



**PATIENT**

Perseus Paden

**SPECIES**

Canine

**BREED**

Cairn Terrier

**SEX**

MN

**AGE**

14yr

**WEIGHT**

21

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Nicole Gotfredson

**HOSPITAL NAME**

Buffalo Veterinary  
Clinic

**REFERRING VET**

Dr. Bessler

**INVOICE**

13205ag

**DATE**

03/17/2023

**PRESENTING CLINICAL SIGNS**

3/8/23: PE: enlarged submandibular LN's-owners report have been enlarged for years, but might be a little bigger; no other lymphadenopathy present; CBC: Anemic: r/o IMHA vs other CHEM: SDMA 16; ALKP: 1672 Radiographs: spondylosis; splenomegaly; FNA of lymph nodes--pending results from WSVL Ddxx: IMHA; neoplasia; vs other rx: Prednisolone 5mg bid until recheck - rec recheck CBC in 1 week; with possible abdominal ultrasound; may increase or continue (or possibly taper) at that dose of steroid depending on FNA results and recheck CBC, etc; Owners will be out of town for 2 weeks after next week; discussed neoplasia (Lymphoma vs other); if confirmed; owners at this time, are not interested in oncology consult or chemotherapy 3/16/23: submandibular LN slightly decrease per Lacey since I did not feel them before. FNA that Dr. Hake performed came back as benign lymphoid hyperplasia. Pt has had days of lethargy and then good days, maybe PU/PD, and has had weight loss. Sometimes will breathe heavier. Still eating good. CBC PCV slightly lower then last week 31.4 and no reticulocytes. I looked at rad that Dr. Hake took last week and I feel there may be some pleural effusion. U/S of chest could see some pleural effusion and abdomen shows diffusely mottled spleen. Owners will return tomorrow for sonopath echo and abdomen . Pt is still on prednisolone but told them to taper to SID. Lymph node aspirate came back as benign lymphoid hyperplasia

**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	50	85	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	NM	NM		2.7	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. Mild eccentric 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 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. 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. No overt TR on Doppler. The right ventricle



<b>PATIENT</b>	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). Normal measured RVOT velocity. 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.
Perseus Paden	
<b>SPECIES</b>	
Canine	<b>Urinary System</b>
<b>BREED</b>	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra 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.
Cairn Terrier	
<b>SEX</b>	Normal size and margination were 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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild left kidney pyelectasia was present. The left kidney measured 4.5 cm in length. The right kidney measured 4.7 cm in length.
MN	
<b>AGE</b>	The area of the aortic trifurcation was free of pathology.
14yr	The area of the residual prostate appeared normal and free of pathology.
<b>WEIGHT</b>	<b>Adrenal Glands</b>
21	The left and right adrenal glands were not definitively visualized. No obvious pathology was present in the area of the bilateral adrenal glands.
<b>INTERPRETED BY</b>	<b>Spleen</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The spleen exhibited generalized asymmetrical enlargement with lateral and medial capsule asymmetrical contour and diffuse non-homogenous micronodular parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis.
<b>IMAGING PERFORMED BY</b>	<b>Liver/Gallbladder</b>
Nicole Gotfredson	The liver was moderately enlarged with areas of capsule asymmetry and non-homogenous mixed echogenic parenchyma exhibiting moderate coarse echotexture. No visualized hepatic mass. 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 non-organized luminal debris. The cystic and common bile ducts were normal.
<b>HOSPITAL NAME</b>	<b>Gastrointestinal</b>
Buffalo Veterinary Clinic	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.
<b>REFERRING VET</b>	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.
Dr. Bessler	
<b>INVOICE</b>	Normal visible colon wall layers were present with apparent formed feces in lumen.
13205ag	<b>Pancreas</b>
<b>DATE</b>	The left limb, right limb, and base of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present
03/17/2023	



## PATIENT

Perseus Paden

with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. No overt evidence of neoplasia.

## Free Abdomen

## SPECIES

Canine

Ill-defined non-homogenous to cystic lymphadenopathy vs mass present in the cranial abdomen within the area of the pancreas caudal to the stomach measuring 5.3 cm in diameter. Intermittent scant pocket of peritoneal free fluid was present. Regional to generalized increased omental echogenicity was noted.

