



PATIENT

Audrey Fox

SPECIES

Canine

BREED

Mexican Hairless

SEX

FS

AGE

12 years

WEIGHT

32

INTERPRETED BY

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

IMAGING PERFORMED BY

Nicole Gotfredson

HOSPITAL NAME

Buffalo Veterinary
Clinic

REFERRING VET

Teresa Bessler

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DATE

7/19/23

PRESENTING CLINICAL SIGNS

Has had bouts of not eating well and diarrhea off and on for a year. Duration of last episode has been 1 week. Color pink, H/L normal auscultation. Abdomen seems fuller, palpation normal. LN normal. Rads show enlarged heart with mild lung congestion. cPI normal CBC: HCT 78.4 (same as in Dec) Chem: BUN 41 (similar to value in Dec) ALT 139 Recommend double cavity U/S

on: Atopica 50mg- ear margin dermatitis. Famotidine 10mg daily Hydroxyzine 25mg 1 bid

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
CARDIAC PARAMETERS	VMAX (m/s)	VMAX (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
PATIENT				1.3	45	80	0.2
CANINE	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)
CARDIAC PARAMETERS							
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6				
PATIENT	NM	NM	NM		3.1	2.5	

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 evidence of significant MR was noted 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. No overt TR was noted 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). 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, cystourethral junction, and visible pelvic urethra to a depth of 3.0 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 was noted.

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No evidence of pathology was noted in the area of the uterine remnant.

The area of the aortic trifurcation was free of pathology.

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Normal size and margination were present in the kidneys. A maintained 1:3 cortex / medulla ratio was present. Mild nonuniform increased cortex echogenicity was noted with adequate medullary volume. Mildly indistinct corticomedullary border demarcation was present. The left kidney measured 5.3 cm in length. The right kidney measured 6.2 cm in length.

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Adrenal Glands

The bilateral adrenal glands were normal in size, though the left adrenal gland was indistinctly visualized. Mild parenchyma heterogeneity and mild capsule asymmetry were present without suspicion for overt neoplasia. The left adrenal gland subjectively measured 0.72 cm width in the caudal pole. The right adrenal gland subjectively measured 0.57 cm width in the caudal pole. There was no evidence of adrenal tumors.

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Spleen

The spleen was normal in size with minor capsule asymmetry and generalized mild parenchyma heterogeneity. A mid-spleen nonhomogeneous, hyperechoic, nodule was noted primarily around the splenic hilus measuring 1.5 cm in diameter. The nodule did not distort the splenic capsule. No splenic masses were noted.

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Liver/ Gallbladder

The liver exhibited subjective mild enlargement. 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. The cystic and common bile ducts were normal.

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Gastrointestinal

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained luminal gas and minor retained anechoic pyloric fluid. No signs of obstruction or foreign material.

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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 colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. The colon contained semi-formed to soft fecal matter, consistent with the patient history.



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Pancreas

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The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

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Free Abdomen

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No overt lymphadenopathy or peritoneal effusion was present.

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ULTRASONOGRAPHIC FINDINGS

- Normal echocardiogram
- Nonspecific gastroenterocolitis pattern, possible inflammatory bowel
- Mild chronic renal changes
- Nonhomogeneous hyperechoic splenic nodule - sonographically suggestive of benign myelolipoma
- Low-grade hepatopathy - sonographically consistent with benign hepatopathy criteria
- Pancreatic remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, there was no sonographic evidence of cardiac or significant abdominal visceral pathology.

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Urinary workup to include UA +/- baseline renal staging such as screening C/S and baseline UPC level if clinically indicated may be considered. Dietary intolerance / food hypersensitivity, dysbiosis, inflammatory gastroenterocolopathy, occult parasitism, and low-grade to chronic pancreatitis which may present as sonographically normal are all potentials. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.

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Empirically, a limited antigen or hydrolyzed diet trial with potential long-term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial.

