


PATIENT

 Spike Morris County
 SD

SPECIES

Canine

BREED

Belgian Malinois

SEX

MN

AGE

8yr

WEIGHT

63lb

PRESENTING CLINICAL SIGNS

collapsed, abd splinting, tenesmus for a few months , prostomegaly, febrile, low glucose

Abnormal PE/Chem/CBC/UA Results: BUN 81, Crea 2.7, Ca 8.8, glu 71, ALKOP 189, GGT 15, tbili 0.8, wnc 3K HCT 58%

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		1.6		1.3	28.1	55	0.28
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	NM		0.8		3.1	3.2	

INTERPRETED BY

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

IMAGING PERFORMED BY

Diane McFadden

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Kim

INVOICE

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DATE

04/18/2023

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. No overt MR 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 mildly subnormal as 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. Normal measured LVOT velocity. 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. Mild TR present on Doppler. 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). Trace pulmonic insufficiency was present on Doppler. No visible pericardial or free pleural 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 was indistinctly visualized owing to overlaying hyperechoic omentum yet was intact with overtly normal wall layering and contained anechoic urine.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the



PATIENT	cortex with no evidence of pelvic dilation. The left kidney measured 7.3 cm in length. The right kidney measured 7.1 cm in length.
Spike Morris County SD	The prostate was enlarged in size with intact, symmetrical capsule contour. The margins of the gland were intact and able to be differentiated from the surrounding tissue. The prostatic parenchyma was mildly echogenic to heteroechoic without parenchymal mineralization. The prostate measured 5.4 cm x 3.6 cm.
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Belgian Malinois	Adrenal Glands The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.76 cm width at the caudal pole and 3.3 cm width at the cranial pole. The right adrenal gland was not definitively visualized owing to regional peri adrenal increased omental artifact.
SEX	Spleen
MN	The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age related remodeling with minor potential for inflammatory or neoplastic disease.
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WEIGHT	Liver/Gallbladder
63lb	The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and mild non-organized hyperechoic debris. No evidence of gallbladder or peripheral gallbladder inflammation was present. The cystic and common bile ducts were normal.
INTERPRETED BY	Gastrointestinal
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate retained anechoic fluid with no signs of ileus, obstruction or foreign material. The intestinal walls demonstrated intact wall layering and maintained 1:3 muscularis / mucosa ratio. The mucosa exhibited mild decreased echogenicity with occasional mucosal speckling. A segmental to diffuse ileus pattern consisting of mild fluid accumulation in the intestinal lumen was present without obstruction or foreign material. No evidence of intestinal masses to the level of the ileocolic junction.
IMAGING PERFORMED BY	
Diane McFadden	
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Dr. Kim	The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Generalized soft fecal matter was present in the colon lumen with lumen dilation.
INVOICE	Pancreas
13525ag	The pancreas was indistinctly visualized owing to regional increased omental artifact. No overt sonographic evidence of pancreatic pathology or inflammation.
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Moderate volume echogenic peritoneal effusion was present with generalized hyperechoic omentum. Intermittent benign/reactive mesenteric/medial iliac lymphadenopathy was present. No overt omental masses.

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ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram with mild LV hypocontractility-athletic state, systemic disease, hypothyroidism may present in this manner. DCM criteria was not met.
- Mild TR-no evidence of clinical pulmonary hypertension.
- Trace pulmonic insufficiency-clinically insignificant.
- Prostatomegaly exhibiting non-homogenous parenchyma-benign prostatic hyperplasia vs prostatitis.
- Structurally unremarkable bilateral kidneys.
- Low-grade subjective benign hepatopathy with normal hepatic vascular volume.
- Intact gallbladder with mild non-organized debris.
- Gastroenterocolitis pattern.
- Moderate volume echogenic peritoneal effusion and generalized hyperechoic omentum.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given no reported subnormal ALB levels that would diminish oncotic pressure, no overt evidence of hepatic passive congestion/significant pathology as well as no evidence of GI mural pathology or obstructive pattern, non-specific peritonitis/septic abdomen with potential with lymphatic obstruction is of primary concern. Abdominocentesis with rapid cytospin and rapid slide preparation of the sediment to conserve the integrity of the cells would be recommended in order to optimize the cytological interpretation. Culture of the fluid can also be considered if any suspicion of inflammatory elements is noted. No overt evidence of intra-abdominal masses. If the patient can be stabilized some or all of the following can be considered empirically pending additional diagnostics. An extremely guarded prognosis is indicated.

