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Clinical Sonography & Telecytology
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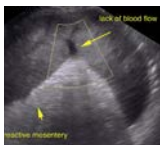
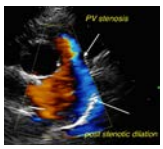
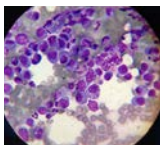
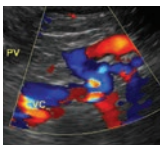

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1-800-838-4268 info@sonopath.com

**PATIENT**
Pumpkin Watkins

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Neutered Male

**AGE**
5 Years

**WEIGHT**
10 Pounds

**INTERPRETED BY**
Eric Lindquist, DMV
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**
Shari Reffi, CVT

**HOSPITAL NAME**
Newton Vet Hospital

**REFERRING VET**
Dr. Chabora

**INVOICE**
38893

**DATE**
6/20/22

## PRESENTING CLINICAL SIGNS

Ventricular tachycardia sustained over 300 bpm. Current meds: Propanolol 0.04mg/kd IV q8

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| FELINE CARDIAC PARAMETERS | BODY WEIGHT (kg) | HR (BPM) | IVSd (cm) | LVIDd (cm) | LVWd (cm) | FS (%) | EF (%) |
|---|---|---|---|---|---|---|---|
| NORMAL PARAMETER | ------ | 150-240 | 0.3-0.6 | 1.0-2.1 | 0.25-0.6 | 35-67 | 80-100 |
| PATIENT | | 230 | 0.60 | 1.82 | 0.63 | 39.6 | 73.5 |
| **FELINE CARDIAC PARAMETERS** | **LA/AO** (Boon) | **LA/AO HEART BASE** (Sisson) | **LA** 2D 4-chamber long axis AS to FW (Sisson) (cm) | | **LVOT VEL.** (m/s) | **RVOT VEL.** (m/s) | **IVRT** (m/) |
| NORMAL PARAMETER | <1.5 | 0.88-1.79 | 0.7-1.7 | | <1.6 | <1.3 | 40-60 |
| PATIENT | 3.0 | 2.7 | 3.0 | | 1.1 | 0.7 | NM |

Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

### *Cardiac Presentation*

The left ventricular wall is remodeled with regions of myocardial asymmetry and borderline IVS and free wall hypertrophy. Subjective generalized mild hyperechoic endocardium, potentially indicative of fibrosis, is noted. Subjective prominent to remodeled papillary muscles. LV systolic dysfunction is adequate, yet subjectively decreased. Borderline LV dilation. Concurrent subjective mild RV remodeled myocardium, yet overall normal RV size. The left atrium is severely dilated and bulbous in appearance. Subjective mild spontaneous contrast/smoke present in the LA lumen. The right atrium exhibited concurrent severe enlargement. No overt evidence of right atrial spontaneous contrast. The mitral valve appeared to be mildly thickened with probable trace MR. Concurrent mild TR on doppler. Blood flow through the LVOT and RVOT exhibited subjective laminar systolic flow and an overtly normal velocity. No overt evidence of pericardial or free pleural fluid. No obvious cardiac tumors. A consistent tachyarrhythmia was present.

## ULTRASONOGRAPHIC FINDINGS

- LV myocardial remodeling and decreased yet subjectively adequate LV systolic function
- Severe biatrial enlargement, mild spontaneous contrast (smoke) in severely enlarged LA
- Tachyarrhythmia

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The finding of severe biatrial enlargement without evidence of significant LV wall thickness may suggest unclassified cardiomyopathy. However, burnout or end stage HCM can also have this appearance. Assessment of T4 levels and systemic BP suggested to rule out complicating factors, LV remodeling and suspect fibrosis, which may indicate concurrent diastolic and systolic dysfunction, and evidence of early thrombus formation present in the LA, putting this patient at significantly high risk for aortic thromboembolism going forward. Potentially, the tachyarrhythmia may be a contributing factor to the development of thrombus formation and progressive heart failure.

