



**PATIENT PRESENTING CLINICAL SIGNS**

Santa Leaver vomiting, diarrhea, anorexia, drinking water; hx of eating underwear etc.  
Abnormal PE/Chem/CBC/UA Results: n/a

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine

**Urinary System**

**BREED**

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

Labrador Retriever

**SEX**

The prostate is normal in size (0.9 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

Neutered Male

**AGE**

The left kidney has a normal shape and size (8.0 cm). Overall echogenicity is normal with decreased 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 hydronephrosis. Renal vasculature is normal.

14 Years

**WEIGHT**

The right kidney is normal in size (6.85 cm), but irregular in shape. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is an isoechoic, irregular bulging mass effect towards the caudal pole of the kidney, measuring approximately 2.0 cm x 2.4 cm. There is no evidence of pyelectasia, nephroliths, or hydronephrosis. Renal vasculature is normal.

65.6 Pounds

**INTERPRETED BY**

**Adrenal Glands**

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

The left adrenal gland is normal in size measuring 0.78 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.

**IMAGING PERFORMED BY**

The right adrenal gland is large in size measuring 2.16 cm at the cranial pole, 1.44 cm at the caudal pole, and 4.81 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is irregular in appearance with an enlarged cranial pole. Echogenicity is uniform. Findings are most consistent with an enlarged cranial pole of the adrenal gland. No obvious vascular invasion is noted.

Diane McFadden, RVT

**HOSPITAL NAME**

**Spleen**

Newton Vet Hospital

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.

**REFERRING VET**

**Liver**

Dr. Chabora

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are too numerous to count hyperechoic parenchymal nodules visualized, varying in size from 0.5-1.75 cm. Additionally, there is a hypoechoic mass measuring 3.5 cm visualized towards the periphery.

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9/3/21



**PATIENT**

Santa Leaver

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

**SPECIES**

Canine

**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.

**BREED**

Labrador Retriever

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is increased at 0.4 cm. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Visualized peristalsis appears appropriate. While some area of bowel appear relatively normal but subjectively thickened, others have reduced distinction of layering, almost consistent with a mass effect.

**SEX**

Neutered Male

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.

**AGE**

14 Years

**Pancreas**

The pancreas is large and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with moderate/severe pancreatitis.

**WEIGHT**

65.6 Pounds

**Free Abdomen**

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a mild mesenteric lymphadenopathy present. The sublumbar lymph node measures 0.7 cm. The omentum is generally of normal echogenicity, but is hyperechoic around the pancreas.

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**PRIMARY FINDINGS**

- Large, prominent, hyperechoic pancreas with surrounding hyperechoic mesentery – The pancreatic changes are most consistent with moderate pancreatitis/pancreatic inflammation. Recommend PLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.
- Heterogeneous liver with diffuse hyperechoic nodules and a hypoechoic liver mass – 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.
- Irregular caudal pole of the right kidney – most consistent with an isoechoic renal mass, but deformity is possible, consistent with previous infarct or congenital malformation, as the lesion is isoechoic.
- Enlarged cranial pole of the right adrenal gland – Right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Generalized small intestinal wall thickening with focal areas of reduced distinction of layering – The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia. A reduction in the detail of wall layering favors either severe intestinal disease or

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**PATIENT**

neoplastic infiltration. Biopsy is recommended.

Santa Leaver

**SECONDARY FINDINGS**

**SPECIES**

- Decreased corticomedullary distinction in both kidneys – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

Canine

**BREED**

- Mild mesenteric lymphadenopathy – The prominent abdominal lymph nodes are most consistent with reactive lymphadenitis or lymphoid hyperplasia. Neoplastic infiltration is considered less likely.

Labrador Retriever

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**SEX**

There are many lesions in this dog's abdomen, and it may be difficult to determine which of these is associated with his current illness. Of most concern are the pancreatic changes. Recommend a quantitative PLI, B12 and folate level to further evaluate for pancreatitis. The changes observed are most consistent with either current significant inflammation or previous severe pancreatitis.

