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Clinical Sonography & Telecytology
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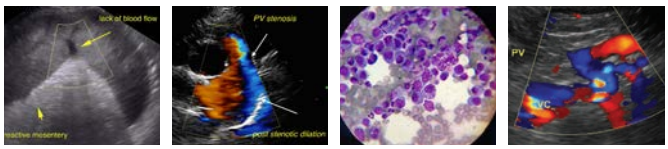

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1-800-838-4268 info@sonopath.com

PATIENT
Humphrey Bonner

SPECIES
Canine

BREED
Yorkie

SEX
Neutered Male

AGE
12 Years

WEIGHT
4.35 kg

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Lemanski

HOSPITAL NAME
Animal Emergency Hospital Volusia

REFERRING VET
Dr. Carver

INVOICE
42492

DATE
11/3/22

PRESENTING CLINICAL SIGNS

Humphrey is a 12 YO MC Yorkshire terrier who presented for hard stomach and being painful. P has had diarrhea for the last 2 days and vomited today. O also noticed increased breathing with wheezing, as well as, a hard abdomen.

Abnormal PE/Chem/CBC/UA Results: CBC: nsf COMP: moderate elevated ALP EPOC: nsf PCV/TS: 42%/9 g/dl CPL: Abnormal Rads- Mild diffuse small intestinal distention and questionably thickened small intestine/diffuse intestinal disease. Moderate hepatomegaly.

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 prostate is unable to be fully visualized in these images.

The right kidney is normal in size (4.3 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 (3.8 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 adrenal glands are unable to be well visualized in these images.

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. 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.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering, except for a suspected focal thickening along the lesser curvature adjacent to the liver that extends approximately 3.0 cm long and is 0.8-0.9 cm thick and hypoechoic in appearance with some loss of mural detail. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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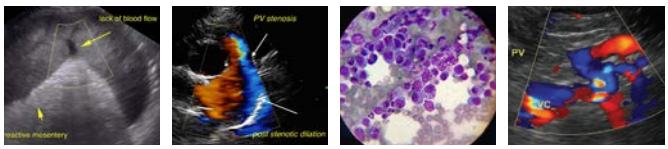

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The visible small intestines are normal in wall thickness and layering. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen is empty with no evidence of obstruction or foreign material.

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.

There is no apparent lymphadenopathy noted in these images.

There is a large amount of enhanced hyperechoic mesenteric fat surrounding the stomach and duodenum in the cranial abdomen. The pancreas is not discretely visible in these images. However, the enhanced mesenteric fat noted is concerning for acute pancreatitis.

ULTRASONOGRAPHIC FINDINGS

- Acute pancreatitis suspected
- **Focal gastric thickening** – Rule outs include inflammation, edema, or gastritis secondary to the pancreatitis, versus infiltrative inflammatory and/or even neoplastic disease.
- **Mucosal speckling –** Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- **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.
- **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.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Medical management of pancreatitis with anti-emetics, gastroprotectants, appetite stimulants or nutritional support as needed, pain management, broad spectrum antibiotics, and fluid therapy is recommended. If possible, a fresh frozen plasma transfusion and hyperbaric oxygen therapy (HBOT) could be beneficial. Pending patient's response to medical management, etc., monitoring/recheck of the focal gastric thickening is recommended, and if it persists, sampling in the for of either a fine needle aspirate or biopsy of the stomach is recommended if patient's coagulation status is appropriate.

Additionally, empirical deworming with a 5-day course of Panacur should be considered.

