SonoPath
Clinical Sonography & Telecytology
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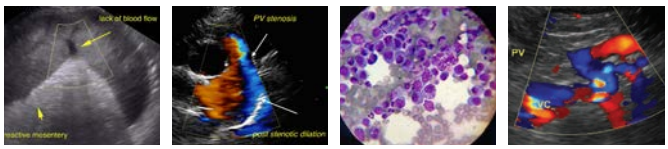


SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Sugar Segel

**SPECIES**

Canine

**BREED**

Pit Bull

**SEX**

Spayed Female

**AGE**

9 Years

**WEIGHT**

73.6 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

**IMAGING PERFORMED BY**

Jessica Miller

**HOSPITAL NAME**

Millburn Vet Hospital

**REFERRING VET**

Dr. Turowsky

**INVOICE**

42658

**DATE**

11/9/22

## PRESENTING CLINICAL SIGNS

Progressive ALP elevation, several month hx of PU/PD
Abnormal PE/Chem/CBC/UA Results: ALP 1106, Tbilli 0.4, unconj bili 0.3

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall is largely normal thickness, but the apical region appears somewhat irregularly thickened, measuring at a maximal thickness of 0.54 cm. The area of the trigone, ureteral papillae and proximal urethra appear free of any irregularities or thickening, and there is no evidence of any calculi. Findings are most consistent with an early mass lesion or focal cystitis. Recommend urinalysis and culture.

The left kidney has a normal shape and size (6.85 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.46 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size measuring 0.83 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.63 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### *Spleen*

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

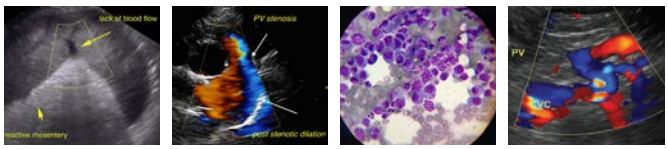
### *Liver*

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

### *Gastrointestinal*

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. It measures at a normal thickness of <0.7cm with some variability due to the



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presence of rugal folds. The distinction of the gastric wall layering is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.44 cm. Jejunum wall measures 0.29 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### *Pancreas*

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### *Free Abdomen*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are visible mesenteric lymph nodes measuring 0.39 cm and 0.54 cm. The omentum is of normal echogenicity.

## ULTRASONOGRAPHIC FINDINGS

- Focally irregular bladder wall in the apical region – Findings could be consistent with an early mass lesion or cystitis. Recommend urinalysis and culture.
- Moderate shadowing debris within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.
- Prominent mesenteric lymph nodes – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

An obvious cause for the PU/PD reported is not observed. Recommend a urinalysis and culture, both for the focal bladder wall irregularity and to look for a potential cause of PU/PD. If the urine culture is positive, recommend treatment and reevaluation of the bladder wall in 4-6 weeks. Recommend reculturing the urine approximately a week after cessation of antibiotics. If the bladder wall lesion is gone or markedly improved, this is likely cystitis type changes. If it is persistent, or the urine culture is negative, consider traumatic catheterization with cytology +/- a urine BRAF test (if BRAF test is positive, this increases the likelihood that this lesion is a transitional cell carcinoma, if it is negative, it is a non-diagnostic test and additional diagnostics will be necessary).

If the urine culture is negative, consider other causes for potential PU/PD, recommend a liver function test, screening for Leptospirosis, and if Cushing's is strongly suspected clinically, you could consider an ACTH stimulation test combined with an adrenal panel to the University of Tennessee, looking for atypical adrenal hormones (atypical Cushing's). These are my general recommendations for further evaluation of an elevation in ALP with normal adrenals:

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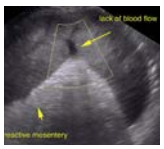
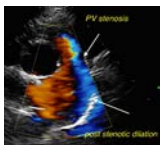
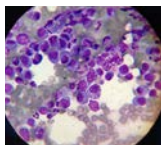
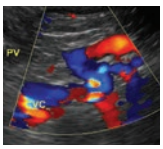

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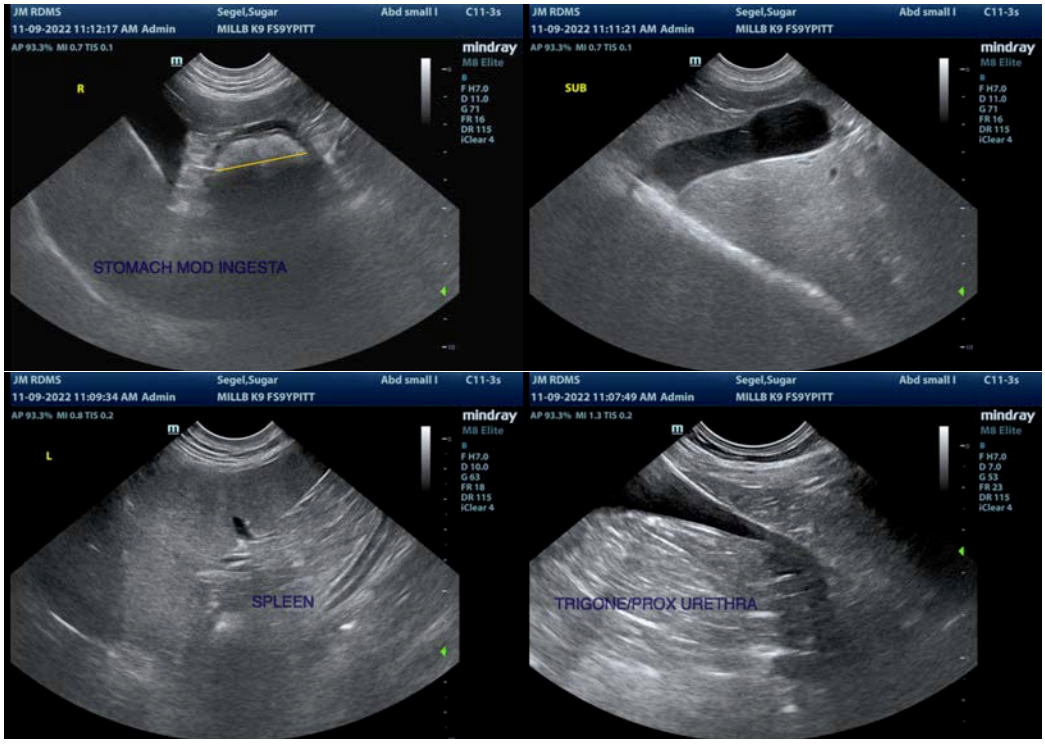
The ultrasonographic changes in the liver were relatively mild. Unfortunately, the sonographic changes do not always reflect the severity or cause of the hepatopathy. The scan today supports a primary hepatopathy as no severe biliary changes were observed.

