



**PATIENT**

Rosco Brown

**PRESENTING CLINICAL SIGNS**

History: Grade 2/6 heart murmur. Assess prior to dental.

**SPECIES**

Canine

**ELECTROCARDIOGRAPHIC FINDINGS**

A six lead ECG is available at 25mm/s; 10mm/mV. The average heart rate is 120bpm (range 60-150bpm). 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 is prolonged. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.

**BREED**

Boston Terrier

ECG diagnosis: Profound respiratory sinus arrhythmia with a left bundle branch block.

**SEX**

Male Neutered

**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 eccentric mitral regurgitation with no left atrial dilation. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. Normal velocity. 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. Trivial aortic and no pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

**AGE**

15 years

**WEIGHT**

27lbs

**CARDIAC CHART**

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	NM	2.0	NM	1.3	32	61	0.33
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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>		1.4	1.2	12.2	2.2	3.2	2.2
*Normal chamber parameters expressed as a mean value (SD)							
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>							
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>							
	3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)			
	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)			

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

**HOSPITAL NAME**

Eubank Animal Clinic

**REFERRING VET**

Dr. Gardner

**INVOICE**

30526

**DATE**

5/1/23

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing trace leaks in 3 valves is appreciated. Lack of significant left atrial enlargement indicates the current risk for complication is low. A small insufficiency may suggest elevated blood pressure and baseline BP is strongly recommended. No



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additional issues are identified. The ECG is unremarkable with a respiratory sinus arrhythmia. A left bundle branch block is present, which is a benign conduction abnormality common in senior dogs. The patient does have evidence of high vagal tone and premedicating with a vagolytic is recommended.

## SPECIES

Canine

In an asymptomatic dog with no significant left atrial enlargement, no cardiac medications are clearly indicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

## BREED

Boston Terrier

## SEX

Male Neutered

Anesthetic risk is considered mild if needed. Premedicate with a vagolytic. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload.

## AGE

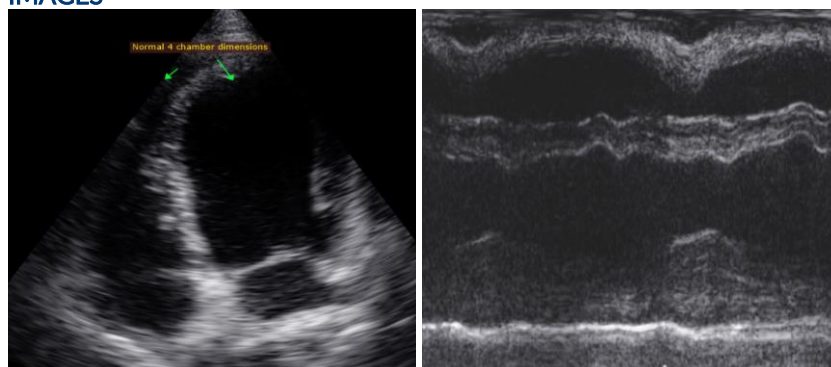
15 years

Recommend conservative monitoring with a recheck echocardiogram in 6-12 months, sooner if any development of clinical signs.

## WEIGHT

27lbs

## IMAGES



## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)



## IMAGING PERFORMED BY

Dana Alterman,  
RDCS, LVT

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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.

**SPECIES**

Canine

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.

**BREED**

Boston Terrier

Maggie Machen Lamy, DVM  
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info@sonopath.com

**SEX**

Male Neutered

**AGE**

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