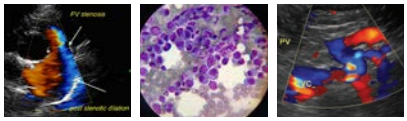
IMAGING PERFORMED BY

IntraPet.com



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

DATE

2/21/23

PATIENT

Gus Bertram

SPECIES

Canine

BREED

Schnauzer X

SEX

Neutered Male

AGE

2/4/12

WEIGHT

34.3 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

HOSPITAL NAME

Festival Vet Clinic

REFERRING VET

Dr. Beron

INVOICE

45394

PRESENTING CLINICAL SIGNS

Hypothyroid - under management; history of CaOx uroliths - SO diet and potassium citrate, galliprant for OA. Recent increases in ALT and AlkP; concern for primary hepatopathy

Current Medications: Thyroxine 1.5mg BID, Potassium Citrate BID, Galliprant 30mg SID, Dausuquin
Lab Results: recent increases in ALT and AlkP
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended with anechoic contents as well as mineral/sand debris. Small conglomerated cystoliths cannot be ruled out. No masses or inflammatory changes are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface. However, there is additionally mineral/small cystoliths noted within the intraprostatic urethral lumen.

The right kidney is normal in size (5.15 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. Non-obstructive areas of mineralization/nephroliths are noted, the largest of which measures 0.60 cm.

The left kidney is normal in size (5.31 cm), shape and echogenicity. A cortical cyst is noted in the crania pole measuring 2.3 cm x 2.7 cm. 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. Non-obstructive areas of mineralization/nephroliths are noted.

Adrenal Glands

The right adrenal gland is normal in size (2.34 cm long x 0.52 cm at the cranial pole and 0.55 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 (1.84 cm long x 0.50 cm at the cranial pole and 0.72 cm at the caudal pole), 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). A 0.50 cm hypo- to anechoic non-capsule disrupting nodule is noted near the tail of the spleen. 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. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is mildly overdistended with a moderate amount of non-dependent, mildly aggregated/inspissated sludge. Hypo to anechoic cystic areas are noted between the gallbladder sludge and

luminal wall. The wall is otherwise smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion.

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.

PRIMARY FINDINGS

- **Emerging mucocele –** 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. The non-dependent nature of this sludge combined with the cystic areas are suggestive, however, of possible emerging cystic mucosal hyperplasia or early gallbladder mucocele.

- **Heterogenous Liver –** 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.

SECONDARY FINDINGS

- Bilateral non-obstructive nephroliths and a large cortical cyst in the left kidney

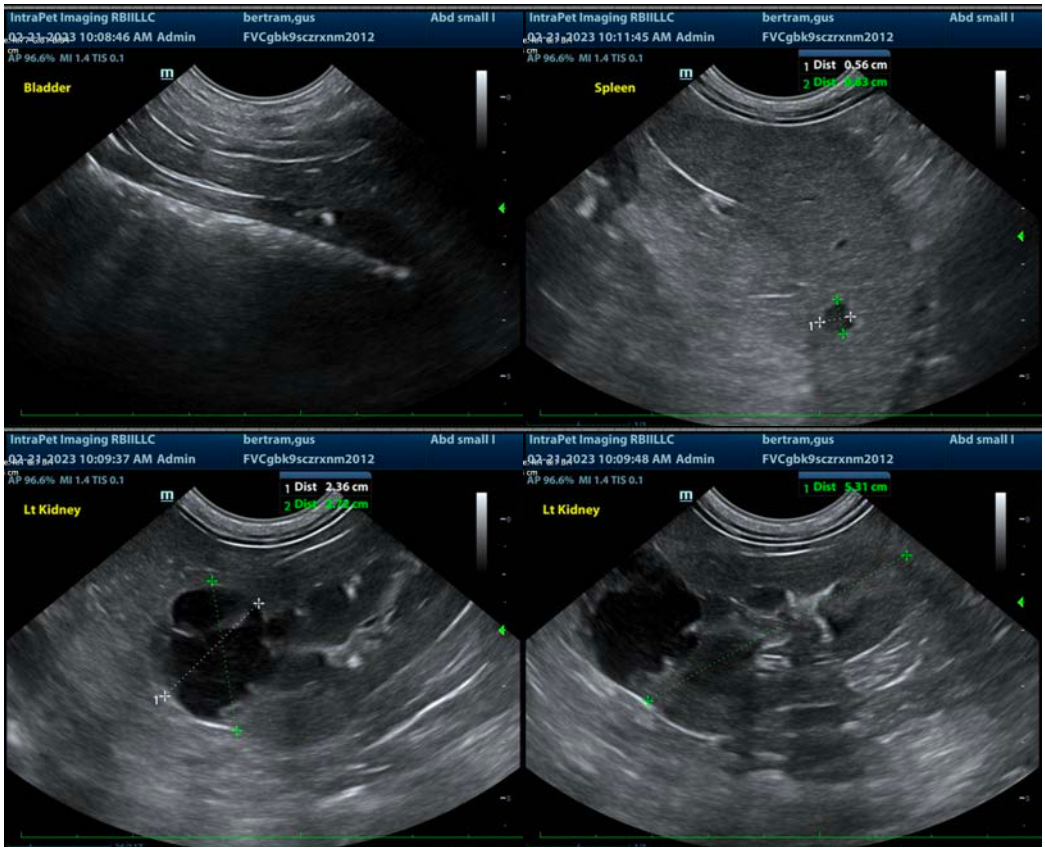
- Urinary bladder sand/mineral debris +/- tiny cystoliths

