**DATE PRESENTING CLINICAL SIGNS**

4/18/22

P presented with coughing on activity at her biannual exam in early March. She also eats her housemate's feces. Radiographs revealed cardiomegaly, which prompted the echo/ECG request while labs revealed anemia, elevated SDMA, low USPG, and elevated pancreas value.

PATIENT

Coco Gale

Current Medications: Ursodiol- 50mg daily since September 2021
 denamarin medium dog advanced- 1 tablet daily since september 2021

SPECIES

Canine

hepaticlear- 1/2 chew daily since 3/04/21, torbutrol- 1mg given as needed (1-3 doses per week typically)
 began 4/15/21

BREED

Miniature Poodle

Lab Results: hematocrit 35%, non-regenerative anemia. USG 1.016. No proteinuria, inactive sediment. Fecal negative.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson

SEX

Female, spayed

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System****AGE**

8/6/2006

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. The region of the trigone is normal.

WEIGHT

9.6 lbs.

The left kidney is normal size (3.44 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

INTERPRETED BY

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

The right kidney is normal size (2.96 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

HOSPITAL NAME

Happy Tails Veterinary
 Hospital

Adrenal Glands

The left adrenal gland is normal size (0.57 cm at cranial pole) (0.44 cm at caudal pole) (1.37 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. Calpeno

The right adrenal gland is normal size (0.53 cm at cranial pole) (0.51 cm at caudal pole) (1.64 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

13223

Spleen

The spleen is normal in size (1.23 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. 1-2 ill-defined hyperechoic areas/nodules are observed along the medial aspect, the largest measuring 0.73 cm in diameter. Splenic vasculature is normal.

Liver

The liver is subjectively prominent in size with swollen curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and exhibits mild heterogeneity. No distinct focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is moderately distended. The wall is hyperechoic to mineralized and normal in thickness. A

small to moderate amount of aggregated echogenic partially dependent to suspended debris/sludge 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 thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

Pancreas

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional 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.

ULTRASONOGRAPHIC FINDINGS

Primary Findings:

- Non-specific chronic age-related renal changes.
- The gallbladder changes are consistent with a “porcelain” gallbladder. This finding is seen with cholecystitis and, in rare instances, can progress to biliary carcinoma. Gallbladder debris/sludge, non-mucocele.
- Suspected benign diffuse hepatopathy. Regenerative nodular hyperplasia and vacuolar hepatopathy are the top differentials.

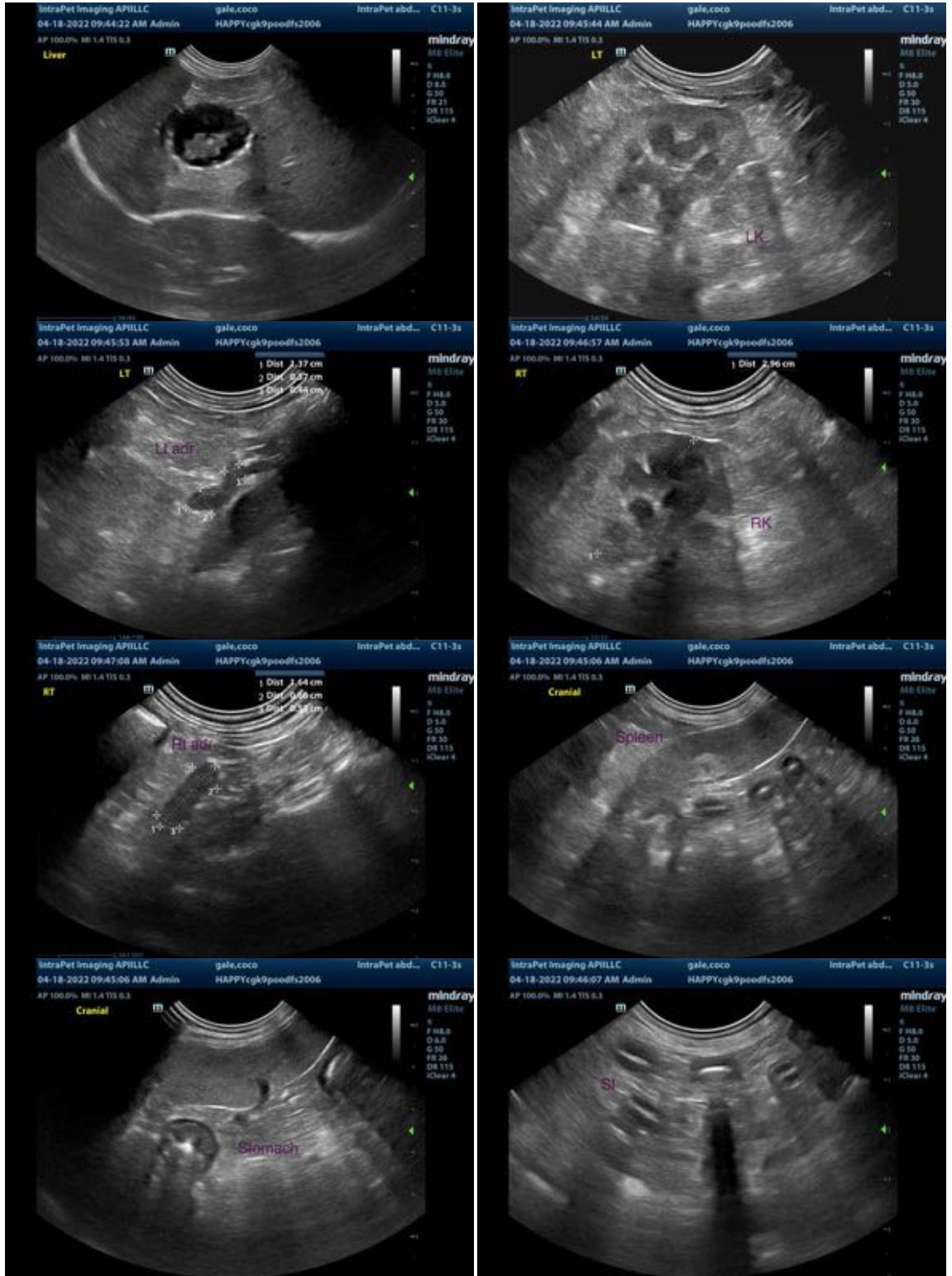
Secondary Findings:

- The hyperechoic splenic lesions are most consistent with a benign process (i.e., myelolipomas) with a lower possibility of emerging neoplasia.

*An obvious cause for the patient’s anemia is not identified in this study. Considerations include occult neoplasia, anemia of chronic disease, decreased bone marrow production, infection (i.e., tick borne), Low-grade GI blood loss, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- Thoracic radiographs (three-view) are recommended, if not already performed.
- Given the labwork findings and sonographic renal changes, serial monitoring of the patient’s kidney values (i.e., every 3-4 months) is recommended to assess for the development of azotemia. Also consider a urine culture and sensitivity +/- transition to a prescription renal diet.
- The patient’s hematocrit should also be closely monitored to assess for worsening anemia. If the hematocrit decreases and anemia remains non-regenerative, a bone marrow aspirate, upper GI endoscopy and assessment for tick-borne disease may be warranted.



The information and recommendations provided are based on the images presented by the referring

veterinarian. 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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