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Clinical Sonography & Telecytology
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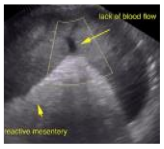
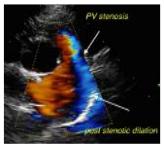
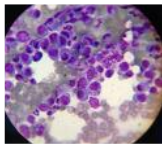
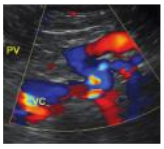





SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Olive Hagar

SPECIES
Canine

BREED
Shep Lab X

SEX
Female Spayed

AGE
11

WEIGHT
29 kg

INTERPRETED BY
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)

IMAGING PERFORMED BY
Dr. Belan

HOSPITAL NAME
Resolution Vet Ultrasound LTD

REFERRING VET
Dr. Magill

INVOICE
13706

DATE
4/21/22

PRESENTING CLINICAL SIGNS

Significant weight loss poor appetite since mid November. Patient was sedated for the scan. Chest x rays were taken after the scan no sign of metastisis
Abnormal PE/Chem/CBC/UA Results: Marked elevation of liver enzymes

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Mild asymmetrical luminal surface to micropolyploid changes were present likely associated with age-related mural changes. Anechoic urine was present in the lumen with no sediment or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

The area of the aortic trifurcation was free of pathology.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 7.7 cm in length. The right kidney measured 7.1 cm in length.

Adrenal Glands

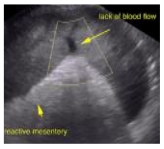
The bilateral adrenal glands exhibited mild parenchyma heterogeneity and mild capsule asymmetry without suspicion for overt neoplasia. The left adrenal gland was normal in size, measuring 0.60 cm width in the cranial pole and 0.63 cm width in the caudal pole. The right adrenal gland was mildly prominent in size yet not overtly consistent with neoplastic criteria, measuring 1.0 cm width in the cranial pole and 0.92 cm width in the caudal pole.

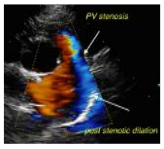
Spleen

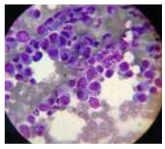
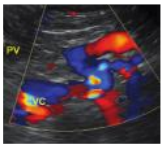
The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease.

Liver/ Gallbladder

The liver exhibited generalized enlargement primarily in the mid to left liver owing to asymmetrical, expansive, mixed echogenic to nodular mass appearing to occupy the majority of the mid to left liver measuring approximately 10.0-12.0 cm in diameter. The mass appeared to extend into the area of the portal vein and potential porta hepatis. The overall right lateral and caudate liver exhibited uniform parenchyma and normal parenchyma echogenicity. The gallbladder was non distended in size with moderate, dependent to mildly nondependent, mildly inspissated yet nonorganized biliary sludge. No





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evidence of gallbladder or peripheral gallbladder inflammation. The cystic duct and common bile ducts were normal without evidence of dilation.

Gastrointestinal

The stomach exhibited sonographically unremarkable and intact wall layering with a normal wall layer ratio. A mild amount of retained anechoic fluid was present in the stomach. Potential for mild gastric displacement owing to hepatomegaly and the hepatic mass is suspected. No signs of ileus, obstruction, or foreign material were noted.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

Free Abdomen

No evidence of overt or significant lymphadenopathy was present. No peritoneal effusion was noted.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Mixed echogenic to nodular expansive liver mass
- Moderate gallbladder debris (non-mucocele)
- Mild splenic heterogeneity - suspect benign, patient variant, mild hyperplasia, hematopoiesis, incidental splenitis, mild breed-associated hypersplenism, suspected
- Mild hypomotile stomach, suspect gastric displacement