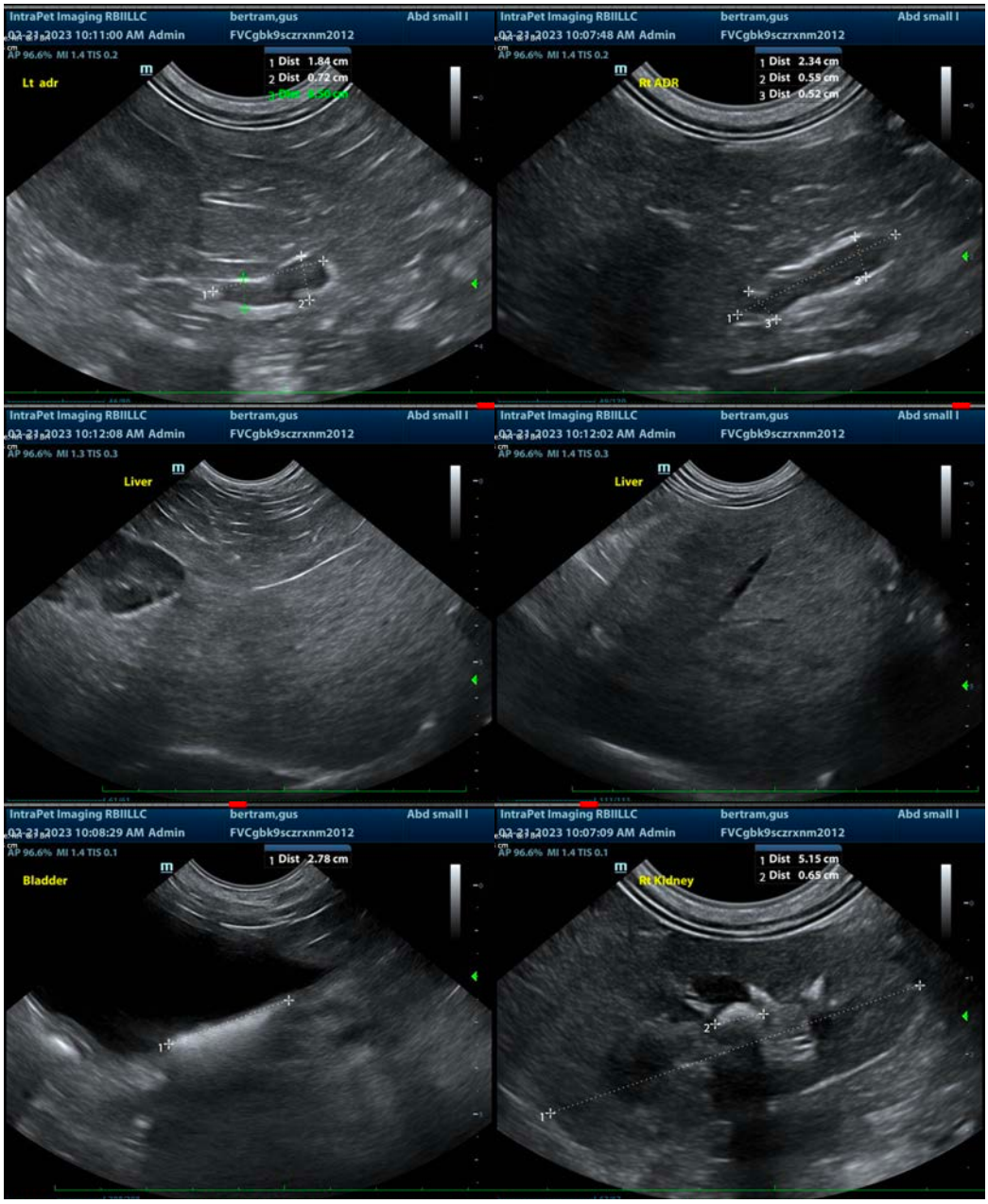
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

- **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

Given the appearance of this patient's liver and gallbladder, recommendations are dependent on clinical signs, and if patient is clinically well, further diagnostic could include a fine needle aspirate of the liver if patient's coagulation status is appropriate, followed by empirical medical management of the emerging mucocele with hepatic nutraceuticals including Ursodiol, broad-spectrum antibiotics, and close monitoring of clinical signs and laboratory changes/liver enzymes for improvement. With that approach, recheck liver enzymes should be considered in 2 weeks. If they are improving, antibiotics should be continued until they either normalize or plateau. If liver enzymes don't improve and/or clinical signs such as cranial abdominal pain, nausea, inappetence, etc. develop, more aggressive therapy up to and including a cholecystectomy (at which time a liver biopsy should also be obtained) may be necessary.




IntraPet Imaging RBIILLC
bertram,gus
Abd small I
02-27-2023 10:11:00 AM Admin
FVCgbk9sczrxnm2012
AP 96.6% MI 1.4 TIS 0.2
Lt adr
1 Dist 1.84 cm
2 Dist 0.72 cm
IntraPet Imaging RBIILLC
bertram,gus
Abd small I
02-27-2023 10:07:48 AM Admin
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AP 96.6% MI 1.4 TIS 0.2
Rt ADR
1 Dist 2.34 cm
2 Dist 0.55 cm
3 Dist 0.52 cm
IntraPet Imaging RBIILLC
bertram,gus
Abd small I
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AP 96.6% MI 1.3 TIS 0.3
Liver
IntraPet Imaging RBIILLC
bertram,gus
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Liver
IntraPet Imaging RBIILLC
bertram,gus
Abd small I
02-27-2023 10:08:29 AM Admin
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Bladder
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IntraPet Imaging RBIILLC
bertram,gus
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02-27-2023 10:07:09 AM Admin
FVCgbk9sczrxnm2012
AP 96.6% MI 1.4 TIS 0.1
Rt Kidney
1 Dist 5.15 cm
2 Dist 0.65 cm

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