



## PATIENT

Tony Frey

## SPECIES

Feline

## BREED

DSH

## SEX

Male Neutered

## AGE

14 years

## WEIGHT

10lbs

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGING PERFORMED BY

Emily Kalenius, DVM

## HOSPITAL NAME

Willamette Veterinary  
Hospital

## REFERRING VET

Dr. Kalenius

## INVOICE

20580

## DATE

8/17/21

## PRESENTING CLINICAL SIGNS

History: Diagnosed with HCM in 2016 and has been on Atenolol since then. He is also hyperthyroid and on methimazole. History of elevated liver values and HTN. Other history of IRIS Stage II CKD and anemia.

-Current medications: Amlodipine 2.5mg SID (last dose last night), Clopidogrel 75mg 1/4 tablet SID (last dose last night), Atenolol 25mg 1/2 tablet BID (last dose this morning), Methimazole 5mg BID (last dose this morning), Mirtazapine 15mg 1/4 tablet every 2-3 days, Entyce 0.26mls PO PRN Gabapentin 100mg given at 10AM this morning.

-Abnormal PE/Chem/CBC/UA Results: HR 110 Resp 28 MM Pink/Healthy CRT <2 sec BP 125/86 (96). Labs 8/4 CBC hct 24%, 3 weeks ago was 32%. Chemistry: BUN 42, creatinine 2.1, in June was 2.3 T4 < 0.5, was 8.1 in July, and 1.3 in June As a result Methimazole dose decreased to current dosing as noted in history.

-Pertinent previous echo findings (12/2019 GW): Moderate focal LVH. LVWd: 0.62, moderate LAE: 1.68cm m-mode. Dx: Mild progressive HCM. Was on Atenolol and Plavix at that time.

## ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is largely normal without significant hypertrophy; PW is borderline. There is a diffusely hyperechoic endocardium consistent with fibrosis. There is papillary muscle remodeling. Systolic function is low normal. The left atrium is severely enlarged. No obvious smoke. The right atrium is mildly enlarged. The mitral valve is normal with normal mobility. No evidence of systolic anterior motion. There is mild central mitral regurgitation present. There is no aortic insufficiency. Blood flow through both the LVOT and RVOT are low normal in velocity. There is trace tricuspid regurgitation present, however the tricuspid valve appears normal in form and function. Normal velocity. No pericardial effusion is visualized. No pleural effusion seen.

## 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	4.5	120	0.51	1.6	0.59	40	74
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	2.2	2.2	1.9		0.84	0.54	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.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The finding of biatrial enlargement in the face of normal LV wall thickness is most consistent with Unclassified Cardiomyopathy (UCM); however, end-stage HCM is also a possibility given the



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history. There is also significant LV remodeling and fibrosis which indicates diastolic dysfunction. The LV also shows low normal systolic function secondary to the primary disease process. MR and TR are mild and likely due to annular stretch. Finally, ascites is noted which is most consistent with congestive heart failure.

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Regardless of classification, the finding of significant biatrial dilation confirms the origin of the ascites is secondary to spontaneous congestive heart failure, and lifelong medications are warranted as below. Pimobendan is recommended (off-label use) due to systolic function. In addition to Plavix to decrease risk of thrombotic events in the future. Atenolol should be discontinued due to active CHF and a relatively low resting heart rate for a cat in failure. This is likely a lifelong discontinuation; however, follow up is advised. It is worth noting that Lasix may worsen patient's azotemia, and this may be a limiting factor in treatment going forward. Careful use of the medication with monitoring of renal values is advised, particularly if there is a drop in appetite.

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The mean survival time for cats with CHF is <12 months; however, most are able to maintain a good quality of life on medications (if piller successfully). The concurrent CKD will likely limit this as well. Patient will always remain at high risk for recurrent episodes of CHF and development of blood clots in the future. Once stabilized, monitoring of sleeping breathing rates at home is recommended as the best way to screen for recurrent CHF at home.

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10lbs

**PLAN**

Continue Clopidogrel 1/4 of a 75mg tab PO q24h. Institute Pimobendan 1.25mg PO q12h. Institute Lasix 1mg/kg PO q12h. Discontinue Atenolol as discussed.

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Recommend recheck renal values and systemic blood pressure in 10-14 days to ensure systemic pressures are stable and drugs well tolerated. If BP is >130mmHg and patient is easily medicated, consider institution of an ACE-I 0.5mg/kg PO q12h.

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Periodic centesis as needed.

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

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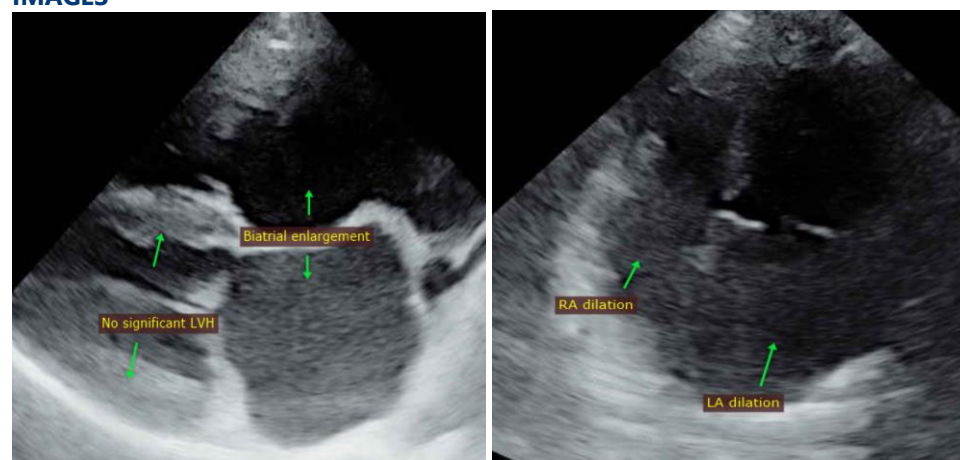
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**The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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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.

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**Maggie Machen Lamy, DVM**

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