**PATIENT**

Missy Barrientos

SPECIES

Canine

BREED

Pug

SEX

Spayed Female

AGE

11 Years

WEIGHT

14.6 Pounds

INTERPRETED BYBeth Johnson, DVM
DACVIM**IMAGING PERFORMED BY**

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging MI

REFERRING VETTown Center Vet
Associates**INVOICE**

37086

DATE

4/21/22

PRESENTING CLINICAL SIGNS

Not willing to eat for the past 8 weeks, O has been trying to feed chicken and rice for 4 weeks. Vomited yesterday (04/20/2022)- yellow bile; has been vomiting after eating some times. No diarrhea. Has been hiding in another room and lethargic for the past week.

Abnormal PE/Chem/CBC/UA Results: Exam findings and abnormal lab values: Exam Findings: T=100.0, P=140, R=20, BCS:4/9 (two pound weight loss since 04/08/2022), CRT/MM: tacky Coat/Skin: mildly delayed turgor Eyes: Corneal hyperpigmentation Heart/Lungs: normal M/S: cold extremities Abdomen: tense and painful on palpation Please see attached BW and radiographs.

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 (3.77 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 (4.23 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 (0.42 cm at the cranial pole and 0.50 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 (0.36 cm at the cranial pole and 0.37 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

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.

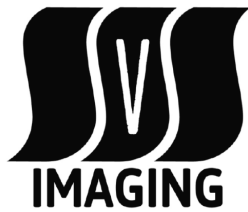
GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is moderately fluid distended with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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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 except for the duodenum, which is thick, measuring up to 0.80 cm thick with early loss of layering appreciated, and a corrugated hyperperistaltic appearance.

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

Pancreas

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

PRIMARY FINDINGS

- Thickened, corrugated duodenum with early loss of layering – concerning for infiltrative neoplasia. Benign severe inflammatory disease or infectious disease cannot be ruled out, but are considered much less likely, given the early loss of layering. The gastric distention is suggestive of at least partial obstruction caused by the thick, corrugated duodenum. Foreign material within the duodenum, such as a linear foreign body, cannot be definitively ruled out, but is not distinctly visualized in these images.

SECONDARY FINDINGS

- 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

Recommendations include ideally exploratory laparotomy for full thickness gastrointestinal biopsies and suspected early duodenal mass removal. Prior to surgery, 3-view thoracic radiographs for further evaluation of possible metastatic disease are recommended. If a more conservative approach is elected, recommendations, given the concurrent hypoalbuminemia, include urinalysis to rule out proteinuria as well as a gastrointestinal malabsorption panel including TLI, PLI, folate and cobalamin to Texas A&M GI laboratory, following which empirical cobalamin supplementation and steroids could be considered as a way to try to alleviate clinical signs and offer quality of life.

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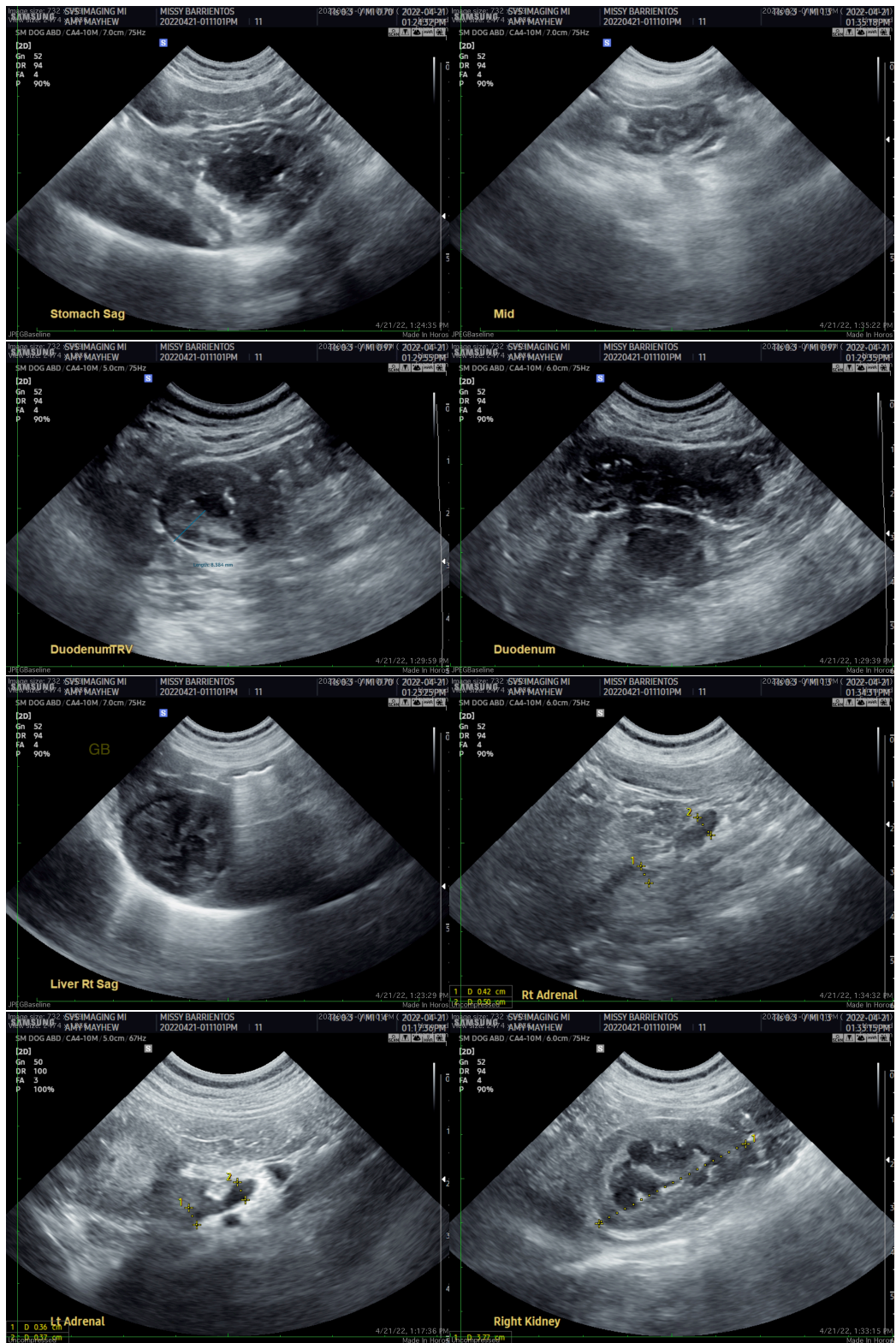
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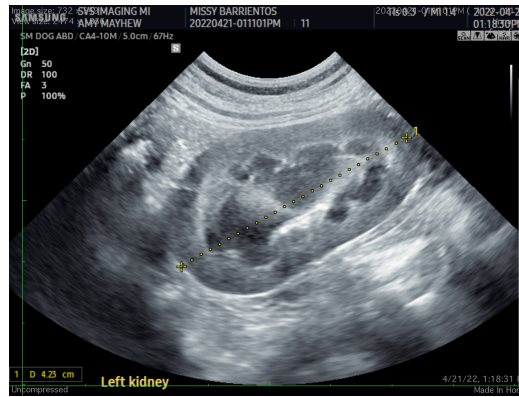
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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