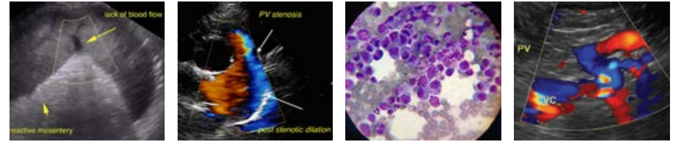

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1-800-838-4268 info@sonopath.com

PATIENT

Murray Greenwood

SPECIES

Canine

BREED

Fox Terrier

SEX

Neutered Male

AGE

13 Years 3 Months

WEIGHT

12.8 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Raul Cases

HOSPITAL NAME

State Ave Vet Clinic

REFERRING VET

Dr. Raul Casas

INVOICE

46273

DATE

3/30/23

PRESENTING CLINICAL SIGNS

Mar 30, 2023- vomited 4x this morning, slightly tolerating (not that fractious) abd US- RO infiltrative intestinal neoplasia; distended abdomen- RO secondary obstructed pattern March 22, 2023- presented with vomiting and dark/liquid diarrhea, fractious, 4/6 mur heard from both sides meds: vetmedin 1.25mg BID, metronidazole, omeprazole, propectalin

Abnormal PE/Chem/CBC/UA Results: March 22, 2023 HGB: 11 g/dl HCT: 35.95% MCH: 19.3 p MCHC: 30.6 g/dl RDWs:22.6% PLT: 675 10^9 GLU: 139 mg/dL

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 area of the prostate is examined without evident pathology.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 3.26 cm. The right kidney measures 4.97 cm. Small bilateral cortical cysts noted.

Adrenal Glands

The right adrenal gland is unable to be well visualized in these images.

The left adrenal gland is normal in size (0.54 cm at the cranial pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The caudal pole is not 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). A 0.20 cm x 0.40 cm hypo- to anechoic non-capsule disrupting nodule is noted in the mid spleen. Splenic vasculature appears normal.

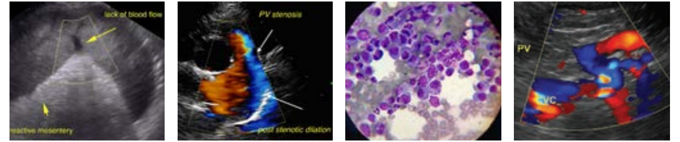
Liver

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.

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 stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is markedly overdistended with echogenic appearing fluid that appears to be an outflow obstruction caused by the proximal bowel mass described below.



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Diffusely, 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). However, in the proximal duodenum, there is an approximately 3.0 cm long x 2.0 cm thick heterogeneous obstructive bowel mass. 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 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 a scant/small amount of free fluid and markedly enhanced mesenteric fat surrounding the bowel mass.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Obstructive proximal small bowel mass** – most concerning for infiltrative neoplasia. A benign inflammatory lesion is possible but considered exceedingly less likely. There is evidence of a focal peritonitis surrounding the bowel mass.

- **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

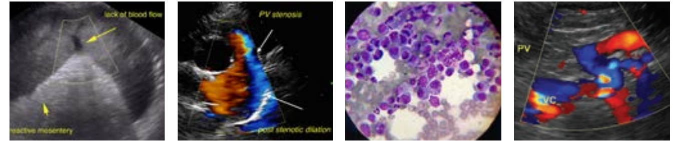
- Age related kidney changes with bilateral cortical cysts

- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

A fine needle aspirate of the bowel mass could be considered if patient's coagulation status is appropriate. However, given the apparent obstructive nature of the mass and the marked inflammatory change surrounding it, an exploratory laparotomy for planned excisional biopsy/resection and anastomosis is recommended.



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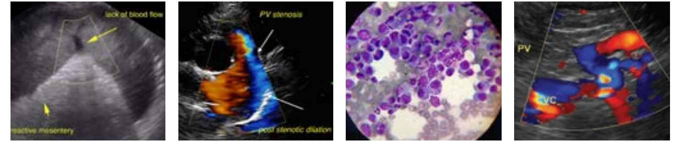

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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