



PATIENT

Izabella Mason

SPECIES

Canine

BREED

Chihuahua X

SEX

Spayed Female

AGE

9

WEIGHT

10.2 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Danielle Lanz

HOSPITAL NAME

New Holland VH

REFERRING VET

Dr. Danielle Lanz

INVOICE

45920

DATE

3/15/23

PRESENTING CLINICAL SIGNS

Consistently elevated liver values, increasing values even with Denamarin for 2 months. She is doing well otherwise; Owners have no concerns.

Abnormal PE/Chem/CBC/UA Results: CBC: WNL Feb 11: Chemistry: ALT 304, AST 65 ALP 198 - March 11 Chemistry: ALT 594, AST 124, ALP 275, Amylase 1730, Lipase 253, Cholesterol 354, CK 432 (not a fasting sample) Dec Chemistry: ALT 200

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.

The right kidney is normal in size (3.65 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (3.85 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

Adrenal Glands

The caudal pole of the right adrenal gland is normal in size (0.51 cm), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The cranial pole is unable to be well visualized in these images.

The left adrenal gland is normal in size (0.44 cm at the cranial pole and 0.39 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

Spleen

The spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with markedly irregular margins. Parenchyma is markedly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

Gastrointestinal

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 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.



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The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

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The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

BREED

Pancreas

Chihuahua X

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

SEX

Spayed Female

Free Abdomen

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9

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

WEIGHT

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ULTRASONOGRAPHIC FINDINGS

- **Markedly heterogenous Liver** – This change can occur with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease. However, given the degree of heterogenicity, infiltrative neoplasia including round cell neoplasia, metastatic neoplasia, etc. also should be considered and ruled out.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Testing for Leptospirosis is recommended. Bile acids are recommended, if tbili is not increased. An empirical course of antibiotics and hepatic nutraceuticals may be tried empirically; however, ultimately, tissue sampling is likely warranted. FNA of the liver can be performed to assess inflammatory cell type, rule in/out round cell neoplasia, etc. If round cell neoplasia is not diagnosed, a liver biopsy (including copper level assessment) may be required to definitively diagnose the underlying hepatopathy.

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Note: These images are diffusely very dark, limiting full evaluation, and potentially obscuring subtle pathology. This may be a machine issue, and if possible, changing machines setting is recommended.

