


**PATIENT**

Patches Langenegger

**PRESENTING CLINICAL SIGNS**

History: New heart murmur. Asymptomatic.

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Female Spayed

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is irregular with a focal septal thickening. The remainder of the wall thickness is normal. There is a mildly hyperechoic endocardium consistent with fibrosis. The papillary muscles are mildly hyperechoic. The left atrium is normal in size. The right atrium is normal in size. The right ventricle appears normal. The mitral valve is normal in structure with mild MR. No TR. Blood flow through the RVOT is mildly elevated with a dynamic profile. The blood flow through the LVOT is normal on doppler; however, an intermittent LVOTO is suspected on color flow and 2D imaging. Mild TR. Borderline normal velocity. No pleural or pericardial effusion seen. No obvious cardiac tumors.

**CARDIAC CHART**
**AGE**

15 years

**WEIGHT**

7.7lbs

**INTERPRETED BY**

 Maggie Machen Lamy,  
 DVM DACVIM  
 (Cardiology)

**IMAGING PERFORMED BY**

Crystal Hill, RVT

**HOSPITAL NAME**

 New Hamburg Vet  
 Clinic

**REFERRING VET**

Dr. Blier

**INVOICE**

29747

**DATE**

3/21/23

FELINE 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	3.5	270	0.61	1.1	0.41	54	89
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE (Swe) <small>(Abbott)</small>	LA 2D short axis Base view (cm) <small>(Abbott)</small>	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	1.4	1.3	1.1	1.7	2.5	NM	
<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 & 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 primary abnormality identified is focal LV hypertrophy in addition to LV remodeling, which may be indicative of early hypertrophic disease or may simply represent a normal variant. The LA is normal which would indicate clinical stability. Serial echocardiography will be necessary to determine progression and clinical significance. Additionally, the murmur is due to a combination of a dynamic RVOT obstruction (benign in origin) and a mild LVOT obstruction with secondary MR, the latter appears intermittent and does not warrant therapy. Finally, a small tricuspid leak is noted with borderline pulmonary pressures. Serial monitoring is advised. No additional issues are identified.

Given these findings, no medications are indicated. Prognosis is guarded long-term.



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Anesthetic risk is considered mild, however judicious IV fluid rates are advised to avoid fluid overload. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine). Avoid vasodilators as this may worsen the obstruction. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, and isoflurane maintenance. Additionally, steroids should be used with caution on older cats, as even a 'normal' geriatric heart can develop evidence of intolerance and fluid retention.

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Monitor for any development of clinical signs, including labored breathing or signs of a blood clot (paralysis, neurologic change). Prognosis is guarded prior to assessing for progression.

**SEX**

Female Spayed

A recheck echocardiogram is recommended in 1 year, sooner if any clinical signs arise.

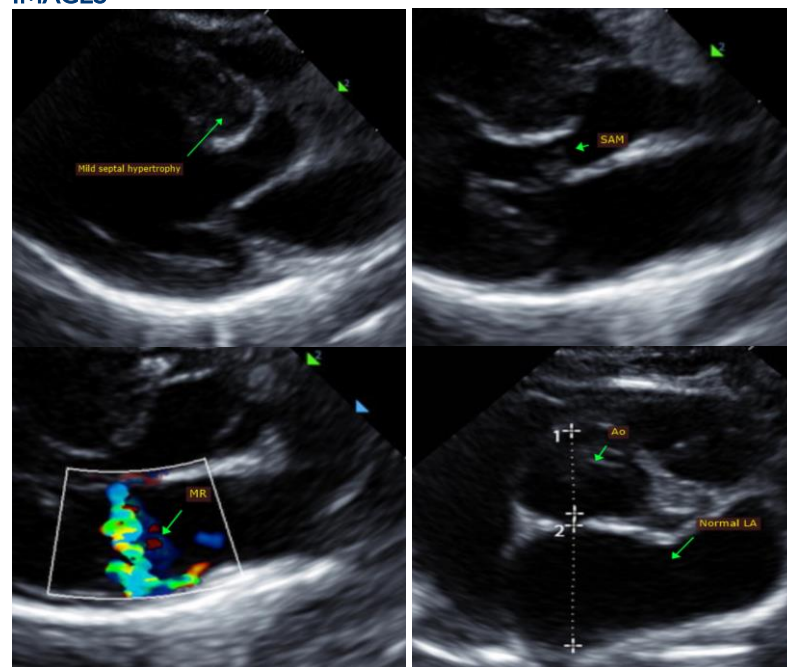
**AGE**

15 years

**IMAGES**

**WEIGHT**

7.7lbs



**INTERPRETED BY**

Maggie Machen Lamy,  
DVM DACVIM  
(Cardiology)

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.

**IMAGING PERFORMED BY**

Crystal Hill, RVT

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.

**HOSPITAL NAME**

New Hamburg Vet  
Clinic

**REFERRING VET**

Dr. Blier

**INVOICE**

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**Maggie Machen Lamy, DVM**  
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