



PATIENT

Rawls Brennan

SPECIES

Canine

BREED

Labrador Retriever

SEX

MN

AGE

5 years

WEIGHT

79 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Lacey-Crook-
SDEP Certified
Sonographer

HOSPITAL NAME

Rivers Edge PMC

REFERRING VET

Dr. Bridget Hayes

INVOICE

13747

DATE

4/27/22

PRESENTING CLINICAL SIGNS

Recent onset of exercise intolerance. On NULO grain-free diet. Some arthritis noted. A few lipomas. Abnormal PE/Chem/CBC/UA Results: Radiographs from 4/20 (see attached) - Mild pleural effusion Labwork WNL (see attached) ECG normal (See attached)

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT	5.3	1.8	1.41	1.3	32.5	64.4	0.5
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
CARDIAC PARAMETERS	(BPM)	VMAX (m/s)	MAX (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	1.2	1.2		3.9	4.0	

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. Minor, primarily centralized MR was present on doppler. The **left ventricle** presented normal thicknesses with maintained linear contour with potential borderline increased VL volume. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was borderline subnormal 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). Trace PI measuring 1.8 m/s was present on doppler. No visible **pericardial** or free pleura fluid was noted. Focal area of homogeneous subjective consolidated lung was noted directly adjacent to the right ventricle, measuring approximately 4.0 cm in diameter. No other additional areas of cardiac or pericardial pathology were noted.



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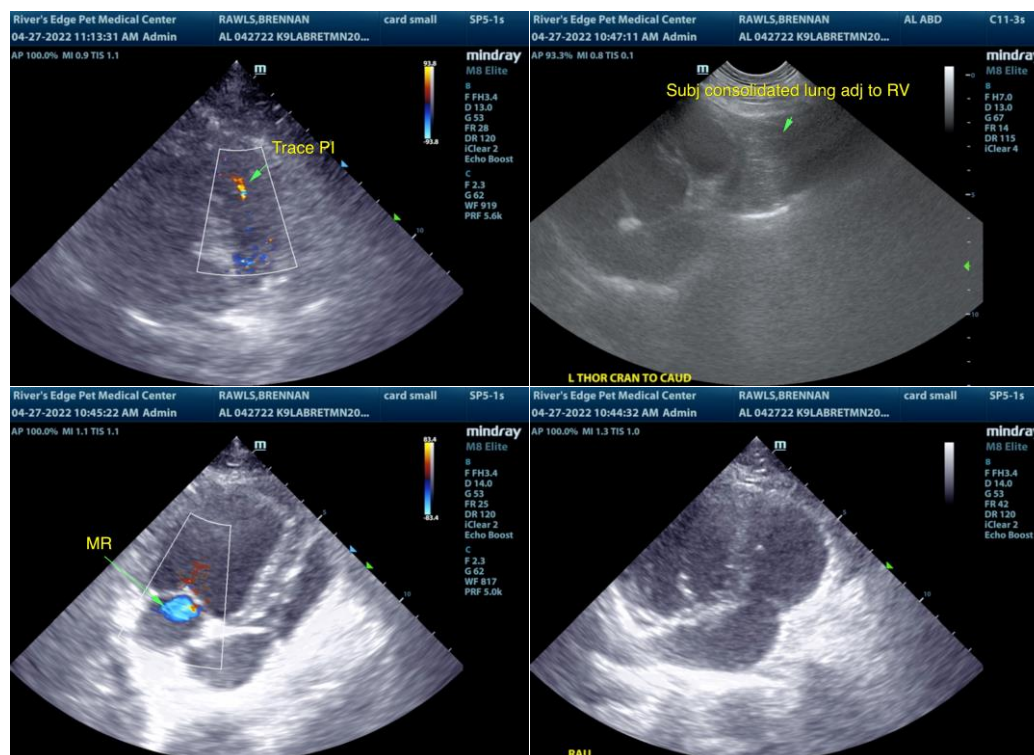
ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function with borderline LV hypocontractility
- Minor MR and trace PI
- Subjective focal consolidated lung adjacent to right ventricle - consolidation, pneumonia, granuloma, or other possible with neoplasia considered a less likely differential diagnosis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The borderline LV hypocontractility in this patient is nonspecific with potential contributing factors including systemic disease, hypothyroidism, and athletic state which can present in this fashion. DCM criteria is not present. However, given the patient's history of a grain-free / boutique diet, potential dietary effects on cardiac function cannot be excluded. Further assessment may include taurine levels and empirical switch to a traditional diet.

No other clinical issues such as left or right heart chamber enlargement or evidence of clinical pulmonary hypertension were noted. The overall cardiac presentation was not consistent with cardiogenic pleural effusion. Lower airway disease may be a top consideration in this patient if evidence of respiratory abnormalities and given subjective focal lung consolidation. No overt indication for cardiac medications at this stage. However, serial sonographic monitoring is required for further assessment. Recheck echocardiogram is suggested in 3-4 months, sooner if clinical signs suggestive of primary heart disease arise.





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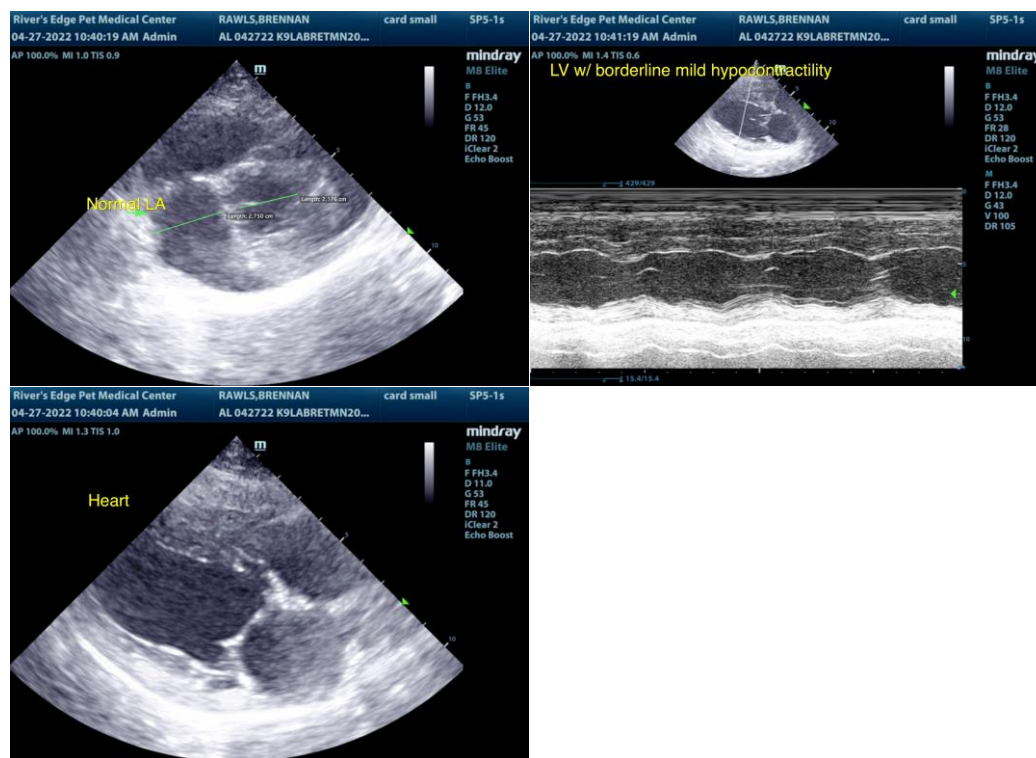
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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