



PATIENT PRESENTING CLINICAL SIGNS

Emma Gold Grade 3/6 heart murmur

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

SPECIES

Canine

BREED

Golden Retriever

SEX

FS

AGE

6yr

WEIGHT

68lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi CVT

HOSPITAL NAME

Warren Animal
Hospital

REFERRING VET

Dr Brian

INVOICE
24646

DATE
04/27/2026

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	--	--	--	1.24	36	67	0.3
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	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	151	1.3	0.95	68lb	4.1	3.9	--

Cardiac Presentation

The echocardiogram in this patient demonstrated normal left atrial size based on 2 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 overt MR 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 measured LVOT velocity. 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. No overt TR on Doppler. 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 measured RVOT velocity. No visible pericardial or free pleural fluid was noted. The cranial mediastinum and pericardial and extra-cardiac regions were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

Primary

- Normal cardiac structure /function



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of clinical issues such as left or right heart chamber enlargement, LV systolic dysfunction, significant valvular insufficiencies, evidence of stenotic disease, arrhythmia, or clinical pulmonary hypertension. The definitive cause of the murmur was not identified. Assuming no volume changes such as dehydration or anemia, a benign flow murmur is probable. A small non-visualized flow abnormality is not excluded. Regardless of classification, the hemodynamic effects of the murmur are low. Monitoring of the heart murmur is recommended without indication for cardiac medications. Recheck echocardiogram is recommended in 6-12 months, sooner if murmur intensity increases or clinical signs arise.

Cardiac anesthetic risk is considered low. If required, the following protocol is recommended. 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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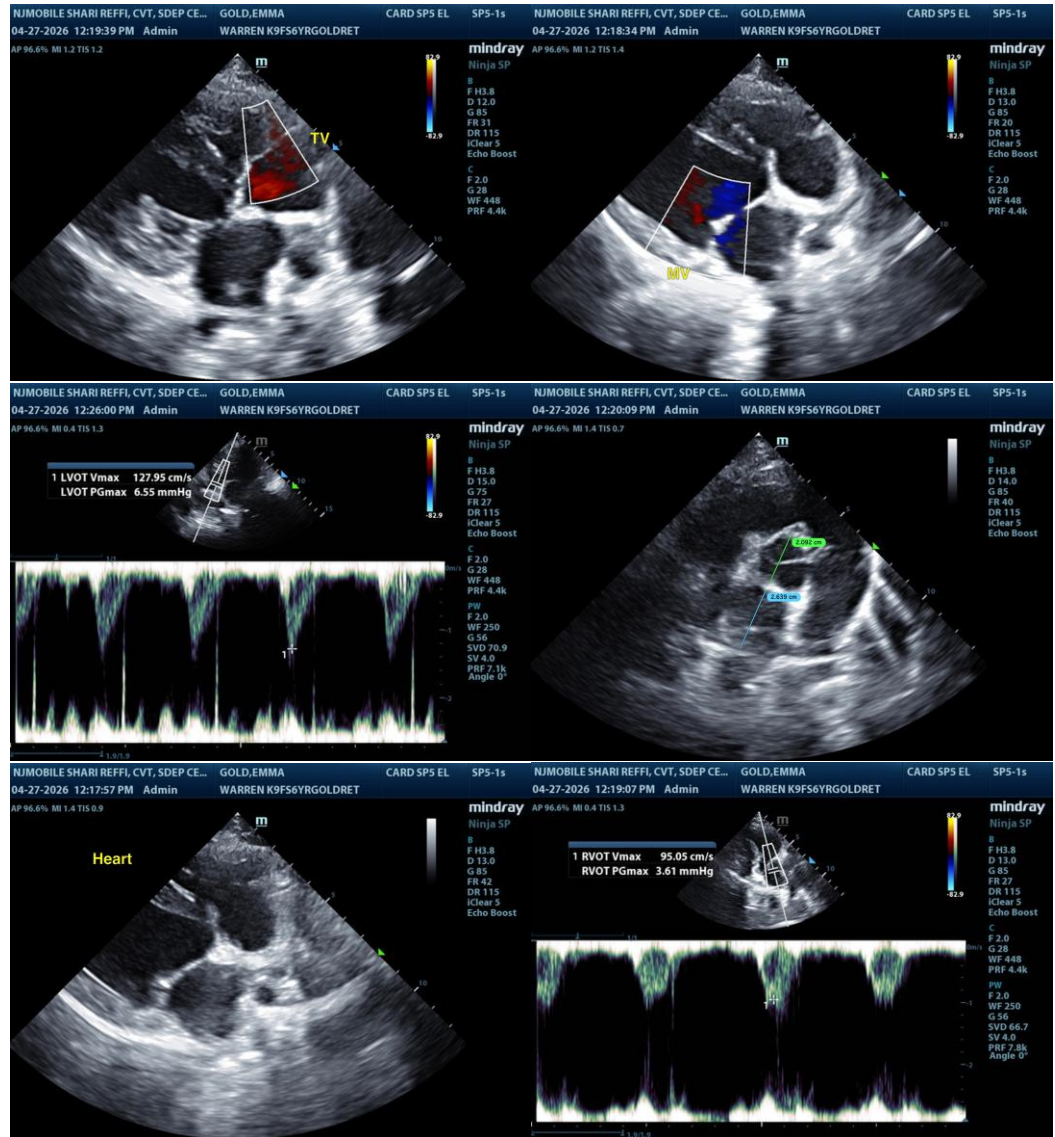
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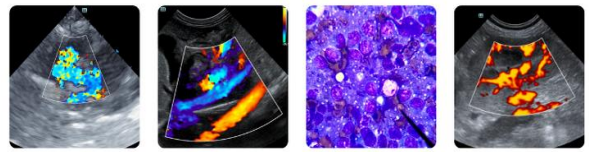
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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



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