



## PATIENT

Freddie Crilly

## SPECIES

Canine

## BREED

Yorkie

## SEX

Male Neutered

## AGE

15 years

## WEIGHT

10.5 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Dr. Elaina Petrone

## HOSPITAL NAME

Long Branch AH

## REFERRING VET

Dr. Elaina Petrone

## INVOICE

14302

## DATE

7/19/22

## PRESENTING CLINICAL SIGNS

New heart murmur on pre-op PE.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>			1.78	1.85	54.7	89.5	0.2
<b>CANINE CARDIAC PARAMETERS</b>	<b>HR</b> (BPM)	<b>AV VMAX</b> (m/s)	<b>PV MAX</b> (m/s)	<b>BODY WEIGHT</b> (kg)	<b>LA</b> 2D short axis Base view (cm)	<b>LVIDd</b> Avg; 2D and m-mode short axis (cm)	<b>LVIDs</b> Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	NM	NM	0.8		3.5	3.4	

## Cardiac Presentation

The echocardiogram in this patient demonstrated mild to moderately enlarged **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler revealed moderate eccentric mitral valve insufficiency. The **left ventricle** presented thicknesses with linear contour with increased left ventricle 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.



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## ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B2)

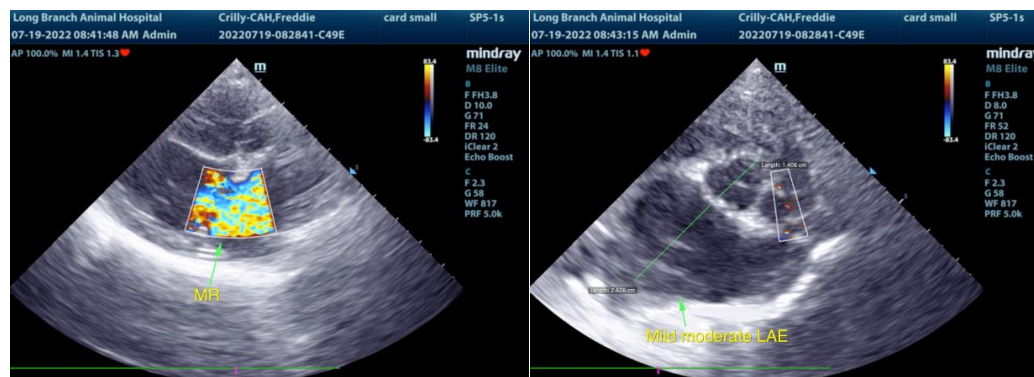
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is consistent with chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The mild to moderate LA enlargement, as well as increased left ventricle volume, indicate that the current and future risk going forward of complications secondary to mitral valve insufficiency is moderately elevated. No other clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension were present.

Given this presentation, Pimobendan 0.3 mg/kg PO BID is recommended. Baseline monitoring of resting respiration rate is suggested. Once the patient is on Pimobendan for 3-5 days, the anesthetic risk is considered mild. This patient may be at increased risk for fluid overload under anesthesia, therefore, judicious to appropriate IV fluid use under anesthesia is advised. Prognosis at this stage is highly variable. Therefore, serial sonographic monitoring is recommended for further assessment. Recheck echocardiogram is suggested in 6 months, sooner if clinical signs arise.

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.



**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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