



## PATIENT

Stella Gateway

## SPECIES

Canine

## BREED

Mix

## SEX

F

## AGE

6 yrs

## WEIGHT

19 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Warren AH

## REFERRING VET

Dr. Amber

## INVOICE

14768

## DATE

8/31/22

## PRESENTING CLINICAL SIGNS

Sinus arrhythmia w/ sinus pauses. Grade II HM left side  
Abnormal PE/Chem/CBC/UA Results: Lyme +

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>	5.5			1.45	45.8	80.7	0.2
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	219	1.7	0.9		2.7	2.4	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. No evidence of valvular prolapse or chordae tendinea rupture. Mild eccentric MR was present on doppler. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. Normal LVOT velocity was present. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). Normal RVOT velocity was present. No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window. Subjective tachyarrhythmia was present.



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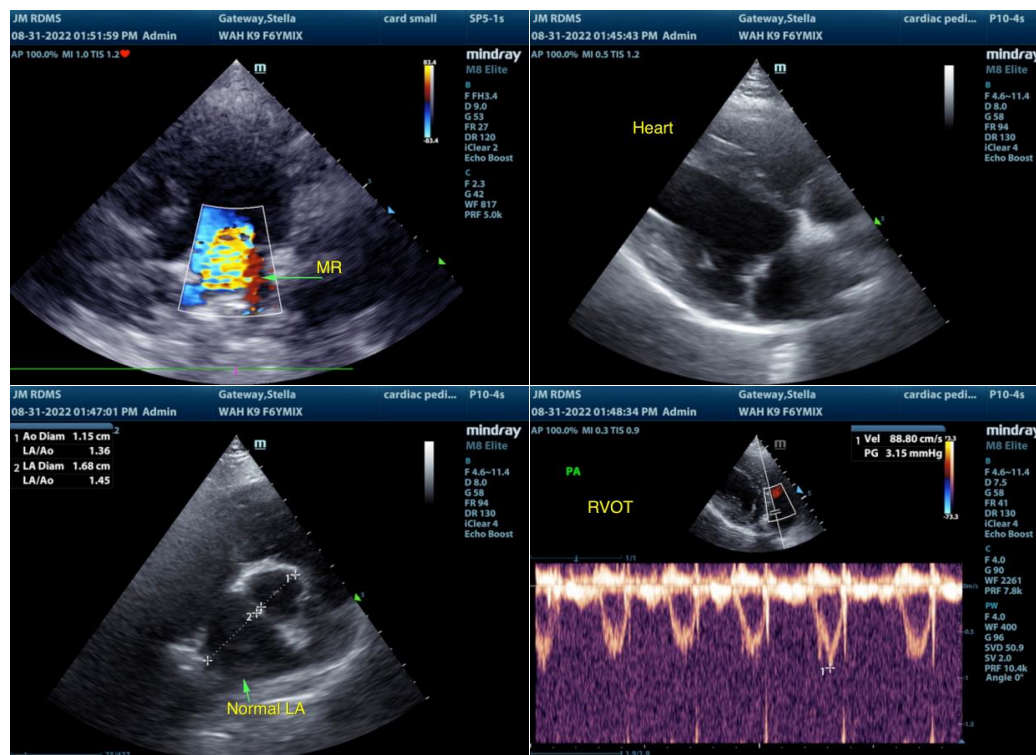
## ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function
- Mild eccentric MR
- Subjective tachyarrhythmia

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of structural or functional cardiomyopathy i.e. left or right heart chamber enlargement or LV systolic dysfunction. The source of the murmur appears to be secondary to compensated mitral valve insufficiency without evidence of left atrium enlargement indicating that the risk of complications secondary to the MR is low. No indication for medications used to treat structural cardiomyopathy. No overt evidence of myocarditis or infiltrative neoplasia was noted.

Further assessment of the arrhythmia with ECG +/- Holter Monitor is recommended. Conservative monitoring of the murmur at this stage is recommended with a potential recheck echocardiogram in 6-12 months, sooner if murmur intensity increases or if clinical signs suggestive of heart disease arise.





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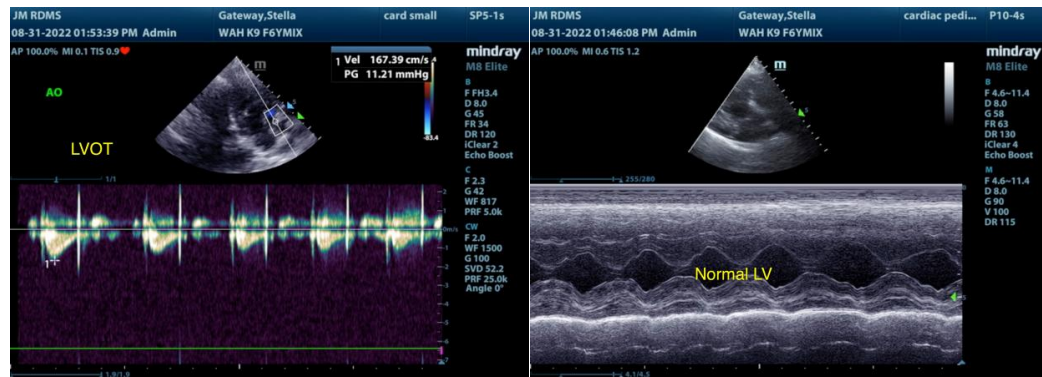
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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