IMAGING PERFORMED BY

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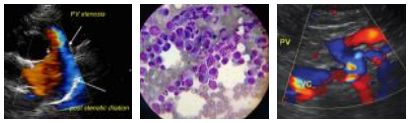

SonoPath
Clinical Sonography & Telecytology
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DATE

5/5/22

PATIENT

Jack Bastian

SPECIES

Canine

BREED

Shih Tzu

SEX

Neutered Male

AGE

4/9/07

WEIGHT

6.1 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

North Laurel AH

REFERRING VET

Dr. Steere

INVOICE

37426

PRESENTING CLINICAL SIGNS

Chronic renal disease (IRIS stage 2) and historical heart murmur. Recent syncopal episodes increasing in frequency and duration. Poor appetite. Possible hypoglycemia.

Current Medications: Vetmedin 1.25mg PO AM, 0.625mg PO PM.
Lab Results: 4/27/22: CBC - Retic 116 (H), WBC 22.1 (H), Neut 17.26 (H), Mono 1.945 (H). Chem - Glu 59 (L), SDMA 39 (H), Creat 2.0 (H), BUN 96 (H), k 5.6 (H), Na:k 26 (L), ALB 2.5 (L), ALT 165 (H), AST 84 (H), Chol 119 (L), CK 427 (H), T4 – WNL.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Declined.

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 (0.70 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (2.99 cm). Overall echogenicity is slightly hyperechoic with poor 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 (3.15 cm) with a 1.11 cm cyst. Overall echogenicity is slightly hyperechoic with poor 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 0.42 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 0.41 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 in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature appears somewhat dilated and prominent. There are numerous ill-defined, subtle hyperechoic nodules throughout the hepatic parenchyma. Specific examples

measured 1.04, 0.91, and 0.92 cm. Additionally, there is an isoechoic bulging mass effect towards the distal aspect of a liver lobe on the mid left side measuring 2.9 cm x 1.97 cm.

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 mild 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. Jejunum wall measured 0.37 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 prominent and mottled compared to the surrounding isoechoic mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

There is a large volume of anechoic free fluid. No significant lymphadenopathy. The mesentery is diffusely hyperechoic.

PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.
- Large, irregular liver with diffuse hyperechoic nodules and an isoechoic mass effect. These lesions have a somewhat benign appearance, but given the clinical signs and the mildly dilated/prominent hepatic vasculature, a fine needle aspirate should be considered.
- Large volume free abdominal fluid

SECONDARY FINDINGS

- Prominent, mottled pancreas – The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Moderate gallbladder sludge – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

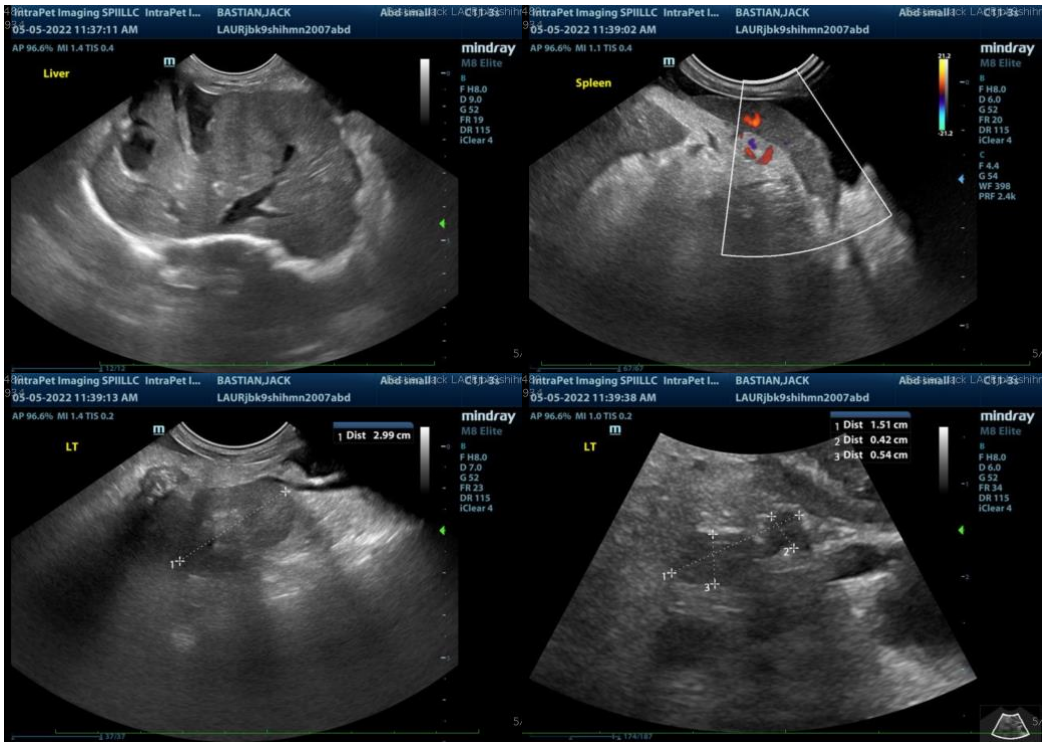
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

