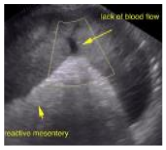
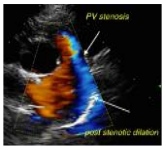
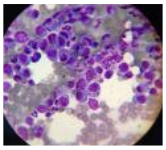
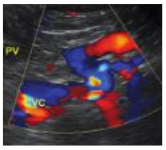
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

**PATIENT**
Wendell McKimm

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Male Neutered

**AGE**
12 years

**WEIGHT**
12lbs

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

**IMAGING PERFORMED BY**
Diane McFadden

**HOSPITAL NAME**
Animal Care Center of Flanders

**REFERRING VET**
Dr. Hargadon

**INVOICE**
29774

**DATE**
3/22/23

## PRESENTING CLINICAL SIGNS

History: Recheck echo. Recent change in breathing. Decreased appetite as of yesterday with lethargy.
-Current medications: Vetmedin 1.25mg BID, Enalapril 2.5mg SID, Lasix 12.5g x 1/2 BID, and Plavix. Last night gave an injection of Cerenia and convenia.
Lab results (3/23/23): BUN 40, creat 1.7, T4 2.0
BP: 189, 280, 176, 141, 180, 165mmHg
-Pertinent previous echo findings (3/2022 EL): MR, TR, biatrial enlargement, likely UCM. LA/AO: 2.0

## RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only.

3/23/23: Cardiomegaly. No obvious evidence of CHF. Heavy bronchial pattern.

## ELECTROCARDIOGRAPHIC FINDINGS

A six lead ECG is available at 50mm/s; 25mm/mV. MM marks cannot be visualized; measurements are estimates. The average heart rate is 180bpm (range 176-200bpm). The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P wave morphology is positive with a normal dimension. Normal PR. The QRS morphology is positive with normal dimension. MEA is normal. No ectopic beats, pauses or dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia.

## ECHOCARDIOGRAM FINDINGS

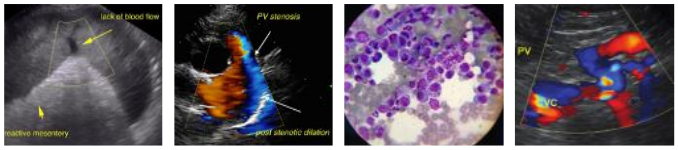
2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal to decreased in dimension. There is a mildly hyperechoic endocardium consistent with fibrosis. The LV is mildly dilated with significantly decreased systolic function. The papillary muscles are mildly remodeled. The left atrium is severely dilated and bulbous in appearance. Subtle smoke is appreciated. The right atrium is mildly increased in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. Mild MR, secondary to annual stretch. Trace TR. Blood flow through both the LVOT and RVOT is low normal in velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors. Premature beats noted throughout the study.

## CARDIAC CHART

| FELINE CARDIAC PARAMETERS | BODY WEIGHT (kg) | HR (BPM) | IVSd (cm) (Moise, Pipers) | LVIDd (cm) (Moise, Pipers) | LVWd (cm) (Moise, Pipers) | FS (%) | EF (%) |
|---|---|---|---|---|---|---|---|
| NORMAL PARAMETER | ------ | 150-240 | 0.35-0.55 | <2 (mean 1.5) | 3.5-0.55 | 35-67 | 80-100 |
| PATIENT | 5.4 | 188 | 0.43 | 2.1 | 0.42 | 14 | 20 |
| **FELINE CARDIAC PARAMETERS** | **LA/AO** (Boon) | **LA/AO HEART BASE (Swe)** (Abbott) | **LA** 2D short axis Base view (cm) (Abbott) | | **LVOT VEL** (m/s) | **RVOT VEL** (m/s) | **E max** (m/s) |
| NORMAL | <1.5 | <1.3 | <1.2 | | <1.6 | <1.3 | <0.9 |
| PATIENT | 2.5 | 2.3 | 2.0 | | 0.74 | 0.5 | NM |

**Note: All measurements based upon multi-modal images and methods. An average value is reported.*
Adapted from June Boon, Veterinary Echocardiography,1998
Abbott J & MacLean H JVIM 2006;20: 111-119, Moise et al. Am J Vet Res 47:1476, 1986. Pipers et al. Am J Vet Res 40:882, 1979.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
SonoPath.com
1-800-838-4268 info@sonopath.com




**PATIENT**
Wendell McKimm

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Male Neutered

**AGE**
12 years

**WEIGHT**
12lbs

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

**IMAGING PERFORMED BY**
Diane McFadden

**HOSPITAL NAME**
Animal Care Center of Flanders

**REFERRING VET**
Dr. Hargadon

**INVOICE**
29774

**DATE**
3/22/23

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The finding of severe LA dilation in the face of a normal LV wall appearance and systolic dysfunction is most consistent with unclassified/restrictive cardiomyopathy (RCM/UCM); however, some prior infectious or inflammatory insult to the myocardium cannot be definitively ruled out. There is normal wall thickness, ruling out typical hypertrophic disease. Compared to the prior study there certainly evidence of progression in both LA enlargement and development of systolic dysfunction. The right heart is also affected, although to a lesser extent. No obvious additional issues are identified and the ECG is unremarkable.

