

**DATE PRESENTING CLINICAL SIGNS**

3/16/23

Presented 03/02/23 for exam with reports P is eating less than normal/refusing to eat dry dog food for about 6 to 8 weeks. O feeds a blue buffalo formula and has not changed the formula/flavor, the P will eat soft food and some chicken. O thinks P is a little more lethargic than normal but is otherwise acting normal. Up to date on all vax including leptospirosis (booster was given in December). Has lost 5 lbs. since 12/23/23, otherwise PE was unremarkable, oral exam was WNL, Radiographs - NSF, BW sent out to lab and that showed severe elevations in liver values, started supportive care with Denamarin, Metronidazole, Amoxicillin and Cerenia, O did initially note some improvement; started eating dry dog food again but once meds ran out appetite dropped off again.

PATIENT

Hershey Costello

SPECIES

Canine

BREED

Labradoodle

SEX

Spayed Female

AGE

8/30/16

WEIGHT

82.1 Pounds

INTERPRETED BYBeth Johnson, DVM
DACVIM**HOSPITAL NAME**

Northwind AH

REFERRING VET

Dr. Repsher

INVOICE

45992

Current Medications: Metronidazole 500mg BID for 10 days, Amoxicillin 500mg BID for 10 days, Cerenia 160mg- ½ SID for 8 days, Denamarin 425mg 2 SID for 14 days.

Lab Results: All liver values increased except GGT. ALT 1150, AST 335, ALP 391, Tbil 1.4.

Radiographs: NSF.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (8.01 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 (7.87 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 (0.53 cm at the caudal pole), 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 (2.37 cm long x 0.53 cm at the cranial pole and 0.65 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 2.5 cm x 3.0 cm heterogeneous, hypo- to partially cystic/anechoic non-capsule disrupting nodule is noted near the head of the spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mottled by multifocal discrete hypoechoic nodules of varying sizes "moth-eaten". Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

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.

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

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.

Free Abdomen

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

There is no apparent lymphadenopathy noted in these images.

There is no evidence of heart base or pericardial pathology noted in these images at this time. If cardiac function evaluation is desired a full echocardiogram is recommended.

PRIMARY FINDINGS

- **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.
- **Heterogeneous/nodular liver** – This change can occur with benign processes such as nodular hyperplasia, steroid or vacuolar hepatopathy, extramedullary hematopoiesis, or even chronic inflammatory disease. However, the heterogeneity in this patient is marked, and infiltrative round cell or even metastatic neoplasia cannot be definitively ruled out.

