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Clinical Sonography & Telecytology
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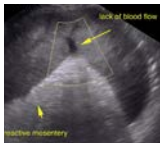
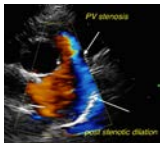
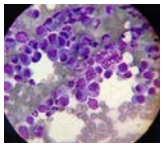
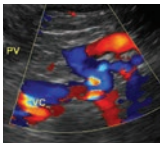

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PATIENT
Perfect Balash

SPECIES
Feline

BREED
DSH

SEX
Neutered Male

AGE
10 Years

WEIGHT
8.8

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Jessica Green

HOSPITAL NAME
Stanglein Vet Clinic

REFERRING VET
Dr. Erin Rothrock

INVOICE
44834

DATE
2/8/23

PRESENTING CLINICAL SIGNS

History of vomiting and weight loss. Did well on bland diet for a few days but once meds were finished P started vomiting again. Decreased appetite. Also having BM outside of the litterbox.

Abnormal PE/Chem/CBC/UA Results: WBC 25.3(H), Neutrophils 21353 (H), otherwise unremarkable. Rads: significant soft tissue opacity within the abdomen obscuring all organs and small intestines-able to appreciate air withing the stomach and colon.

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.

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. Multiple too numerous to count cortical cysts are noted bilaterally, including the largest one measuring approximately 3.0 cm in diameter on the caudal pole of the right kidney. The left kidney measures 4.46 cm. The right kidney measures 5.68 cm.

Adrenal Glands

The adrenal glands are unable to be well visualized in these images.

Spleen

No normal spleen is visible in these images (see other).

Liver

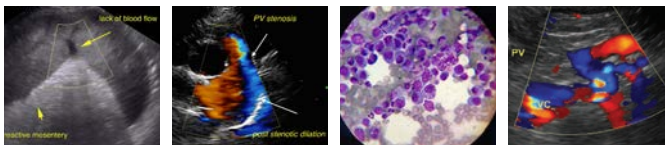
Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. 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. The cystic and common bile duct are tortuous and dilated, measuring up to 0.90 cm dilated.

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.

Diffusely, 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, without evident loss of layering appreciated. The lumen is empty with no evidence of obstruction or foreign material. Multifocally, however, there are several bowel loops that appear thick, one in particular measuring 0.77 cm thick with some early emerging loss of layering (see other).



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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 moderate amount of anechoic free fluid.

There is no apparent lymphadenopathy noted in these images.

In the left mid abdomen, there is large (too large to get an accurate measurement, as it can't be captured in one image), lobulated, primarily solid, hyperechoic mass. The mass appears to originate from the spleen. However, in several video clips, bowel lumen appears to run through the mass, so whether the mass is big enough to be encompassing bowel, or whether the origin is bowel, cannot be determined from these images. Additionally, lymphadenopathy could be a consideration.

PRIMARY FINDINGS

- **Hyperechoic hepatomegaly** – This appearance is most consistent with benign hepatic lipidosis. Infiltrative disease such as amyloidosis or round cell neoplasia, such as mast cell tumor or less likely, lymphoma, is also possible.
- Dilated cystic and common bile duct with no debris, mineral, nodules, etc. noted, so the dilation is likely secondary to some post-hepatic cholestasis caused by the abdominal mass.
- **Diffusely 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. Multifocally, the bowel changes are more concerning for infiltrative neoplasia.
- The large intraabdominal mass is concerning for infiltrative neoplasia such as round cell neoplasia versus other. Given the echogenicity, a large intraabdominal lipoma, making it difficult to visualize normal spleen, and encompassing bowel loops, etc. is possible and should be differentiated via tissue sampling.

SECONDARY FINDINGS

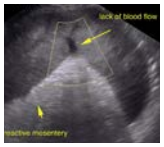
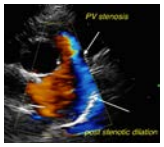
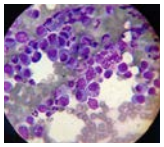
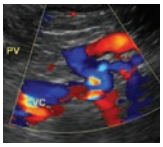
- Age related kidney changes with multiple cortical cysts

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 intraabdominal mass is recommended if patient's coagulation status is appropriate.

