



## PATIENT

Tilly Roe

## SPECIES

Feline

## BREED

DSH

## SEX

Female Spayed

## AGE

11 years

## WEIGHT

9.3lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

Callihan, DVM

## HOSPITAL NAME

Animal Emergency  
Care

## REFERRING VET

Dr. Bailey

## INVOICE

23187

## DATE

3/21/22

## PRESENTING CLINICAL SIGNS

History: Per owner history, patient was diagnosed with CHF on 3/8/22 with primary care vet. We do not have images or records for review, but had radiographs at that time and was started on furosemide. Had been doing well per owner until last couple days inappetent, breathing harder, lethargic. Pt was given two doses of furosemide (total of 4mg/kg) IV prior to echo. Respiratory effort is improved but she remains tachypneic.

Abnormal PE/Chem/CBC/UA Results: Lytes normal, BUN slightly elevated; mildly hypothermic T=99; crackles bilaterally; no murmur; pt is thin body condition, BCS 3/9.

-Radiographs: There is slightly heterogeneous alveolar opacity involving the ventral aspect of multiple lung lobes including the right cranial lobe, right middle lobe, and the cranial and caudal segments of the left cranial lung lobe. In the lateral views, the dorsal-caudal aspect of the lungs appears normal. The lung disease silhouettes with the heart however marked cardiomegaly is not present.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal to decreased in dimension with regions of irregularity. There is a diffusely hyperechoic endocardium consistent with mild fibrosis. The papillary muscles are mildly remodeled and hyperechoic. The endocardium also appears mildly remodeled. LV is mildly dilated with depressed myocardial function. The left atrium is mild to moderately enlarged with a horizontal component. No obvious smoke seen. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure and mobility. Mild central MR. Blood flow through both the LVOT and RVOT is decreased in velocity. The aortic valve is normal with no aortic insufficiency. Scant pericardial and pleural effusion seen. No obvious cardiac tumors.

## 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	4.2	NM	0.36	2.0	0.36	35	60
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	1.8	1.7		0.8	0.6	NM
<p><i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>            Adapted from June Boon, Veterinary Echocardiography, 1998            Abbott J &amp; 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.</p>							

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Restrictive cardiomyopathy is suspected. This diagnosis is based upon left atrial dilation, mild LV dilation and dysfunction and no LV hypertrophy. Typically, mild to moderate atrial dilation would indicate the risk for complication is low, however there is certainly risk for progression going forward. A small mitral leak is appreciated as well which appears hemodynamically insignificant. No obvious additional issues are identified.



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The history in this case is confounding, as the patient's clinical signs returned despite Lasix therapy and the pulmonary pattern was nonspecific. Given these findings, I would certainly continue cardiac supportive medications as below, and consider coverage with a broad-spectrum antibiotic to cover all bases. Should the symptoms recur again, a thoracocentesis may be indicated depending on amount of effusion present. Additionally repeat CXR for comparison may be beneficial.

The long-term prognosis is guarded, with a mean survival time for cats with CHF <8-12 months, however most are able to maintain a good quality of life on medications if able to be stabilized. There will always remain risk for recurrent episodes of CHF, development of blood clots, arrhythmias, and/or sudden death in the future. Monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

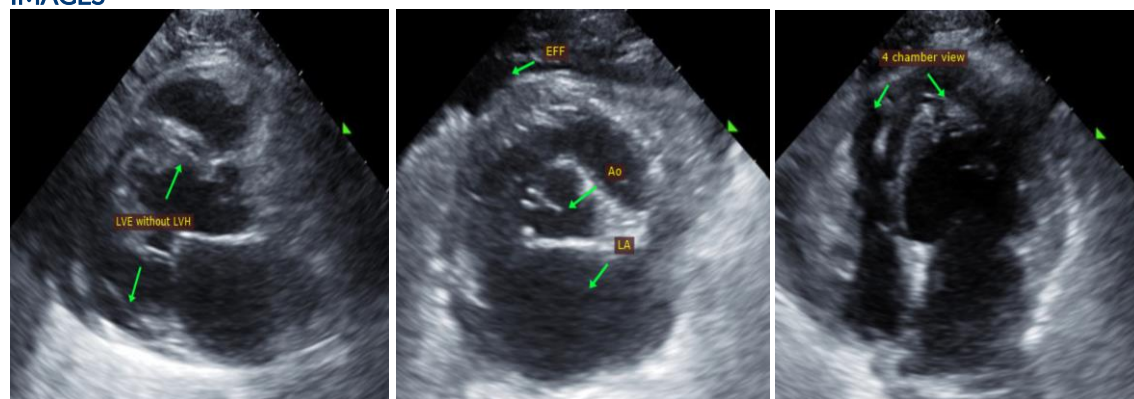
**PLAN**

Baseline BP/ECG recommended. Administer oral medications as follows: administer furosemide 1-2mg/kg PO q12h. Institute blood thinner Clopidogrel (Plavix) 75mg tablets; give ¼ tab orally once daily (NOTE: this medication is very bitter on the cut edges). Institute Pimobendan (off label use) 1.25mg PO q12h. Consider use of a broad-spectrum antibiotic, such as azithromycin for possible infectious component. If recurrent respiratory signs persists, repeat CXR with radiologist review are recommended. Additionally, a thoracocentesis may be warranted in the future.

Recheck renal values in 10-14 days to ensure tolerance of medications, then every 3-4 months lifelong.

A recheck echocardiogram is recommended in 4-6 months to assess for progression.

**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**  
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