



**PATIENT**

Tia Carlson

**SPECIES**

Canine

**BREED**

Chihuahua Mix

**SEX**

Female Spayed

**AGE**

14 years

**WEIGHT**

11.88lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History of chronic valvular disease. Tia is presently doing well. She had dental surgery a few months ago and now has an oronasal fistula which will need to be surgically addressed. She is eating well with normal activity for the most part but did get ataxic on a walk ~ 3 weeks ago. She is coughing and sneezing. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear, mm pink, moist. BP: 170-180mmHg. Current medications: 1) Pimobendan/vetmedin 3.75mg 1/2 tab twice a day \*No sedation for study.

-Pertinent previous echo findings (3/1/22 MML): LA 2.4 cm; LA:Ao 1.8; LV 2.5 cm; moderate LAE; mild LVE; moderate MR; trace TR.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** The LV diameter is mildly increased with hyperdynamic function. LV wall thicknesses are normal.

**Left atrium:** The left atrium is moderately dilated.

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

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

**Right ventricle:** Mild RV enlargement.

**Right atrium:** Mild RA enlargement.

**Tricuspid valve:** The tricuspid valve appears thickened with moderate tricuspid regurgitation. Velocity consistent with severe pulmonary hypertension.

**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 150bpm.

**2-Dimensional Measurements**

Ao diam (cm)	1.0
LA diam (cm)	2.3
LA:Ao (Swe)	2.3
IVS thickness (cm)	0.6
LVID diastole (cm)	2.9
PW thickness (cm)	0.6
LVID systole (cm)	1.1
FS (%)	62

**Doppler Measurements**

PV Vmax (m/s)	0.61
AoV Vmax (m/s)	1.4
MR Vmax (m/s)	5.6
TR Vmax (m/s)	4.8
TR PG (mmHg)	93

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

27838

**DATE**

12/6/22

**INTERPRETATION OF THE FINDINGS**

Compared to the prior study, there is evidence of progression. Previously moderate mitral and trivial tricuspid regurgitation are now severe with progressive left heart enlargement. The pulmonary pressures are also documented to be severely elevated with mild right heart enlargement. This is surprising given the timeframe and lack of respiratory signs and may be falsely over-estimated. Follow up is advised. No additional issues are identified.

Given these findings, reasonable to continue Pimobendan with addition of an ACE-I and Spironolactone, if easily medicated. These are for potential long-term benefit given these findings. No obvious indication for Sildenafil prior to associated clinical signs, such as exertional syncope or dyspnea.



**PATIENT**  
Tia Carlson

Prognosis is guarded going forward, given the significance of the findings. Patient may be at risk for progression to CHF, development of arrhythmias and/or sudden death in the future.

**SPECIES**  
Canine

**RECOMMENDATIONS**

- Continue Pimobendan 0.3mg/kg PO q12h.
- Institute ACE-I 0.5mg/kg PO q12h,
- Institute Spironolactone 1-2mg/kg PO q12h.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit.
- Anesthetic risk is considered moderately elevated 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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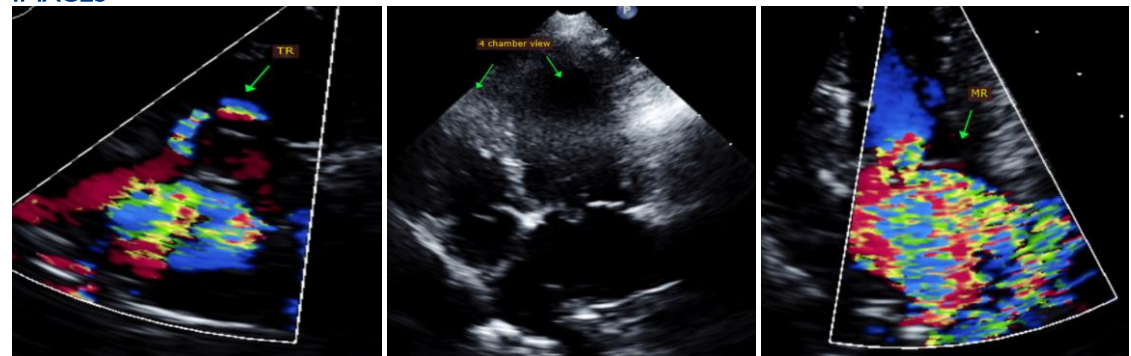
**PLAN**

- 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**



**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary  
Services

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.

**REFERRING VET**

Dr. Masloski

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**

27838

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

**DATE**

12/6/22

**Echocardiogram performed by:**

Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service (4paus.com)