



PATIENT

Ari Wettschreck

SPECIES

Canine

BREED

Icelandic Sheepdog

SEX

Male Neutered

AGE

6.6 years

WEIGHT

19.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Greg Kuhlman, DVM

HOSPITAL NAME

Red River Animal
Emergency Hospital &
Referral Center

REFERRING VET

Dr. Kuhlman

INVOICE

46810

DATE

2/12/26

PRESENTING CLINICAL SIGNS

History: Presented as dam was diagnosed with mitral valve disease. Lab work showed elevated BNP and kidney values. No heart murmur. Lyme positive (has been treated in the past, and is currently being treated). On Doxycycline 100mg BID x 30d (for Lyme, is almost finished), Enalapril 2.5mg BID (started 1-19-26), Welactin omega 3, Heartguard Plus, "Natural product" for flea and tick control. -Abnormal PE/Chem/CBC/UA Results: BP: 190mmHg; patient was nervous and had a multi-hour car ride to get to us. (1/9/2026) CBC: WNL CHEMISTRY: SDMA 17 µg/dL (0-14) High, Creatinine 2.2 mg/dL (0.5-1.5) High, BUN 48 mg/dL (9-31) High, Albumin 2.4 g/dL (2.7-3.9) Low, Globulin 5.0 g/dL (2.4-4.0) High T4: 1.8 µg/dL (1.0-4.0) Normal ProBNP: 3,527 pmol/L (0-900) High 4dx: Lyme Positive, Anaplasma spp. Positive, Heartworm Antigen Negative, Ehrlichia spp. Negative.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild MV thickening with no prolapse into the left atrial lumen. No obvious mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	NA	NA	NM	1.2	33	60	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	0.8	1.2	8.9	1.8	2.7	1.8
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)

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



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension.

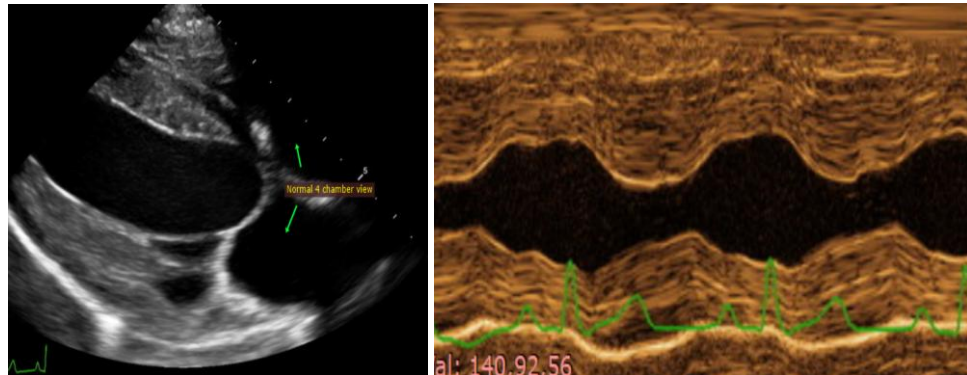
These findings do not explain BNP elevation. While a false positive is possible, renal disease can also lead to its elevation. No follow up is necessary. A baseline BP is recommended.

No medications are indicated and the prognosis is open from a cardiac standpoint.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

A recheck echocardiogram is recommended should a significant murmur develop or signs of cardiac compromise be noted in the future.

IMAGES



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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