



## PATIENT PRESENTING CLINICAL SIGNS

Rocky Valerio History: Patient presents for heart murmur grade 1-2/6. History of vomiting. No reported meds.

## SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

Canine

BREED

Chihuahua

SEX

Neutered Male

AGE

12 Years

WEIGHT

17.15 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	<1.3	28-40	40-100	<0.6
PATIENT	5.9	<2.0	1.46	1.46	36	67	0.16
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	107	1.3	0.1	--	2.9	2.9	--

### Cardiac Presentation

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 vegetative thickening consistent with endocardiosis. Doppler indicated moderate eccentric 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. 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.

## INTERPRETED BY

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

## IMAGING PERFORMED BY

Kelly Vazquez

## HOSPITAL NAME

Animal Paradise  
Hospital

## REFERRING VET

Dr. Hellwarth

## INVOICE

16361

## DATE

6/28/22

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2.0cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted. Aortic trifurcation was normal.



<b>PATIENT</b>	No overt pathology in the area of the residual prostate.
Rocky Valerio	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.8 cm in length. The right kidney measured 3.6 cm in length.
<b>SPECIES</b>	
Canine	<b>Adrenal Glands</b>
<b>BREED</b>	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.45 cm width at the caudal pole and 0.4 cm width at the cranial pole.
Chihuahua	
<b>SEX</b>	The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.45 cm width at the caudal pole.
Neutered Male	<b>Spleen</b>
<b>AGE</b>	The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.
12 Years	
<b>WEIGHT</b>	<b>Liver</b>
17.15 Pounds	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion.
<b>INTERPRETED BY</b>	The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	<b>Gastrointestinal</b>
<b>IMAGING PERFORMED BY</b>	The stomach was normal with mildly prominent yet intact pylorus wall. The pylorus wall measured 0.45 cm. The lumen of the stomach was empty with no evidence of retained ingesta, fluid or foreign material.
Kelly Vazquez	
<b>HOSPITAL NAME</b>	The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material. The duodenum wall measured 0.40 cm.
Animal Paradise Hospital	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>REFERRING VET</b>	<b>Pancreas</b>
Dr. Hellwarth	The area of the pancreas base and the proximal right pancreatic limb exhibited mildly hyperechoic to nonhomogeneous parenchyma compared to adjacent nonreactive omentum.
<b>INVOICE</b>	<b>Free Abdomen</b>
16361	No overt lymphadenopathy or peritoneal effusion was present.
<b>DATE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
6/28/22	<ul style="list-style-type: none"> <li>Chronic mitral valve disease (ACVIM B-1)</li> </ul>



**PATIENT**

Rocky Valerio

- Intact yet mildly prominent pylorus walls
- Potential low grade chronic pancreatitis
- Mild age-related kidneys

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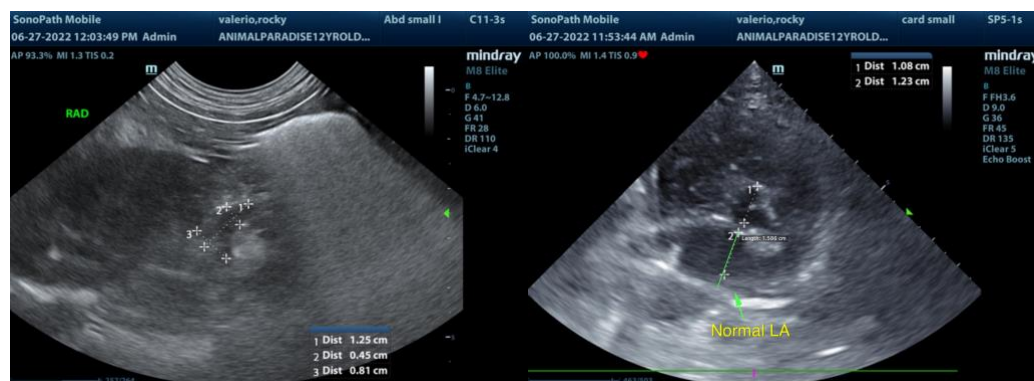
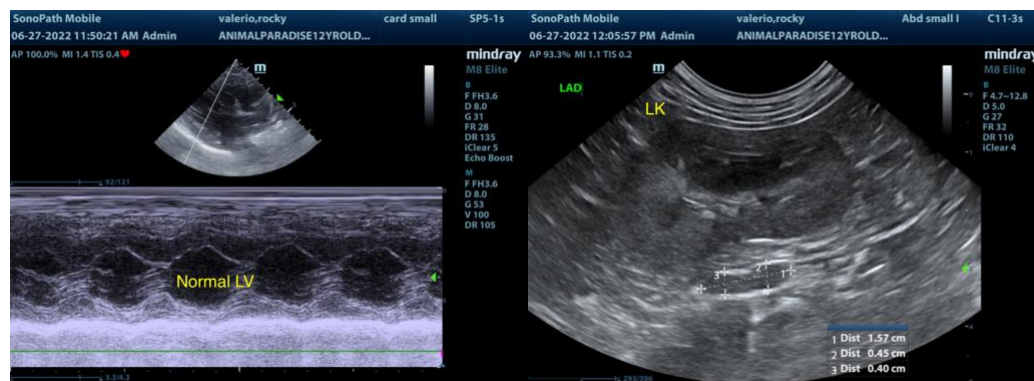
6/28/22

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The cause of the murmur is chronic degenerative valvular changes with secondary eccentric mitral valve insufficiency. The lack of left atrial enlargement implies that the risk of complication secondary to mitral valve insufficiency is low at this time and, without current clinical signs, indicates that medical therapy is not required. However, prognosis at this stage is highly variable and serial sonographic monitoring is required for further prognosis. Conservative monitoring is recommended with a recheck echocardiogram in 6-12 months, sooner if clinical signs suggestive of heart disease develop.