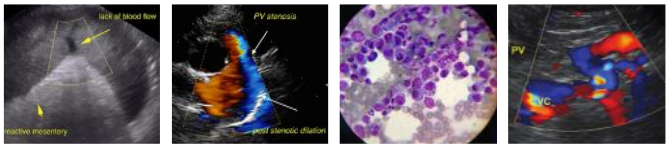
Secondary Findings

- Mild chronic renal changes
- Minor pancreatic remodeling
- Micropolyploid apical urinary bladder changes - benign, potential for low-grade cystitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Although sampling is required for further assessment, the primary finding in this study of the mid to left liver mass is consistent with neoplastic criteria such as hepatocellular or cholangiocellular carcinoma, or other. Benign etiologies such as severe hyperplasia, granuloma, or similar are possible yet thought less likely. Correlation with pending cytology with potential for oncology consultation Is recommended.

Subjectively, complete surgical resection of the hepatic mass appears to be limited or potentially precluded, given its size, likely involvement of more than one liver lobe, and potential extension into



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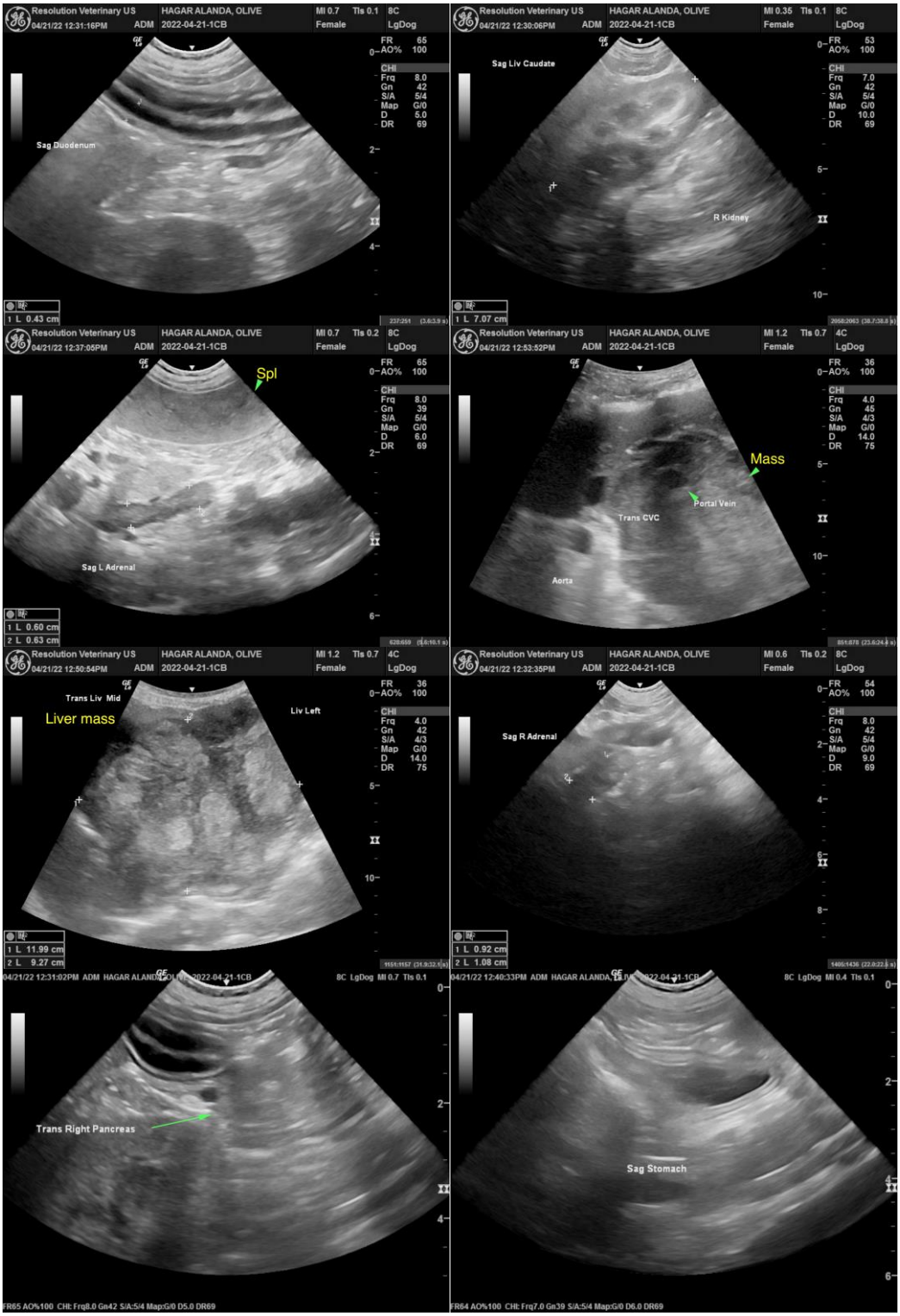
the area of the portal vein and porta hepatis. If additional assessment is elected, core biopsy of the hepatic mass +/- abdominal CT for further assessment could be considered.



