



## PATIENT

Gypsy Steinhouse

## PRESENTING CLINICAL SIGNS

## SPECIES

Canine

No significant clinical history. Elevated liver values on annual senior panel Physical exam findings: osteoarthritis. Abnormal CBC values: mild thrombocytosis Abnormal Chemistry Values: mild increase in ALT and AST. Moderate increase in ALP. Mild increase in cholesterol. Significant CK elevation (1800) Abnormal UA Values: USG 1023, 1+ urine protein Radiograph Findings(email radiographs if available): Reason for Ultrasound: Evaluate for cause of elevated liver values.

## BREED

Husky X

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

## SEX

Spayed Female

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, or masses. In the region of the proximal urethra, there is mild urethral dilation and numerous hyperechoic foci, most consistent with small stones. Correlate these findings with abdominal radiographs. Recommend urinalysis and culture.

## AGE

15 Years

The left kidney has a normal shape and size (6.1 cm). 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 no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

## WEIGHT

53.8 Pounds

The right kidney has a normal shape and size (6.17 cm). 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 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 0.82 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 BY

Loetitia Saint-Jacques,  
LVT

The right adrenal gland is normal in size measuring 0.57 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

Alpine AH

### 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. Lindsay Sjolín

### Liver

The liver is subjectively normal in size, and hypoechoic 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. No focal nodules or cystic lesions are observed.

## INVOICE

39823

## DATE

7/26/22



## PATIENT

Gypsy Steinhouse The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. Small gallbladder polyps are also noted. 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

Husky X

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. Jejunum wall measured 0.42 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

## SEX

Spayed Female

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

15 Years

### **Pancreas**

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.

## WEIGHT

53.8 Pounds

### **Free Abdomen**

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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## REFERRING VET

Dr. Lindsay Sjolin

## INVOICE

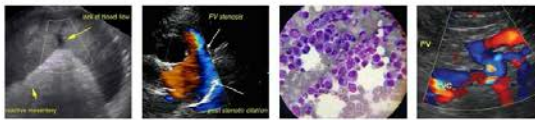
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## ULTRASONOGRAPHIC FINDINGS

- Heterogeneous, hypoechoic 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.
- Moderate gallbladder debris with gallbladder polyps – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.
- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Numerous small mineralizations visualized within the proximal urethra – I suspect these are small enough to pass provided they do not all adhere to each other. Correlate with abdominal radiographs, urinalysis and culture, and recommend close monitoring .



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**SEX**

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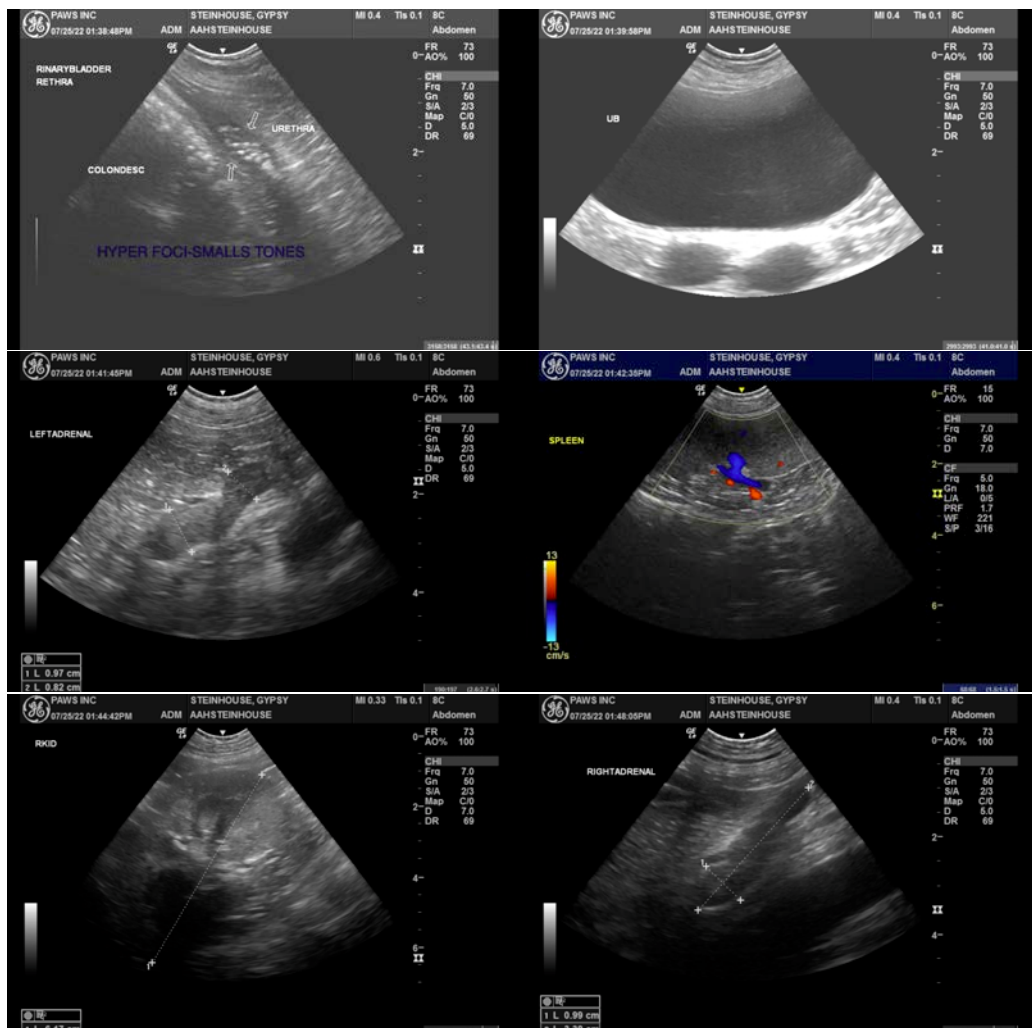
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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

No focal lesions are visualized associated with the liver on today's scan. The gallbladder does appear to have a moderate amount of debris and some mild gallbladder polyps, so underlying inflammation is possible. Correlate these findings with bloodwork and the clinical picture. Consider a liver function test +/- fine needle aspirate of the liver to further evaluate. Additionally, consider adding Ursodiol long-term +/- antibiotics, and continuing to monitor the gallbladder. If liver function is abnormal, and cytology is not helpful, you could consider obtaining a liver biopsy for histopathology and cultures.

There are numerous small stones visualized within the proximal urethra. I suspect these are small enough to pass (unless they all adhere to each other). Recommend a free catch urinalysis to see if any stones pass, or if crystals are present. Recommend continued monitoring of this area.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement.





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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.

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