Colloids/Hetastarch

10 to 20 mL per kilogram per hour and dogs

10 to 15 mL per kilogram per hour cats

(Can bolus first 1/3 of dose over 15 minutes)

Plasma 10 mL / kilogram IV over 4 hours

Buprenorphine 0.02 mg/kg IV IM SC q4-6 hours **Or CRI Lidocaine** 30-50 ug/kg/min

Dolasetron for nausea: 0.6-1 mg/kg/day Iv or PO

Famotidine 1 mg/kg IV IM p.o. dc s.i.d. /b.i.d.

Sucralfate 0.5-1 g p.o. t.i.d. dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

Clindamycin 10mg/kg IV p.o. bid

Enrofloxacin 10-15 mg/kg IV p.o. s.i.d. dogs, 5 mg/kg Iv po Sid cats

Metronidazole 10-20 mg/kg IV p.o. b.i.d.

Dexamethasone physiological 1 mg/kg to treat adrenal burnout if long standing sickness, shock dose 4-10 mg/kg.



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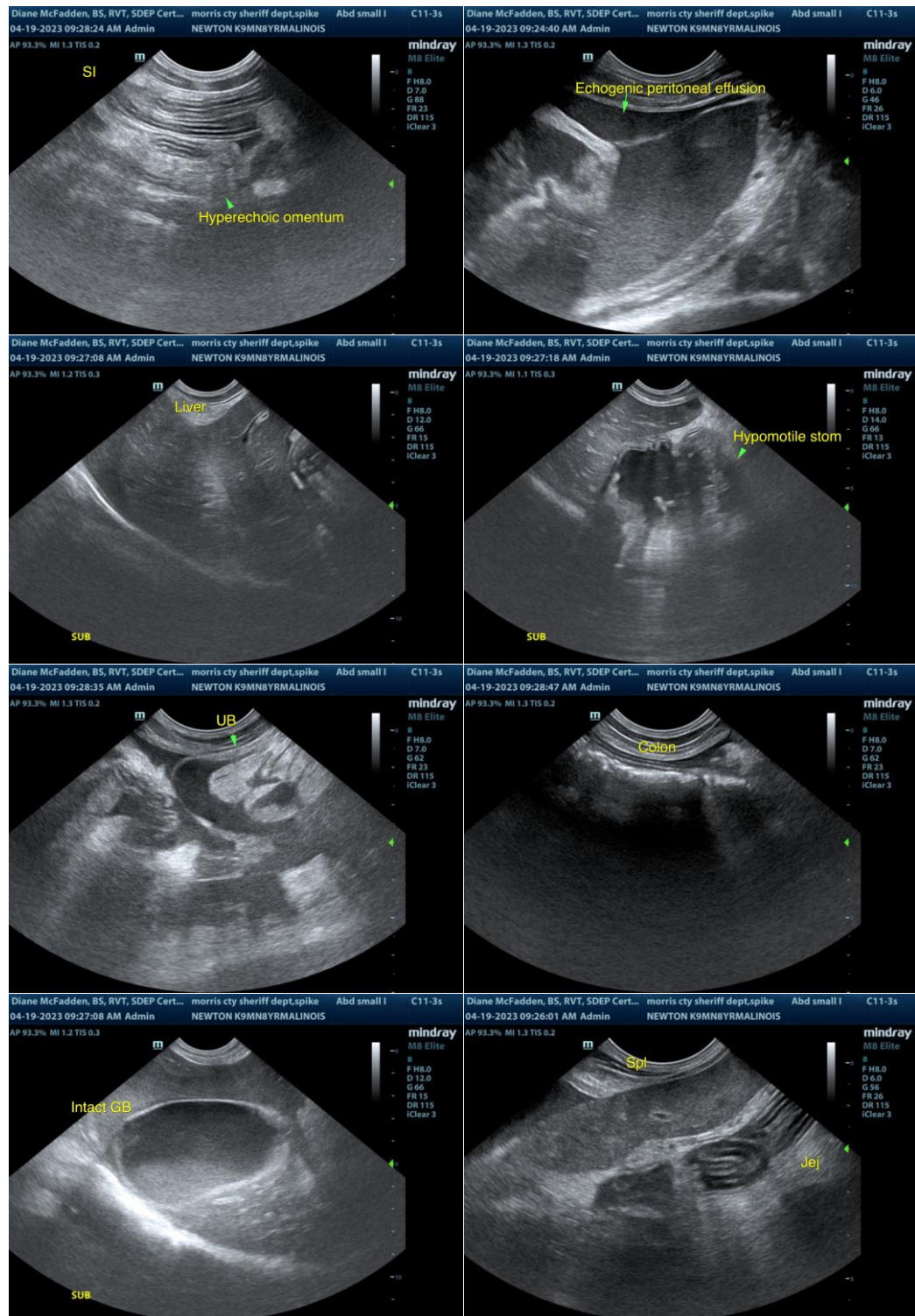
Dr. Kim

