



**PATIENT**

Benji Neumann

**SPECIES**

Canine

**BREED**

Bichon Frise

**SEX**

Male Neutered

**AGE**

15 years

**WEIGHT**

12.25lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING PERFORMED BY**

Eduardo Rodriguez  
III, RCS

**HOSPITAL NAME**

Mass Veterinary Services

**REFERRING VET**

Dr. Masloski

**INVOICE**

27680

**DATE**

11/29/22

**PRESENTING CLINICAL SIGNS**

History: History chronic valvular disease - Stage B2, with moderate-severe MR, trace-mild TR, moderate LAE (measurements not available). Benji was started on Pimobendan and Enalapril. Currently, doing well at home. On exam: NSR, no murmurs noted, PSS lung fields clear, mm pink moist. BP: 150-160 mmHg. Current medications: 1) Pimobendan/vetmedin 2.5mg 1/2 tab twice a day as well as 2) Pimobendan/vetmedin 1.25mg 1/4 tab twice a day 3) Enalapril 2.5mg 1 tab daily 4) Tacrolimus 1 drop each eye twice a day 5) Dexamethasone 1 drop both eyes daily \*No sedation for study.

**ELECTROCARDIOGRAPHIC FINDINGS** \*Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 175bpm (range 136-188bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. P and QRS morphologies are positive. Isolated APCs are identified; singles only. No VPCs, pauses or other dysrhythmias observed. ECG diagnosis: Sinus tachycardia with isolated APCs.

**ECHOCARDIOGRAM FINDINGS**

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

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

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

**Mitral valve:** The mitral valve is diffusely thickened with significant prolapse into the left atrial lumen. Flail leaflet (see below. Severe eccentric mitral regurgitation; normal velocity.

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

**Right ventricle:** Normal right ventricular diameter and morphology.

**Right atrium:** Normal RA dimension.

**Tricuspid valve:** The tricuspid valve appears mildly thickened with mild tricuspid regurgitation; velocity is mild to moderately elevated.

**Pulmonary valve/Pulmonary artery:** The pulmonic valve is normal in morphology and mobility. No pulmonic insufficiency.

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

**2-Dimensional Measurements**

Ao diam (cm)	1.5
LA diam (cm)	2.7
LA:Ao (Swe)	1.8
IVS thickness (cm)	0.7
LVID diastole (cm)	3.5
PW thickness (cm)	0.7
LVID systole (cm)	1.5
FS (%)	57

**Doppler Measurements**

PV Vmax (m/s)	0.92
AoV Vmax (m/s)	1.7
MR Vmax (m/s)	5.8
TR Vmax (m/s)	3.5
TR PG (mmHg)	50

**INTERPRETATION OF THE FINDINGS**

Chronic degenerative valve disease persists with stage B2 disease. Severe mitral regurgitation is noted, although left heart dimensions remain moderate. Mild to moderate pulmonary hypertension is identified, which is not noted in the prior results. This is likely secondary to LA pressure elevation in an asymptomatic dog. No additional issues are identified.



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Given these findings, continue 2 medications as prescribed with no additional medications clearly indicated. Prognosis remains guarded long-term with risk for progression to CHF in the future.

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Isolated APCs with an underlying sinus tachycardia are noted on the ECG. These are not surprising given a stressed patient with significant left atrial enlargement. These do not warrant obvious therapy; however, monitoring for development of SVT or atrial fibrillation are recommended. Signs of this development include acute lethargy or collapse.

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**RECOMMENDATIONS**

- Continue medications as prescribed.
- Monitor for sustained arrhythmias as discussed.
- 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 progressive cough, labored breathing, exercise intolerance or collapse episodes.
- Monitoring of sleeping breathing rates is advised as the best way to screen for progression to CHF in the future.

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**PLAN**

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

**IMAGING PERFORMED BY**

Eduardo Rodriguez  
III, RCS

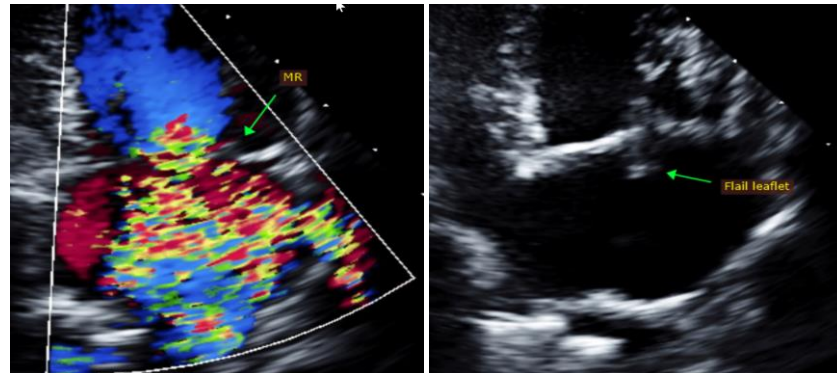
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**IMAGES**

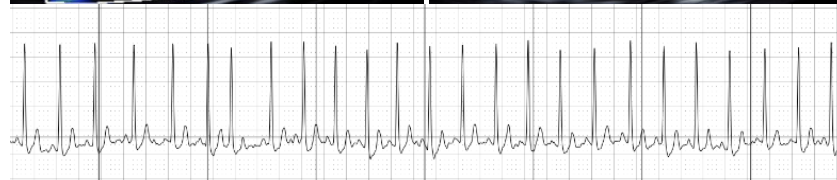


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Mass Veterinary  
Services



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Clinical Sonography & Telectology  
EDUCATIONAL TELECONSULTATION SERVICES™  
1-800-838-4268 info@sonopath.com SonoPath.com

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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.

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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.

**BREED**

Bichon Frise

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

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**Echocardiogram performed by:** Eduardo Rodriguez III, RCS  
Pet Animal Ultrasound Service (4paus.com)

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