



PATIENT

Quinnie Hughes

SPECIES

Canine

BREED

Labrador Retriever

SEX

Spayed Female

AGE

13

WEIGHT

34.6 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Evan Bell

HOSPITAL NAME

Cedarview AH

REFERRING VET

Dr. Evan Bell

INVOICE

46791

DATE

4/19/23

PRESENTING CLINICAL SIGNS

Presented at start of April for coughing that has lasted several months. Initially sounded more like a gag and seemed worse in heat and evening. DVM noted similar behavior when palpating the abdomen. Currently on renal diet and has good appetite with no vomiting.

Abnormal PE/Chem/CBC/UA Results: Chest rads show age related mineralization/changes, otherwise normal. Most recent bloodwork in May 2022. Moderate non-regenerative anemia. Mild (ALT 143) and moderate ALP elevations (1600) cPLI Pending. Blood drawn for baseline panel but not submitted yet.

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 (6.3 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 or mineral observed. A chronic infarct was noted in the caudal pole.

The left kidney is normal in size (5.9 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 right adrenal gland is normal in size (0.51 cm at the cranial pole and 0.43 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.49 cm at the cranial pole and 0.56 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). A 2.0 cm x 2.5 cm slightly heterogeneous, primarily hypo- to anechoic non-capsule disrupting nodule is noted in the mid body. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. In a part of the liver that is difficult to definitively localize in these images, there is a more discretely heterogeneous, hyperechoic mass-like lesion that measures 5.0 cm x 5.5 cm.

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.



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Gastrointestinal

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

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.

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

Pancreas

Pancreas is prominent in size with swollen irregular contour. Parenchyma is heterogenous characterized by hyperechoic tissue remodeling intermixed with ill-defined hypoechoic nodules. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

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

In one image, there is a mildly enlarged, normal shaped lymph node that can't be localized without a label, believed to be a medial iliac lymph node.

PRIMARY FINDINGS

- **Heterogenous Liver with a more discrete, slightly more heterogeneous mass-like lesion** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia. The more discrete, slightly more heterogeneous mass-like lesion could represent similar benign etiologies including nodular hyperplasia, etc. and/or a benign adenoma/hepatoma. However, infiltrative neoplasia including hepatocellular carcinoma versus round cell neoplasia versus sarcoma, etc. are also differentials and can't be ruled out without tissue sampling.
- **Hypo to anechoic splenic nodule** – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out.

SECONDARY FINDINGS

- Chronic infarct in the right kidney
- **Reactive suspected medial iliac lymph nodes** – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- **Pancreatic nodular hyperplasia** – Infiltrative neoplasia cannot be ruled out but is considered less likely.



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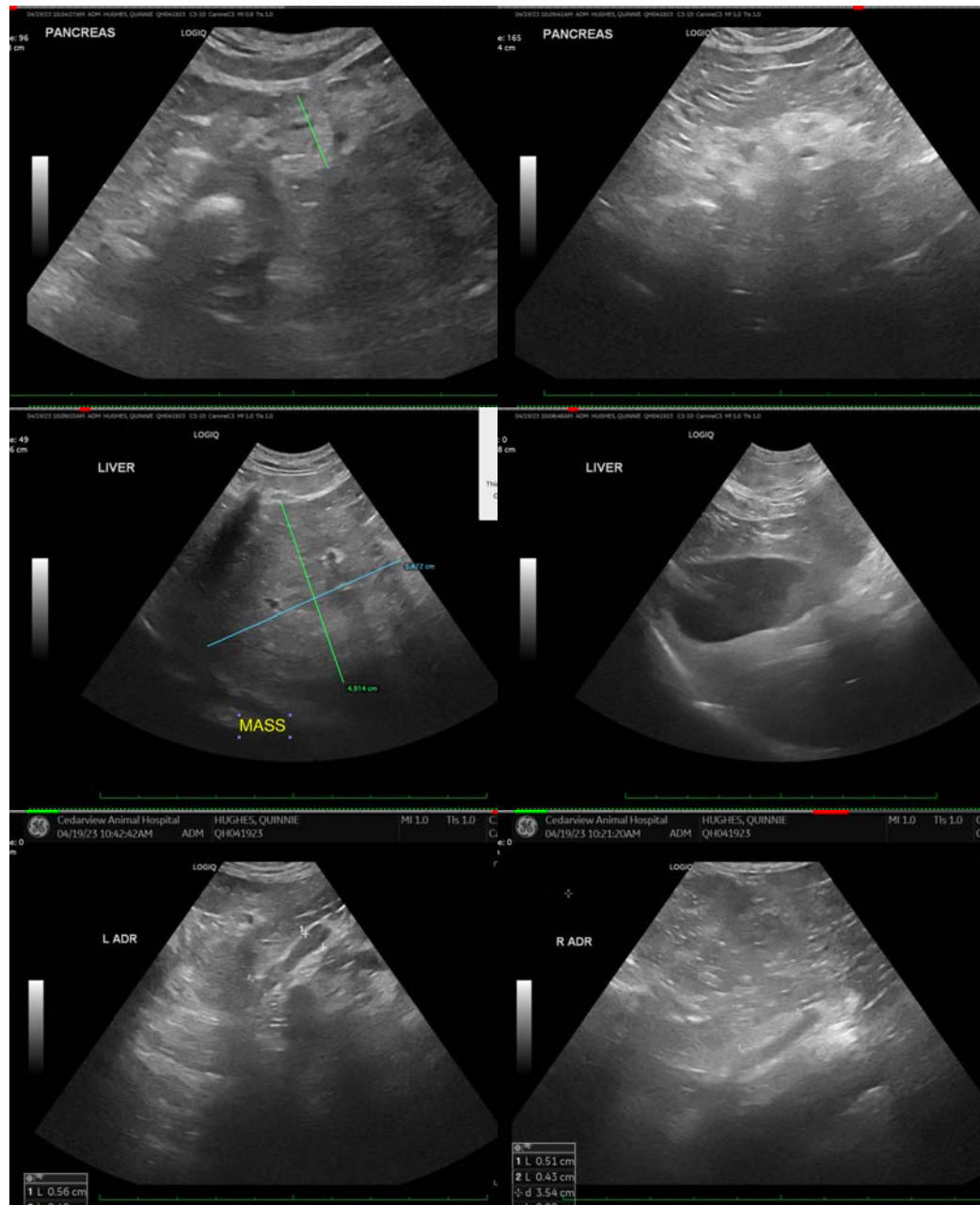
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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The changes above trend primarily toward benign and/or likely normal aging changes with the most concerning being the emerging liver mass. Therefore, further diagnostic recommendations include fine needle aspirates of the liver +/- the spleen if patient's coagulation status is appropriate. Having said that, this patient's reported gagging could represent an unrelated problem such as laryngeal paralysis or GERD. Empirical medical management for GERD could be considered in the form of antacid therapy.





