


**PATIENT PRESENTING CLINICAL SIGNS**

Nixon Clow History: Labs show marked ALP elevation. Heart murmur. Possible increased drinking and panting. Normal appetite and urination.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: ALP 1200+

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED** Black-mouthed Cur The urinary bladder wall is normal in thickness and the mucosal surface is smooth. The bladder is mildly to moderately distended. Luminal contents are anechoic. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

**SEX** Neutered Male The prostate is normal in size (1.61 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

**AGE** 5 years The left kidney is normal in size (7.07 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**WEIGHT** 50 kg The right kidney is normal in size (7.24 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with minimal loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter.

**Adrenal Glands**

The left adrenal gland is small in size (0.35 cm at cranial pole) (0.49 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**INTERPRETED BY**

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

The right adrenal gland is in slightly small size (0.88 cm at cranial pole) (0.59 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**IMAGING PERFORMED BY**

Dr Sarah Barthelemy

**Spleen**

The spleen is normal in size (2.40 cm in width at the level of the hilus) with a normal capsular contour. The parenchyma is subtly mottled in appearance. No focal lesions are observed. Splenic vasculature is normal.

**Liver**
**HOSPITAL NAME**

Montgomery  
 Village Vet

The liver is normal to slightly small in size with normal curvilinear peripheral contours. The parenchyma is isoechoic relative to the spleen and homogenous in appearance. No distinct focal lesions are observed. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion.

**REFERRING VET**

Dr Nadeau

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/not seen.

**Gastrointestinal**

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 is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

**INVOICE**

12567

**DATE**

3.30.23

### **Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional 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.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Questionable microhepatica

### **Secondary Findings**

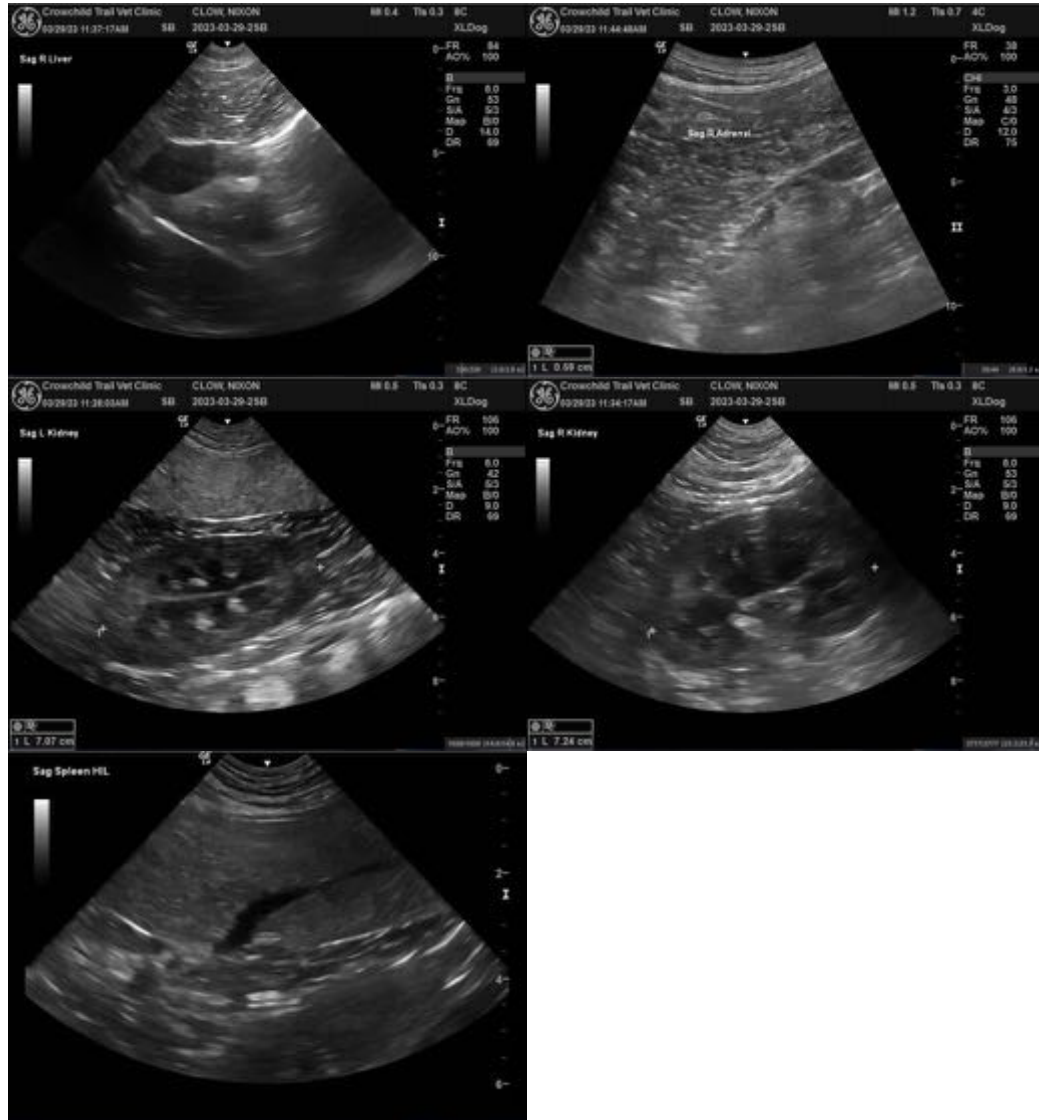
- The bilaterally small adrenal glands may be a normal variant for this patient or may be secondary to early atrophy due to emerging hypoadrenocorticism.
- The splenic parenchymal changes are most consistent with a benign process such as lymphoid hyperplasia, extramedullary hematopoiesis, splenitis or antigenic stimulation with a low possibility of infiltrative neoplasia (i.e., lymphoma, mast cell neoplasia).

\*An obvious cause for the patient's clinical signs and elevated ALP is not definitively identified in this study. Considerations include microscopic hepatopathy (i.e., congenital disease, cholestasis, inflammatory disease, fibrosis, other).

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

- Pre-and postprandial serum bile acids are recommended. If values are significantly elevated, liver biopsies (i.e., laparoscopic, or surgical) may be warranted.
- Regarding the possible polydipsia, consider the following:
  1. Urinalysis
  2. Urine culture and sensitivity to assess for occult pyelonephritis.
  3. ACTH stimulation test to screen for hypo- and hyperadrenocorticism





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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