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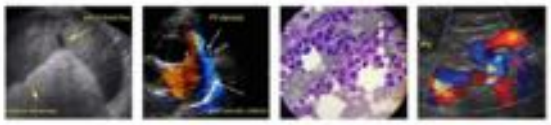


IMAGING PERFORMED BY
pawsonography@gmail.com 530-786-8340

**PATIENT**

Tag Collins

**SPECIES**

Canine

**BREED**

Mixed Border Collie

**SEX**

Female Spayed

**AGE**

15 years

**WEIGHT**

50 lbs

**INTERPRETED BY**

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)

**IMAGING PERFORMED BY**

Loetitia Saint-Jacques, LVT

**HOSPITAL NAME**

Dr Nancy Reese

**REFERRING VET**

AC of Penn Valley

**INVOICE**

12684

**DATE**

4.5.23

## PRESENTING CLINICAL SIGNS

History: Presented 3/13/23- O concerned with pet's cognitive abilities and confusion. Pet having "leaning episodes" at home. No PU/PD, appetite is OK. Hx of instability/neuro like episodes last year (previous clinic) that mostly resolved until recently- these episodes somewhat different from history. Senior panel at that time all WNL. Due to the change in liver enzymes, wanted to evaluate abdomen; owner does not want to pursue intracranial disease workup, but does want to evaluate liver/abd for evidence of neoplasia/inflammation/other for evidence of extracranial conditions that could contribute to possible brain/neurologic changes.

Abnormal PE/Chem/CBC/UA Results: Panel on 3/13/23: Marked elevation ALT 1159 (N; 12-118), AST slight increase 71 (15-66), ALP WNL, proteinuria (in hx too) hematuria 3+, USG 1.030, alb/BR/gluc OK; HCT 36%, high monocytes 1180 (0-840); neg HW and Ehrlichia, anaplasma, Lyme.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is moderately distended. Luminal contents are mostly anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 1- 2 cm, are normal.

The left kidney is normal in size (6.03 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. A small cortical cyst is seen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (6.02 cm in length) with a normal shape, architecture and smooth peripheral margins. The cortex is isoechoic relative to the spleen. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. A small cortical cyst is seen. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

### *Adrenal Glands*

The left adrenal gland is normal in size (0.74 cm at cranial pole) (0.75 cm at caudal polewith a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The caudal pole of the right adrenal gland is visualized and is in normal size (0.50 cm in width) with a normal shape, glandular echogenicity and detail. Surrounding vasculature is normal.

### *Spleen*

The spleen is subjectively normal in size overall (2.03 cm in width at the level of the hilus). A 1.59 cm heterogenous, slightly cavitated nodule/mass is observed at the caudal aspect. The lesion causes slight capsular expansion. In addition, a few small hyperechoic nodules are seen (the largest measuring 1.32 cm in diameter). Splenic vasculature is normal with no obvious evidence of thrombosis.

### *Liver*

The liver is subjectively normal in size with normal contours and structure. The parenchyma is hypoechoic relative to the spleen and subtly heterogenous in appearance. A 3.58 cm isoechoic-to-heterogenous mass is observed on the left side. The lesion does not appear to cause capsular expansion. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of aggregated echogenic gravity-dependent debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

***Gastrointestinal***
The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. 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 not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

***Pancreas***
The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely slightly hyperechoic 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. The abdominal lymph nodes are normal/not visible.

***Other***
A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

## ULTRASONOGRAPHIC FINDINGS

### Primary Findings

- Left hepatic mass. Differentials include neoplasia (i.e., adenoma, adenocarcinoma, round cell tumor), versus a benign process (i.e., regenerative nodular hyperplasia, inflammatory focus, granuloma, other). The diffuse hepatic parenchymal changes could be consistent with an inflammatory hepatopathy (i.e., chronic hepatitis), Leptospirosis, infiltrative neoplasia, hepatotoxicosis (i.e., copper), regenerative nodular hyperplasia, vacuolar hepatopathy, other hepatopathy or some combination thereof.

- Splenic nodule. Differentials include neoplasia (i.e., sarcoma, round cell tumor, metastatic lesion) versus a benign process (i.e., focus of lymphoid hyperplasia, extramedullary hematopoiesis, or similar).

