IMAGING PERFORMED BY

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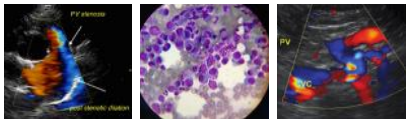

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DATE
9/26/22

PATIENT
Demi Koester

SPECIES
Canine

BREED
Puggle

SEX
Intact Female

AGE
11/29/09

WEIGHT
26 Pounds

INTERPRETED BY
Beth Johnson, DVM DACVIM

HOSPITAL NAME
Essex Middle River VC

REFERRING VET
Dr. Hicks

INVOICE
17458

PRESENTING CLINICAL SIGNS

History: Bloated abdomen, pu/pd, hindend ataxia/weakness, focal skin lesion on rump.

Current Medications: Carprofen 50mg sid, Gabapentin 100mg bid
Proin 25mg bid - all indefinitely, Enrofloxacin 136mg sid 2 weeks
Lab Results: 8/19/22 CBC/Chem./UA - alt 290, alphas 324, cholesterol 466, lipase 1,250/UA -spgr. 1.015, marked rods (free catch)
9/15/22 LDDS – pending.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Torbugesic IV.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is overdistended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Some of the echogenic debris appears to be mineral/sand debris settled along the dependent wall. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Left kidney is normal is size (4.84 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 infarcts observed. Moderate pyelectasia is noted, as well as nonobstructive nephrolithiasis.

Right kidney is normal is size (5.05 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

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 3.3 cm long x 0.81 cm at the cranial pole and 1.65 cm at the caudal pole. The right adrenal gland measures 3.9 cm long x 1.8 cm at the cranial pole and 1.8 cm at the caudal pole.

Spleen

Spleen is subjectively small/volume contracted 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. Multifocal mineral foci are noted. 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 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.

The visible small intestines are normal in wall thickness and layering. 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 and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

- 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.

- 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.

- An overdistended urinary bladder with urinary bladder debris, including sand debris

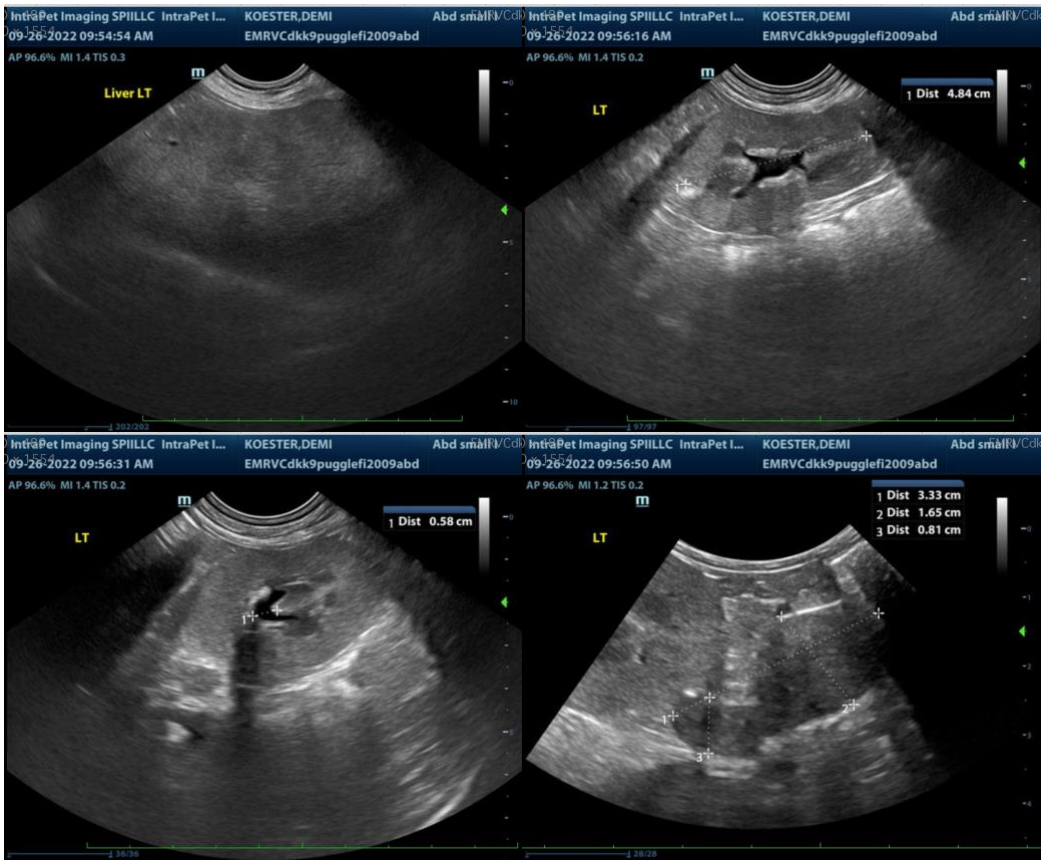
- Nonobstructive nephrolithiasis and pyelectasia in the left kidney, concerning for possible pyelonephritis versus a result of chronic PU/PD.

