SonoPath
Clinical Sonography & Telecytology
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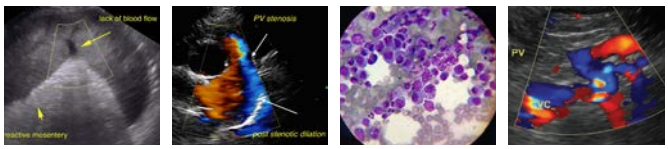

SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Lexie Friedman

SPECIES
Canine

BREED
Maltese

SEX
Spayed Female

AGE
9 Years

WEIGHT
9 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
All Creatures Great & Small Denville

REFERRING VET
Dr. Mitrovic

INVOICE
43003

DATE
11/29/22

PRESENTING CLINICAL SIGNS

PU/PD. Elevated liver enzymes. No current meds.
Abnormal PE/Chem/CBC/UA Results: alt 305, alkp 1556, ggt 40, bun/creat ratio 62, phos 6.5, chol 437, PSL 290, mono 1400. U/A-USG 1.019, Prot 3+, PH 6.5, bld 1+, rbc 4-10/hpf

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. Small cortical cysts are noted in the right kidney. The right kidney measures 4.7 cm. The left kidney measures 4.56 cm. A cortical cyst is noted in the caudal pole of the left kidney, measuring 0.64 cm x 0.77 cm.

Adrenal Glands

The right adrenal gland is normal in size (1.47 cm long x 0.76 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is enlarged (2.87 cm long x 2.36 cm caudally and 0.78 cm cranially) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

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 (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.

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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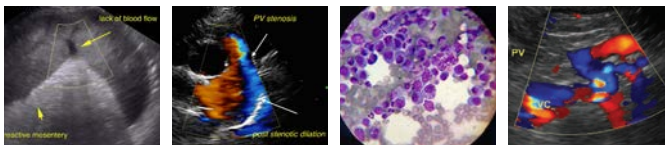

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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty 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

Pancreas is prominent (enlarged) in size and mildly irregular in shape with a slightly undulating contour. Parenchyma is coarse in echotexture and heterogenous to hypoechoic in echogenicity.

Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Left adrenal mass –** consistent with adenoma or possibly hyperplasia. Early adenocarcinoma or pheochromocytoma cannot be ruled out but are considered less likely. Interpret in combination with clinical signs of hyperadrenocorticism or other adrenal disease.
- Chronic active pancreatitis
- **Hyperechoic hepatomegaly -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

SECONDARY FINDINGS

- Age related kidney changes with cortical cysts
- **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

The described adrenal gland, liver and gallbladder changes are all suggestive of hyperadrenocorticism, likely adrenal dependent hyperadrenocorticism. However, pituitary dependent hyperadrenocorticism cannot be definitively ruled out. Given the reported clinical signs of hyperadrenocorticism, including polyuria, polydipsia, etc., testing for hyperadrenocorticism with a LDDS test is warranted. If not recently evaluated, blood pressure is recommended. If not recently evaluated, a urinalysis and, if indicated based on urinalysis results, urine culture are also recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ratio is recommended.

Given the mild pancreatic changes, if clinically indicated, 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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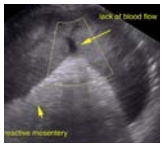
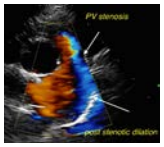
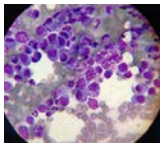
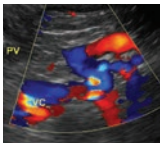

