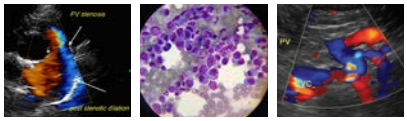
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE

1/5/23

PATIENT

Teddy Shamleffer

SPECIES

Canine

BREED

Yorkshire Terrier

SEX

Neutered Male

AGE

10/3/07

WEIGHT

8.46 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Everhart Vet Hospital

REFERRING VET

Dr. Goodman

INVOICE

43984

PRESENTING CLINICAL SIGNS

Decreased appetite and intermittent vomiting.

Current Medications: Carafate 500mg BID, also Cerenia as needed for nausea.
Lab Results: High ALKP/sodium borderline elevated.
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 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 normal in size (1.01 cm) and slightly irregular in shape. The parenchyma is slightly heterogeneous with mildly irregular external margins. The prostatic urethra appears normal with no evidence of irregularity, invasion, or mass effect. There are small mineralizations evident in the parenchyma.

The left kidney has a normal shape and size (3.45 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.21 cm) with pinpoint non-obstructive nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring XXcm 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 0.56 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 large and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The parenchyma is diffusely severely heterogeneous and nodular with nodules varying from 0.25-1.5 cm. Some of the nodules appear to mildly deviate the hepatic margins. One nodule appears to be slightly deviating the gallbladder wall, measuring 0.62 cm.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. 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. Duodenum wall measures 0.38 cm. Jejunum wall measures 0.27 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 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.

PRIMARY FINDINGS

- Large, severely nodular and heterogeneous liver – 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. While often these diffuse hypoechoic nodules are benign, these have a slightly more aggressive appearance in that they are deviating the hepatic margins slightly.

- Slightly irregular prostate with small mineralizations – While the prostate larger appears within normal limits, the mineralizations could be concerning for a possible carcinoma.

SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with pinpoint non-obstructive nephroliths – The bilateral renal findings are consistent with age-related change.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No obvious for the vomiting reported is observed, as the gastrointestinal tract and pancreas appear relatively normal.

The liver appears severely nodular and heterogeneous. Often, these types of nodules are benign in nature, but these do deviate the hepatic margins somewhat. Recommend a fine needle aspirate (provided coagulation parameters are normal) and a liver function test.

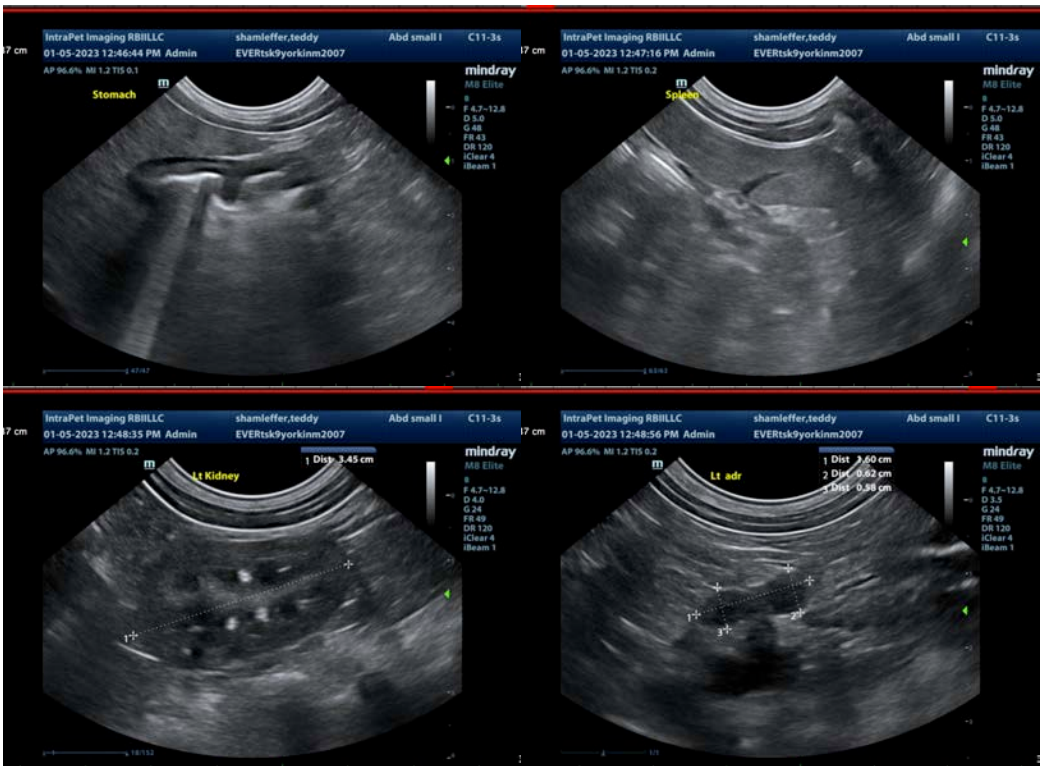
The prostate is relatively normal in size but has some pinpoint mineralizations and looks slightly irregular. Correlate this with a digital rectal exam. Options moving forward would include continued monitoring with ultrasound or a fine needle aspirate of the prostate, as the mineralization increases the concern for possible early neoplasm.

