

**PATIENT PRESENTING CLINICAL SIGNS**

Ducky Pearson Elevated ALT, ALP, GGT, identified on bloodwork after possible focal seizure, history of suspected abdominal mass. Meds: Ursodial, milk thistle  
Abnormal PE/Chem/CBC/UA Results: U/A normal, Sp. grav 1.022, Mild elevated TP (83), moderate elevation in ALT (221) significant elevation in ALP (1817) significant elevation in GGT (27), mildly elevated RBCs and RDW on CBC.

**SPECIES**

Canine

**BREED**

Bulldog X

**SEX**

Neutered Male The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

**AGE**

10.5 Years

The left kidney has a normal shape and size (5.42 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**

33.2 kg

The right kidney has a normal shape and size (5.94 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 in size measuring 0.54 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**

Crystal Hill

The right adrenal gland is normal in size measuring 0.75 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.

**HOSPITAL NAME**

New Hamburg VC

**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.

**REFERRING VET**

Dr. Van Hausen

**Liver**

The liver is subjectively normal in size, and echogenicity with slightly irregular margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. While there is no distinct mass effect, there are occasionally some indistinct bulges in the parenchyma, which could represent an ill-defined lesion, but no specific focal lesion is observed.

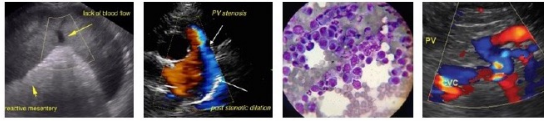
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37006

**DATE**

4/19/22

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.



**PATIENT**

**Gastrointestinal**

Ducky Pearson

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.

**SPECIES**

Canine

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 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.)

**BREED**

Bulldog X

Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**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.

**Pancreas**

**AGE**

10.5 Years

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**

**WEIGHT**

33.2 kg

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.

**Other**

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

There is a large, solid, hyperechoic, homogeneous mass effect visualized caudal to the left kidney measuring 9.41 cm x 7.6 cm. This has the general appearance of an intraabdominal lipoma, but FNA is recommended.

**IMAGING PERFORMED BY**

Crystal Hill

**ULTRASONOGRAPHIC FINDINGS**

- Heterogeneous, irregular liver – 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.
- Large, solid, homogeneous mass effect caudal to the left kidney – Primary differential would be an intraabdominal lipoma. Recommend a fine needle aspirate.

**HOSPITAL NAME**

New Hamburg VC

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**REFERRING VET**

Dr. Van Hausen

No distinct focal hepatic lesions are observed, although the liver margins are somewhat rounded and bulging in some areas. I suspect this is an incidental observation, but monitoring is warranted. This is what I recommend in dogs with an elevation in their ALP levels with no focal lesion in their liver and no evidence of biliary disease.

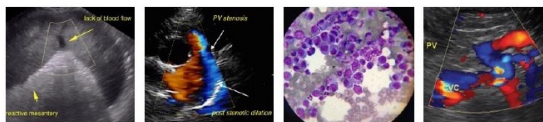
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- Induction phenomena are the most common cause for an elevation in ALP. These are systemic illnesses that 'turn on' the liver enzyme. Causes of this include Cushing's disease, dental disease, arthritis, and numerous others. In many cases the exact cause is unclear but as long as ultrasound and bile acids tests are normal most patients do not have progressive changes in their liver. While liver biopsy is not routinely performed, vacuolar hepatopathy, is noted on most biopsies. This is often non-progressive but in rare cases can be more severe and lead to liver failure.

**DATE**

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## PATIENT

Ducky Pearson

- If signs of cushings disease are present recommend endocrine function testing to evaluate for cushings disease.

## SPECIES

Canine

- Consider fine needle aspirate to rule out round cell neoplasia -if this is a concern.
- If a cause for the ALP elevation is not identified: I recommend recheck general blood work every 6 months, ultrasound once per year, and bile acids test every 1-2 years based on other results. If the ALP continues to climb a biopsy could be considered.

## BREED

Bulldog X

- Consider long term use of denamarin, and monitoring for the signs of cushings developing.

## SEX

Neutered Male

- A primary vacuolar hepatopathy can be breed related and is seen in Scottish Terriers, Schnauzers, Cocker spaniels etc.

## AGE

10.5 Years

Additionally, there is a large, hyperechoic, homogeneous mass effect visualized caudal to the left kidney. This has the appearance of an intraabdominal lipoma, but a fine needle aspirate is recommended to make sure it is not a different type of tumor.

