



PATIENT

Cullen Moore

SPECIES

Feline

BREED

DSH

SEX

Neutered Male

AGE

18 years

WEIGHT

7.2 lbs

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Dr. Gromalak

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Bittner

INVOICE

12268

DATE

9/20/21

PRESENTING CLINICAL SIGNS

Weight loss, thin Grade III/VI systolic murmur CBC WNL, Chem WNL, T4 WNL 4.6, elevated proBNP - 269 (N<100)

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		210	0.60	1.4	0.60	45.7	80.5
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	1.4	1.1	1.4	1.0	1.0	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 structure. 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. The **left ventricle** presented borderline hypertrophic changes with primarily maintained linear contour. A focal area of IVS hypertrophy present in the basilar aspect of the IVS in the area of the left ventricular outflow tract was present, measuring approximately 0.9 x 0.8 cm. Mild papillary muscle hypertrophy in the left ventricle lumen was present. The **myocardium** presented some minor 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 subjective mild turbulent flow with subjectively unremarkable overall 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 dilation due to cuor pulmonale, overt stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window.



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ULTRASONOGRAPHIC FINDINGS

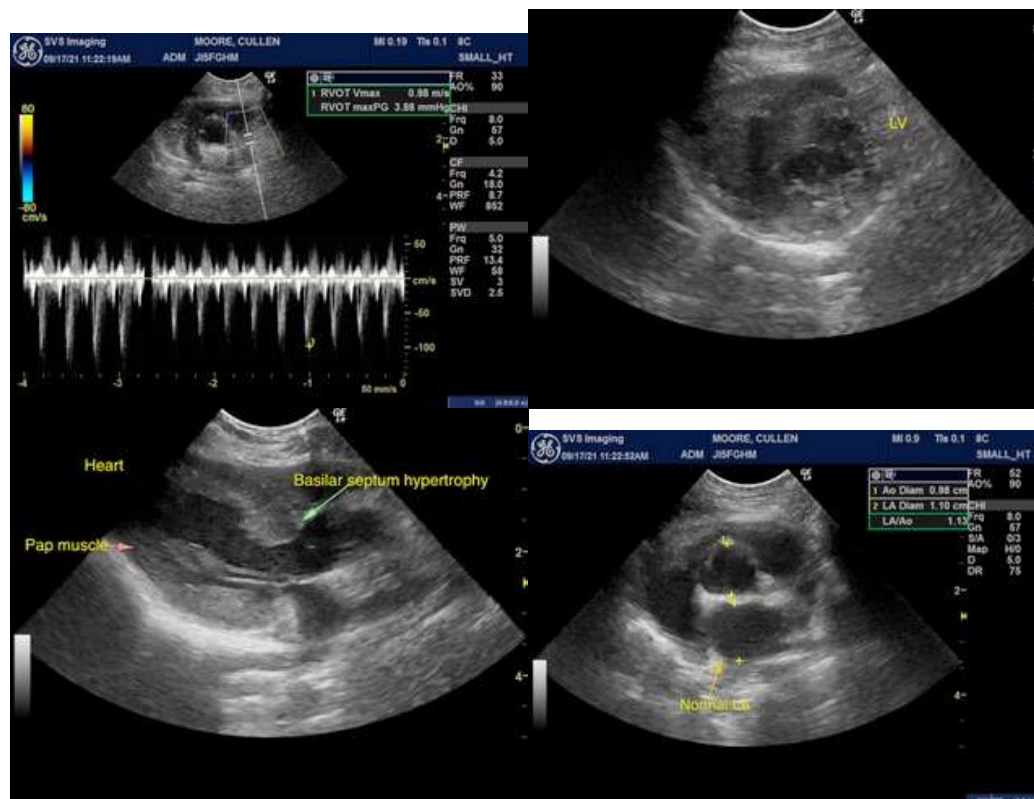
Primary Findings

- Myocardial remodeling with basilar IVS hypertrophy - consistent with mild fixed LVOT obstruction
- Normal left atrium

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is most consistent with turbulent blood flow in the left ventricular outflow tract during systole owing to basilar IVS hypertrophy and mild fixed LVOT obstruction. Potential for minor, concurrent systolic anterior motion of the mitral valve cannot be definitively excluded, yet was not overtly visualized. Potential for atypical hypertrophy cardiomyopathy is possible. This is a rule-out diagnosis assuming no evidence of hyperthyroidism or systemic hypertension. Assessment of systemic blood pressure is recommended with continued monitoring of T4 levels.

At this time, the lack of left atrium enlargement, as well as overall lack of left or right heart chamber enlargement, indicates that the risk of future complication is relatively low. No overt indication for cardiac medications. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease develop.





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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.

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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.

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info@SonoPath.com

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