



## PATIENT

Paris Harris

## SPECIES

Canine

## BREED

Lab Mix

## SEX

FS

## AGE

10 yrs

## WEIGHT

86.2 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Diane McFadden

## HOSPITAL NAME

Budd Lake AH

## REFERRING VET

Dr. Verhalen

## INVOICE

15109

## DATE

10/6/22

## PRESENTING CLINICAL SIGNS

tachycardia with discordant pulses; multiple syncopal episodes. Coughing, wt loss. Hx of Cushings. On galliprant, gabapentin, vetoryl 60 mg am and 30mg pm. Abnormal PE/Chem/CBC/UA Results: 8/2022 ALT 218, ALKP1158, Na/K 24, cortisol 2.7 (1.5-5)

## 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	5.5	2.6		1.9	16	32	0.8
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	216	1.1	0.8		5.9	5.8	

## Cardiac Presentation

The echocardiogram for this patient presented moderate excessive **left atrial size** expressed in 2 different LA measurement methods. Left atrial content was anechoic. Mild deviation of the atrial septum owing to increased left atrial volume and bulbous appearance was noted. The cranial and caudal **mitral** valve leaflets presented normal linear structure yet eccentric insufficiency was present. The **left ventricle** demonstrated excessive volume (LVIDd measurement below). Ventricular function was subnormal expressed by the fractional shortening measurement listed below. The myocardium appeared mildly thin typical of a DCM-like presentation. 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 adequate linear morphology. Mild TR was present 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. The cranial **mediastinum and pericardial regions** were free of masses in the visible window. Tachycardia was present.

## ULTRASONOGRAPHIC FINDINGS

- LA/LV enlargement with LV systolic dysfunction
- MR/TR
- Tachycardia



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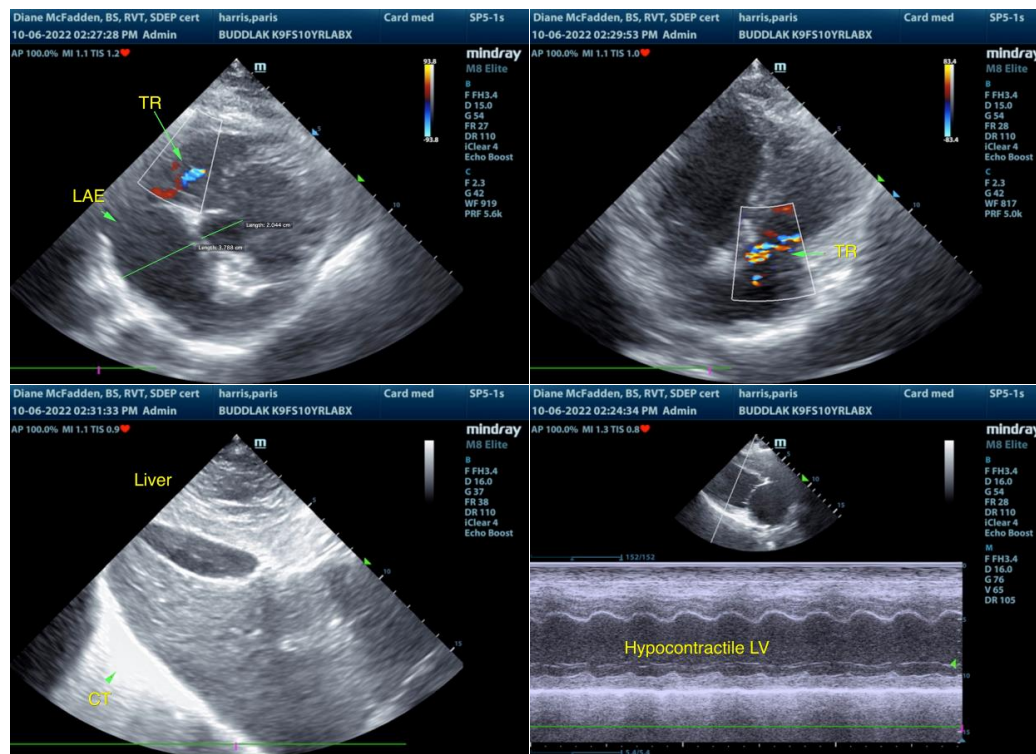
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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiomyopathy may be primary in nature (DCM), or secondary to potential underlying factors such as taurine deficiency, myocarditis, tachycardia-induced cardiomyopathy, or infiltrative disease such as lymphoma. Assessment of possible grain-free, boutique, or exotic diet with potential taurine or troponin levels may be considered. Left-heart volume overload predisposes to pulmonary congestion, while the tachycardia may predispose to right-sided heart failure. No evidence of hepatic congestion or cranial abdominal ascites at this time, based on brief cranial abdominal sonographic assessment.

ECG or Holter Monitor is recommended for further assessment of the tachycardia, given the syncopal episodes. The coughing in this patient may be multifactorial in nature. Three-view chest radiographs, if not done, are recommended to assess for evidence of underlying pulmonary disease. Pimobendan 0.3 mg/kg PO BID, as well as diuretic therapy 1.0-2.0 mg/kg PO BID at the lowest effective dose to control clinical signs is recommended. ACE inhibitor medication may be considered if evidence of hypertension, i.e., systemic BP > 130, (not advised if BP < 130). Omega fatty acids supplementation may be of some long-term benefit. However, prognosis is guarded pending ECG or Holter Monitor assessment with potential tachyarrhythmia therapy. Serial sonographic monitoring is required for further prognosis. Recheck echocardiogram is recommended in 4-6 weeks, sooner if progressive clinical signs of CHF or development of malignant arrhythmias arise.





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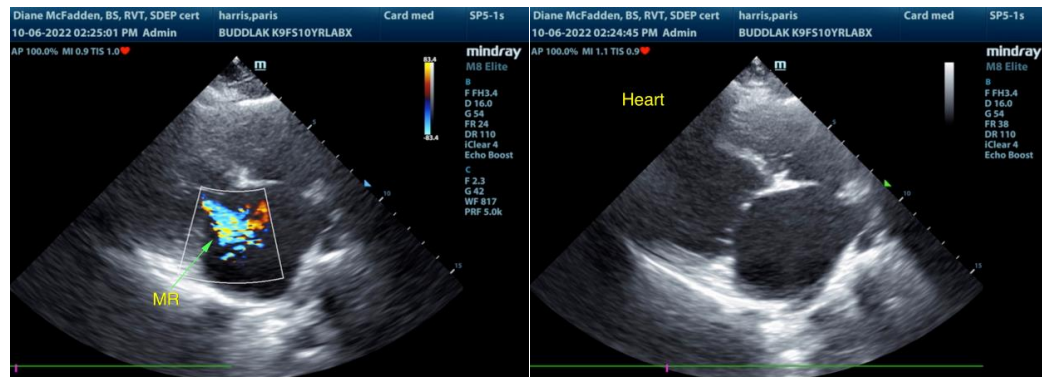
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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