



## PATIENT

Bailey Zenolzion

## SPECIES

Canine

## BREED

Chihuahua

## SEX

FS

## AGE

9 years 10 months

## WEIGHT

9 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Newton Vet

## REFERRING VET

Dr. Wyman-Greenwald

## INVOICE

12680

## DATE

11/30/21

## PRESENTING CLINICAL SIGNS

Grade III/VI systolic murmur progressed over the past few months. No clinical signs.

## 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.8	<1.0	1.4	1.42	39.1	72	0.23
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)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	157	1.0	0.8		2.6	2.39	

## Cardiac Presentation

The echocardiogram in this patient demonstrated mildly enlarged **left atrial** size based on 3 different LA measurement methods. Subtle deviation of the Interatrial septum towards the right atrium, indicative of suspected mild increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis with mild valvular prolapse. No evidence of chordae tendinea rupture was noted. Doppler indicated measurable eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with minor subjective increased left ventricle volume. 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 demonstrated adequate linear morphology. Color doppler assessment revealed trace tricuspid valve insufficiency. 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.

Rapid view of the cranial abdomen revealed no evidence of hepatic congestion or cranial abdominal ascites.



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**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

- Chronic mitral valve disease (ACVIM early stage B2)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is chronic degenerative valvular changes and mild valvular prolapse with secondary eccentric mitral valve Insufficiency. The mild left atrium enlargement indicates the risk of future complication is mildly elevated, although prognosis at this stage is highly variable. In a nonclinical patient with only mild left heart changes, cardiac medications are not specifically Indicated based on Epic Study Criteria. It would be reasonable to conservatively monitor at this stage, while serial echocardiographic monitoring is required for further prognosis. However, given the mild left atrium and subjective left ventricle enlargement, Pimobendan at this stage would not be contraindicated. Anesthetic risk if needed is considered mild. The following anesthetic protocol may be considered if needed. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs consistent with heart disease develop.

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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.

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

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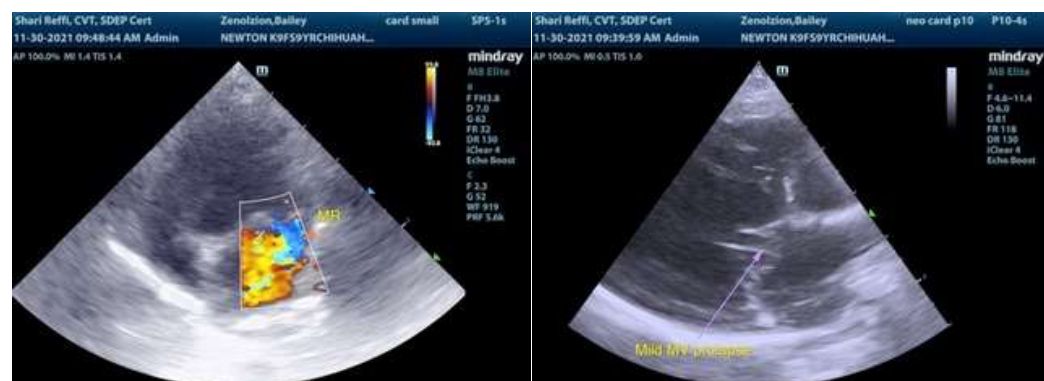
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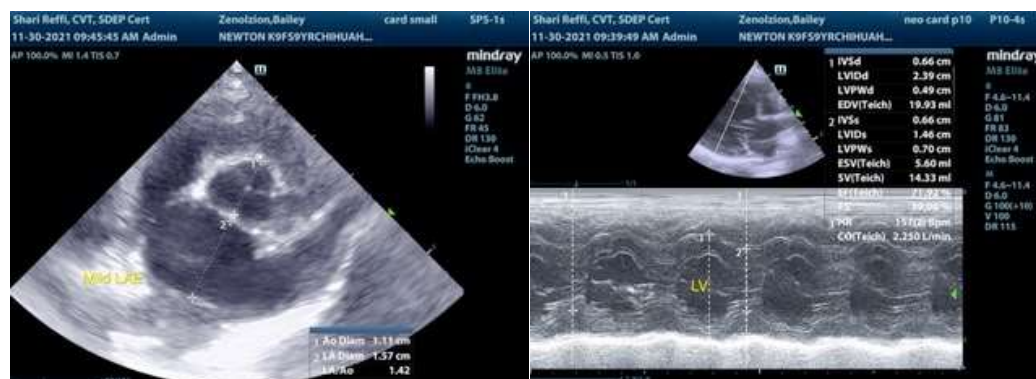
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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