



**PATIENT**

Buster Ham

**SPECIES**

Canine

**BREED**

Miniature Poodle Mix

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

18.6lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Cole England, DVM

**HOSPITAL NAME**

Blue Cross Animal  
Clinic

**REFERRING VET**

Dr. Pauly

**INVOICE**

46524

**DATE**

1/21/26

**PRESENTING CLINICAL SIGNS**

History: Presented for frequent collapse issues. CXR showed considerable heart enlargement. Grade 5/6 left basilar murmur present. Started on Vetmedin 2.5mg q12h.  
-Abnormal PE/Chem/CBC/UA Results: Mild ALT elevation (140); remainder WNL. HWT negative

**RADIOGRAPHIC FINDINGS \*NOTE: Images submitted for supplemental cardiac information only.**

Significant cardiomegaly. No obvious evidence of CHF.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets with mild prolapse into the left atrial lumen. Marked eccentric mitral regurgitation with marked left atrial dilation. Normal MR velocity. Moderately increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears thickened with septal prolapse and moderate tricuspid regurgitation. Velocity consistent with moderate PAH. Moderate to severe right atrial and ventricular enlargement. 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. Moderate MPA dilation. 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	5.0	4.0	NM	2.8	58	90	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	0.9	0.8	8.4	3.2	3.9	1.5
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				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)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				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**

Chronic degenerative valve disease causing marked mitral and moderate tricuspid regurgitation. Marked LA dilation enlargement indicates the risk for spontaneous congestive heart failure is elevated and cardiac supportive medications are indicated as below. There is also moderate pulmonary arterial hypertension and right heart enlargement, which should be monitored going forward. Systolic function is intact, and no additional issues are identified.



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Syncope in a dog with this degree of structural disease is most likely cardiogenic in origin, although an atypical seizure cannot be ruled out. Cardiac causes include pulmonary hypertension (moderate in this case), early CHF/poor cardiac output (very possible), rupture of a chord or LA tear (not seen but possible), arrhythmia (not seen), or vasovagal events (unlikely). Given the combination of LA dilation and moderate PAH, I am concerned for a combination of PAH and early CHF as a possibility. Recommend initiate full cardiac support, including Sildenafil therapy and monitor closely for improvement/persistence of symptoms. If episodes still persist, other causes should be investigated (ECG/holter monitor, neurology consult, etc.).

Close monitoring for development of associated clinical signs (development of a cough, labored breathing, exercise intolerance or worsening collapse episodes) is recommended. Monitoring of sleeping breathing rates is recommended as the best way to screen for CHF at home. Prognosis is guarded to poor given the severity of cardiac disease and dilation and high risk for decompensation, worsening collapse episode, and/or development of spontaneous CHF.

Elective anesthesia, fluid or steroid therapy should be avoided in this case.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit.

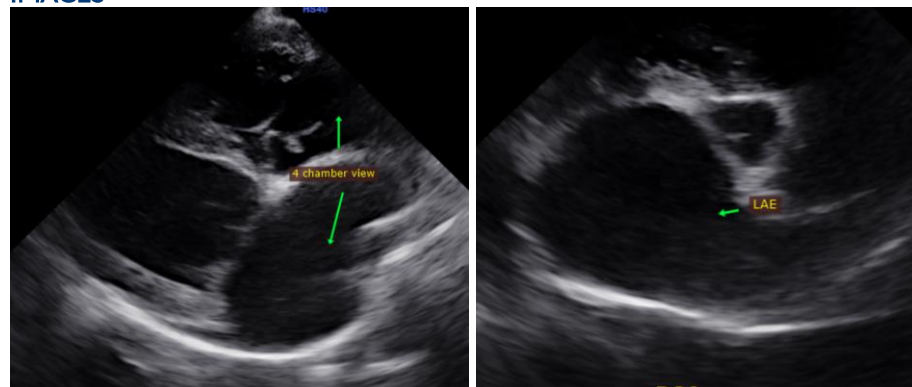
## PLAN

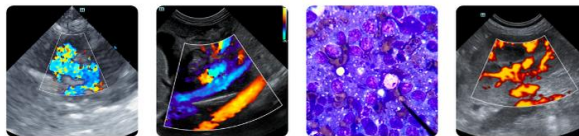
Institute furosemide (Lasix) 1-2mg/kg PO q12h. Institute spironolactone 1-2mg/kg PO q12h. Institute Pimobendan 0.25-0.3mg/kg PO q12h. Institute Sildenafil 1-2mg/kg PO q12h. If exertional syncope persists, further workup should be considered.

Monitor renal panel and blood pressure in 1-2 weeks to ensure tolerance of medications, then every 3-4 months lifelong. If doing well and BP is >130mmHg, institute ACEI 0.5mg/kg PO q12h.

A recheck echocardiogram is recommended in 6 months to screen for progression, sooner if clinical signs arise.

## IMAGES





## PATIENT

Buster Ham

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.

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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

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Maggie Machen Lamy, DVM  
Diplomate of the American College of Veterinary Internal Medicine (Cardiology)  
info@sonopath.com

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