



PATIENT

Cash Vaassen

SPECIES

Canine

BREED

Lab

SEX

Male Intact

AGE

5 years

WEIGHT

115lbs

INTERPRETED BY

Maggie Machen Lamy,
DVM, DACVIM
(Cardiology)

IMAGING PERFORMED BY

Sarah Pender, CVT

HOSPITAL NAME

SVS Imaging QC

REFERRING VET

Dr. McCleary

INVOICE

29749

DATE

3/21/23

PRESENTING CLINICAL SIGNS

History: Presented for pre-op diagnostics (chest rads + BW) for prior to removal of soft tissue sarcoma on R lateral abdomen. No history of heart disease or symptoms of heart disease noticed at home -Abnormal PE/Chem/CBC/UA Results: BAR, very active/anxious. HR 130, RR pant/eupneic. No murmurs or arrhythmias heard on cardiac auscultation.

Sedated with Dexmedetomidine/Butorphanol prior to chest rads due to patient reactivity/anxiety Thoracic rads (2-view): enlarged/rounded heart (VHS 12.1, heart 75% of chest width on VD view); no metastasis seen in lung fields FAST scan of heart - no evidence of cardiac tamponade, visible fractional shortening of ventricles.

RADIOGRAPHIC FINDINGS *NOTE: Images submitted for supplemental cardiac information only. Mild cardiomegaly. No obvious evidence of CHF.

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; 25mm/s, 10mm/mV. The average heart rate is 100bpm (range 88-107bpm). 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 rhythm with respiratory variation.

ECHOCARDIOGRAM FINDINGS

2D, m-mode, color flow and doppler imaging is available. Normal mitral valve leaflets with no prolapse into the left atrial lumen. Trace mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with trace tricuspid regurgitation. Normal velocity. 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 aortic or pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

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	NM	2.0	NM	1.4	27	53	0.5
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	88	1.4	1.2	52.2	4.2	4.7	3.4
*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)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				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)



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Adapted from June Boon, Veterinary Echocardiography, 1998	25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435	30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002	35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995	40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
	50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

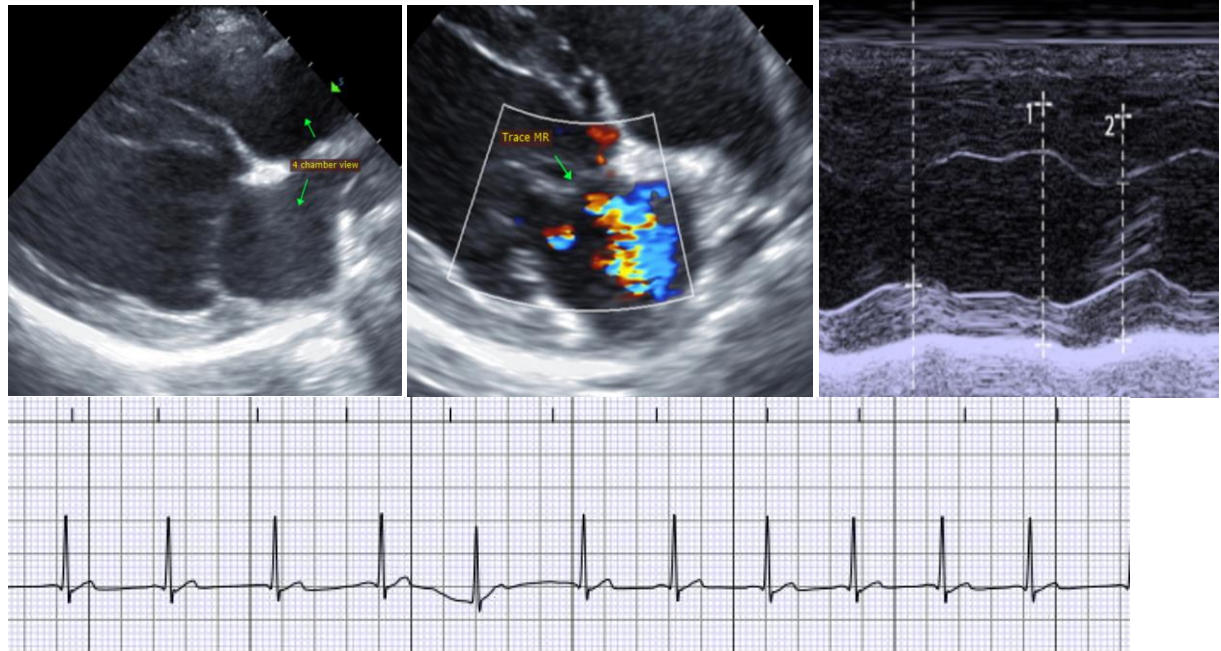
Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. Trace MR and TR may suggest early valve disease and follow up is advised should a murmur be auscultated in the future. No other significant valvular leaks are visualized, and no evidence of pulmonary hypertension. The ECG is unremarkable with a normal sinus rhythm.

These findings would suggest the radiographic appearance is likely a normal variant. **Dexdomitor can cause transient chamber dilation, which may explain the discrepancy in the findings.** Consider reassessing CXR to establish a baseline in the absence of sedation.

Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

A recheck echocardiogram is recommended should a significant murmur develop or signs of cardiac compromise be noted in the future.

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.

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Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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