


**PATIENT**

Sir Good

**PRESENTING CLINICAL SIGNS**

History: Heart murmur. Assess prior to anesthesia.

**SPECIES**

Feline

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is normal in dimension without hypertrophy. The LV chamber is mild to moderately dilated with adequate myocardial function. A perimembranous VSD is visualized just below the aortic valve (0.44cm across). The shunt appears left to right, the max velocity is >5.0m/s. The left atrium is moderately increased in size for this body size. The right atrium is normal. The right ventricle appears normal. The MPA is normal with normal outflow velocity. The pulmonic valve is largely normal. No PI. The mitral valve is normal in structure and mobility. No MR. Blood flow through the LVOT is mildly elevated in velocity. No AI. Trace TR. No additional shunts are visualized. There is no pleural or pericardial effusion seen.

**BREED**

Maine Coon Cat

**SEX**

Male

**AGE**

15 months

**CARDIAC CHART**
**WEIGHT**

15.5lbs

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm) (Moise, Pipers)	LVIDd (cm) (Moise, Pipers)	LWVd (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	7.0	115	0.46	2.5	0.55	49	82
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	1.2	1.6	1.7		1.4	1.4	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.

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM, DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

 Potomac Mobile  
 Veterinary Ultrasound

**HOSPITAL NAME**

 Clocktower Animal  
 Hospital

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is a perimembranous ventricular septal defect (VSD). The defect is hemodynamically significant based upon left heart volume overload at a relatively young age. The shunt appears left to right with high velocity flow. A small tricuspid leak is identified, although relatively insignificant. No additional congenital defects are visualized at this time. Referral should be considered in any congenital case for lifelong monitoring.

**REFERRING VET**

Dr. Jarrett

VSDs in cats have variable outcomes, and lifelong monitoring is advised. The defect in this case appears hemodynamically significant, with volume overload at 1 year of age. Over time this may worsen with progression to clinical signs and development of CHF within the patients lifespan. The prognosis is guarded however, as the rate of progression with subclinical cardiomyopathy is highly variable. Patient will always remain at risk for development of congestive signs, arrhythmias and/or sudden death in the future.

**INVOICE**

29528

**DATE**

3/10/23



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Given these findings, it is reasonable to consider cardiac supportive medications such as an ACE-I and Plavix for theoretic benefit. It is important to note that no medications have been shown to change outcome at this stage of disease and simple monitoring would be an alternative approach. Discussion with the owner is advised.

## SPECIES

Feline

Monitor at home for any associated clinical signs, including respiratory changes or signs of a thrombus.

## BREED

Maine Coon Cat

Anesthetic risk is considered moderate 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.

## SEX

Male

## AGE

15 months

## PLAN

Consider referral to a local Cardiologist. Consider medications as follows: Pending BP >140mmHg, institute ACEI 0.5mg/kg PO q12h. Consider institute Plavix 75mg tabs; Give ¼ tab by mouth every 24 hours (NOTE: bitter along cut edge, may cause foaming at the mouth; coat in entirety).

## WEIGHT

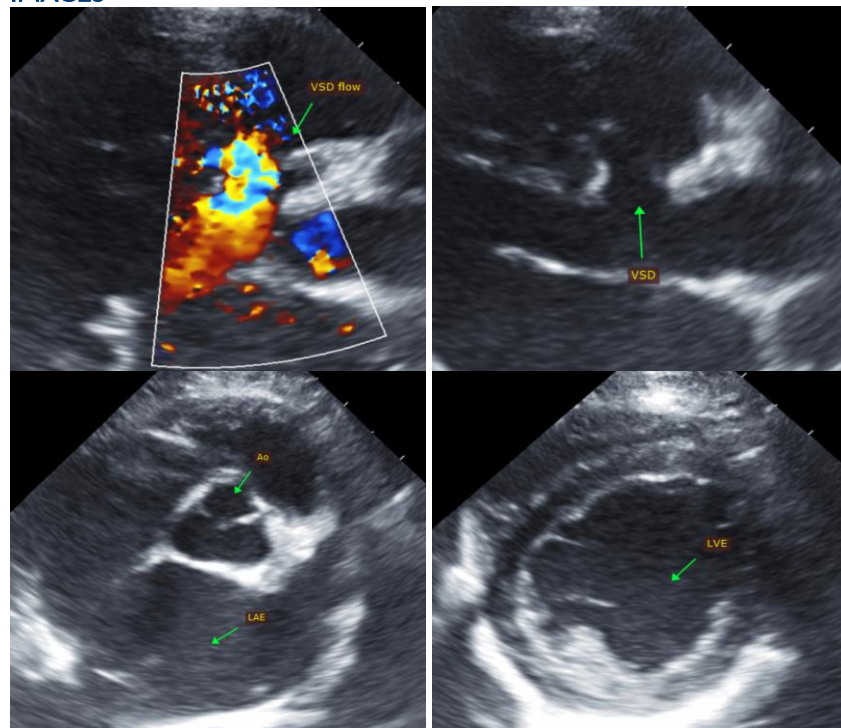
15.5lbs

Recommend a recheck echocardiogram in 6 months to screen for progressive dilation, sooner any change in RR/RE is noted at home.

## INTERPRETED BY

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

## IMAGES



## IMAGING PERFORMED BY

Potomac Mobile  
Veterinary Ultrasound

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## REFERRING VET

Dr. Jarrett

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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.

**SPECIES**

Feline

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.

**BREED**

Maine Coon Cat

Maggie Machen Lamy, DVM  
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info@sonopath.com

**SEX**

Male

**AGE**

15 months

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