

**DATE PRESENTING CLINICAL SIGNS**

10/20/21 History: History of vomiting, low PCV, lethargy, heart murmur.

PATIENT

Haley Grimm

Current Medications: Pimobendan
 Date of Previous IntraPet Ultrasound: No previous
 Sedation: declined
 Stat Report: not requested

SPECIES

Canine

BREED

Cocker Spaniel Mix

SEX

Spayed Female

AGE

2011

WEIGHT

36 Pounds

INTERPRETED BY

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 Diplomate DACVIM
 (Small Animal
 Internal Medicine)

HOSPITAL NAME

Madonna VC

REFERRING VET

Dr. Cangro

INVOICE

13921

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.

The left kidney presented normal size (5.70 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. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney presented normal size (5.48 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. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal size (0.57 cm at cranial pole) (0.59 cm at caudal pole) (2.46 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.

The right adrenal gland is normal size (0.65 cm at cranial pole) (0.68 cm at caudal pole) (2.64 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.

Spleen

The spleen is subjectively prominent in size (2.18 cm at the level of the hilus) with normal curvilinear peripheral contours. The parenchyma is diffusely mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and diffusely mottled in appearance. A 2.25 cm x 2.04 cm isoechoic to slightly hypoechoic nodule is observed adjacent to the gallbladder neck. 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. Luminal contents are anechoic. The cystic and common bile ducts are normal.

Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is mildly distended with ingesta. The gastric wall and pylorus are normal in thickness with a normal layering pattern. 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 or overt infiltrative disease is noted.

Pancreas

The left and right limbs 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. The abdominal lymph nodes are normal/not visible.

Other

A brief echocardiogram revealed no evidence of pericardial effusion.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The splenic parenchymal changes are non-specific and could be secondary benign pathology (i.e., lymphoid hyperplasia or extramedullary hematopoiesis). Alternatively, infiltrative neoplasia (i.e., round cell tumor) may be present.
- Hepatic nodule/mass, differentials include neoplasia (i.e., adenoma, adenocarcinoma, round cell tumor) versus benign pathology (i.e., regenerative nodule, inflammatory focus). The diffuse hepatic parenchymal changes are non-specific and could be secondary to age-related pathology (i.e., regenerative nodular hyperplasia or vacuolar hepatopathy). Alternatively, a pathologic process (i.e., infiltrative neoplasia) may be present.

Secondary Findings

- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral age-related renal changes with dystrophic mineralization

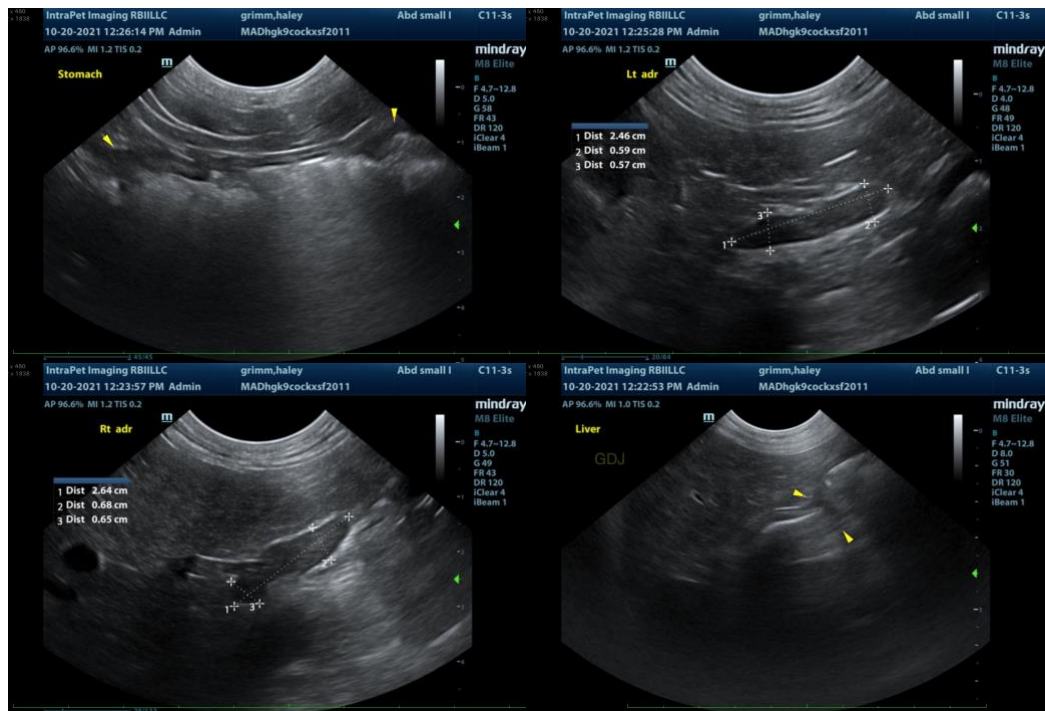
*An obvious cause for the patients' clinical signs is not identified in the study. Differentials include primary gastrointestinal or pancreatic disease, underlying metabolic issue, other.

