**DATE PRESENTING CLINICAL SIGNS**

2/9/2022 History: Came in for wellness exam - lab work was abnormal. Hx on seizures controlled on phenobarbital. Appetite has been off occasionally with low albumin. Concerned about PLE. P also has elevated ALP and GGT. Concerned about liver or gallbladder dz. P currently has pyoderma and hx of allergies.

PATIENT

Maggie Orf

Current Medications: Gabapentin 300mg 2 BID, Galliprant 100mg 1 SID, Thyro-Tabs Canine 0.8mg 1/2 BID, Phenobarbital 100mg 1.5 BID, Cephalexin 500mg 3 BID.

SPECIES

Canine

Lab Results: Increased MCV, significant? Slight increase in MCH but decrease in MCHC, likely not significant. Mild Thrombocytosis likely stress related vs HAC. Chem: Slight increase in K, likely related to thrombocytosis. Hypoalbuminemia, more severe than previous, PLN vs PLE vs decreased production. Elevated ALP and GGT, ALP could be related to Phenobarb, Concern GGT is related to GB dz. TT4: WNL, low normal, may be affected by Phenobarb, should be higher on therapy Phenobarb: Therapeutic range, and no seizures per owner. 4Dx: Nx4, MF Neg, Fecal Neg. Attached separately.

BREED

Newfoundland

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

SEX

Female Spayed

Additional history: albumen 2.1. Alk Foss total 1202. GDT 22. 4dx negative. Fecal negative for ova and Giardia.

AGE

7-1-2014

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

WEIGHT

134.6 Lbs.

The left kidney is normal in size (7.69 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Trace pyelectasia is present (0.17 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

Andrea Nicastro, DMV,
Diplomate DACVIM
(Small Animal
Internal Medicine)

The right kidney is normal size (7.14 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal to mild loss of corticomedullary distinction. Trace pyelectasia is present. There is no evidence of nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

HOSPITAL NAME

Taylorville
Veterinary Clinic

Adrenal Glands

The left adrenal gland is normal size (0.81 cm at cranial pole) (0.80 cm at caudal pole) (3.93 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

REFERRING VET

Dr. Bray

The right adrenal gland is normal size (0.67 cm at cranial pole) (0.74 cm at caudal pole) (3.71 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

INVOICE

10304

Spleen

The spleen is subjectively normal in size (1.67 cm in width at the level of the hilus) with a normal curvilinear peripheral contours. The parenchyma is subtly mottled in appearance with a few small ill-defined hypoechoic nodules/areas. Splenic vasculature appears normal with no evidence of thrombosis.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is slightly mottled in appearance. No distinct focal lesions are observed. Vascular and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is mildly to moderately distended. The wall is thickened (up to 0.51 cm), irregular and hyperechoic to mineralized. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is mildly to moderately distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive or overt infiltrative disease is noted.

Pancreas

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. A cluster of enlarged lymph nodes is observed in the right cranial quadrant, the largest measuring 2.21 x 1.85 cm. The largest lymph node is rounded. The others are slightly irregular in shape. The surrounding mesentery is slightly hyperechoic.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The lymphadenopathy in the right cranial quadrant is concerning for infiltrative neoplasia (i.e, round cell tumor). However, reactive lymphadenitis or lymphoid hyperplasia cannot be excluded.
- The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, regenerative nodular hyperplasia, and/or age-related remodeling. Infiltrative neoplasia (i.e, round cell tumor), is also possible. Inflammatory disease is considered less likely, given the normal ALT.
- The gall bladder wall mineralization (a.k.a, "porcelain" gall bladder), is most consistent with cholecystitis. However, this finding has been associated with biliary carcinoma in some instances.

Secondary Findings

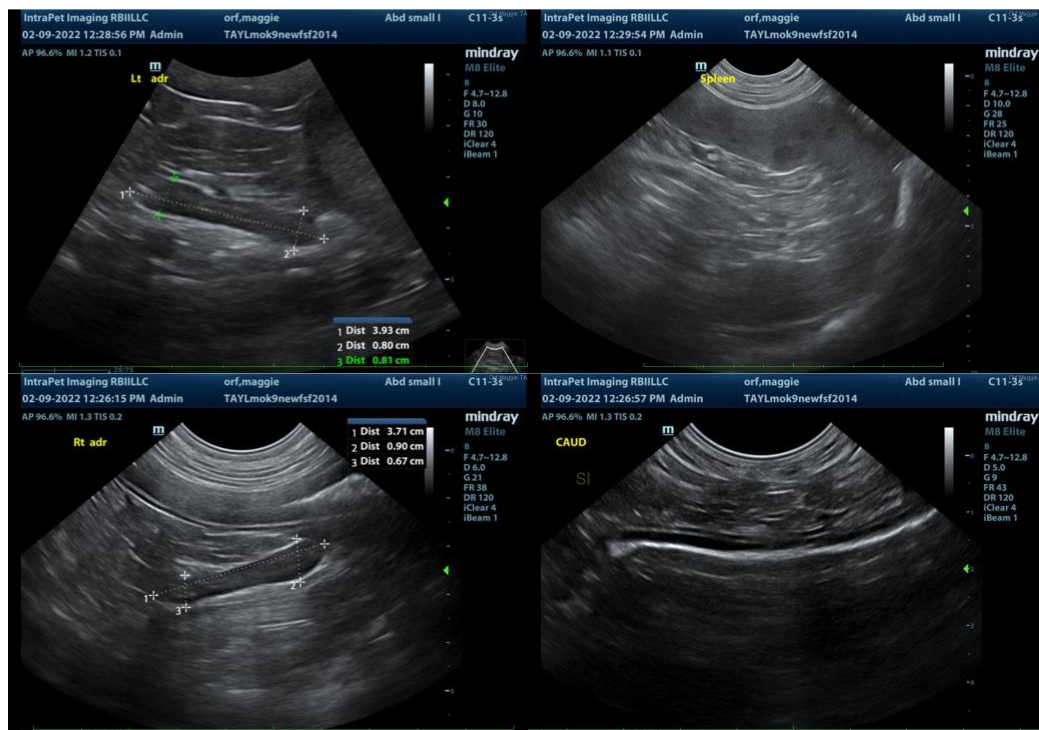
- Minor degenerative renal changes with trace pyelectasia and left dystrophic mineralization
- Age-related pancreatic remodeling +/- fibrosis. Low-grade inflammation is also possible, particularly if the patient is uncomfortable on abdominal palpation.

