



## PATIENT

Bear Bear DePaul

## SPECIES

Canine

## BREED

Terrier Mix

## SEX

Male Neutered

## AGE

8

## WEIGHT

12.6

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Jenn

## HOSPITAL NAME

Rockaway AH

## REFERRING VET

Dr. Salazar

## INVOICE

13092

## DATE

1/16/26

## PRESENTING CLINICAL SIGNS

History: wheezing, new grade 6 murmur cardiomegaly

Abnormal PE/Chem/CBC/UA Results: WNL

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (M-Mode) | LA/AO (Heart Base; Swe) | FS (%)               | EF (%)                                   | EPSS (cm)                                |
|---------------------------|---------------|---------------|----------------|-------------------------|----------------------|--|--|
| NORMAL PARAMETER          | 4.5-5.5       | <2.7          | 1.3            | Up to 1.6               | 28-40                | 40-100                                   | <0.6                                     |
| PATIENT                   | 5.3           | 3.0           | --             | 2.6                     | 40                   | 74                                       | 0.33                                     |
| CANINE CARDIAC PARAMETERS | HR (BPM)      | AV VMAX (m/s) | PV MAX (m/s)   | BODY WEIGHT             | LAD LA MAX 4 Chamber | 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            | 1.2           | 1.0            | 12.6                    | 4.1                  | 4.2                                      | --                                       |

## Cardiac Presentation

The echocardiogram in this patient demonstrated severe increased **left atrial** size with intra atrial septal deviation based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with endocardiosis. No evidence of valvular prolapse or chordae tendineae. Doppler revealed measurable severe eccentric MR. MR velocity measured 5.3 m/s. The **left ventricle** presented severe increased LA dimension and sphericity. 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 mild thickening with mild TR noted on doppler. TR velocity measured 3.0 m/s. 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 cardiac / pericardial tumors was visible. No evidence of arrhythmia present.

## ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease with left heart volume overload (stage C)



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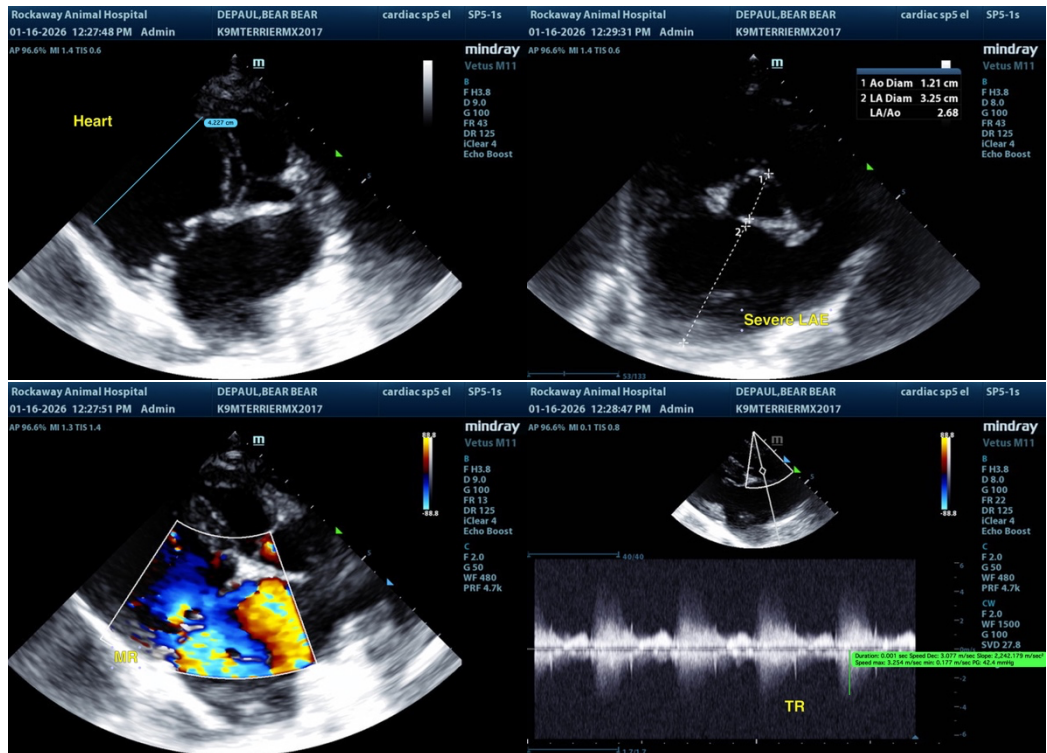
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- Mild TV insufficiency – estimated pulmonary pressure gradient suggestive of mild increased pressure

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No obvious significant or clinical pulmonary hypertension. If patient is currently dyspneic, hospitalization with IV diuretic therapy until patient is stabilized with concurrent respiratory support is recommended. Pimobendan 0.3 mg/kg BID, Spironolactone Furosemide combination both 1-2 mg/kg BID, ACE inhibitor 0.5 mg/kg SID and respiratory support which may include antitussive medication Hydrocodone is recommended. Prognosis is highly guarded to long-term poor as this patient will remain at increased risk of progressive CHF, development of malignant arrhythmia, or progressive pulmonary hypertension. Elective anesthesia is not advised. Sonographic monitoring indicated for further assessment. Recheck echo suggested in 4-6 months, sooner if clinically indicated. Omega-3 fatty acid and mild salt restriction may prove beneficial.





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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](mailto:info@sonopath.com)