



## PATIENT

Cassius Lewis

## SPECIES

Canine

## BREED

Boxer

## SEX

MC

## AGE

12

## WEIGHT

57

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Michelle Bartus

## HOSPITAL NAME

Valley Veterinary  
Service

## REFERRING VET

Peter Nelson

## INVOICE

16578

## DATE

7/28/22

## PRESENTING CLINICAL SIGNS

Echo done 6/28/21. Seemed normal, but was not read by specialist. Dog has periodic episodes that seem to be syncope. Occurs about every 4-6 months. Recommended repeat echo, but owner requested that we have the one from last year evaluated by specialist.

Abnormal PE/Chem/CBC/UA Results: chem ,cbc normal 6/24/21

## 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	<1.3	28-40	40-100	<0.6
PATIENT	--	--	NM	1.4	33.3	65.6	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				
PATIENT	NM	1.5	1.0	--	3.6	3.6	--

## 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 adequate and in normal range 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.

## ULTRASONOGRAPHIC FINDINGS



## PATIENT

- Normal echocardiogram

Cassius Lewis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## SPECIES

Overtly normal cardiac structure and function without evidence of clinical issues, such as left or right heart chamber enlargement, LV systolic dysfunction or overt evidence of clinical pulmonary hypertension.

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Boxer

Given the breed and history of intermittent syncope, concern for arrhythmogenic right ventricular cardiomyopathy is likely indicated. Cardiac presentation may be essential normal with ARVC. Holter monitor is strongly recommended to assess for evidence of underlying arrhythmia with potential for cardiology consult. Ideally, given the time frame from this study, full recheck echocardiogram is recommended to assess for evidence of current chamber enlargement or other abnormalities.

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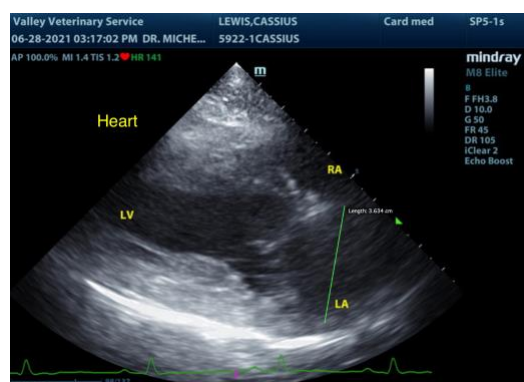
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)  
info@SonoPath.com