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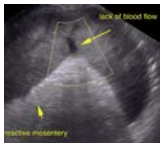
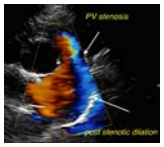
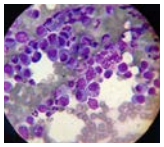
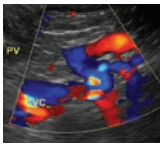

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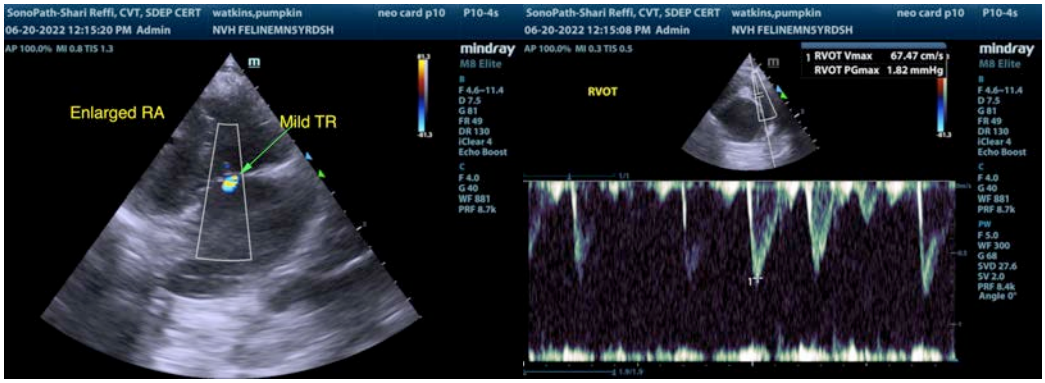
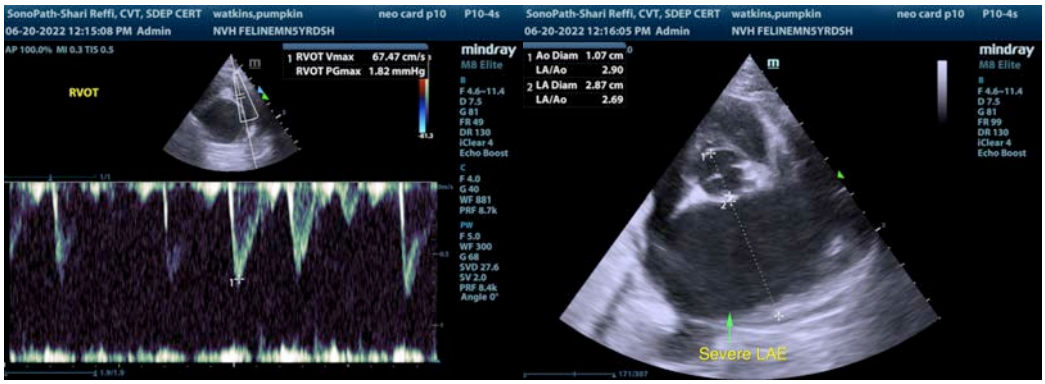
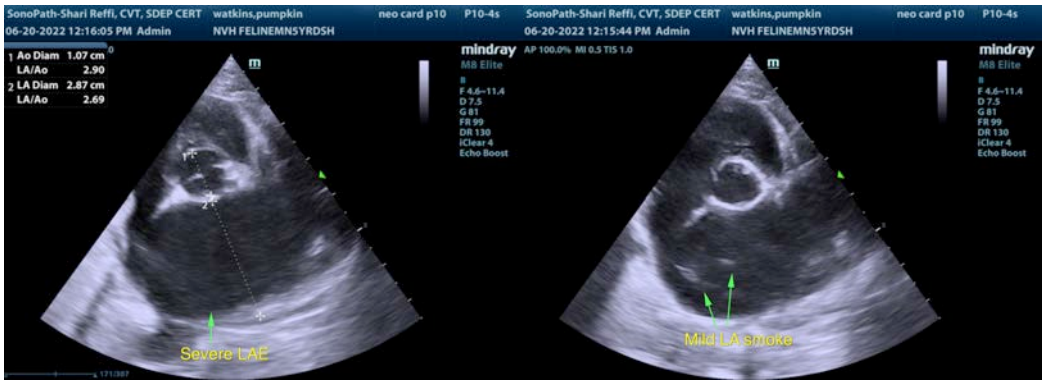
ECG assessment recommended for further clarification of the arrhythmia with potential for anti-arrhythmic medical therapy, if clinically indicated. Regardless of categorical classification, the degree of biatrial enlargement and concurrent arrhythmic disease indicates that long-term prognosis is likely poor. Going forward, this patient will be at significant elevated risk for episodes of CHF, thromboembolism, +/- sudden death.

