



PATIENT	PRESENTING CLINICAL SIGNS
Milly Wright	Chronic weigh loss and history of ongoing hepatic disease on hepatosupport. Abnormal PE/Chem/CBC/UA Results: Mild persistent elevation of liver enzymes
SPECIES	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Canine	Urinary System
BREED	The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths, sediment, or calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.
Cocker X	Intermittent mesenteric lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of lymph node size was 2.1 cm x 0.65 cm.
SEX	
Female Spay	
AGE	
11	
WEIGHT	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 to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. Pinpoint medullary mineral was noted in both kidneys. The left kidney measured 5.3 cm in length. The right kidney measured 4.8 cm in length.
10.4 kg	
INTERPRETED BY	Adrenal Glands
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.52 cm width in the cranial pole and 0.63 cm width in the caudal pole. The right adrenal gland measured 0.49 cm width in the cranial pole and 0.48 cm width in the caudal pole.
IMAGING PERFORMED BY	Spleen
Dr. Belan	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.
HOSPITAL NAME	Liver/ Gallbladder
Woodlands Vet Clinic	The liver exhibited generalized enlargement with areas of capsule asymmetry primarily owing to multiple, variably sized to expansive, variably echogenic intraparenchymal macronodules to masses. Some of the nodules exhibited central hyperechogenicity with peripheral hypoechogenicity potentially consistent with target lesions. An example of a nonuniform hyperechoic mass in the caudate liver lobe measured approximately 5.3 cm in diameter. An example of a mixed echogenic intraparenchymal to expansive nodule measured 2.4 cm diameter in the left liver. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal
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Canine

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Cocker X

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Female Spay

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vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing anechoic content with mildly congealed, mildly hyperechoic gallbladder debris primarily in the caudal lumen and gallbladder neck. The cystic and common bile ducts were normal.

Gastrointestinal

The visualized gastric walls were sonographically normal. The lumen of the stomach contained mild ingesta / chyme most consistent with post prandial presentation without signs of ileus, obstruction or foreign material. The ventral gastric body wall width measured 0.31 cm.

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. The duodenum wall measured 0.55 cm width. The jejunum wall measured 0.42 cm width.

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. This is likely consistent with age-related pancreatic changes and considered incidental. No evidence of active pancreatic inflammation was noted.

Free Abdomen

Small pockets of scant perihepatic free fluid were noted. Suspect associated mildly nonhomogeneous hepatic lymphadenopathy dorsal to the duodenum and adjacent to the portal vein. Suspected hepatic lymph node measured 3.8 cm in diameter. Potential for parenchymal expansion or mass in the area of the hepatic lymph nodes associated with the caudate liver lobe is also possible.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Heterogenous irregular hepatomegaly exhibiting multifocal variably expansive to echogenic intraparenchymal macronodules to masses
- Suspected associated hepatic lymphadenopathy
- Mild gallbladder debris (non-mucocele)
- Overtly normal gastrointestinal tract with mild gastric ingesta

Secondary Findings

- Bilateral chronic renal changes with pinpoint medullary mineral

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

General considerations for the hepatic changes may include vacuolar hepatopathy, chronic inflammatory disease, nodular hyperplasia, fibrosis, or hematopoiesis, with primary concern for infiltrative neoplasia, i.e., adenocarcinoma or other.



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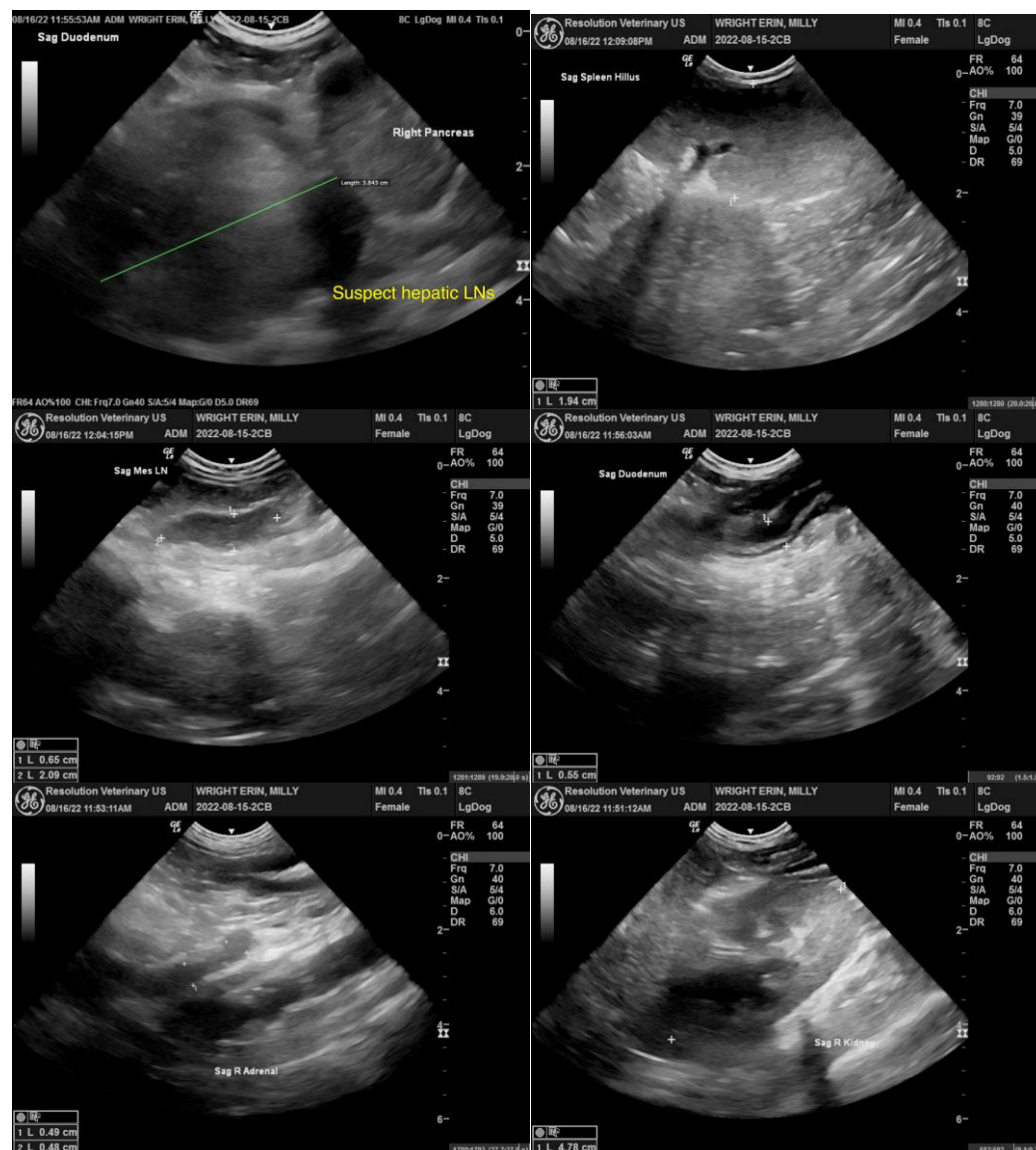
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Assuming normal clotting status hepatic FNA, specifically of a macronodule or mass, is recommended for cytology and further assessment. Concurrent FNA of suspected hepatic lymphadenopathy could also be considered.