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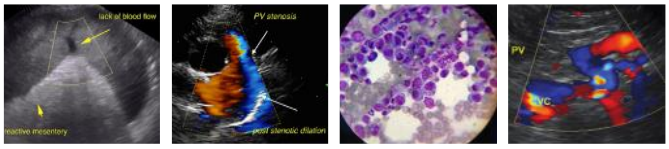

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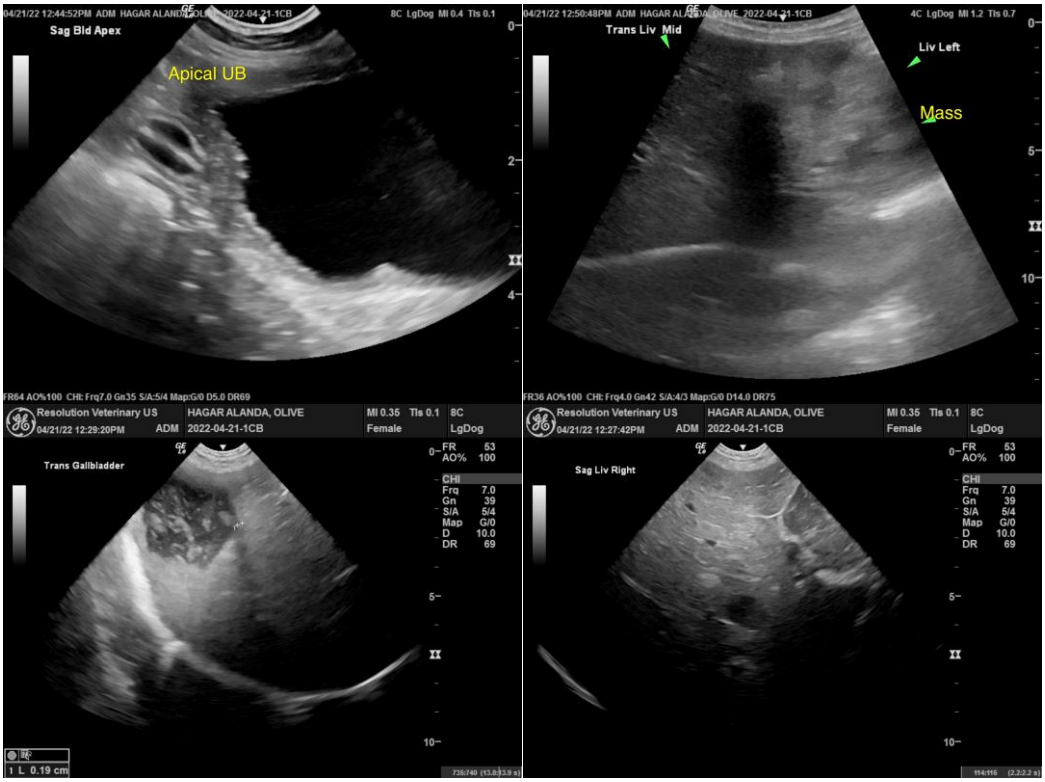

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com