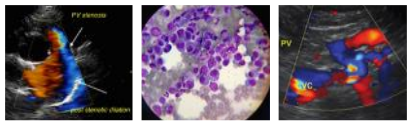
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
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DATE
7/14/22

PATIENT
Leo Appleton

SPECIES
Feline

BREED
DSH

SEX
MN

AGE
4/1/2010

WEIGHT
9 lbs. 11 ounces

INTERPRETED BY
Beth Johnson, DVM DACVIM

HOSPITAL NAME
Alexander AH

REFERRING VET
Dr. Alexander

INVOICE
14292

PRESENTING CLINICAL SIGNS

7-14-22 – Alexander Animal Hospital – Dr. Alexander.
Leo Appleton
Feline DSH 9lbs 11oz MN 4/1/2010.

Pt has history of slightly increasing ALT.

Current Medications: Hepato 1 SID.
Lab Results: 2/4/20 ALT 136, 6/12/21 ALT 182, 6/6/22 ALT 216.
Normal PT/PTT.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: IM sedation.
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 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.

Kidneys are overall normal in size and shape with smooth peripheral margination. The left kidney measured 3.15 cm. The right kidney measured 3.36 cm. 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, mineral or infarcts observed.

Adrenal Glands

The right adrenal gland is normal in size (0.5 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.4 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively large in size with normal smooth margins. Parenchyma is normal in echogenicity with a coarse/heterogenous echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively mildly enlarged with a swollen contour. Mild parenchymal heterogenicity is noted characterized by multifocal discrete hypoechoic nodules. Visible vasculature appears normal without distention or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is mild cystic and common bile duct dilation with a torturous appearance and luminal debris, some of which appears mineral in composition extending to the level of the duodenal papilla which is prominent.

Gastrointestinal

The stomach wall is normal in thickness (< 0.4 cm) 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 with no evidence of obstruction or foreign material.

The visible colon is normal in wall thickness (< 0.2 cm) 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

Reactive 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. No appreciable free fluid is noted in these Images. No evidence of post fine needle aspirate complications is appreciated.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- A nodular liver - this finding is concerning for Infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease cannot be ruled out.
- Coarse splenomegaly – can be associated with congestion caused by sedation (if sedated) but can also be associated with diffuse infiltrative disease. Both benign conditions such as extramedullary hematopoiesis, lymphoid hyperplasia, amyloidosis (leave amyloidosis out if canine) as well as infiltrative neoplastic diseases such as round cell neoplasia should be considered.
- Both suspended and gravity-dependent gallbladder debris, some of which appears to be mineral, is noted within the lumen of the gallbladder, as well as in the lumen of the cystic and common bile

duct which is mildly dilated and torturous all the way to the level of the duodenal papilla which is prominent. Differentials for the prominent duodenal papilla area include mucus or debris within the duct overlining the papilla vs. an inflammatory change. Infiltrative neoplasia / nodule / mass in the area is considered less likely, but cannot be ruled out.

- Chronic active pancreatitis
- 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.
- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely

