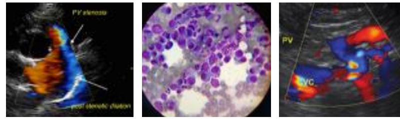
IMAGING PERFORMED BY

IntraPet.com



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DATE
5/12/22

PATIENT
Luke Knight

SPECIES
Canine

BREED
Flat Coated Retriever

SEX
Intact Male

AGE
6/12/12

WEIGHT
108.4 Pounds

INTERPRETED BY
Kathleen Sennello DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

HOSPITAL NAME
Eastern AH

REFERRING VET
Dr. Warner-Jones

INVOICE
15149

PRESENTING CLINICAL SIGNS

History: Older Pet, intermittent Vomiting. General work up concern for low USG on first morning urine. Screening for Scarred kidneys, prostate issues, cancer.

Current Medications: None. Gabapentin 900mg 2 hours prior to scan.
Lab Results: Senior screening labs >> Isosthenuric urine. First morning usg 1.012.
Radiographs: Abd rads in April. Possible large pylorus vs other.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

The prostate is large in size (4.88 cm in height in the sagittal view) but has a regular shape with smooth external margins. The parenchyma is hyperechoic and heterogenous, but no discrete focal lesions are present. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (8.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (8.45 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.7 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.75 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

Liver

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a hyperechoic nodule visualized in the right side of the liver, measuring 2.02 cm x 1.7 cm and another smaller hyperechoic nodule, measuring 1.0 cm in diameter.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis: mucosa layer ratio. The jejunum measured as normal (0.47 cm). Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The (pancreas/region of the pancreas) is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

Other

Both testicles are imaged and appear within normal limits.

ULTRASONOGRAPHIC FINDINGS

- Large heterogeneous hyperechoic prostate. The findings are most consistent with benign prostatic hypertrophy +/- prostatitis. I recommend urinalysis and culture.

- Heterogeneous liver with hyperechoic nodules. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The hyperechoic nodules visualized trend the more benign appearance, but an underlying neoplastic process cannot be ruled out.

- Mild/moderate gallbladder debris. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

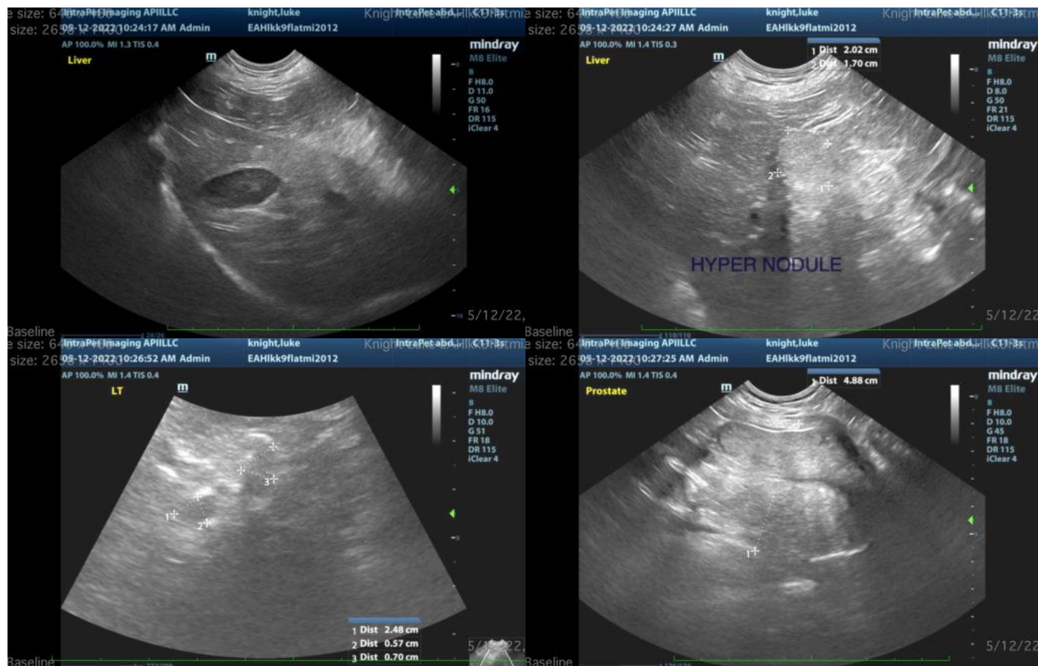
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