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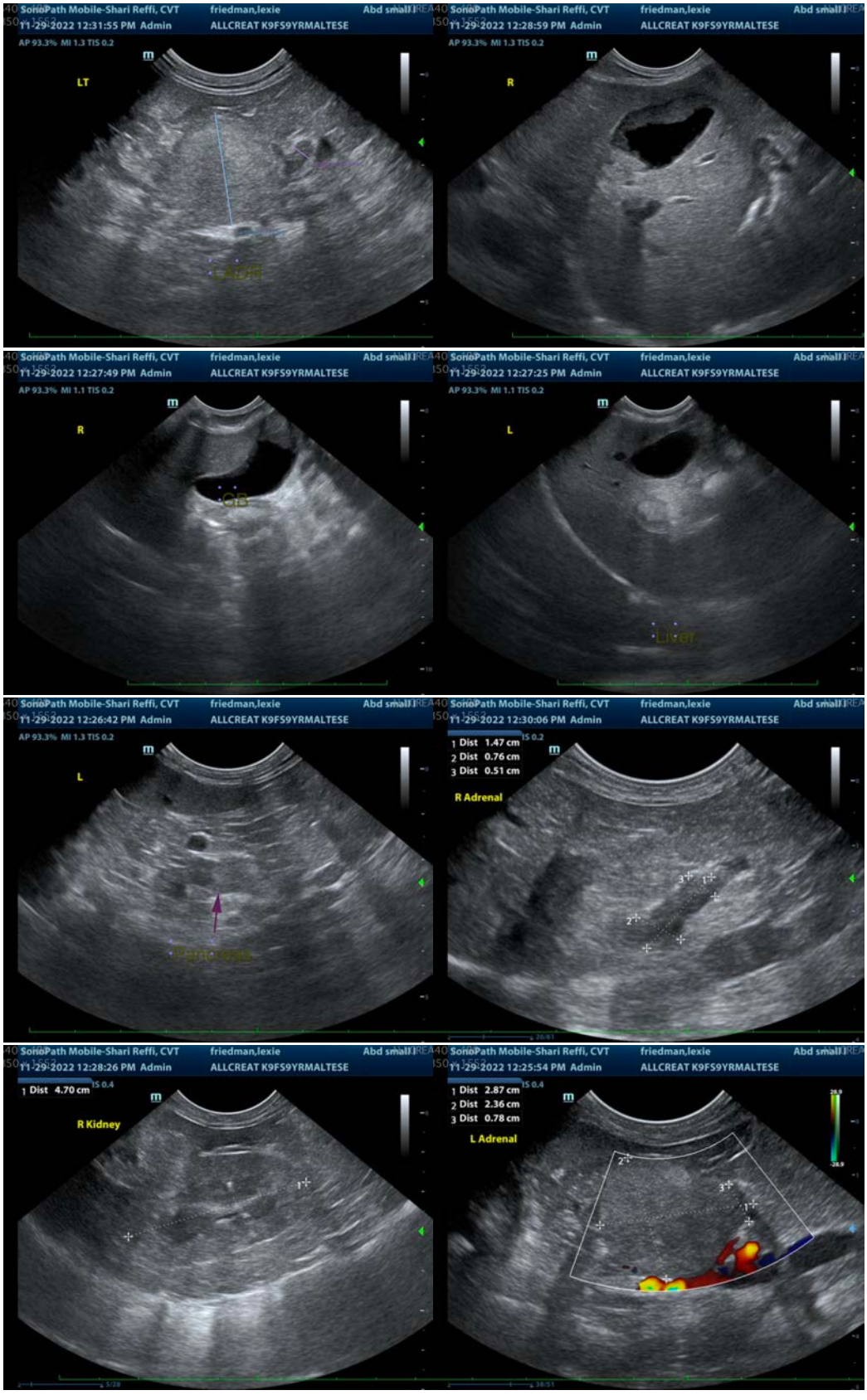

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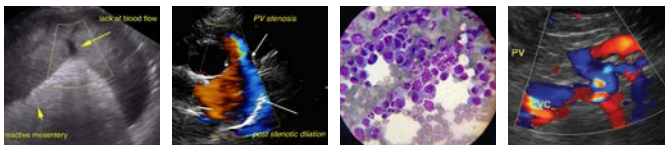

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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