



**PATIENT**

Lily Belle Acquavita

**SPECIES**

Canine

**BREED**

English Bulldog

**SEX**

Spayed Female

**AGE**

9 years

**WEIGHT**

55 lbs

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Cassels Conway

**HOSPITAL NAME**

Central Broward AH

**REFERRING VET**

Dr. Cassels Conway

**INVOICE**

91764

**DATE**

9/9/21

**PRESENTING CLINICAL SIGNS**

History: Progressive ALP elevation starting 1 month ago. Recent UTI treated with Clavamox, resolved. P has a history of atopy well controlled with immunotherapy, hypoallergenic diet, apoquel- long term. History of KCS well controlled on cyclosporine, neo/poly/dex, optixcare- long term. O started P on "probiotic miracle" supplement recently, lactobacillus with stearic acid.

Abnormal PE/Chem/CBC/UA Results: 8/5/2021 Cbc- plt cnt 468 H, est inc Chem- Alp-269 H Tbil-0.5 H Cholesterol 464 H HEm 4+ t4-0.6L u/a- sp g 1049 prot 2+ blood 3+ wbc-4-10 H rbc-21-50H Bacteria- cocci 51-100 urine c/s Heavy growth Enterococcus sp. S- Clavamox 8/30/2021 FASTED Chem: ALP 526 UA: 1.048, 1+ protein C/S: No growth

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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.

The left kidney has a normal shape and size (5.67 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.

The right kidney has a normal shape and size (4.99 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.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.77 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.

The right adrenal gland is normal in size measuring 0.72 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.

**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.



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**Liver**

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The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed. 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.

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**Gastrointestinal**

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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.

**SEX**

Spayed Female

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

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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.

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**Pancreas**

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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.

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**Free Abdomen**

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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.

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**ULTRASONOGRAPHIC FINDINGS**

No significant ultrasonographic lesions were identified.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INVOICE**

The scan was relatively normal. Unfortunately you can still have significant liver disease present with a normal appearing ultrasound. In the case of an ALP elevation first consider possible iatrogenic issues such as hemolysis or lipemia in the blood sample (make sure this is a fasted sample with minimal hemolysis). In sensitive dogs even a steroid in eyedrops (such as the NeoPolyDex solution) can cause a mild elevation in ALP. There were no focal lesions observed in the liver and the biliary tract appears normal. Possible early Cushing's could be a consideration, but the adrenal glands appear relatively

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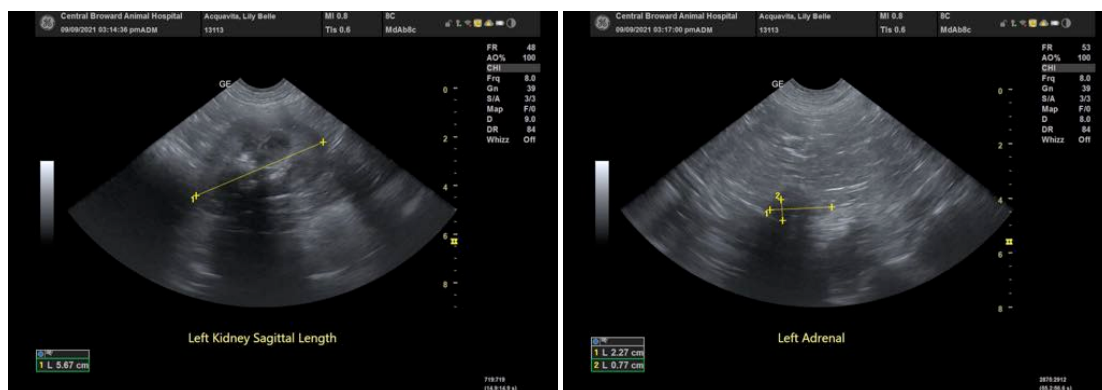
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normal. In these situations I consider these issues:

- Induction phenomena is the most common reason for an elevated 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.
- If signs of Cushing's disease are present recommend endocrine function testing to evaluate for Cushing's disease.
- 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.
- Consider long term use of Denamarin, and monitoring for the signs of Cushing's developing.
- A primary vacuolar hepatopathy can be breed related and is seen in Scottish Terriers, Schnauzers, Cocker spaniels etc.

I recommend continued use of a probiotic due to enterococcus UTI. These tend to occur in dogs that have used antibiotics frequently and in this breed with the associated skin issues this is likely. If possible try to use topical antibiotics as much as possible and always treat these urinary tract infections based on culture and sensitivity results (as you have been doing, which is great) because they can become resistant and difficult to treat.





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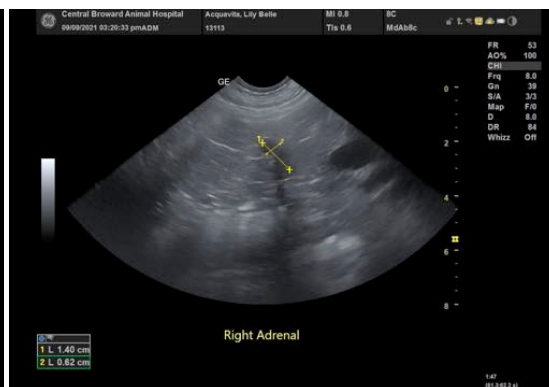
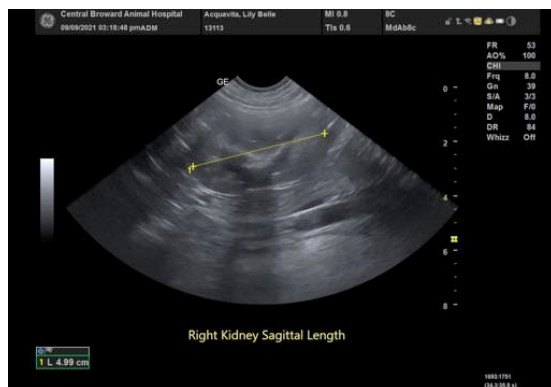
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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