



**PATIENT**

Finley Henningfeld

**PRESENTING CLINICAL SIGNS**

History: Presented for dental procedure. Pre-surgical thoracic x-rays revealed suspected air bronchograms, edema, and lobar signs. Prescribed furosemide and enrofloxacin.

**SPECIES**

Ferret

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

Normal cardiac silhouette with suspicion for fat in the pericardium. No obvious evidence of CHF.

**BREED**

Mustelidae

**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; 50mm/s, 40mm/mV. The average heart rate is 200bpm (range 176-220bpm). 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.

**SEX**

Male

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild diffuse thickening of mitral valve leaflets with no obvious prolapse into the left atrial lumen. No significant mitral regurgitation with a normal left atrial dimension. No LV dilation with adequate myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious pulmonic insufficiency. Mild to moderate aortic insufficiency. No effusions or tumors appreciated.

**AGE**

3 years

**WEIGHT**

3.5lbs

**CARDIAC CHART**

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) <small>(Moise, Pipers)</small>	LVIDd (cm) <small>(Moise, Pipers)</small>	LVWd (cm) <small>(Moise, Pipers)</small>	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.35-0.55	<2 (mean 1.5)	3.5-0.55	35-67	80-100
PATIENT	1.6	200	0.3	1.3	0.3	43	78
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	1.3	1.2	0.9	1.1	1.1	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.

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

Dr. Barajas

**INVOICE**

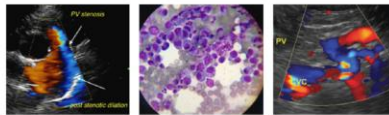
23948

**DATE**

4/29/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The only abnormality identified is mild to moderate aortic insufficiency. No specific lesion is noted, and this is presumed to be either a primary valve degeneration issue, or potentially secondary to systemic hypertension. Regardless, the quantification is mild to moderate and there is no secondary LA or LV dilation present. Lack of significant left atrial enlargement indicates the current risk for complication is low. No concurrent issues such as systolic dysfunction or



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pulmonary hypertension are noted in this study. The ECG is unremarkable with a normal sinus tachycardia.

**SPECIES**

Ferret

In an asymptomatic ferret with no significant left atrial enlargement, **CHF is considered highly unlikely**. A Radiologist review of the films may be beneficial as there is suspicion for lower airway changes; however, based upon the information that we have there is no indication to continue Lasix at this time. No obvious indication for cardiac supportive medications at this time. If systemic hypertension is identified or suspected, vasodilation using an ACE-I may be reasonable if patient is easily medicated. Assessment of progression in the future will help predict long term prognosis, which is highly variable at this stage. Monitor for development of a cough, labored breathing, exercise intolerance or collapse episodes.

**BREED**

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**SEX**

Male

Anesthetic risk is considered mild if needed. Cardiac protective drug choices (opioid/benzodiazepine premedication, propofol or alfaxalone induction, isoflurane gas) are recommended. Pre-oxygenate for 5-10 minutes prior to induction. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Mild IV fluid restriction is recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

**AGE**

3 years

**PLAN**

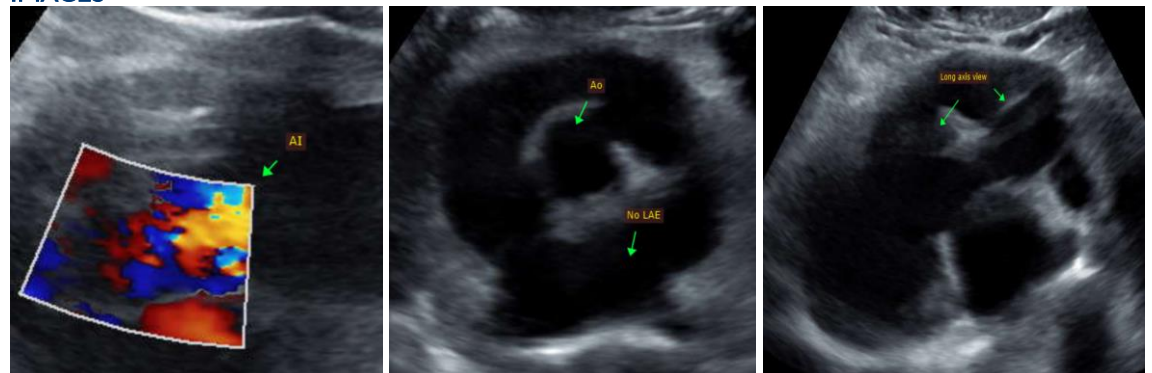
Consider a Radiologist review of the films. Discontinue Lasix unless otherwise directed.

**WEIGHT**

3.5lbs

Recommend conservative monitoring with a recheck echocardiogram annually, sooner if any development of clinical signs.

**IMAGES**



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Maggie Machen Lamy, DVM, DACVIM (Cardiology)

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Tom McNeill

**HOSPITAL NAME**

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**REFERRING VET**

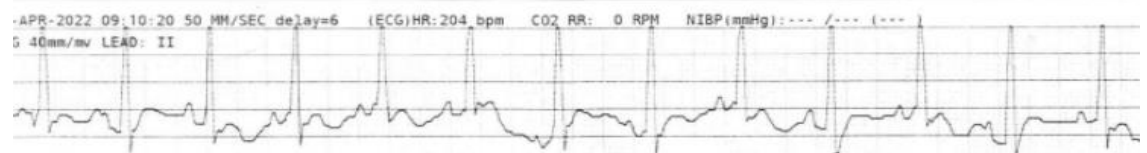
Dr. Barajas

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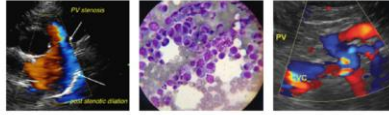


The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I

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

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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

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