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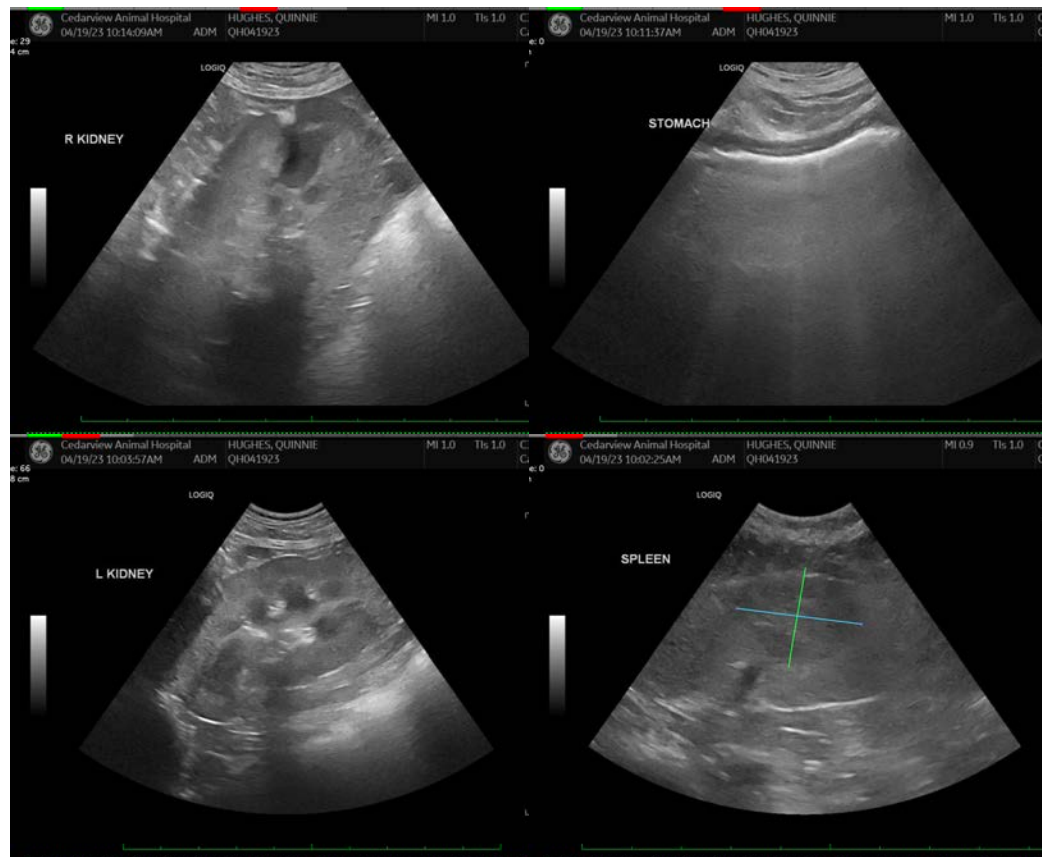
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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