



**PATIENT**

Willow Palmer

**SPECIES**

Feline

**BREED**

Domestic Longhair

**SEX**

Female, spayed

**AGE**

4 Yrs.

**WEIGHT**

8.02 lbs.

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Jenna Walsh

**HOSPITAL NAME**

West Eugene AH

**REFERRING VET**

Dr. Sundholm

**DATE**

10/31/22

**INVOICE**

14167

**PRESENTING CLINICAL SIGNS**

History: Willow has a history of elevated ALT and calcium. This was first detected with routine wellness bloodwork March 2022. Her ALT has remained elevated despite several months of denamarin. She is otherwise clinically healthy. Current Medications Denamarin

Abnormal PE/Chem/CBC/UA Results: 10/28/22: ALT (145); Ca2+ (12.8) ; FeLV/FIV neg

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder lumen is mildly distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 1-2 cm, are normal.

The left kidney is normal size (3.21 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (3.42 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild loss of corticomedullary distinction. A hyperechoic medullary band is observed adjacent to the corticomedullary junction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

*Adrenal Glands*

The left adrenal gland is normal in size (0.29 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal in size (0.42 cm width). Normal shape and glandular echogenicity. The phrenicoabdominal vein and surrounding vasculature are normal.

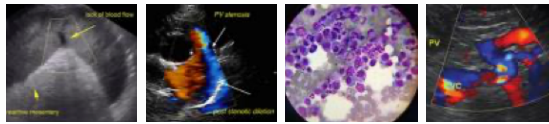
*Spleen*

The spleen is normal in size (0.73 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

*Liver*

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed. The gall bladder lumen is moderately distended. The wall is thin and smooth. Luminal contents are anechoic. The cystic and common bile ducts are normal.

*Gastrointestinal*



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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. No obstructive disease is noted.

**Pancreas**

The pancreas is normal in size with normal peripheral contours. The pancreatic duct is normal. The base and limbs of the pancreas are isoechoic to surrounding omental fat. No focal lesions are observed. There is no evidence of peripancreatic inflammation or effusion.

**Free Abdomen**

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

**Other**

A brief echocardiogram reveals no obvious evidence of pericardial effusion.

**ULTRASONOGRAPHIC FINDINGS**

- Mild bilateral chronic renal changes.

\*An obvious cause for the mildly elevated ALT is not identified in this study. Considerations include normal variation, inflammatory disease (i.e., lymphoplasmacytic hepatitis, bacterial cholangiohepatitis), reactive hepatopathy, other.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Consider pre and post prandial serum bile acids to assess hepatic function. Ultimately, hepatic tissue sampling (i.e., fine needle aspirate or surgical biopsy) may be necessary to get a definitive diagnosis. If biopsies are pursued, aerobic and anaerobic bile cultures are also recommended.
- Regarding the hypercalcemia, consider a PTH/PTHrP/ionized calcium. Three-view thoracic radiographs can also be considered to assess for occult neoplasia in the chest.



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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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)  
[info@SonoPath.com](mailto:info@SonoPath.com)

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