



PATIENT PRESENTING CLINICAL SIGNS

George Larson Grade 3/6 heart murmur, George is in need of a dental and a mass removal on left hind foot. Would like base line echo for anesthesia risks.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

German Shorthair Pointer

SEX

Neutered Male

AGE

14 Years

WEIGHT

67 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	1.18	51.1	86.1	0.41
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	118	1.6	1.1		3.6	3.6	

Cardiac Presentation

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Tomcheck

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 different LA measurement methods. Chamber volumes and echogenicity were normal. The cranial and caudal **mitral** valve leaflets presented subtle vegetative thickening suggestive of mild endocardiosis. Doppler indicated measurable mild insufficiency. 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 or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology. 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. **Pulmonic** 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. No echographically detectable evidence of infiltrative disease was visible. The cranial **mediastinum** and **pericardial regions** were free of masses in the visible window.

ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function
- Mild mitral valve and tricuspid valve insufficiency

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur, although not definitive, is most suggestive of mild degenerative valvular changes with secondary minor mitral valve and tricuspid valve insufficiency. No other evidence of



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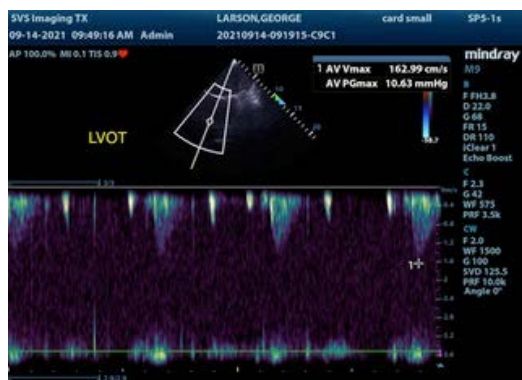
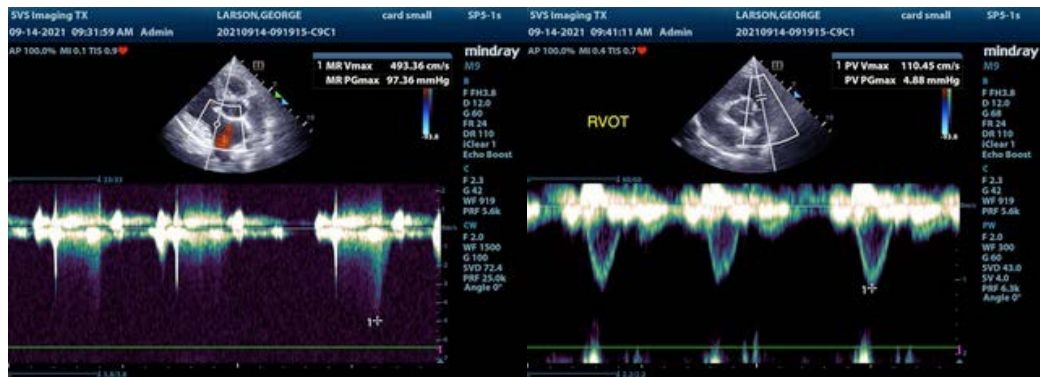
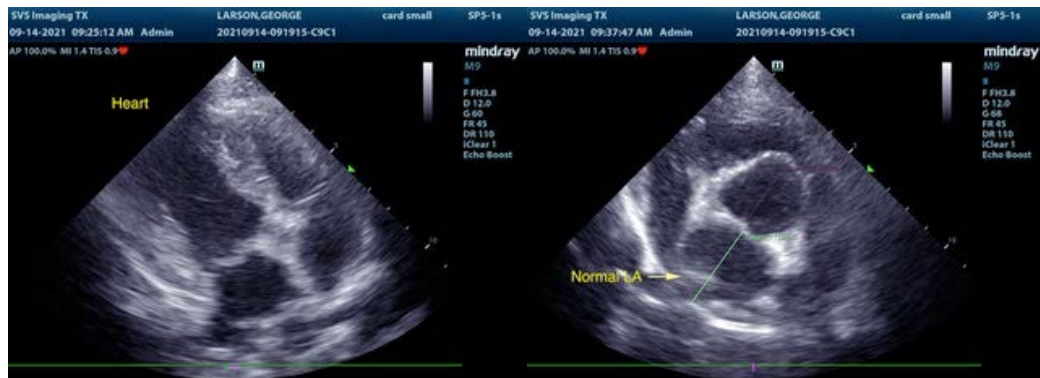
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systolic dysfunction valvular insufficiencies. No evidence of clinical pulmonary hypertension. The lack of left atrial enlargement as well as lack of overall left or right heart chamber enlargement indicate that the risk for future complication is low. No indication for cardiac medications. No overt anesthetic contraindications. Assuming normal blood pressure, the following anesthetic protocol is suggested. Conservative monitoring of the heart murmur at this time would be appropriate with recheck echocardiogram suggested in 6 months, sooner if clinical signs consistent with heart disease develop. 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.





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.

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.

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

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