



**PATIENT**

Tucker Borisek

**SPECIES**

Canine

**BREED**

Yorkshire Terrier

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

8.2lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Fred Gromalak, DVM

**HOSPITAL NAME**

SVS Imaging

**REFERRING VET**

Dr. Gromalak

**INVOICE**

26879

**DATE**

10/13/22

**PRESENTING CLINICAL SIGNS**

History: Previously diagnosed with CHF at a different vet, yet despite medicatinos intensity and frequency of cough is worsening.

-Current medications: Pimobendan 2.5mg 1/2 BID, Furosemide 12.5mg 1 BID, and Benazepril 5mg 1/4 BID.

**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. Mild eccentric mitral regurgitation with mild left atrial dilation. Normal MR velocity. Normal LV diameter with adequate myocardial function. The tricuspid valve appears mildly thickened with septal prolapse and 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. 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	NM	2.5	NM	1.4	43	77	0.22
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	150	1.1	0.9	3.7	1.6	2.2	1.2
*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)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				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)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing mild mitral and trace tricuspid regurgitation. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or pulmonary hypertension are noted in this study.

Given these findings, the cough is unlikely to be cardiac in origin and primary respiratory causes should be considered. **CHF is essentially ruled out with mild disease seen here and cardiac**



## PATIENT

Tucker Borisek

**medications can be safely discontinued.** It may be reasonable to continue Pimobendan for the short-term, given a lack of historical information; however, Lasix and Benazepril are certainly unnecessary. Consider further respiratory work up/treatment (hydrocodone, taper course of steroids, Enrofloxacin, TTW/BAL, etc.).

## SPECIES

Canine

Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage (B1). 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

Yorkshire Terrier

Anesthetic risk is considered mild if needed. 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. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

## SEX

Male Neutered

## AGE

13 years

## PLAN

Continue Pimobendan as prescribed until serial exams supports mild disease. Discontinue Lasix and Benazepril. Further cough evaluation/treatment as discussed.

## WEIGHT

8.2lbs

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

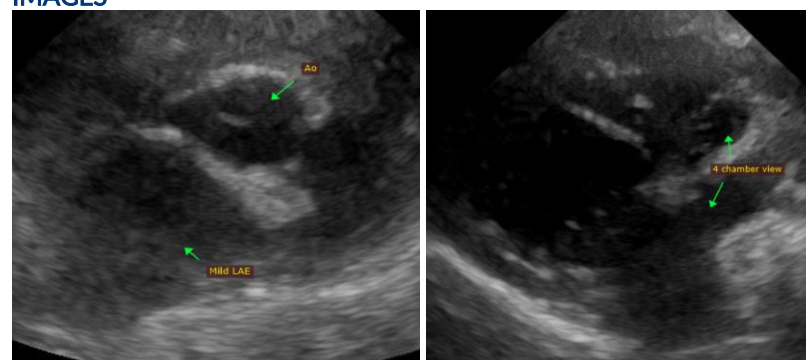
## INTERPRETED BY

Maggie Machen  
Lamy, DVM, DACVIM  
(Cardiology)

## IMAGES

## IMAGING PERFORMED BY

Fred Gromalak, DVM



## HOSPITAL NAME

SVS Imaging

## REFERRING VET

Dr. Gromalak

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.

## INVOICE

26879

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.

## DATE

10/13/22

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