No overt evidence of significant abdominal visceral pathology. The mildly prominent pyloric walls were nonspecific yet if recurrent episodes of vomiting, potential for mild pyloric gastritis could be considered. Likewise, a possibility of chronic pancreatitis and/or minor fibrosis owing to previous inflammation could be possible. Further assessment may include a Spec CPL.

A canned bland or hydrolyzed diet and as needed gastroprotectant protocol during episodes of vomiting or if recurrent vomiting would be reasonable. If vomiting is persistent/progressive, sonographic reassessment of the area of the pylorus would be recommended.





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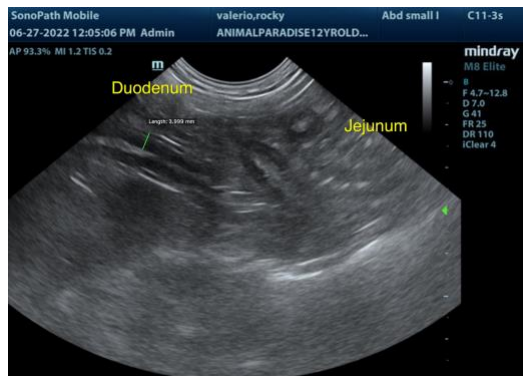
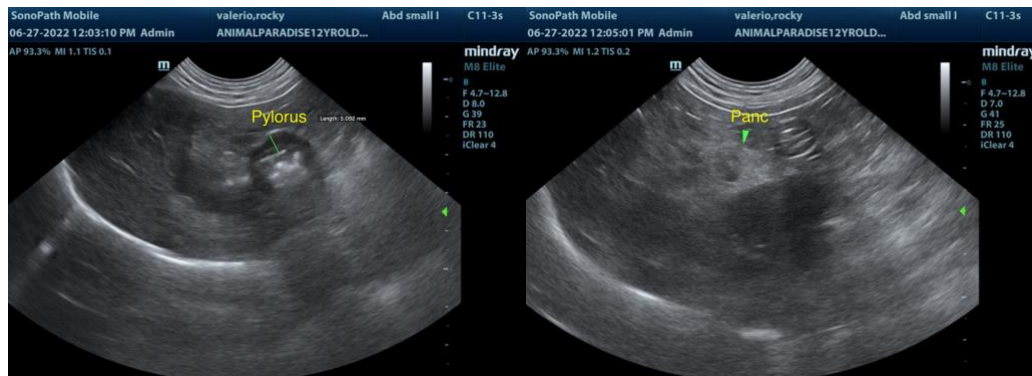
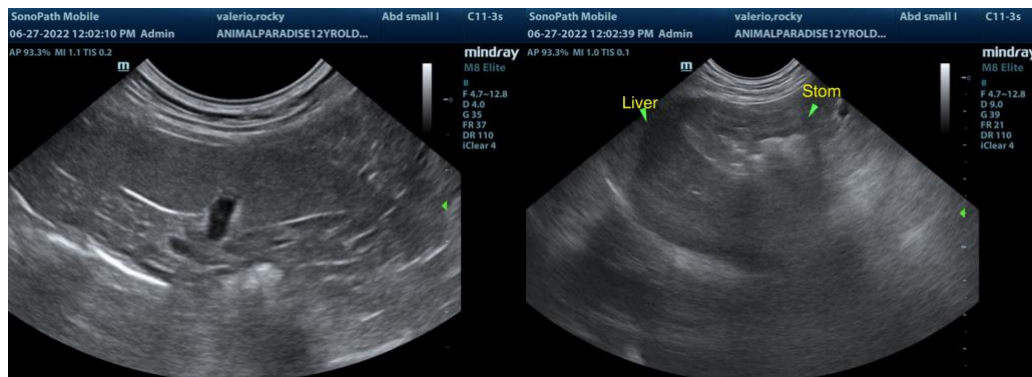
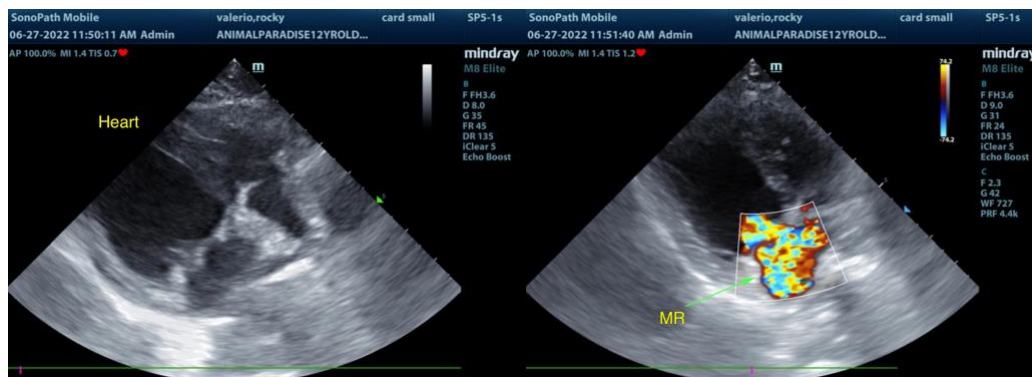
Dr. Hellwarth

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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.



**PATIENT**

Rocky Valerio

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.

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**info@SonoPath.com**

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