

**PATIENT**

Jake Nolte

**SPECIES**

Canine

**BREED**

Chihuahua

**SEX**

Male Neutered

**AGE**

13 years

**WEIGHT**

9lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Wignall Animal  
Hospital

**REFERRING VET**

Dr. Colella

**INVOICE**

29634

**DATE**

3/16/23

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease - Stage B2. Jake was seen at ER in January for heavy breathing and coughing. Radiographs showed increased interstitial pattern. Furosemide was dispensed. Current medications: Furosemide 12.5 mg, 1/2-tab BID, Hydrocodone 5mg, 1/2-tab BID. Pimobendan 0.3 mg/kg PO q12h (currently not being given). -Pertinent previous echo findings (6/2/22 MML): LA 1.9 cm, LA:Ao 1.8, LV 22 cm, mild LAE, moderate MR. BP: 165, 173, 175mmHg.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and Doppler imaging is available.

**Left ventricle:** The LV diameter is normal with adequate myocardial function. LV wall thicknesses are normal.

**Left atrium:** The left atrium is mildly enlarged.

**Mitral valve:** The mitral valve is diffusely thickened with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with an elevated velocity.

**Aortic valve/aorta:** The aortic valve is normal in morphology and mobility. Normal aortic outflow velocity; laminar flow. No aortic insufficiency.

**Right ventricle:** Normal right ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension.

**Right atrium:** Normal RA dimension.

**Tricuspid valve:** The tricuspid valve appears normal with trace tricuspid regurgitation. Normal velocity.

**Pulmonic valve/pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency. Normal RVOT velocity; laminar flow.

**Pericardium/other:** No pericardial or pleural effusion noted. No obvious cardiac masses.

**Heart rhythm:** ECG reveals a sinus rhythm with an average HR of 180bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.3
LA diam (cm)	1.8
LA:Ao (Swe)	1.4
IVS thickness (cm)	0.6
LVID diastole (cm)	1.7
PW thickness (cm)	0.6
LVID systole (cm)	1.0
FS (%)	43

**Doppler Measurements**

PV Vmax (m/s)	0.7
AoV Vmax (m/s)	1.2
MR Vmax (m/s)	6.9
TR Vmax (m/s)	2.4
TR PG (mmHg)	23

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with moderate mitral and trace tricuspid regurgitation. Compared to the prior study, findings appear stable to mildly improved on Pimobendan therapy. A tricuspid leak has developed; however, the pulmonary pressures are normal. No additional issues are identified.

Given these findings, continue Pimobendan as prescribed. Continued assessment of progression in the future will help predict long term outcome, however prognosis is guarded at this stage (B2).



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A recent episode of CHF is unlikely based upon these findings (stable moderate disease). Consider a Radiologist review of the films from the ER, to rule CHF in or out. If Lasix is continued, recommend use of an ACEI to block RAAS activation.

**SPECIES**

Canine

**RECOMMENDATIONS**

- Continue Pimobendan 0.3mg/kg PO q12h.
- Recommend radiologist review of the films. If CHF is ruled out, discontinue Lasix. If CHF is suspected, continue Lasix and add ACEI 0.5mg/kg PO q12h.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- 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.
- Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

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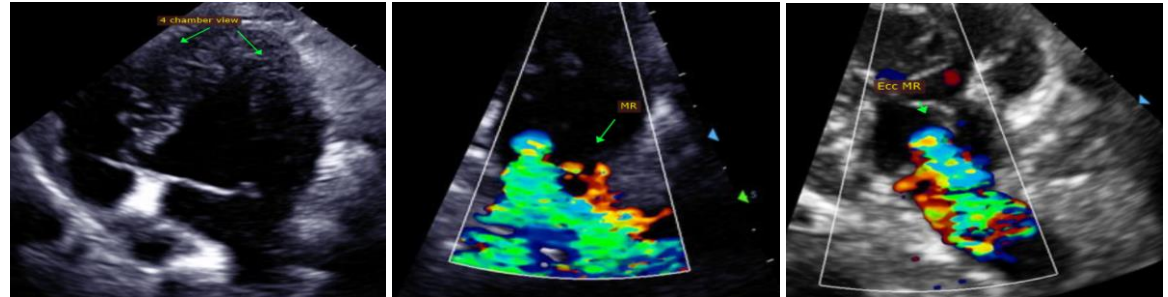
**PLAN**

- 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**



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.

**IMAGING PERFORMED BY**

Pamela Harrigan,  
 RDCS

**HOSPITAL NAME**

Wignall Animal  
 Hospital

**REFERRING VET**

Dr. Colella

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.

**INVOICE**

29634

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

**DATE**

3/16/23

Echocardiogram performed by: Pamela Harrigan, RDCS  
 Pet Animal Ultrasound Service ([4paus.com](http://4paus.com))