Given the obvious compression of surrounding organs, ultimately an exploratory laparotomy for planned mass removal, at which time full thickness biopsies of the GI tract are also recommended, may be necessary. If that approach is elected, given the lack of ability to definitively determine tissue origin, a pre-surgical planning abdominal CT scan could be considered.

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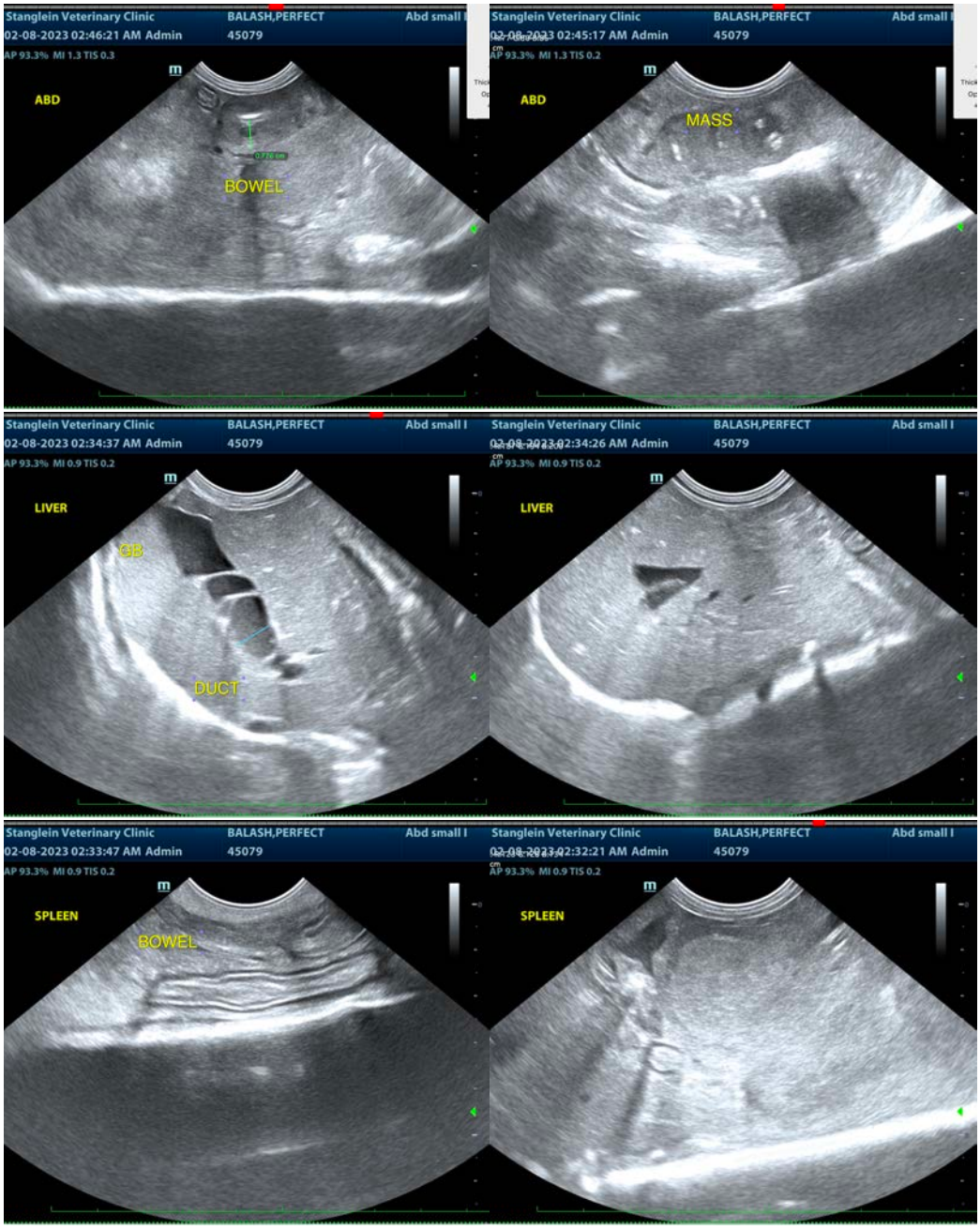
Additionally, while trying to workup the mass, a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

