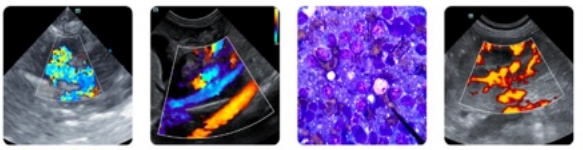

SonoPath www.thefocalzone.com info@thefocalzone.com 289.808.2608

PATIENT

Higgins Pastorius

SPECIES

Canine

BREED

Boston Terrier

SEX

Neutered male

AGE

9 years

WEIGHT

17.3 kg

INTERPRETED BY

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

IMAGING PERFORMED BY

Amanda Stewart

HOSPITAL NAME

Beattie Pet Hospital Ancaster

REFERRING VET

David-Steele

INVOICE

69139

DATE

11/27/25

PRESENTING CLINICAL SIGNS

History: Grade 1-2 heart murmur - DDx: valvular disease, congenital heart defect, cardiomyopathy. HR is 60, consistent with previous recordings. Previous HR recorded was 110 under stress in 2024.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The left atrium normal in dimension. The left ventricle is normal in dimension, with normal systolic function. The right atrium and ventricle are subjectively normal in dimension and systolic function. The mitral valve is thickened and redundant consistent with myxomatous changes, and there is no significant prolapse. There is evidence of mild mitral regurgitation. The tricuspid valve leaflets are minimally thickened with mild tricuspid regurgitation and evidence of mild pulmonary hypertension. The left ventricular outflow tract demonstrated normal laminar flow and the visible aorta is unremarkable. The right ventricular outflow tract assessment revealed normal laminar flow, and appropriate diameter and distensibility. There is no evidence of semilunar valve insufficiency. There is no visible pericardial, pleural, or free peritoneal fluid noted. The cardiac chambers, pericardial and visible extra-cardiac regions were free of masses, spontaneous echo contrast, or thrombi.

CANINE CARDIAC PARAMETERS	Body Weight kg	HR BPM	LAD 4 ch Long	RAD 4 ch Long	La/Ao Heart Base	LVIDd	LVIDs
NORMAL PARAMETER		50-100			<1.6		
PATIENT	17.3 kg	NM	3.72	3.14	1.37	3.68	2.72
CANINE CARDIAC PARAMETERS	**FS**	**EPSS**	**PV V MAX (m/s)**	**AV V Max (m/sec)**	**MR Vmax**	**TR Vmax**	**RPA distensibility (normal >30%)**
NORMAL PARAMETER	28-40	<0.6	0.7-1.6	0.7-1.7	4.5-5.5	< 2.7	
PATIENT	26	0.5	1.0	1.3	5.8	3.2	35

ECG:
A six-lead ECG with mild baseline artifact is available for review. The average heart rate is approximately 60bpm, with a normal mean electrical axis. The QRS complexes are sinus in origin (<70ms), with appropriate P-Q intervals (80ms). There are irregular R-R intervals, consistent with respiratory variation. The P wave amplitude varies with the R-R interval. There is no evidence of atrial or ventricular ectopy, nor any atrioventricular block. The underlying rhythm is most consistent with a respiratory sinus arrhythmia with a wandering pacemaker (normal physiologic change).

ULTRASONOGRAPHIC FINDINGS

These findings identify degenerative mitral valve disease with minimal to no hemodynamic effects in the presence of mild pulmonary hypertension (PH). In the absence of more convincing left sided enlargement, the PH is more likely related to primary respiratory disease or other etiology (non-type 2 PH). Pulmonary hypertension in dogs is most commonly secondary to primary respiratory disease (chronic bronchitis, pulmonary fibrosis, or other forms of pulmonary interstitial disease). Pulmonary

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hypertension can also develop in dogs with severe heartworm disease or secondary to pulmonary thromboembolism (PTE). Less commonly, pulmonary hypertension is identified in dogs as an idiopathic condition.

Respiratory sinus arrhythmias are a normal physiologic change that is common in dogs with higher vagal tone (especially with underlying respiratory disease). It is common for this irregularity to be abolished in instances of higher heart rate or increased sympathetic drive.

