



PATIENT

Johnny Martin

SPECIES

Feline

BREED

DLH

SEX

Male Neutered

AGE

3.1 years

WEIGHT

10.6lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Renee Trionfetti, VMD

HOSPITAL NAME

Firefly Veterinary
Urgent Care

REFERRING VET

Dr. Watzka

INVOICE

45855

DATE

11/20/25

PRESENTING CLINICAL SIGNS

History: Recheck echo. Presented to evaluate an episode of panting. History of VSD, confirmed with CT in 2023. Presented 1 week ago for episode of open mouth breathing after running around the house with housemates. At time of presentation was breathing normally. Chronic grade 3-4/6 systolic parasternal heart murmur, lungs sounded normal. History of partial liver lobectomy secondary to cystadenoma 2 years ago. Other PMH: Congenital Diaphragmatic hernia that was repaired as a kitten. Bilateral cryptorchid; was neutered at around 1 year of age. Left Hip Luxation (as well as stifle luxation) - this was present when owner first rescued kitten. On Gabapentin 50mg Q8h. Sedated with Torb and Alfaxalone. BP: 122, 124, 128mmHg.
-CXR: mild diffuse bronchial lung pattern. Normal heart.
-Pertinent previous echo findings (12/2023 MML): history of ascites. Color flow suggestive of a VSD; inconclusive. Mild TR, enlarged aortic root; remainder NSF. Further workup recommended.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. The left ventricular wall is mildly hypertrophied. There is a mildly hyperechoic endocardium consistent with fibrosis and ventricular remodeling. Mild papillary muscle remodeling. A small VSD is seen on color flow and 2D imaging, which appears hemodynamically insignificant. The right ventricle is subjectively normal in size and morphology. There no left atrial enlargement present. No right atrial enlargement present. Normal RVOT velocity. Systolic anterior motion (SAM) of the mitral valve is present, with an elevated dynamic LVOT velocity (not captured on spectral doppler). There is mild eccentric mitral regurgitation present secondary to SAM. Trace TR. Normal velocity. There is no pericardial effusion noted. Scant pleural effusion appreciated. No obvious cardiac tumors.

CARDIAC CHART

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	4.8	120	0.66	1.2	0.66	57	90
FELINE CARDIAC PARAMETERS	LA/AO <small>(Boon)</small>	LA/AO HEART BASE <small>(Swe) (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	1.0	1.0	1.1	1.2	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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Unusual case. The previously noted VSD is more apparent in this image set with a small shunt fraction crossing into the RVOT. **The VSD is hemodynamically insignificant**, and the LA and LV are not dilated. Of more concern, this patient has now developed an additional issue with hypertrophic obstructive cardiomyopathy (HOCM). This is based upon LVH (mild in this case) with a dynamic LVOT obstruction (SAM) and secondary mitral regurgitation contributing to the heart murmur. The hypertrophy and obstruction are both mild, and there is no left atrial



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enlargement present, indicating the risk of spontaneous CHF and/or a thrombotic event is currently low. No additional issues are identified.

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This case has a highly unusual history, with ascites initially reported and now scant pleural effusion. It must be stressed that these are unrelated to heart disease in this patient as neither atrium has ever been dilated. Further workup for pleural effusion is certainly indicated through fluid sampling and systemic screening.

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Prognosis is guarded long-term. **Again, as the VSD is insignificant; however, HOCM may worsen going forward.**

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While no medications have been shown to definitively alter long term outcome at this stage of disease, atenolol is often initiated to decrease the outflow obstruction. If the patient is easily medicated, it may be reasonable to initiate at this time as below. If there is difficulty medicating at home, an alternative approach would be to monitor for progression over the next 6-12 months. Discussion with the owner is advised. No additional medications are indicated prior to significant atrial dilation.

AGE

3.1 years

Monitor at home for any respiratory signs or blood clot events (neurologic change, paralysis, etc.).

