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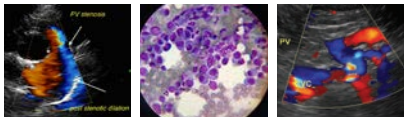

SonoPath

Clinical Sonography & Telecytology

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**DATE**

9/13/22

**PATIENT**

Molly Breitenbach

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Spayed Female

**AGE**

3/12/08

**WEIGHT**

14.4 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Stephanie Warga RDCS, RVT

**HOSPITAL NAME**

Perry Hall AH

**REFERRING VET**

Dr. Breidenbaugh

**INVOICE**

41292

## PRESENTING CLINICAL SIGNS

Diagnosed as diabetic in March, 2022. Begun on Prozinc insulin. Overweight with BCS 7-8/9. Has had a difficult time managing urinary concerns, even when good glycemic control on Fructosamine testing, still PU/PD and having urinary accidents and consistent E. coli urinary tract infections. See lab results and dates. Treated with susceptible antibiotic therapy and no improvement. Concurrent arthritic changes with laxity in carpus bilaterally and decreased activity level.

Current Medications: Currently on 4U insulin BID (will receive 2U the morning of ultrasound), reduced to this on 7/21/22
Should be just about finished Zeniquin 25mg SID (14 days)
Lab Results: 9/1/22 Fructosamine- 283 (ideal 300-400 in diabetic patients). 8/31/22 UA: rod +/- cocci UTI- began on Zeniquin. 8/20/22
UA: rods UTI - refilled clavamox. 7/21/22 UA: rod UTI- culture e coli susceptible to everything- began clavamox; Fructosamine: 273 (ideal 300-400 diabetic patients) *decreased insulin from 5U to 4U BID
6/16/22 CBC: elevated MCH (16.6) lymphopenia (0.582), CHEML: hypochloremia (108), elevated bicarb (27), elevated ALP (104), hypercholesterolemia (431),, elevated lipase (76), elevated CK (736)
UA: cysto, usg 1.007, pH 7.0, 2+ protein, trace blood, marked rods and cocci, 3+ epithelial cells, T4: 1.4 WNL.
6/2/22 Frucosamine- 318- maintained at 5U insulin
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (4.55 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (4.45 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

### *Adrenal Glands*

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals (left measures 0.65 cm, right measures 0.68 cm), hypoechoic in echogenicity. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended.

### *Spleen*

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

### *Liver*

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in

echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

### *Gastrointestinal*

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

The observed pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and irregular in shape with a swollen undulating contour. Pancreatic duct dilation is noted. Enhanced hyperechoic ill-defined surrounding fat is noted.

### *Free Abdomen*

There is a large amount of enhanced/hyperechoic fat and mesentery surrounding the pancreas.