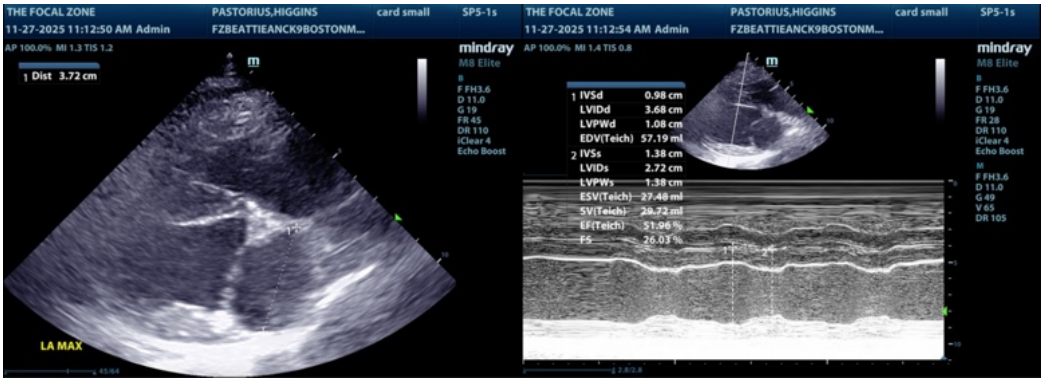
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given these findings, no cardiac therapy is recommended. There are no cardiac contraindications to anesthesia, fluid therapy, vasopressor therapy, or corticosteroids as indicated for further assessment and treatment. If not already performed, baseline thoracic radiographs and blood pressure are recommended. A recheck echocardiogram is recommended in 6 months.

Anesthesia considerations:
While there is no CHF present, there is likely an increased anesthetic risk which must be considered prior to any anesthetic procedure. If anesthesia is necessary, then alpha-2 agonists, ketamine, and Telazol should be avoided. Fluid therapy during anesthesia does not necessarily need to be adjusted. A shorter anesthetic duration will reduce the risk of complications. Pre-oxygenation is mandatory. Premedication with an opioid (e.g., butorphanol, hydromorphone, oxymorphone) with or without a benzodiazepine is generally the safest protocol. An induction agent such as Propofol, alfaxalone, or diazepam/etomidate can be used to effect. Maintenance of anesthesia with isoflurane or sevoflurane is reasonable.

Diet:
A high-quality food from Hills, Royal Canin, Science Diet, Eukanuba, Iams, or Purina that is highly palatable with adequate protein and calories for maintaining optimal body condition is reasonable.

Activity:
No special considerations are necessary.



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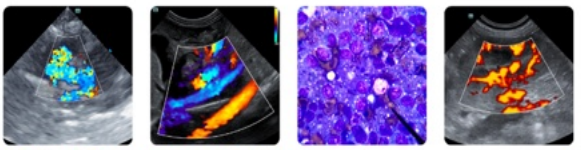

Clinical Sonography & Telecytology
Educational Teleconsultation Services™

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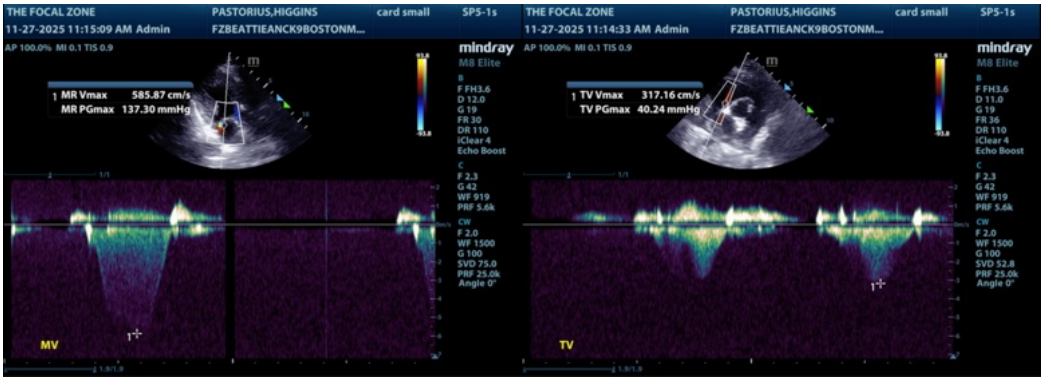

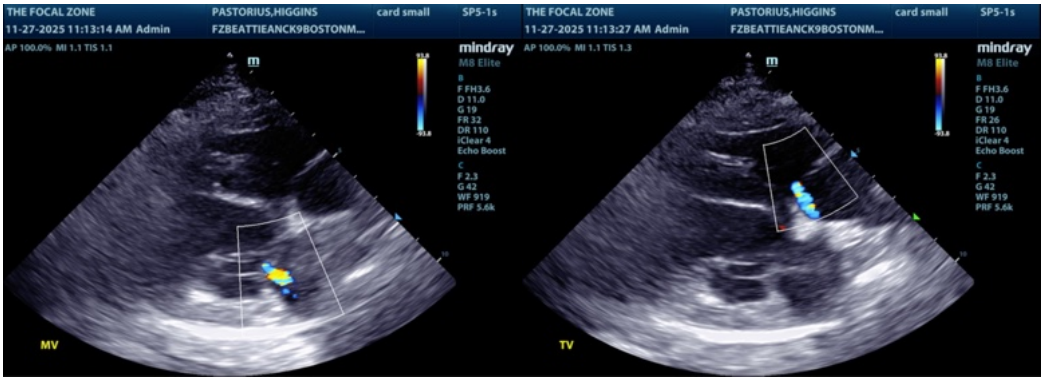

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Bradley Harris, DVM, DACVECC, DACVIM (cardiology)

info@SonoPath.com