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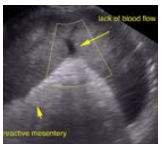
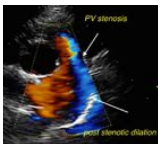
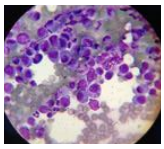
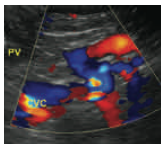

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1-800-838-4268 info@sonopath.com

PATIENT
Ivy Ciufo

SPECIES
Feline

BREED
Domestic Shorthair

SEX
Spayed Female

AGE
9 years

WEIGHT
5.8 lbs

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Adriene Ligenza

HOSPITAL NAME
Rush VC

REFERRING VET
Dr. Milot

INVOICE
94527

DATE
12/13/21

PRESENTING CLINICAL SIGNS

History: weight loss, severely jaundice, started Ursodiol and Denamarin
Abnormal PE/Chem/CBC/UA Results: extremely elevated liver values

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is moderately distended with anechoic contents. It has normal uniform wall thickness (< 0.2 cm). No masses or cystoliths are observed.

The left kidney is normal in size (4.49 cm) 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 echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Right kidney is normal in size (4.25 cm) 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 echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

Left adrenal gland is unable to be fully visualized due to the pathology/free fluid, etc. However, no adrenal pathology is noted

Right adrenal gland is normal in size (1.0 cm long, 0.4 cm thick), shape and contour. Corticomedullary structure is unremarkable.

Spleen

Spleen is subjectively normal in size with normal smooth margins. Parenchyma is normal in echogenicity and echotexture. No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. Visible vasculature and biliary tree appear normal without distension or congestion. Isoechoic to hyperechoic, heterogenous tissue changes/nodules are noted within the right liver. Gallbladder is normal/empty. However, the biliary system is the upper end for dilation and measured up to 0.4 cm dilated. It tapers normally with no evidence of obstruction to the level of the duodenal papilla; however, there is echogenic debris/material within the common bile duct. There is biliary ectasia present throughout the liver parenchyma.

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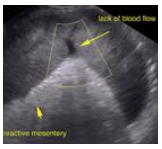
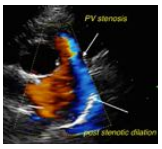
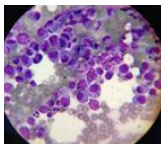
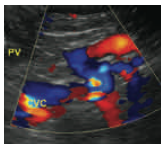

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Gastrointestinal

The visible gastric wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm). The stomach is empty.

The small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). There are no luminal contents noted within small intestines.

Colon is normal in wall thickness (< 0.2 cm) and layering.

Pancreas

Pancreas has normal homogenous echotexture and is normal in echogenicity and smooth margination. There is no evidence of peripancreatic inflammation.

Free Abdomen

Lymph nodes are normal with no observed enlargement. There is a small amount of anechoic free fluid.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Decreased Corticomedullary Distinction – This finding is expected/consistent with age-related mild degenerative disease and should be interpreted clinically in combination with laboratory changes.
- Hyperechoic hepatomegaly– most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Cholangiohepatitis, hepatic lipidosis or infiltrative neoplasia such as lymphoma is possible. Given the concurrent high globulin and low albumin the suspicion for lymphoma is increased.
- Heterogenous hepatic tissue within the right liver combined with diffuse, biliary ectasia. This could be chronic cholangiohepatitis with intrabiliary mucous/sludge/debris. However, the nodular appearance could also indicate biliary cystadenoma or even cystadenocarcinoma.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Based on the ultrasound images neither intrahepatic nor post hepatic cholestasis as the cause for the increased bilirubin can be ruled out. There is no visible post hepatic obstruction present. However, the presence of echogenic debris in the biliary system combined with the biliary ectasia raise some suspicion for biliary cyst adenoma/adenocarcinoma possibly contributing in causing post hepatic cholestasis. Intrahepatic cholestasis due to a supportive cholangiohepatitis or lipidosis or more likely infiltrative neoplasia such as lymphoma is also considered more likely. Therefore, recommendations include FNA of the liver if the patient's coagulation status is appropriate to look for lymphoma and if cytology is inconclusive or negative for lymphoma then I recommend abdominal exploratory with biopsy of the abnormal hepatic tissue to further evaluate for possible biliary adenoma/carcinoma.

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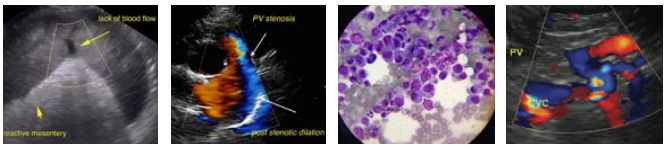

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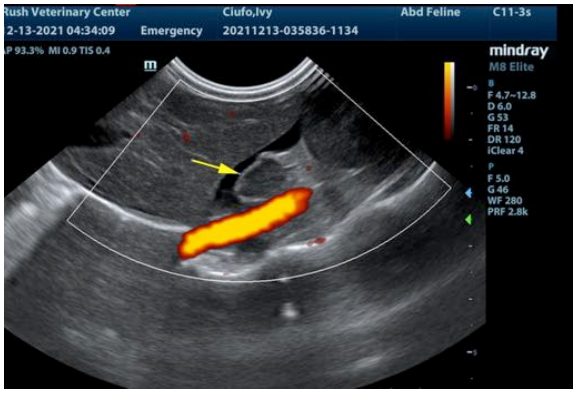

