



**PATIENT PRESENTING CLINICAL SIGNS**

Fergie Gustin 2/6 heart murmur noted on pimobendan 1/2 PO BID. Radiographs indicated right side atrium enlargement. Occasional coughing

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

Canine

**BREED**

Bichon X

**SEX**

Neutered Male

**AGE**

5 Years

**WEIGHT**

19.8 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	<1.6	28-40	40-100	<0.6
PATIENT			NM	1.33	40.9	70.3	0.22
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	114	1.4	1.5		2.6	2.74	

**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 mild subjective increased size compared to the left atrium (approximate 1:1 right atrium/left atrium ratio) with maintained normal structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. Minor tricuspid valve insufficiency noted on 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). 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**

- Overtly normal cardiac function
- Mildly prominent right atrium

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kim Liedberg

**HOSPITAL NAME**

SVS Imaging

**REFERRING VET**

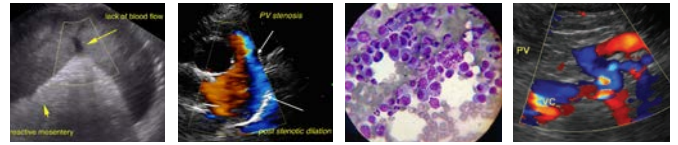
Dr. Preiser

**INVOICE**

24909

**DATE**

8/24/21



**PATIENT**

Fergie Gustin

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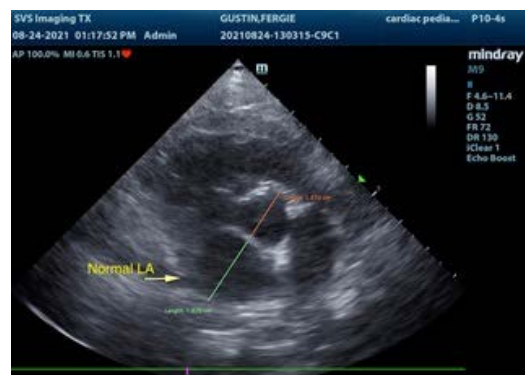
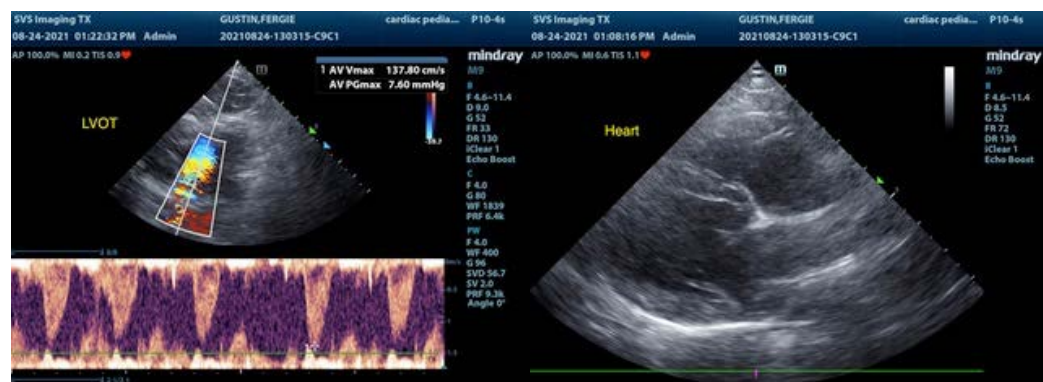
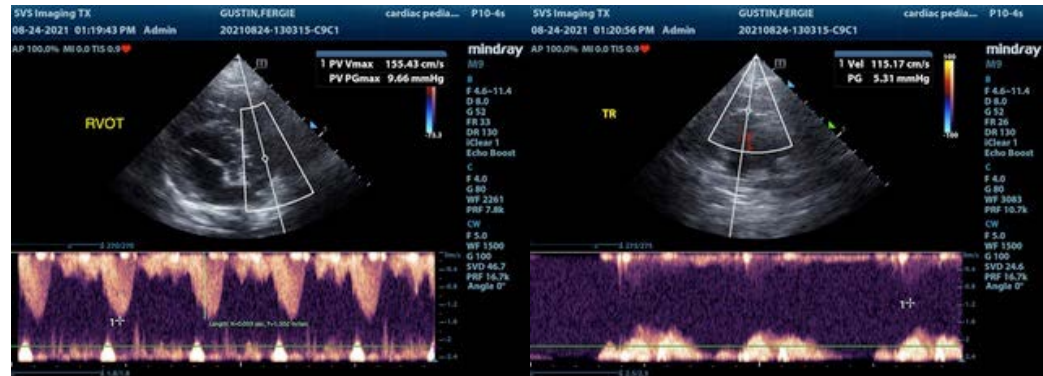
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Largely normal cardiac structure and function without evidence of significant left or right heart chamber enlargement, systolic dysfunction or clinical pulmonary hypertension. The study did exhibit subjective mildly prominent right atrium compared to the left atrium, which is of unclear clinical significance given the lack of clinical pulmonary hypertension and pulmonic stenosis, and was not overtly consistent with impending right heart failure.

Given these findings, no indication for cardiac medications unless previously documented hepatic congestion or ascites. The occasional coughing in this patient is most likely non-cardiogenic in origin. Consideration for potential primary lower airway disease may be indicated. Sonographic monitoring of the right atrium would be appropriate with a recheck suggested in 6 months, sooner if clinical signs consistent with right heart disease or clinical pulmonary hypertension develop. Recheck heartworm testing may be considered if clinically indicated.





**PATIENT**

Fergie Gustin

**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.**

**SPECIES**

Canine

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.

**BREED**

Bichon X

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info@SonoPath.com

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