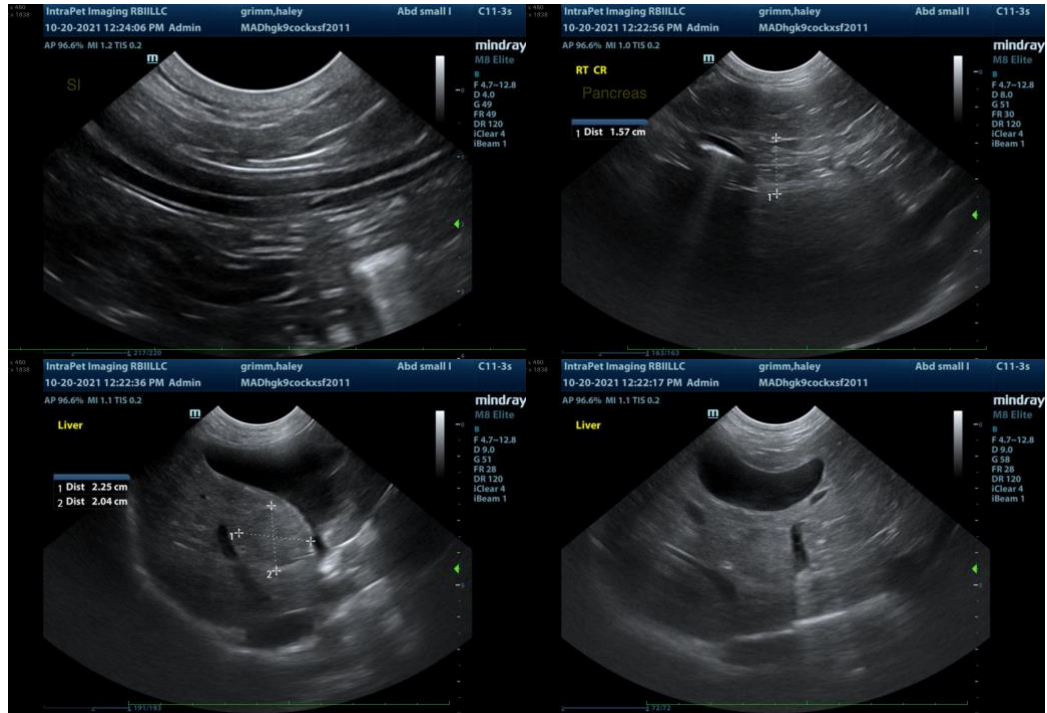
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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

Other diagnostic considerations include the following:

1. Fine needle aspirates of the spleen and liver (if accessible). Aspiration of the hepatic nodule is recommended.
 2. Fecal evaluation for ova and Giardia
 3. GI panel including serum cobalamin, folate, TLI and PLI
 4. A resting cortisol level to screen for hypoadrenocorticism. If resting cortisol level is < 2.0 mcg/dL, an ACTH stimulation test is recommended
 5. A 6-week limited antigen diet trial to assess for food allergies
 6. Pre- and postprandial serum bile acids to evaluate hepatic function
- Depending on the results of the above diagnostics/therapeutics, endoscopic or surgical gastrointestinal biopsies may be warranted. If surgery is pursued, hepatic mass removal with submission for histopathology is also recommended.
 - Given the history of anemia, a CBC with reticulocyte count is recommended to determine if a regenerative process is present.





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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