


PATIENT

Kitty Perryman

SPECIES

Feline

BREED

DSH

SEX

SF

AGE

12 yrs

WEIGHT

9.25

PRESENTING CLINICAL SIGNS

Systolic sternal heart murmur 3/6 auscultated when presenting for exam for mobility issues on 8/31/22. LS and lumbar pain on palpation but otherwise normal exam. BW, probnp and radiographs done that day. Probnp was abnormal, TT4 elevated as well as Free T4, UPC normal and remaining bloodwork was normal and UA normal besides +2 proteinuria. Last seen for dental cleaning which went well, preop BW and probnp were normal at that time (4/6/21).

Abnormal PE/Chem/CBC/UA Results: probnp elevated (Snap test) TT4 and free T4 elevated BW normal Radiographs to be sent Blood Pressure Measurements 211/150/170 Current Medications starting methimazole 2.5mg BID after this echo Radiographic Findings see attached - my findings - There is spondylosis to L6-L7, LS, T10-L1, potential osteophytes at the radiohumeral joints bilaterally and enthesiophytes on the distal patellar ligament insertions bilaterally. Increased bone formation at proximal fibular/tibial jct bilaterally. The rest of the skeletal system appears normal. The heart measures enlarged to VHS 8.5, suspected right atrial enlargement, pulmonary vessels of normal shape/size and pulmonary parenchyma appears normal. The stomach is empty, as is the small intestine and kidney sizes/shapes as is the urinary bladder. There is moderate firm feces in the colon and mild amount of gas. No other abnormalities noted. Suspected instability in areas with spondylosis as fitting with concerns of O and clinical signs as well as changes in the other joints with potential for arthritis, cardiomegaly with increased VHS.

INTERPRETED BY

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

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

Ark AH

REFERRING VET

Dr. Jackson

INVOICE

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DATE

9/7/22

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	-----	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT		NM	0.51	1.36	0.46	52.9	87.9
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT		1.35	1.3	1.0	0.75	NM	
Adapted from June Boon, Veterinary Echocardiography, 1998 Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705							



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Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size and structure. Chamber volume and blood echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented minor irregular age-related changes that are not clinically significant at this time with adequate extension in systole and union in diastole. No overt MR was noted on doppler. The **left ventricle** presented normal free wall and septal thicknesses with mild alinear contour. Mildly prominent or remodeled papillary muscles were noted. The **myocardium** presented some echogenic remodeling and mild hyperechoic endocardium consistent with expected age-related change with potential for mild fibrosis. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle exhibited mild increased size compared to the left atrium with normal overall structure and anechoic content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient. No overt MR was noted on doppler. The **right ventricle** was of normal size (1/3 diameter of LV), myocardial echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No pulmonic artery or right ventricle dilation secondary to cuor pulmonale or evidence of pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window. No cardiac tumors were evident.

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ULTRASONOGRAPHIC FINDINGS

- LV myocardial remodeling - no evidence of HCM criteria
- Normal LA
- Borderline to mild RA enlargement, normal RV

IMAGING PERFORMED BY

Sara Hansen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, normal cardiac function with evidence of LV myocardial remodeling likely associated with age-related myocardial changes with the potential for mild fibrosis. The borderline to mildly enlarged right atrium does not appear to be of clinical significance, given no overt evidence of pulmonary hypertension.

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A definitive cause of the murmur was not obvious given the lack of significant left or right heart chamber enlargement, overt or significant valvular insufficiencies, or other valvular disease. If no evidence of volume changes such as dehydration or anemia, a physiologic flow murmur would be suspected, although the possibility of a small flow abnormality not visualized cannot be definitively excluded. Regardless, the lack of significant left or right heart chamber enlargement indicate that the risk of complications secondary to the murmur is relatively low. No overt indication for cardiac medications is evident. Conservative monitoring of the murmur with recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease arise or if murmur intensity increases.



