



**PATIENT**

Iggy Drumheller

**SPECIES**

Canine

**BREED**

Shiba Inu X

**SEX**

Neutered Male

**AGE**

12

**WEIGHT**

12 kg

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Guenther

**HOSPITAL NAME**

Central Island Vet  
Emergency Hospital

**REFERRING VET**

Dr. Lou

**INVOICE**

46879

**DATE**

4/23/23

**PRESENTING CLINICAL SIGNS**

V+, inappetence and lethargy since yesterday evening. Other dog at home also had similar C/S + diarrhea. Recently changed diet to raw (turkey) 2 days ago. Eats goose and rabbit feces. Normal urination.

Abnormal PE/Chem/CBC/UA Results: Lepto SNAP negative, PCR pending Moderate leukocytosis with neutrophilia and left shift, markedly elevated ALT (too high to read), moderately elevated ALP, GGT, TBILI and mildly elevated cholesterol.

**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.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (5.59 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 (5.26 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**

The right adrenal gland is normal in size (2.11 cm long x 0.37 cm at the cranial pole and 0.35 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.65 cm long x 0.46 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

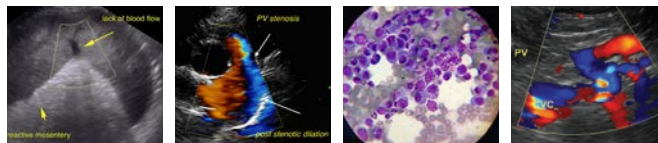
**Spleen**

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**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma, the largest of which measures 1.5 cm x 1.8 cm adjacent to the gallbladder. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.



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**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with 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. Enhanced hyperechoic ill-defined surrounding fat is noted.

**Free Abdomen**

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

The medial iliac lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

**PRIMARY FINDINGS**

- Acute pancreatitis is suspected
- **Heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

**SECONDARY FINDINGS**

- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- **Reactive medial iliac lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A quantitative PLI is recommended if not recently evaluated. Additionally, a fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. In the meantime, in addition to mild acute pancreatitis, given this patient's dietary history and laboratory changes, an ascending bacterial cholangiohepatitis is also suspected. Therefore, treatment recommendations empirically while awaiting results include fluid therapy, antiemetics, gastroprotectants, hepatic nutraceuticals such as Ursodiol and/or Denamarin and broad-spectrum antibiotics. A short-term transition to a low-fat diet, if well tolerated, could be considered, given the concern for mild pancreatitis. Ultimately, transition away from a raw cooked diet is recommended long-term.



