



**PATIENT**

Leo Morell

**SPECIES**

Canine

**BREED**

Toy Fox Terrier Mix

**SEX**

Male Intact

**AGE**

14 years

**WEIGHT**

7.9lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

25437

**DATE**

7/20/22

**PRESENTING CLINICAL SIGNS**

History: Recheck echo. History chronic valvular disease, advanced. Current presentation: Diagnosed with CHF in June. Did not improve with Lasix dose increase and was changed to Torsemide. He continues to cough, but not to the point of collapsing. He continues to eat well with normal activity for him. On exam: NSR, grade IV/VI murmur with PMI left apical area radiating to right, PSS, lung fields clear with faint inspiratory crackles noted on right. Current medications: 1) Torsemide 5mg 1/4 tab daily 2) Pimobendan/vetmedin 0.94mg 1 capsule twice a day 3) Spironolactone 25mg 1/4 tab twice a day 4) Hydrocodone with homatropine/hycodan 5mg 1 tab three times a day \*Sedated with propofol for study.  
-Pertinent previous echo findings (11/17/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 2.3 cm; LA:Ao 1.8; LV 2.9 cm; severe LAE; mild LVE; severe MR; mild-moderate TR (2.3 m/s).

**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 severely dilated.  
**Mitral valve:** The mitral valve is diffusely thickened with prolapse into the left atrial lumen. Flail leaflet. Severe eccentric mitral regurgitation with an elevated normal velocity.  
**Aortic valve/Aorta:** The aortic valve appears thickened with normal outflow velocity; laminar flow. Trace 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 mildly thickened with septal prolapse and mild to moderate tricuspid regurgitation. Normal velocity.  
**Pulmonic valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. Trace 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)	1.2
LA diam (cm)	2.5
LA:Ao (Swe)	1.9
IVS thickness (cm)	0.7
LVID diastole (cm)	2.7
PW thickness (cm)	0.7
LVID systole (cm)	1.2
FS (%)	56

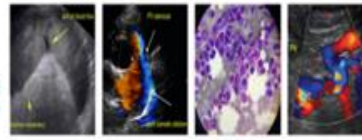
**Doppler Measurements**

PV Vmax (m/s)	0.55
AoV Vmax (m/s)	0.76
MR Vmax (m/s)	4.5
TR Vmax (m/s)	2.7
TR PG (mmHg)	30

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists without significant progression. A flail leaflet is visualized, that was not noted previously. The overall left heart dimensions are stable with severe MR. Mild to moderate TR is unchanged without significant pulmonary hypertension. No additional issues are identified.

Given a cough that persists despite Torsemide therapy, this likely reflects primary airway disease with mainstem bronchi compression. More aggressive Hydrocodone may be beneficial and/or a course of Baytril if there was acute worsening of the symptom.



**PATIENT** Crackles were noted on the exam and CXR may be beneficial to determine if these are due to pulmonary disease or recurrent edema as treatment would differ.

Leo Morell

**SPECIES** No change to the current medications at this time prior to further evaluation. Prognosis remains poor long-term with end-stage disease. Patient will always be at risk for recurrent CHF, syncope and/or sudden death in the future.

Canine

**RECOMMENDATIONS**

- Continue Pimobendan, Spironolactone, Torsemide, and Hydrocodone as prescribed.
- Consider a repeat CXR, respiratory therapy as discussed.
- Monitor BP every 6 months, if >130mmHg institute ACE-I 0.5mg/kg PO q12h.
- Close monitoring for development of associated clinical signs (development of a progressive 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.
- Omega fatty acid supplementation and mild salt restriction may be of some long-term benefit. Mild activity restriction is advised.
- Elective anesthesia is not advised.

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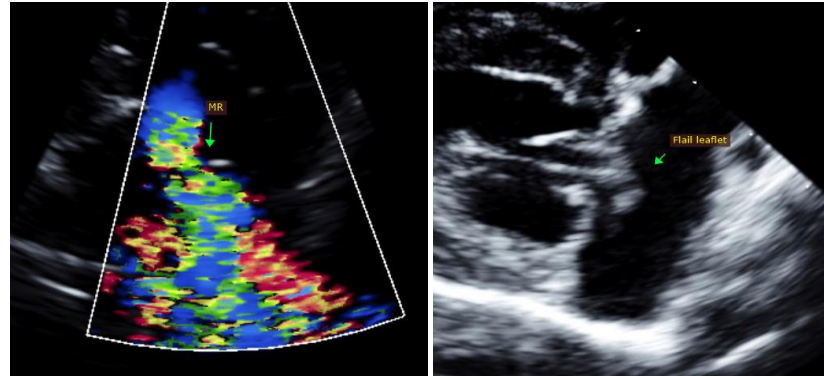
**PLAN**

- Recheck renal panel and BP every 4-6 months lifelong.
- Recommend conservative monitoring with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

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**IMAGES**



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Pamela Harrigan,  
RDCS

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Mass Veterinary  
Services

**REFERRING VET**  
Dr. Masloski

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

**INVOICE**  
25437

**DATE**  
7/20/22

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**Echocardiogram performed by:** Pamela Harrigan, RDCS  
Pet Animal Ultrasound Service (4paus.com)