

**PATIENT**

**Boba Chang**

**SPECIES**

Feline

**BREED**

DMH

**SEX**

Female Spayed

**AGE**

11 years

**WEIGHT**

8lbs

**INTERPRETED BY**

Maggie Machen  
Lamy, DVM  
DACVIM (Cardiology)

**IMAGING**

**PERFORMED BY**

Pamela Harrigan,  
RDCS

**HOSPITAL NAME**

Pine Banks Animal  
Hospital

**REFERRING VET**

Dr. Syed

**INVOICE**

20413

**DATE**

8/7/21

**PRESENTING CLINICAL SIGNS**

History: Grade II/VI systolic murmur; coughs 1-3 times per day. Needs dental procedure. BP: 175mmHg.

**ECHOCARDIOGRAM FINDINGS**

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

**Left ventricle:** The LV diameter is borderline increased with mildly decreased systolic function. The LV wall thicknesses are irregular with regions of significant thinning. There is a diffusely hyperechoic endocardium consistent with fibrosis. Exuberant fibrous banding. The papillary muscles are remodeled.

**Left atrium:** The left atrium is mildly dilated; however, bulbous in appearance. No obvious smoke or thrombi seen.

**Mitral valve:** The mitral valve is normal in structure and mobility. No obvious systolic anterior motion is seen. Moderate MR. Normal MR velocity.

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

**Right ventricle:** Normal RV.

**Right atrium:** Normal RA.

**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 200bpm.

**2-Dimensional Measurements**

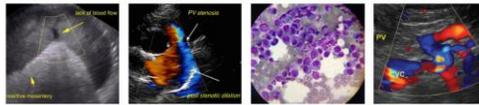
Ao diam (cm)	1.0
LA diam (cm)	1.5
LA:Ao (Swe)	1.5
IVS thickness (cm)	0.27
LVID diastole (cm)	1.7
PW thickness (cm)	0.26
LVID systole (cm)	1.1
FS (%)	35

**Doppler Measurements**

PV Vmax (m/s)	1.1
AoV Vmax (m/s)	1.1
MR Vmax (m/s)	5.4
TR Vmax (m/s)	1.8
TR PG (mmHg)	13

**INTERPRETATION OF THE FINDINGS**

The finding of left atrial enlargement in the face of normal to decreased LV wall thickness and systolic dysfunction is most consistent with Restrictive Cardiomyopathy (RCM), however some prior insult to the myocardium cannot be ruled out. Mild left atrial dilation is present in addition to significant LV remodeling and fibrosis which indicates diastolic dysfunction. Moderate MR is the cause of the murmur with no additional issues are identified.



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Regardless of categorical classification, the finding of atrial dilation and systolic dysfunction confers risk for progression in the future and addition of Pimobendan (off label use) should be considered. No additional medications are indicated at this time.

The long-term prognosis is guarded; however, there is a highly variable rate of progression in cats with subclinical disease. There will always remain risk for progression to CHF and development of blood clots in the future. Monitoring is certainly advised, particularly should any respiratory signs, collapse or significant lethargy be noted in the future.

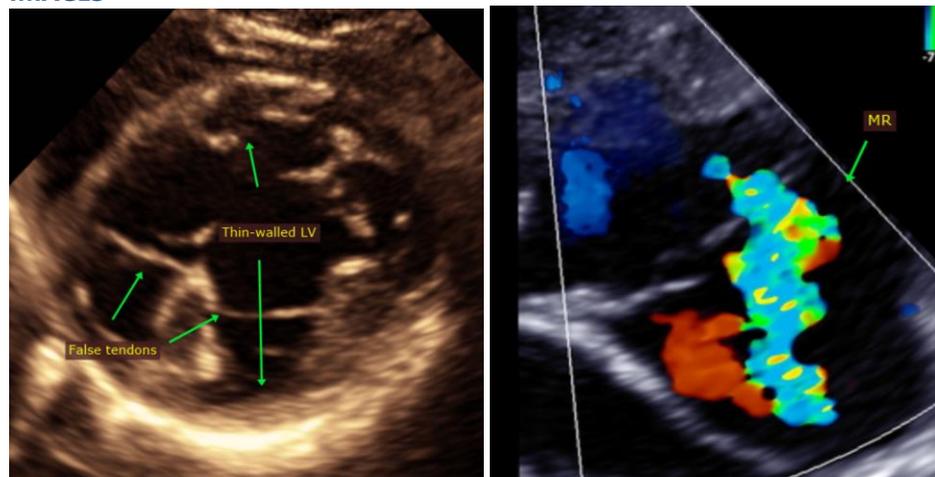
**RECOMMENDATIONS**

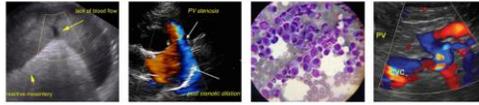
- Recommend institute Pimobendan (off label use) 1.25mg PO q12h.
- Anesthetic risk is considered moderate, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.
- Monitor for any clinical evidence of cardiac compromise, including respiratory changes, collapse and/or signs of a blood clot event (paralysis, neurologic changes, etc.).

**PLAN**

- Recheck echocardiogram in 6 months, sooner if clinical signs arise

**IMAGES**





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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.

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DMH

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

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