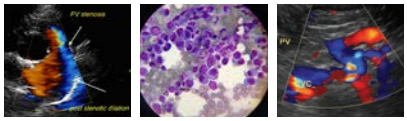
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

DATE

3/14/23

PATIENT

Bella Klemkowski

SPECIES

Canine

BREED

American Bulldog X

SEX

Spayed Female

AGE

5/1/10

WEIGHT

71.8 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Bel Air Vet Hospital

REFERRING VET

Dr. Schmidt

INVOICE

45891

PRESENTING CLINICAL SIGNS

Patient came in on 2/13/23: Patient has had increased drinking for past few weeks with urinary accidents. 3 pound weight loss since 9/22. Distended abdomen.

Current Medications: Galliprant 60mg- 1 tablet every 24 hours (2/13-2/23), Synotic- for swollen toe every 8-12 hours (2/13-3/1)
Lab Results: Chem- ALT: 273, ALK Phosp. 2823, GGT:13, Cholesterol:547, Urine Specific Gravity: 1.008, Protein 2+. PH-7.5
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

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 (7.49 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 (7.44 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 small (flattened contour), measuring 3.15 cm long x 0.43 cm at the cranial pole, and 0.59 cm at the caudal pole. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is enlarged (3.76 cm long x 1.93 cm at the cranial pole and 0.37 cm at the caudal pole), with mild heterogenous parenchymal changes, primarily noted in the cranial pole. 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 with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Additionally, in the left caudal liver, there is a discrete, more heterogeneous, isoechoic mass measuring 2.8 cm x 3.8 cm in size. 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 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 observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. 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.

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- **Left adrenal mass –** consistent with adenoma or possibly hyperplasia. Adenocarcinoma or early pheochromocytoma cannot be ruled out. Interpret in combination with clinical signs of hyperadrenocorticism or other adrenal disease.

- **Heterogenous Liver with a discrete liver mass –** 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. The discrete mass is concerning for a more serious infiltrative process including possibly infiltrative neoplasia such as hepatocellular carcinoma versus round cell neoplasia versus sarcoma versus other. A benign hepatoma/adenoma or a more focal marked nodular hyperplasia is also possible and can't be differentiated without tissue sampling.

- **Pancreatic age-related remodeling –** Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.

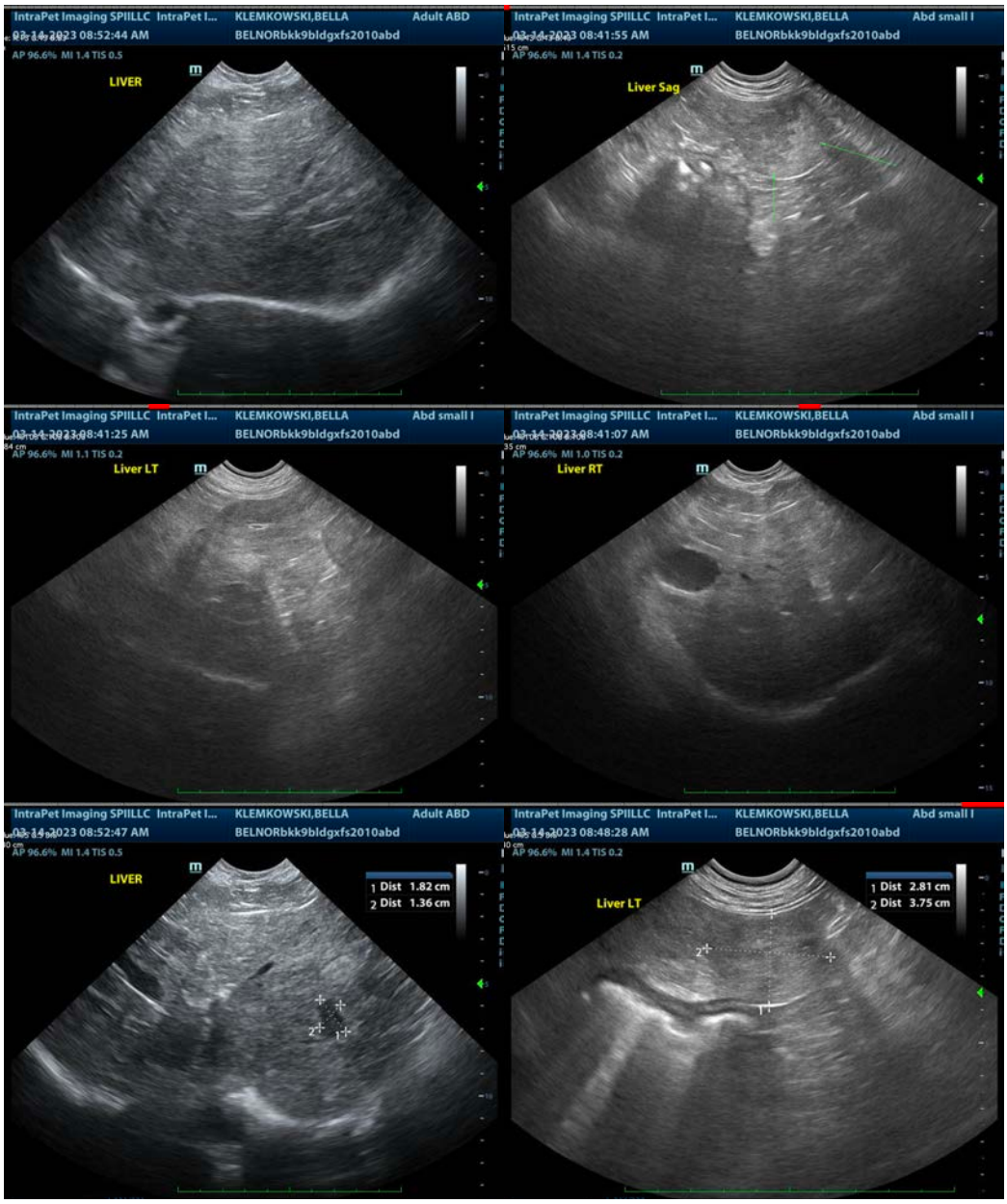
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

