



PATIENT

Butkus Brown-Wene

SPECIES

Canine

BREED

Boxer Mix

SEX

MN

AGE

9 years

WEIGHT

69

INTERPRETED BY

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

IMAGING PERFORMED BY

Nicole Gotfredson

HOSPITAL NAME

Buffalo Veterinary
Clinic

REFERRING VET

Garry Gotfredson
DVM

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DATE

6/30/23

PRESENTING CLINICAL SIGNS

Referral Case- weight loss of 15lbs in the last month. Anorexic, 6% dehydrated. Was acth stim test at previous vet years ago, was borderline and treatments was started but got sick on the meds so stopped them. Stress leukogram, ALP=784, Glucose=126, ALB=2.6, GLOB=6.1. previous vet prescribed, metro, rimadyl, cerenia, methocarb.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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				1.2	45	80	0.25
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	1.1	NM		3.7	3.6	

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. 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.



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Urinary System

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The urinary bladder, trigone, and cystourethral junction 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 was noted.

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There was no overt pathology in the area of the residual prostate.

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No evidence of pathology in the area of the aortic trifurcation.

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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 cortex with no evidence of pelvic dilation. The left kidney measured 7.4 cm in length. The right kidney measured 7.8 cm in length.

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Adrenal Glands

The left adrenal gland was indistinctly visualized exhibiting subjective mildly enlarged caudal pole measuring 1.35 cm width. The left adrenal gland exhibited subjective maintained symmetrical caudal left adrenal contour and homogeneous parenchyma. The right adrenal gland was not definitively visualized.

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Spleen

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The spleen exhibited subjective subnormal size yet maintained a symmetrical capsule contour with subtle parenchyma heterogeneity. Probable splenic volume contraction owing to dehydration was noted. No overt evidence of neoplastic criteria was noted.

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Liver/ Gallbladder

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The liver exhibited generalized enlargement with symmetrical to mildly rounded hepatic contour and uniform mild increased hepatic parenchyma echogenicity compared to the spleen. Normal vascular volume was noted with no visualized hepatic masses or nodules. The gallbladder was non-distended in size containing primarily anechoic content with mild nonorganized debris. The cystic and common bile ducts were normal.

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Gastrointestinal

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The stomach presented overtly normal visualized wall layering. The stomach contained a moderate amount of progressively shadowing nonspecific ingesta.

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The small intestine presented generalized intact wall layering with segmental to generalized propensity for prominent mildly nonhomogeneous intestinal mucosa. The jejunum wall width measured 0.48 cm. The duodenum wall width measured 0.48. Possible segmental intestinal distention with retained variably echogenic nonshadowing chyme and lumen gas was noted.

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Overtly normal visible colon wall layers were present with segmental colon distention with non-formed fecal matter primarily noted in the area of the descending and distal descending colon extending into the colorectum.



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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 were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Progressively shadowing nonspecific gastric ingesta
- Suspect enteropathy with potential for segmental intestinal distention with retained chyme and increased gas
- Segmental to generalized distended colon with non-formed fecal matter
- Hepatomegaly with mild uniform parenchyma hyperechogenicity - suggestive of vacuolar hepatopathy pattern, infiltrative round cell neoplasia thought less likely
- Mild gallbladder sediment (non-mucocele)
- Indistinctly visualized yet subjective mildly enlarged caudal left adrenal gland - nonspecific

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the degree of weight loss in this patient without evidence of cardiomyopathy and assuming no evidence of pathology on three view chest radiographs, rehydration protocol with expectation toward exploratory laparotomy for gross inspection of the generalized gastrointestinal tract and liver and with gastrointestinal and hepatic biopsies considered essential, assuming normal clotting status, is warranted.

Gross inspection of the bilateral adrenal glands at the time of surgery is recommended.

The possibility of segmental intestinal obstructive pattern or non-visualized foreign body, although not definitive, cannot be excluded. Given the reported anorexia in this patient, concern for possible gastric foreign material is potentially indicated.

Recheck adrenal testing could be considered although the patient's current clinical signs are not overtly consistent with Cushing's Syndrome. Rehydration protocol with sonographic reassessment of the gastrointestinal tract for evidence of persistent progressively shadowing ingesta and progressive possible segmental intestinal distention would be a more conservative approach.



