



**PATIENT**

Murray Roemmich

**SPECIES**

Canine

**BREED**

Dachshund Mix

**SEX**

MN

**AGE**

13yr

**WEIGHT**

20.4lb

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Ackmann

**HOSPITAL NAME**

Buffalo Veterinary  
Clinic

**REFERRING VET**

Dr. Ackmann

**INVOICE**  
23777

**DATE**  
02/03/2026

**PRESENTING CLINICAL SIGNS**

- -Coughing started approximately 1 week ago
  - Occurs randomly, including middle of the night
  - Not exercise or stress induced
  - Decreased appetite for past 2 days, still eating but less than normal
  - One episode of mucoid discharge after coughing
  - Previous heart murmur documented (grade 3/6 left apical systolic)

Abnormal PE/Chem/CBC/UA Results: -Heart: Grade 5/6 heart murmur heard equally on right and left side and throughout lung fields -Chest radiographs (3 views): enlarged heart, pulmonary congestion consistent with congestive heart failure, VHS 13.25 - Heartworm test: negative (Flex 4) - Doppler BP: 100mmHg

**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	--	--	--	2.3	45	78	0.4
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	1.4	1.0	20.4lb	5.0	4.0	--

**Cardiac Presentation**

The echocardiogram in this patient demonstrated severe increased left atrial size with interatrial septal deviation based on 3 different LA measurement methods. The cranial and caudal mitral valve leaflets presented thickening consistent with endocardiosis. Mild valvular prolapse and potential abnormal coaptation owing to LA enlargement. Doppler indicated significant eccentric insufficiency. The left ventricle presented thickened walls with linear contour and increased LV dimension/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 thickening with mild TR on Doppler. The right ventricle was of normal size (1/3 diameter of LV),



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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 overt arrhythmia. Possible emerging mild hepatic congestion was present. No ascites.

## ULTRASONOGRAPHIC FINDINGS

### Primary

- Chronic mitral valve disease with mild valvular prolapse (ACVIM stage C)
- Mild tricuspid regurgitation -possible emerging to mild pulmonary hypertension given mild hepatic congestion

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is significantly elevated with possible clinical signs secondary to volume overload. Initiate **Furosemide** / **Spironolactone** 1-2 mg/kg BID, **Pimobendan** 0.3 mg/kg BID. **ACEI** is suggested if systemic BP >130 (not indicated if <130). Antitussive medication if coughing is suggested. Prognosis is considered variable and sonographic monitoring is recommended. Recheck echo cardiogram is suggested in 6 months, sooner if progressive clinical signs. Elective anesthesia is not advised.



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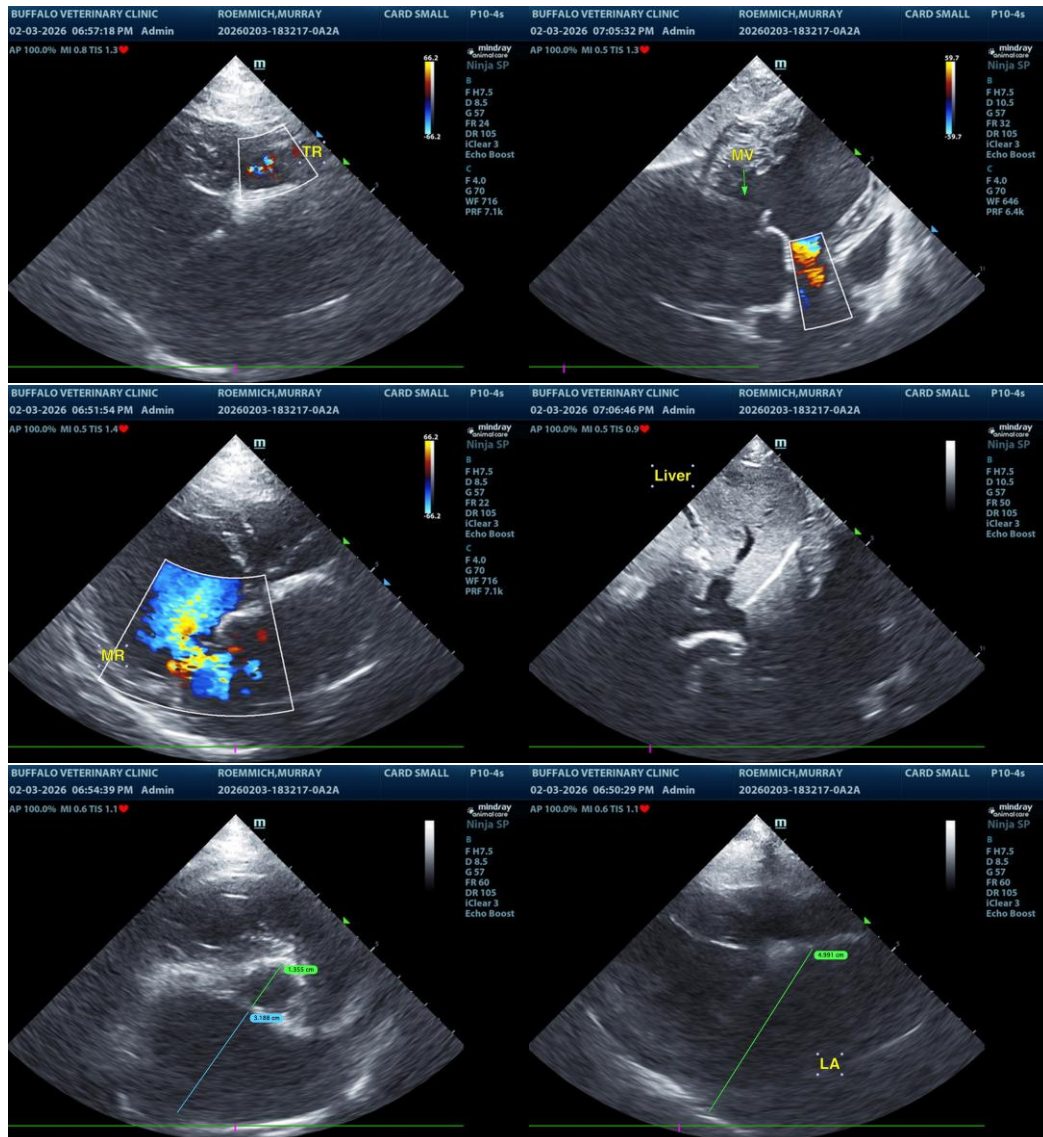
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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