



## PATIENT

Shelby Cassatly

## SPECIES

Canine

## BREED

Maltese Mix

## SEX

FS

## AGE

11 years

## WEIGHT

11.6

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Brenda King VMD

## REFERRING VET

Dr. King

## INVOICE

13390

## DATE

2/22/22

## PRESENTING CLINICAL SIGNS

Cardiac Workup. No current meds.

Abnormal PE/Chem/CBC/UA Results: ALT 419, ALKP 204, GGTP 14, T4 1.3

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.5	1.2	1.3	1.5	47.1	80.0	0.27
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	101	1.2	1.1		2.8	2.9	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric insufficiency. 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. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment revealed mild vegetative changes with minor TR. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. No overt evidence of significant arrhythmia was noted.



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## ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1)
- Minor TR - estimated pulmonary pressure gradient not consistent with clinical pulmonary hypertension

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is secondary to chronic degenerative valvular changes with eccentric mitral valve insufficiency. The lack of left atrium enlargement indicates that the relative risk secondary to mitral valve Insufficiency for clinical signs is relatively low. However, prognosis at this stage is highly variable, and serial sonographic monitoring is required for further prognosis. No other clinical issues such as systolic dysfunction or clinical pulmonary hypertension were present. In a nonclinical patient without evidence of clinical signs, cardiac medications are not specifically indicated. Conservative monitoring at this stage would be appropriate. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease arise.

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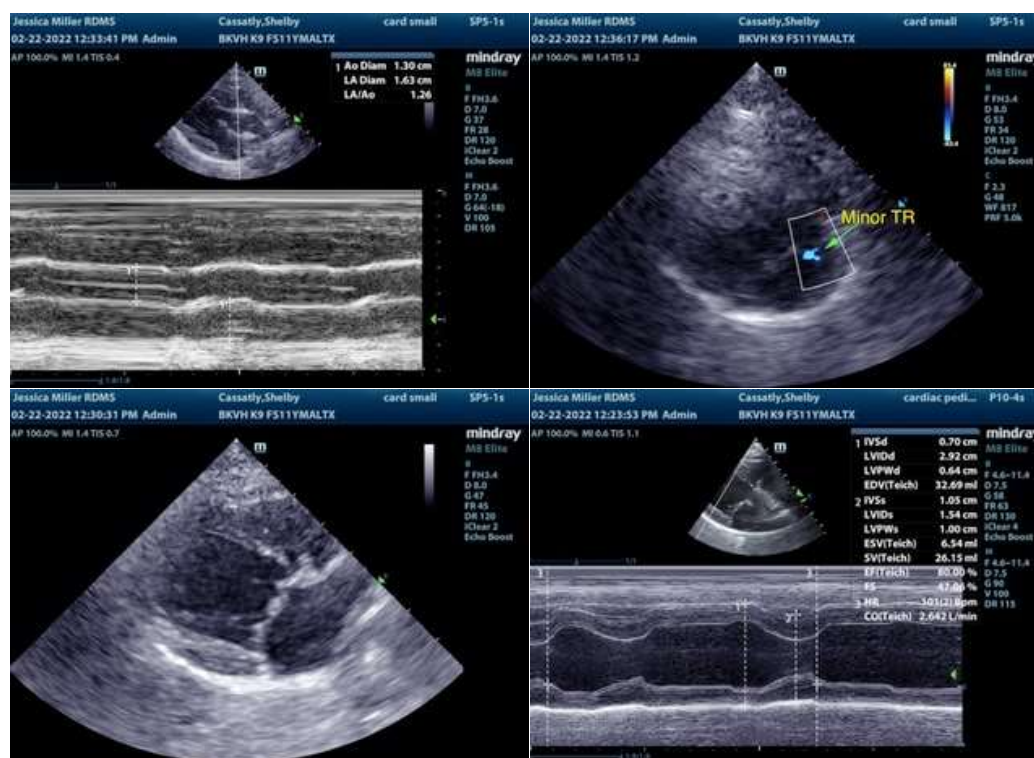
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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