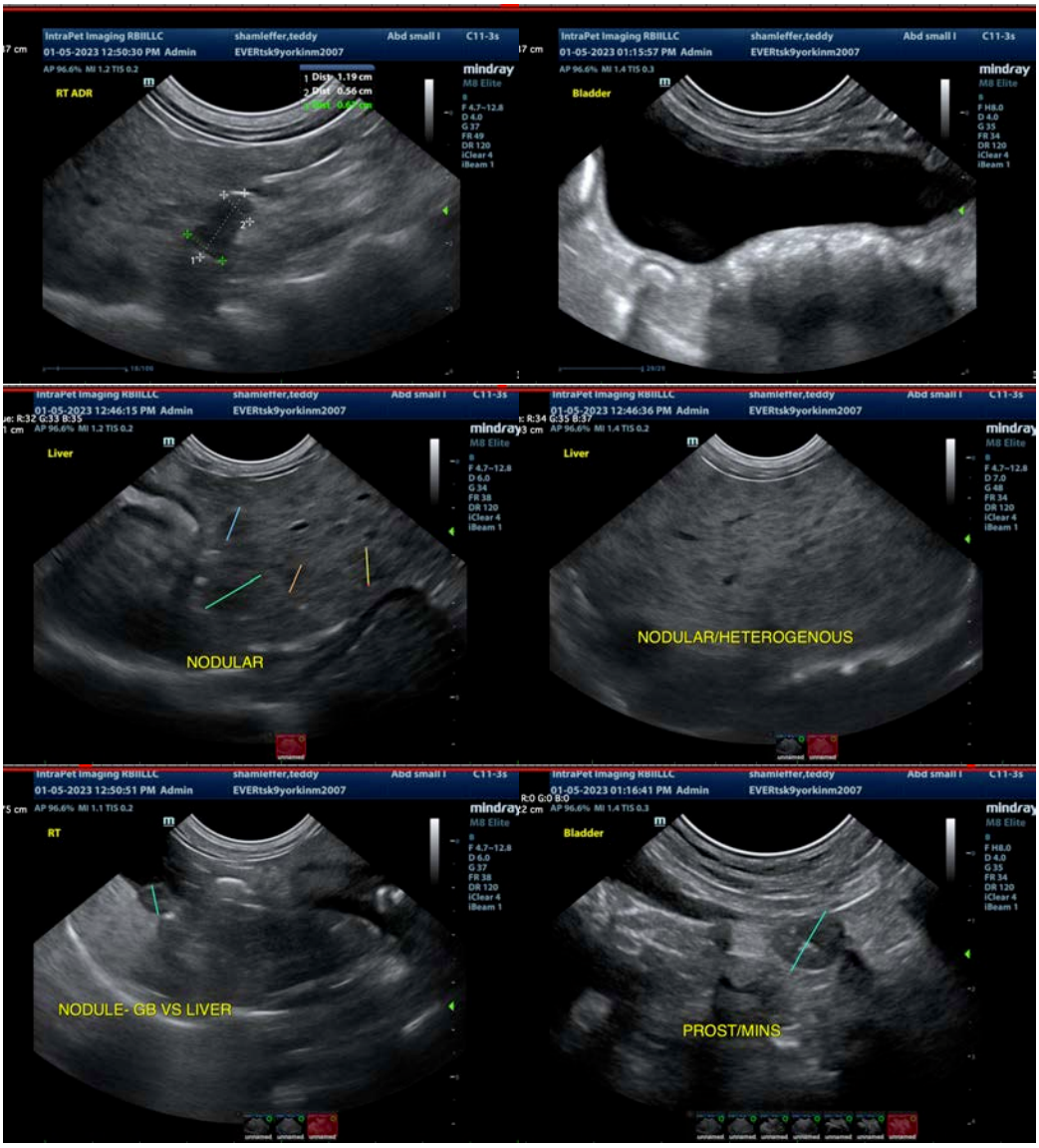
The changes observed in the kidneys are most consistent with chronic age related renal changes. Recommend a blood pressure, urinalysis and culture as a baseline.

It is unclear if the hepatic changes could be causing the vomiting, although a primary gastrointestinal issue is possibly more likely. Consider the following:

- Consider a novel protein/hydrolyzed protein diet (exclusively at least 4-6 weeks)
- Consider a GI panel to Texas A&M for evaluation of B12 levels, folate, PLI/TLI etc.. to further evaluate for pancreatic/small intestinal disease.
- Recommend chronic probiotic therapy.
- If symptoms persist, recommend reevaluation and possibly obtaining GI biopsies.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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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