IMAGING PERFORMED BY

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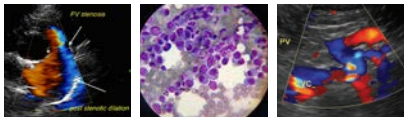

SonoPath
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DATE

7/5/22

PATIENT

Danny Searfodd

SPECIES

Canine

BREED

Schnauzer

SEX

Neutered Male

AGE

9/21/11

WEIGHT

20.6 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Stephanie Pearce RDCS, RVT

HOSPITAL NAME

Celebrie Vet Hospital

REFERRING VET

Dr. Garrett

INVOICE

39194

PRESENTING CLINICAL SIGNS

Patient seen by Doctor Garrett on 6/28/22 for ADR/Lethargic/not barking for a few days. New Cardiac Murmur Grade 3/6. Blood work and x-rays done : enlarged heart/trachea pushed up/liver enlarged.

Current Medications: None.
Lab Results: CPL- 448, Lipase-457, ALP- 991, GGT-19, ALT- 253.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Declined at this time.

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 (0.88 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 (5.68 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 (5.38 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.73 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 0.54 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 normal in 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 are numerous ill-defined hypoechoic lesions within the parenchyma, one measuring 2.33 cm x 0.96 cm, another is visualized at 1.78 cm x 1.89 cm. There is a small cystic lesion visualized measuring 0.83 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 moderate amount of mineralized 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 uniform diameter with minimal fluid distension. Wall appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Jejunum wall measured 0.38 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

Scan free abdominal fluid is present. There are mildly prominent mesenteric lymph nodes visualized measuring 0.47 cm and 0.55 cm. The omentum is of normal echogenicity.

PRIMARY FINDINGS

- Large, irregular, heterogeneous liver with ill-defined hypoechoic 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 appearance of the lesions observed trends towards a more benign process, although underlying neoplasia cannot be excluded as a possibility.

- Moderate mineralized gallbladder debris – There is a moderate amount of debris visualized within the gallbladder, but no significant thickening or inflammation surrounding the gallbladder. Continued monitoring is warranted.

SECONDARY FINDINGS

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

- Subjectively thickened small intestine – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver is large, heterogeneous, and slightly irregular with some ill-defined hypoechoic lesions. The appearance of the liver trends towards a more benign process, although an underlying neoplastic process cannot be excluded as a possibility. No large discrete focal lesions are observed. Given the historical findings

and the scant amount of free abdominal fluid, recommend a cardiac ultrasound (currently scheduled). If there is significant heart disease present, many of these changes could be secondary to that (i.e,. congestion, age related change, etc.). If there is no evidence of significant heart disease, then consider a primary hepatopathy and the following steps:

- Consider close evaluation of history for possible toxic changes examine medications, diet, dietary indiscretion etc...

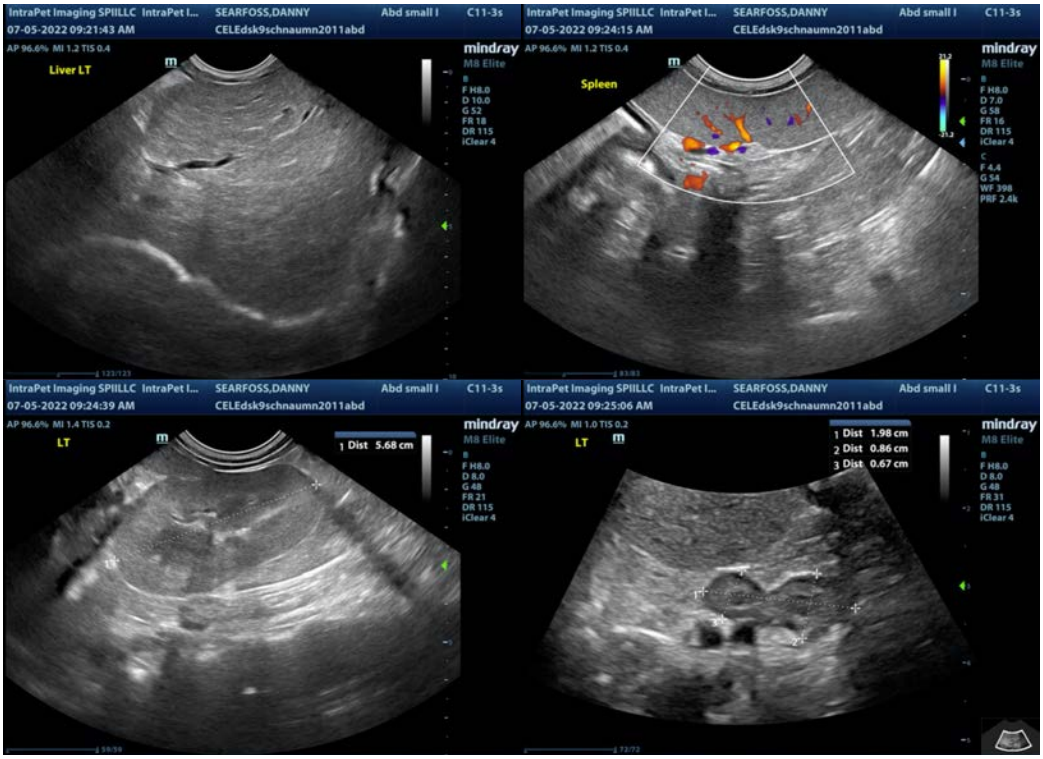
- Consider PCR on urine/serum for leptospirosis (if not on antibiotics)/serology if recent antibiotic history

