SonoPath
Clinical Sonography & Telecytology
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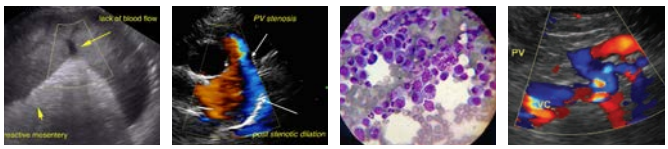


SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Davie Diehl

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

8 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Danielle Lanz

**HOSPITAL NAME**

New Holland VH

**REFERRING VET**

Dr. Danielle Lanz

**INVOICE**

44092

**DATE**

1/10/23

## PRESENTING CLINICAL SIGNS

2 month history of weight loss and ravenous appetite and diarrhea. Was diagnosed with diabetes mellitus in the past 2 months and went into remission last week. Still has ravenous appetite with weight loss and intermittent diarrhea.

Abnormal PE/Chem/CBC/UA Results: CBC: RBC 6.94 Chemistry: Gluc 63, K+ 5.6 Na/K ratio 26, Chloride 113 TCO2 23 Albumin 2.2 Cholesterol 89

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The left kidney has a normal shape and size. 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 (4.96 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 region of left adrenal (Cranial to left renal artery) is unremarkable but the adrenal is not distinctly visualized. No evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.44 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*

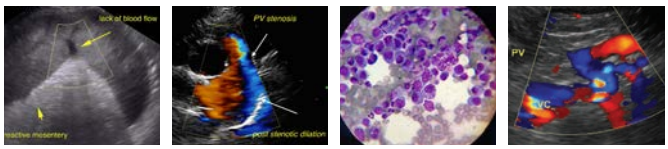
The area of the spleen is imaged, but the area of the hilus and the margins of the spleen are difficult to differentiate from surrounding tissue. No obvious lesions are observed.

### *Liver*

The liver is large in size, and hyperechoic with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is an ill-defined hypoechoic lesion within the parenchyma measuring 1.12 cm.

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*



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The stomach contains a large amount of fluid/ingesta. It measures at a normal thickness of <0.36cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers 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 appear diffusely fluid distended. The jejunal wall appears relatively normal to slightly thickened at 0.31 cm. Wall layering appears adequate. There is minimal visualized peristaslsis. There are no focal lesions consistent with an obstruction or mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. The colon is diffusely distended with non-formed fecal material. 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*

There is a scant amount of free fluid. No lymphadenopathy. The omentum appears diffusely hyperechoic.

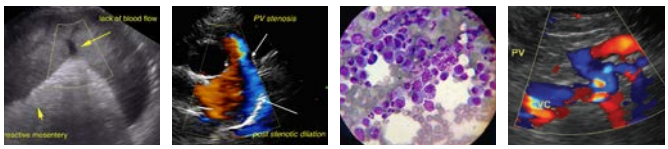
## ULTRASONOGRAPHIC FINDINGS

- Large, hyperechoic, heterogeneous liver with a hypoechoic ill-defined nodule – Hepatic changes are non-specific and could be consistent with hepatic lipidosis, inflammatory/infectious disease, infiltrative neoplasia, or other hepatopathy. The hypoechoic region is ill-defined and trends towards a more benign lesion, although underlying neoplasia cannot be excluded as a possibility.
- Diffusely fluid/ingesta distended stomach, small and large intestine – Findings are most consistent with generalized ileus. No focal lesions or obstruction are observed, but multiple partial obstructions cannot be ruled out.
- Scant free abdominal fluid

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is diffuse generalized fluid distention of the entire GI tract. This could be due to generalized ileus secondary to underlying gastrointestinal disease, ileus due to a metabolic or neuromuscular issue (dysautonomia), a partial distal obstruction (none observed), etc. Generalized malabsorptive disease seems most likely.

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.
- Consider prokinetic therapy (Metoclopramide).
- Correlate these findings with abdominal radiographs and 3-view thoracic radiographs.