WEIGHT

10.6lbs

Anesthetic risk is considered mild; however, judicious fluid administration is advised if needed with careful monitoring to screen for fluid overload. A reasonable protocol includes opioid/benzodiazepine premedication, propofol induction, isoflurane maintenance. Avoid ketamine, telazol, acepromazine and Dexdomitor. Additionally, drugs that stimulate heart rate should be avoided unless clinically necessary (glycopyrrolate, atropine).

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(Cardiology)

Risk for complication with steroid or fluid use typically follows LA dilation, which in this case is low. That said, any cat can experience acute intolerance and monitoring for this phenomenon is always advised (a change in RR/RE, particularly during the initiation phase).

IMAGING PERFORMED BY

Renee Trionfetti, VMD

PLAN

Further workup for scant pleural effusion as discussed. If elected/able, administer titrating dose of atenolol: 25mg tablets; Give ¼ tab once daily. Recheck heart rate in 1-2 weeks with target stressed rate of 140-160bpm 12-24 hours post-administration. Increase as needed until target reached.

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Screening blood pressure and T4 are recommended every 6 months.

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Recommend recheck echocardiogram in 6 months to assess for progression, sooner if clinical issues arise.

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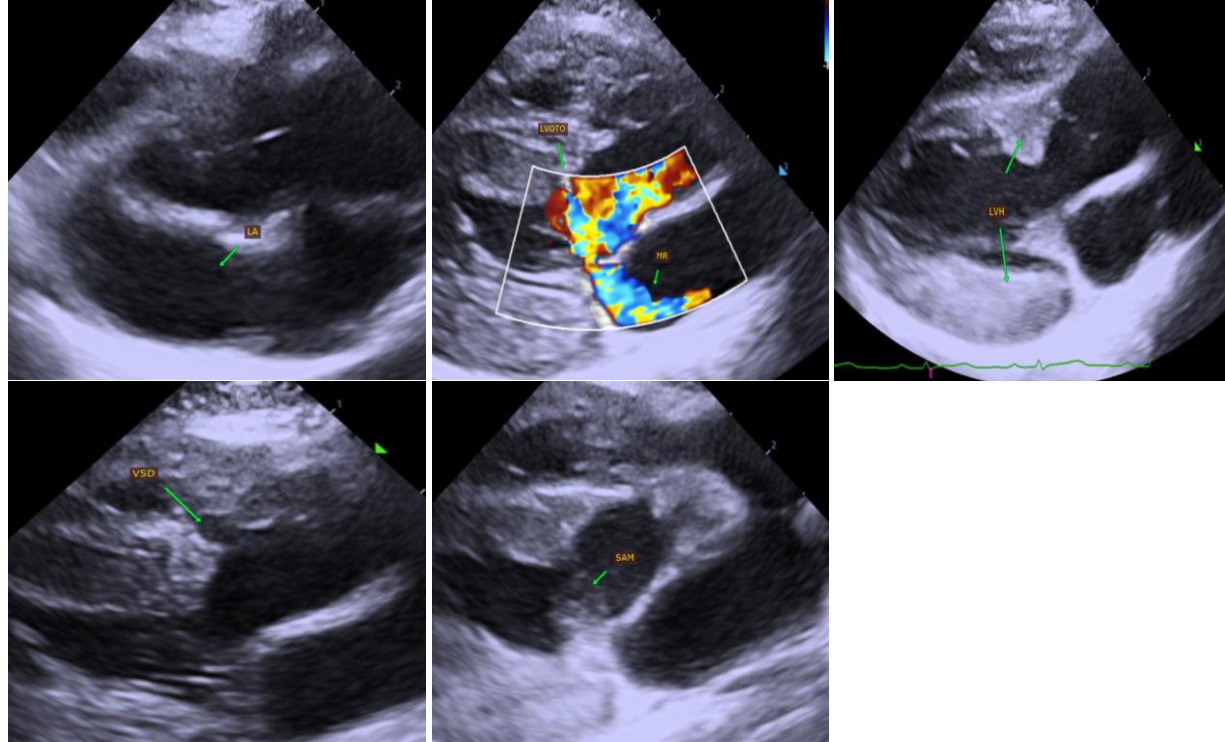
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IMAGES



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
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