

**DATE PRESENTING CLINICAL SIGNS**

1/23/23 History: Proactive measure- to rule out hypercalcemia of malignancy.

PATIENT

Morris Walizer

Current Medications: Amlodipine compounded 1mg/mL 0.9L SID, Bravecto.

Lab Results: See attached.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

SPECIES

Feline

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

BREED

DSH

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

SEX

Neutered Male

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia or infarcts observed. The left kidney measures 3.77 cm. The right kidney measures 3.85 cm. Small nonobstructive nephroliths are noted bilaterally.

AGE

12/17/2005

WEIGHT

12.1 Pounds

Adrenal Glands

Left adrenal gland is normal in size (0.38 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

INTERPRETED BY

Beth Johnson, DVM
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Right adrenal gland is normal in size (0.47 cm), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

HOSPITAL NAME

Cat Hospital of
Towson

Liver

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. Adjacent to the gallbladder, there is a subtle, approximately 1.7 cm x 2.3 cm homogenous hypoechoic nodule/mass. Visible vasculature and biliary tree appear normal without distension or congestion.

REFERRING VET

Dr. Slaughter

INVOICE

20767

Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestine demonstrates areas of thick muscularis layer relative to mucosa (disruption of the normal 1:3 muscularis:mucosa ratio). Small intestinal submucosa is slightly irregular, thick and hyperechoic, without evident loss of layering appreciated. The lumen of the small intestine is empty with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

Pancreas

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

Free Abdomen

There is no evidence of peritoneal effusion. The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Inflammatory bowel disease (IBD) pattern – Thick muscularis has been reported with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma. No aggressive lymphadenopathy, loss of layering, etc. is noted to make lymphoma more probable, but lymphoma cannot be definitively ruled out without tissue sampling.
- Chronic active pancreatitis
- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Hypoechoic liver nodule trends in appearance toward benign and may represent nodular hyperplasia, however, infiltrative neoplasia, including round cell neoplasia, primary hepatic neoplasia, metastatic disease, etc., cannot be definitively ruled out.

Secondary Findings

- Age-related kidney changes with small bilateral nonobstructive nephrolithiasis

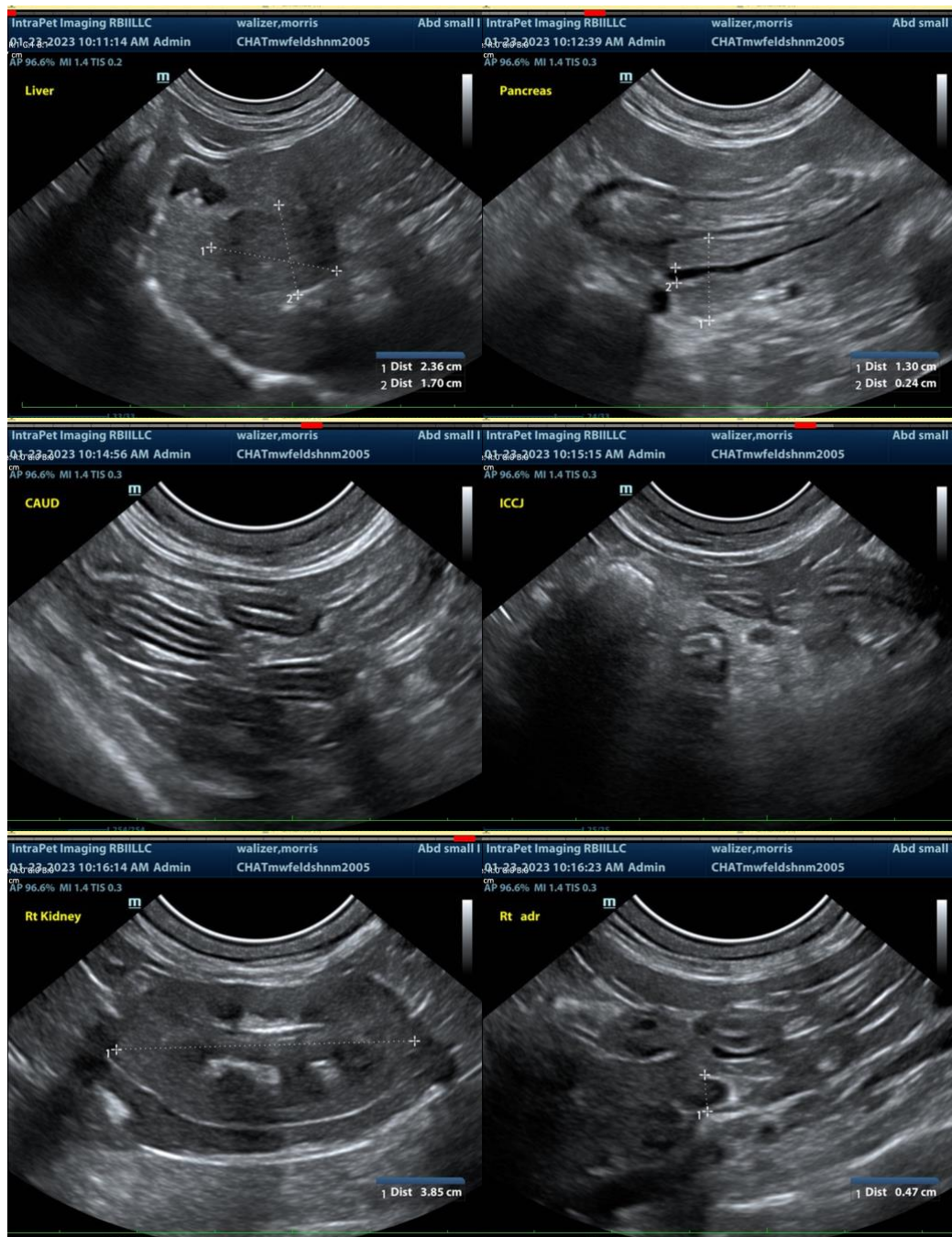
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