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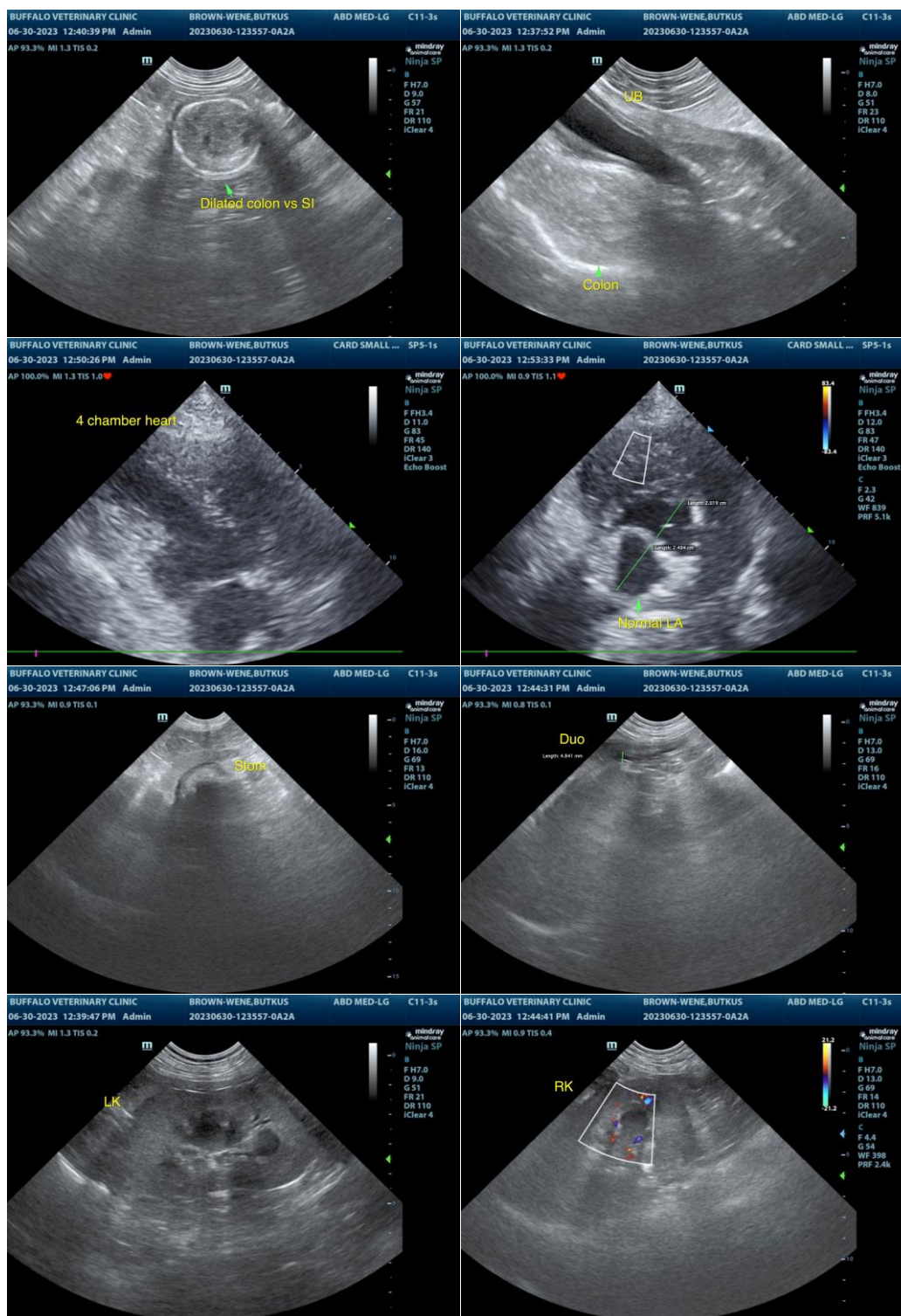
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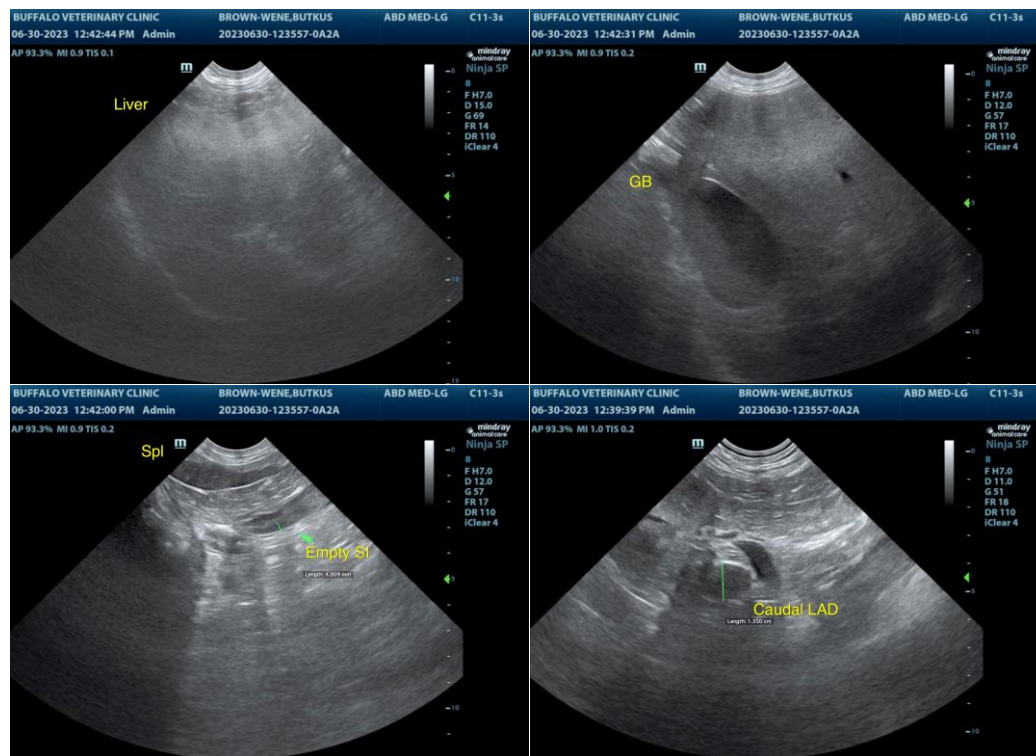
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

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