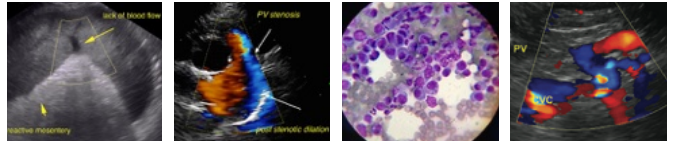




<b>PATIENT</b>	<b>PRESENTING CLINICAL SIGNS</b>
Achilles Zapp	Chronic enzyme elevation over 6 months, gradually worsening. Started having diarrhea that improves with Metronidazole and bland diet but returns; that has been several weeks. Alert, good appetite, no vomiting, maintaining weight. Has been taking Denamarin Advanced liver supplement for the past couple of months, along with Probiotics.
<b>SPECIES</b>	
Canine	
<b>BREED</b>	Abnormal PE/Chem/CBC/UA Results: ALKP 958 ALT 90; over 6 months, ALKP has gradually elevated, and ALT fluctuates between 90-150.
Jack Russell Terrier	<b>ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN</b>
<b>SEX</b>	<b>Urinary System</b>
Neutered Male	The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment, or cystoliths are observed. The urinary bladder, trigone, and visible pelvic urethra are normal in thickness with a smooth mucosal surface.
<b>AGE</b>	The prostate is normal in size, echotexture, and echogenicity for a neutered male.
12yr	The right kidney is normal in size (4.44 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.
<b>WEIGHT</b>	The left kidney is normal in size (4.11 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.
19.1	
<b>INTERPRETED BY</b>	<b>Adrenal Glands</b>
Beth Johnson, DVM DACVIM	The right adrenal gland is normal in size (cranial 1.1 cm, caudal 0.7 cm), shape, and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
<b>IMAGING PERFORMED BY</b>	The left adrenal gland is normal in size (cranial 0.4 cm, caudal 0.47 cm), shape, and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
Michelle Bartus	
<b>HOSPITAL NAME</b>	<b>Spleen</b>
Valley Veterinary Services Inc	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). No focal nodules or masses are observed. Splenic vasculature appears normal.
<b>REFERRING VET</b>	<b>Liver</b>
Michelle Bartus	Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.
<b>INVOICE</b>	
10313	
<b>DATE</b>	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.
7/12/2023	<b>Gastrointestinal</b>
	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 or foreign material.
	Pyloric outflow tract appears patent.



**PATIENT**

Achilles Zapp

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 or foreign material.

**SPECIES**

Canine

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**BREED**

Jack Russell Terrier

**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.

**SEX**

Neutered Male

**Free Abdomen**

There is no evidence of free peritoneal effusion noted in these images.

**AGE**

12yr

There is no apparent lymphadenopathy noted in these images.

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

19.1

- **Hyperechoic hepatomegaly**– This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible but considered less likely.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

- **Mild 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.

**IMAGING PERFORMED BY**

Michelle Bartus

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

Valley Veterinary  
Services Inc

Differentials for a primary cholestatic liver enzyme pattern (increased ALP) are vast and non-specific. Differentials include, but are not limited to, benign nodular hyperplasia which occurs in 70% of older dogs and often does not result in an abnormal ultrasound, reactive or idiopathic/vacuolar hepatopathy, cholestasis and/or hyperadrenocorticism as well as many chronic non-hepatobiliary diseases such as chronic infections/inflammation from dental disease, IBD, neoplasia, hyperlipidemia, hypothyroidism, chronic pancreatitis, chronic stress, etc.

**REFERRING VET**

Michelle Bartus

**INVOICE**

10313

There is no ultrasonographic evidence of cholestasis. Adrenocortical testing such as a low dose dexamethasone suppression test could be considered if clinical signs of hyperadrenocorticism are present. Ursodiol could be considered if gallbladder sludge is noted. A fine needle aspirate of the liver could be considered if patient's coagulation status is appropriate. Otherwise, recommendations include addressing any other concurrent disease and monitoring. If values are progressive, recheck imaging is recommended.

**DATE**

7/12/2023

Given this patient concurrent intermittent diarrhea a fecal exam is recommended if not recently evaluated. As is a gastrointestinal malabsorption panel (including cobalamin, folate, TLI, and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function. In the meantime, empirical deworming with a 5-day course of Panacur could be considered as could a probiotic such as Visbiome or Provable.



**PATIENT**

Achilles Zapp

Additionally, if tolerated a transition in diet could be considered based on trial-and-error response with options being hydrolyzed protein diet versus a bland easy-to-digest, or low-fat diet versus potentially biome diet etc.

**SPECIES**

Canine

**BREED**

Jack Russell Terrier

**SEX**

Neutered Male

**AGE**

12yr

**WEIGHT**

19.1

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Michelle Bartus

**HOSPITAL NAME**

Valley Veterinary  
Services Inc

**REFERRING VET**

Michelle Bartus

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10313

**DATE**

7/12/2023

