



## PATIENT

Mac Golf Club

## SPECIES

Canine

## BREED

Collie

## SEX

M

## AGE

13 years

## WEIGHT

52.6 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Shari Reffi, CVT

## HOSPITAL NAME

Summit Dog and Cat  
Hospital

## REFERRING VET

Dr. Lepkowski

## INVOICE

17269

## DATE

7/18/23

## PRESENTING CLINICAL SIGNS

Exercise intolerance. No current meds.

## 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	<1.3	28-40	40-100	<0.6
PATIENT	5.1	3.0	1.6	1.6	35	65	0.3
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				
PATIENT	NM	1.1	0.7		4.8	4.5	

### Cardiac Presentation

The echocardiogram in this patient demonstrated mild to moderately enlarged **left atrial** size based on 3 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented mild to moderate thickening consistent with endocardiosis. No evidence of valvular prolapse was noted. Doppler indicated measurable moderate eccentric insufficiency. MR velocity measured 5.1 m/s. The **left ventricle** presented normal thicknesses with maintained linear contour with mild increased LV 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 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). Trace pulmonic insufficiency was present on Doppler. 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.



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**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (ACVIM B2)
- TR - estimated pulmonary pressure gradient (~36 mmHg) suggestive of mild increased pulmonary pressure, not consistent with overt clinical pulmonary hypertension
- Trace pulmonic insufficiency

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The mild to moderate LA / LV enlargement indicates that the current and future risk of complications secondary to MR is mild to moderately elevated. Pimobendan 0.3 mg/kg PO BID is warranted at this stage. Baseline monitoring of resting respiration rate going forward, as well as assessment of three view chest radiographs, if evidence of increased resting respiration rate or clinical concern for pulmonary edema, is recommended. Low-dose diuretic trial Spironolactone 1.0-2.0 mg/kg PO BID could be considered if clinical concern for emerging pulmonary edema. Prognosis is considered highly variable and sonographic monitoring is advised. Recheck echocardiogram is recommended in 6 months, sooner if progressive clinical signs consistent with emerging left heart volume overload or exercise intolerance are noted.

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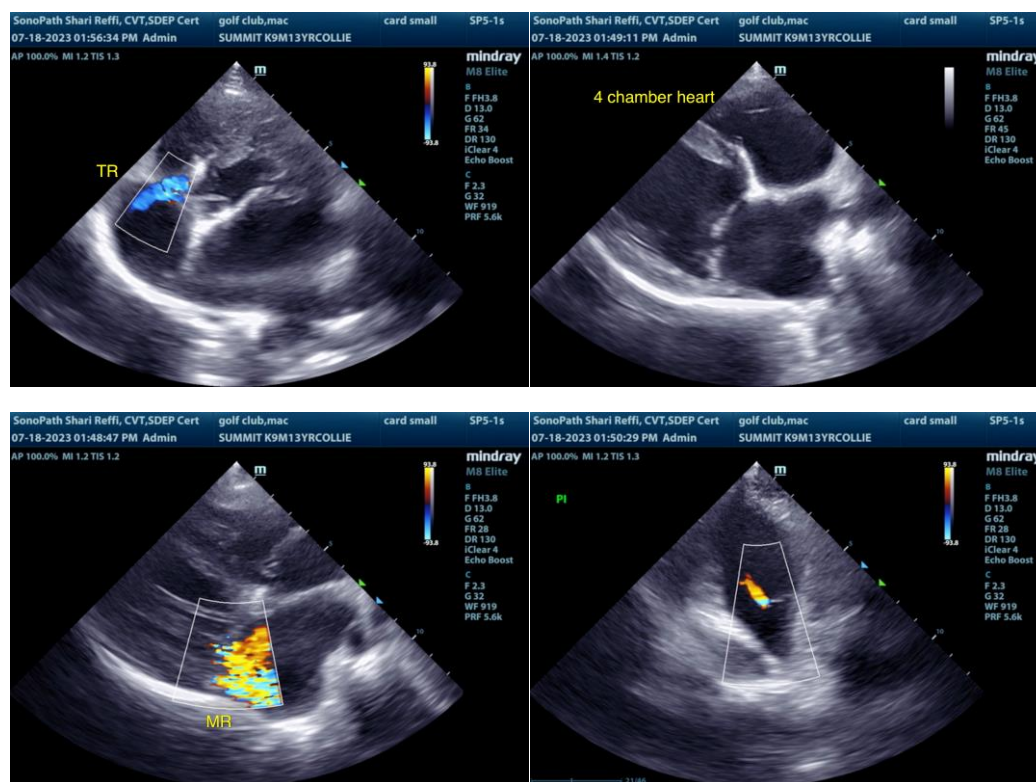
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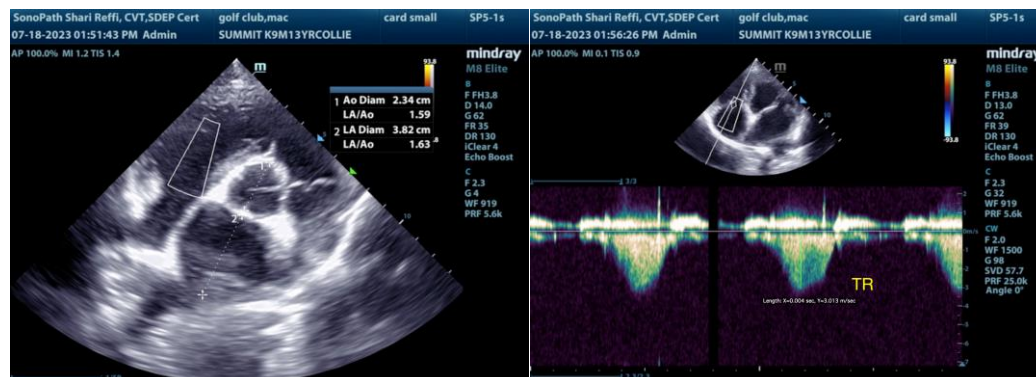
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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