

PATIENT

Chloe Zubcak

SPECIES

Canine

BREED

Chihuahua

SEX

FS

AGE

10 years

WEIGHT

9.4 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Ramapo Valley AH

REFERRING VET

Dr. Katara

INVOICE

15846

DATE

1/17/23

PRESENTING CLINICAL SIGNS

Cardiomegaly and unusual soft tissue opacity/possible lump by cardiac silhouette, grade 4-5/6 systolic murmur, coughing. Current meds: Furosemide 6.25 mgs BID, Pimobendan 1.25 mgs BID, Hydrocodone.

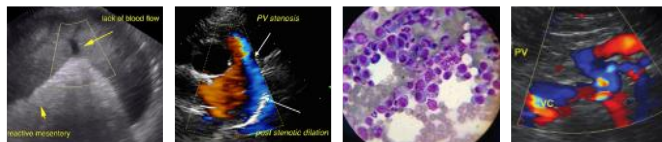
Abnormal PE/Chem/CBC/UA Results: Bloods done on 1/11/23 are WNL. U/A: WNL, USG 1.035.

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	5.3	<2.0		2.0	41.1	73.3	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	117	1.1	0.73		3.8	3.2	

Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 2 different LA measurement methods. Mild 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 moderate thickening consistent with endocardiosis with mild septal leaflet prolapse. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented normal thicknesses with linear contour with 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 subjective mild thickening with minor TR on Doppler. Normal estimated pulmonary pressure gradient was noted. 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. No arrhythmia was noted.



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ULTRASONOGRAPHIC FINDINGS

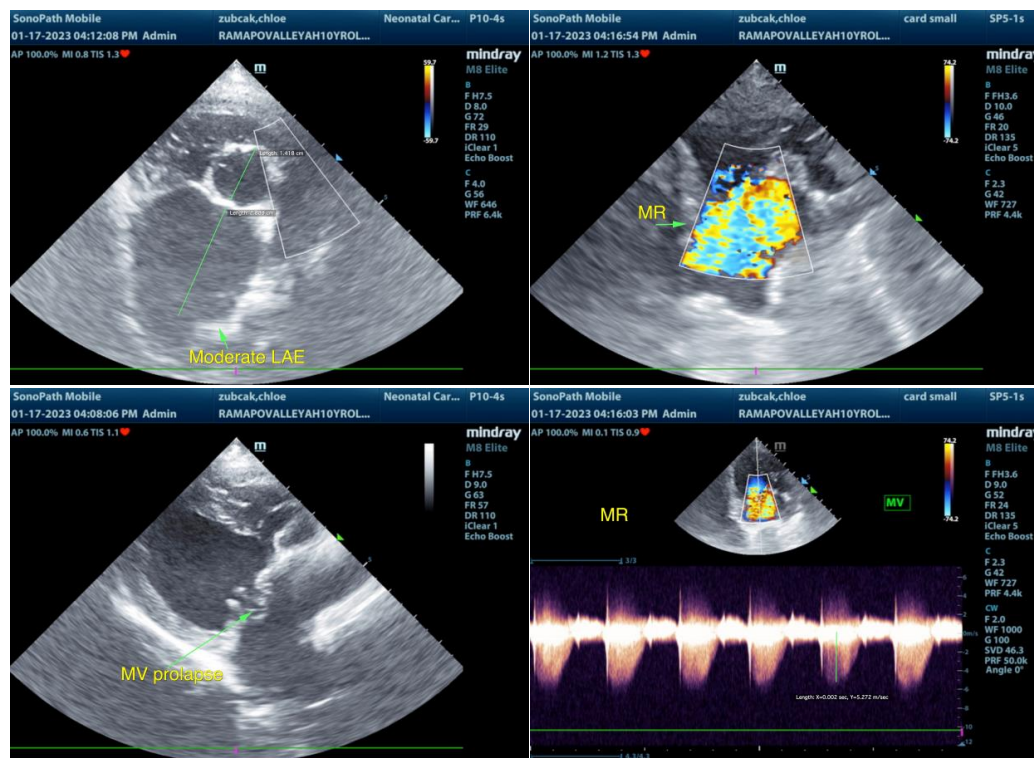
- Chronic mitral valve disease (ACVIM B2)

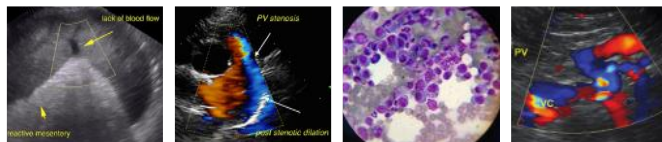
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The moderate LA enlargement with evidence of left heart volume overload indicates that the risk of current and future complications secondary to MR is moderately elevated. The coughing in this patient may be multifactorial in origin, assuming no evidence of current pulmonary edema, potentially secondary to mainstem bronchi irritation/compression or possible concurrent lower airway disease. Continued cardiac medications in conjunction with anti-tussive medication are recommended.

Baseline monitoring of resting respiration rate going forward is advised. Assessment of systemic BP is recommended. If BP is greater than 130, ACE inhibitor medication is recommended (not advised if BP <130). Omega-3 Fatty Acids and mild salt restriction may be of benefit. No evidence of cardiac or overt pericardial tumors. Prognosis is highly variable and serial sonographic monitoring is recommended. Recheck echocardiogram is suggested in 6 months, sooner if progressive clinical signs or radiographic cardiomegaly. Anesthetic risk is considered moderately elevated and should be avoided unless absolutely necessary. If anesthesia is required, the following anesthetic protocol is suggested.

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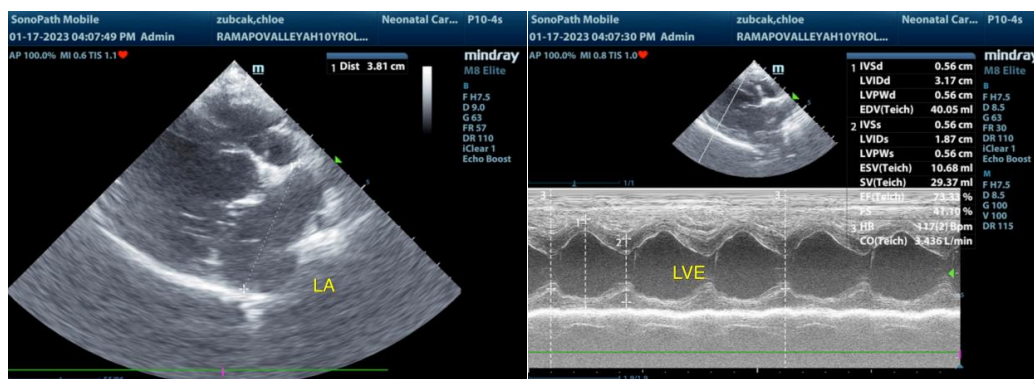
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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