



**PATIENT**

Gozer Anderson

**SPECIES**

Feline

**BREED**

Bengal

**SEX**

Male Neutered

**AGE**

3.15.12

**WEIGHT**

14lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Homeward Bound  
Veterinary Services

**REFERRING VET**

Dr. Vance

**INVOICE**

23228

**DATE**

3.22.22

**PRESENTING CLINICAL SIGNS**

History: For the past few weeks has noticed increased drinking, one of the cats is urinating more (larger clumps). No v/d. O unsure of weight loss, thinks he's normally 15lb. Eats dry. P has been down from Michigan since January. Grade 3/6 L systolic murmur.

-Pertinent abnormal PE/Chem/CBC/UA Results: NSF, elevated globulins and GGT

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

-Pertinent previous ultrasound results: No previous.

-STAT: Not requested

-Imaging performed by: Stephanie Pearce RDCS, RVT.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with regions of borderline hypertrophy. There is a diffusely hyperechoic endocardium consistent with fibrosis and remodeling. The endocardium also appears remodeled. The MV appears normal. A dynamic LVOTO is identified on Spectral, 2D and color flow imaging with mild to moderate eccentric MR. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. Blood flow through the RVOT is normal in velocity. No obvious TR. There is no pleural or pericardial effusion seen. There are no obvious cardiac tumors.

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LWVd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	6.4	NM	0.51	1.7	0.55	42	77
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>		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	NM	1.3	1.1		3.1	1.3	NM

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.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

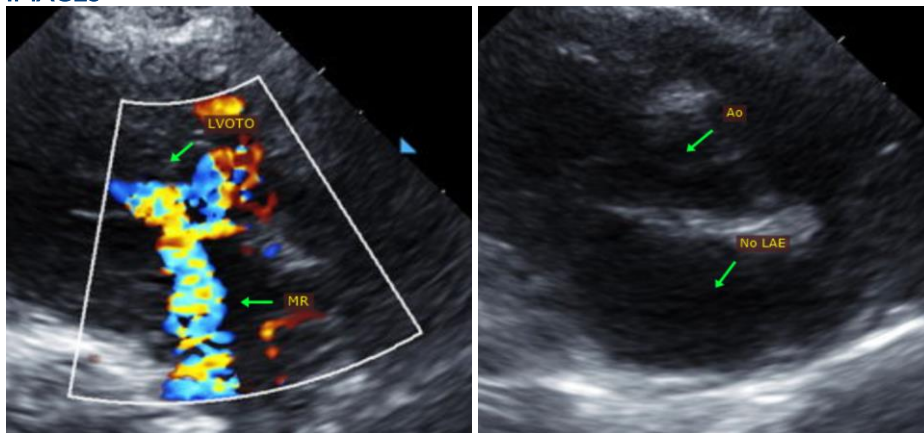
Overtly normal cardiac structure and function. The murmur is due to a dynamic LVOT obstruction and mitral regurgitation secondary to abnormal valve movement and elevated heart rates. There is no significant LV hypertrophy, although regions do measure borderline. There is also remodeling and fibrosis of the left ventricular wall. These changes in total may be indicative of early cardiac disease (HOCM) or may simply represent a normal variant. Serial echocardiography will be necessary to determine progression and clinical relevance of both findings. A screening BP and T4 are recommended.

In patients with persistent LVOT obstruction and an elevated pressure gradient, a beta blocker is often prescribed to lower heart rate and decrease the gradient. In this patient with a mild obstruction and borderline normal LA/LV dimensions, no medications are clearly indicated.

From a structural standpoint, anesthetic risk is currently low. Avoid heart rate stimulating drugs (atropine, glycopyrrolate) unless clinically necessary. Avoid vasodilators such as acepromazine as this can worsen obstruction. Judicious IV fluid rates are recommended to avoid fluid overload in this patient with diastolic dysfunction.

A recheck echocardiogram is recommended in 6-12 months, sooner if any 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.

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