

**PATIENT PRESENTING CLINICAL SIGNS**

Lola Marquez new heart murmur, needs dental, doing well at home no coughing

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

BREED

Terrier X

SEX

Spayed Female

AGE

9 Years

WEIGHT

20 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Jenn

HOSPITAL NAME

Rockaway AH

REFERRING VET

Dr. Maniar

INVOICE

35644

DATE

2/14/22

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	<1.6	28-40	40-100	<0.6
PATIENT	--	<2.0	NM	1.92	41.6	73.7	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	BELOW	BELOW	BELOW	BELOW
PATIENT	135	1.0	0.8		3.9	3.4	

**Cardiac Presentation**

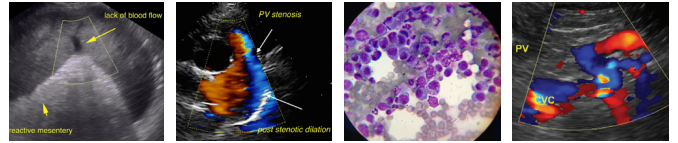
The echocardiogram for this patient presented moderately excessive **left atrial size** expressed in 3 different LA measurement methods. Mild deviation of the intraatrial septum towards the right atrium present, suggestive of mild elevated left atrial pressure. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated eccentric insufficiency. The **left ventricle** presented normal thicknesses with linear contour with mild increased left ventricular 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 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.

**ULTRASONOGRAPHIC FINDINGS**

- Chronic mitral valve disease (ACVIM B2)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is consistent chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The moderate left atrial enlargement indicates that the risk going forward is elevated, although the heart appears to be overall compensated at this stage. However, prognosis is highly variable, and serial sonographic monitoring is recommended for further prognosis. No additional



**PATIENT**

Lola Martinez

clinical issues such as systolic dysfunction or overt clinical pulmonary hypertension. Pimobendan 0.3 mg/kg PO BID warranted at this stage, as this medication may help prolong cardiac changes associated with mitral valve insufficiency. Anesthetic risk is considered mildly elevated, yet not overtly contraindicated, assuming normal BP. This patient may be at increased risk for fluid overall given the LA enlargement. Judicious fluid use is recommended under anesthesia. The following anesthetic protocol is suggested. Pre-anesthetic ECG suggested. Recheck echocardiogram recommended in 6 months, sooner if clinical signs arise.

**SPECIES**

Canine

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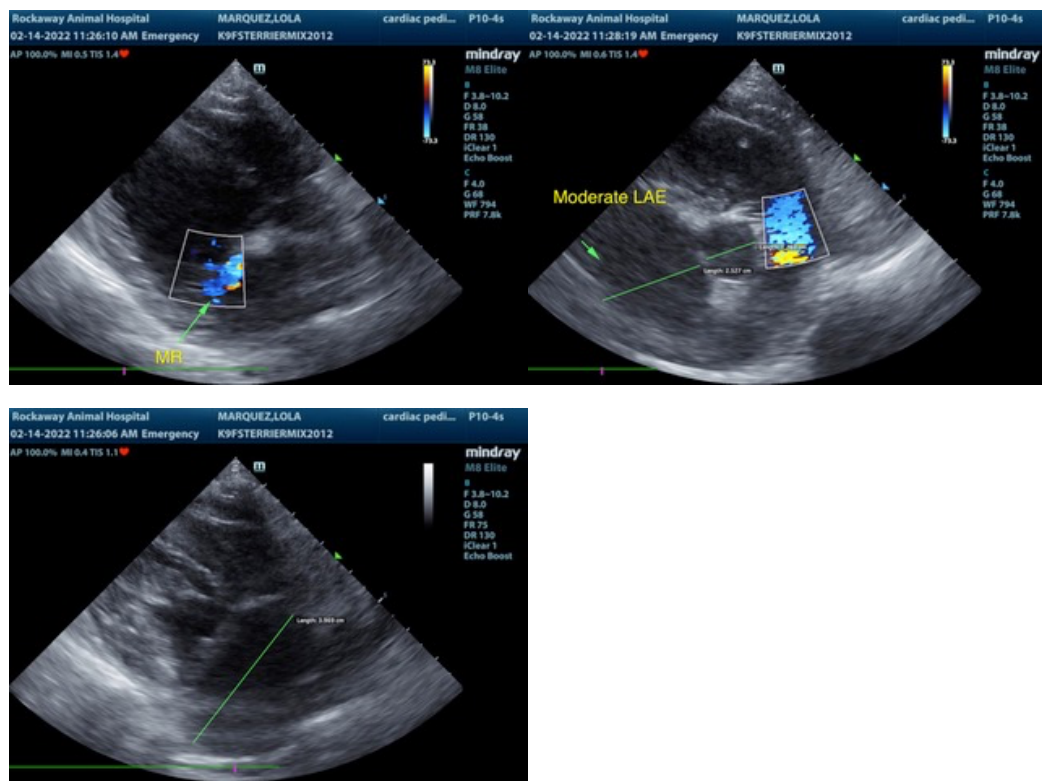
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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