



**DATE PRESENTING CLINICAL SIGNS**

11.10.25 History: Wheezing. Hyperthyroidism. PE: increased lung sounds on the right.  
-Pertinent abnormal PE/Chem/CBC/UA Results: ProBNP elevated around 244. Chem: wnl. Cbc: wnl. T4: 1.8  
-Current medications: 5mg Methimazole SID.

**PATIENT**

Rowan Thorseth -Sedation used: Not required to complete full diagnostic ultrasound.  
-Pertinent previous ultrasound results: No previous.  
-STAT: Not requested.  
-Imaging performed by: Stephanie Warga RDCS, RVT.

**SPECIES**

Feline

**BREED**

DSH

**SEX**

MN

**AGE**

2.1.09

**WEIGHT**

7.5lbs

**ELECTROCARDIOGRAPHIC FINDINGS**

A six lead ECG is available at 25mm/s; 5mm/mV. Baseline artifact impedes careful interpretation; however, the average heart rate is 120bpm. The underlying rhythm is sinus in origin. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. The MEA is shifted left. VPCs and APCs are seen throughout. Primarily single abnormal beats; however, brief runs of SVT is suspected. No ventricular tachycardia or other dysrhythmias are observed.

ECG diagnosis: Sinus bradycardia with ventricular and supraventricular arrhythmias.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension. There is a mildly hyperechoic endocardium consistent with mild fibrosis. The endocardium also appears mildly remodeled. The papillary muscles are normal in size and hyperechoic. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. No obvious valve regurgitation. Blood flow through both the LVOT and RVOT is normal in velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors. Premature beats noted throughout the study.

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**HOSPITAL NAME**

Harborside Mobile VC

**REFERRING VET**

Dr. Hawkins

**INVOICE**

45687

**CARDIAC CHART**

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LVWd (cm) (Moise, Pipers)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	3.5-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	3.4	NM	0.45	1.6	0.46	53	87
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Swe) (Abbott)	LA 2D short axis Base view (cm) (Abbott)		LVOT VEL (m/s)	RVOT VEL (m/s)	E max (m/s)
NORMAL	<1.5	<1.3	<1.2		<1.6	<1.3	<0.9
PATIENT	NM	1.3	1.2		0.8	0.9	NM

Adapted from June Boon, Veterinary Echocardiography, 1998  
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

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

Overtly normal cardiac structure and function. The LV wall thickness is normal, and there is no evidence of elevated left atrial pressure or underlying pathology at this time. There is mild remodeling and fibrosis of the left ventricular wall, which is considered likely a normal age-related finding. Flow through the great vessels is normal, and no significant valve regurgitation is identified.

No obvious structural cause for BNP elevation is seen here. A flaw of the BNP test is false positives, which may be the case; however, alternative causes for elevation should be considered, including decreased renal clearance, hypertension, etc. If no obvious cause is identified, reassessing this patient in 6-12 months is recommended to ensure early disease was not missed.

The ECG does show frequent arrhythmias are present with VPCs and APCs identified. The VPCs appear to be singles only; however, brief runs of SVT are suspected. The underlying rhythm is sinus in origin; however, the resting HR is relatively low for a cat in hospital, which may suggest a concurrent sinus node issue. Given the totality of the findings in a cat with underlying bradycardia and no symptoms, no treatment is warranted at this time. That being said, monitor for signs of sustained arrhythmias, including lethargy or collapse. A left axis deviation is a benign conduction abnormality that is common in older cats. Full systemic screening is recommended in this senior cat in search of possible underlying causes of the arrhythmia.

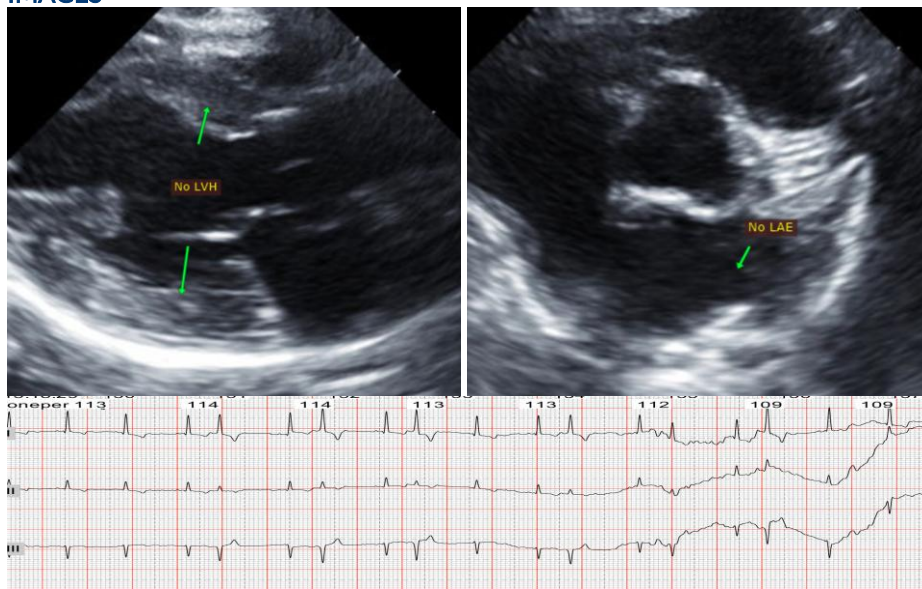
Anesthesia is not advised in this case.

### **PLAN**

Baseline BP is recommended. Consider full systemic evaluation due to arrhythmia.

Recommend recheck echocardiogram and ECG in 6 months, sooner if any collapse or any additional clinical issues arise.

### **IMAGES**





**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. This report was generated using transcription software, and minor dictation errors may be present. 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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