

**DATE PRESENTING CLINICAL SIGNS**

11/8/22 Elevated ALKP on routine BW level is 1,159, USG 1.004.

PATIENT Current Medications: None listed.

Louis Wilkes

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine

Urinary System**BREED**

Yorkie Poo

The urinary bladder is moderately distended with anechoic contents. No masses or inflammatory changes. Shadowing mineral foci are noted within the proximal urethra, before the prostate, measuring 0.47 cm. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

SEX

Intact Male

Prostate is normal in size for an intact male. Parenchyma is diffusely homogenous and relatively hyperechoic. Normal distinct margins and symmetrical bilobed shape are maintained.

AGE

8/31/16

The right kidney is normal in size (5.23 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. Small, non-obstructive areas of mineralization/nephroliths are noted.

WEIGHT

23 Pounds

The left kidney is normal in size (4.79 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 or infarcts observed. Small, non-obstructive areas of mineralization/nephroliths are noted.

INTERPRETED BYBeth Johnson, DVM
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (2.21 cm long x 0.65 cm at the cranial pole and 0.59 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BYStephanie Warga
RDCS, RVT

The left adrenal gland is normal in size (1.85 cm long x 0.49 cm at the cranial pole and 0.59 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Perry Hall AH

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.

REFERRING VET

Dr. Baer

Liver

The liver is subjectively large in size/rounded. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE

42636

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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.

The left testicle contains a discrete, round hypoechoic nodule that measures approximately 0.70 cm in size. The right testicle contains a cystic nodule.

PRIMARY FINDINGS

- **Hepatomegaly** – Primary rule out is a benign steroid, endocrine, or vacuolar hepatopathy versus a reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease such as round cell neoplasia is possible but considered less likely.
- Cystolith in the proximal urethra and non-obstructive bilateral small nephroliths
- Chronic active pancreatitis

SECONDARY FINDINGS

- **Nodule in the left testicle and a cystic area in the right testicle** – Both benign and malignant etiologies are possible and cannot be differentiated with ultrasound alone.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

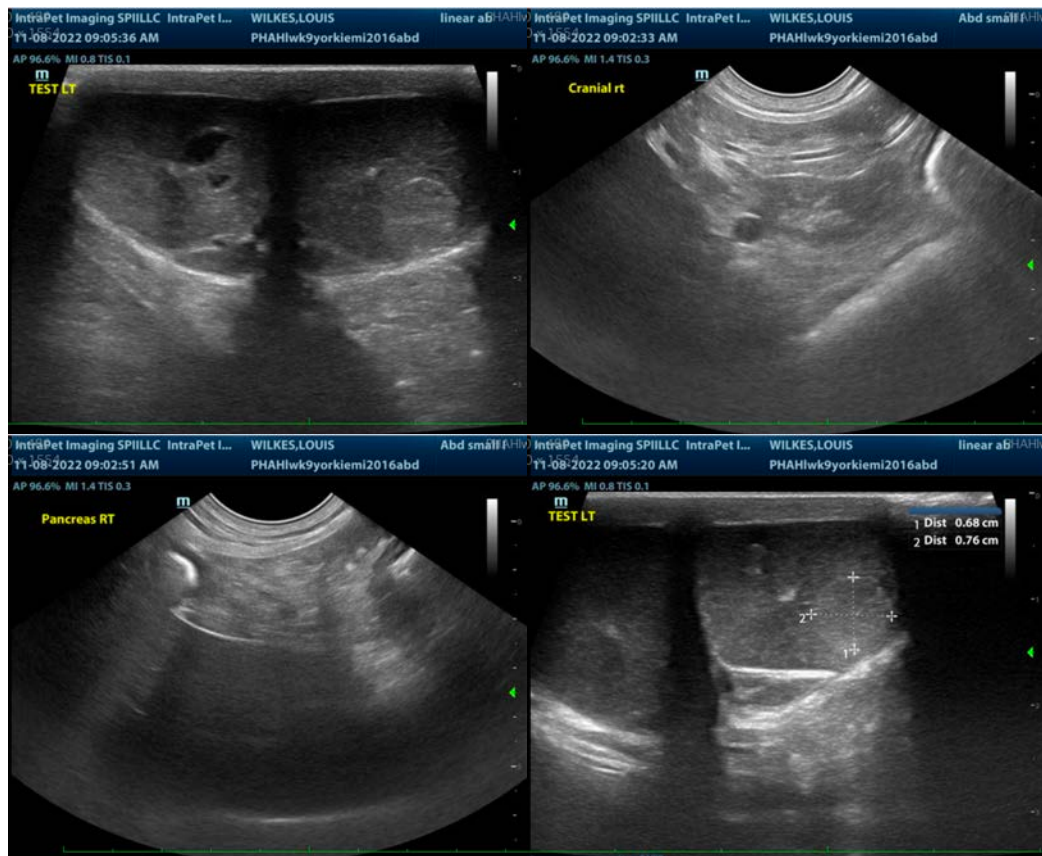
If not recently evaluated, urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

