



## PATIENT

Charlie Mauriello

## SPECIES

Canine

## BREED

Cavalier King Charles

## SEX

MN

## AGE

12 years old

## WEIGHT

32.2 lbs.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kelly Vazquez

## HOSPITAL NAME

Ramapo Valley AH

## REFERRING VET

Dr. Gary Duhr

## INVOICE

15412

## DATE

11/8/22

## PRESENTING CLINICAL SIGNS

Recheck echo to stage progression of B2 valvular disease with enlarged left atrium and left ventricle.

Current med: Pimobendan 5 mgs 1 tab BID. Prev. ultrasound performed on 9/23/22.

Abnormal PE/Chem/CBC/UA Results: Normal CBC and Superchem.

## 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)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	5.8			1.84	50	85	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	BELOW	BELOW	BELOW	BELOW
PATIENT	101	1.5	1.0		4.3	4.0	

## Cardiac Presentation

The echocardiogram in this patient demonstrated enlarged **left atrial** size based on 3 different LA measurement methods. Mild deviation of the interatrial septum towards the right atrium, suggestive of some degree of increased left atrial pressure, was present. The cranial and caudal **mitral** valve leaflets presented moderate thickening consistent with endocardiosis. Subtle prolapse of the septal leaflet was present. No evidence of chordae tendineae rupture. Doppler indicated measurable moderate eccentric insufficiency. The **left ventricle** presented thicknesses with linear contour with mild to moderate 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. No evidence of significant TR on Doppler. 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



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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

Overall static cardiac presentation with subjective mild improved LA/LV dimensions, although some degree of measurement variability between studies is possible. No evidence of significant progressive LA/LV enlargement with no additional clinical issues such as LV systolic dysfunction or evidence of clinical pulmonary hypertension.

Continued Pimobendan 0.3 mg/kg PO BID +/- Spironolactone 1.0-2.0 mg/kg PO BID is recommended. Omega-3 fatty acids and mild salt restriction may prove beneficial. Baseline monitoring of resting respiration rate is advised. Long-term prognosis continues to be highly variable and serial sonographic monitoring is required. Recheck echocardiogram is recommended in 6 months, sooner if clinical signs arise. If needed, the anesthetic risk is considered moderately elevated. The following anesthetic protocol is recommended if required with judicious IV fluid use under anesthesia.

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.

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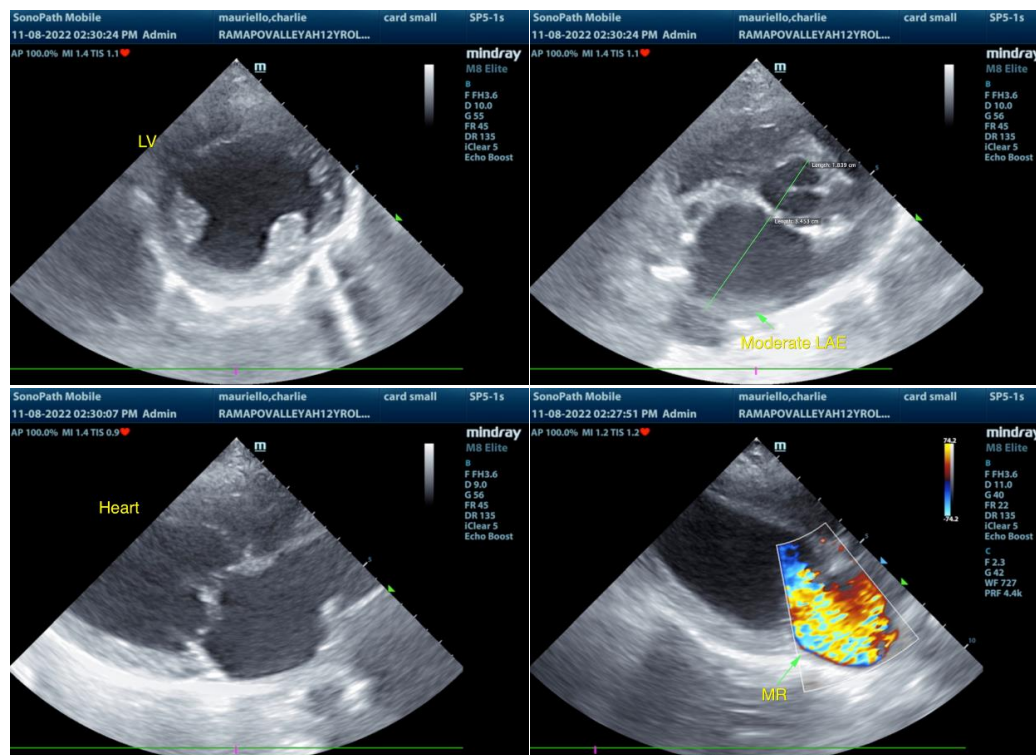
Dr. Gary Duhr

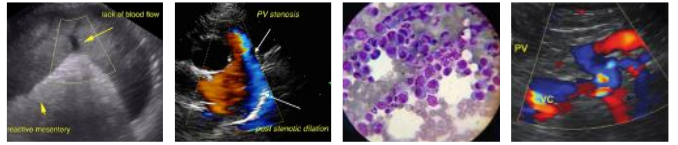
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**