



**PATIENT**

Sammi Swenor Wolfe

**SPECIES**

Canine

**BREED**

JRT X

**SEX**

Spayed Female

**AGE**

15 Years

**WEIGHT**

10.3 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Crystal Hill

**HOSPITAL NAME**

Snelgrove VS

**REFERRING VET**

Dr. Gunsinger

**INVOICE**

21257

**DATE**

2/24/23

**PRESENTING CLINICAL SIGNS**

History: Significantly elevated kidney values which were not present 2 weeks ago. Recommended U/A to look for infection however considered ultrasound first to rule out other issues. Has been on Meloxicam and Clavamox.

Abnormal PE/Chem/CBC/UA Results: SDMA 35(0-14) Creatinine 577(44-133) Urea 52.8(3.2-11.) Phosphorous 5.8(0.8-2.0) Potassium 6.4(4.0-5.4) ALT 140(18-121) ALP 3991(5-160). CBC is ok.

**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 were noted. Ureteral papillae were normal. The pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some moderate 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 right kidney measured 5.65 cm. The left kidney measured 4.61 cm. Minor microcystic cortical changes were noted in both kidneys. Nonobstructive mineralization was noted in the kidneys.

**Adrenal Glands**

The **adrenal glands** were mildly swollen and slightly irregular. The left adrenal gland measured the upper limits of normal at 2.02 cm x 0.6 cm at the caudal pole and 0.69 cm at the cranial pole. The right adrenal gland measured 1.39 cm x 1.2 cm at the cranial pole and 0.7 cm at the caudal pole.

**Spleen**

The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a minor/benign change; however, can be related to Cushing's disease or other endocrinopathies.

**Liver**

The **liver** revealed age-related changes. Hyperechoic nodular changes were noted throughout the liver.

The **gallbladder** revealed coalescing biliary sand, measuring approximately 2.5 cm. Minor gallbladder polyps were noted.

**Gastrointestinal**

There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and



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large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

The base and left limb of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. The right limb was prominent and irregular. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

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**ULTRASONOGRAPHIC FINDINGS**

- Mild degenerative renal changes with microcystic cortical changes and nonobstructive mineralization
- Mildly swollen and slightly irregular adrenal glands, particularly the left adrenal gland
- Splenic mineralization
- Benign hepatopathy with nodular changes
- Coalesced gallbladder sand and polyps
- Prominent irregular pancreas in the right limb
- Partially full stomach

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The kidneys subjectively appear 50-60% compromised. No evidence of lower urinary tract disease. The patient may be passing calculi periodically yet no obstructive disease is noted at this time. Blood pressure measurements are warranted. If any inflammatory sediment is present in the urine, then assessment for UTI is indicated with culture. IV fluid support is recommended to correct the azotemia.

**INTERPRETED BY**

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If the patient appears cushingoid, then work up for PDH would be indicated, especially given the splenic mineralization, which is likely secondary to an endocrinopathy, and the swollen adrenals (particularly the left adrenal). FNA of the liver is recommended. Subxyphoid palpation is warranted to assess for pain or discomfort associated with the pancreas.