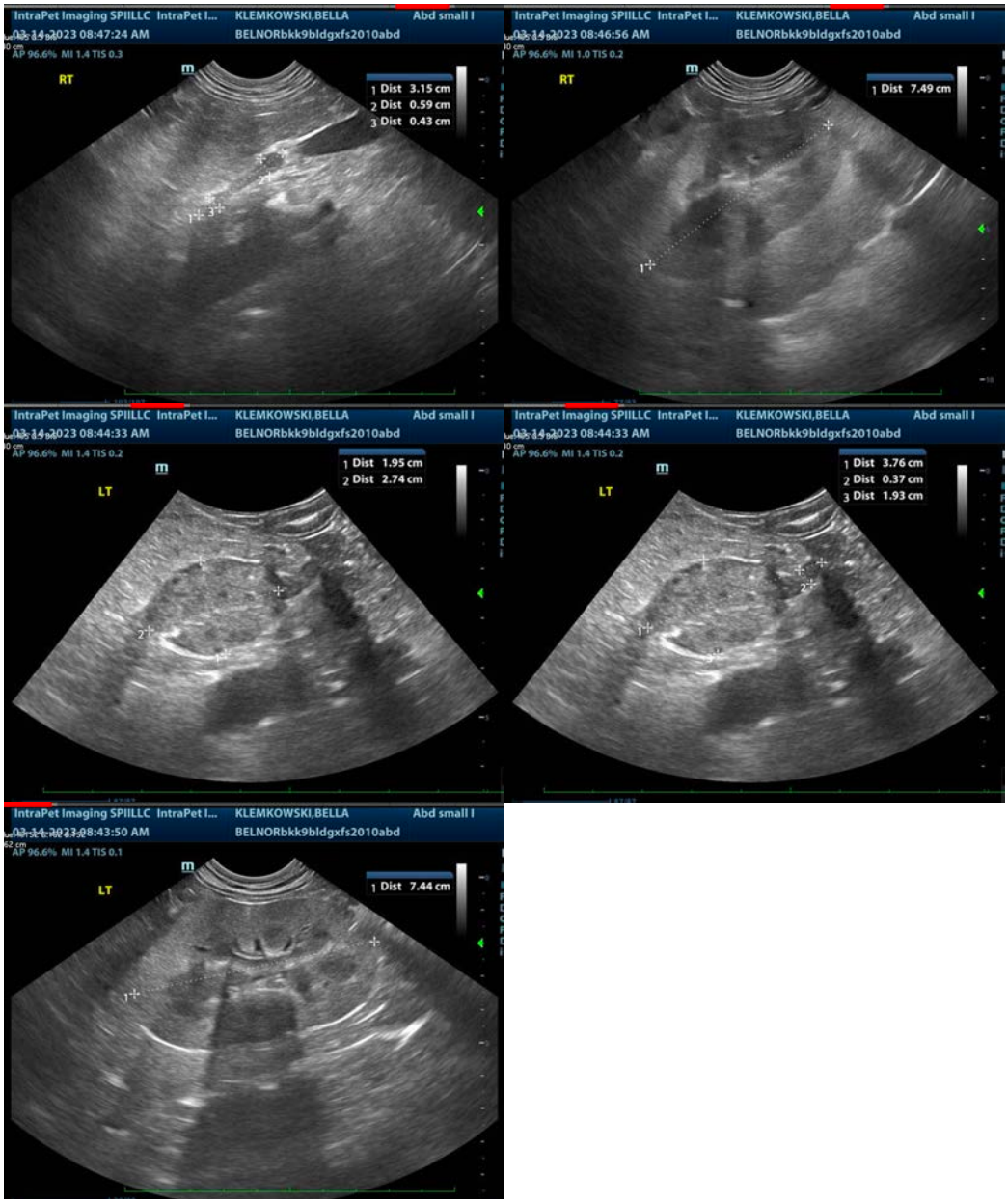
This patient's left adrenal nodule combined with the history of increased liver enzymes, PU/PD, etc. is most concerning for a functional adrenal tumor. A blood pressure is recommended if not recently evaluated. Given the proteinuria combined with the reported weight loss, a urine protein to creatinine ratio is also recommended to help quantify proteinuria and help determine whether or not medically management of it specifically is necessary. Finally, a low-dose Dexamethasone suppression test is recommended to definitively diagnose the suspected adrenal dependent hyperadrenocorticism.

Having said that, hyperadrenocorticism does not typically result in weight loss, so the weight loss combined with the concerning appearance of the liver warrants investigation prior to further workup of hyperadrenocorticism, beginning with three view thoracic radiographs 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 liver mass as well as the diffuse liver changes is also recommended if patient's coagulation status is appropriate.

Additionally, pending results of cytology, 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.





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