

**DATE**

12/29/21

**PRESENTING CLINICAL SIGNS****PATIENT**

Bella Cornblatt

History: Severe arthritis - was on 75 mg Carprofen in AM; 32.5 mg in PM plus 50 mg, Tramadol TID, plus Cosequin. All was last given 12/20. She then had an episode of idiopathic vestibular disease and was treated with 25 mg Meclizine and 80 mg Cerenia SID. Since this episode, she has been pu/pd. Bloodwork pulled 12/27 showed a moderately elevated ALT. She is worse at night with drinking and urination and panting. It could be severe senior anxiety as well.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: IM 0.25 mL dexdomitor plus 0.5 ml torbutrol

Stat Report: Not requested.

**BREED**

Imaging Performed By: Rachel Brillhart, RDMS.

Beagle Mixed Breed

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Spayed Female

**Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2 cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**AGE**

11/13/2007

The right kidney has a normal shape and size (5.74 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

61 Lbs.

The left kidney has a normal shape and size (6.45 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**Adrenal Glands**

The left adrenal gland is normal/borderline large in size measuring 0.84 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**HOSPITAL NAME**

Harborside MVC

The right adrenal gland is normal/borderline large in size measuring 0.71 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**REFERRING VET**

Dr. Hawkins

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**INVOICE**

13237

**Liver**

The liver is subjectively large in size, and echogenicity with smooth peripheral margins. The parenchyma is mildly heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a subtle isoechoic mass effect/nodule visualized on the right side of the liver, measuring 3.82 cm x 2.97 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal (between 0.3-0.5 cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47 cm.) Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The (pancreas/region of the pancreas) is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Large heterogeneous liver with isoechoic nodule/mass effect. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The mass lesion is subtle and could be consistent with either a benign or cancerous process.
- Moderate gallbladder sludge. The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Borderline bilateral adrenomegaly. The bilateral adrenomegaly could be consistent with bilateral hyperplasia (e.g., secondary to pituitary-dependent hyperadrenocorticism), bilateral infiltrative neoplasia, inflammatory adrenal disease, other. Correlation with clinical findings is recommended.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

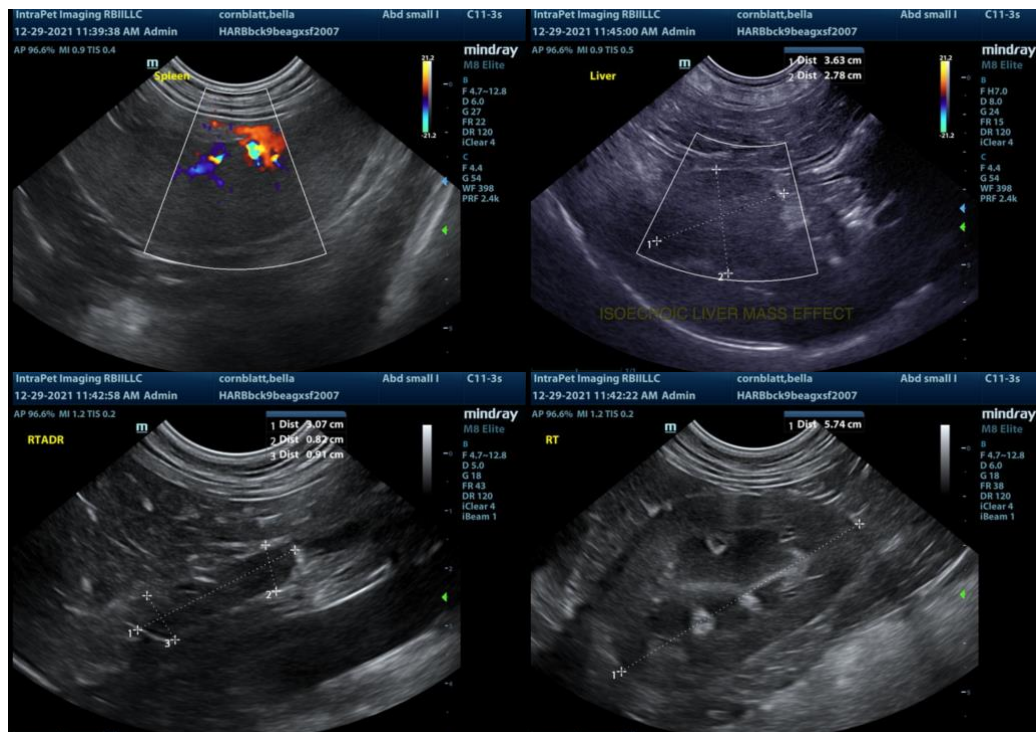
The liver is large and somewhat mottled with an ill-defined mass effect. This could represent a large regenerative nodule or an early carcinoma adenoma. If surgical resection is desired, consider a contrast CT

