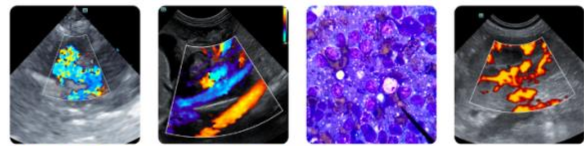
Charleston Mobile Veterinary Services
IN PARTNERSHIP WITH SONOPATH VETERINARY ULTRASOUND



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™
www.charlestonmobile.net
info@charlestonmobile.net 800.403.5408

**PATIENT**

Coco Drew

**SPECIES**

Feline

**BREED**

Siamese

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

4 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Andrea Nicastro DVM, DACVIM

**HOSPITAL NAME**

Veterinary Specialty Care Blue Pearl Mt. Pleasant

**REFERRING VET**

Dr. Holmes

**INVOICE**

13911

**DATE**

02/21/26

## PRESENTING CLINICAL SIGNS

- Grade III/VI heart murmur (R>L), no arrhythmia
- TFAST: Moderate amount of pleural effusion, subjectively La:Ao >1.5, thickened RV wall
- 300 ml blood-tinged tan pleural effusion removed - submitted for cytology

Rads: Right middle/cranial alveolar pattern +/- left cranial lung lobe interstitial pattern - differentials include cardiogenic pulmonary edema (given cardiomegaly), bronchopneumonia or less likely atelectasis or neoplasia. Moderate cardiomegaly - probably due to cardiomyopathy (e.g. HCM or HCM phenotype secondary to hyperthyroidism). Suspected sternal lymphadenopathy -reactive or metastatic. Subjectively thickened appearance of small intestines may represent normal variation, fluid filled intestines or, given reported weight loss, chronic enteropathy (e.g. due to IBD or small cell lymphoma) is also considered.

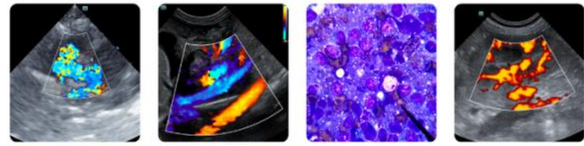
## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

| 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 | 4.0 | NM | 0.62 | 1.4 | 0.65 | 50 | 85 |
| **FELINE CARDIAC PARAMETERS** | **LA/AO** (M-mode) | **LA/AO HEART BASE** (Sisson) | **LAD** LA MAX 4 Chamber | | **LVOT VEL.** (m/s) | **RVOT VEL.** (m/s) | **IVRT** (m/) |
| NORMAL PARAMETER | <1.5 | 1.6 | 0.7-1.7 | | <1.6 | <1.3 | 40-60 |
| PATIENT | -- | 2.5 | 2.3 | | 3.0 | 1.3 | NM |
| Adapted from June Boon,Veterinary Echocardiography,1998<br>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 mild hypertrophied with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Papillary muscle hypertrophy with regions of remodeling. Severe increased left atrial dimension, no evidence of foreign thrombus with possible early indistinct spontaneous contrast. There is indistinct systolic anterior motion (SAM) of the mitral valve present, with an elevated LVOT velocity seen on color flow. Dynamic LVOT profile. There is moderate eccentric mitral regurgitation present secondary to SAM measuring approximately 6.0 m/s. Normal right atrial size. Normal right ventricle size. Normal RVOT velocity. No TR. No other obvious valvular regurgitation is present. No obvious cardiac tumors. No evidence of arrhythmia or hepatic congestion. Pericardial comet tail artifact with pleural effusion.

## ULTRASONOGRAPHIC FINDINGS





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- Hypertrophic obstructive cardiomyopathy with LV remodeling/fibrosis.
- Severe LA enlargement with indistinct spontaneous contrast.
- Elevated LVOT velocity and dynamic profile.
- Moderate eccentric MR.
- Pleural effusion with pericardial comet tail artifact.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The degree of atrial dilation confirms the diagnosis of congestive heart failure and cardiogenic pleural effusion. Concurrent thoracic or pulmonary disease cannot be definitively excluded. Correlation with effusion analysis cytology +/- culture and sensitivity if clinically indicated is recommended.

Assessment of T4 level and systemic BP to rule out potential complicating factors is recommended. Continued hospitalization with injectable LASIX in an attempt to stabilize patient is indicated. If patient is stabilized, LASIX 1 to 2 mg/kg BID and Clopidogrel 75 mg tab, 0.25 tab PO SID is recommended. Given evidence of congestive heart failure and dynamic LV outflow obstruction, Atenolol and Pimobendan at this stage are contraindicated.

Concurrent monitoring of renal parameters and ECG are indicated. Going forward, this patient will remain at severely increased risk for progressive CHF or thrombotic event or possible sudden death.

Elective anesthesia is not advised. Sonographic monitoring is recommended with recheck echo suggested in three to four weeks if stabilized, sooner if continued or progressive evidence of CHF.

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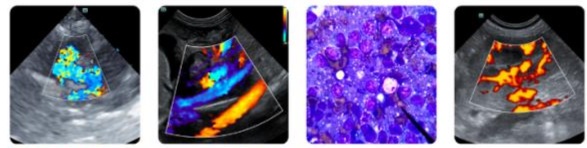

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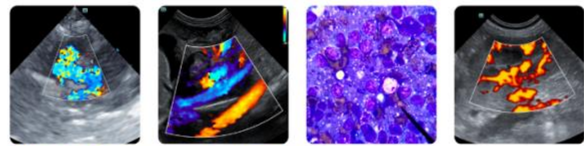



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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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