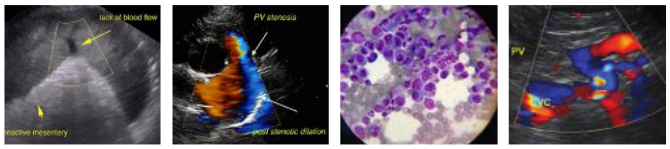
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



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

PATIENT

Martin McSpirit

SPECIES

Canine

BREED

Boston Terrier

SEX

MN

AGE

13yr

WEIGHT

35.8lb

INTERPRETED BY

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

IMAGING PERFORMED BY

Kelly Vazquez

HOSPITAL NAME

Westwood Regional Vet Hospital

REFERRING VET

Dr. Cattiny

INVOICE

11990ag

DATE

10/25/2022

PRESENTING CLINICAL SIGNS

Assess for CHF and CKD.

Current meds: unasyn, cerenia, famotadine, and Epogen.

Abnormal PE/Chem/CBC/UA Results: Azotemia with hyperphosphatemia, anemia, and leukocytosis with neutrophilia. ProBNP pending. Creat. 3.0, BUN 110, BUN/Creat. 36 (N), phos. 9.9, RBC 4.3, HCT 31.4, HGB 10.5, retics. 117.8

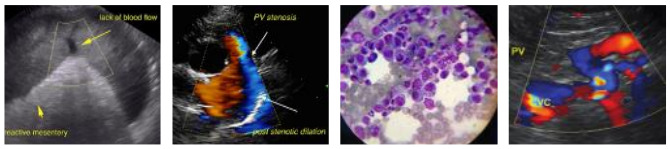
ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN AND HEART

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	6.0	<2.0	1.2	1.35	48.3	83.2	0.2
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	97	1.2	1.0		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 thickening consistent with endocardiosis. Doppler indicated measurable mild to 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 mild subjective thickening with mild 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 disease was visible. The cranial mediastinum and pericardial regions were free of masses in the visible window.

Urinary System



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The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 2 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.

Normal renal size with asymmetrical margination was present in both kidneys. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Mild to moderate loss of corticomedullary distinction was also present. The renal medullary volume was subjectively reduced. Several thinly walled cortical cysts containing anechoic fluid were present bilaterally. The left kidney measured 5.4 cm in length. The right kidney measured 5.9 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and free of pathology.

Adrenal Glands

The left adrenal gland exhibited borderline prominent size based on caudal pole width. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.80 cm width in the cranial pole and 2.6 cm length. The right adrenal gland measured 0.54 cm width in the cranial pole and 2.4 cm length.

Spleen

The spleen exhibited overall normal size and generalized parenchyma heterogeneity. A mildly expansive non-homogenous to nodular small mass was present in the cranial spleen measuring ~ 3.5-4.0 cm in diameter. The mass mildly distorted the regional splenic capsule without evidence of parenchymal escape.

Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. 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 variably echogenic non-organized luminal debris. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction or foreign material.

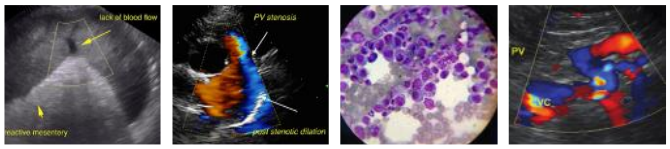
The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

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



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

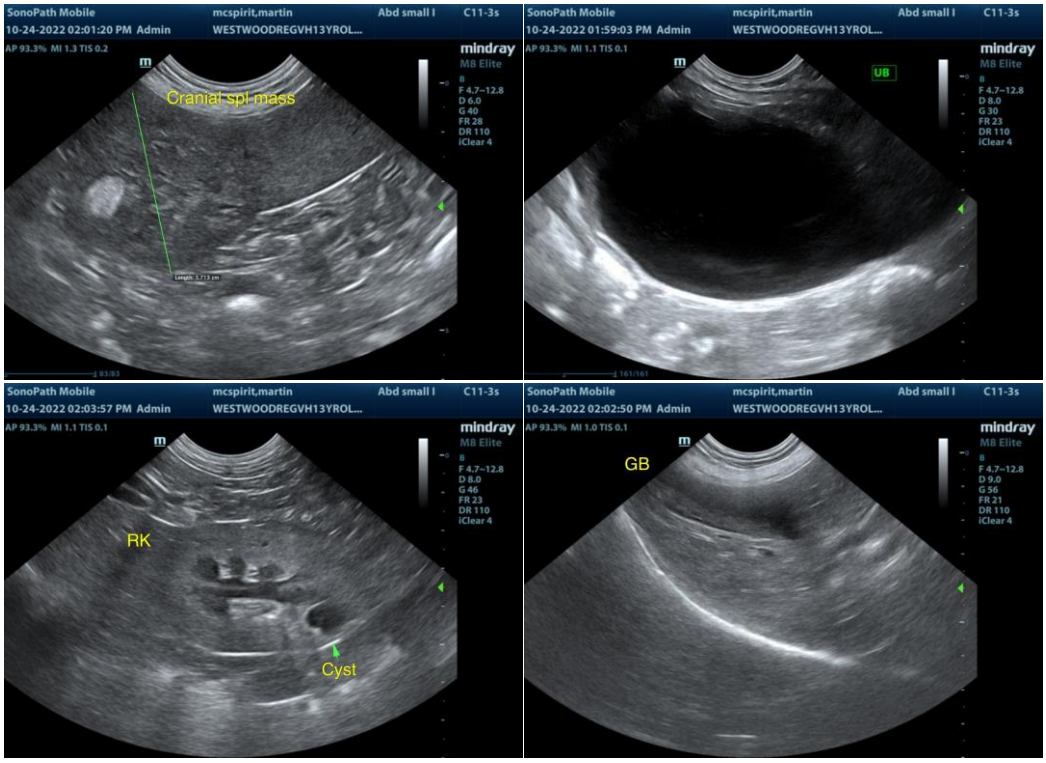
ULTRASONOGRAPHIC FINDINGS

- Chronic mitral valve disease (ACVIM B1)
- Mild TR-no evidence of clinical pulmonary hypertension
- Moderate chronic renal changes with bilateral cortical cysts
- Non-specific mildly expansive nodular small cranial splenic mass- hyperplasia, hematopoiesis, small hematomas, focal splenitis or similar with emerging neoplastic criteria possible
- Mild hepatic parenchyma remodeling
- Mild gallbladder debris (non-mucocele)