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

## ULTRASONOGRAPHIC FINDINGS

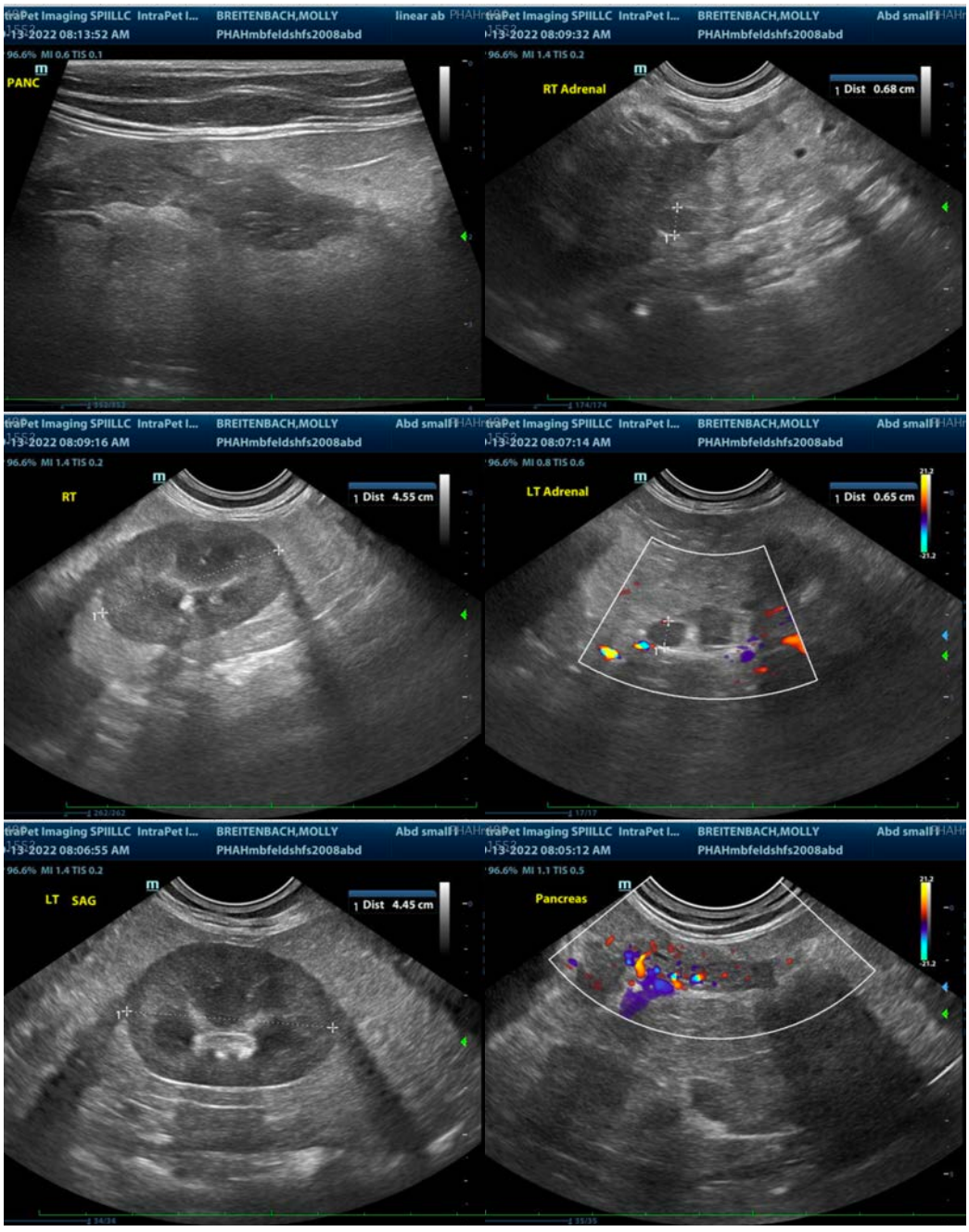
- Acute pancreatitis suspected, potentially acute on chronic smoldering pancreatitis

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Differentials for this patient's recurrent urinary tract infections include true recurrent infections secondary to diabetes, or potentially an infection that has not been fully cleared. Therefore, recommendations are to treat the urinary tract infection as a complicated urinary tract infection based on culture and sensitivity results for at least 4 weeks. Treatment recommendation includes a 2$^{nd}$ culture a week to 10 days after starting antibiotics to rule out any secondary organisms masked by a primary bug as well as a final 3$^{rd}$ culture a week to 10 days after finishing antibiotics to be sure that the infection has fully cleared. If the infection returns after that, then a recurrent infection is more likely, in which case the diabetes may not be as well as controlled as indicated based on the Fructosamine result. Patients can have normal, or even in this case, low fructosamine and not be well regulated, and in fact behaving spikes of hyperglycemia secondary to a Somogyi effect, which may be occurring in this patient, given the ongoing PU/PD and low Fructosamine.

Recommendations include a full blood glucose curve, or if not possible to obtain a full curve, placement of a freestyle libre sensor could be considered for more thorough evaluation of this patient's blood glucose values and true diabetes mellitus control.

If clinical signs of acute pancreatitis are present, then supportive/symptomatic medical management of pancreatitis in the form of antiemetics, gastroprotectants, appetite stimulant if necessary, pain management if indicated is recommended in the meantime.




**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.

**Beth Johnson**, DVM, DACVIM
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