

**DATE PRESENTING CLINICAL SIGNS**

7/12/23 Not eating, uncomfortable.

**PATIENT**

Rizza Seaborg

Current Medications: GI diet,, buprenorphine oral (as needed for pain),, doxycycline 400mg: 1/2TBID, Lasix 40mg: 1/2TBID, DES 1mg: 1T 2x weekly, Galliprant 60: 1TSID PRN. Owner unable to give any medications at this time due to p not eating.

Lab Results: pancreatitis, elevated alt / alp / ca

Date of Previous IntraPet Ultrasound: No previous.

**SPECIES**

Canine

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**BREED**

Mixed

**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. Some mineral/sand debris is noted as well. 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.

**AGE**

4/21/12

The right kidney is normal in size (6.93 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.

**WEIGHT**

55 Pounds

The left kidney is normal in size (6.65 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.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (0.61 cm at the cranial pole and 0.56 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**HOSPITAL NAME**

Honeygo AH

The left adrenal gland is normal in size (0.53 cm at the cranial pole and 0.68 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**REFERRING VET**

Dr. Mullenex

**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). An approximately 2.0 cm in diameter non-capsule disrupting hypoechoic nodule is noted in the mid spleen as well as several smaller hypo- to anechoic nodules/lesions near the head of the spleen. Splenic vasculature appears normal.

**INVOICE**

43946

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mottled by multifocal discrete hypoechoic nodules of varying sizes "moth-eaten". Some of the nodules have a subtle hyperechoic center, consistent with "target lesions". Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as 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. However, note that at the level of the diaphragm caudal to the heart there is a 6.5 cm x 5.0 cm heterogeneous, primarily hypoechoic soft tissue density pulmonary mass adjacent to the diaphragm.

## **PRIMARY FINDINGS**

- Nodular Liver - This finding is concerning for infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease (nodular hyperplasia) cannot be ruled out but is considered less likely.
- Hypoechoic splenic nodules can represent benign cysts, hematomas, extramedullary hematopoiesis, etc. However, given concurrent pathology, infiltrative neoplasia/metastatic disease is considered most likely.
- Pulmonary nodule/mass – may represent the primary disease or a metastatic lesion, but is concerning as well for infiltrative neoplasia.

## **SECONDARY FINDINGS**

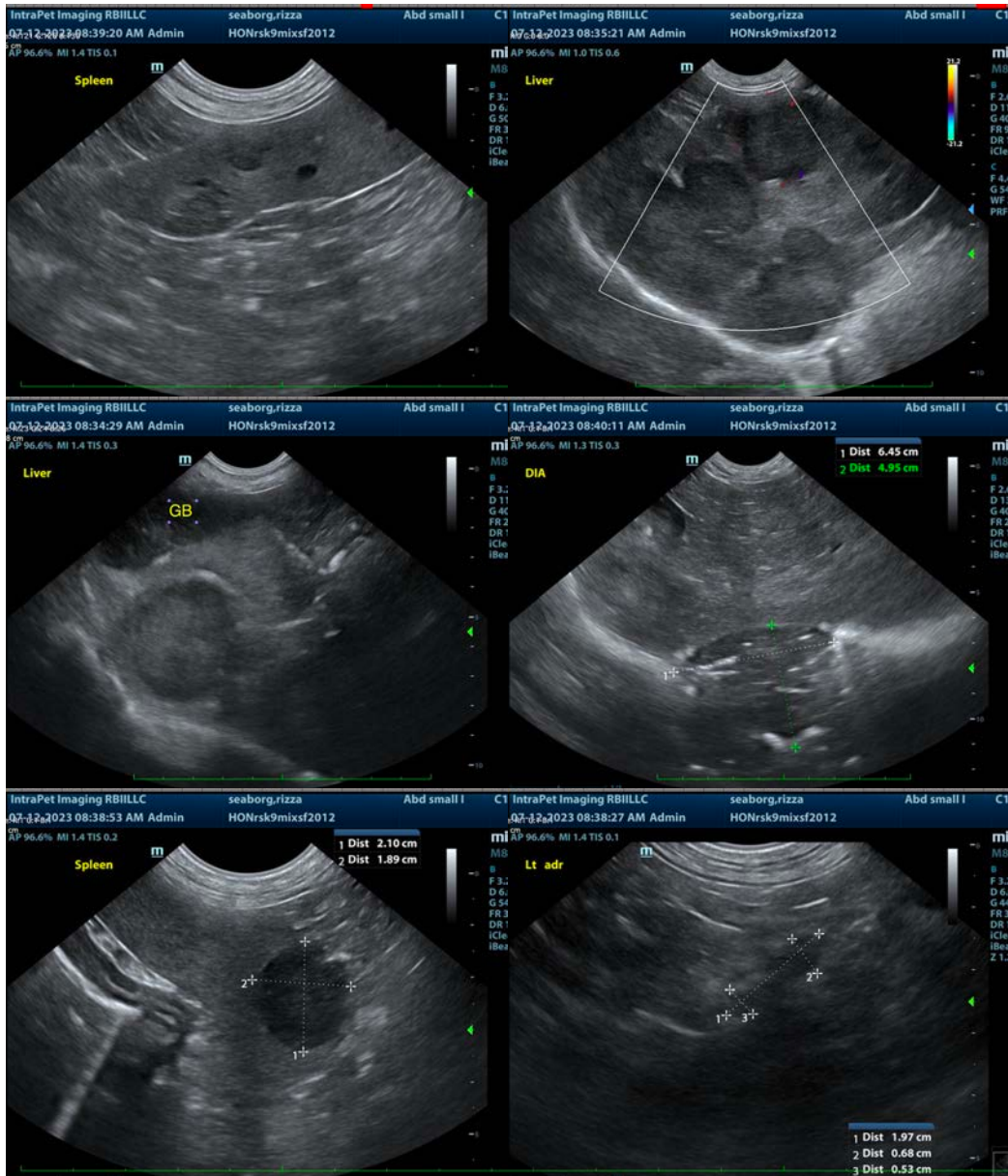
- Moderate gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted 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