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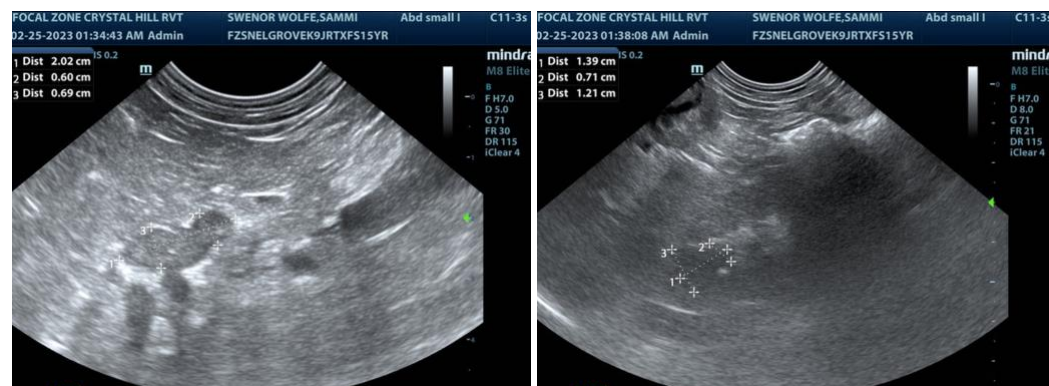
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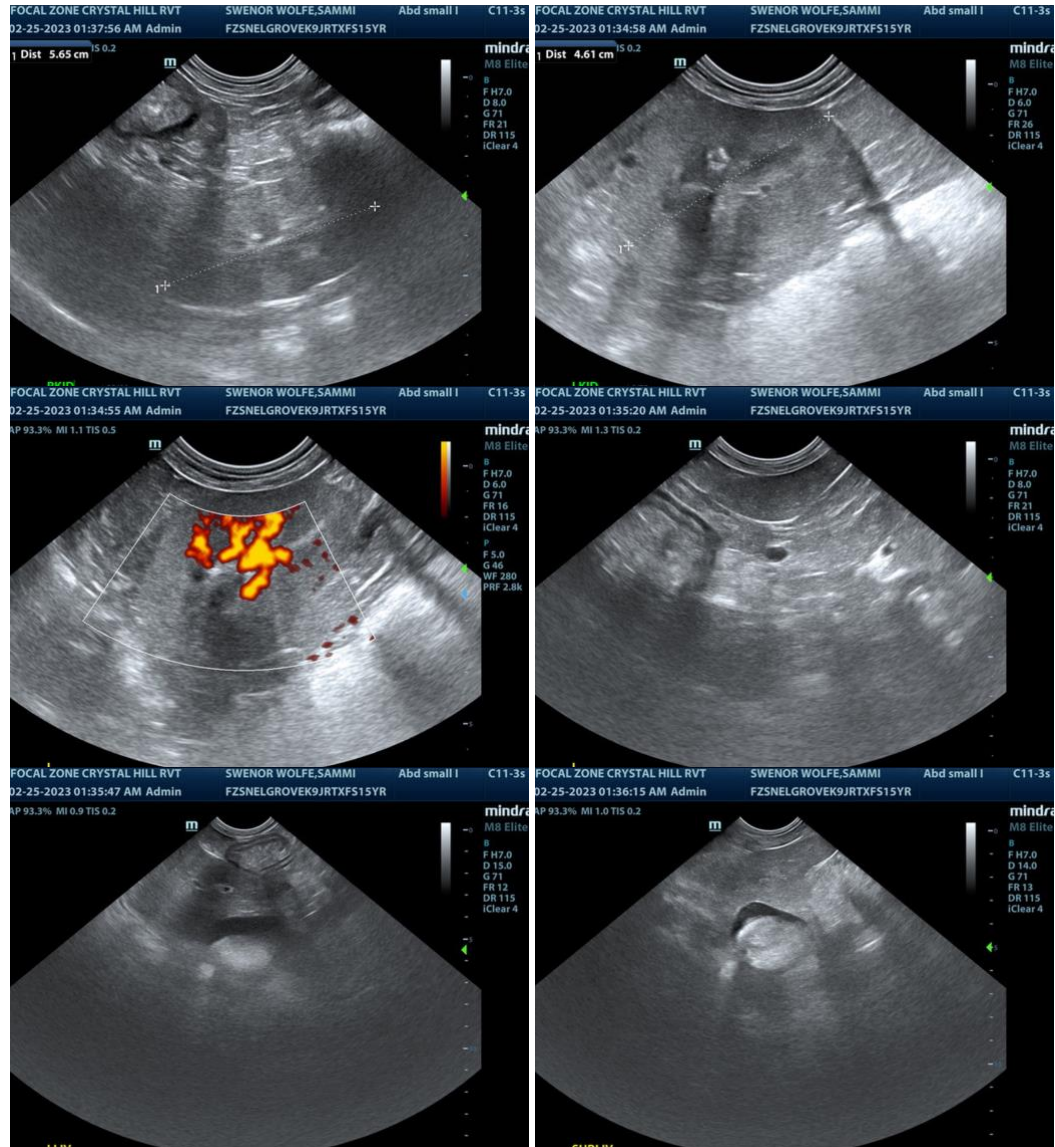
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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