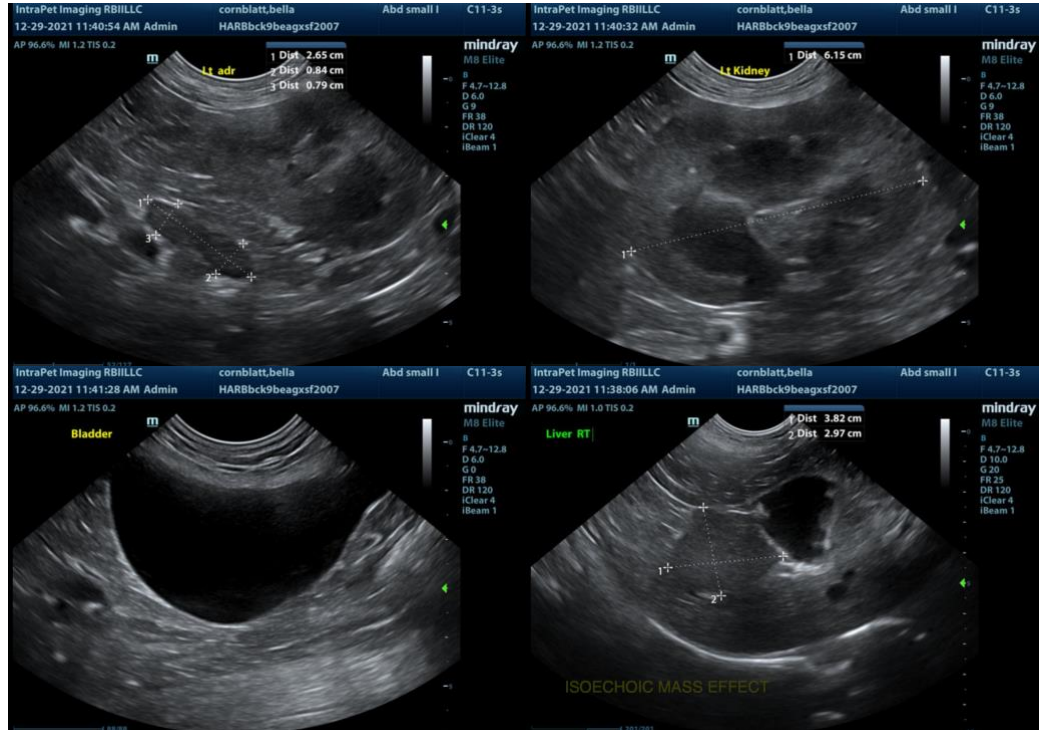
scan for surgical planning. If surgery wouldn't be considered, a fine needle aspirate could be considered or continued periodic monitoring with ultrasound.

Additionally, the adrenal glands are plump. This may be an incidental finding or could be an indicator of Cushing's disease. Given the history of PU/PD and elevated liver values, this could be a possibility, but typically it is not an ALT elevation which is seen.

- Consider pre-and postprandial bile acids to evaluate liver function.
- Consider screening for leptospirosis
- If clinical signs are consistent and there is a significant ALP elevation, you could consider screening for Cushing's disease.
- Consider a fine needle aspirate of the liver/liver mass.
- I recommend three-view thoracic radiographs to evaluate for concurrent intrathoracic disease.

Additionally, the ALT elevation could be consistent with any sort of toxin exposure, medications, etc. I would avoid NSAIDs if possible, particularly if bile acids are abnormal.





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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