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Clinical Sonography & Telecytology
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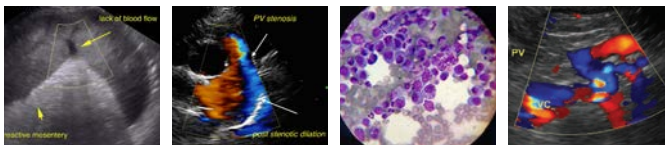


SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Lucy Smith

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
6 Years

WEIGHT
3.6 kg

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Erin Wicks

HOSPITAL NAME
Shores VEC

REFERRING VET
Dr. Lupole

INVOICE
42514

DATE
10/18/22

PRESENTING CLINICAL SIGNS

Transferred from rdvm for AUS. Took to rdvm for vomiting, weight loss and lethargy.

Abnormal PE/Chem/CBC/UA Results: Abdominal: tense on palpation, fluid feel, multiple firmer feeling masses vs. inflammation/thickened tissue rDVM Bloodwork: RBC 5.64 L, HCT 30.2 L, hgb 9.3 L, MCV 53.5 H, PMN 0.27 L *bands suspected*, Monocytes 1.85 H, Plt 114 L, Creat 0.6 L, BUN 15 L, Potassium 3.2 L, Total protein 5.1 L, Albumin 1.8 L, GGT 7 H, Total bilirubin 1 H, Amylase 419 L rDVM T4: 1.1 The liver size appears to be subjectively normal, taking body conformation, stomach position and the pointed extensions of the liver lobes into account. The hepatic parenchyma is uniformly hypoechoic and presents a coarse echotexture. The parenchymal echogenicity is iso- to hypoechoic relating to the fat within the falciform ligament and splenic parenchyma. The hepatic veins appear to be normal in diameter. The portal veins present with thin hyperechoic markings. The intrahepatic biliary tree is not seen. The extrahepatic biliary ducts are not seen. The gallbladder and cystic duct are thin walled and normal in size and shape. The gallbladder content is mainly anechoic. The common bile duct is seen between the proximal duodenum and portal vein and is within normal limits. The fat within the portal hilus is regular in echotexture and hypoechoic.

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 (3.79 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. A small isoechoic bulge is noted along the cranial pole, best visualized in the sagittal plane and not visible in the transverse view. This may represent a renal nodule. However, this area is adjacent to the bowel mass, and so adhered or adjacent tissue is possible. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.85 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 area of the right adrenal gland is examined without evident pathology.

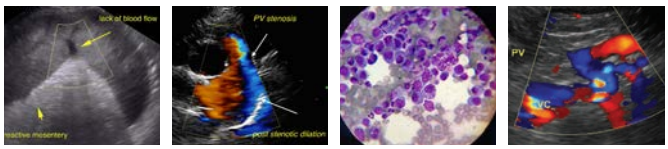
The left adrenal gland is normal in size (0.37 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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.



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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 mildly fluid distended with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic. The lumen is empty with no evidence of obstruction or foreign material. In addition to the diffuse changes described, in the cranial right abdomen there is an approximately 5.0 cm long x 2.5 cm thick small bowel mass characterized by complete loss of mural detail, loss of layering, and a hypoechoic wall.

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 small amount of echogenic appearing free fluid as well as enhanced mesenteric fat surrounding the bowel mass.

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

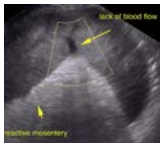
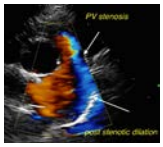
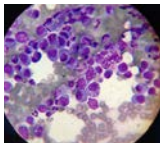
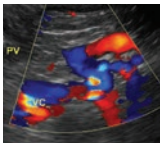
There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- **Small bowel mass** – concerning for infiltrative neoplasia such as lymphoma versus adenocarcinoma versus other. Benign inflammatory disease is possible but considered much less likely.
- **Diffuse inflammatory bowel disease (IBD) pattern –** Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma.
- **Small capsular bulge in the right kidney** – This may represent a nodule versus irregular contour secondary to a possible infarct. However, given the lack of confirmation in the transverse view, adjacent tissue mimicking a nodule on the edge of the kidney can't be ruled out.
- Evidence of focal peritonitis including free fluid and enhanced mesenteric fat surrounding the bowel mass.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A fine needle aspirate of the bowel mass could be considered if the patient's coagulation status is appropriate. However, given the patient's clinical status and the evidence of a focal peritonitis, an exploratory laparotomy for bowel mass removal/resection and anastomosis after patient stabilization

