



## PATIENT

Archer Delahunt

## SPECIES

Canine

## BREED

Alaskan Malamute

## SEX

MN

## AGE

8 years

## WEIGHT

98 lbs.

## INTERPRETED BY

R. McKenzie Daniel, DVM,  
DABVP (Canine and

## IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

## HOSPITAL NAME

Pine Creek VC

## REFERRING VET

Dr. Denny Nolet

## INVOICE

16813

## DATE

8/10/22

## PRESENTING CLINICAL SIGNS

The lung field on RADs looks ok, but there is a microcardia. This was seen previously and we had discussed Addison's Disease, but since the dog was otherwise normal, we did not find any abnormalities on blood tests, we decided to see how things would go. Now O says that the dog is going down hill slowly and acts weak and sleeps a lot. In house blood work shows a significant increase in liver parameters Will start dog on AB's until the U/S Rx: Amoxicillin 500 mg Two caps BID x 7 days.

Abnormal PE/Chem/CBC/UA Results: ALT 74 (12/2021) 707 (8/2022) ALP 25 (12/2021) 228 (8/2022) Bili 0.1 (12/2021) 1.1 (8/2022)

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. Pinpoint to focal areas of minor nonobstructive medullary mineral were present. The left kidney measured 6.6 cm in length. The right kidney measured 6.7 cm in length.

### Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.64 cm width at the caudal pole and 0.66 cm width at the cranial pole. No evidence of subnormal adrenal size.

The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.74 cm width at the caudal pole and 0.90 cm width at the cranial pole. No evidence of subnormal adrenal size.

### Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. A solitary hyperechoic nodule was noted in the mid spleen, measuring 0.84 cm in diameter.

### Liver/ Gallbladder

The liver presented normal in size. The hepatic parenchyma revealed diffuse reduced echogenicity compared to the spleen and renal cortical parenchyma with a mild coarse echotexture. Increased portal



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vein prominence was evident. The capsule of the liver was normal in margination. Distinct masses or nodules were not evident. The hepatic and portal vasculature were normal in appearance.

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The gallbladder was non-distended in size with mildly prominent to hyperechoic gallbladder walls. Anechoic content was present with several areas of mineralized debris to small nonobstructive choleliths. An example of an area of mineralized debris to small choleliths measured 0.82 cm in diameter. No evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

## BREED

### ***Gastrointestinal***

Alaskan Malamute

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

## SEX

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

## AGE

8 years

### ***Pancreas***

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

## WEIGHT

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### ***Free Abdomen***

Intermittent, mildly prominent to enlarged mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). The lymph nodes were not consistent with inflammatory or neoplastic lymphatic criteria. An example of lymph node measured 1.0 cm in diameter.

A scant pocket of free fluid was noted between the caudal left liver and cranial spleen.

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## ULTRASONOGRAPHIC FINDINGS

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### ***Primary Findings***

- Mild pinpoint to focal renal medullary mineral
- Hepatopathy
- Mild chronic cholecystitis pattern with nonobstructive luminal mineral/small choleliths
- Intermittent benign/reactive, likely incidental mesenteric lymph nodes

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### ***Secondary Findings***

- Benign solitary splenic nodule- consistent with solitary benign myelolipoma

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## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

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The overall appearance of the liver was nonspecific. Potential considerations may include acute on chronic hepatitis/choleangiohepatitis (viral, bacterial, Leptospirosis, toxin, etc.), vacuolar hepatopathy, nonobstructive cholestasis, immune mediated disease, noncardiogenic hepatocongestion, occult



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neoplasia or other hepatopathy. Further assessment may include, assuming normal clotting status, FNA cytology +/- Leptospirosis titers/PCR if clinically indicated. Empirically, hepatosupportive medications which may include Denamarin or Ursodiol +/- antibiotic protocol to cover for cholangiohepatitis with monitoring of hepatic parameters going forward would be reasonable. No evidence of posthepatic obstructive criteria.

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Given the normal adrenal presentation, occult Addisons disease is considered a less likely differential diagnosis yet further assessment with a resting cortisol level could be considered.

