



## PATIENT

Winston Paulson

## SPECIES

Canine

## BREED

Norwegian Elkhound

## SEX

Neutered Male

## AGE

12 Years 7 Months

## WEIGHT

25.5 kg

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP

## IMAGING PERFORMED BY

Dr. Jill Rankin

## HOSPITAL NAME

Fish Creek Pet Hospital

## REFERRING VET

Dr. Lindsey

## INVOICE

12199

## DATE

11/11/25

## PRESENTING CLINICAL SIGNS

Winston, a 12-year-old male neutered Norwegian Elkhound, presented with a three to four-month history of chronic intermittent vomiting and mild elevations in liver and pancreatic values. The primary issue is a chronic history of intermittent vomiting over the past three to four months. A physical exam revealed some mild back pain, a lick granuloma on the RH, sensitivity on abdominal palpation, lenticular sclerosis, and preputial discharge. Blood work showed an elevated ALT at 163, an elevated ALP at 829, and mildly elevated amylase and lipase. His hematocrit was 30.9. An abdominal ultrasound was planned, though a preliminary point-of-care ultrasound (pocus) was limited due to a dense hair coat and did not show any obvious free fluid. The patient was reported to be doing well and ate the night before being made NPO for the scheduled ultrasound.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with minor urine sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic change were noted.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate appeared normal and free of pathology

Both kidneys exhibited asymmetrical margination with cortical infarcts. The renal cortex presented uniformly increased in echogenicity with uniform echotexture. The renal cortex appeared to be hypertrophied resulting in an altered cortex: medulla ratio. Loss of corticomedullary border demarcation was also present. The renal medullary volume was subjectively reduced. Mild medullary mineral was present. The left kidney measured 5.2 cm in length. The right kidney measured 5.6 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 0.51 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.45 cm width.

### 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. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

### Liver

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion.



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The gallbladder was mildly subnormal in size (likely given presence of gastric ingesta) with mild gravity dependent focally hyperechoic nonorganized biliary sludge. The common bile duct was not visualized.

### **Gastrointestinal**

The stomach presented with normal intact visible wall. The stomach contained moderate variably echogenic nonshadowing ingesta and lumen gas. No evidence of obstruction to the pyloric outflow or foreign material. Pylorus wall measured 0.65 cm wall width.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Empty lumen without mechanical/metabolic ileus to the level of the colon. The duodenum wall measured 0.50 cm width. The jejunum wall measured 0.45 cm width.

Normal visible colon wall layers were present with formed fecal matter in lumen.

### **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 was evident.

### **Free Abdomen**

No overt lymphadenopathy or peritoneal effusion was present.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Overall, sonographically normal gastrointestinal tract with variably echogenic nonshadowing gastric ingesta- consistent with food echogenicity.
- Normal area of pancreas.
- Chronic renal changes exhibiting cortical infarcts and medullary mineral.
- Benign hepatopathy pattern exhibiting parenchymal remodeling.
- Nonorganized gallbladder debris (non-mucocele).

### **Secondary Findings**

- Sonographically normal spleen.

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

Overall, largely geriatric abdomen without evidence of significant visceral pathology such as obstructive gastrointestinal mural pathology, masses or neoplastic criteria. If documented NPO, some degree of metabolic gastric ileus, potentially secondary to low-grade gastritis or pancreatitis (both of which may present sonographically normal), may be possible. Documented 12 hour fast and sonographic reassessment of the gastrointestinal tract would be ideal as gastric ingesta may prohibit full evaluation of the gastric interior and deep wall. Correlation with a spec cPL is recommended. If patient is nonclinical, canned novel protein or hydrolyzed diet with as needed gastroprotectant Omeprazole and empirical therapy for low-grade pancreatitis or esophagitis may prove beneficial. Urinalysis is recommended if not recently done.