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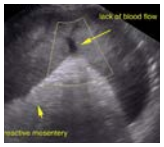
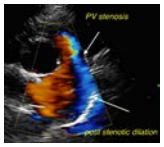
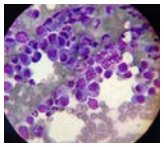
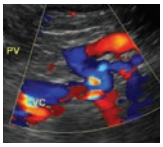

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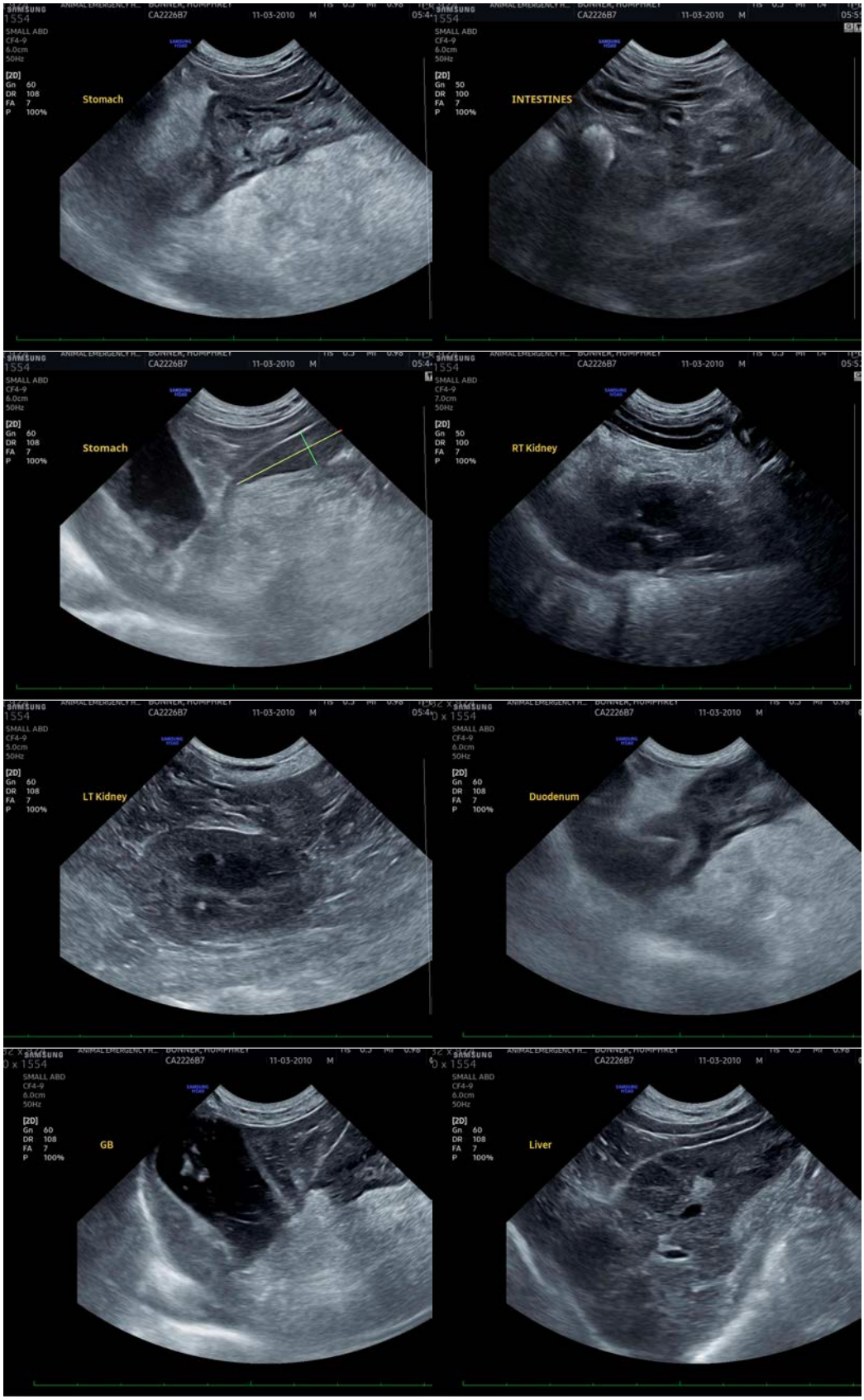

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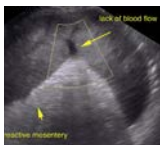
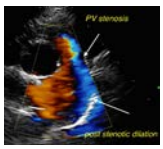
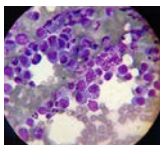
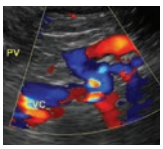

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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