



**PATIENT**

Willy Elliott

**SPECIES**

Canine

**BREED**

German Shepherd Mix

**SEX**

Neutered male

**AGE**

13 ½ years

**WEIGHT**

22.4 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Trudeau

**HOSPITAL NAME**

Petworks VH

**REFERRING VET**

Dr. Trudeau

**INVOICE**

42068

**DATE**

1/11/23

**PRESENTING CLINICAL SIGNS**

History: Owner noticed a seizure Dec 30th; then was having them daily ; bloods performed July 4 revealed significantly elevated liver enzymes  
Abnormal PE/Chem/CBC/UA Results: Chem elevated ALT 1911 U/L; ALKP 949 U/L; GLOB 48 g/L; otherwise WNL CBC: mild increase in neutrophils and platelets otherwise NSF

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 4.56 cm. The right kidney measured 5.5 cm.

**Adrenal Glands**

The left **adrenal gland** was enlarged at the cranial pole and measured 1.03 cm and the caudal pole measured 0.88 cm. The left adrenal gland revealed capsular expansion without capsular escape. There was no evidence of vascular invasion. The right adrenal gland was subnormal in size and measured 0.46 cm.

**Spleen**

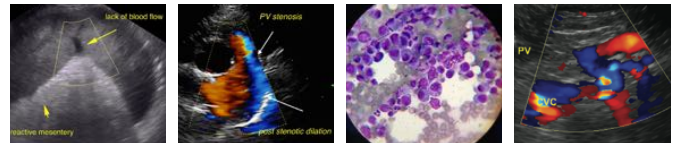
The **spleen** was poorly visible owing to interfering artifact.

**Liver**

The **liver** revealed heterogenous, hypoechoic nodular changes were noted as well as slightly increased portal markings. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

**Gastrointestinal**

Muscularis hypertrophy was noted in the stomach, yet the mucosal and submucosal layers were unremarkable. Peristalsis was noted. The intestines were free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated



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normal luminal chyme and stool consistency respectively. The colon was fluid filled. No obstructive or overt infiltrative disease was noted. The mesenteric lymph nodes were enlarged and reactive and measured 1.5 x 0.7 cm.

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**SPECIES**

***Pancreas***

Canine

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**BREED**

German Shepherd Mix

**ULTRASONOGRAPHIC FINDINGS**

**SEX**

Nodular hyperplasia liver pattern.

Neutered male

Gastric muscularis hypertrophy.

**AGE**

Fluid filled colon.

13 ½ years

Reactive mesenteric lymph nodes.

Enlarged left adrenal gland.

**WEIGHT**

Subnormal right adrenal gland.

22.4 kg

Gallbladder debris.

**INTERPRETED BY**

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

I am most concerned about the left adrenal gland and liver nodules in this patient. Differentials on the left include pheochromocytoma, adenoma and adenocarcinoma. Serial blood pressure measurements are warranted. If hypertension is an issue then urine catecholamine is indicated. Bile acid profile and FNA of the liver is indicated. Given the seizure activity skull CT is indicated. Given the ALT cause of acute on chronic insult such as Leptospirosis should be considered. FNA of the liver is recommended. If the patient appears Cushingoid then work-up for adrenal dependent Cushing's can be considered.

