



**PATIENT**

Yogi Borja

**SPECIES**

Canine

**BREED**

Cavalier King Charles

**SEX**

MN

**AGE**

13 years

**WEIGHT**

22.6 lbs.

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Animal General on  
Hudson

**REFERRING VET**

Dr. Stefanie Lang

**INVOICE**

12965

**DATE**

1/5/22

**PRESENTING CLINICAL SIGNS**

Grade 3/6 heart murmur auscultated during exam. No current meds.

Abnormal PE/Chem/CBC/UA Results: ALP 156, albumin 2.4, nRBC -2, platelet - 53,000, monocytes - 1127, neutrophils 13202

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	5.5	3.0 MAX	1.5	1.7	32	61	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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	101	1.0	0.8		3.9	3.7	

**Cardiac Presentation**

The echocardiogram in this patient demonstrated moderately enlarged **left atrial** size based on 3 different LA measurement methods. Mild deviation of the interatrial septum towards the right atrium suggestive of increased left atrial pressure was present. The cranial and caudal **mitral** valve leaflets presented vegetative thickening consistent with endocardiosis. Doppler indicated measurable eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with mild 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 concurrent vegetative thickening. Subjective moderate tricuspid valve insufficiency was present on color 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). Trace pulmonic valve insufficiency was present on color doppler assessment. 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.



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## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Myxomatous mitral valve disease (ACVIM B2)
- TR - estimated pulmonary pressure gradient (approximately 36 mmHg MAX) consistent with mild elevated pulmonary pressures or mild pulmonary hypertension

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The moderate left atrium enlargement indicates that the risk of current and future complication going forward is elevated. Pimobendan 0.3 mg/kg PO BID is recommended as this medication may help prolong cardiac changes associated with mitral valve insufficiency. Although mild elevated pulmonary pressures are likely, the degree of elevated pulmonary pressure was not overtly consistent with clinical pulmonary hypertension. However, continued monitoring for evidence of increased resting respiration rate, exercise intolerance, or syncope is advised. Recheck echocardiogram is suggested in 6 months, sooner if above mentioned clinical signs are noted. Anesthetic risk in this patient is considered mildly elevated, yet no overt anesthetic contraindications.

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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.

<https://www.antechdiagnostics.com/cadet-braf>

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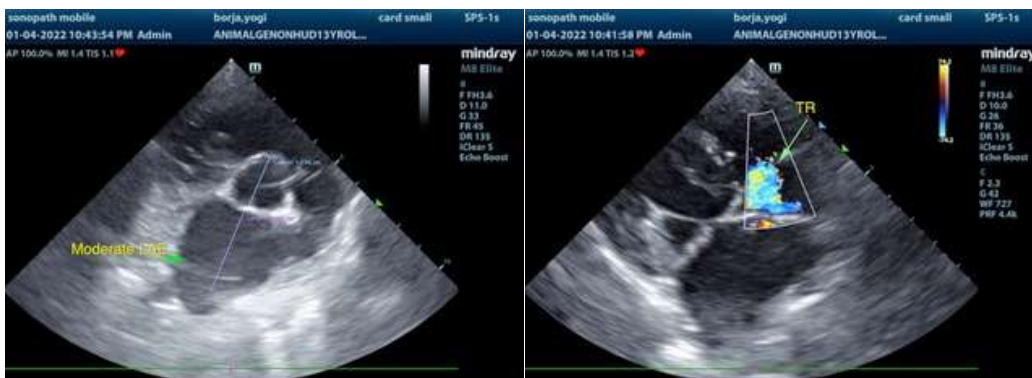
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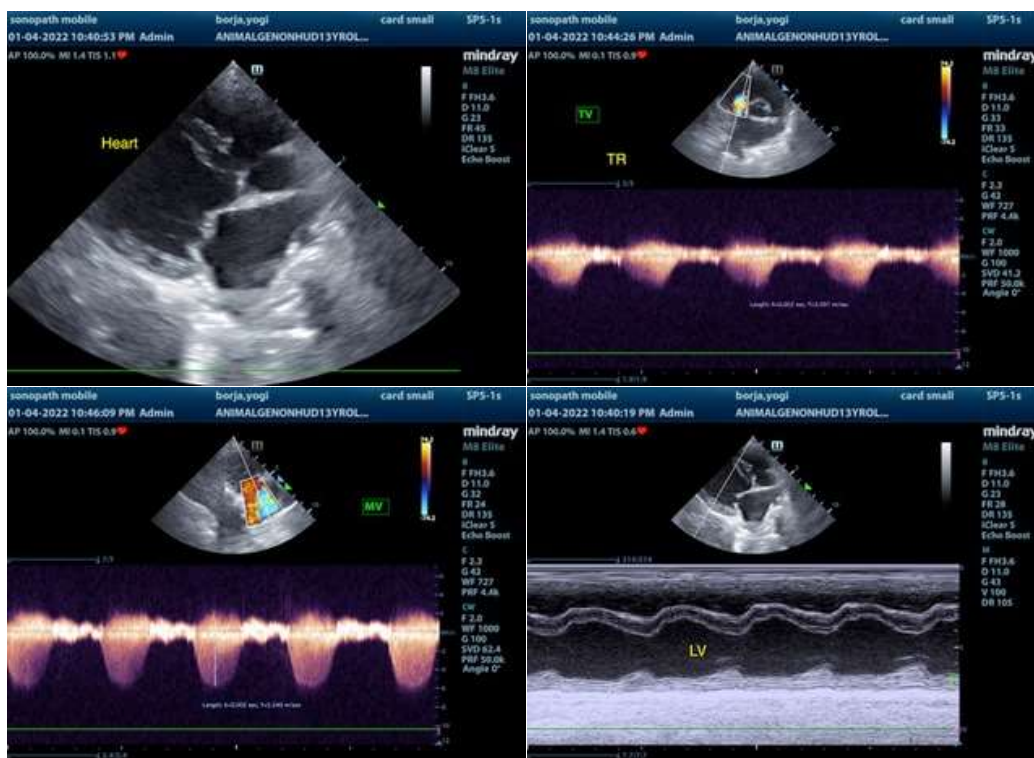
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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