

**DATE PRESENTING CLINICAL SIGNS**

5/24/22

Presented for 1 week duration for decreased appetite, lethargy. Presented with pale gums, hematocrit 11%. X-rays show large liver.

**PATIENT**

Bella Giese

Current Medications: None started.

Lab Results: Hematocrit 11%. Elevated WBC, ALT, and ALP. Regenerative anemia, possible thrombocytopenia. ALT 579, ALP 476.

Radiographs: Large liver.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: no previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Requested by DVM.

Imaging Performed By: Andi Parkinson, RDMS.

**BREED**

Beagle

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

Female, spayed

The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended. A scant amount of suspended echogenic debris is observed within the lumen. 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.

**AGE**

2/22/2013

The left kidney is normal size (5.32 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.

**WEIGHT**

38.7 lbs.

The right kidney is normal size (5.66 cm in length) with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths or hydroureter.

**INTERPRETED BY**

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

**Adrenal Glands**

The left adrenal gland is normal size (0.53 cm at cranial pole) (0.58 cm at caudal pole) (2.00 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.

**HOSPITAL NAME**

Festival VC

The right adrenal gland is normal size (0.55 cm at cranial pole) (0.74 cm at caudal pole) (1.92 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. Cianelli

**Spleen**

The spleen is subjectively prominent in size (2.22 cm in width at the level of the hilus) with swollen, slightly undulating peripheral contours. The parenchyma is subtly mottled in appearance. 1-2 areas of infarction are observed at the mid to caudal aspect. Splenic vasculature at the hilus appears normal.

**INVOICE**

13418

**Liver**

The liver is subjectively enlarged with swollen peripheral contours. The parenchyma is hyperechoic relative to the spleen and subtly mottled in appearance. A 2.19 x 2.11 cm ill-defined hyperechoic nodule is observed deep on the left side. In addition, a 1.00 x 0.70 cm cystic lesion is also observed on the left. Vascular and biliary tracts are of normal volume with no evidence of congestion. The gall bladder lumen is mildly distended. The wall is normal in thickness. A scant amount of echogenic 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 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 base/right limb of the pancreas is prominent in size with slightly irregular peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and mottled in appearance. No distinct focal lesions are observed. The pancreatic duct is not overtly dilated.

### ***Free Abdomen***

A small amount of echogenic free fluid is observed. The abdominal lymph nodes are normal/not visible.

### ***Other***

A brief echocardiogram reveals no obvious evidence of pericardial effusion, right atrial/right auricular masses or chamber enlargement.

Mild caudal vena cava dilation (0.99 cm in diameter).

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings:**

- Splenic infarct(s). The diffuse splenic parenchymal changes could be consistent with infiltrative neoplasia (i.e., lymphoma) or a benign process (i.e., antigenic stimulation, lymphoid hyperplasia, extramedullary hematopoiesis or similar).
- Non-specific diffuse hepatopathy. Differentials include inflammatory disease (i.e., bacterial cholangiohepatitis, chronic active hepatitis), infiltrative neoplasia (i.e., lymphoma), hepatotoxicosis (i.e., copper) +/- concurrent vacuolar hepatopathy and/or regenerative nodular hyperplasia. The hyperechoic hepatic nodule trends toward the benign (i.e., regenerative nodule) with a lower possibility of emerging neoplasia. The cystic hepatic lesion could be consistent with a benign cyst, hematoma or emerging tumor (i.e., hemangioma, hemangiosarcoma).
- The ascites may be secondary to hemorrhage, neoplastic effusion, increased vascular permeability, increased hydrostatic pressure, other.
- The dilated caudal vena cava may be secondary to overhydration or an "upstream" issue (i.e., clot within the thoracic caudal vena cava, extraluminal obstruction, other).

