



PATIENT

Missy Nocella

SPECIES

Canine

BREED

CKCS

SEX

Female Spayed

AGE

13.5 years

WEIGHT

17.1lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Kristen Carpenter,
DVM

HOSPITAL NAME

Penridge Animal
Hospital

REFERRING VET

Dr. Kristen Carpenter

INVOICE

47633

DATE

4/21/26

PRESENTING CLINICAL SIGNS

History: Recheck echo (prior report not provided): history of CVD B2/mild PH. History of cholangiohepatitis and chronic hepatopathy/fibrosis with portal vein thrombus and chronic smoldering pancreatitis. Increased RE at home and generalized weakness/paresis. CXR showed pleural effusion and concern for right-sided CHF. Thoracocentesis performed (80mL of clear to light yellow fluid consistent with modified transudate removed from R thorax). Clinical signs much improved after chest tap. Recently started Lasix 5mg PO BID and Spironolactone 12.5mg PO BID. Chronic medications: Sildenafil 5mg PO BID, Pimobendan 1.875mg PO BID, Ursodiol 62.5mg PO SID, Clopidogrel 18.75mg PO BID, Metronidazole 25mg PO BID, Omeprazole 5mg PO SID, Gabapentin 100mg PO BID, Cerenia 6mg PO SID, cobalequin, fish oils, cosequin, Mirtazapine PRN. BP: 128, 130mmHg. Sedated with Buprenorphine. -Abnormal lab results: HCT 32.1%, TP 4.6 (L), Albumin 2.0 (L), Cholesterol 124 (L), BUN 18 (low normal). Historically elevated liver enzymes are now normal. 4/17/26.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Mild cardiomegaly. Pleural effusion.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Diffuse thickening of mitral valve leaflets (anterior>posterior) with mild prolapse into the left atrial lumen. Moderate eccentric mitral regurgitation with moderate left atrial dilation. Normal MR velocity. Mildly increased LV diameter with hyperdynamic myocardial function. The tricuspid valve appears mildly thickened, with trace tricuspid regurgitation. Normal velocity. Normal right atrial and ventricular diameter. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities. No aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No cardiac tumors observed.

CARDIAC CHART

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	6.0	2.6	1.6	1.6	52	90	0.2
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	0.9	0.7	7.8	2.4	3.0	1.5
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
BODY WEIGHT DEPENDENT PARAMETERS				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
<i>*Note: All measurements based upon multi-modal images and methods. An average value is reported.</i>				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)

Adapted from June Boon, Veterinary Echocardiography, 1998



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Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Hansson et al, Vet Rad and Ultrasound 2002	40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
Bonagura et al. Echocardiography: principles of interpretation, Vet	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Chronic degenerative valve disease causing moderate mitral and trace tricuspid regurgitation. Moderate left atrial enlargement indicates there is relatively low risk for imminent complication; however, risk for progression to spontaneous congestive heart failure in the future is elevated. No additional issues such as pulmonary hypertension are identified.

These findings are inconsistent with right-sided CHF, as there is no evidence of elevated RA pressure. Other possible causes for pleural effusion should be considered. Based upon the information available, there is no indication for continued Sildenafil, Spironolactone or Lasix therapy. Pimobendan should be continued going forward. Assessment of progression in the future will help predict long term outcome; however, prognosis is guarded at this stage (B2). Fifty percent of stage B2 patients typically develop CHF within 2-2.5 years of diagnosis. The median time to development of CHF in B2 cases treated with pimobendan is 3.5 years.

Omega fatty acid supplementation and mild salt restriction may also be of some long-term benefit. Monitor for development of a progressive cough, labored breathing, exercise intolerance or collapse episodes.

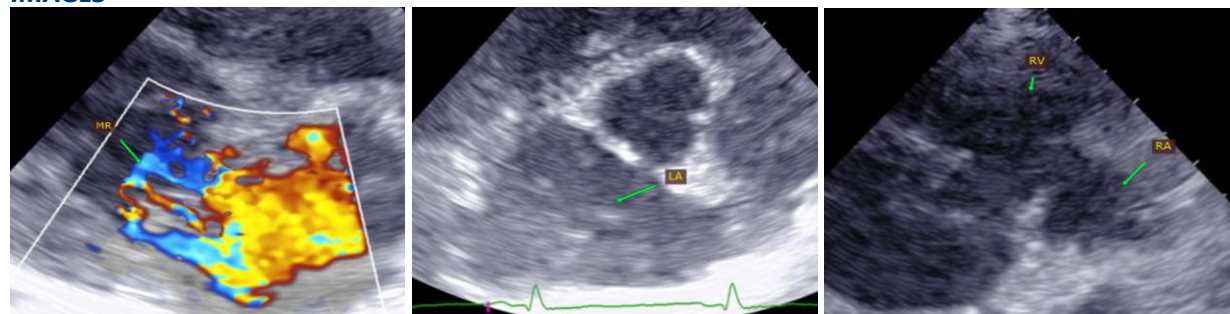
Anesthetic risk is considered mildly elevated. Cardiac protective drug choices (opioid/benzodiazepine premedication, Propofol or alfaxalone induction, iso or sevo gas) are recommended. Monitor for arrhythmias, hypotension, and hypoxia both intra and post-operatively and intervene as necessary. Judicious IV fluid rates are recommended to avoid fluid overload. Avoid heart rate stimulating drugs such as atropine unless clinically indicated.

PLAN

Discontinue medications as discussed above. Continue Pimobendan 0.25-0.3mg/kg PO q12h. Further workup for pleural effusion is indicated.

Recommend monitor for progression with a recheck echocardiogram in 6 months, sooner if any development of clinical signs.

IMAGES





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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. 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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