg PO q12h. Recheck renal values in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong.

**AGE**

12 years

A recheck echocardiogram is recommended in 4-6 months to assess for progression.

**IMAGES**

**WEIGHT**

10.2lbs



**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

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.

**IMAGING PERFORMED BY**

Kelly Reschny, RVT

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.

**HOSPITAL NAME**

Burlington Lakeshore  
Veterinary Hospital

**REFERRING VET**

Dr. Aziz

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