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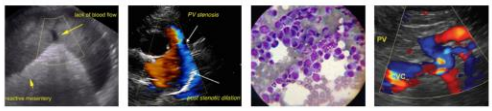

SonoPath
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**PATIENT**
Mr. Bighead Cimini

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Male Neutered

**AGE**
13 years

**WEIGHT**
12.7lbs

**INTERPRETED BY**
Maggie Machen Lamy, DVM
DACVIM (Cardiology)

**IMAGING PERFORMED BY**
Pamela Harrigan, RDCS

**HOSPITAL NAME**
Foster Veterinary Clinic

**REFERRING VET**
Dr. Hattan

**INVOICE**
24345

**DATE**
5/23/22

## PRESENTING CLINICAL SIGNS

History: Recheck echo. History elevated cardiopet BNP with overtly normal cardiac structure and function on prior echocardiogram (1/18/21 Maggie Machen Lamy, DVM, DACVIM-Cardiology): LA 1.29 cm; LA:Ao 1.19; LV 2.1 cm; IVS 0.42 cm; PW 0.41 cm; normal LA size; mildly dilated LV; no flow abnormalities. Current status: elevated cardiac marker; non-regenerative anemia becoming more severe. Having bicavity ultrasound studies.

## 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, 20mm/mV. The underlying rhythm is sinus in origin with an average heart rat of 166bpm and a largely regular rhythm. P for every QRS complex and vice versa. P and QRS morphologies are positive. Frequent ventricular arrythmias are seen throughout, with singles, frequent couplets and one triplet identified. No supraventricular premature beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus rhythm with malignant ventricular arrythmias.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and Doppler imaging is available.
**Left ventricle:** The LV diameter is moderately increased with adequate function. The LV wall thicknesses are normal. There is a diffusely hyperechoic endocardium consistent with fibrosis. False tendons. The papillary muscles are remodeled and hyperechoic. The endocardium appears remodeled.
**Left atrium:** The left atrium is moderately dilated and 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. No MR.
**Aortic valve/Aorta:** The aortic valve is mildly thickened. No obvious stenosis. Normal aortic outflow velocity; laminar flow. Mild aortic insufficiency.
**Right ventricle:** Mild right ventricular dilation.
**Right atrium:** The right atrium is moderately dilated.
**Tricuspid valve:** The tricuspid valve appears normal with no tricuspid regurgitation.
**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.

**2-Dimensional Measurements**

| | |
|---|---|
| Ao diam (cm) | 1.0 |
| LA diam (cm) | 1.7 |
| LA:Ao (Swe) | 1.7 |
| IVS thickness (cm) | 0.48 |
| LVID diastole (cm) | 2.3 |
| PW thickness (cm) | 0.46 |
| LVID systole (cm) | 1.3 |
| FS (%) | 44 |

**Doppler Measurements**

| | |
|---|---|
| PV Vmax (m/s) | 0.63 |
| AoV Vmax (m/s) | 1.2 |
| MR Vmax (m/s) | NA |
| TR Vmax (m/s) | NA |
| TR PG (mmHg) | NA |

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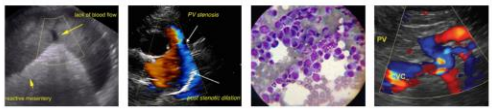

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## INTERPRETATION OF THE FINDINGS

Unfortunately, there is evidence of significant progression with development Unclassified Cardiomyopathy (UCM). The LV is increased comparatively and of great concern both atria are now moderately dilated. This indicates risk for progression going forward. A small aortic leak is noted, and a baseline blood pressure is recommended. No additional issues are identified.

The ECG is also concerning with frequent malignant ventricular arrythmias. This is determined based upon markers of malignancy, such as frequent couplets and a brief run of ventricular tachycardia. This is likely due to underlying structural disease and stress in this patient and does warrant therapy.

Regardless of categorical classification, the finding of atrial dilation and arrhythmic disease confers risk for progression in the future and medications should be instituted. Consider use of an ACE-Inhibitor, pending BP assessment, due to presence of an aortic leak. Pimobendan is also recommended if the patient is easily medicated. Additionally, Plavix may be reasonable given atrial dilation to help decrease the risk of a blood clot event in the future. Finally, consider use of Atenolol in this case due to arrythmias noted here. Other options are available pending response, such as Sotalol; however, Atenolol would be the safer option.

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

## RECOMMENDATIONS

- Recommend institute blood thinner Plavix 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).
- Recommend institute Pimobendan (off label use) 1.25mg PO q12h.
- Recommend institute Atenolol 25mg tablets, give ¼ tab PO q24h.
- Baseline BP recommended, if >150mmHg, institute ACE-I 0.5mg/kg PO q12h.
- If patient develops lethargy or collapse, immediate recheck ECG is recommended to screen for malignant sustained arrhythmias.
- Elective anesthesia is not advised.
- 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 BP and ECG in 1-2 weeks. If amount of ectopy is not significantly decreased, consider an alternative medication such as Sotalol (compounding required). Consider resubmit ECG for evaluation if any question.
- Monitor BP and ECG every 4-6 months.
- Recheck echocardiogram in 6 months, sooner if clinical signs arise .

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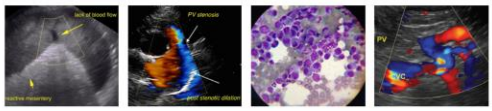

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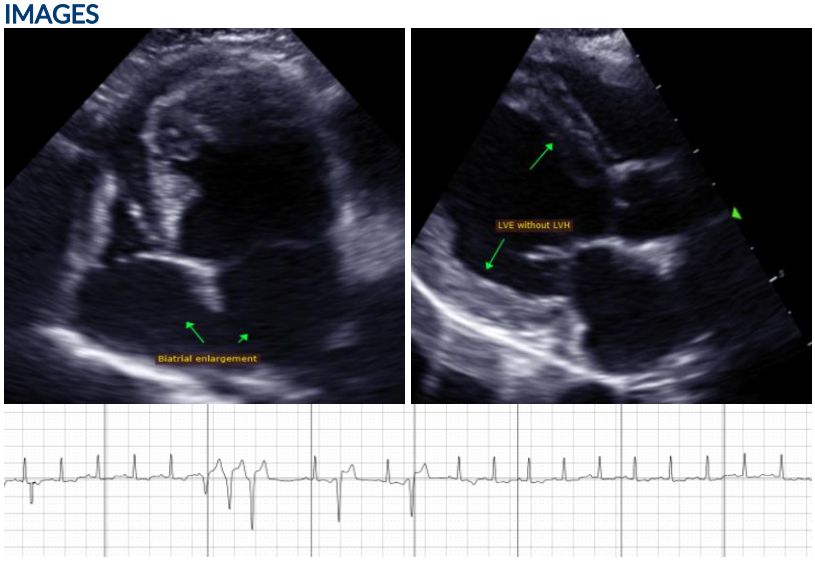
## IMAGES




**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.**

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.

**Maggie Machen Lamy, DVM**
**Diplomate of the American College of Veterinary Internal Medicine (Cardiology)**
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