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Clinical Sonography & Telecytology
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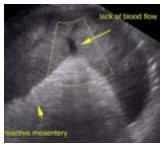
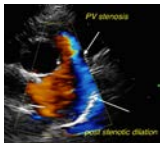
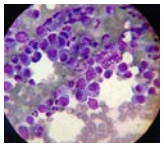
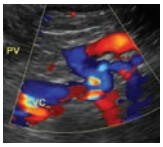

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1-800-838-4268 info@sonopath.com

PATIENT
Dudley Sorenson

SPECIES
Canine

BREED
Beagle

SEX
Neutered Male

AGE
11 Years

WEIGHT
44.6 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
Shohola Vet Hospital

REFERRING VET
Dr. Gramazio

INVOICE
43114

DATE
12/1/22

PRESENTING CLINICAL SIGNS

Elevated liver enzymes and increased Ca+, Hx PHPT and hypothyroidism. Current meds: Levothyroxine 0.4mg sid, Galliprant 60mg 1/2 sid, Milk Thistle

Abnormal PE/Chem/CBC/UA Results: Ca+ 14.5 (11.8 H); ionized Ca+ 1.56 (1.45 H); K 5.6 (5.4 H); ALT 126 (121 H); ALP 478 (160 H); Retic 170 (110 H); PLT 557 (448 H)

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.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (5.91 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 (5.62 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 (2.2 cm long, 0.70 cm at the cranial pole and 0.69 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 (2.34 cm long x 0.51 cm at the cranial pole and 0.64 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. 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. In the mid to right caudal liver, there is a homogeneous, iso- to slightly hypoechoic mass measuring 4.5 cm x 5.8 cm. 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.

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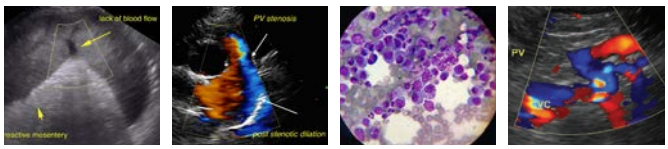

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Gastrointestinal

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.

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

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 free peritoneal effusion noted in these images.

Left medial iliac lymph node is enlarged and hypoechoic in appearance, measuring 1.3 cm long and 0.72 cm thick.

PRIMARY FINDINGS

- **Liver mass –** concerning for infiltrative neoplasia such as primary hepatocellular carcinoma versus round cell neoplasia, versus sarcoma, versus other. A benign hepatoma/adenoma, marked nodular hyperplasia, etc. cannot be ruled out without tissue sampling, but is considered slightly less likely.

- **Medial iliac lymphadenopathy –** Differentials include both reactive lymphadenopathy as well as infiltrative neoplasia and cannot be differentiated without tissue sampling.

SECONDARY FINDINGS

- **Hyperechoic splenic nodules –** most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

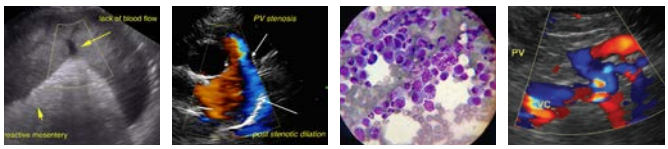
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

This patient is reportedly hypercalcemic and has a history of primary hyperparathyroidism. If the hyperparathyroidism was treated and the hypercalcemia has returned, then reevaluation of a malignancy panel to include PTH, PTHrP, and ionized calcium is recommended.

Additionally, if not recently evaluated, a rectal exam is recommended with close evaluation of the perianal area, including anal glands, especially given the medial iliac lymphadenopathy.

A fine needle aspirate of the liver mass is recommended if patient's coagulation status is appropriate, especially if the hypercalcemia is suggestive of malignancy.

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.



