



PATIENT

Ruby Ezzo

SPECIES

Canine

BREED

Chihuahua

SEX

Spayed Female

AGE

12 Years 5 Months

WEIGHT

4.8 pounds

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP (Canine
/ Feline Practice)

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Smithfield Animal
Hospital

REFERRING VET

Dr. Boe

INVOICE

13007

DATE

01/08/2026

PRESENTING CLINICAL SIGNS

~4/6 heart murmur heard on PE Simparica trio

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (M-Mode)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	Up to 1.6	28-40	40-100	<0.6
PATIENT	5.2	3.2	NM	2.0	43	76	0.25
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LAD LA MAX 4 Chamber	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				
PATIENT	152	1.0	0.6	--	2.4	2.5	--

Cardiac Presentation

The echocardiogram in this patient demonstrated mild to moderate increased **left atrial** dimension based on 2 different LA measurement methods. The cranial and caudal **mitral valve** leaflets presented thickening consistent with endocardiosis with valvular prolapse. Doppler indicated moderate to severe eccentric MR. The **left ventricle** presented with mild increased dimension. 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 mild thickening with mild TR on doppler. 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 cardiac / pericardial tumors was visible.

ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with valve prolapse (ACVIM B2).
- TV insufficiency- estimated pulmonary pressure gradient suggestive of mild increased pulmonary pressure with no overt clinical pulmonary hypertension.



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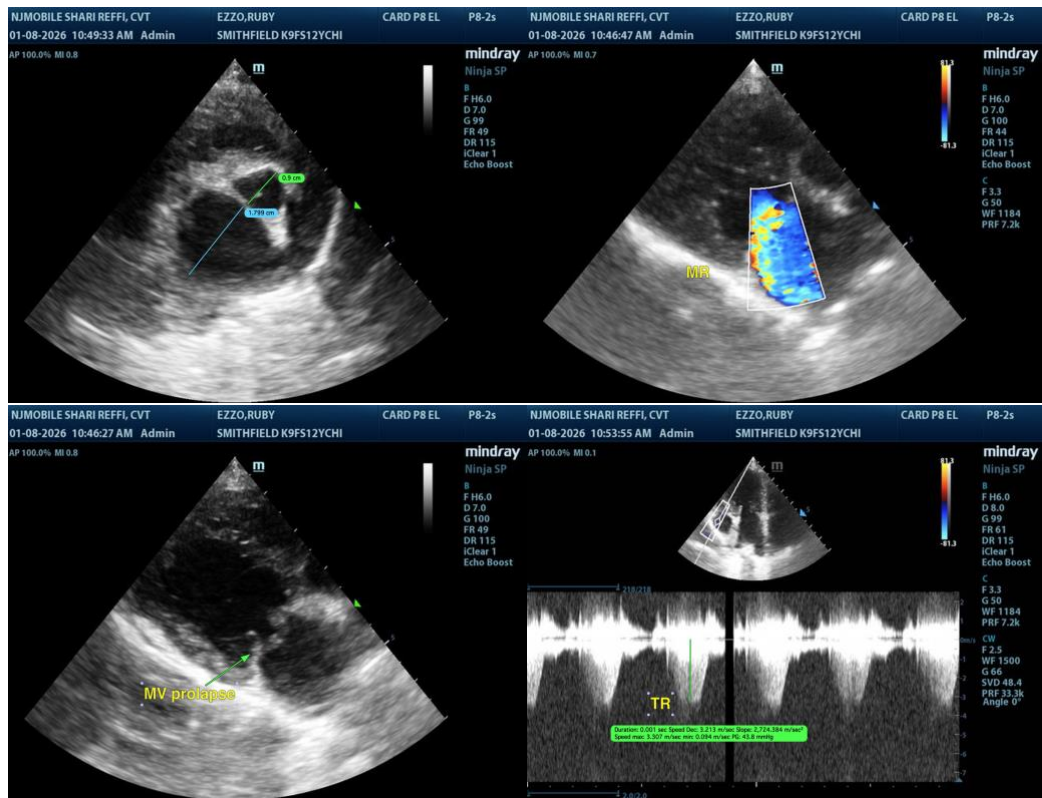
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is elevated, yet overall, the heart appears stable. No other clinical issues such as LV systolic dysfunction or clinical pulmonary hypertension. Pimobendan 0.3 mg/kg BID is recommended. No overt indication for additional medication. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echo cardiogram is suggested in 6 months, sooner if clinical signs arise.

Cardiac anesthetic risk is considered mild to moderate yet potentially mildly reduced once on Pimobendan for 3-5 days. If required, the following protocol is suggested with clinical monitoring and appropriate to judicious IV fluid administration. 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.





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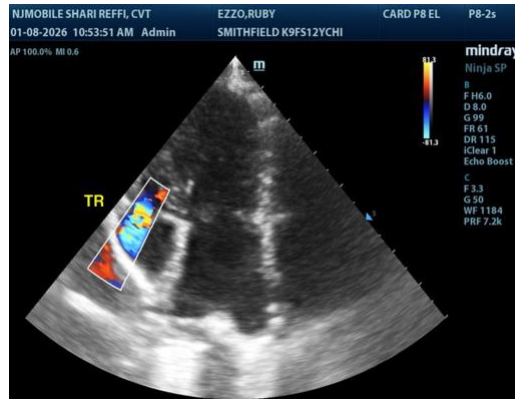
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

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