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Clinical Sonography & Telecytology
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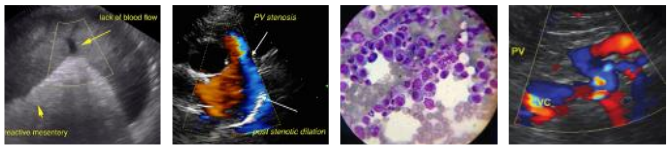


SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**
Mika Rodriguez

**SPECIES**
Canine

**BREED**
Staffordshire Terrier

**SEX**
FS

**AGE**
8.5yr

**WEIGHT**
56.8lb

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

**IMAGING PERFORMED BY**
Kelly Vazquez

**HOSPITAL NAME**
Vetco Total Care Kinnelon

**REFERRING VET**
Dr. Rodriguez

**INVOICE**
11862ag

**DATE**
10/14/2022

## PRESENTING CLINICAL SIGNS

Patient with previous history of cervical herniated disc, presented on 10/11 for dental and mass removals. Pre-op thoracic rads performed - possible upper airway lesion (lar par, pharyngitis, laryngitis, tracheitis). Patient has presented with intermittent dry cough.

Current meds: probiotics, Chinese herbs, joint supplements.

Abnormal PE/Chem/CBC/UA Results: Mildly decreased reticulocyte hemoglobin. U/A: USG 1.046,

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

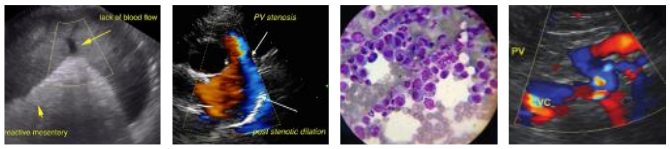
| CANINE CARDIAC PARAMETERS | MR VMAX (m/s) | TR VMAX (m/s) | LA/AO (Boon method) | LA/AO (Heart Base; Swe) | FS (%) | EF (%) | EPSS (cm) |
|---|---|---|---|---|---|---|---|
| NORMAL PARAMETER | 4.5-5.5 | <2.7 | 1.3 | <1.3 | 28-40 | 40-100 | <0.6 |
| PATIENT | | | 1.3 | 1.1 | 35 | 65 | 0.35 |
| **CANINE 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 | 91 | 1.0 | 1.1 | | 4.1 | 4.1 | |

### *Cardiac Presentation*

The echocardiogram in this patient demonstrated normal left atrial size based on 3 separate methods of LA evaluation. The cranial and caudal mitral valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. Mild eccentric MR present on Doppler. 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. Tricuspid valvular assessment demonstrated adequate linear morphology and kinesis. The right ventricle was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. Pulmonary outflow 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. The cranial mediastinum and pericardial and extra-cardiac regions were free of masses in the visible window.

### *Urinary System*

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm 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.



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Normal size and margination was 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 minor loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. A solitary lateral cortical cyst was present in the right kidney. The left kidney measured 5.7 cm in length. The right kidney measured 65 cm in length.

The area of the aortic trifurcation was free of pathology.

### *Adrenal Glands*

The left adrenal gland was subnormal in size with normal contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.41 cm width at the caudal pole and 2.5 cm length.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.49 cm width at the caudal pole and 2.0 cm length.

### *Spleen*

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.

### *Liver*

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.

The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content with mild echogenic luminal debris which is non-specific and likely incidental assuming no evidence of cholestasis. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.

### *Gastrointestinal*

The stomach presented mild wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with mild retained primarily anechoic fluid was present.

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.

Normal visible colon wall layers were present with apparent formed feces in lumen.

### *Pancreas*

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

### *Free Abdomen*

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

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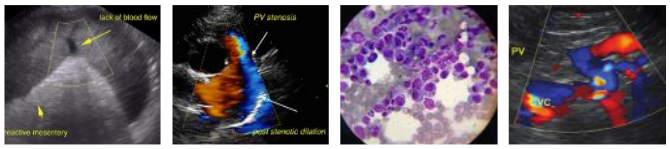

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## ULTRASONOGRAPHIC FINDINGS