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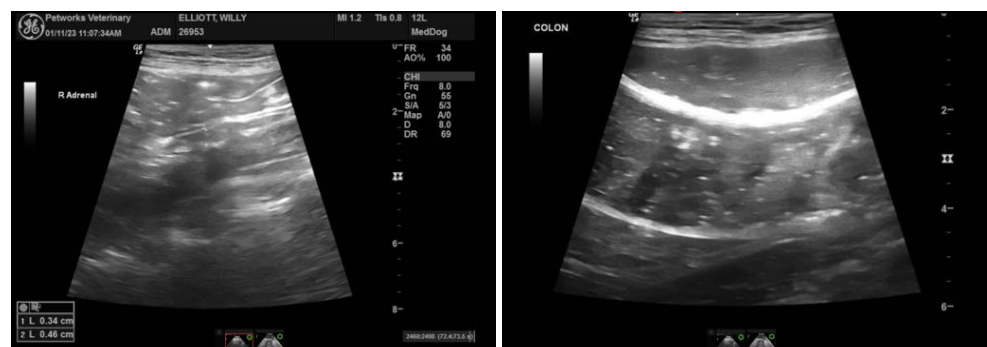
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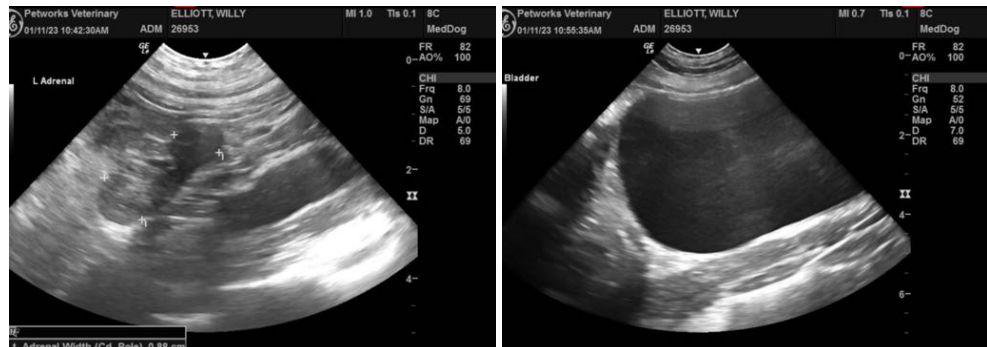
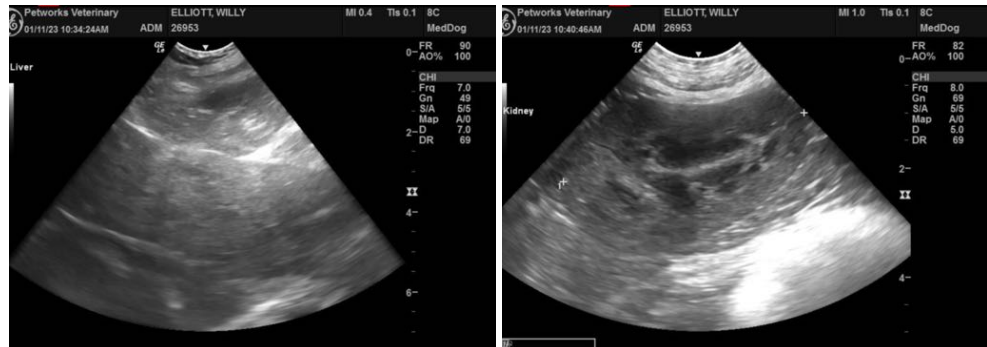
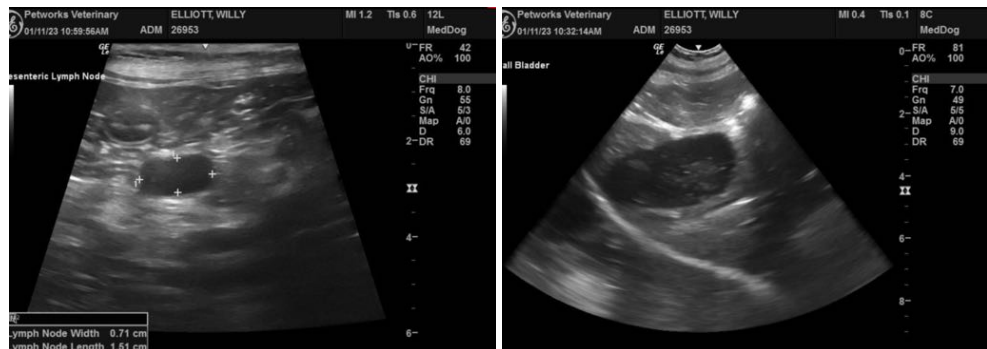
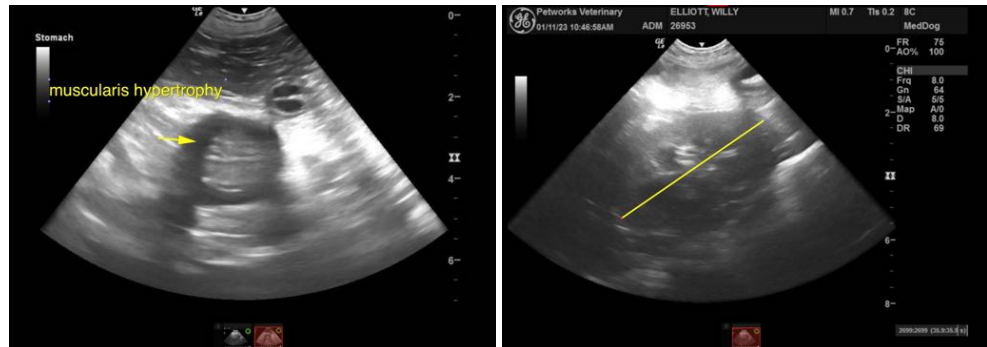
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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



**PATIENT**

can be of any further assistance please contact me.

Willy Elliott

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com

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