



**PATIENT PRESENTING CLINICAL SIGNS**

**MALILA PIPER**  
 History: Recheck echo. PE - MM pink, HR 90, RR 30, hydration normal. Nervous, no cough on tracheal palpation, very evident heart murmur heard, pulses are strong and synchronous, slightly decreased lung sound appreciated, no abdominal pain or masses on palpation. Has started having episodes of syncope which were better on Furosemide but now not helping

**SPECIES**

Canine

**BREED**

Maltese

**SEX**

Female Spayed

**AGE**

15y

**WEIGHT**

3.88 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Centerville AH

**REFERRING VET**

Sandhu

**INVOICE**

13356

**DATE**

4/1/26

Medications: Has been on Pimobendan and Furosemide

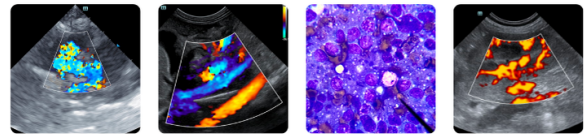
Abnormal PE/Chem/CBC/UA Results: Please see attached previous echo report and most recent lab values and radiograph

**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	--	~2.2	--	2.1	50	84	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	149		0.1.37	--	2.6	2.1	--

**Cardiac Presentation**

The echocardiogram in this patient demonstrated severe increased **left atrial** size based on 2 different LA measurement methods with intra atrial septal deviation. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis primarily noted in the septal leaflet with valvular prolapse. Doppler indicated eccentric MR insufficiency. The **left ventricle** presented moderate 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 thickening with mild valvular prolapse. TV insufficiency noted on doppler. Measured TV insufficiency ~2.2 m/s (estimated 20 mmHg pressure). The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract



**PATIENT**

Malila Piper

**SPECIES**

Canine

**BREED**

Maltese

**SEX**

Female Spayed

**AGE**

15y

**WEIGHT**

3.88 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Centerville AH

**REFERRING VET**

Sandhu

**INVOICE**

13356

**DATE**

4/1/26

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. No evidence of arrhythmia or hepatic congestion noted.

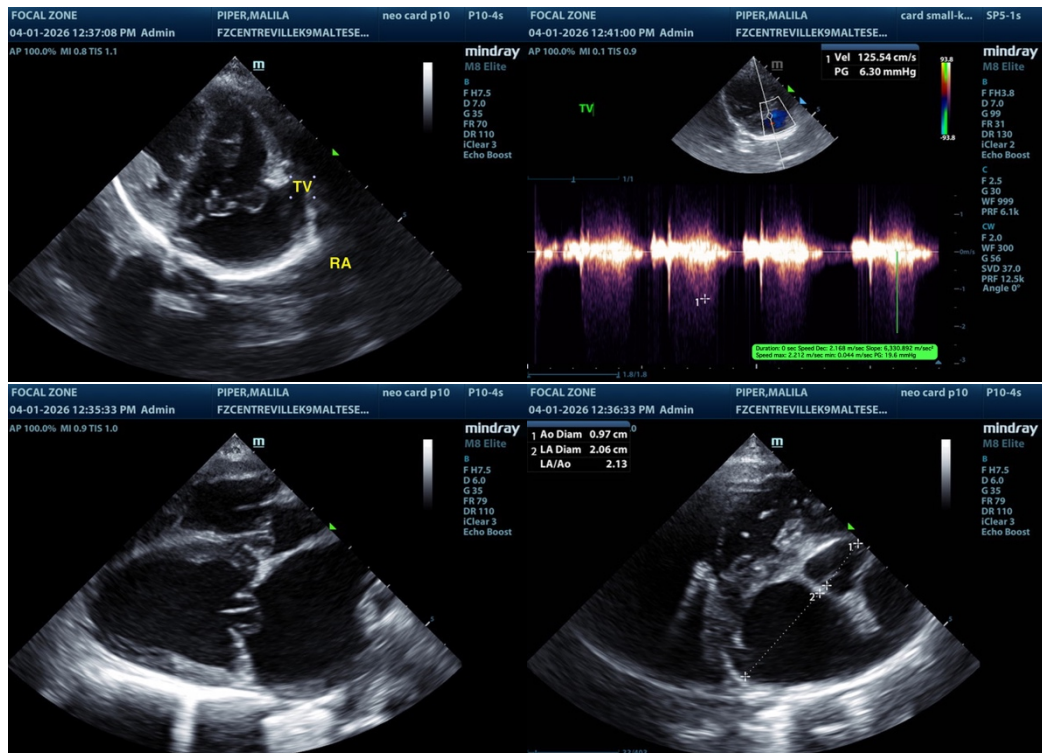
**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease with valvular prolapse and left heart volume overload
- TV insufficiency with overtly normal RA/RV/pulmonary artery – estimated pulmonary pressure gradient not overtly consistent with clinical pulmonary hypertension

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overall, static cardiac presentation compared to the previous study measurements. The degree of LA/LV enlargement is consistent with left heart volume overload indicating current and future risk of complication is significantly elevated. Continue Pimobendan and diuretic protocol with consideration for combined Lasix/Spironolactone 1-2 mg/kg BID is recommended. Omega fatty acid supplementation and mild salt restriction may prove beneficial. Monitoring of systemic BP and ECG for evidence of hypertension or paroxysmal arrhythmia given potential syncopal episodes is recommended.

The possibility of underestimated pulmonary pressure gradient based on TV insufficiency cannot be definitively excluded. Monitoring of resting respiration rate or for clinical signs, i.e. increased syncopal episodes, exercise intolerance, etc. which may suggest possible emerging concurrent pulmonary hypertension, is indicated. ACE inhibitor 0.5 mg/kg SID to BID may be considered and indicated as systemic BP >130. Prognosis remains highly guarded and sonographic monitoring indicated. Recheck echo in 6 months, sooner if clinically indicated. Elective anesthesia is not advised.





**PATIENT**

Malila Piper

**SPECIES**

Canine

**BREED**

Maltese

**SEX**

Female Spayed

**AGE**

15y

**WEIGHT**

3.88 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Centerville AH

**REFERRING VET**

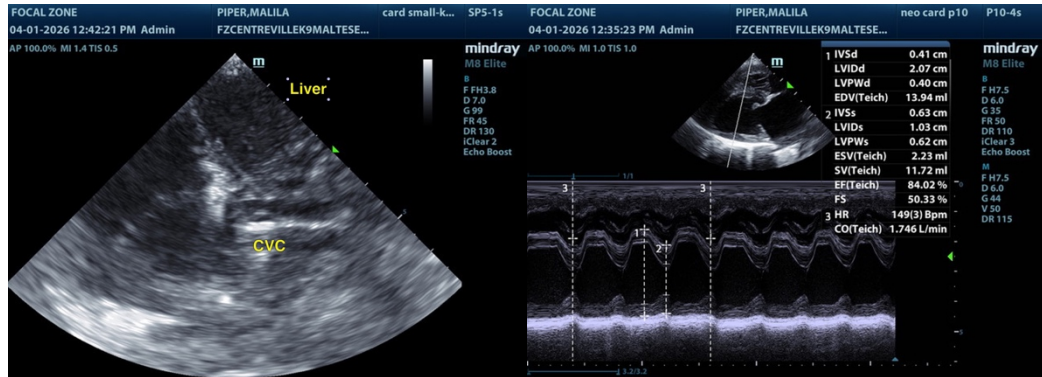
Sandhu

**INVOICE**

13356

**DATE**

4/1/26



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](mailto:info@SonoPath.com)