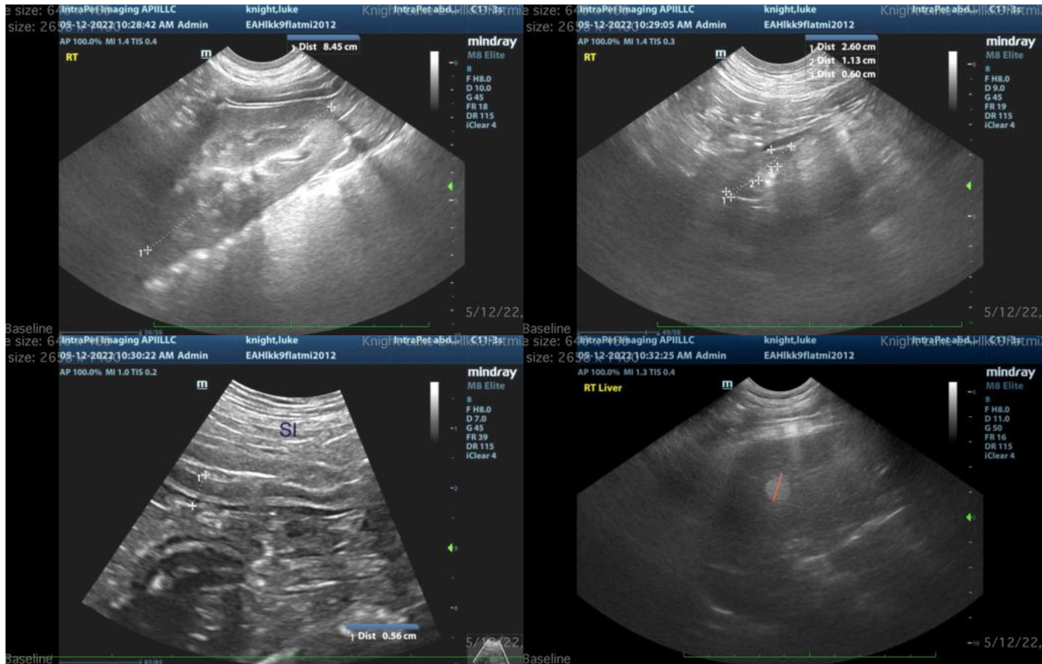
Today’s scan is relatively normal for an intact senior dog. The prostate is large and hyperechoic and heterogeneous. This is most consistent with benign prostatic hypertrophy. Consider a urinalysis and culture to look for evidence of subclinical prostatitis.

The liver is heterogeneous. This could be an age-related change (remodeling) or consistent with a mild hepatopathy. Correlate with blood work findings. There are some ill-defined hyperechoic nodules visualized. I suspect these lesions are too deep to easily fine needle aspirate. Consider continued monitoring with ultrasound and if they’re enlarging, consider a contrast CT scan and surgical removal/biopsy.

If metabolic disease is thought an unlikely cause for the vomiting, consider primary gastrointestinal disease, such as food allergies/ dietary intolerance, chronic pancreatitis, GI parasitism, dietary indiscretion, IBD and less likely intestinal neoplasia. Correlate with abdominal radiographs and consider a GI panel (to Texas A & M) for a qualitative PLI, TLI, cobalamin and folate to obtain more information regarding the GI tract and the pancreas.

Isosthenuria is a broad problem to address. Quantitate water intake to determine if the pet is polyureic. I recommend urinalysis and culture to look for infection, evidence of prostatitis, etc. You could consider a liver function test, screening for leptospirosis, etc.





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.

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