

PATIENT PRESENTING CLINICAL SIGNS

Mollie Lee
HISTORY: · P has a chronic issue with her GI tract. She is currently on Hill's z/d diet, cerenia, prednisone, and Vitamin B-12 injections. · P has had a couple previous abdominal ultrasounds, and we would like to recheck the liver nodules again.

SPECIES

Canine

BREED

Shihtzu

SEX

Spayed Female

AGE

12y

WEIGHT

10.8lbs

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

IMAGING PERFORMED BY

Loetitia Saint-Jacques,
LVT

HOSPITAL NAME

Mount Rose Animal
Hospital

REFERRING VET

Dr. Katie Weldon

INVOICE

10045

DATE

2/14/2023

PREVIOUS ULTRASONOGRAPHIC FINDINGS 10/28/21: • Large, heterogeneous liver with four hypoechoic nodules - The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. The findings are most consistent with relatively stable regenerative nodules, although a neoplastic process cannot be ruled out. Findings are most likely consistent with a steroid hepatopathy. • Mildly decreased corticomedullary distinction in both kidneys with numerous non-obstructive nephroliths - Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. The hyperechoic mineralized foci observed at the corticomedullary junction of the left/right kidney are consistent with small, non-obstructive nephroliths. Oral cavity = 1/4 dental disease. Rest of exam WNL. **REASON FOR ULTRASOUND:** · Evaluate liver nodules.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae, and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses, or cystic calculi.

The left kidney has a normal shape and size (3.32 cm) with small nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (3.23 cm) with small nephroliths. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex: medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

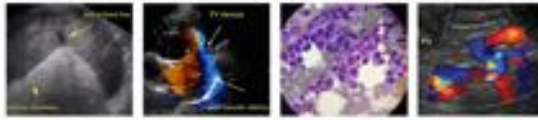
Adrenal Glands

The left adrenal gland is normal in size measuring 0.57 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.55 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.



PATIENT *Liver*

Mollie Lee The liver is large in size, slightly irregular and normal in echogenicity. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous hypoechoic nodules scattered throughout the hepatic parenchyma varying in size from approximately 0.25 cm to 2.0 cm. These are too numerous to count and at a certain point serial measurements become inaccurate unless if there are some primary lesions you are following. The most distinct nodule visualized deep to the gallbladder measuring 1.4 cm x 1.68 cm.

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Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis: mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

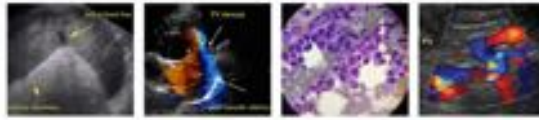
The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

PRIMARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with non-obstructive nephroliths. The bilateral renal findings are consistent with age-related change.
- Large heterogenous liver with hypoechoic nodules. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed trend toward a more benign process, but underlying neoplasia cannot be ruled out.



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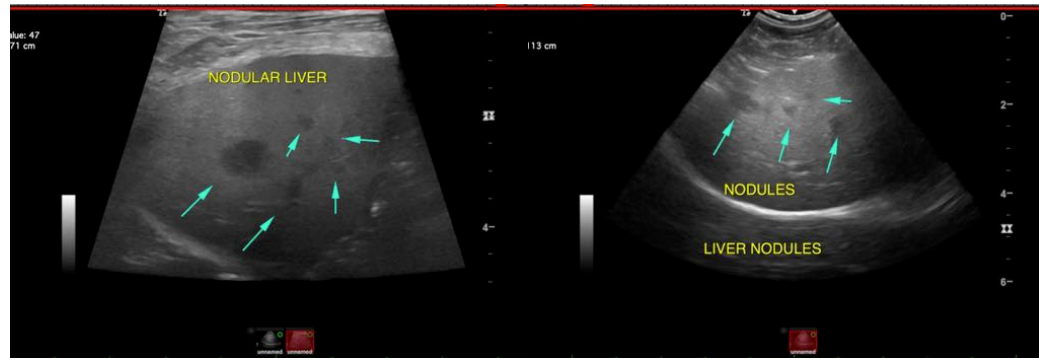
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The nodules visualized on today's scan appear somewhat more numerous and potentially the larger nodule deep to the gallbladder has increased in size. These lesions do not have significant criteria for malignancy, although this cannot be ruled out. If liver enzymes are continuing to rise and the patient is not clinically doing well, consider a fine needle aspirate of a representative nodule. But at this point following individual nodules becomes very challenging, the largest nodule deep to the liver appears slightly larger than the previous scan. Findings are consistent with progressive nodular change of the liver.



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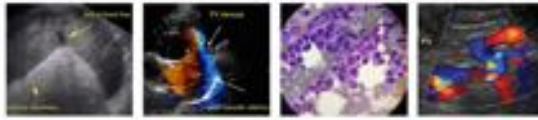
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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