Neutered Male

**AGE**

Additionally, the bowel changes are concerning as a cause for the vomiting. I cannot definitively rule out the possibility of a partial obstruction, as ultrasound can be insensitive in picking up some types of material. Correlate these findings with serial radiographs. The bowel wall changes are concerning for possible severe infiltrative disease such as IBD or neoplasia. If symptoms don't improve, surgery may need to be considered to evaluate for foreign material and to biopsy the GI tract.

14 Years

**WEIGHT**

Of additional concern is the liver mass, the possible renal mass/irregularity, and the enlarged right adrenal gland. Consider fine needle aspirate of the liver mass and caudal pole of the right kidney to obtain further information. Additionally, consider advanced imaging (CT scan), as this will better delineate the location of the hepatic mass for possible surgical removal as well as evaluate the adrenal gland for any evidence of vascular invasion, which might impact a decision for possible surgical removal. The changes in the adrenal gland can be benign or malignant, and the adrenal gland can be actively secreting hormone, or not. If signs of Cushing's disease are present, consider adrenal function testing (likely done when the pet is feeling better) and blood pressure evaluation.

65.6 Pounds

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Labrador Retriever

**SEX**

Neutered Male

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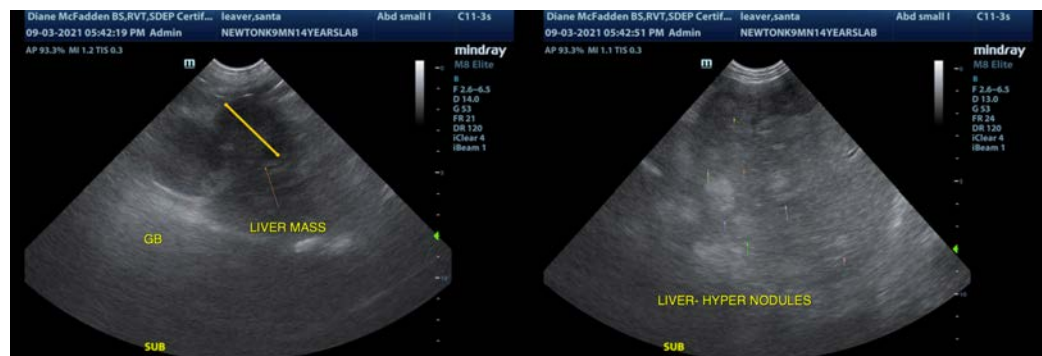
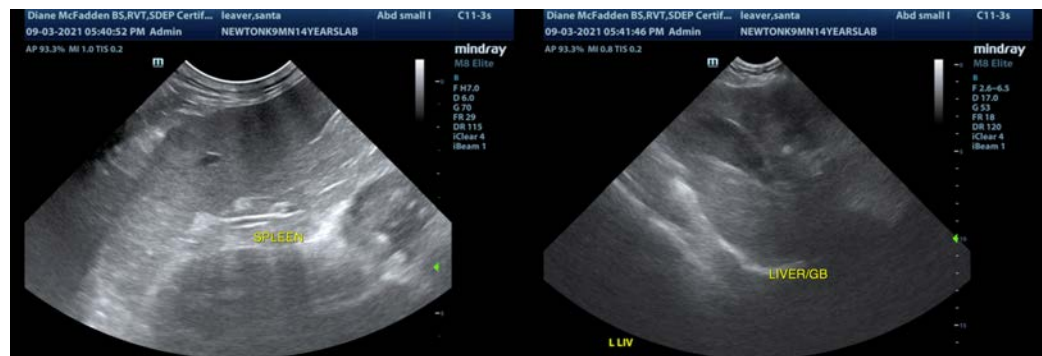
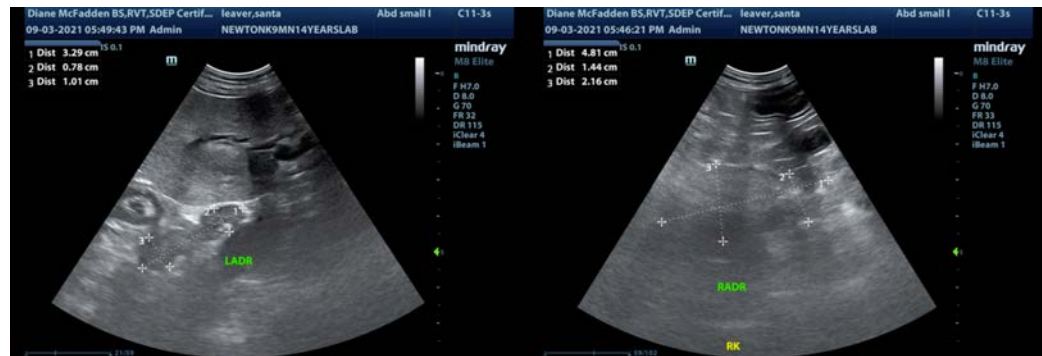
Dr. Chabora

