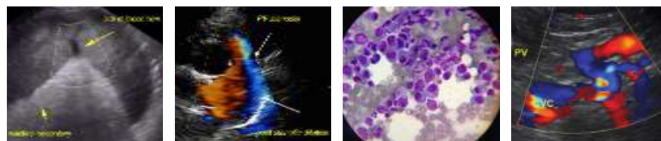
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

**PATIENT**
Ashley Cressy

**SPECIES**
Feline

**BREED**
DSH

**SEX**
FS

**AGE**
13 years

**WEIGHT**
10 lbs.

**INTERPRETED BY**
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

**IMAGING PERFORMED BY**
Kim Liedberg

**HOSPITAL NAME**
SVS Imagin WI

**REFERRING VET**
Dr Chughtai, American Vet Service

**INVOICE**
12505

**DATE**
11/1/21

## PRESENTING CLINICAL SIGNS

A 2/6 heart murmur was noted on PE along with cardiomyopathy seen on radiographs.
Abnormal PE/Chem/CBC/UA Results: elevated BNP elevated liver enzymes

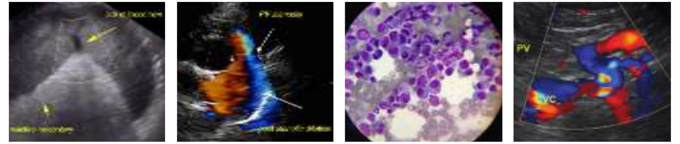
## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| 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 | | 245 | 0.49 | 1.5 | 0.50 | 33 | 65 |
| **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 | | 2.2 | 2.0 | | 1.0 | 0.8 | 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 echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented subjective normal linear structure and kinetics with minor insufficiency noted on color doppler assessment. Anechoic content was present in the left atrium without evidence of spontaneous contrast or smoke. The **left ventricular** septum and free wall revealed normal thicknesses, adequate yet subnormal contractility indicated by the fractional shortening with normal left ventricular volume, yet some myocardial remodeling noted in the septum and free wall, suggestive of some level of **myocardial fibrosis**. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed increased size and normal content. No evidence of masses associated with the right atrium and auricle were noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was enlarged in size with normal chordae structure, myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx.1:1 pa/ao ratio). No visible **pericardial** effusion was present with subjective moderate free pleural fluid exhibiting mild cellular component was noted. No overt evidence of cranial **mediastinal** or extra cardiac masses was present in the visible plane. Tachycardia was present.





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## ULTRASONOGRAPHIC FINDINGS

### *Primary Findings*

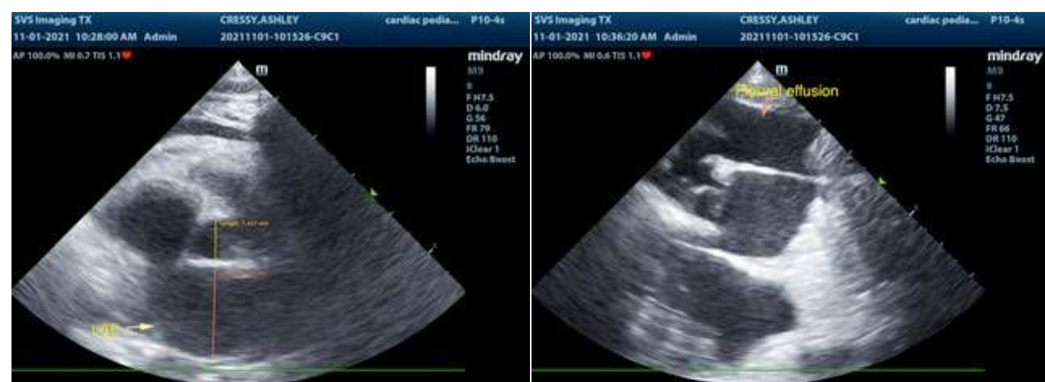
- Unclassified / restricted cardiomyopathy with biatrial enlargement
- Tachycardia
- Pleural effusion

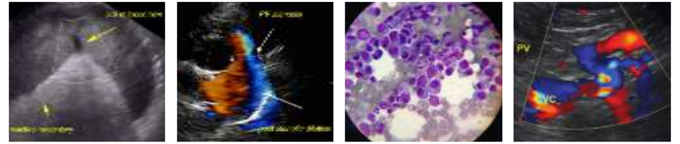
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The finding of biatrial enlargement in the face of normal LV wall thickness is most suggestive of unclassified cardiomyopathy, while the potential RCM or burnout or end-stage HCM can also have this appearance. Both diastolic and systolic dysfunction are likely.

Regardless of categorical classification, the degree of atrial dilation in combination with tachycardia indicates that the pleural effusion in this case If secondary to congestive heart failure. A likely poor long-term prognosis is indicated, yet medical therapy is warranted.

Hospitalization with injectable Lasix and as-needed oxygen Is suggested until patient is stabilized. Lasix 1.0-2.0 mg/kg PO BID, Plavix 1/4 75 mg tablet PO SID and off-label Pimobendan 1.25 mg PO BID is recommended. ECG assessment is suggested, given the tachycardia while monitoring of renal parameters and blood pressure are Indicated. Regardless of response to medical therapy, this patient is at severely elevated risk for continued episodes of congestive heart failure with potential for sudden death. Recheck echocardiogram may be considered in 4-6 months, sooner if continued signs of congestion are noted.





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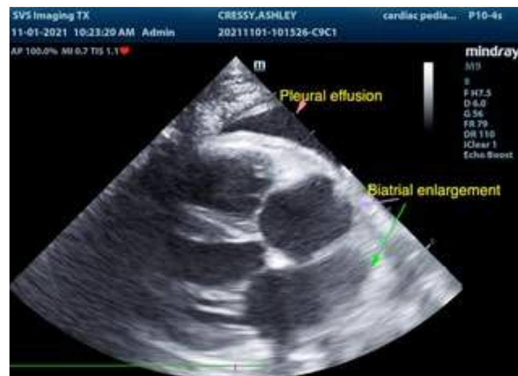


**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**