Consider hospitalization with injectable diuretics, if patient needs stabilization. Lasix 1-2 mg/kg PO BID, Clopidogrel 75 mg tab (1/4 tab PO SID), and off label Pimobendan 1.25 mg PO BID recommended. Continued monitoring of renal parameters, BP and ECG advised. Recheck echocardiogram suggested in 4-6 months, sooner if progressive signs consistent with CHF or aortic thromboembolism noted.



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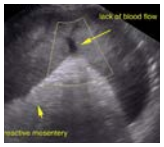
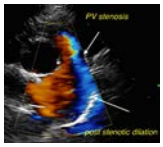
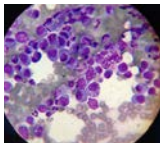
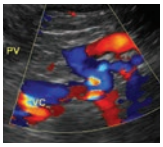

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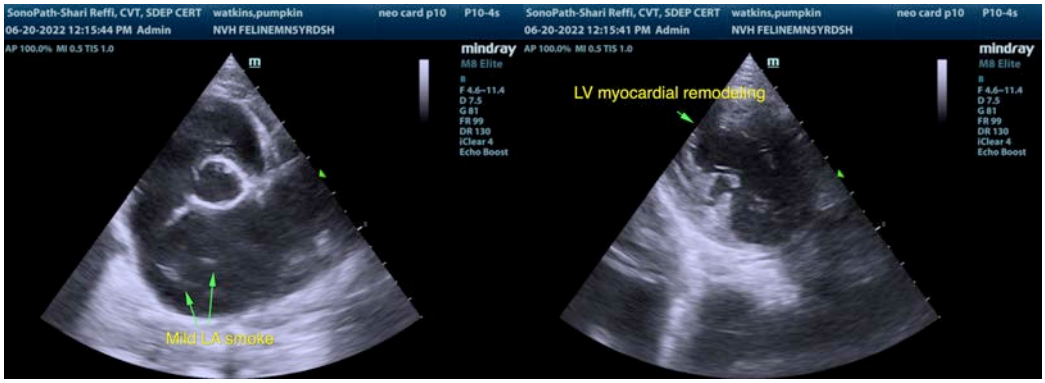


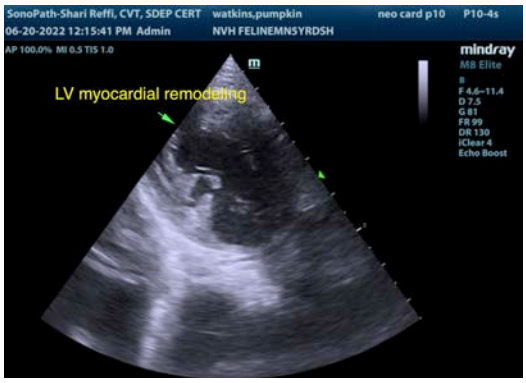


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)**

**info@SonoPath.com**