



PATIENT

Breeze Schlax

SPECIES

Canine

BREED

Springer Spaniel

SEX

Female Spayed

AGE

9 years

WEIGHT

35lbs

INTERPRETED BY

Maggie Machen
 Lamy, DVM, DACVIM
 (Cardiology)

IMAGING PERFORMED BY

Heidi Putnam, SDEP
 Clinical Sonographer

HOSPITAL NAME

West Hills Animal
 Hospital

REFERRING VET

Dr. Fogarty

INVOICE

20732

DATE

8/24/21

PRESENTING CLINICAL SIGNS

History: Elevated BNP. Assess prior to surgery for cruciate repair.
 -Abnormal PE/Chem/CBC/UA Results: ALT 126, cardio ProBNP 2300.

ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 130bpm (range 60-166bpm). 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 inverted. MEA is shifted right. No ectopic beats, pauses or dysrhythmias observed.
 ECG diagnosis: Normal sinus rhythm with respiratory variation. Right axis deviation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no prolapse into the left atrial lumen. Trace central mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no 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 or 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	1.1	31	60	0.28
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	86	1.2	0.9	15.9	2.0	4.7	3.2
*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)
				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)

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



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Clin North Am 15:1177, 1995	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)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cardiac structure and function in this patient is overtly normal. No significant valvular regurgitation is noted, and the cardiac dimensions and function are normal. A small mitral leak is noted; however, this is considered physiologic in the absence of a heart murmur. Follow up is advised should a murmur be detected in the future. The ECG is unremarkable with a normal sinus rhythm (MEA shift is considered incidental in the absence of right heart disease).

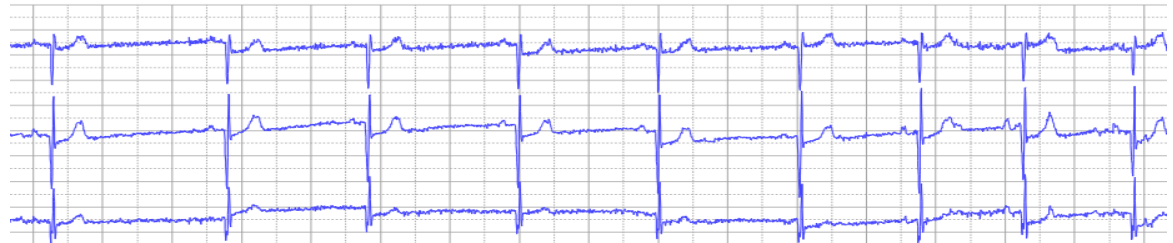
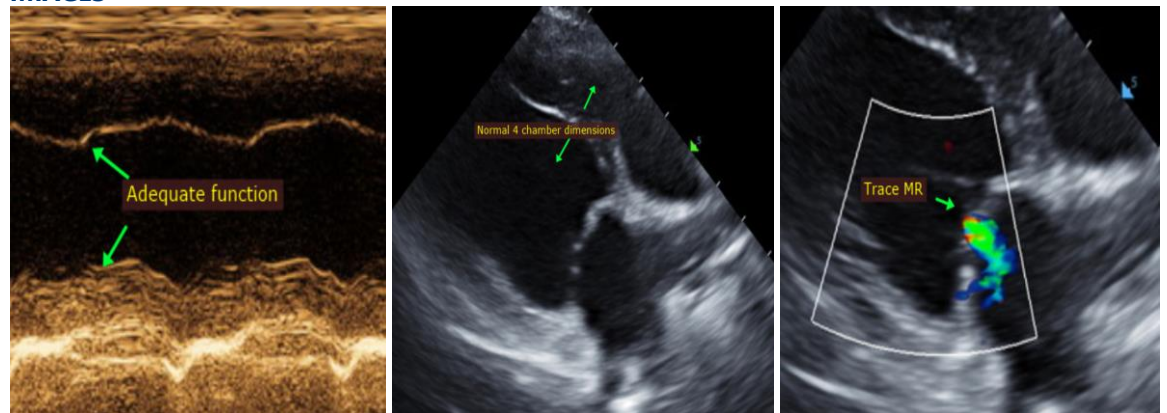
No obvious reason for NT-ProBNP elevation is seen, most likely making this a false positive result (a known weakness of the test). Other possible causes should be considered, including hypertension or renal disease. If no obvious cause is identified, reassessing this patient in 6-12 months is recommended to ensure early disease was not missed.

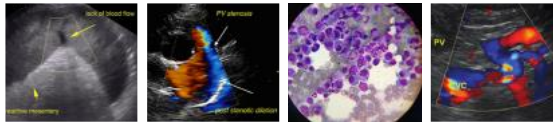
No cardiac medications are indicated at this time. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

No cardiac contraindication for general anesthesia.

A recheck is recommended in 6-12 months to ensure no progressive issues are identified, sooner should a murmur or any clinical signs of cardiac compromise be noted at home.

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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