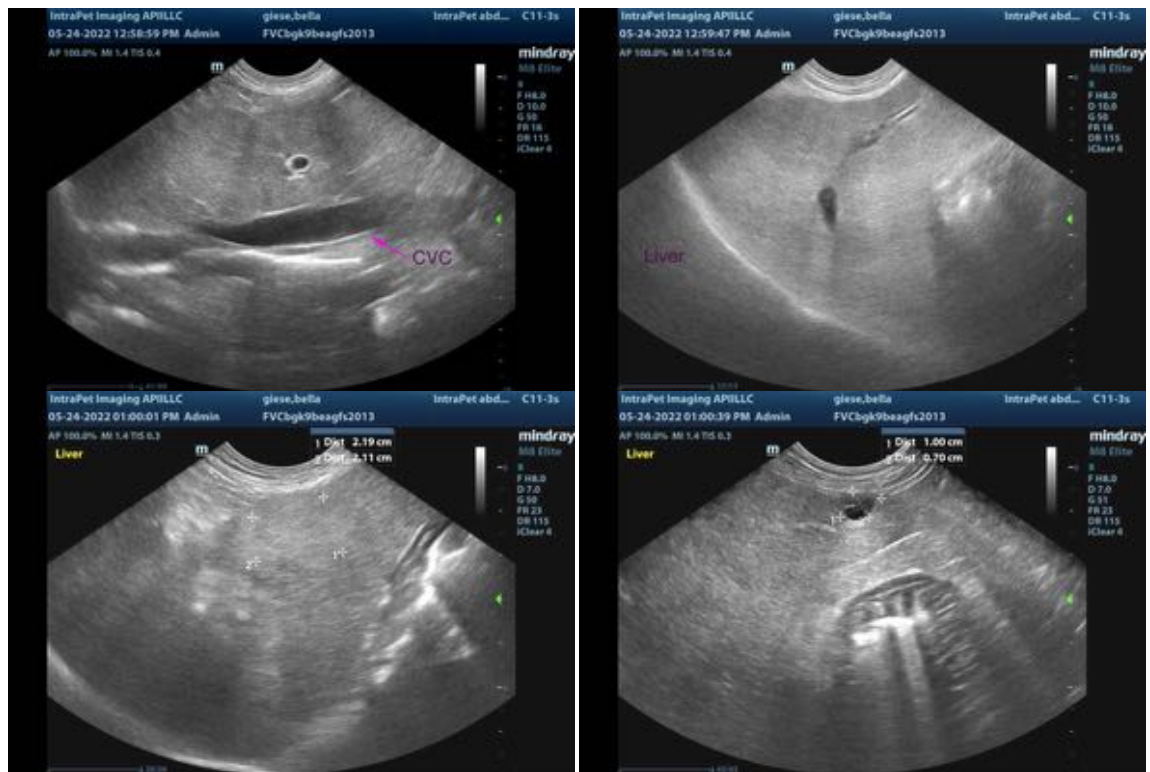
### **Secondary Findings:**

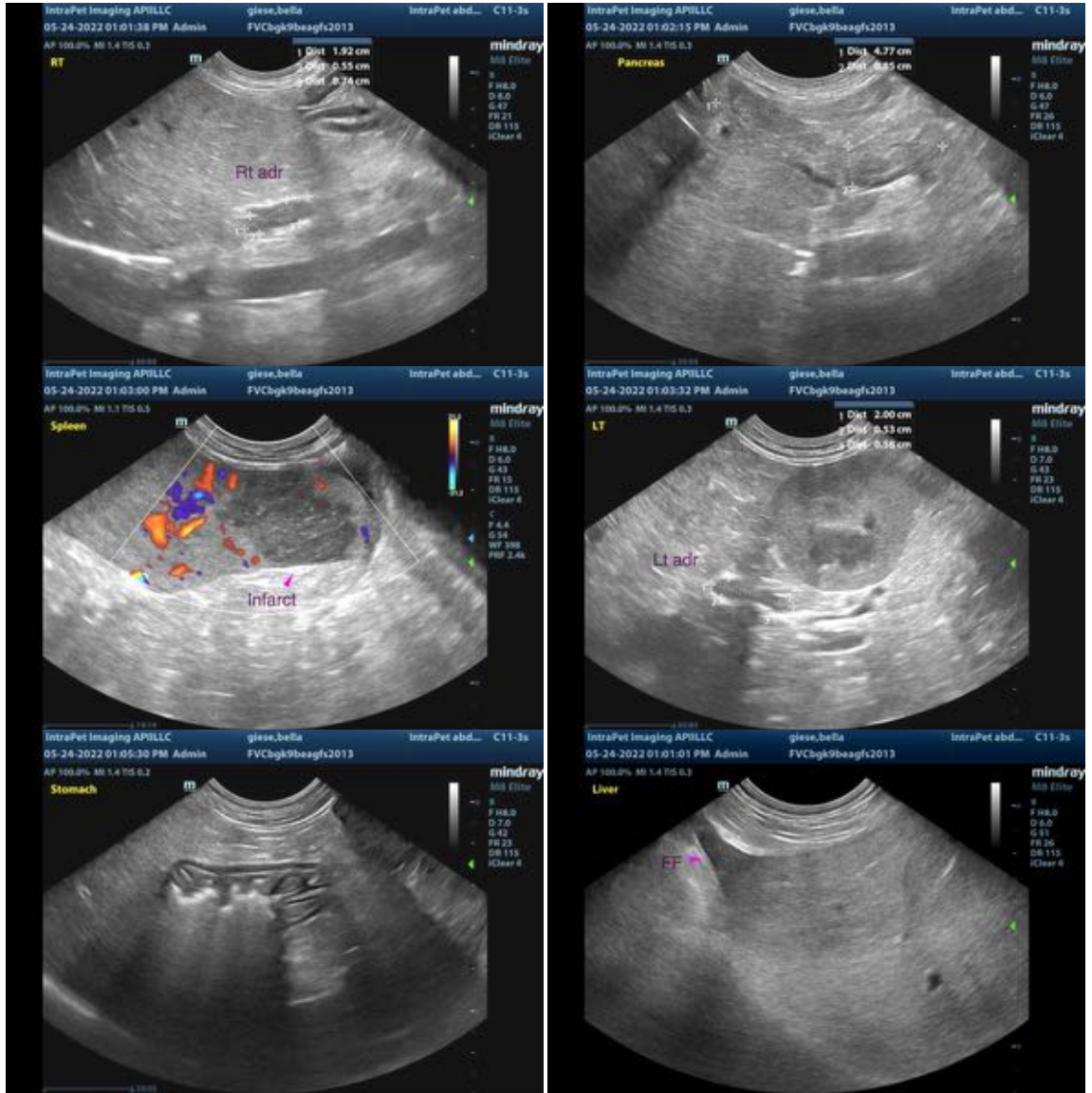
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral minor age-related renal changes.

\*An obvious cause for the severe regenerative anemia is not identified in this study. Considerations include blood loss (i.e., GI, other) or hemolysis.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

- A recheck CBC with platelet count (send to diagnostic lab) and PT/PTT are recommended. If the platelet count and clotting status are appropriate, consider fine needle aspirates of the liver and spleen to further evaluate for round cell neoplasia.
- Also consider a slide agglutination test to assess for hemolysis.
- Also consider a comprehensive tick panel (send to NC State). While awaiting test results, a blood transfusion may be warranted.
- If the above diagnostics are inconclusive, an upper GI endoscopy may be warranted to assess for gastrointestinal blood loss/pathology.





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.

Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)  
 Andrea.nicastro@sonopath.com