



PATIENT

Stormy Sanders

SPECIES

Canine

BREED

Cane Corso

SEX

FI

AGE

9 weeks 4 days

WEIGHT

19.8 lbs.

INTERPRETED BY

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

IMAGING PERFORMED BY

Amanda Lacey-Crook
- SDEP Certified
Sonographer/Jasmine

HOSPITAL NAME

Rivers Edge PMC

REFERRING VET

Dr. Jamie Sullivan

INVOICE

12991

DATE

1/7/22

PRESENTING CLINICAL SIGNS

New puppy exam revealed a grade 2/6, soft, systolic heart murmur with PMI on the left lateral thorax, but audible on both left and right lateral thorax. Today there is a squeak and a rub sound, per Dr. DLG
Abnormal PE/Chem/CBC/UA Results: See attached radiographs and ECG report

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	3.5	2.0	1.46	1.43	42.1	76.5	0.15
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	1.8	1.4		2.56	2.4	

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 insufficiency was present on color doppler assessment. 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. Minor insufficiency was noted on color doppler assessment. 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 pulmonic valve insufficiency was present on color doppler assessment, measuring 1.1 m/s. 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

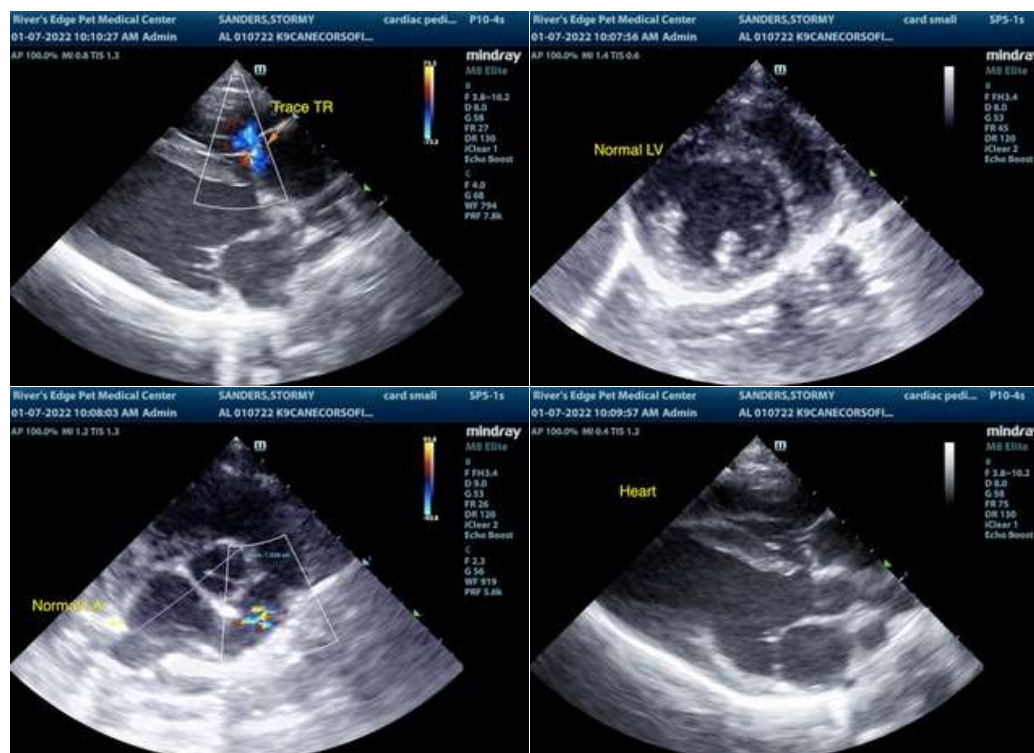
- Overtly normal cardiac structure and function
- Minor MR / TR / PV insufficiency

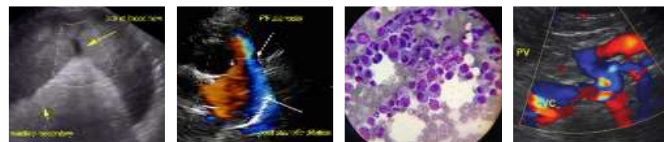
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence was present of structural or functional cardiomyopathy without an obvious cause of the murmur identified. Minor MR, TR, and PV insufficiency were present, yet not likely audible. No evidence of systolic dysfunction, definitive stenotic disease were present while the possibility of a significant shunt is considered unlikely, given the lack of left or right heart chamber enlargement. If no evidence of significant volume changes i.e., dehydration or anemia, considerations for the murmur may include benign physiologic flow murmur or small flow abnormality not visualized here.

In the face of normal overall cardiac structure and function, anesthetic risk is considered low without overt anesthetic contraindications. Further evaluation with a board-certified cardiologist is recommended, given the age of the patient and potential for nonobvious congenital abnormality.

Suggested anesthetic protocol may include opioid or Benzodiazepine pre-med, induction with Propofol or Alfaxalone, and appropriate gas anesthesia with avoidance of alpha 2 agonists.





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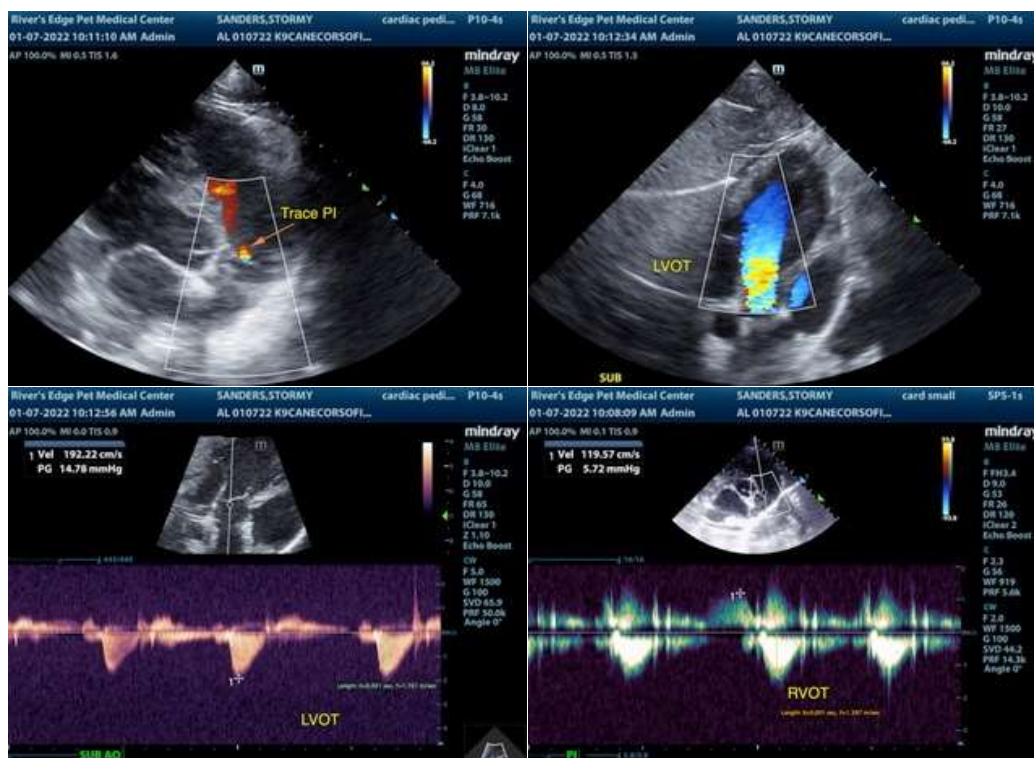
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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