A very guarded prognosis pending sampling is warranted. As-needed gastrointestinal support is recommended.





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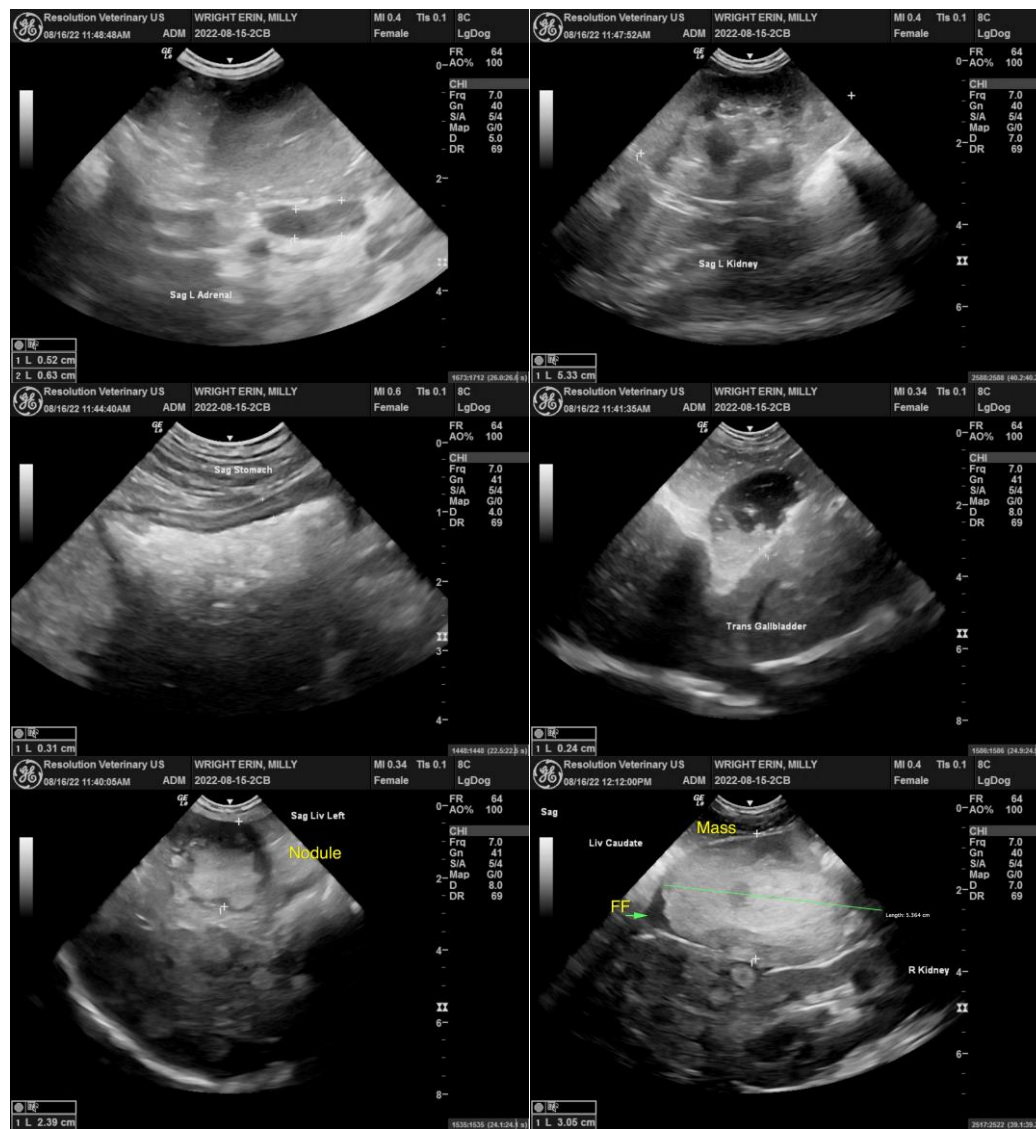
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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