



## PATIENT

Glitch Ellinwood

## SPECIES

Feline

## BREED

DMH

## SEX

Male Neutered

## AGE

12 years

## WEIGHT

10.5lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

G. Gunther, DVM

## HOSPITAL NAME

New Frontier Animal  
Medical Center

## REFERRING VET

Dr. Gunther

## INVOICE

27662

## DATE

12/1/22

## PRESENTING CLINICAL SIGNS

History: History of heart murmur. History of hypertension - controlled by Amlodipine. History of Hyperthyroidism - had I131 in August 2022. Normal BP.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a diffusely hyperechoic endocardium consistent with fibrosis. The papillary muscles are hyperechoic. The left atrium is mildly enlarged in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No MR is noted. No TR is noted. Blood flow through both the LVOT and RVOT is normal in velocity. No AI. No obvious cause for the murmur is identified. No pleural or pericardial effusion seen. 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>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
<b>NORMAL PARAMETER</b>	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
<b>PATIENT</b>	4.8	NM	0.42	1.3	0.41	56	89
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)
<b>NORMAL</b>	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
<b>PATIENT</b>	1.6	1.45	1.38		1.5	1.5	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.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal geriatric cardiac structure and function with normal LV wall measurements. There is mild remodeling and fibrosis of the left ventricular wall however, and this may be indicative of early cardiac disease or may simply represent a normal variant. What is most concerning is the LA measures mildly enlarged, which may be indicative of early restrictive or unclassified disease. No cause for the murmur is identified in this study, making it likely physiologic in origin. Regardless, serial echocardiography will be necessary to determine progression and clinical relevance. No evidence of hypertensive or thyrotoxic cardiomyopathy.

Monitor for any development of clinical signs at home, including labored breathing, cough or signs of a blood clot (paralysis, neurologic change).

Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction,



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isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention. No cardiac medications are clearly indicated.

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A recheck echocardiogram is recommended in 6-12 months to screen for progressive dilation and reassess murmur origin.

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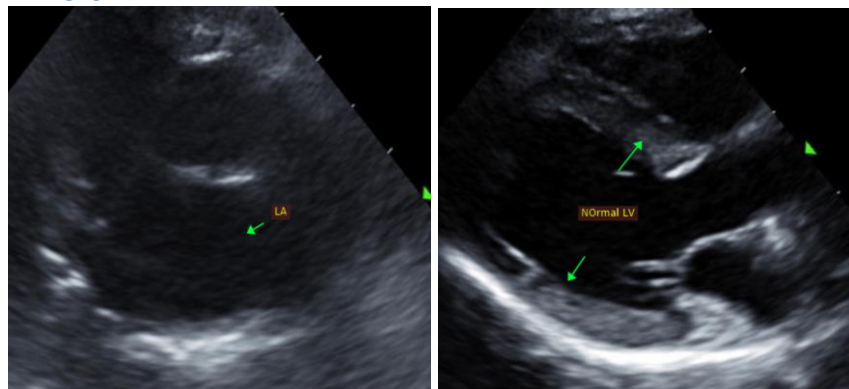
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**IMAGES**



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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