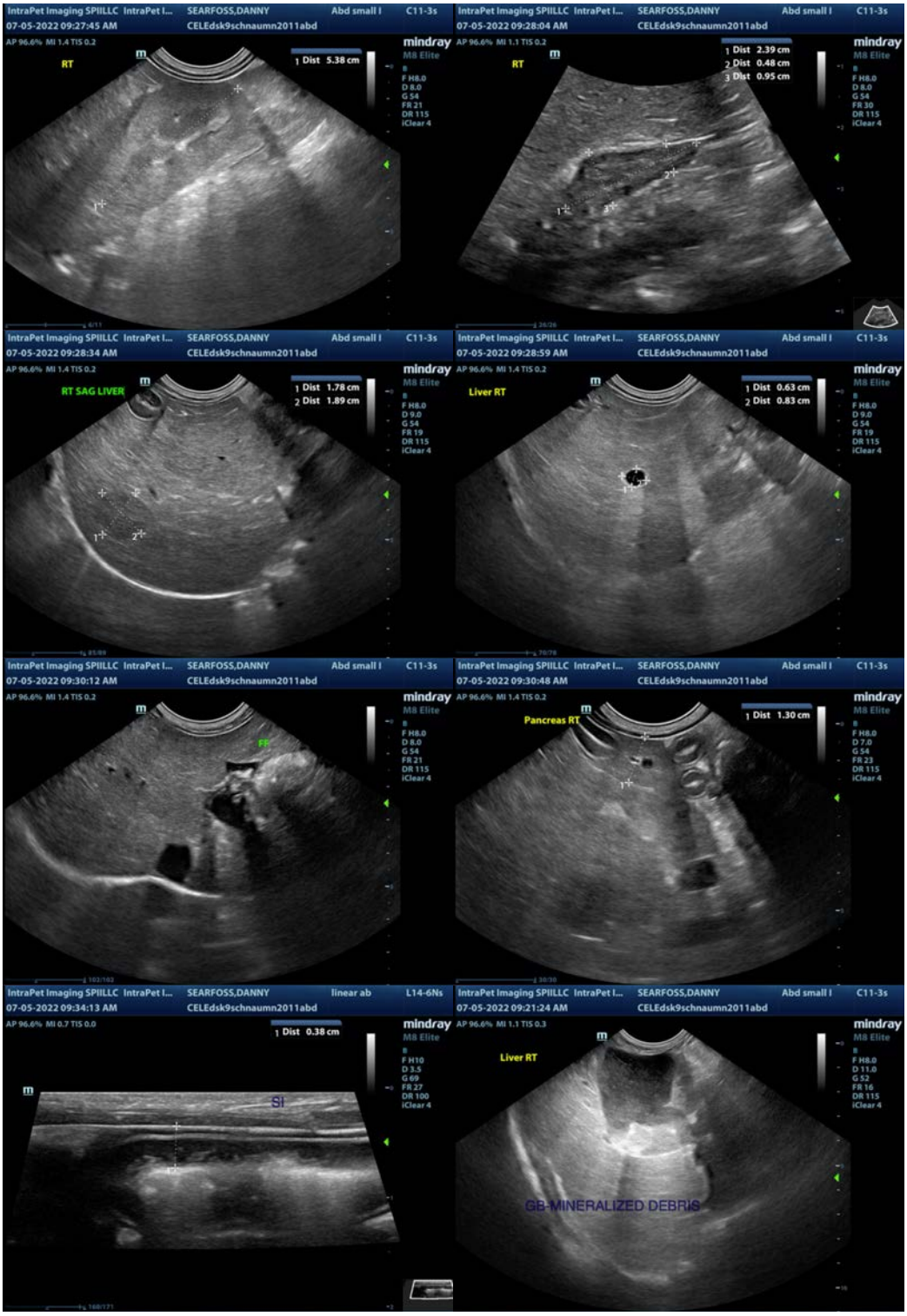
- If not already done, consider pre and post prandial bile acids to evaluate liver function

- If the ALP is significantly elevated relative to the ALT and symptoms consistent with cushings are present, consider adrenal function testing (ACTH stim)

- Consider Fine needle aspirate if round cell neoplasia is on your differentia list (25 g needle, normal coags)

- If no response to supportive care (denamarin, fluids, antibiotics,+/- ursodiol etc…) Consider liver biopsy with samples obtained for histopathology, culture, and copper levels.

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1 Dist 5.38 cm
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1 Dist 2.39 cm
2 Dist 0.48 cm
3 Dist 0.95 cm
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RT SAG LIVER
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Pancreas RT
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1 Dist 0.38 cm
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Liver RT
GB-MINERALIZED DEBRIS

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)
kathleen.sennello@sonopath.com