## WEIGHT

33.2 kg

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## IMAGING PERFORMED BY

Crystal Hill

## HOSPITAL NAME

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## REFERRING VET

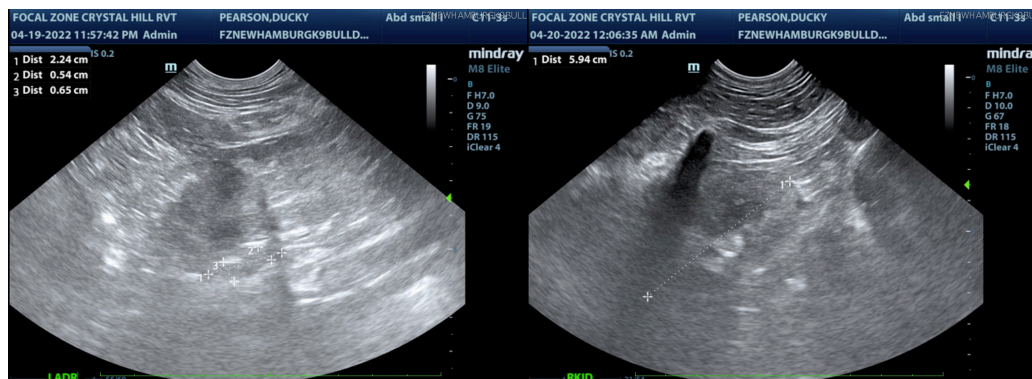
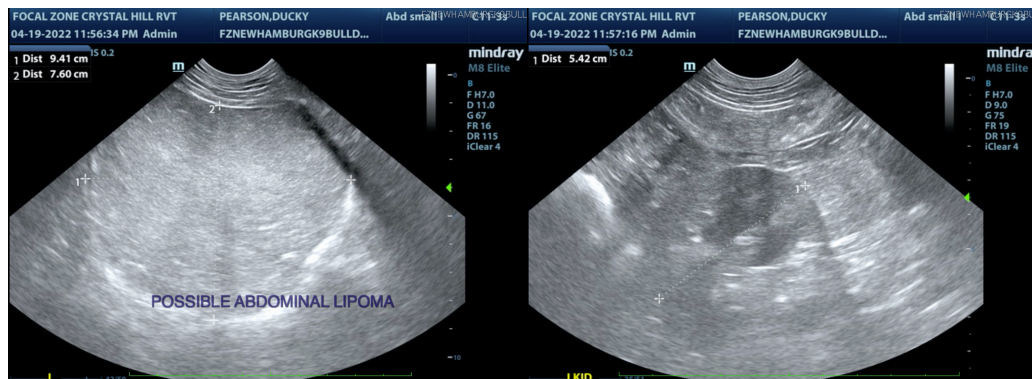
Dr. Van Hausen

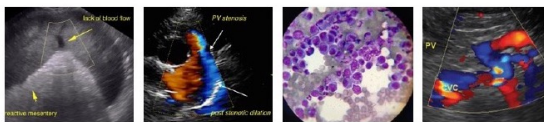
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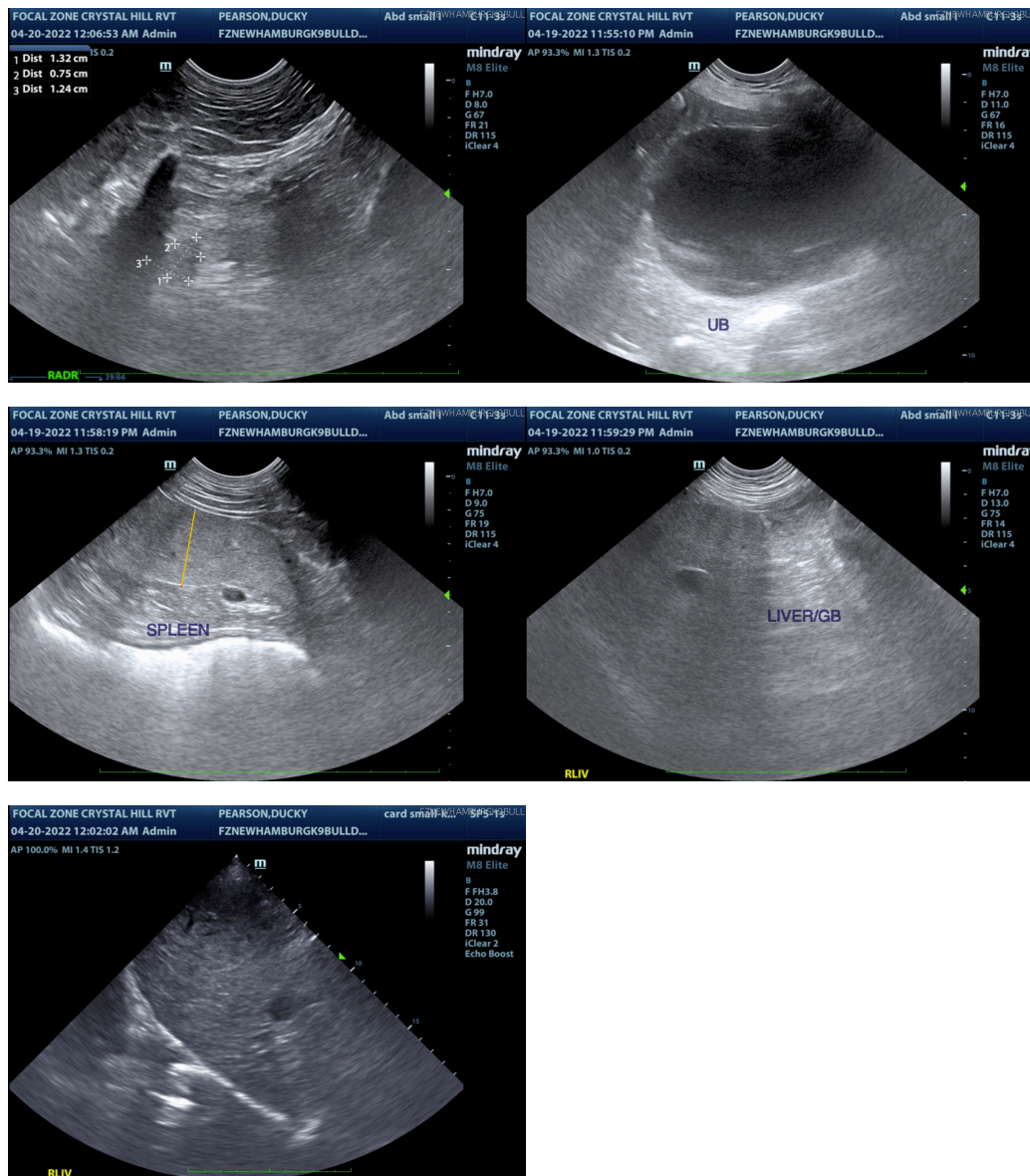
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

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