IMAGING PERFORMED BY

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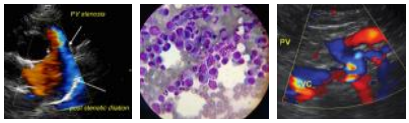

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DATE
12/16/22

PATIENT
Teddy Yalowitz

SPECIES
Canine

BREED
Bichon

SEX
Neutered Male

AGE
8/5/2008

WEIGHT
22.2 Pounds

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

HOSPITAL NAME
AMC of Dulaney Valley

REFERRING VET
Dr. Chrest

INVOICE
20116

PRESENTING CLINICAL SIGNS

History: Liver values increasing.

Current Medications: Galliprant 20mg SID, Apoquel 5.4mg SID, Thyro Tabs 0.2mg 1 AM, ½ PM, Tramadol 50mg ½ BID.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Andi Parkinson, BS, 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 2.0 cm) appear normal with no evidence of wall thickening, mucosal irregularities or masses. There is a focal area of hyperechoic shadowing mineralization in the dependent portion of the urinary bladder, most consistent with a stone, measuring approximately 1.0 cm.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (4.44 cm). 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 infarcts or hydroureter. Renal vasculature is normal. Mild pyelectasia is noted in the left kidney, measuring 0.26 cm. Numerous small nonobstructive nephroliths are noted.

The right kidney has a normal shape and size (4.83 cm). 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. Numerous small nonobstructive nephroliths were noted.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.74 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 0.57 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 large 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 are numerous ill-defined hyperechoic nodules visualized within the parenchyma, measuring approximately 0.36 cm, 0.32 cm, etc. Additionally, there is an ill-defined hyperechoic lesion on the left side of the liver, which is irregularly shaped and has two small cystic regions. This area measures approximately 2.7 cm x 1.22 cm and it as the periphery of the liver.

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 duodenum measured as normal (0.41 cm in wall thickness), and the jejunum measured as normal (0.32 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 hypoechoic as 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

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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Shadowing mineralization in the dependent portion of the urinary bladder. Findings are most consistent with a bladder stone. Correlate with abdominal radiographs. Recommend urinalysis and culture.

- Hypoechoic prominent pancreas. The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation.

- Large heterogenous liver with ill-defined hyperechoic nodules and an irregular hyperechoic slightly cystic mass lesion. 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 hyperechoic nodules trends towards the more benign

lesion. The cystic lesion is poorly defined. Consider a fine needle aspirate or close continued monitoring.

Secondary Findings

- Decreased corticomedullary distinction in both kidneys with mild left sided pyelectasia and numerous nonobstructive nephroliths visualized. The bilateral renal findings are consistent with age-related change. Pyelectasia of the left kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

