



## PATIENT

Khan Warren

## SPECIES

Feline

## BREED

DSH

## SEX

Neutered Male

## AGE

11 Years

## WEIGHT

8 kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP

## IMAGING PERFORMED BY

Catherine Alexander  
LVT

## HOSPITAL NAME

NorthStar Veterinary  
Sonography PLLC

## REFERRING VET

Dr. Amanda Lovell  
DVM

## INVOICE

12048

## DATE

11/03/25

## PRESENTING CLINICAL SIGNS

Per owner, patient had previous cardiac ultrasound and DVM diagnosed with HCM. This scan is to follow up with routine assessment of heart. No images or previous measurements are available.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	--	NM	0.6	1.65	0.6	45	77
FELINE CARDIAC PARAMETERS	LA/AO (M-mode)	LA/AO HEART BASE (Sisson)	LAD LA MAX 4 Chamber	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	1.6	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	--	1.5	1.48	--	0.7	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and dimension. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. No overt MR on doppler. The **left ventricle** presented borderline increased IVS and free wall dimension. The **myocardium** presented some mild remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window.

## ULTRASONOGRAPHIC FINDINGS

- Overall, normal cardiac structure/function with mild LV myocardial remodeling and borderline increased LV wall dimension.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The left ventricle did not overtly meet definitive HCM criteria exhibiting borderline IVS and free wall



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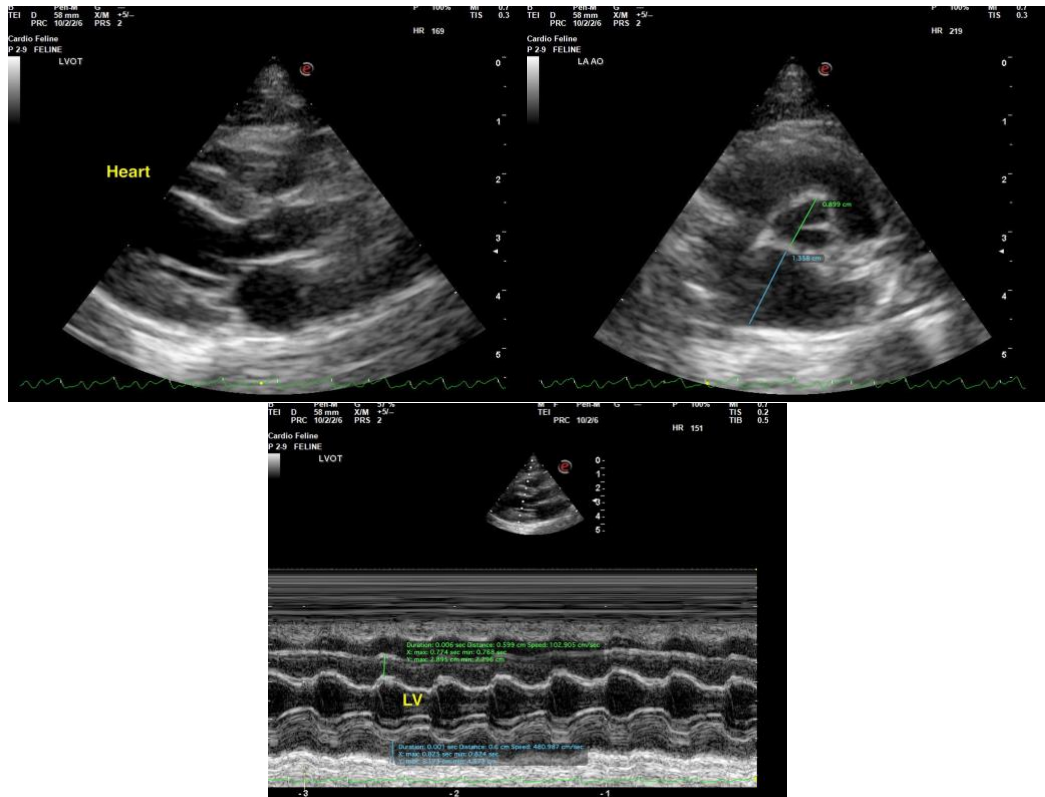
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dimension. This could indicate patient variant or mild HCM phenotype, which would be a rule out diagnosis once the patient is deemed euthyroid and normotensive. Regardless of classification, the lack of LA enlargement indicates the current and future risk of complication is low. Assessment of systemic BP and T4 level if not recently done is recommended. No indication for cardiac medication. Sonographic monitoring is recommended for further assessment and prognosis. Recheck echo in 6-12 months would be ideal or sooner if clinically indicated. No anesthetic contraindications. Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.



The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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