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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. Serial sonographic monitoring is recommended with a recheck echocardiogram in 6-12 months, sooner if clinical signs suggestive of heart disease develop.

A UA +/- baseline UPC for additional renal staging as well as monitoring of systemic BP is recommended. Given concurrent chronic kidney disease, sonographic monitoring of the cranial splenic mass for evidence of progression would be reasonable without evidence of intra-abdominal or cardiac metastasis. Assuming normal BP, splenectomy with peri-operative IVF therapy and close monitoring of renal parameters would be a more aggressive approach. Three view chest radiographs are recommended if not done to assess for occult thoracic pathology.



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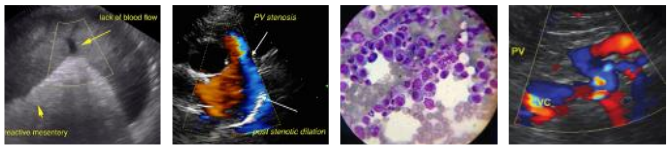

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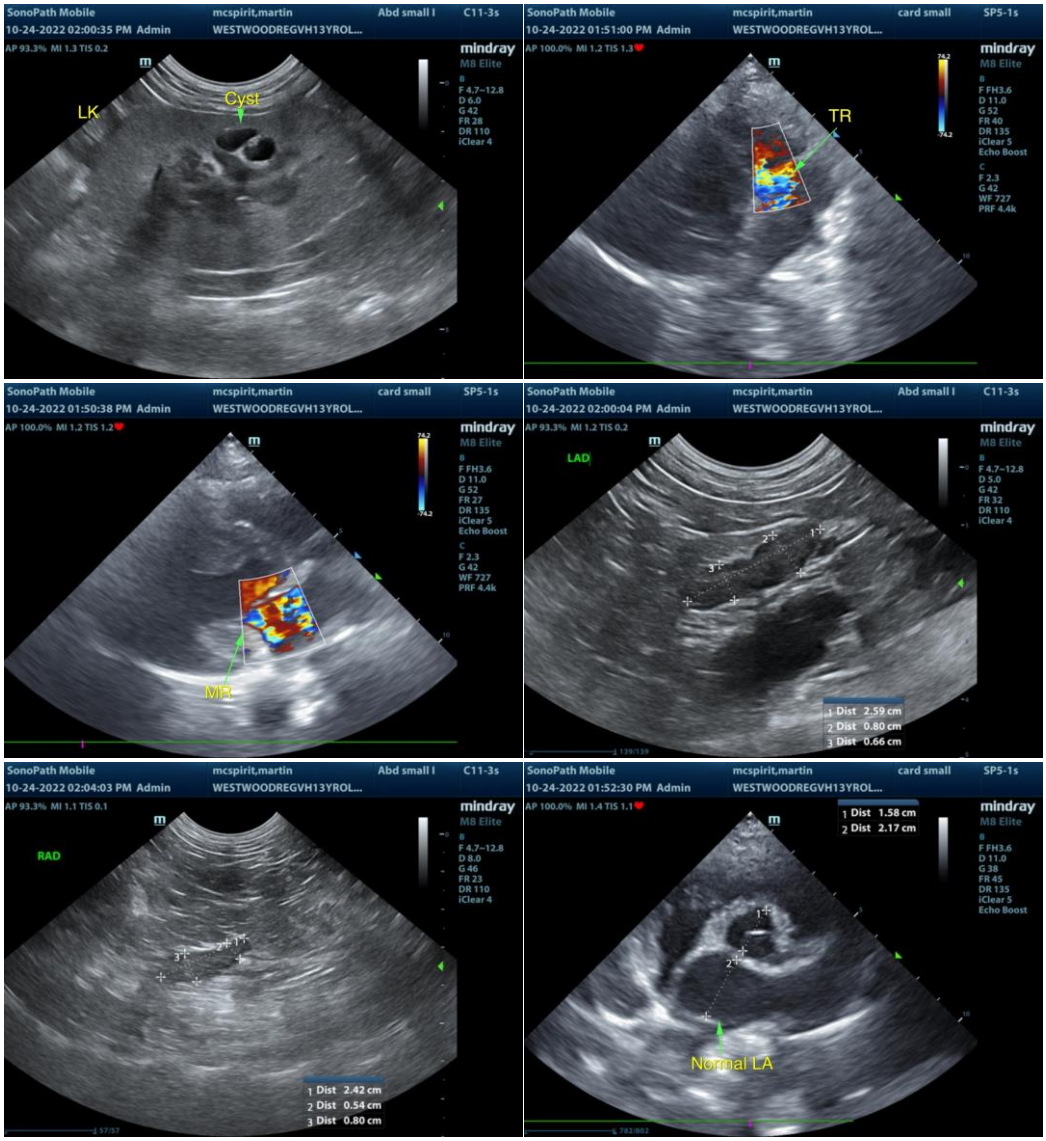

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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