

PATIENT

Buster Neumann

SPECIES

Canine

BREED

Terrier Mix

SEX

Male Neutered

AGE

11 years

WEIGHT

17lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Loetitia Saint-Jacques,
LVT

HOSPITAL NAME

Critter Care Mobile
Veterinary Clinic

REFERRING VET

Dr. Hartzell

INVOICE

47681

DATE

4/26/26

PRESENTING CLINICAL SIGNS

History: No sedation. Done standing with owner holding. Presented 04/22/2026 for history of progressive, non-productive cough of approximately 6 months duration. Cough/gag ATO has become worse late at night or with exertion. No Hx of V/D, PU/PD, appetite-normal, BAR. PE asculted muffled heart sounds with subtle end-systolic murmur III/VI with tachycardic runs and possible ascultable murmur. Increased moist pulmonary sounds bilaterally with increase inspiratory effort. Dog splints abdomen, but suspect distension and possible hepatosplenomegaly. T-101.2 F HR-96, R-48, with muddy MM tongue. Moderate periodontal disease on remaining dental arcade. BP: 133/81, 156/132, 107/71, 111/72, 76/21. Thoracic radiographs indicated increased pulmonary interstitial/alveolar congestion (Radiology report attached). Dog was given 10mg Furosemide IM, with RX phoned into CVS Pharmacy for Furosemide 20mg Tablets with directions for 1/4 tablet PO BID.
-Abnormal PE/Chem/CBC/UA Results: 04/24/2026 reveals: >AST 74IU/L (15-66), >Alk Phos 332 IU/L (5-131), > BUN/Crea Ratio 32 (4-27), >Cholesterol 363mg/dL (92-324), >CPK 1659IU/L (59-895), Platelet Ct 459 10³/uL (140-400), Heartworm Ag-pending

ELECTROCARDIOGRAPHIC FINDINGS

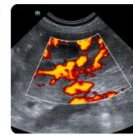
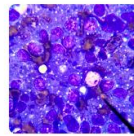
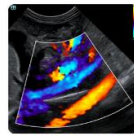
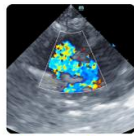
A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 130bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild mitral valve leaflet thickening with no obvious prolapse into the left atrial lumen. No mitral regurgitation is identified. Normal left atrial dimension. Normal LV diameter with normal myocardial function. The tricuspid valve appears subjectively normal. No TR. The right heart is normal. No overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. No aortic abnormalities identified, with normal outflow velocity. Normal pulmonic outflow velocities. No aortic insufficiency. Trace pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

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			NM	1.2	52	82	NM
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	NM	1.5	1.3	7.7	1.6	2.4	1.2
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)



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BODY WEIGHT DEPENDENT PARAMETERS

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*

Adapted from June Boon, Veterinary Echocardiography, 1998
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435
Hansson et al, Vet Rad and Ultrasound 2002
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995

5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac structure and function with no cause of a murmur identified. No significant valvular insufficiencies were noted and no structural issues identified. In the absence of significant volume changes (dehydration or anemia), other possibilities include a physiologic flow murmur only present with elevated heart rates, or a small flow abnormality not seen here. Should the murmur persist/progress in the future, it is reasonable to monitor periodically via recheck echocardiography in the future. The ECG is unremarkable with a normal sinus rhythm.

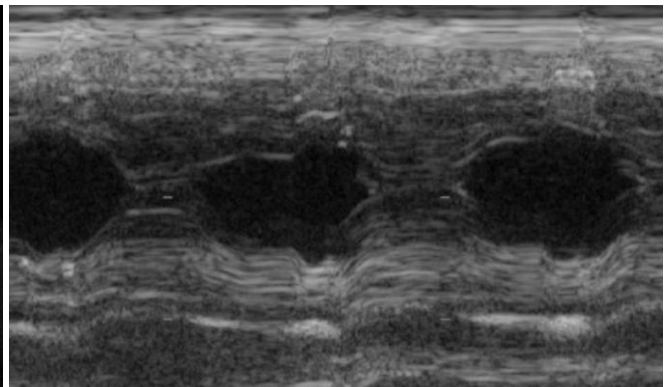
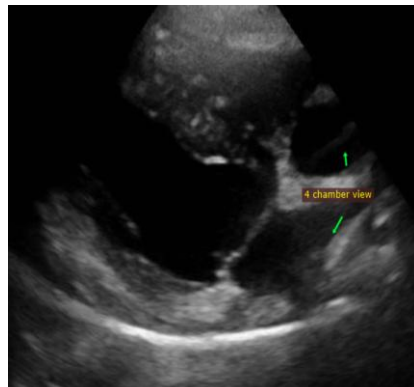
These findings would suggest the cough is unlikely to be cardiac in origin and respiratory disease is likely. It is rare to see a radiology report with such discordant results to the echo findings. Highly recommend repeat CXR for comparison and additional consultation. Based upon what is seen here, there is no indication for continued diuretics in this patient. Consider further respiratory work up/treatment (hydrocodone, taper course of steroids, Enrofloxacin, TTW/BAL, etc.). A poorly controlled cough can lead to development of pulmonary hypertension over time, and monitoring for associated clinical signs is recommended (primarily exertional syncope/dyspnea).

No cardiac medications are indicated at this time. Prognosis is open. Monitor for any development of cough, labored breathing or exercise intolerance.

No cardiac contraindication for general anesthesia.

Recommend recheck echocardiogram in 12-18 months to reassess murmur origin and screen for development of concurrent cardiac disease that the preexisting murmur may mask.

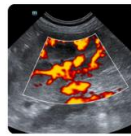
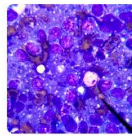
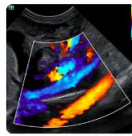
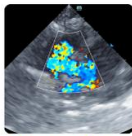
IMAGES



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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. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM
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