## BREED

Cairn Terrier

Intermittent enlarged mesenteric and medial iliac lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 2.6 cm x 0.9 cm.

## SEX

MN

## ULTRASONOGRAPHIC FINDINGS

- Overtly normal cardiac structure and function.
- Subjective mild MR, normal LA.
- Enlarged mottled spleen.
- Hepatomegaly exhibiting non-homogenous parenchyma.
- Medial iliac/mesenteric lymphadenopathy-marked cystic cranial mesenteric lymphadenopathy vs ill-defined peripancreatic/perigastric mass lesion.
- Mixed echogenic to prominent pancreas.
- Intermittent to scant peritoneal free fluid.

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

## INTERPRETED BY

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

Although peripheral LN cytology was benign, primary concern for multicentric intra-abdominal neoplasia involving the spleen, mesenteric lymph nodes and potentially liver is warranted. Current prednisone therapy may be suppressing cytological neoplastic criteria. Assuming normal clotting status and using a 25g needle, a hepatosplenic +/- accessible LN and/or cranial mesenteric mass FNA for screening cytology is warranted for further assessment and potential oncology consult.

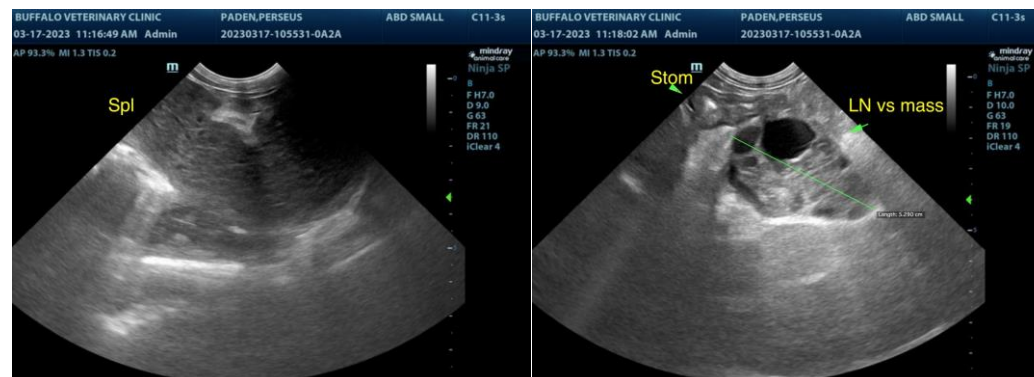
## IMAGING PERFORMED BY

Nicole Gotfredson

An extremely guarded prognosis is indicated.