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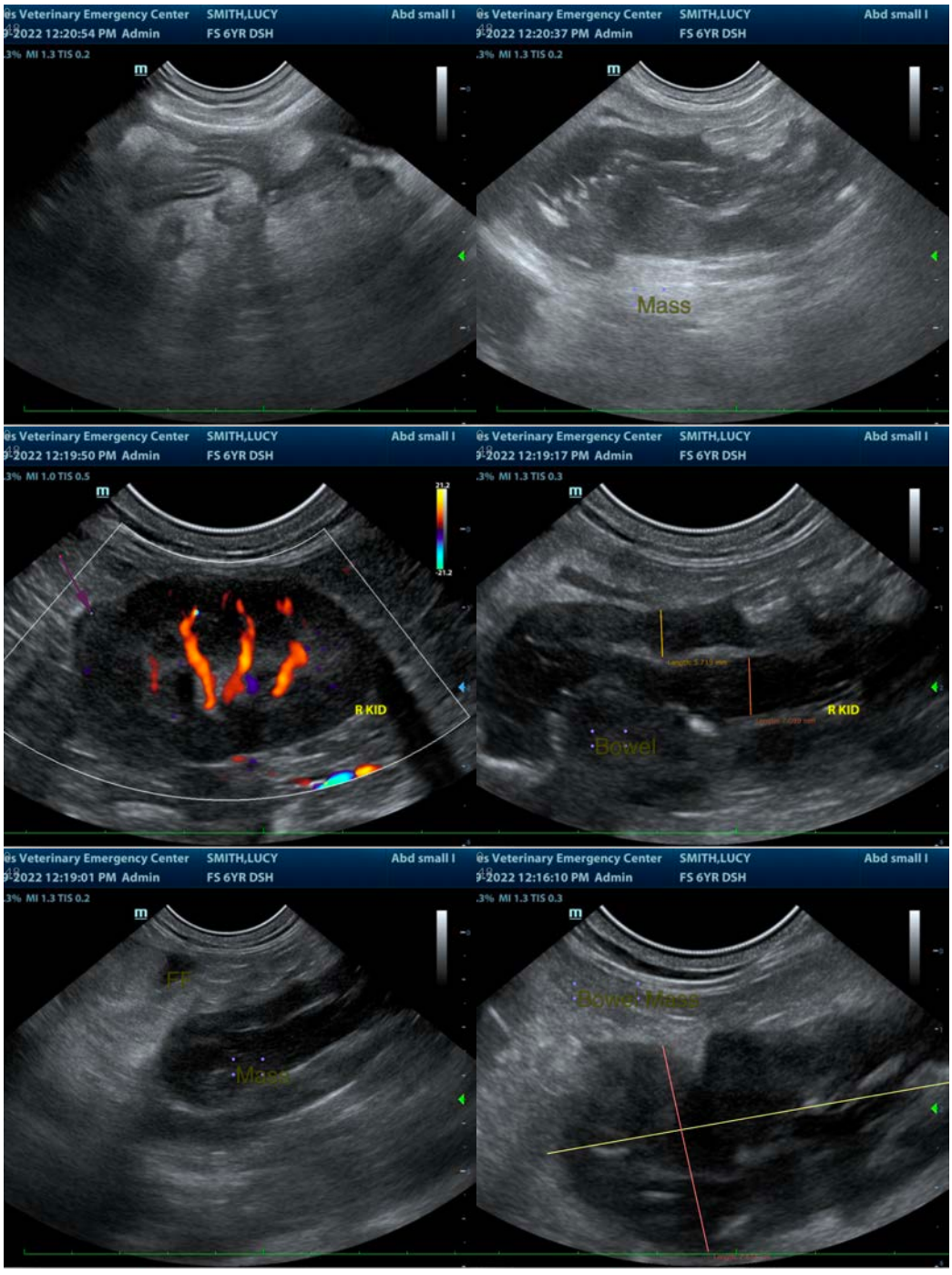
may be the more appropriate next step. To help determine whether an aspirate versus surgery should be pursued next, the free fluid could be sampled and looked at to look for evidence of a septic abdomen, which of course would warrant surgery.

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.



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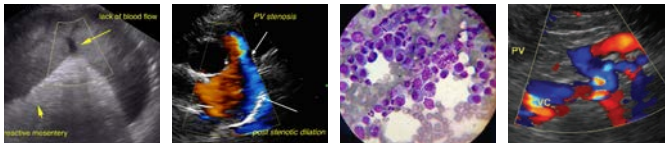

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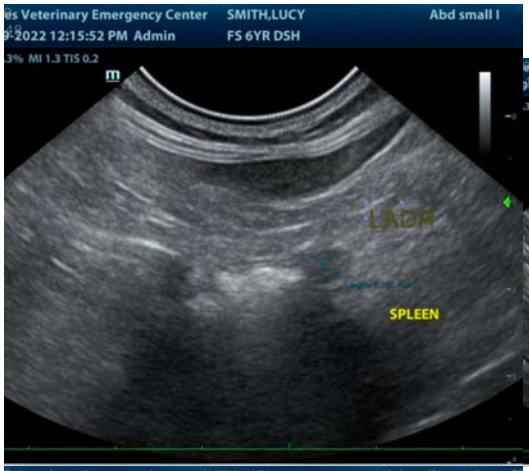

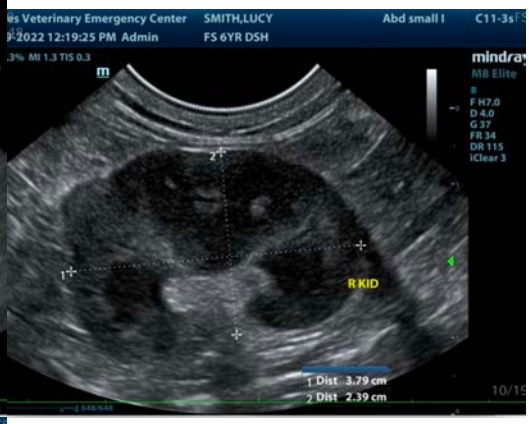

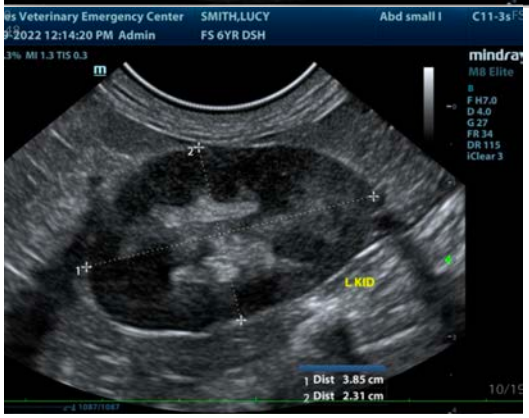

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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