



PATIENT

Flynn Murphy Wilson

SPECIES

Canine

BREED

King Charles Cavalier

SEX

Male Neutered

AGE

9 yrs

WEIGHT

15 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Ackmann

HOSPITAL NAME

Buffalo VC

REFERRING VET

Dr. Ackmann

INVOICE

12860

DATE

11/25/25

PRESENTING CLINICAL SIGNS

History: Previously diagnosed with congestive heart failure by mobile veterinarian - Heart murmur recognized approximately 4 years ago. Previous mobile ultrasound performed (brief heart ultrasound), no radiographs due to financial constraints - Eating, drinking, defecating, urinating normally - No vomiting, diarrhea, or gasping for air - Increased coughing, sleeping more, panting more - Still has good energy - No exercise intolerance issues

Meds: Currently on furosemide 12.5mg TID and pimobendan 2.5mg (1 tablet in morning, 0.5 tablet in evening)

Abnormal PE/Chem/CBC/UA Results: Doppler blood pressure- 140 mmHg Grade 5/6 left apical systolic heart murmur HR: 160 pm - Chest radiographs performed: very large heart (VHS 12.75), perihilar pulmonary congestion with interstitial pattern consistent with left-sided CHF, dorsal tracheal deviation due to cardiac enlargement vs. mediastinal mass - Heartworm test (Flex 4): negative for heartworm and tick-borne diseases

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	--	--	--	2.0	50	82	0.35
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	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	--	0.8	--	4.9	4.1	--

Cardiac Presentation

The echocardiogram in this patient demonstrated severe increased **left atrial** size based on 2 different LA measurement methods. The cranial and caudal **mitral** valve leaflets presented thickening consistent with degenerative changes/endocardiosis and valvular prolapse. Doppler indicated eccentric insufficiency. The **left ventricle** presented normal thicknesses with linear contour and significant increased LV 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



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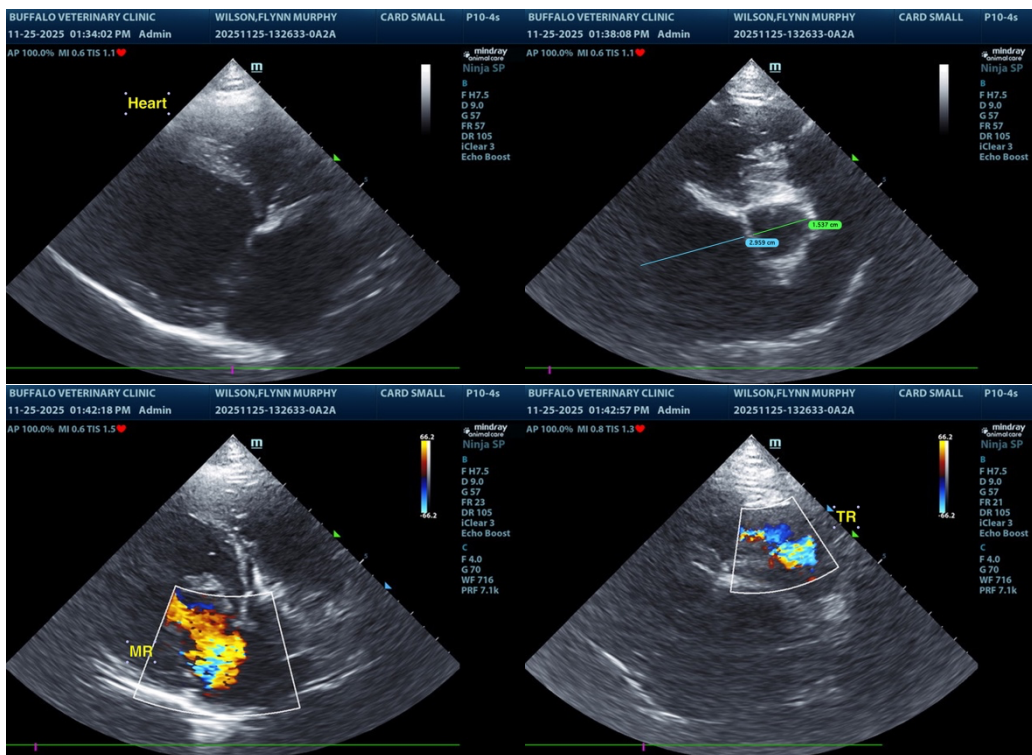
auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated mild thickening with mild TR noted on doppler. Measured TR velocity ~1.5 m/s. The **right ventricle** was of normal size (1/3 diameter of LV), chordae 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 mitral valve prolapse and left heart volume overload (ACVIM stage C)
- Mild TV insufficiency – no overt clinical pulmonary hypertension

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The degree of left heart volume overload is consistent with congestive criteria. Continued triple therapy including Pimobedan and Furosemide/Spironolactone combination, both 1-2 mg/kg if evidence of pulmonary edema. ACE inhibitor 0.5 mg/kg SID titrating up to BID with monitoring of resting respiration rate, renal parameters, ECG and systemic BP is indicated. Prognosis is guarded going forward, as this patient will remain at increased risk for progressive CHF development of malignant arrhythmia or pulmonary hypertension. Elective anesthesia is not advised. Recheck echo recommended in 6 months, sooner if progressive clinical signs, i.e. exercise intolerance or elevated resting respiration rate.





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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