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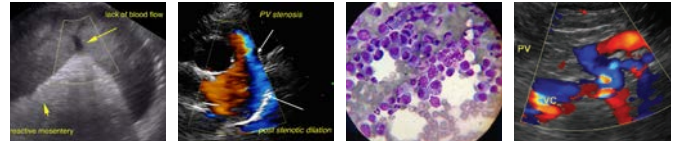
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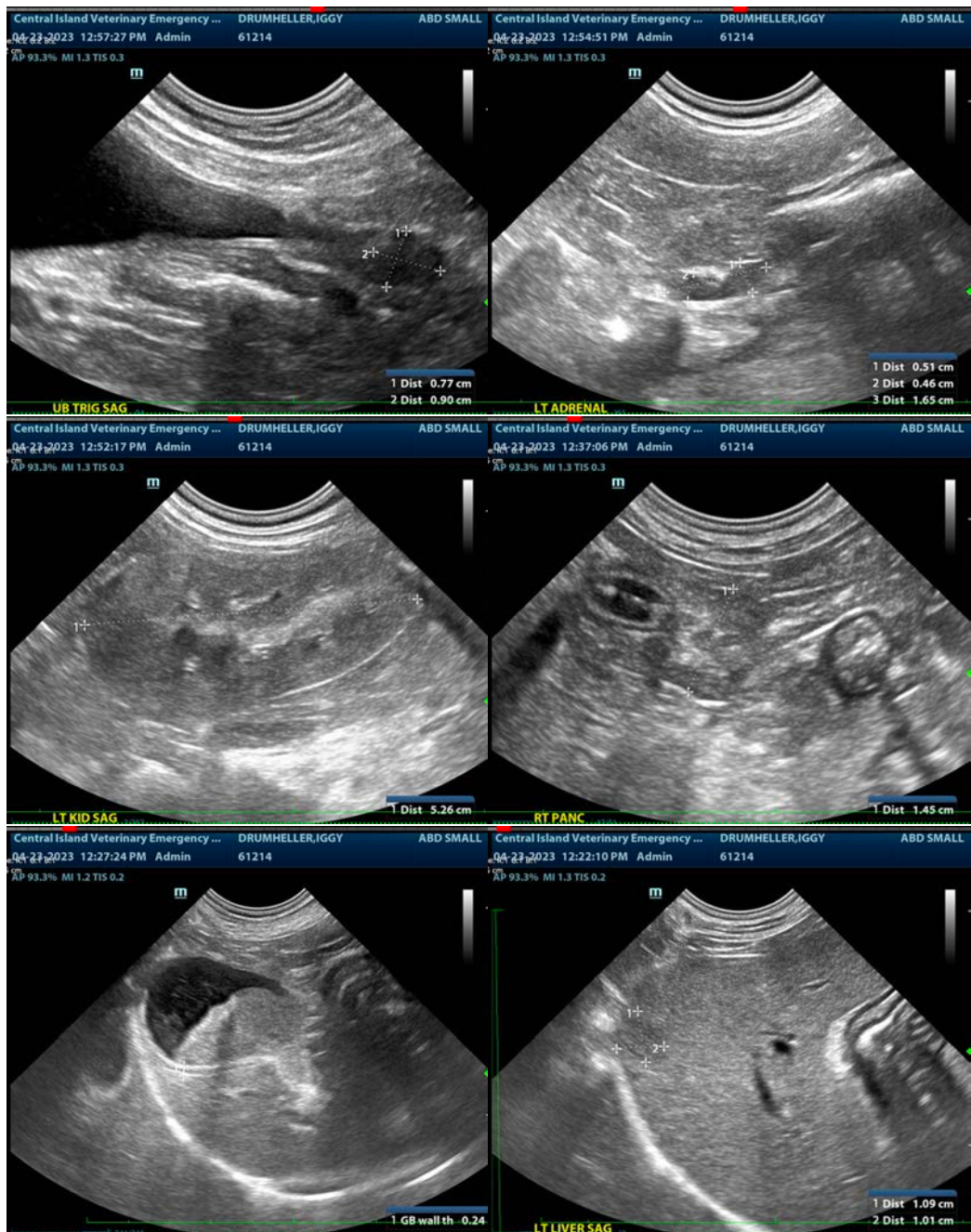
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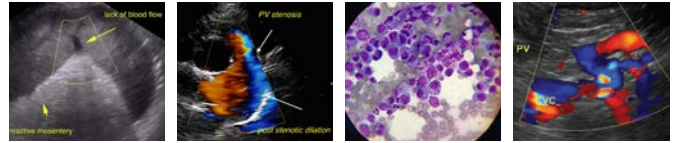
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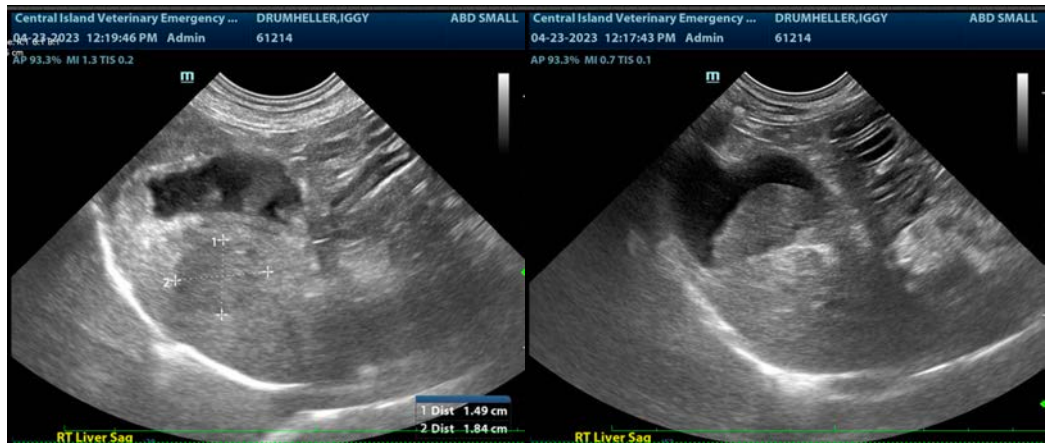
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com