



**PATIENT**

Cooper Van Blarcom

**SPECIES**

Canine

**BREED**

Schnoodle

**SEX**

MN

**AGE**

12 yrs

**WEIGHT**

21 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Ho Ho Kus Vet

**REFERRING VET**

Dr. Scott

**INVOICE**

15052

**DATE**

10-4-22

**PRESENTING CLINICAL SIGNS**

Heart murmur- grade V. 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			2.0	1.82	45.7	77.7	0.2
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	93	1.9	1.1		4.1	3.9	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Subtle deviation of the interatrial septum towards the right atrium, suggestive of increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable mild to moderate eccentric insufficiency. The **left ventricle** presented thicknesses with maintained linear contour with 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 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 infiltrative disease was visible. The cranial **mediastinum and pericardial regions** were free of masses in the visible window.

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral disease (ACVIM B2)
- Mild TR - estimated pulmonary pressure gradient (~30 mmHg) suggestive of increased pulmonary pressure yet not overtly consistent with clinical pulmonary hypertension



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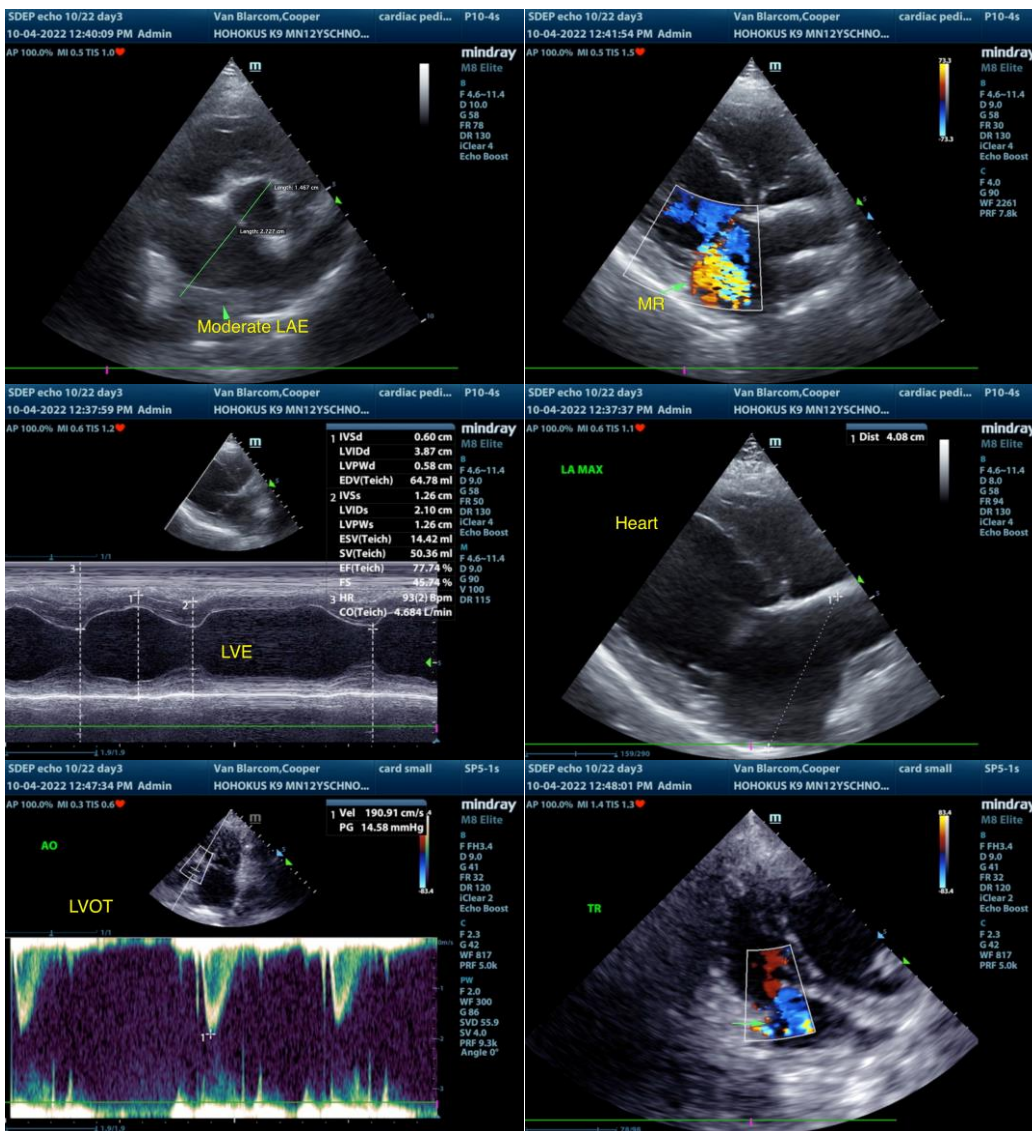
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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur secondary to chronic degenerative valvular changes with eccentric mitral valve and mild tricuspid valve insufficiency. The moderate LA enlargement as well as increased left ventricle volume indicate that the risk of current and future complication secondary to mitral valve insufficiency is moderately elevated. No other clinical issues such as LV systolic dysfunction or DCM criteria were present. Pimobendan 0.3 mg/kg PO BID is recommended at this stage. Prognosis is highly variable and serial sonographic monitoring is required for further assessment. Baseline monitoring of resting respiration rate, as well as for evidence of exercise intolerance is recommended. Anesthetic risk is considered mild to moderately elevated, yet risk would decrease once on Pimobendan for 3-5 days. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs consistent with left-sided congestion or evidence of clinical pulmonary hypertension arise.





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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.

**SPECIES**

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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.

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**info@SonoPath.com**

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