## HOSPITAL NAME

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Clinic



## REFERRING VET

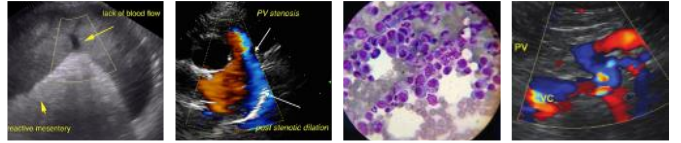
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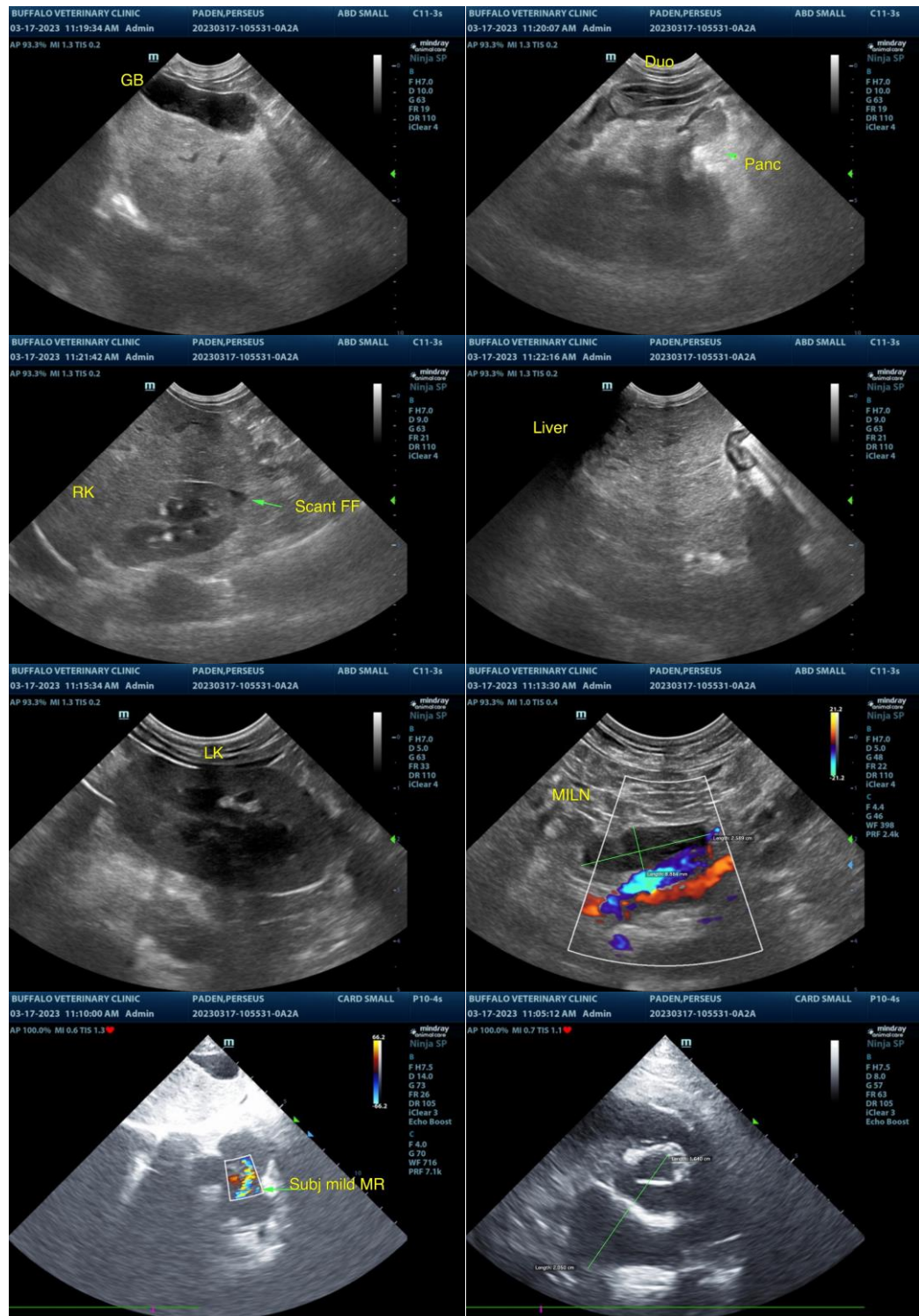
Dr. Bessler

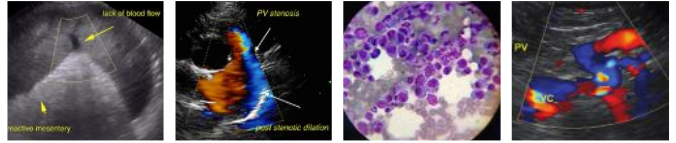
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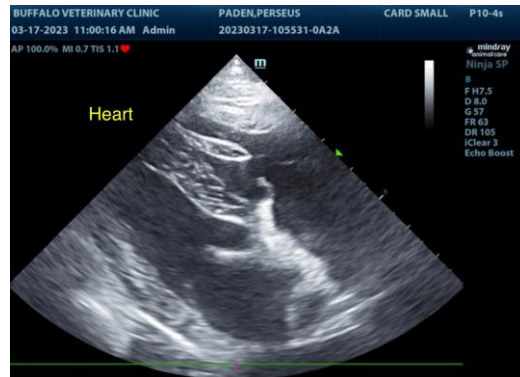
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)  
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