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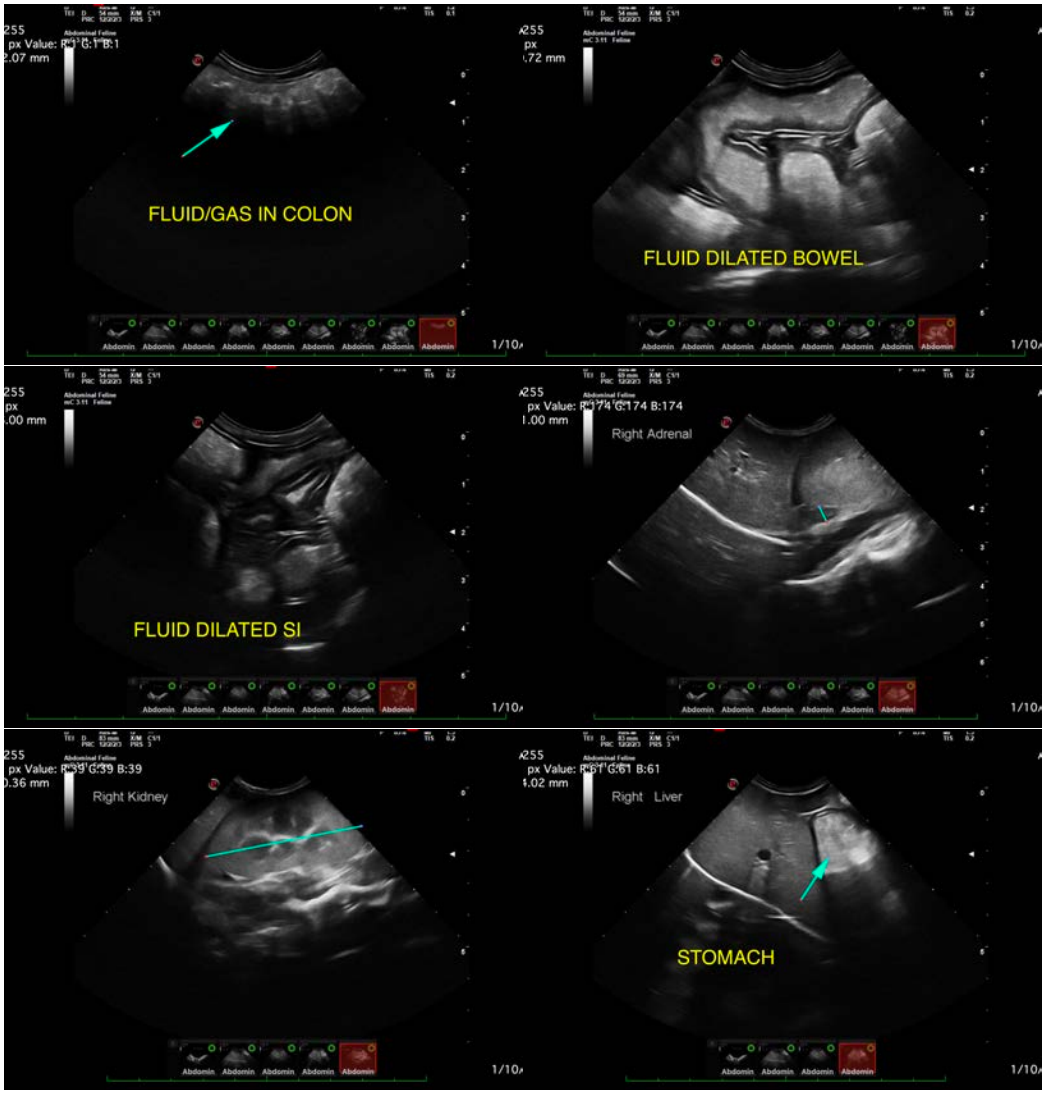
- If symptoms persist, GI biopsies may be necessary.
- It is unclear if the low albumin levels are due to a protein losing enteropathy or if there is another source. Consider evaluating urine protein levels and a liver function test, looking for evidence for concurrent renal or hepatic disease. Hepatic disease would be an additional differential for the hypoglycemia observed.

The liver is large with an ill-defined hypoechoic nodule. This appearance could largely be consistent with a diabetic hepatopathy but consider a fine needle aspirate (provided coagulation parameters are normal).

The spleen was difficult to definitively visualize. Power doppler on the hilus can help with determining orientation.



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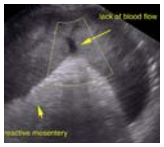
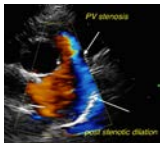
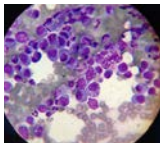
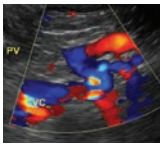

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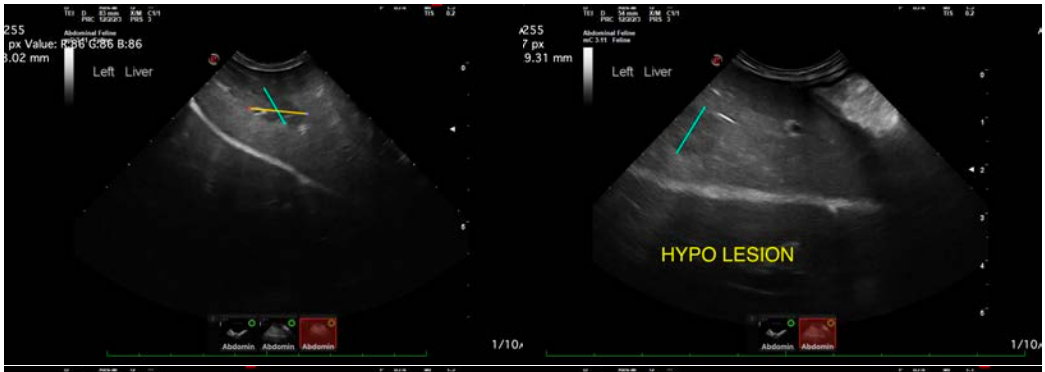




**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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