



## PATIENT

Rusty Waffle

## SPECIES

Canine

## BREED

Doberman

## SEX

MN

## AGE

11 years

## WEIGHT

87 lbs.

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

## IMAGING PERFORMED BY

Kim Liedberg

## HOSPITAL NAME

SVS Imaging WI

## REFERRING VET

Dr Baum, Lyons  
Veterinary Service

## INVOICE

12395

## DATE

10/19/21

## PRESENTING CLINICAL SIGNS

Normal BW with no notable heart murmur present. ProBNP 1348.2 He is on carprofen and gabapentin for pain relief.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

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			--	1.54	26.7	56.2	0.57
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	95		0.8		5.0	4.5	

## Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was mildly subnormal for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



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## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Overtly normal cardiac structure for age / breed
- Mild left ventricle hypocontractility

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, normal cardiac structure and likely function, given the age and breed of the patient, without evidence of significant systolic dysfunction or valvular insufficiencies noted. The subnormal contractility is nonspecific and may be a normal age-related or patient variant or potentially secondary to athletic state. Given the normal reported blood work, hypocontractility owing to systemic disease i.e., hypothyroidism does not appear to be present. If no clinical signs of heart disease such as exercise intolerance, syncope, or evidence of arrhythmogenic disease, the left ventricular hypocontractility is likely an incidental finding. DCM criteria was not met. However, serial sonographic monitoring of this patient would be ideal with recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease develop. No overt indication for cardiac medications at this time.

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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. 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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