



PATIENT PRESENTING CLINICAL SIGNS

Foxy Duffield
SPECIES History: History of chronic cough. Crackles auscultated on exam this morning. No murmur auscultated. Chest x-rays shows potentially enlarged cardiac silhouette. P given Lasix injection in hospital as well as butorphanol, rDVM reports p's breathing is much improved
 Abnormal PE/Chem/CBC/UA Results: lab work pending

Canine ULTRASONOGRAPHIC EXAMINATION OF THE HEART

BREED

Pomeranian

SEX

Neutered Male

AGE

12 Years

WEIGHT

5.6 Pounds

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	--	1.3	--	1.3	39.6	77	0.18
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	<2.0	0.65	--	2.0	1.8	--

INTERPRETED BY

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

IMAGING PERFORMED BY

Meredith Swart

HOSPITAL NAME

Swart Veterinary Imaging

REFERRING VET

Meredith Swart

INVOICE

14735

DATE

4/14/22

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. The **left ventricle** presented normal free wall and septal thicknesses with linear contour. The **myocardium** presented some echogenic remodeling consistent with expected age-related change. **Contractility** of the ventricular walls was adequate and in normal range for this breed and patient size. The **left ventricular outflow** tract demonstrated normal laminar flow with subjectively unremarkable structure. Subjective assessment of the **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated expected findings for this age patient with mild thickening. Mild TR present on doppler. The **right ventricle** was of normal size (1/3 diameter of LV), echogenicity and thickness. **Pulmonic** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No dilation due to heartworm disease, cor pulmonale, stenosis, or pulmonic hypertension was noted. No visible **pericardial** or free pleural fluid was noted. The **mediastinum** was free of masses in the visible window. Intermittent, subjective tachyarrhythmia noted.

ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function



PATIENT

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- Mild TR- estimated pressure gradient based on measured TR velocity was not consistent with clinical pulmonary hypertension
- Subjective intermittent tachyarrhythmia

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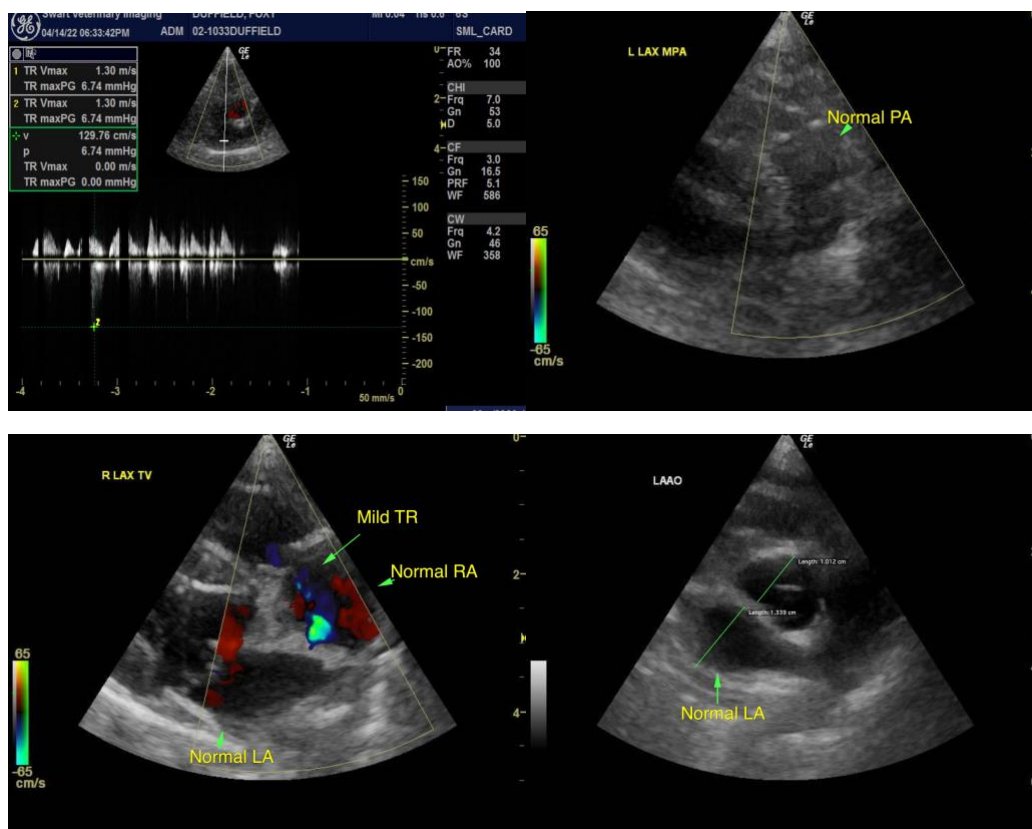
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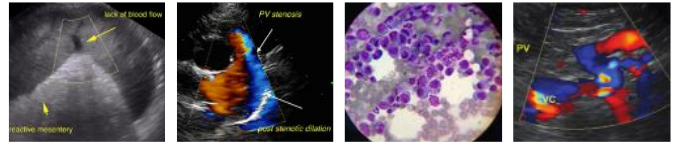
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, largely age-related cardiac changes without evidence of significant structural or functional cardiomyopathy. No clinical issues, such as systolic dysfunction, significant left or right heart chamber enlargement or evidence of clinical pulmonary hypertension were noted. Given this presentation, the chronic coughing in this patient is most likely noncardiogenic in origin. Consideration for primary lower airway disease or noncardiogenic pulmonary edema, if clinically applicable, may be indicated.

No overt indication for cardiac medications given this presentation. Primary respiratory support is suggested. Correlation with pending lab work and monitoring of thoracic radiographs with potential recheck echocardiogram if persistent/progressive respiratory signs or as needed. ECG assessment recommended given the subjective intermittent tachycardia.





PATIENT

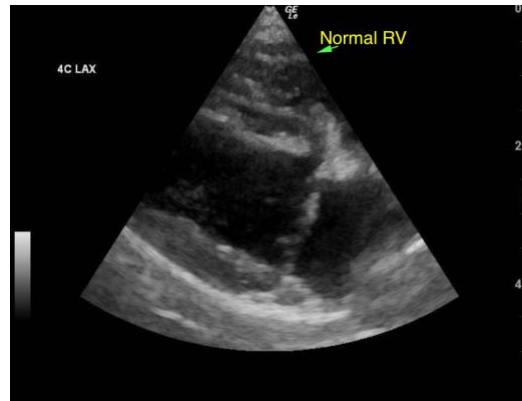
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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