**Dr. Johnson would love any follow up information that you are able to obtain on this patient, is possible.



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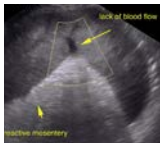
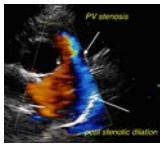
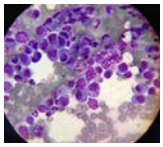
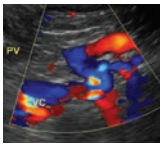

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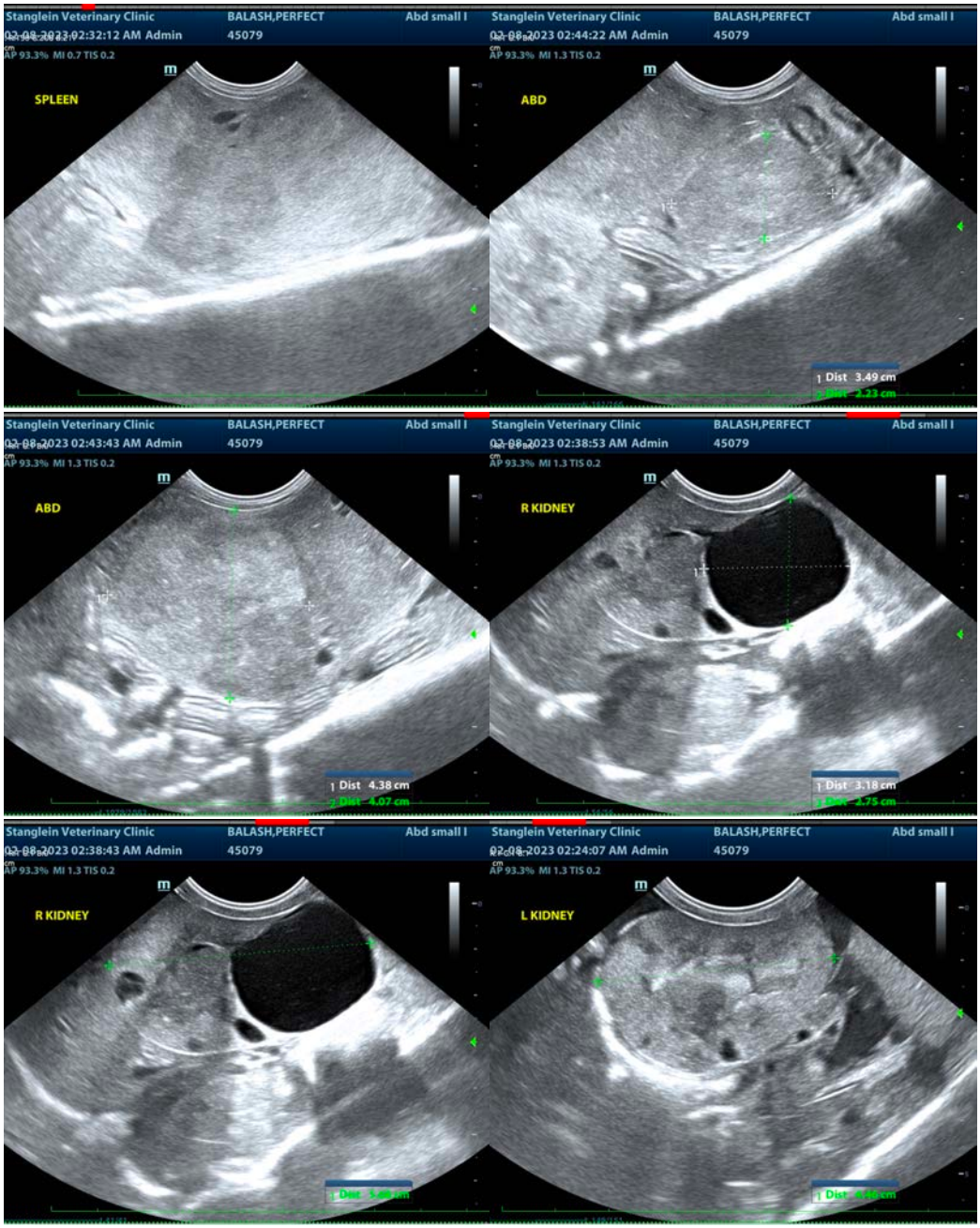

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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