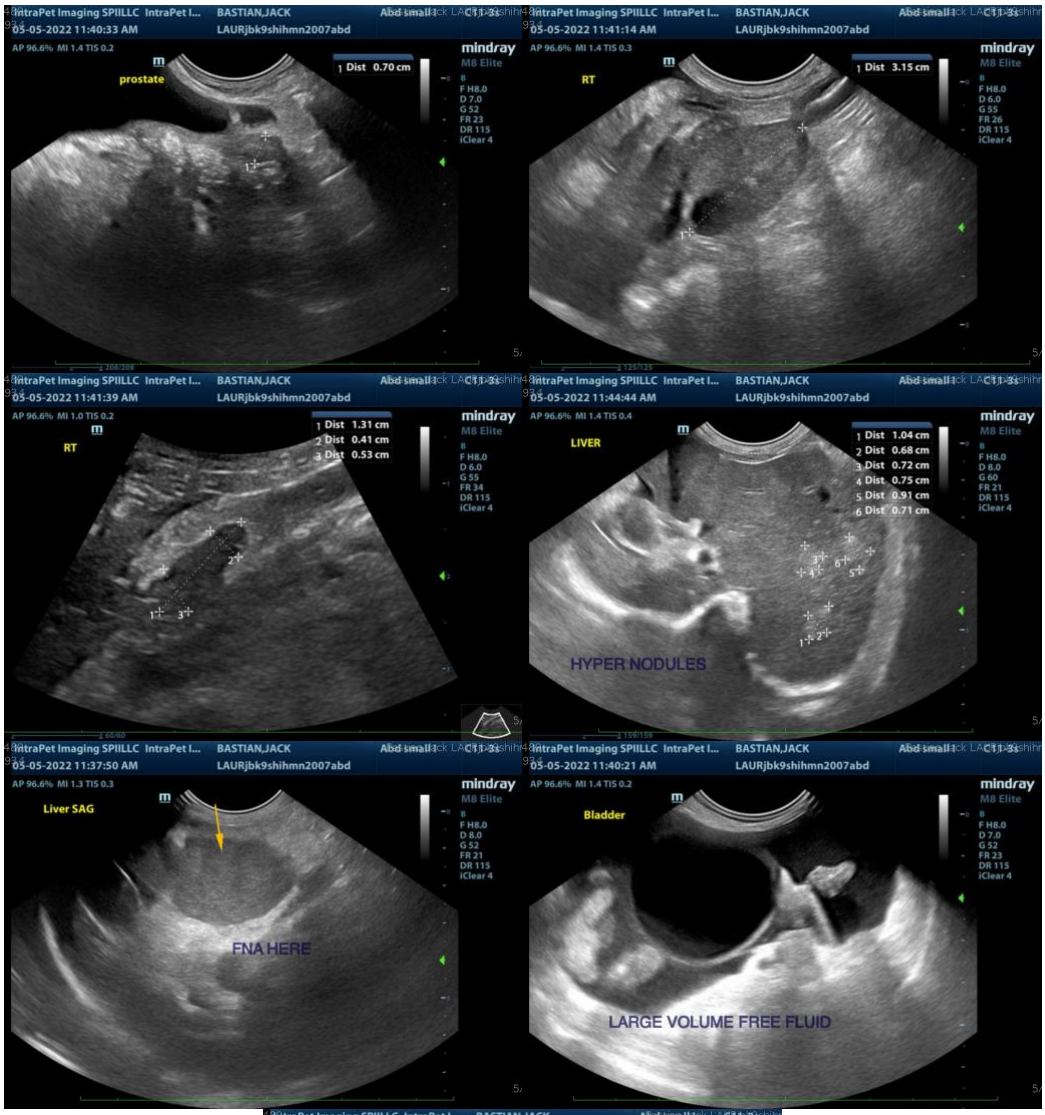
The liver appears somewhat large and irregular with hyperechoic nodules and a larger mass effect. The vasculature appears somewhat prominent. The first step (already initiated) is to get a cardiac evaluation to look for evidence of cardiac disease, which could be causing congestion and ascites. If there is no evidence of heart disease based on the hepatic findings, I would recommend a liver function test (low glucose, low albumin, etc.), and a fine needle aspirate of the liver (possibly more normal liver and the isoechoic mass effect, see image).

Additionally, fluid analysis and cytology should be performed on the abdominal fluid.

The kidneys also have decreased corticomedullary distinction. Recommend a blood pressure evaluation, urinalysis, culture, and urine protein to creatinine ratio to look for renal disease as a source for the hypoalbuminemia noted.

The albumin levels are low, but unlikely to be low enough to be causing the ascites noted. If heart disease is ruled out and liver function and renal protein loss is minimal, then consider a contrast CT scan of the caudal thorax and abdomen, and a possible GI panel to evaluate for a protein losing enteropathy.




IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:40:33 AM LAURjbk9shihmn2007abd
prostate
1 Dist 0.70 cm
mindray M8 Elite
IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:41:14 AM LAURjbk9shihmn2007abd
RT
1 Dist 3.15 cm
mindray M8 Elite
IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:41:39 AM LAURjbk9shihmn2007abd
RT
1 Dist 1.31 cm
2 Dist 0.41 cm
3 Dist 0.53 cm
mindray M8 Elite
IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:44:44 AM LAURjbk9shihmn2007abd
LIVER
1 Dist 1.04 cm
2 Dist 0.68 cm
3 Dist 0.72 cm
4 Dist 0.75 cm
5 Dist 0.91 cm
6 Dist 0.71 cm
HYPER NODULES
mindray M8 Elite
IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:37:50 AM LAURjbk9shihmn2007abd
Liver SAG
FNA HERE
mindray M8 Elite
IntraPet Imaging SPIILLC IntraPet I... BASTIAN,JACK
05-05-2022 11:40:21 AM LAURjbk9shihmn2007abd
Bladder
LARGE VOLUME FREE FLUID
mindray M8 Elite
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LIVER
ISOECHOIC LIVER MASS
mindray M8 Elite

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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