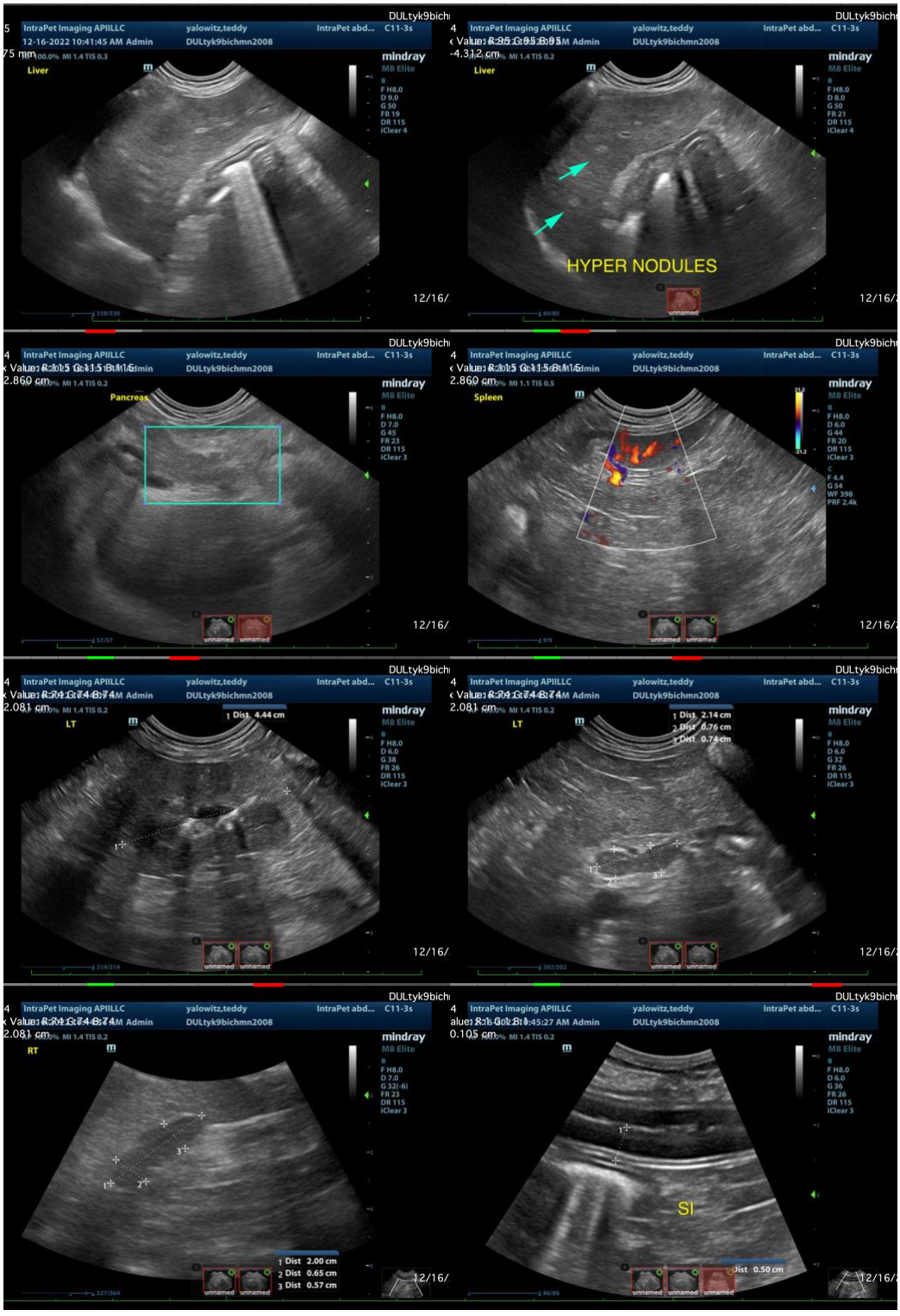
The liver is diffusely large and heterogenous. There are some ill-defined hyperechoic nodules, which I suspect represent benign lesions, although underlying neoplastic lesion cannot be ruled out. Additionally, there is a hyperechoic irregular subtle cystic lesion towards the periphery of the liver; fine needle aspirate of this region could be considered and strongly recommend continued monitoring with ultrasound. The cause for the significant liver enzyme elevation is unclear, this could be due to a diffuse hepatopathy or less likely related to the lesions described. Consider the following:

- 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.

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

There is a stone visualized in the urinary bladder. Recommend a urinalysis and culture and radiographs to confirm the size and number of stones present. If this is clinical, a cystotomy could be considered. Additionally, there are chronic changes observed in both kidneys and nonobstructive nephroliths. Continued monitoring is warranted, as these can shift in position. Recommend a blood pressure evaluation.

The pancreas is prominent and hypoechoic. This could be due to mild active inflammation or due to previous episodes of inflammation.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Liver
HYPER NODULES
Pancreas
Spleen
LT
RT
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1 Dist 4.44 cm
1 Dist 2.14 cm
2 Dist 0.76 cm
3 Dist 0.74 cm
1 Dist 2.00 cm
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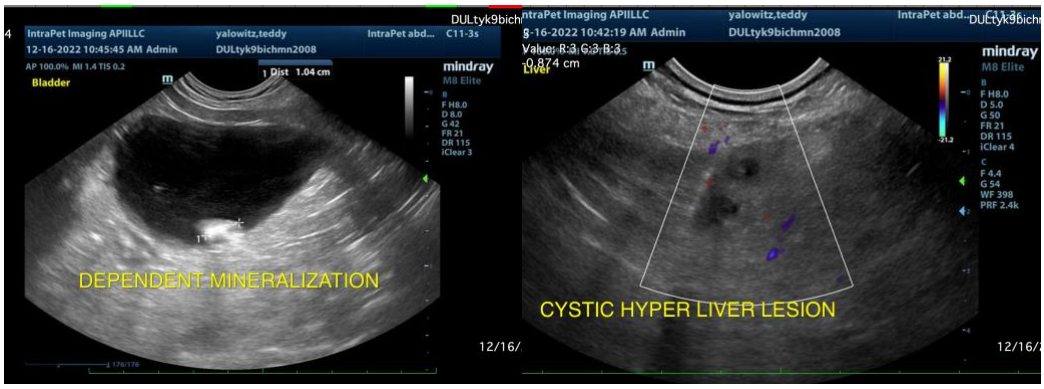
3 Dist 0.57 cm
1 Dist 0.50 cm



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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kathleen.sennello@sonopath.com