



**PATIENT**

Bandit Dixon

**SPECIES**

Canine

**BREED**

Pomeranian

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

12lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Gudrun Gunther, DVM

**HOSPITAL NAME**

New Frontier Animal  
Medical Center

**REFERRING VET**

Dr. Gunther

**INVOICE**

47549

**DATE**

4/13/26

**PRESENTING CLINICAL SIGNS**

History: Presented for huffing/shortness of breath at home. Sleeping RR: 13bpm. Chronic cough for many years. CXR showed moderate focal interstitial pattern - possible focal pneumonia. On Vetmedin 1.25mg PO BID, Hydrocodone 5mg 1/4 - 1/2 BID for cough. Well controlled diabetic.

**RADIOGRAPHIC FINDINGS** \*NOTE: Images submitted for supplemental cardiac information only. Subject mild cardiomegaly. No obvious evidence of CHF.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The mitral valve is thickened with mild prolapse into the left atrial lumen. There is moderate eccentric mitral regurgitation present. There is moderate left atrial enlargement. There is no left ventricular dilation. Left ventricular systolic function is hyperdynamic. Septal flattening noted. There is normal systolic flow velocity across the aortic valve, no insufficiency. The aortic valve appears normal. Moderate right heart enlargement. The tricuspid valve is thickened with mild to moderate tricuspid regurgitation. The tricuspid regurgitant velocity is consistent with moderate pulmonary hypertension. The MPA and branches are dilated. The pulmonary artery and pulmonic valve are normal. Mild PI; elevated velocity. No pericardial/pleural effusion or cardiac masses are seen.

**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)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	6.0	4.0	1.3	1.7	55	90	0.2
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>	112	1.0	0.6	5.4	2.0	2.1	0.8
*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)
				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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Chronic degenerative valve disease causing moderate mitral and tricuspid regurgitation. Moderate left atrial enlargement indicates there may be elevated risk for spontaneous



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congestive heart failure in the future. Moderate pulmonary hypertension is present as evidenced by an elevated TR velocity and right heart enlargement, which is likely secondary to a reported cough. Given the combination of findings, continued Pimobendan is recommended going forward.

Coughing in this patient is likely due to a primary respiratory issue, given the chronicity of the findings. This patient certainly needs more aggressive management of respiratory disease, such as increased Hydrocodone, Theophylline, etc. Sildenafil is recommended, due to an altered respiratory pattern upon exam.

The cough (i.e., primary respiratory disease) is the suspected cause of development of pulmonary hypertension. It is important to note that PAH doesn't cause the cough; rather the inverse is true. Adequate cough suppression is of the up most importance to maintain stability going forward.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

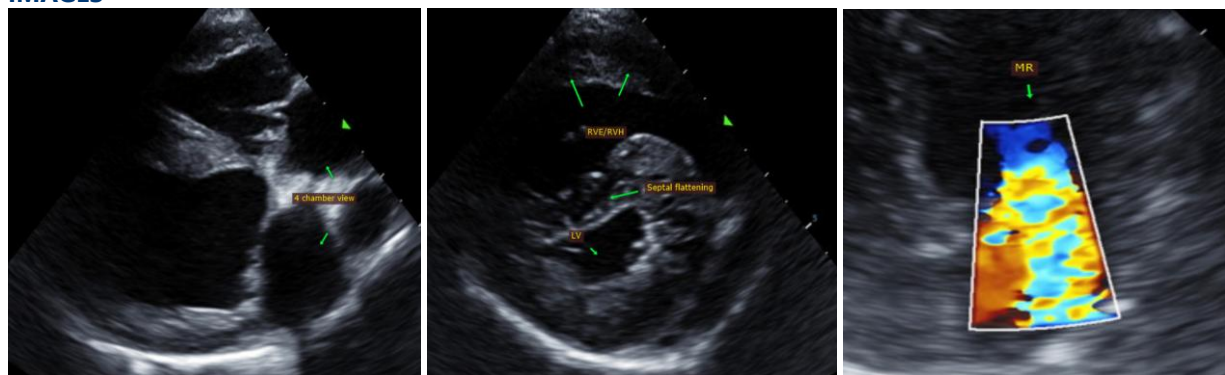
Elective anesthesia is not advised.

## PLAN

Continue Pimobendan 0.25-0.3mg/kg PO BID. Consider further respiratory workup/treatment with continued Hydrocodone as indicated. Institute Sildenafil 1-2mg/kg PO q8-12h.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

## IMAGES



**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



## PATIENT

or if I can be of any further assistance, please contact me.

Bandit Dixon

**Maggie Machen Lamy, DVM**

## SPECIES

**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**

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info@sonopath.com

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