### Secondary Findings

- Mild bilateral chronic renal changes

- Mild age-related pancreatic remodeling of the right limb

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

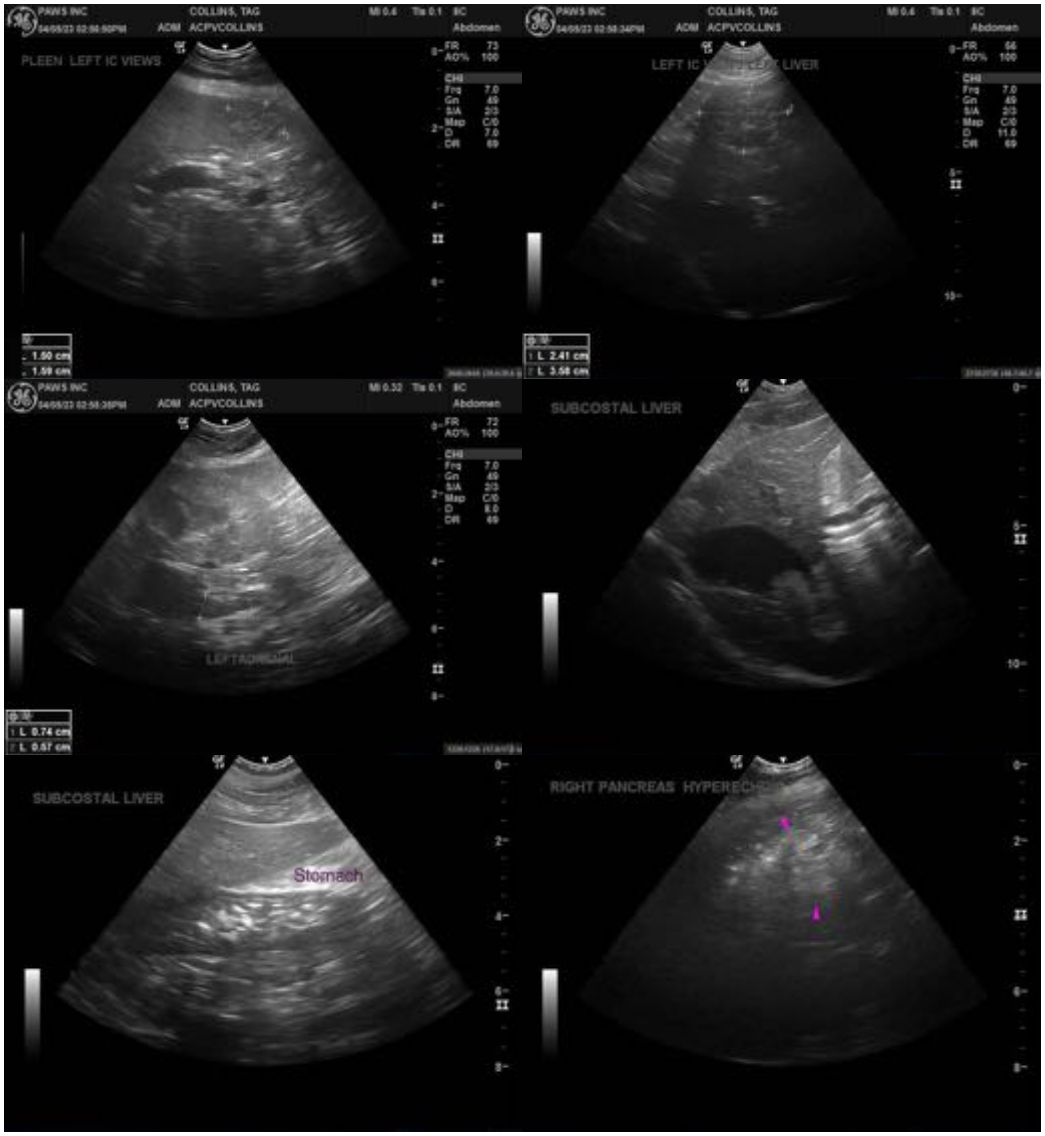
- Three-view thoracic radiographs are recommended to assess for pulmonary metastases.

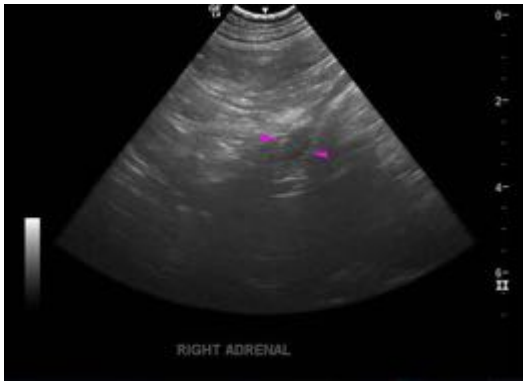
- Consider pre-and postprandial serum bile acids +/- a blood ammonia level to assess for hepatic encephalopathy.

- Consider fine-needle aspirates of the liver nodule, other hepatic lobes and the splenic nodule (if clotting status is appropriate). Twenty-five gauge-needles should be used. The patient should be monitored post-procedure for the presence iatrogenic hemorrhage.

- Given the patient's neurologic signs, also consider the following:

    1. Baseline blood pressure measurement to assess for systemic hypertension
    2. T4/free T4 by equilibrium dialysis
    3. Consultation with a board-certified neurologist






**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.

**Andrea Nicastro**, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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