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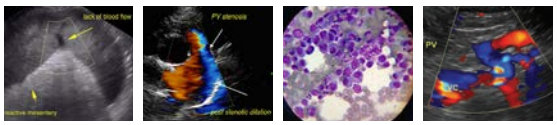

ANIMAL SOUNDS NW
MOBILE VETERINARY ULTRASOUND
IMAGING PERFORMED BY
AnimalSoundsNW.com 541-357-9423

PATIENT

Tony Buck

SPECIES

Canine

BREED

Lhaso Apso

SEX

Neutered Male

AGE

14 Years

WEIGHT

17.9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Sara Hansen

HOSPITAL NAME

West Eugene AH

REFERRING VET

Dr. Powers

INVOICE

43358

DATE

6/21/23

PRESENTING CLINICAL SIGNS

Hematuria found incidentally on wellness BW last month and persisted upon recheck with no clinical signs of urinary tract discomfort. No bacteria, crystals, or pyuria noted in either urine sample. More recently, his appetite has decreased, and he has lost 2 pounds since last month. He is now also straining to urinate. History of chronically elevated ALP and triglycerides.

Abnormal PE/Chem/CBC/UA Results: 5/4/23: ALP 1187, triglycerides 1597 (post-prandial), Chol 410, PSL 241; UA RBC 4-10/hpf and 2+ protein. 5/12/23: Recheck triglycerides 489 (fasted), recheck UA RBC 4-10/hpf and 2+ protein. Current Medications Heartgard, Nexgard, Phycox Radiographic Findings None

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is diffusely thick with an irregular hyperechoic mucosa, measuring 0.30 cm thick, with a more prominently thick irregular trigone and proximal urethra measuring 0.61 cm thick extending from the prostatic mass.

The prostate is asymmetrically irregularly enlarged measuring 2.0 cm wide with a diffusely heterogeneous, partially cystic parenchyma. Margins are difficult to fully differentiate from surrounding tissue.

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 mineral or infarcts observed. The left kidney measured 5.01 cm. The right kidney measures 5.17 cm. Pyelectasia is noted bilaterally. Marked pyelectasia noted in the left kidney measuring 1.0 cm in the sagittal view with a dilated ureter noted proximally as it exits the kidney and again distally as it enters the urinary bladder. It cannot be fully traced in these images.

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 right adrenal gland measures 2.23 cm long x 1.9 cm at the cranial pole and 1.1 cm at the caudal pole. The left adrenal gland measures 0.62 cm at the cranial pole and 1.1 cm at the caudal pole.

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. Visible vasculature and biliary tree appear normal without distension or congestion.

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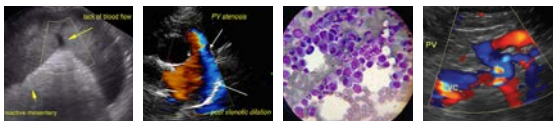

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Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

The 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.

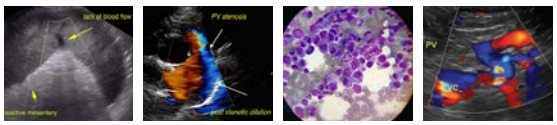
Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

ULTRASONOGRAPHIC FINDINGS

- Heterogeneous prostatic mass – concerning for infiltrative neoplasia such as carcinoma versus other. However, benign, bacterial, or even fungal prostatitis cannot be ruled out without additional information.
- Chronic cystitis is suspected. However, in addition to chronic cystitis there is some concern for infiltration of the prostatic mass into the proximal urethra and trigone, further supporting carcinoma as a differential. Again, however, especially given the diffuse bladder wall changes, a benign prostatitis/cystitis is also possible.
- Marked pyelectasia in the left kidney with a dilated ureter – suggestive of at least partial obstruction caused by the infiltrative tissue affecting the trigone. Having said that, an infection (i.e., pyelonephritis) cannot be ruled out.
- 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.



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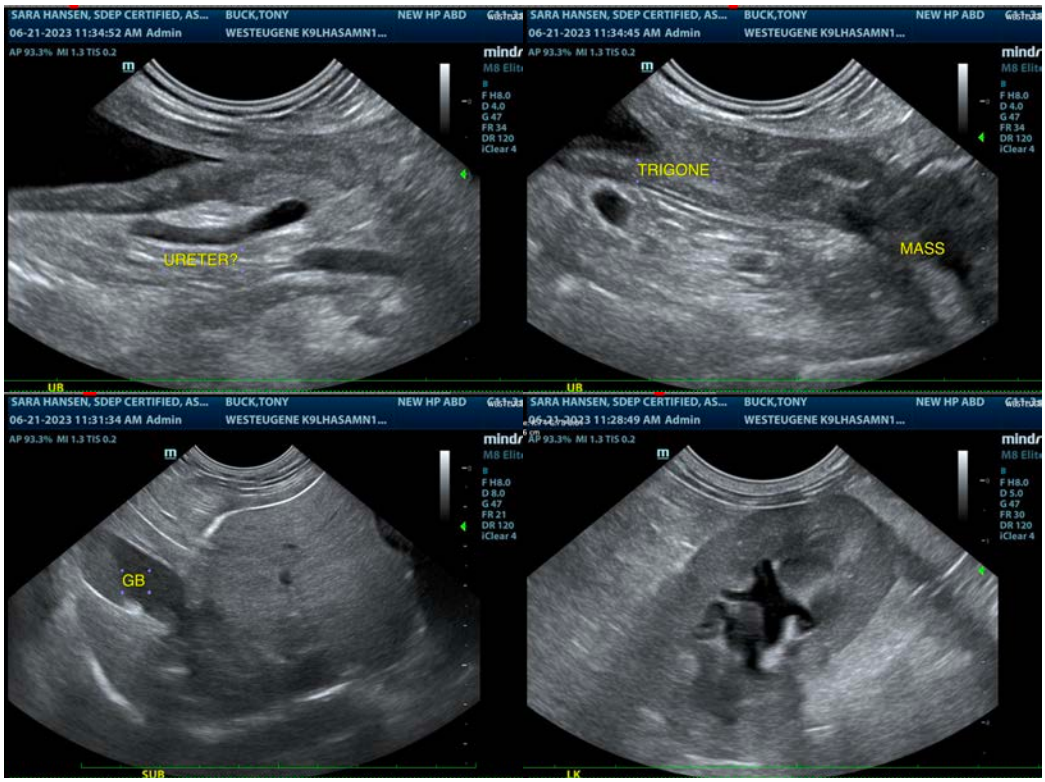
- Mild gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted 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

