



**PATIENT PRESENTING CLINICAL SIGNS**

Wolfgang Yano

History: Incidental grade 4/6 cardiac murmur. PMI L apex. No clinical signs.

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Feline

The echocardiogram in this patient demonstrated normal **left atrial** size and structure with no evidence of “smoke” or thrombi. The cranial and caudal **mitral valve** leaflets appeared mildly thickened with some insufficiency noted on Doppler. Systolic anterior motion of the mitral valve was noted at higher heart rates, yet not present at lower heart rates. The **left ventricle** presented excessive free wall and septal thicknesses with hypertrophic thicknesses compared to normal for this species. The **myocardium** presented essentially normal echogenicity without immediate signs of fibrotic or ischemic disease. **Contractility** of the ventricular walls was considered excessive for this patient evidenced by the elevated fractional shortening measurement. The **left ventricular outflow** tract demonstrated turbulent laminar flow. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated linear morphology. The **right ventricle** was of normal size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter. No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The **mediastinum** was free of masses in the visible window.

**BREED**

Domestic Shorthair

**SEX**

Neutered male

**AGE**

3 years

**WEIGHT**

10 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Mandeville

**HOSPITAL NAME**

BetterVet

**REFERRING VET**

Dr. Mandeville

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	1.07	0.6	56	90
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	1.3	1.2			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							

**ULTRASONOGRAPHIC FINDINGS**

**INVOICE**

96740

Minor form of hypertrophic cardiomyopathy, not clinically significant. Mild dynamic obstruction, clinically compensated.

Slightly vegetative mitral valve.

**DATE**

3/9/22



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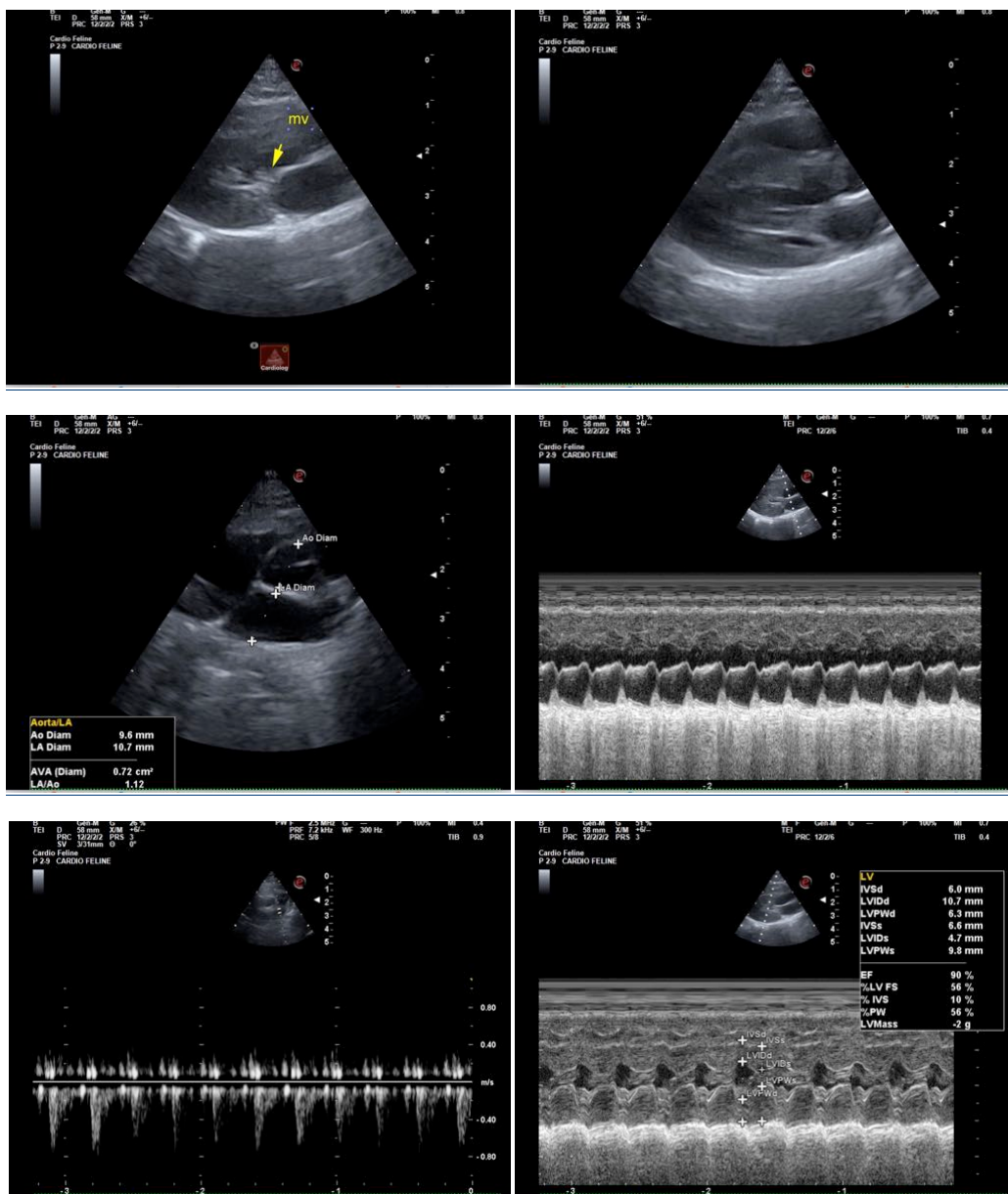
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

If exercise intolerance is an issue Atenolol therapy can be considered for a target heart rate of less than 180 bpm. SAM was not present constantly during tachycardic episode during elevated heart rates. Turbulence at the left ventricular outflow tract and mitral valve was noted. Recheck sonogram is recommended in 6 months or earlier if murmur grade increases or clinical signs initiate.



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



**PATIENT**

can be of any further assistance please contact me.

Wolfgang Yano

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com

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