Regardless of categorical classification, the finding of severe left atrial dilation is highly concerning as there is high risk for clinical decompensation. The patient recently had a change in breathing pattern, which may reflect recurrent congestive heart failure; however, the CXR are more consistent with lower airway disease. Unless Lasix was altered since the symptom change, CHF is considered unlikely. Covering all bases is recommended as below. It is unclear when the cardiac medications were initiated, although chronic use is suspected based upon the 2022 recommendations. If that is the case they should be continued going forward. If respiratory symptoms do not improve with empiric respiratory therapy, a trial increase in Lasix is suggested.

The mean survival time for cats once CHF develops is 8-12 months, however most are able to maintain a good quality of life on medications. There will always remain risk for progression to CHF and development of blood clots in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for CHF at home.

Elective anesthesia, fluid or steroid therapy is not advised.

## PLAN

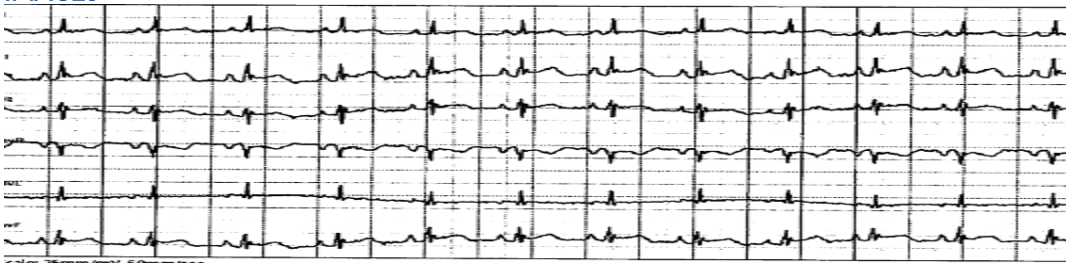
Given that convenia was already administered, no further antibiotics are recommended unless symptoms have not improved. If RR/RE remain abnormal, a course of azithromycin and a dose increase in Lasix are recommended: administer Lasix 12.5mg am, 6.25mg pm. If the symptoms HAVE improved, continue Lasix 6.25mg PO q12h.

Continue Plavix 75mg tablets; give ¼ tab orally once daily. Continue Pimobendan 1.25mg PO q12h. Pending BP >130mmHg, continue ACE-I 0.5mg/kg PO q24h.

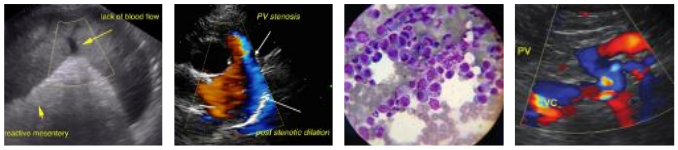
Recheck renal values and BP every 3-4 months lifelong.

A recheck echocardiogram is recommended in 6 months to assess progression.

## IMAGES



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

**PATIENT**
Wendell McKimm

**SPECIES**
Feline

**BREED**
DSH

**SEX**
Male Neutered

**AGE**
12 years

**WEIGHT**
12lbs

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

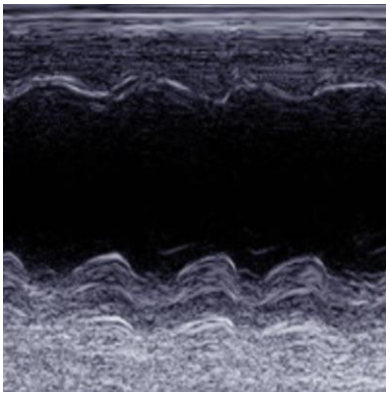
**IMAGING PERFORMED BY**
Diane McFadden

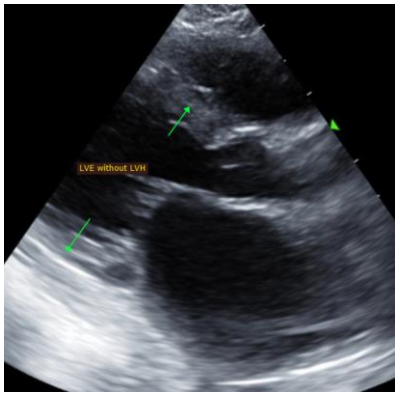
**HOSPITAL NAME**
Animal Care Center of Flanders

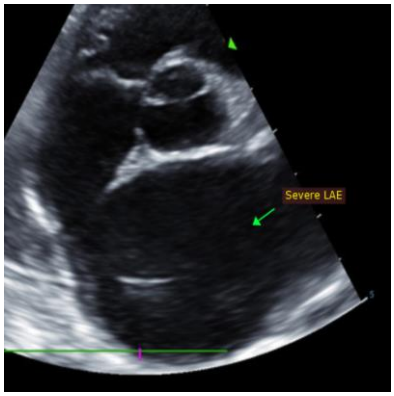
**REFERRING VET**
Dr. Hargadon

**INVOICE**
29774

**DATE**
3/22/23






**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)**
info@sonopath.com