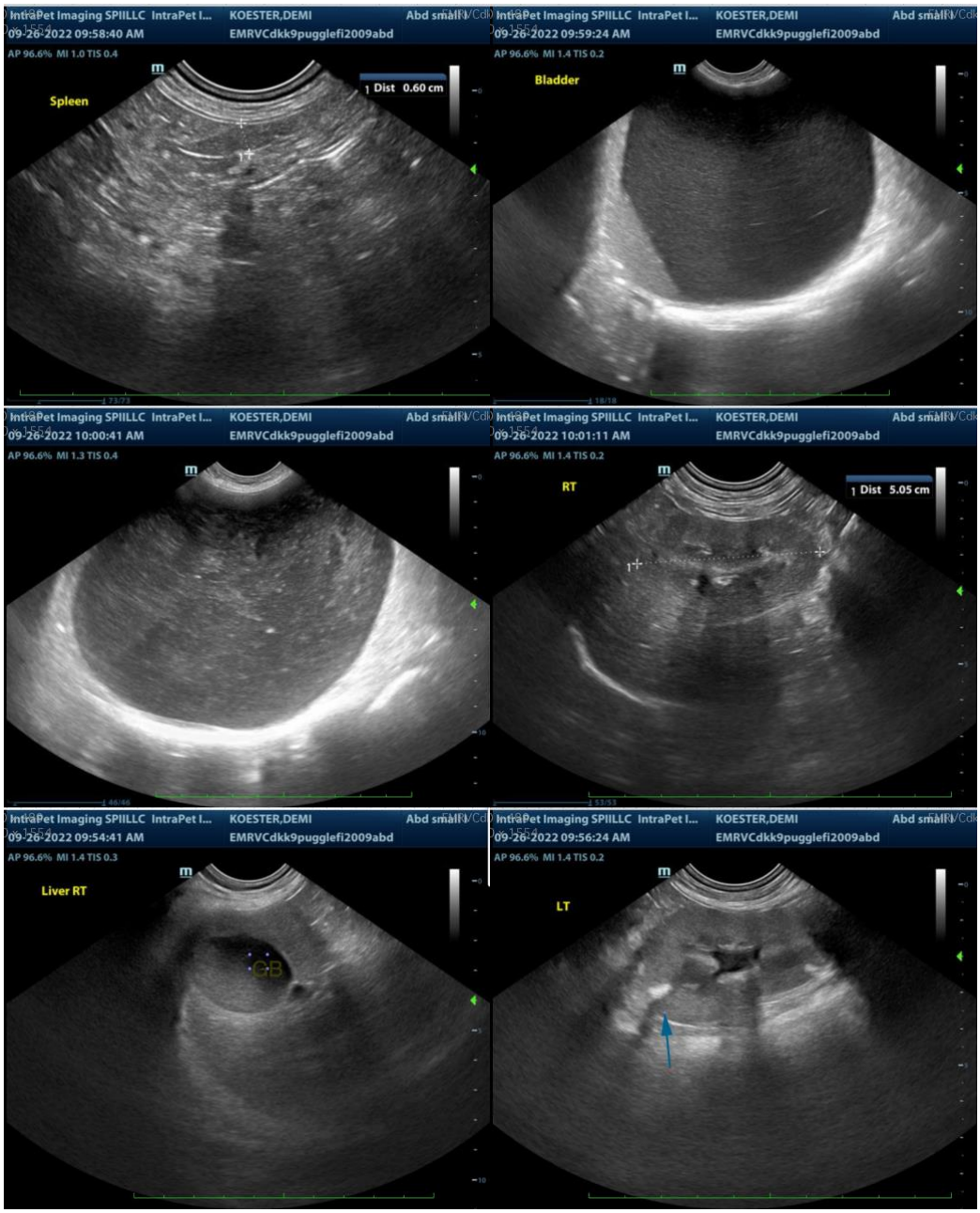
Secondary Findings

- Spleen mineralization – This is a benign change but can be associated with endocrinopathies, especially hyperadrenocorticism.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The pathology described above, combined with this patients history, etc., is all concerning for hyperadrenocorticism, likely pituitary dependent combined with secondary urinary tract infection +/- pyelonephritis. Therefore, a urine culture is recommended if not recently evaluated. Once the urinary tract infection has cleared, if protein is still present in the urine, a urine protein to creatinine ratio is recommended to quantify the proteinuria if present. A low dose dexamethasone suppression test, as is reportedly already pending is recommended and finally, given the concurrent ataxia reported, ruling out a vascular event given the suspected Cushings disease is indicated. Therefore, a blood pressure, as well as the investigation for possible proteinuria as stated above is recommended if not recently evaluated.

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Spleen
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Bladder
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Liver RT
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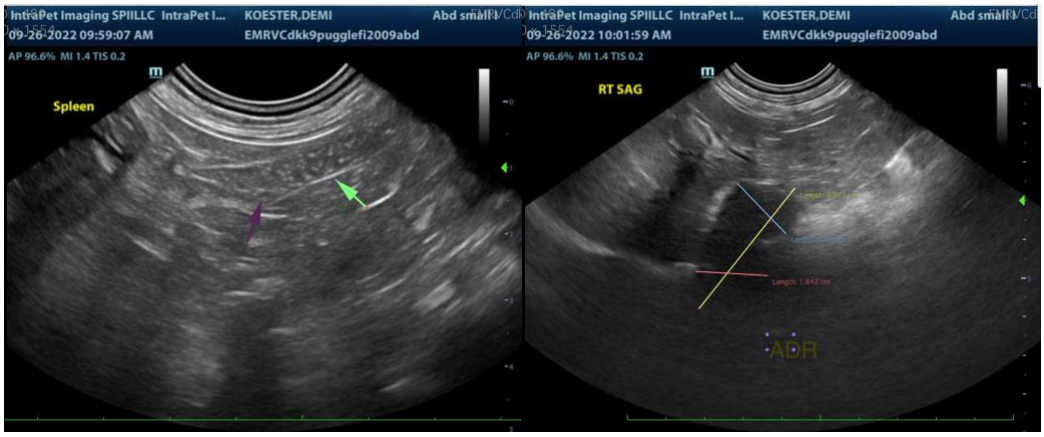
LT



The information and recommendations provided are based on the images presented by the referring veterinarian. 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
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