Urinalysis and urine culture, if indicated based on urinalysis results, are recommended. Submission of urine to look for BRAF gene mutation, which is associated with urinary bladder cancer, could be considered. Other diagnostic options include traumatic catheterization, fine needle aspirate (with small risk of tumor seeding/trailing) or cystoscopy for further sampling.

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.

The adrenal, liver and gallbladder changes can all be seen with hyperadrenocorticism. However, further evaluation and/or treatment of hyperadrenocorticism is not recommended in the face of concurrent illness. Therefore, addressing the prostatic and urinary bladder pathology is considered the priorty.



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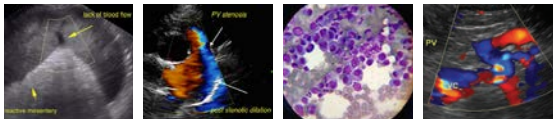

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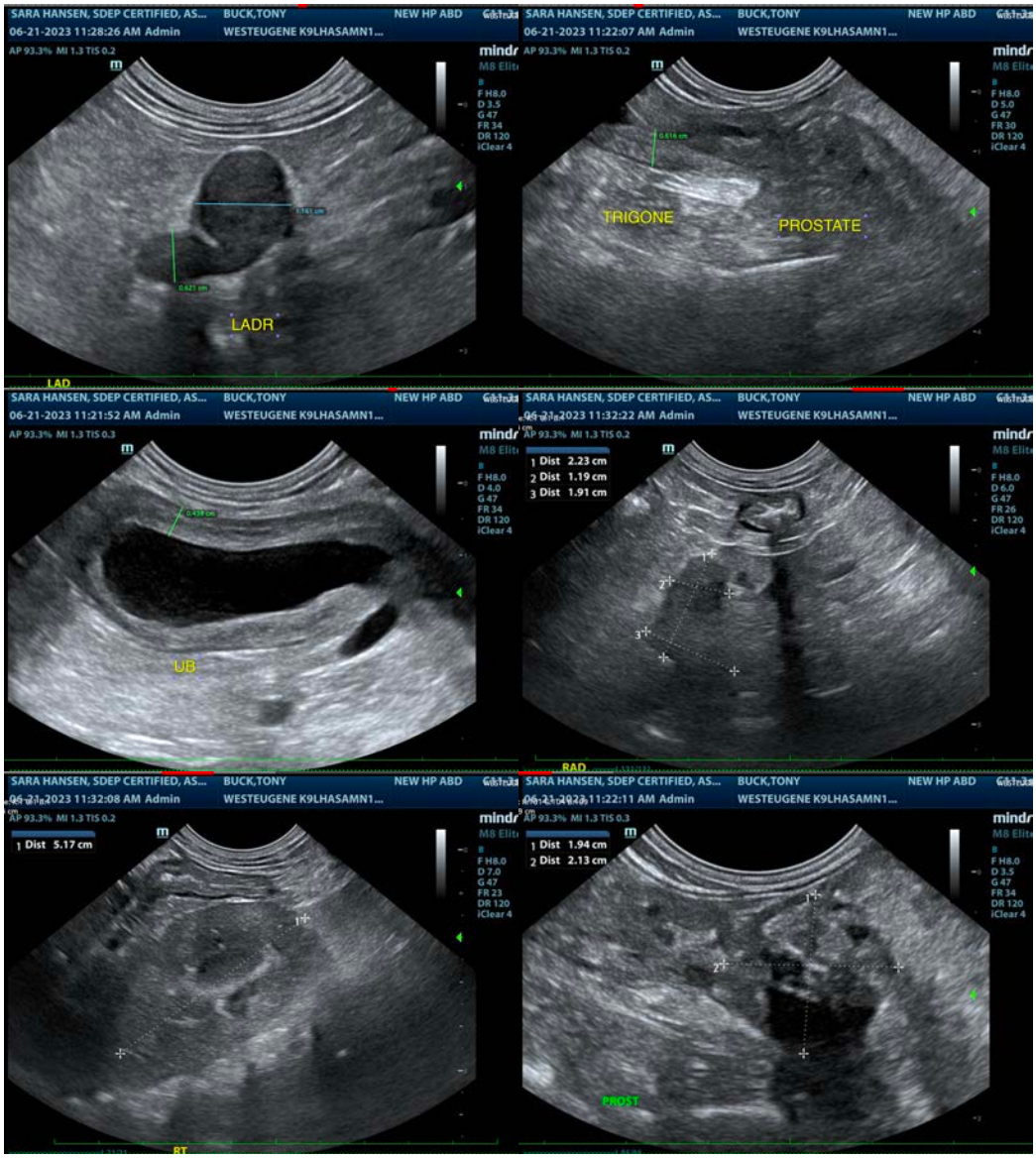

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com