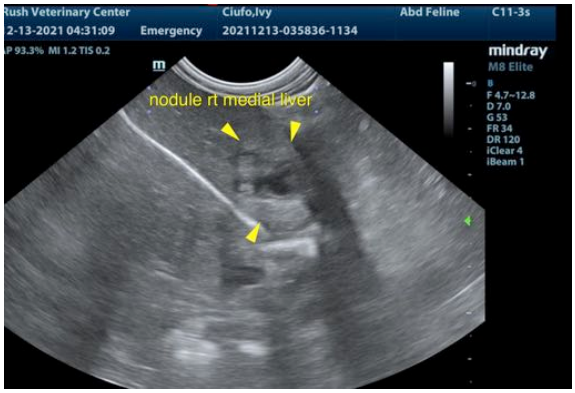

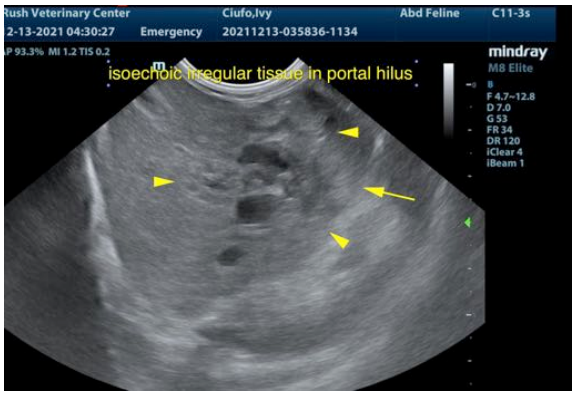

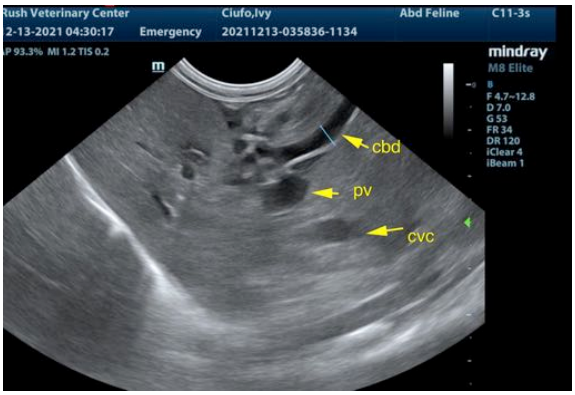

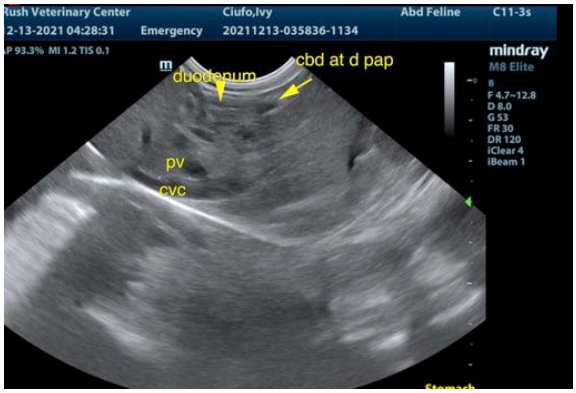

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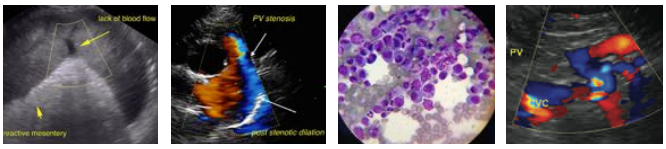

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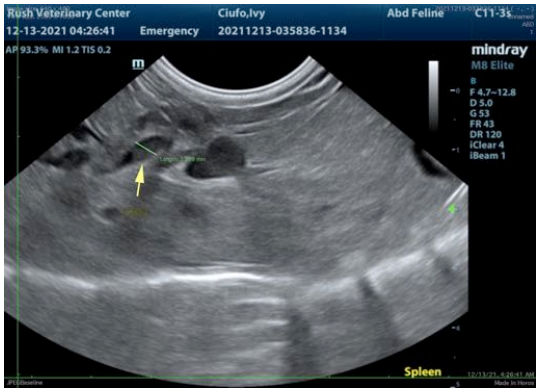

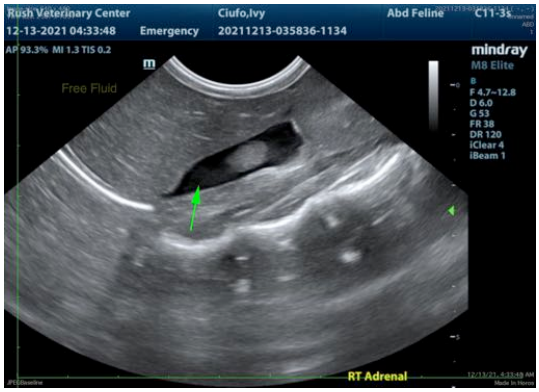

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com