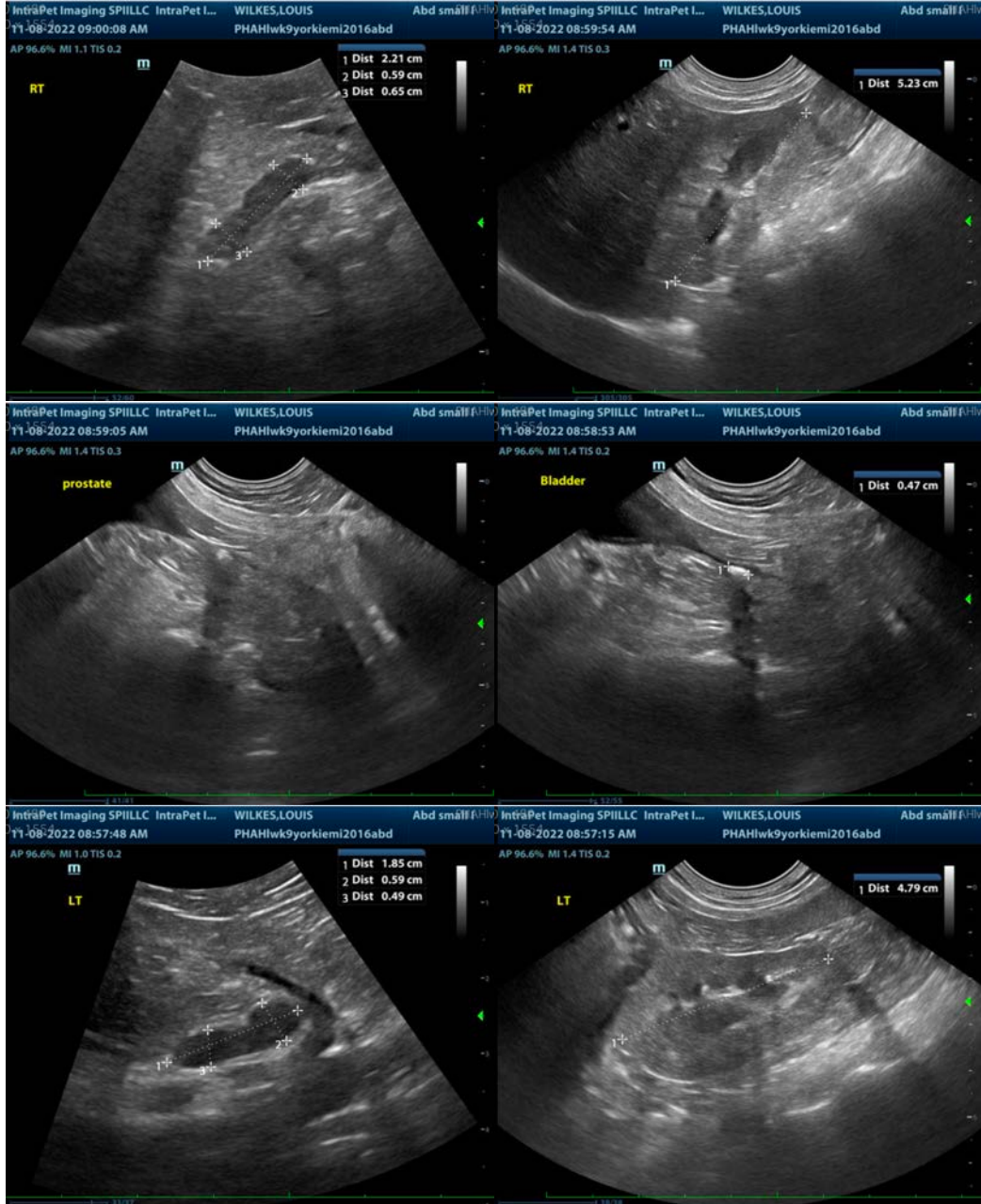
Differentials for increased ALP are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound,

reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc.

There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

Additionally, while not likely related to the reported increased ALP, given the reported testicular nodules, patient neuter is recommended with submission of testicles for histopath.







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.

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