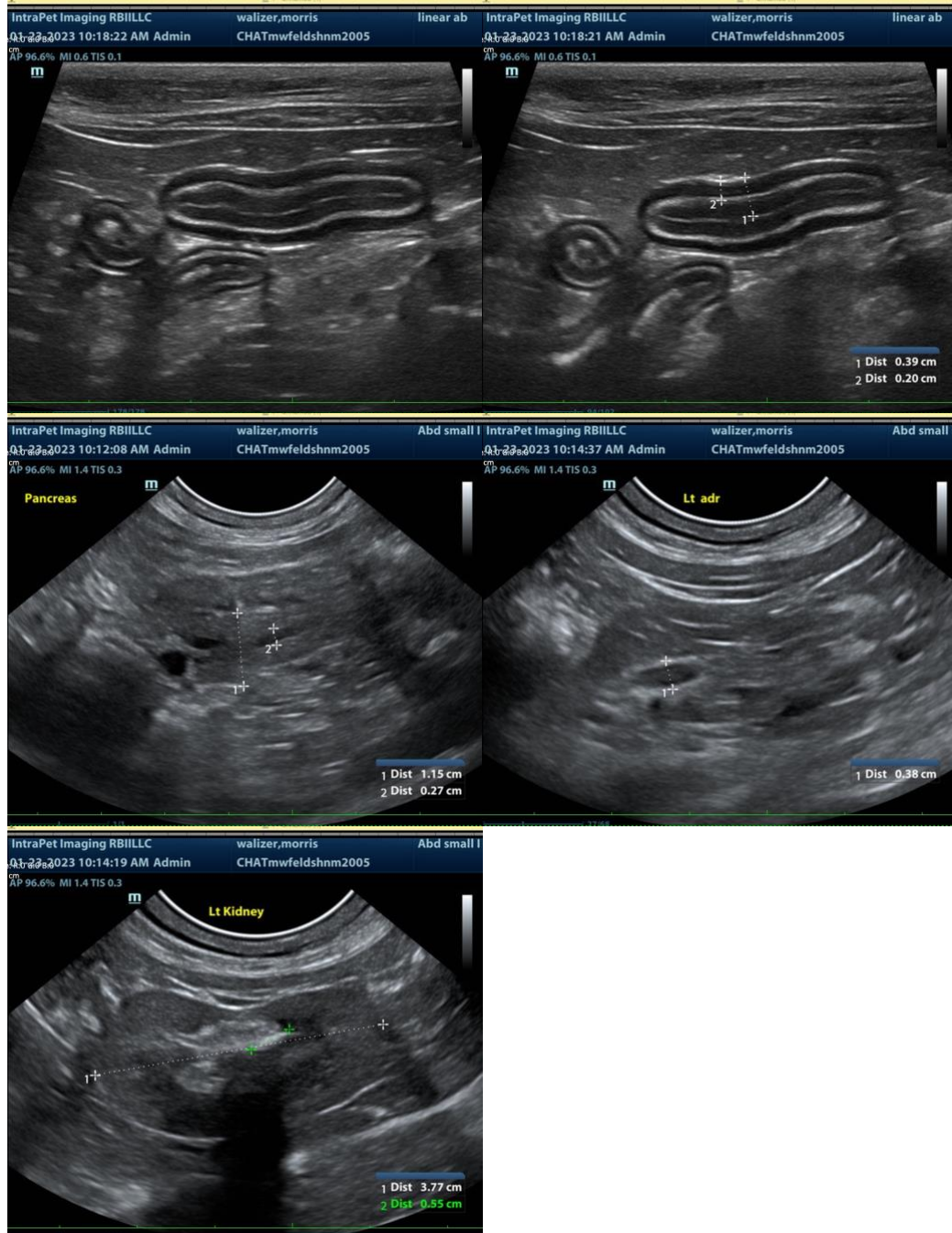
Given that this ultrasound was reportedly evaluated to rule out hypercalcemia of malignancy, a fine needle aspirate of the liver nodule could be obtained if patient's coagulation status is appropriate. Additionally, potentially even prior to the aspirate, a malignancy panel is recommended to include PTH, PTHrP and ionized calcium for further differentiation of the hypercalcemia. If the panel is performed and the PTHrP is increased, suggestive of malignancy, then at that time, a liver aspirate is certainly indicated.

Additionally, especially if patient has clinical signs consistent with infiltrative bowel disease, including intermittent vomiting, diarrhea, weight loss, etc., a gastrointestinal malabsorption panel (including

cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

Ideally, if a diagnosis is not obtained cytologically, biopsies of the liver nodule and GI tract, being sure to include ileum, if possible, would be obtained to definitively diagnose and therefore manage the suspected concurrent infiltrative bowel disease.





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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