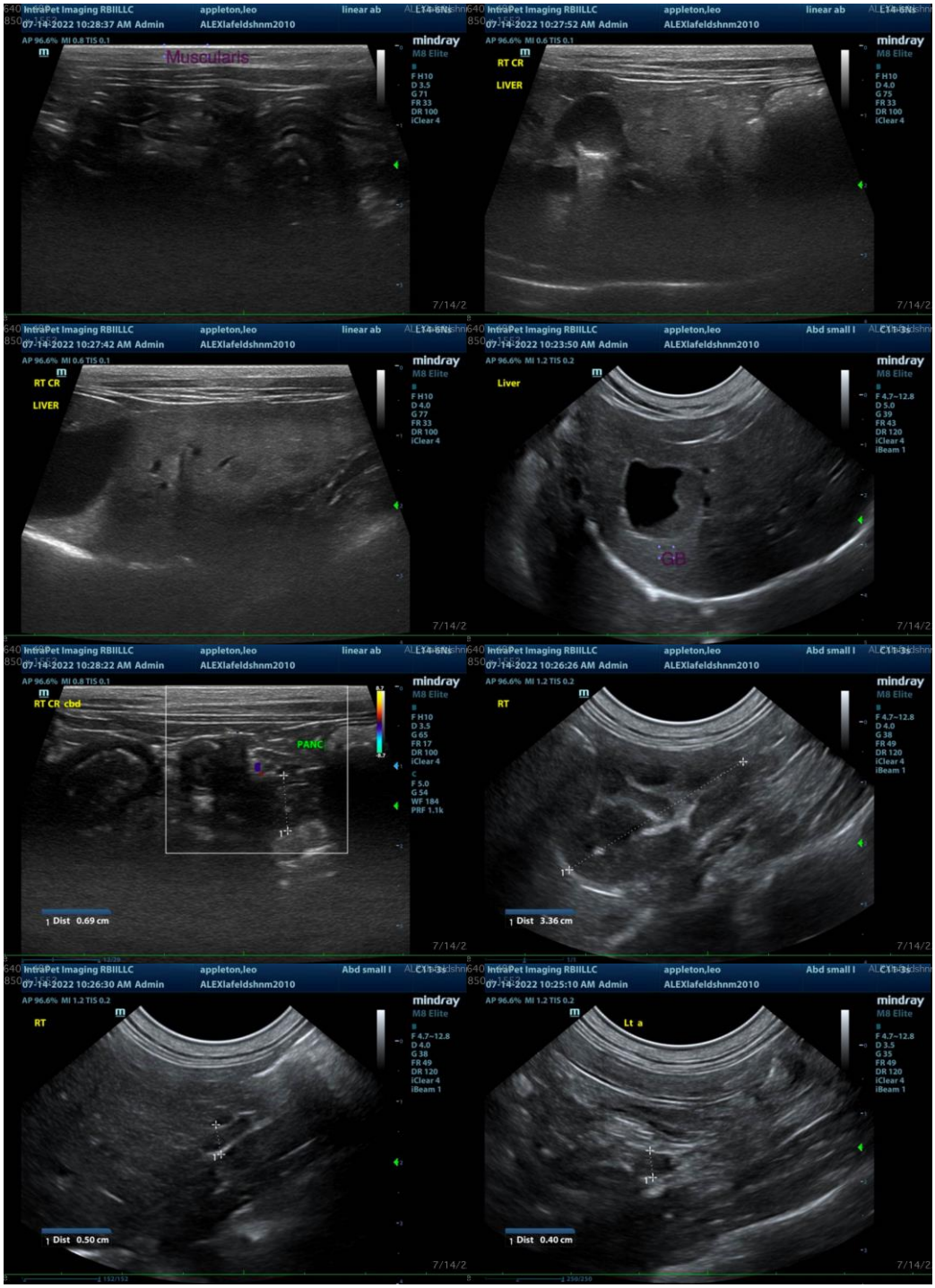
Secondary Findings

- Age-related kidney changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

A fine needle aspirate of the liver is recommended as was performed with cytology results reported pending. In the meantime, treatment recommendations include fluid therapy, anti-emetics, gastroprotectants, hepatic nutraceuticals such as ursodiol and/or Denamarin, and broad-spectrum antibiotics. Nutritional support is critical to prevent/manage concurrent hepatic lipidosis, so appetite stimulants and/or, if indicated, feeding tube placement is also recommended. If a diagnosis is not obtained cytologically, and ALT increase / clinical signs continue beyond medical management of cholangitis, ideally biopsies of the GI tract being sure to include ileum if possible are recommended at which time biopsies of the liver +/- the spleen could be obtained as well to definitively diagnosis and therefore manage the infiltrative disease.



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.

Beth Johnson, DVM, DACVIM
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