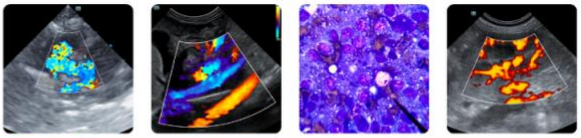



**PATIENT**

Layla Macdonald

**SPECIES**

Feline

**BREED**

Siberian

**SEX**

Spayed Female

**AGE**

13 Years 2 Months

**WEIGHT**

9.4 Pounds

**INTERPRETED BY**

James Wood, DVM, DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Vincent Ravancho, CVT

**HOSPITAL NAME**

Englewood VC

**REFERRING VET**

Dr. Ezik

**INVOICE**

37279

**DATE**

5/29/26

## PRESENTING CLINICAL SIGNS

History: Pre-Anesthetic cardiac evaluation due to ECG abnormalities including right axis deviation and sinus bradycardia noted on recent screening ECG. Evaluate for underlying structural or myocardial disease despite absence of audible murmur or arrhythmia on physical exam. Senior feline patient. Previous Echo screening inv#14552 in 2020. No medications.

## 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** | 4.3 | 115 | 0.45 | 1.27 | 0.49 | 44.1 | 79.2 |
| **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** | -- | 1.17 | 1.24 | | 0.6 | 0.64 | NM |
| Adapted from June Boon, Veterinary Echocardiography,1998<br>Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705 | | | | | | | |

### *Cardiac Presentation*

The mitral valve leaflets are normal and there is no mitral regurgitation. The left atrial size is normal. There is no evidence of systolic anterior motion of the mitral valve and no evidence of a left ventricular outflow tract obstruction. Left ventricular systolic function normal. Transmitral inflow E and A waves suggest a delayed relaxation pattern of LV filling. This is suspected to be an age-related finding in this patient. There is no evidence of left ventricular concentric hypertrophy. There is normal right atrial size without evidence of tricuspid regurgitation. There is no prolapse of the tricuspid valve leaflets and no evidence of pulmonary hypertension on the images provided. The right ventricle appears normal in structure and function subjectively. The aortic and pulmonary valves have normal morphology, and the corresponding outflow velocities are within normal limits. There is no evidence of pulmonary or aortic valve insufficiency. The aorta appears normal. The pulmonary artery and associated branches appear normal. There is no evidence of pleural effusion, pericardial effusion, or intracardiac masses.

## ULTRASONOGRAPHIC FINDINGS

- Structurally normal heart on echo
- Bradycardia- suspect sinus bradycardia versus 2:1 second degree AV block

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

**PATIENT**

Layla Macdonald

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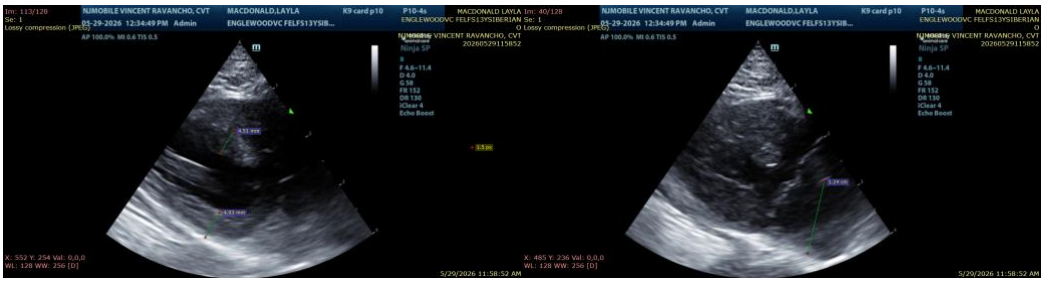
The echocardiogram still showed no evidence of underlying structural disease, such as cardiomyopathy. No specific cardiac medications are recommended for structural disease and there is no contraindication to anesthesia from a structural cardiac standpoint. However, the bradycardia is progressive on this exam. A diagnostic ECG was not included on this consult. However, a six-lead ECG is recommended. If sinus bradycardia persists, an atropine response test is recommended at 0.04 mg/kg IM. Repeat ECG at 30 minutes. A positive result would be the development of sinus tachycardia, the heart rate >180, and resolution of any AV block if present. The reported ECG findings suggested a sinus bradycardia. It's worth noting that cats around this heart rate can sometimes have 2:1 second degree AV block, with blocked P waves superimposed on the T wave of the conducted beat and can appear as sinus bradycardia. A positive atropine response test is recommended prior to anesthesia to ensure that the patient's intrinsic heart rate can be responsive under anesthesia to treat hypotension.



**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.

James Wood, DVM, DACVIM (Cardiology)

info@SonoPath.com