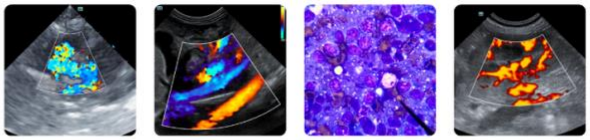

PATIENT

Ruby McGrath

SPECIES

Canine

BREED

Shih Tzu

SEX

Spayed Female

AGE

11.4 Years

WEIGHT

18

INTERPRETED BY

R. McKenzie Daniel, DVM, DABVP

IMAGING PERFORMED BY

Dr. Sorbo

HOSPITAL NAME

JM Pet Resort & Veterinary Clinic

REFERRING VET

Dr. Sorbo

INVOICE

12451

DATE

11/24/25

PRESENTING CLINICAL SIGNS

Grade 2-3/6 left-sided heart murmur (likely mitral valve) - r/o mitral valve disease, tricuspid regurgitation, physiologic murmur. BP - 160

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	--	2.3	NM	1.15	44	76	0.2
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	NM	1.3	0.95	--	2.2	2.6	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** dimension based on 2 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented mild thickening consistent with mild endocardiosis. No overt or definitive significant MR on doppler. Doppler indicated measurable 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 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. Noncongested liver was noted.

ULTRASONOGRAPHIC FINDINGS

- Overall normal cardiac structure/function.

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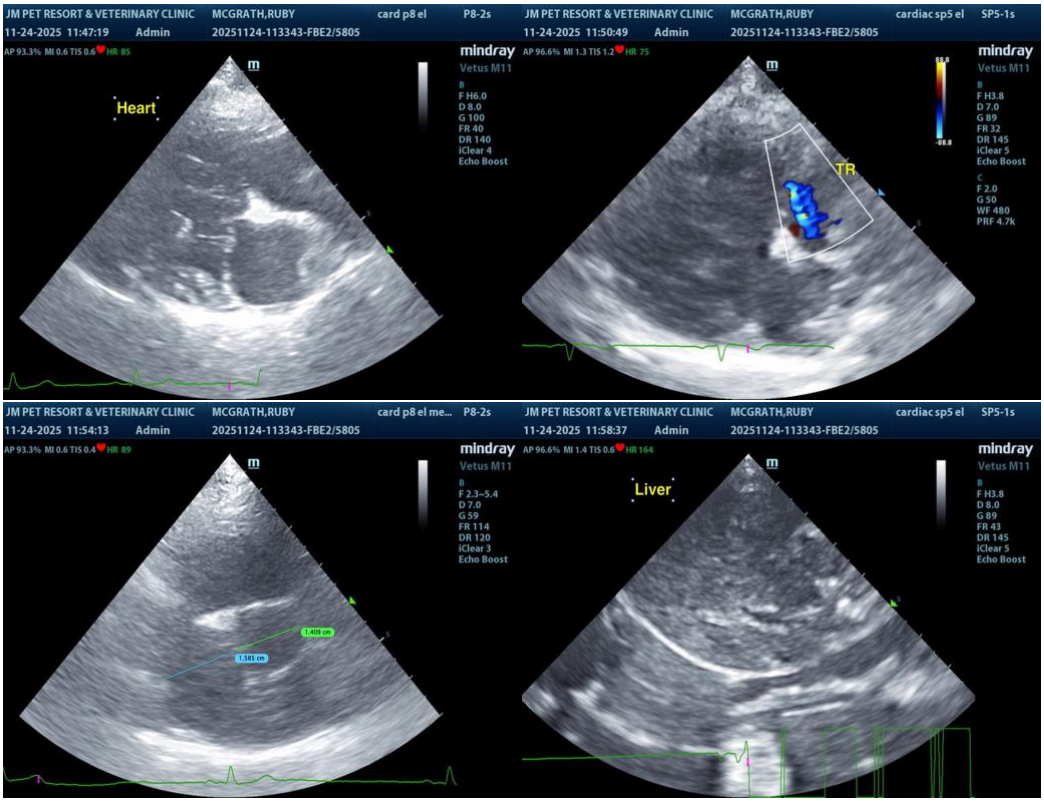
- Mildly thickened mitral/tricuspid valve with mild TR on doppler- no evidence of clinical pulmonary hypertension.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The only source of the murmur is the mild TR which is of questionable origin given murmur description. Mild nonobvious MR given evidence of mild thickened mitral valve leaflets may be suspected. Regardless of murmur classification, the hemodynamic effects of the murmur are low without evidence of left/right heart chamber enlargement or clinical pulmonary hypertension. No indication for cardiac medication. Conservative monitoring of the murmur going forward is advised with recheck echo suggested in 6-12 months or sooner if increase in murmur intensity or if clinical signs arise. No anesthetic contraindications. 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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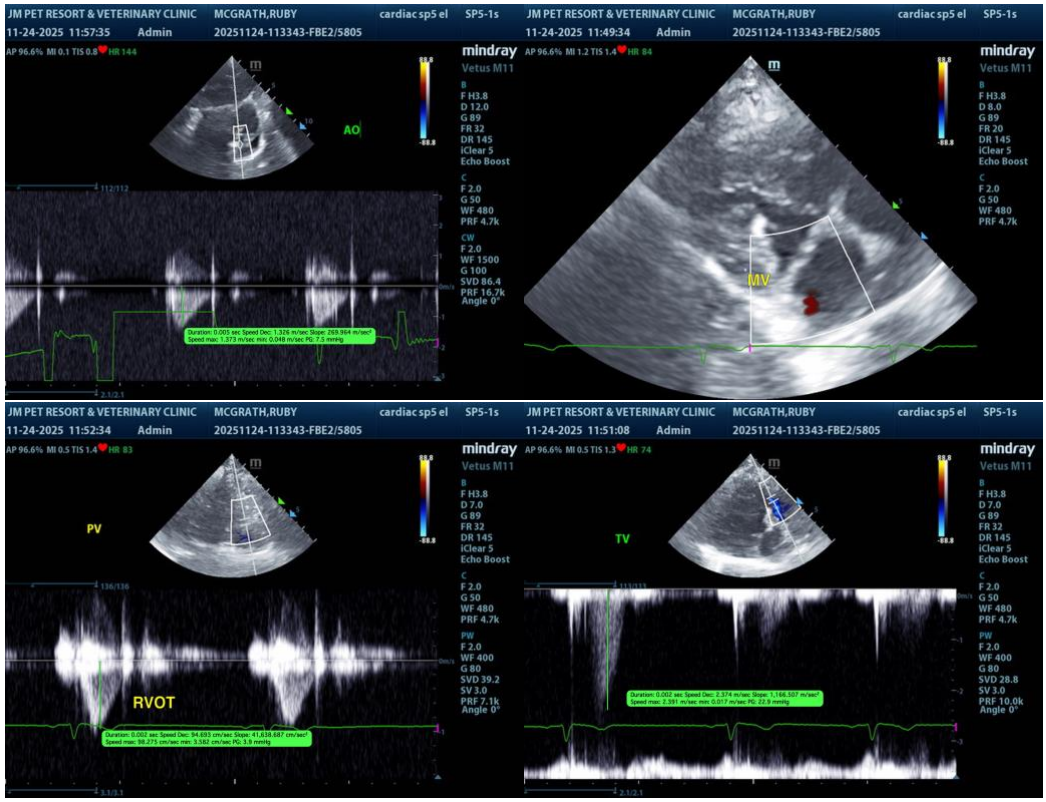

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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