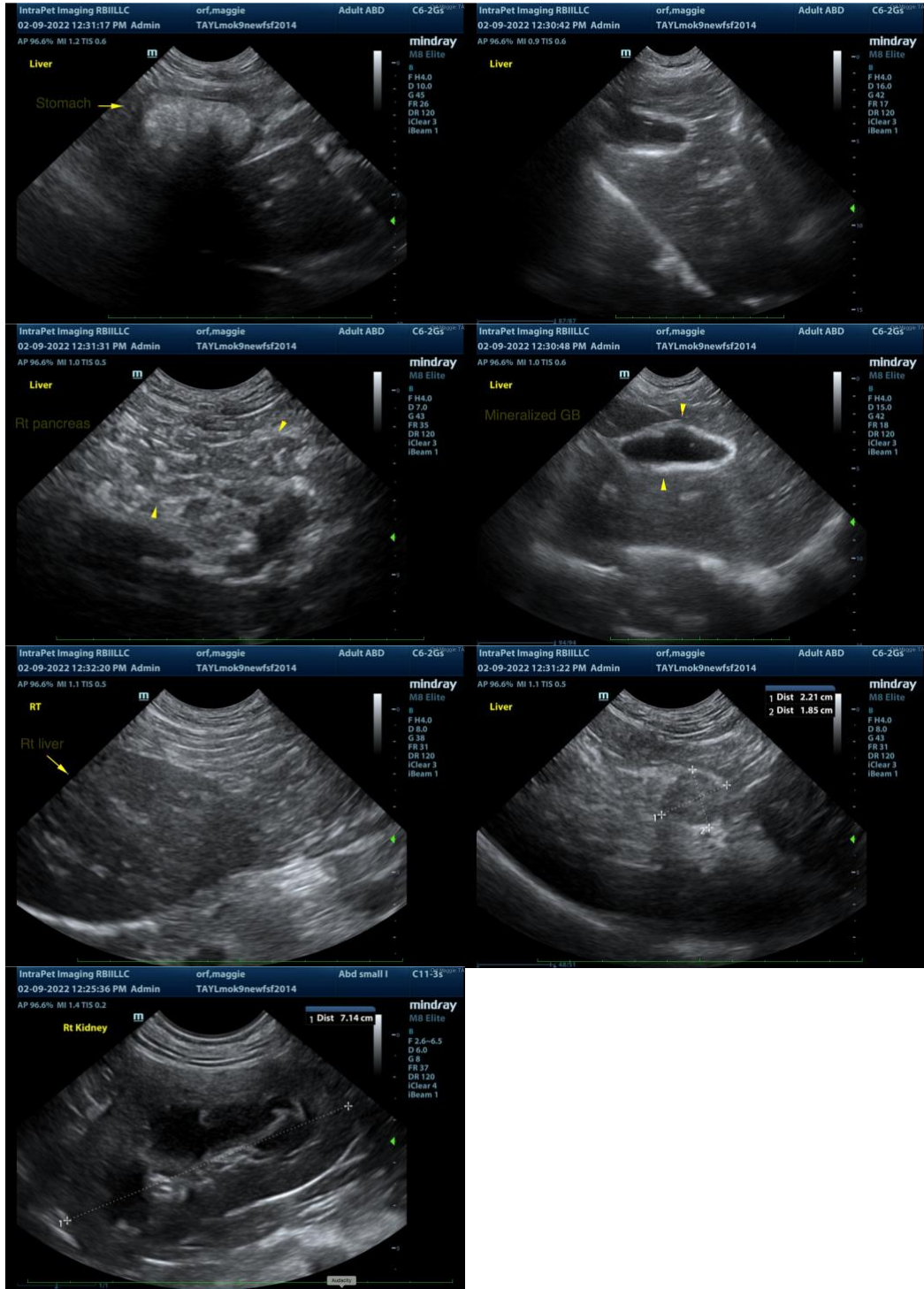
- The splenic parenchyma changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis or splenitis with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Regarding the hypoalbumenia, consider the following:

1. Pre-and postprandial serum bile acids to assess for hepatic dysfunction
2. UPC test for proteinuria
3. Regarding the abdominal lymphadenopathy, consider an ultrasound-guided fine-needle aspirate, if accessible. If not accessible, an abdominal exploratory with lymph node +/- hepatic and GI biopsies may be necessary to get a definitive diagnosis. Thoracic radiographs should be performed prior to anesthesia.
4. If tissue sampling is not to be pursued at this time, consider repeat bloodwork and abdominal ultrasound in 2-3 weeks to assess for progression.





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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