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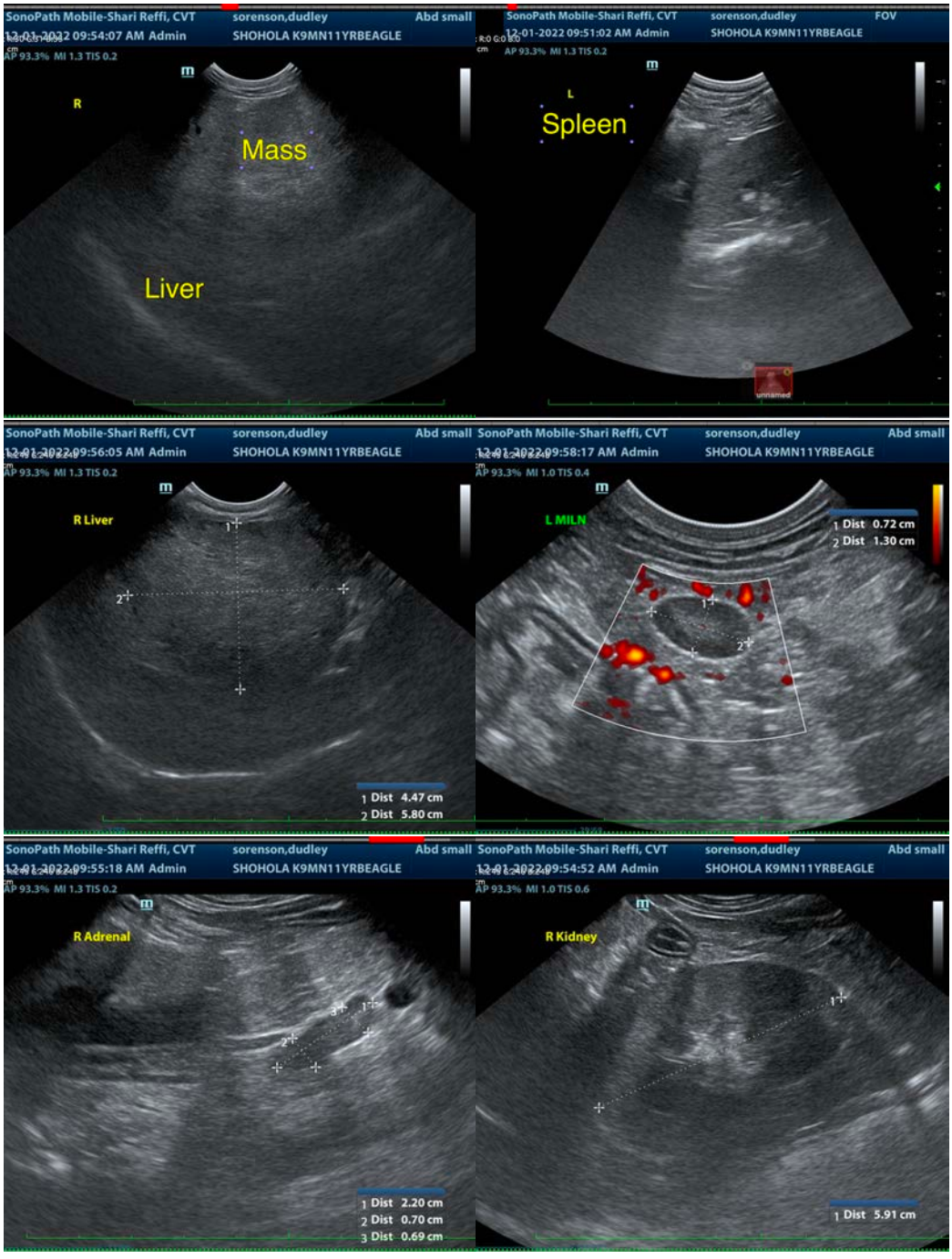
While considered less likely, given the concurrent hyperkalemia, a baseline cortisol is recommended. If baseline cortisol is less than 2, a full ACTH stimulation test is recommended to rule out hypoadrenocorticism.



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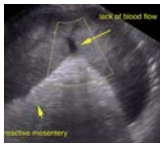
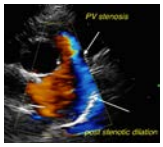
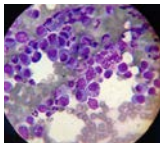
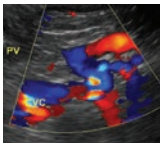

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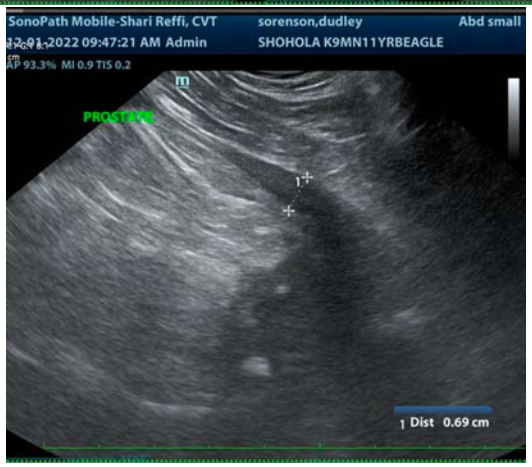

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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