



PATIENT PRESENTING CLINICAL SIGNS

Jack Sullivan 4/6 heart murmur noted on pre dental exam. Occasional cough and bad teeth. Anesthesia concerns.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Canine

BREED

Jack Russell Terrier

SEX

Neutered Male

AGE

12 Years

WEIGHT

18 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	5.1	1.0	1.5	1.78	54.6	89.4	0.33
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	142	1.1	1.2		3.3	3.15	

INTERPRETED BY

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

IMAGING PERFORMED BY

Kim Liedberg

HOSPITAL NAME

SVS Imaging

REFERRING VET

Dr. Burke

INVOICE

25086

DATE

8/31/21

Heart

The echocardiogram for this patient presented excessive **left atrial size** expressed both in the LA/AO and LA max measurement. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable, primarily eccentric insufficiency. The **left ventricle** presented normal thicknesses with linear contour with minor subjective increased left ventricle volume. 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. 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

- Chronic mitral valve disease (ACVIM B2)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The mild increased left atrium size as well as mild subjective increased left ventricle volume indicate that the risk for future complication is elevated, yet prognosis is highly variable. The coughing in this patient is likely multifactorial in origin, yet not overtly secondary to cardiomegaly given



PATIENT

Jack Sullivan

only mild left atrium and left ventricle changes. Based on Epic Study criteria, this patient is considered borderline for the use of Pimobendan. However, given the mild left atrial enlargement and potential benefits of Pimobendan administration, this medication is recommended at 0.3 mg/kg PO BID and should be administered 3-4 days prior to anesthesia. Anesthetic risk is considered mildly elevated, yet no overt anesthetic contraindications. This patient may be at increased risk for fluid overload.

SPECIES

Canine

Therefore, judicious IV fluid use is recommended. The following anesthetic protocol is suggested if anesthesia is pursued.

BREED

Jack Russell Terrier

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.

SEX

Neutered Male

Recheck echocardiogram recommended in 6 months, sooner if clinical signs consistent with heart disease (pulmonary edema, exercise intolerance, etc.) are noted. Baseline monitoring of resting respiration rate at home is suggested.

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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.

IMAGING PERFORMED BY

Kim Liedberg

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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