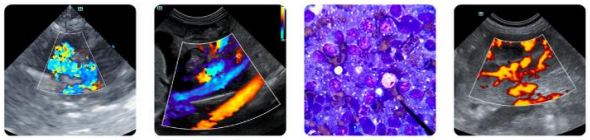


PATIENT

Shadow Miracle

SPECIES

Feline

BREED

DSH

SEX

Male Neutered

AGE

1 year

WEIGHT

17.4lbs

INTERPRETED BY

Maggie Machen Lamy, DVM, DACVIM (Cardiology)

IMAGING PERFORMED BY

Lauren Kuzimski, DVM

HOSPITAL NAME

Animal Emergency Hospital Deland

REFERRING VET

Dr. Lauren Kuzimski

INVOICE

46937

DATE

2/22/26

PRESENTING CLINICAL SIGNS

History: Presented for difficulty breathing. Tried to cough up a hair ball two days ago and since then has been breathing abnormally. O did give Laxatone but did not seem to help. Only eats treats and does not eat cat food. Placed in oxygen @ 3L/min after PE. On Cerenia 1mg/kg IV once, Lasix 2mg/kg IV q8h. AUS- pending. Thoracocentesis performed on L caudal thorax - removed 12mL of clear effusion, more effusion present, but unable to obtain remainder. Fluid analysis - TP 3.0g/dL. BP: 118mmHg.

ELECTROCARDIOGRAPHIC FINDINGS *Note: Single lead ECGs are evaluated as a rhythm strip. Morphology/MEA cannot be definitively commented on.

A single lead ECG is available; 25mm/s, 10mm/mV. The average heart rate is 220bpm. The rhythm is sinus in origin, with a p for every QRS complex and vice versa. The P and QRS morphologies are positive. No ectopic beats, pauses or other dysrhythmias observed.
ECG diagnosis: Normal sinus tachycardia.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Severe left ventricular dilation with diminished systolic function. Increased sphericity. Moderate to severe left atrial enlargement. No spontaneous contrast visualized. The mitral valve appears normal in form and function, with no obvious prolapse into the left atrial lumen. Trace central mitral regurgitation. The tricuspid valve appears normal in form and function. Moderate right atrial dilation. The RV is mildly dilated with decreased function. No significant tricuspid regurgitation. The aortic valve is normal in morphology and mobility. Low normal RVOT velocity. No aortic or pulmonic insufficiency. Scant pericardial and pockets pleural effusion noted. No obvious cardiac tumors.

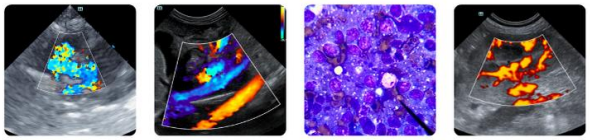
CARDIAC CHART

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	7.9	NM	0.41	2.8	0.42	7	10
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	NM	2.2	2.0		NM	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.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unfortunately, this patient has end-stage cardiomyopathy and systolic dysfunction. There is dilation and overload of a four chambers with marked LV dysfunction. The degree of dilation and pump failure puts the patient at high risk for congestive heart failure in the future. The right heart is also affected to a lesser extent. No additional structural issues are seen. The ECG is largely normal with a sinus tachycardia appreciated.

In cats, systolic failure can be primary in nature (DCM); however, this is relatively uncommon. An advanced form of restrictive cardiomyopathy (RCM) with development of systolic dysfunction is also possible. Alternatively, systolic failure can develop secondary to taurine deficiency, myocarditis, or infiltrative disease such as lymphoma. Taurine deficiency is highly uncommon in cats on commercially prepared cat foods; however, can consider taurine supplementation in case of an absorption issue. In a young cat, an infectious or in utero issue is possible, with resultant damage of the myocardium. A cardiac troponin could be considered, although results will not change prognosis or treatment plan.

