



**PATIENT PRESENTING CLINICAL SIGNS**

Lewis Atkinson History: new grade 4 continuous murmur heard today. requires anesthetic for dental procedure

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Feline

BREED

Ragdoll

SEX

Neutered Male

AGE

11 Years

WEIGHT

4.45 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Reschny

HOSPITAL NAME

Oxford County VC

REFERRING VET

Dr. Halfon

INVOICE

13365

DATE

1/10/22

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	--	187	0.62	1.23	0.60	53.1	87.2
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	1.2	1.1	1.2	1.4	0.94	NM	

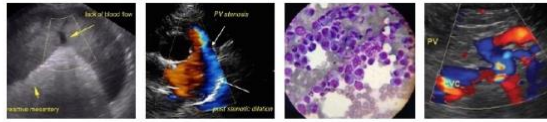
Adapted from June Boon, Veterinary Echocardiography, 1998  
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

**Cardiac Presentation**

The echocardiogram in this patient demonstrated normal **left atrial** size and structure with no evidence of "smoke" or thrombi. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics without overt evidence of insufficiency on color doppler assessment. The **left ventricle** presented borderline free wall and septal hypertrophic changes, specifically in the area of the basilar interventricular septum in the area of the LV outflow tract. The **myocardium** presented essentially normal echogenicity without immediate signs of fibrotic or ischemic disease with minor evidence of age-related myocardial remodeling. **Contractility** of the ventricular walls was within normal limits as evidence by the fractional shortening measurement. The **left ventricular outflow** tract demonstrated potential for minor 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.

**ULTRASONOGRAPHIC FINDINGS**

- Borderline IVS and LV freewill hypertrophic changes, including focal basilar septal hypertrophy in area of LV outflow tract
- Minor myocardial remodeling
- Normal left atrium



**PATIENT INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Lewis Atkinson

Potential for emerging HCM is possible yet would be considered a rule out diagnosis, assuming the patient is euthyroid and normotensive. The LV changes may also be secondary to myocardial remodeling. Potential for essential physiologic or flow murmur owing to focal basilar IV hypertrophy within LV outflow tract possibly suggestive of mild fixed LVOT obstruction possible. However, the measured LVOT velocity did not indicate significant obstruction. Regardless, the normal overall cardiac presentation, including no evidence of left or right heart chamber enlargement or systolic dysfunction, indicate that the risk of future complication at this time is low. No indication for cardiac medications. No overt anesthetic contraindications, assuming normal blood pressure. Recheck echocardiogram suggested in 6 months or sooner if the murmur persists/progresses or if clinical signs suggestive of cardiac disease initiate.

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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.

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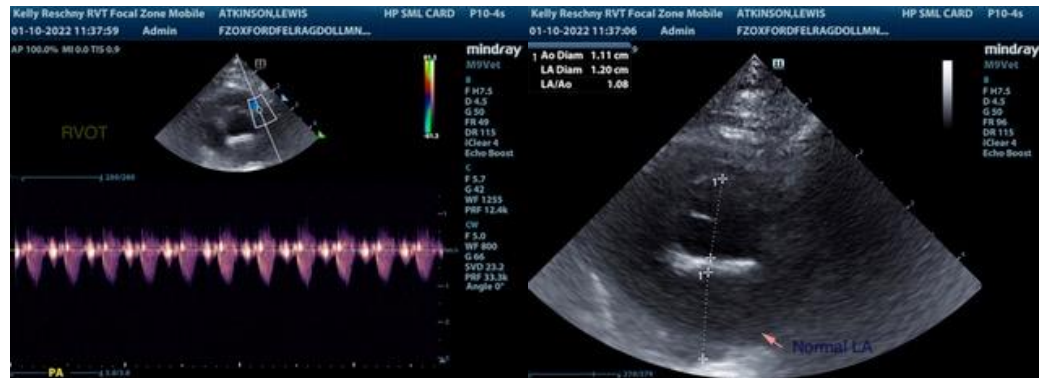
<https://www.antechdiagnostics.com/cadet-braf>

**WEIGHT**

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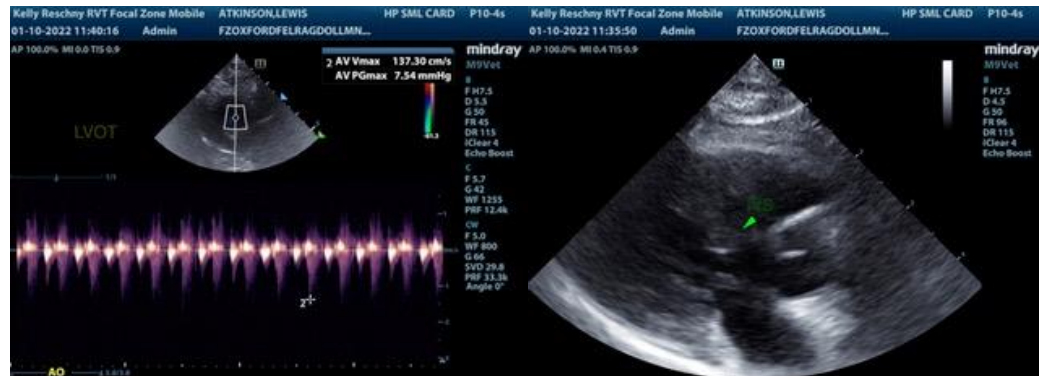
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.



## PATIENT

Lewis Atkinson

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**  
[info@SonoPath.com](mailto:info@SonoPath.com)

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