PRIMARY FINDINGS

- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

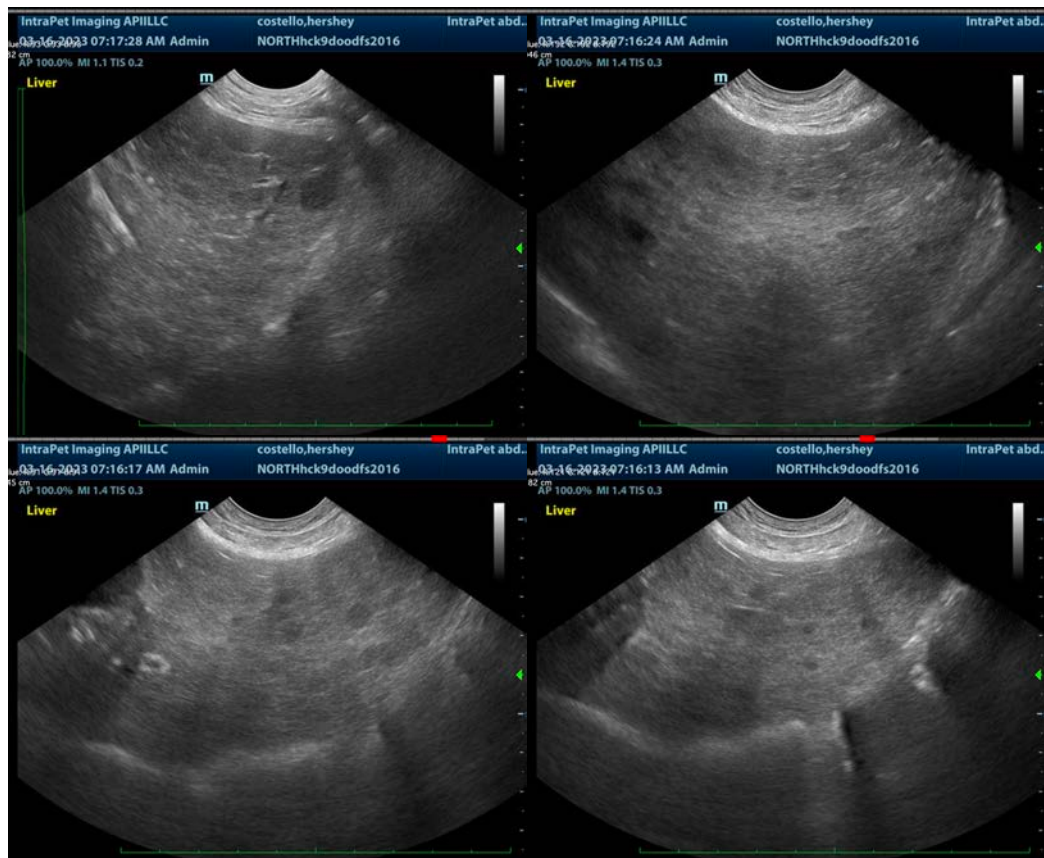
- Urinary bladder debris

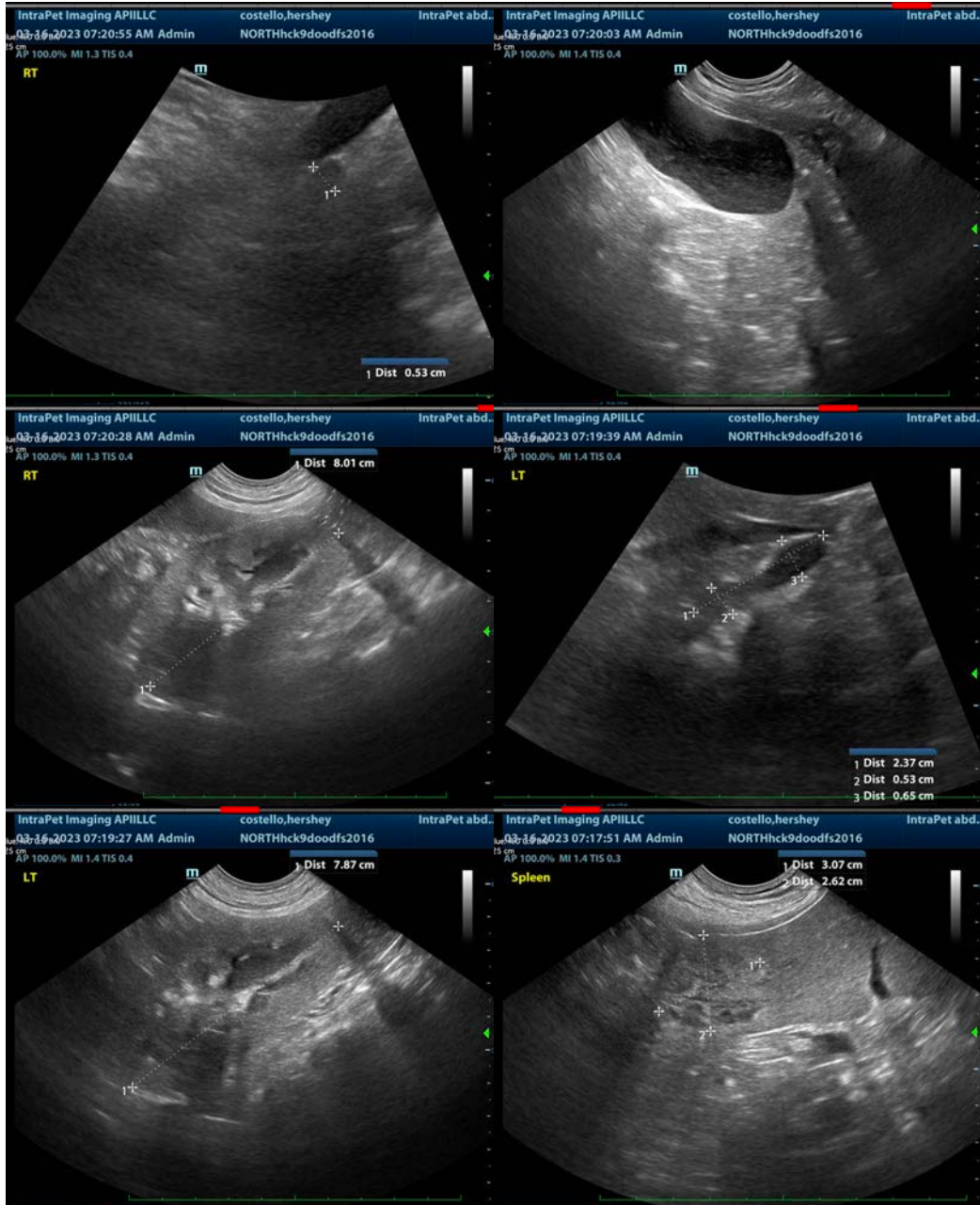
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

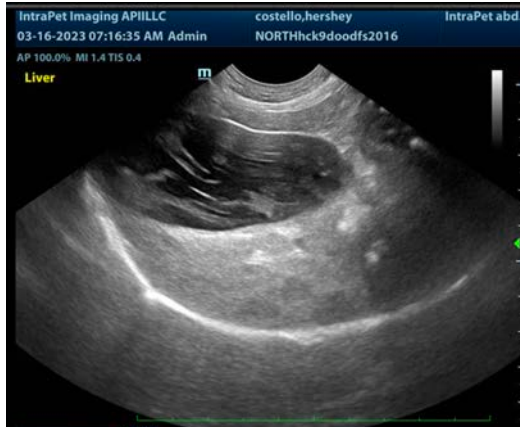
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Fine needle aspirates of the liver as well as the splenic nodule are recommended if patient's coagulation status is appropriate.

If a diagnosis is not obtained cytologically, a liver biopsy, being sure to include copper level assessment, may ultimately be required.







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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