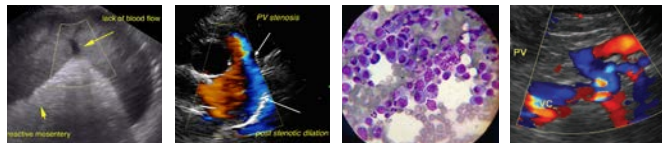
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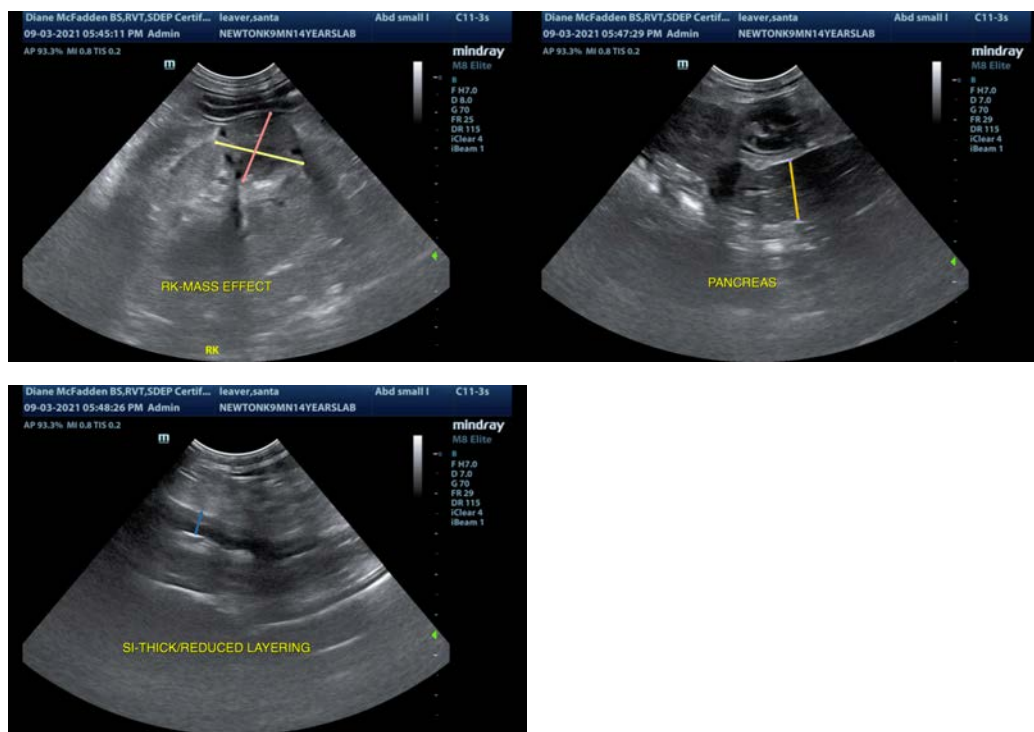
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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