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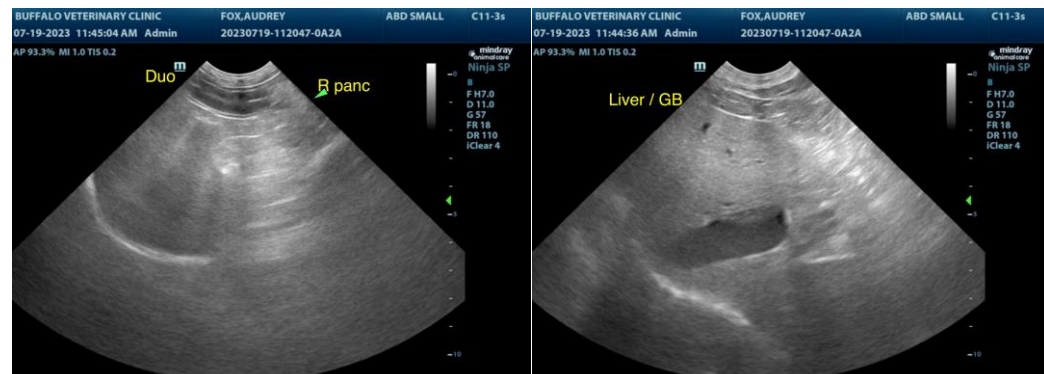
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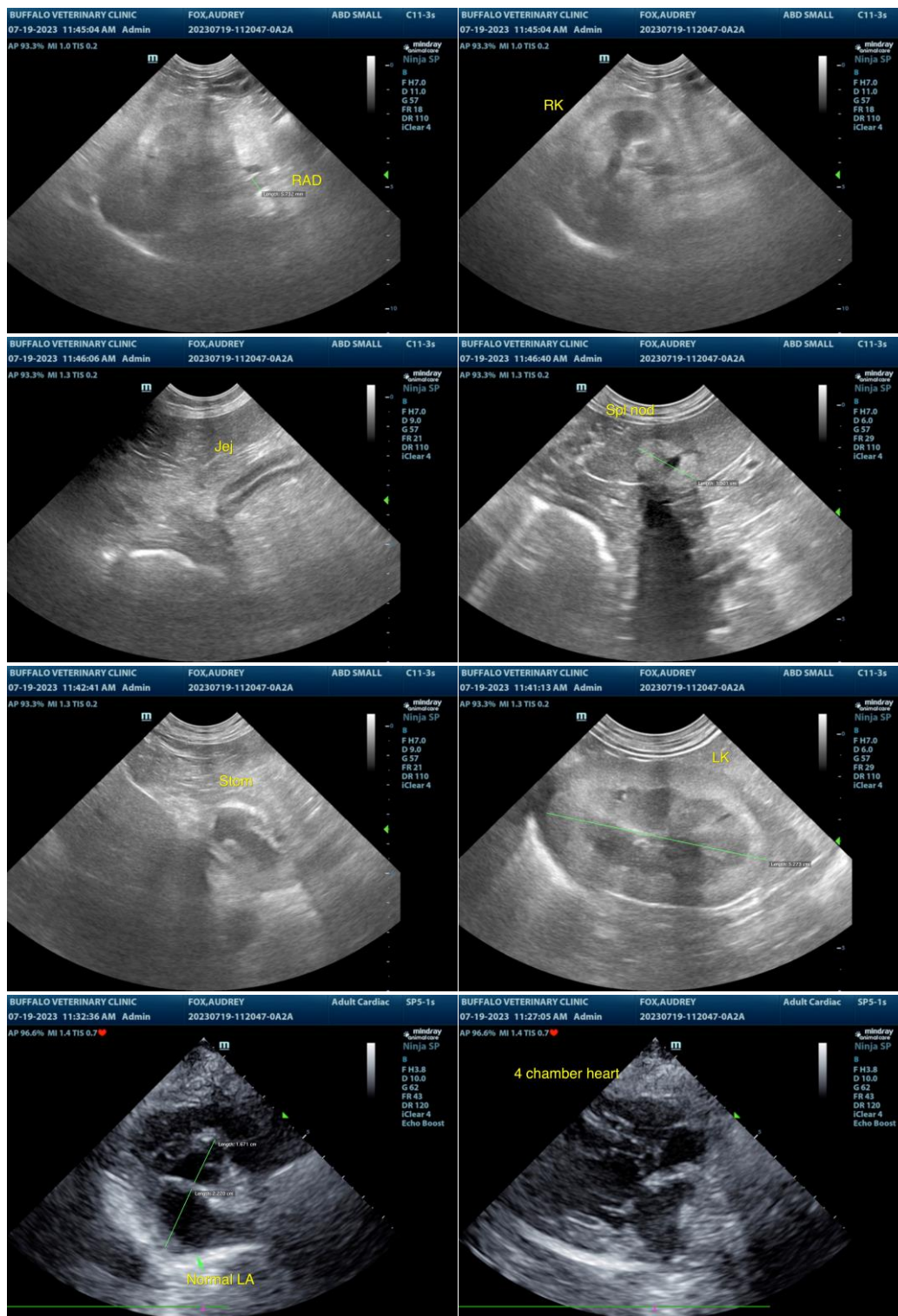
Teresa Bessler

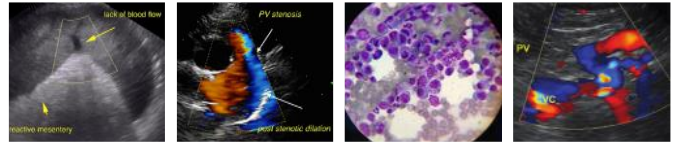
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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