These findings certainly support CHF in this case and full cardiac support should be continued going forward. Prognosis is poor to grave at this stage in the disease process, with an average survival time of <6 months Most cats are able to maintain a good QOL for some time however on oral medication. High risk for recurrent CHF, development of blood clot events and/or malignant arrhythmias/sudden death at home should be discussed.

Monitor for development of labored breathing, limb paralysis/neurologic changes and/or collapse episodes in the future. Periodic Thoracocentesis will be necessary going forward. Monitoring of sleeping breathing rates at home is recommended to assess response to medications and recurrence of CHF in the future.

PLAN

Institute Lasix/furosemide 1- 2mg/kg PO q12h. Institute anti-coagulant Plavix/Clopidogrel 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety). Institute heart muscle support Pimobendan 1.25mg by mouth every 12 hours (off label use). Consider supplement taurine 500mg daily. Consider cTnI and systemic work up.

Recheck renal panel and BP in 1-2 weeks then every 3-4 months lifelong. Do not utilize an ACEI in this patient.

*NOTE: Many cats are difficult to medicate, and multiple medications can be overwhelming. If there is difficulty at home, Lasix and Plavix are considered most important. Consider compounding if needed.

Recheck echocardiogram in 6 months to reassess cardiac function.

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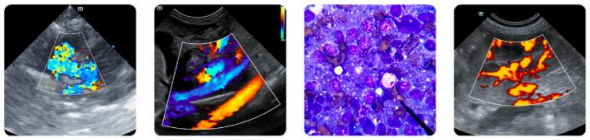

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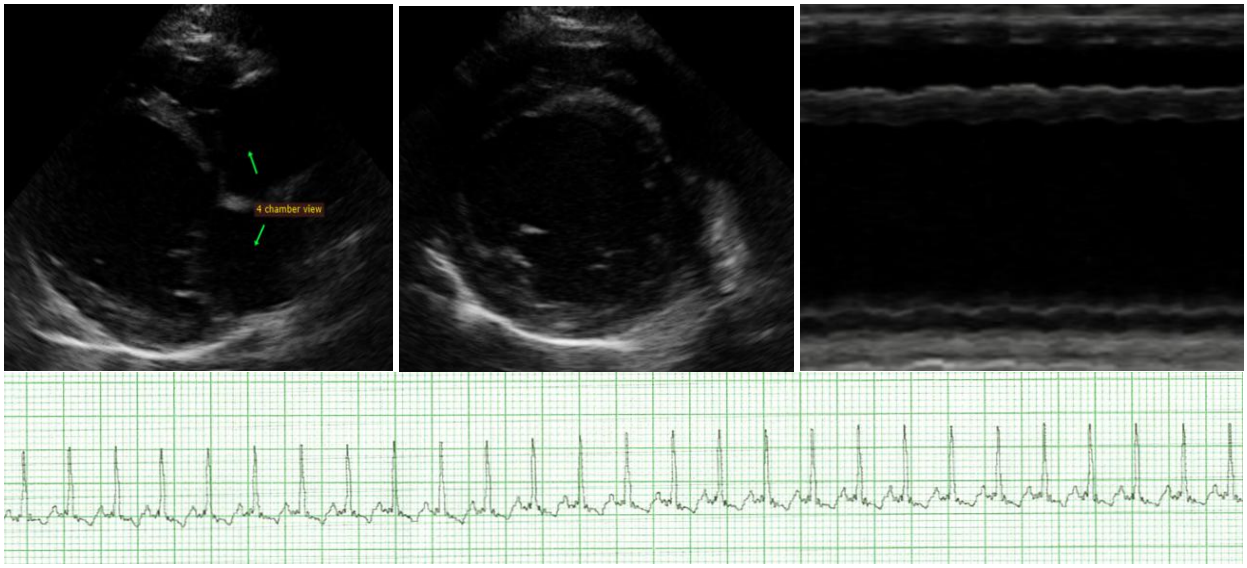

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. 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