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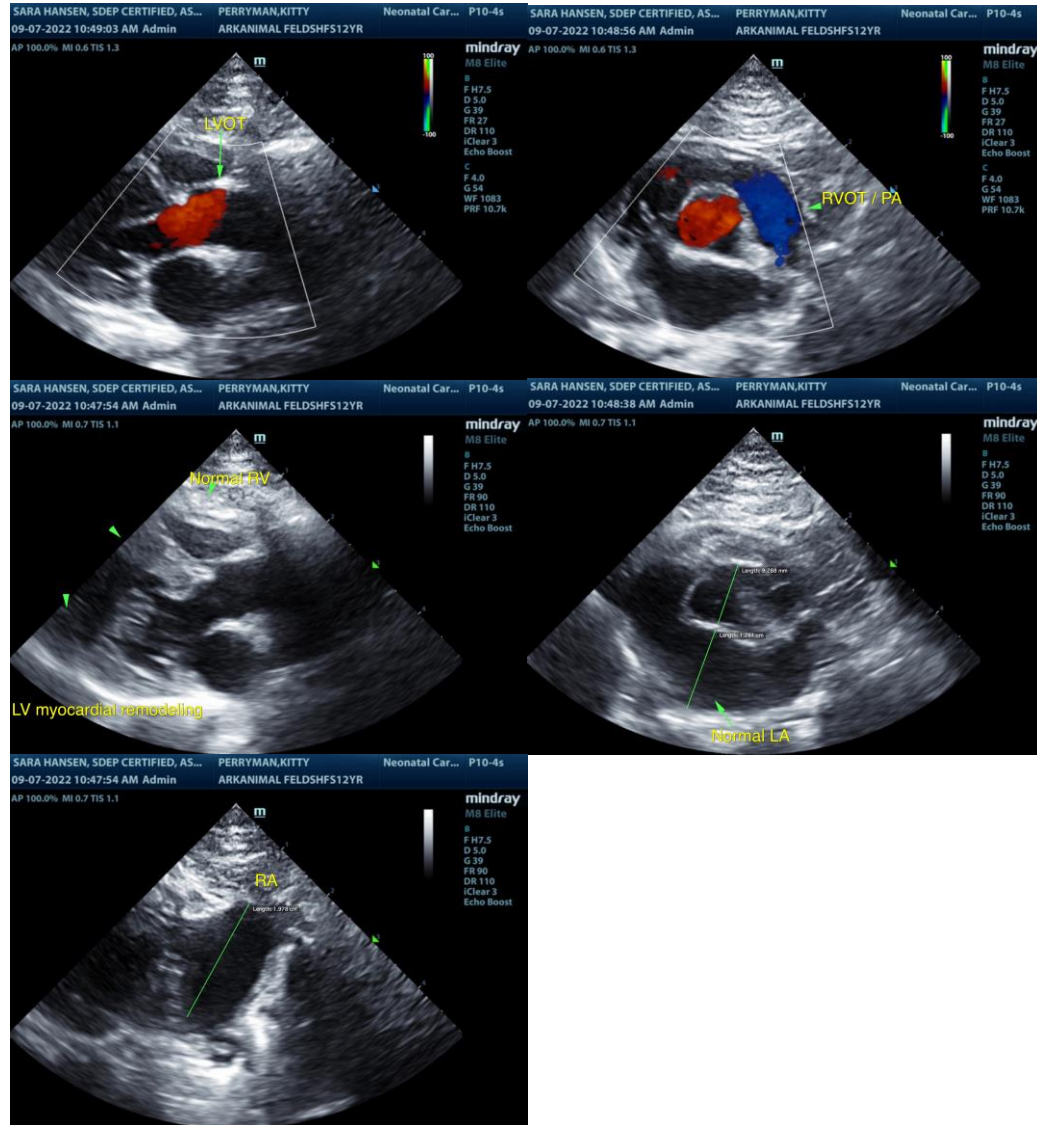
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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