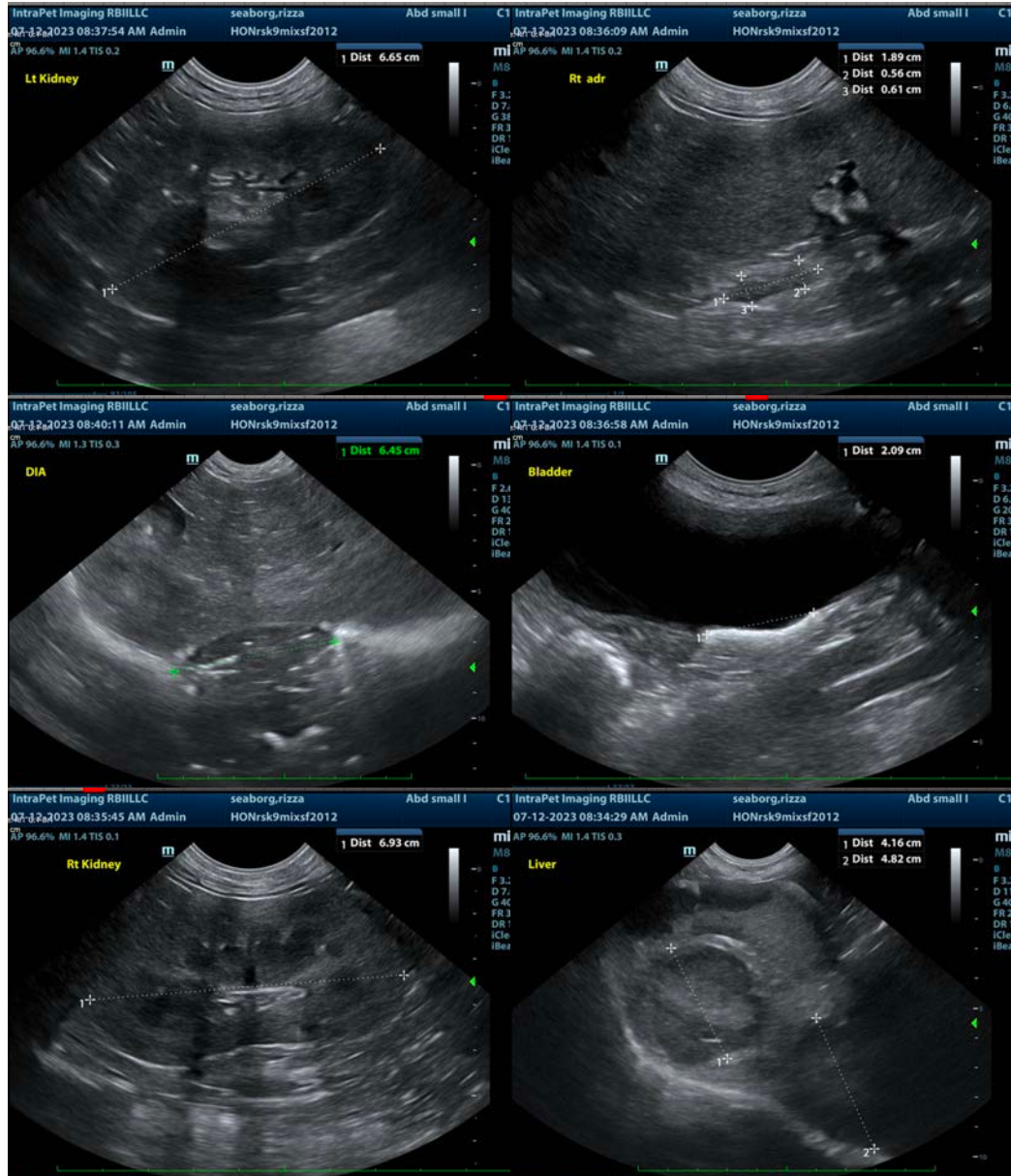
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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 +/- the pulmonary mass +/- the spleen are recommended if patient's coagulation status is appropriate.

Given the findings described above, this patient's hypercalcemia is most likely hypercalcemia of malignancy. However, further evaluation, pending cytology results, could be considered in the form of a malignancy panel to assess ionized calcium, PTH, and PTHrP.





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.

**Beth Johnson, DVM, DACVIM**  
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