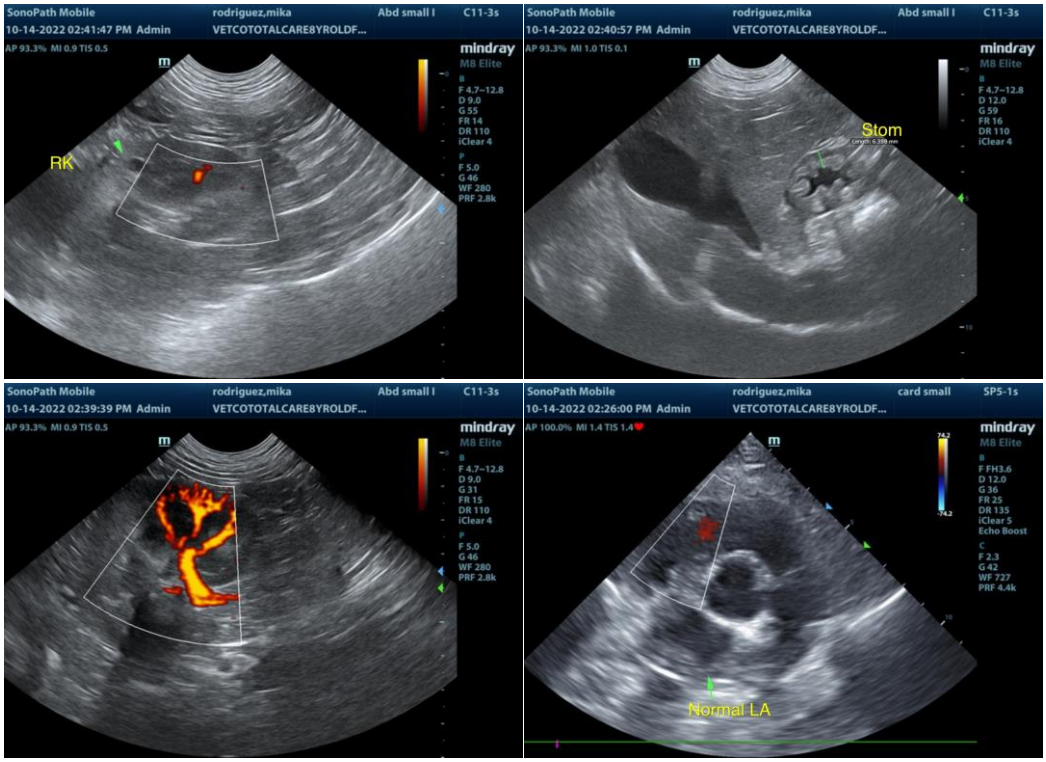
- Overtly normal cardiac structure and function
- Mild compensated eccentric MR
- Subjective mild subnormal left adrenal gland
- Early minor age-related renal changes with right kidney cortical cyst
- Possible mild gastritis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The lack of left or right heart chamber enlargement indicate that the hemodynamic effects of the murmur are minimal. No indication for cardiac medications. No evidence of clinical pulmonary hypertension. No anesthetic contraindications. Recheck echocardiogram recommended in 6-12 months, sooner if murmur intensity increases or clinical signs suggestive of heart disease arise.

The subnormal left adrenal size is likely a patient variant. A resting cortisol level could be considered if clinically indicated.

A gastric protectant protocol may be considered if clinical signs consistent with gastritis are noted, however the stomach presentation may be incidental.



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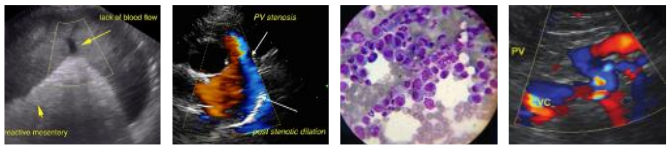

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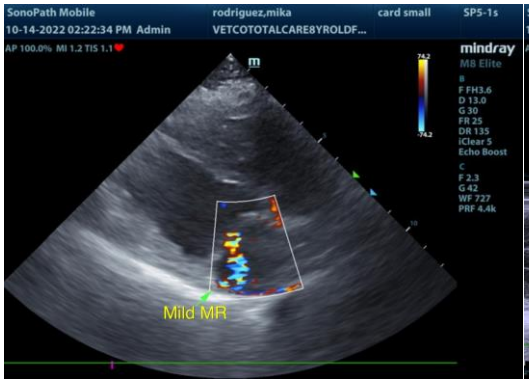


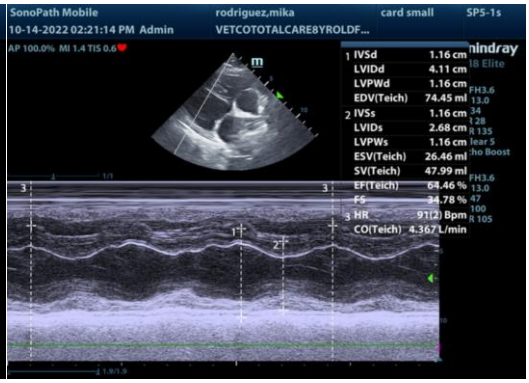

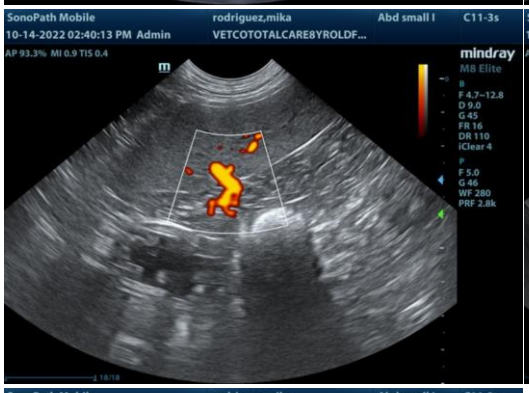



**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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**