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history
- If not already done, consider pre and post prandial bile acids to evaluate liver function
- If the ALP is significantly elevated relative to the ALT and symptoms consistent with Cushing's are present, consider adrenal function testing (ACTH stim)
- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)
- If no response to supportive care (Denamarin, fluids, antibiotics, +/- ursodiol etc.) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.



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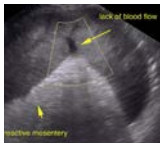
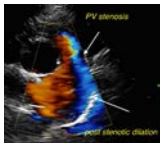
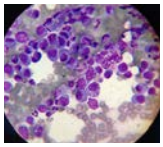
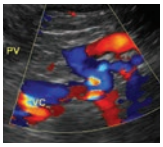

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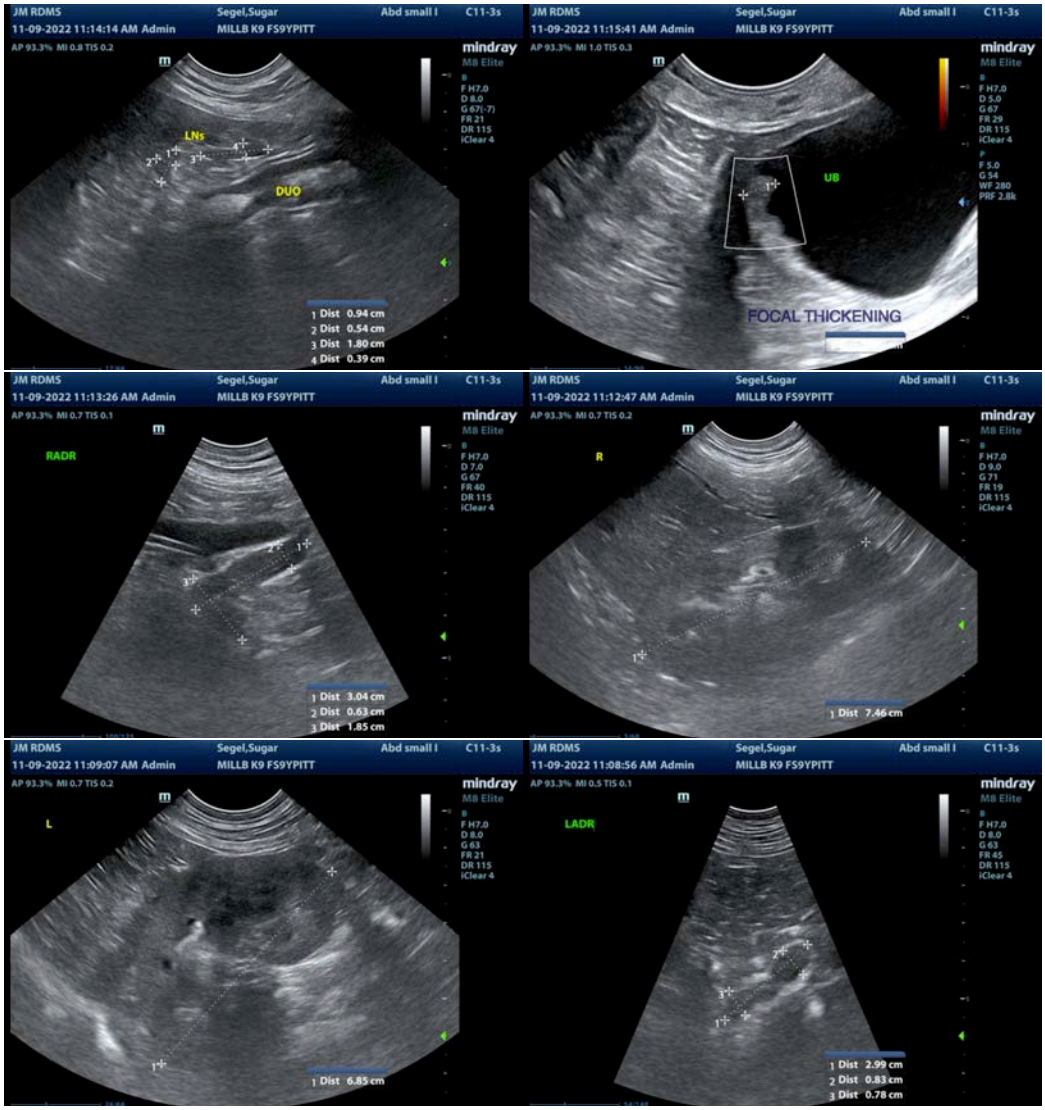


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com