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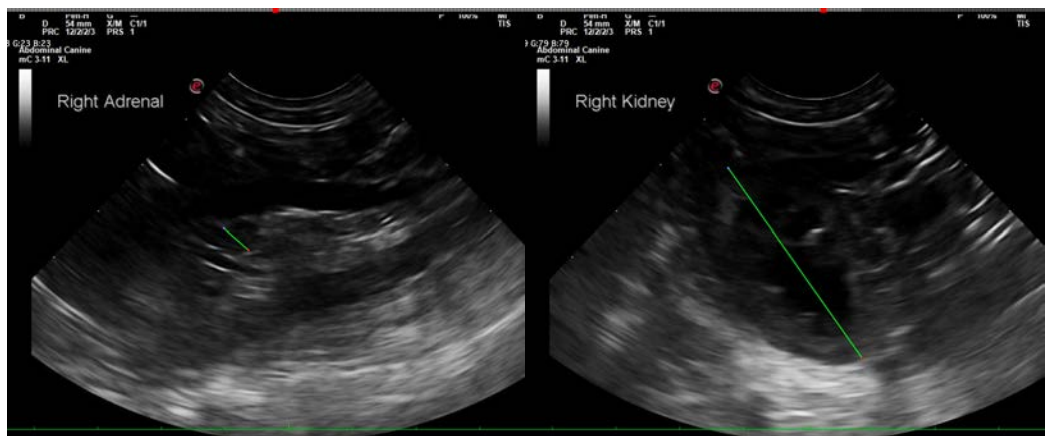
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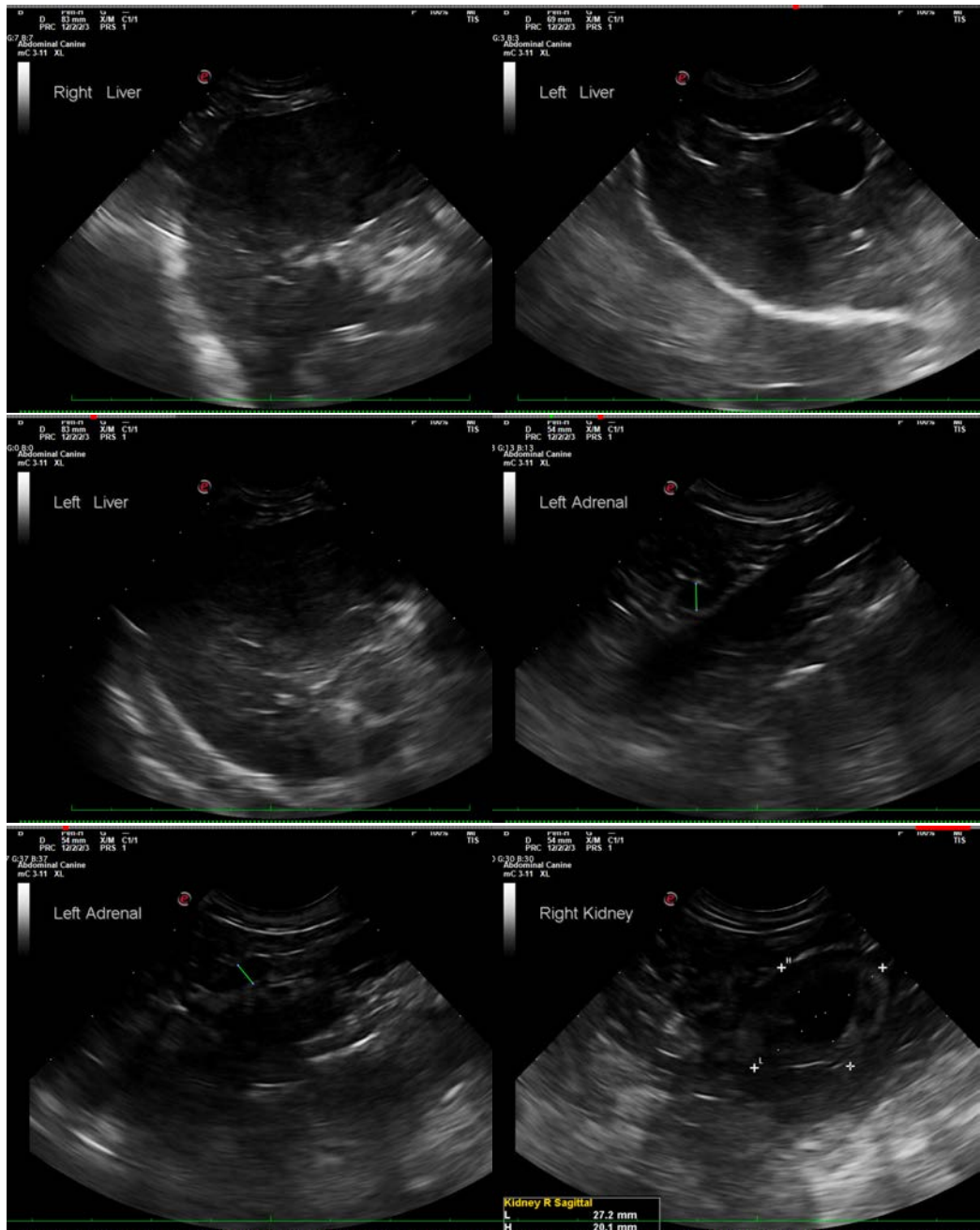
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
Beth.Johnson@sonopath.com