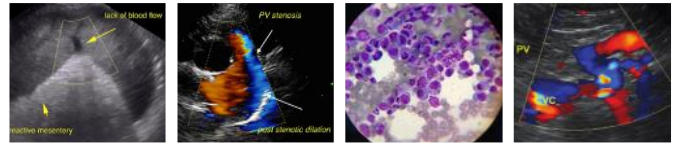
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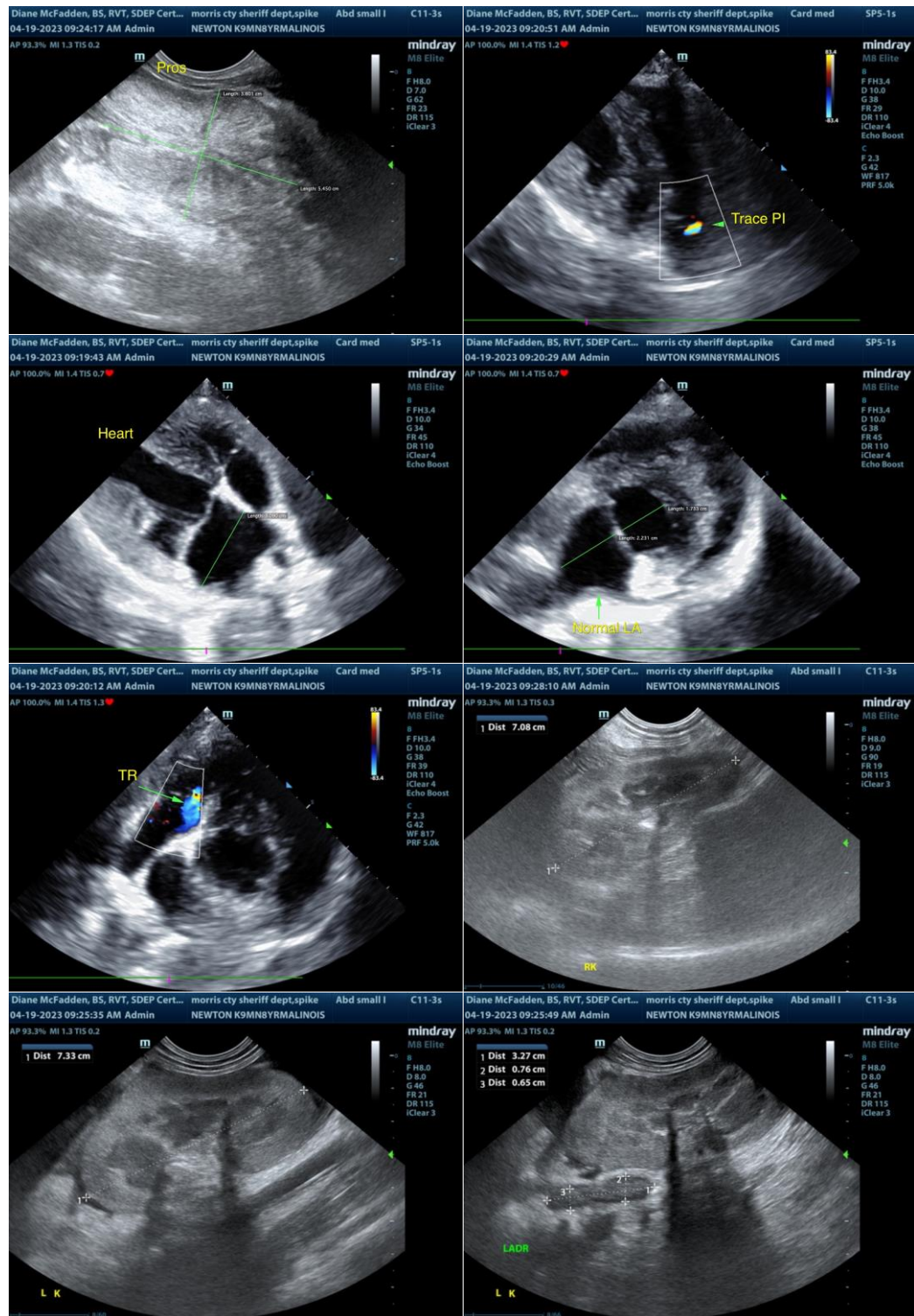
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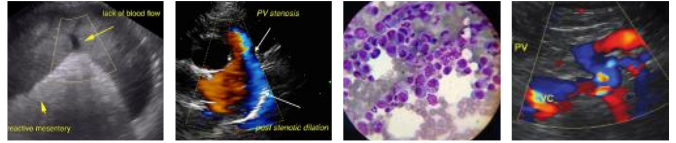
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I



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can be of any further assistance, please contact me.

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mac.daniel@sonopath.com

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