



PATIENT

Luna Greene

SPECIES

Canine

BREED

Chihuahua Mix

SEX

FS

AGE

12 yo

WEIGHT

23 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Meredith Swart

HOSPITAL NAME

Swart Veterinary
Imaging

REFERRING VET

Dr. Meredith Swart

INVOICE

14810

DATE

9/6/22

PRESENTING CLINICAL SIGNS

Patient has Cushing's disease and hx of murmur. No echo performed previously. X-rays performed at last clinic showed an enlarged heart and possible bronchial pattern. Current rDVM does not have access to x-rays. Patient is currently on vetoryl 30 sid, lasix 20 mg 1 tab bid, benazepril 5 mg 1/2 tab bid, and pimobenan 5 mg 1/2 tab bid
Abnormal PE/Chem/CBC/UA Results: none reported today

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			1.46	1.62	49.6	90	0.24
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	2.0	1.2		3.5	3.2	

Cardiac Presentation

The echocardiogram in this patient demonstrated mildly enlarged **left atrial** size based on 3 different LA measurement methods. The mitral valve was mildly thickened with minor septal leaflet prolapse. Doppler indicated moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. 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 borderline elevated LVOT velocity with no evidence of aortic stenosis. 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. 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.



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ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with minor septal leaflet prolapse (ACVIM mild B2)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The mild left atrium enlargement indicates that the risk of current and future complications is mildly elevated yet overall, the heart appears to be compensated. No evidence of additional clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension were noted.

In a nonclinical patient without evidence of significant chamber enlargement, cardiac medications are not overtly indicated, yet Pimobendan at this stage would not be inappropriate as this medication may help prolong cardiac changes associated with mitral valve insufficiency and in light of mild LA enlargement. Diuretic therapy would only be indicated if increased resting respiration rate or radiographic evidence of congestion. Likewise, ACE inhibitor medication would be suggested if BP >130, (Not advised if BP <130).

Prognosis at this stage is highly variable and serial sonographic monitoring is required for further assessment. Recheck echocardiogram is suggested in 6 months with baseline monitoring of resting respiration rate, sooner if clinical signs arise.

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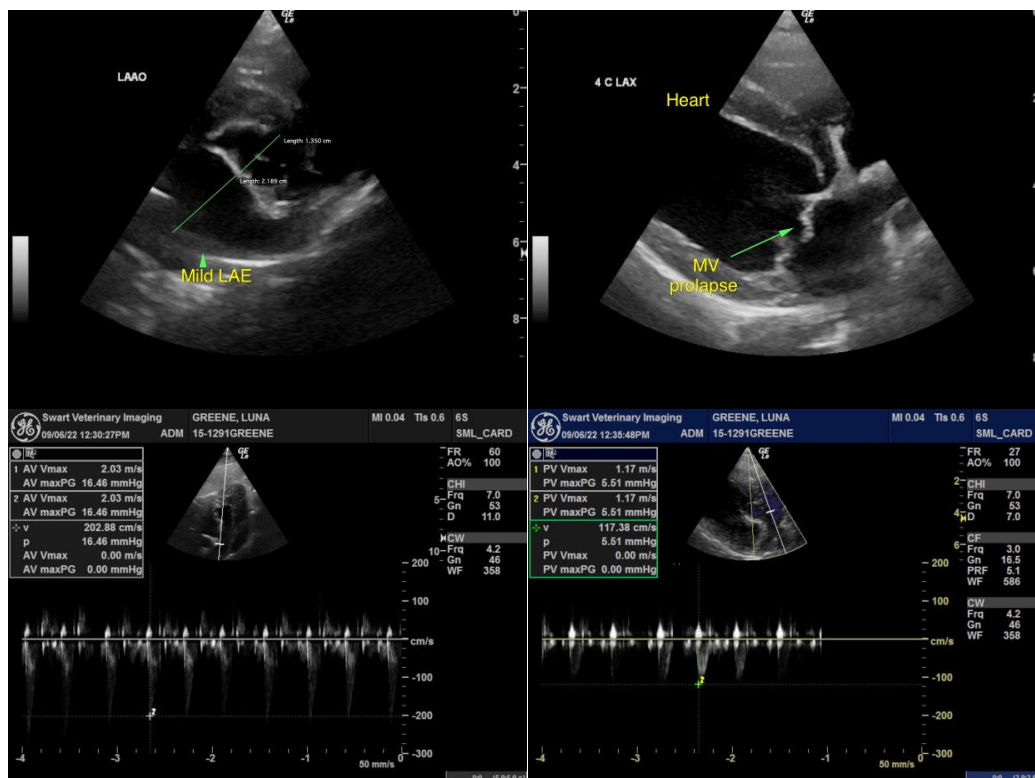
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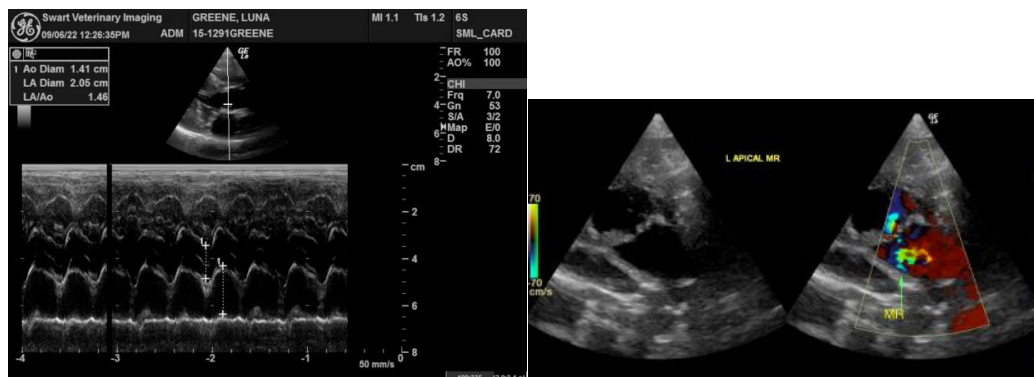
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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