**SEX**

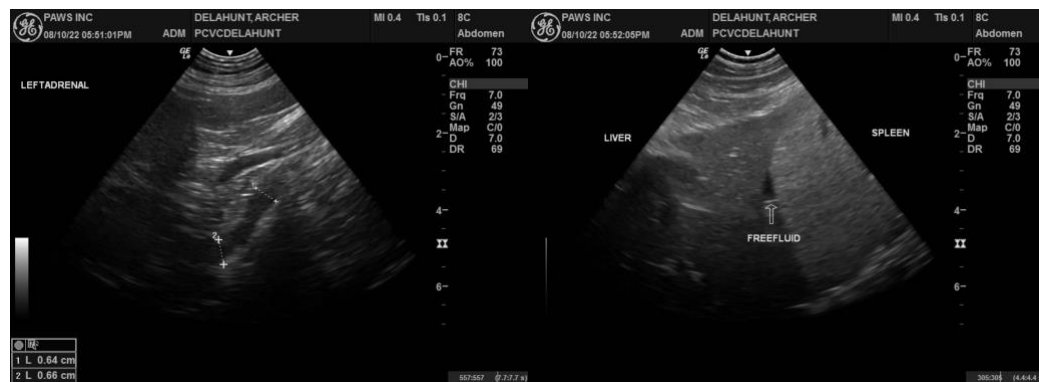
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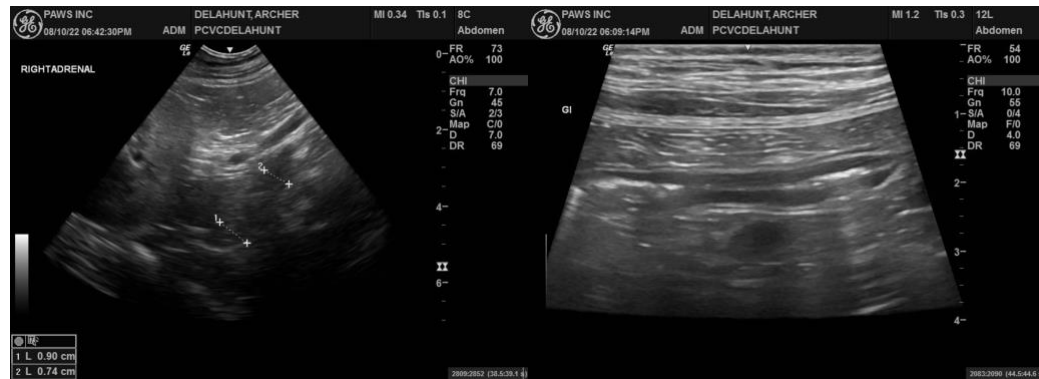


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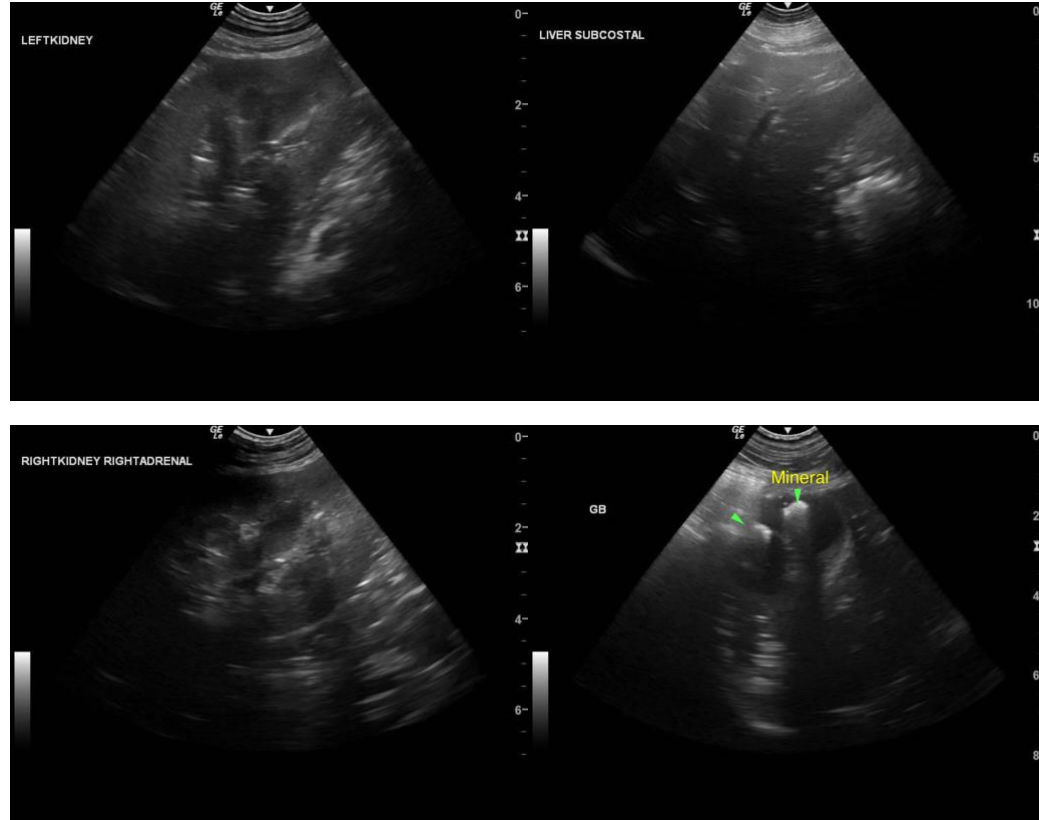
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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