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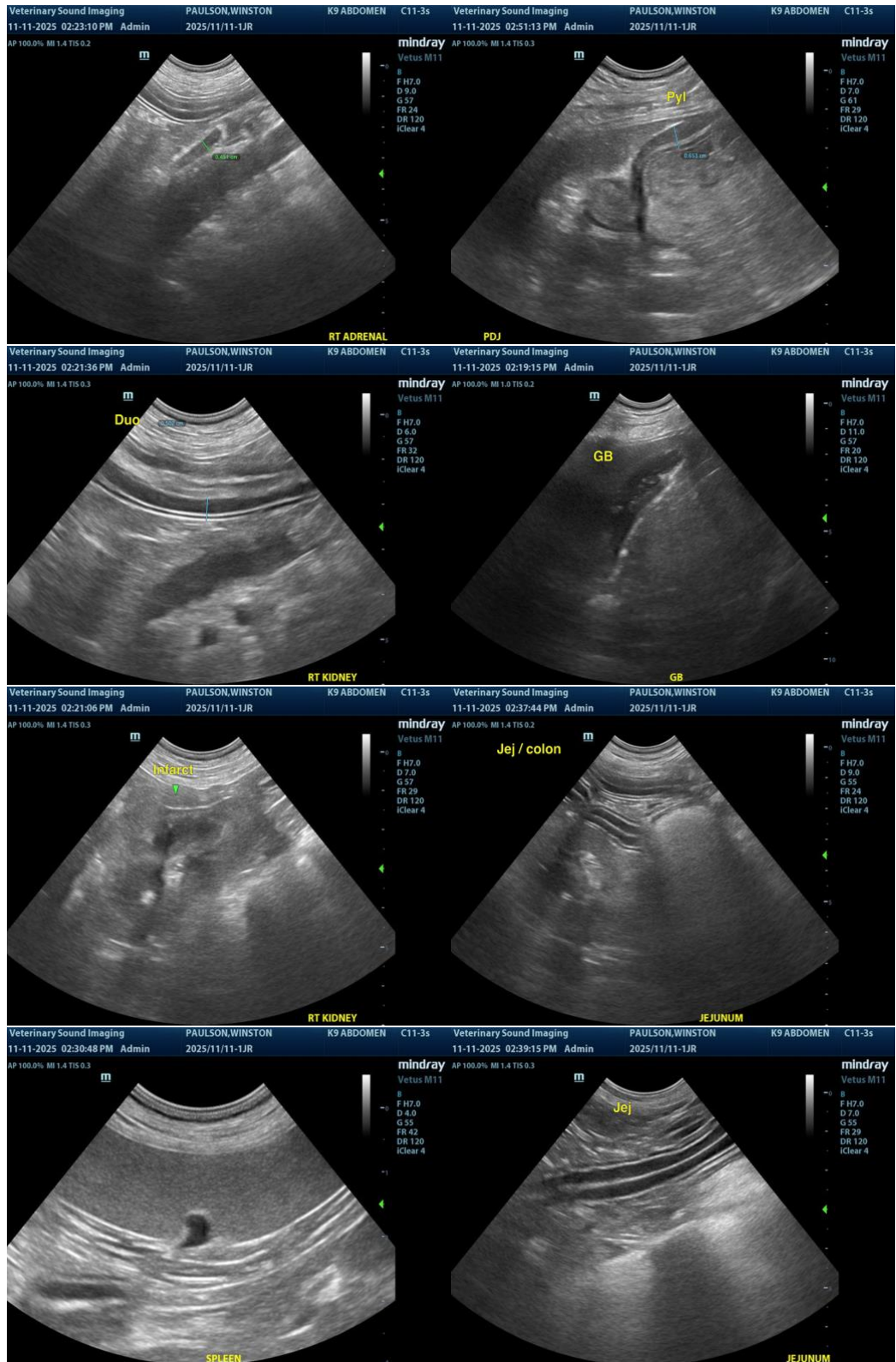
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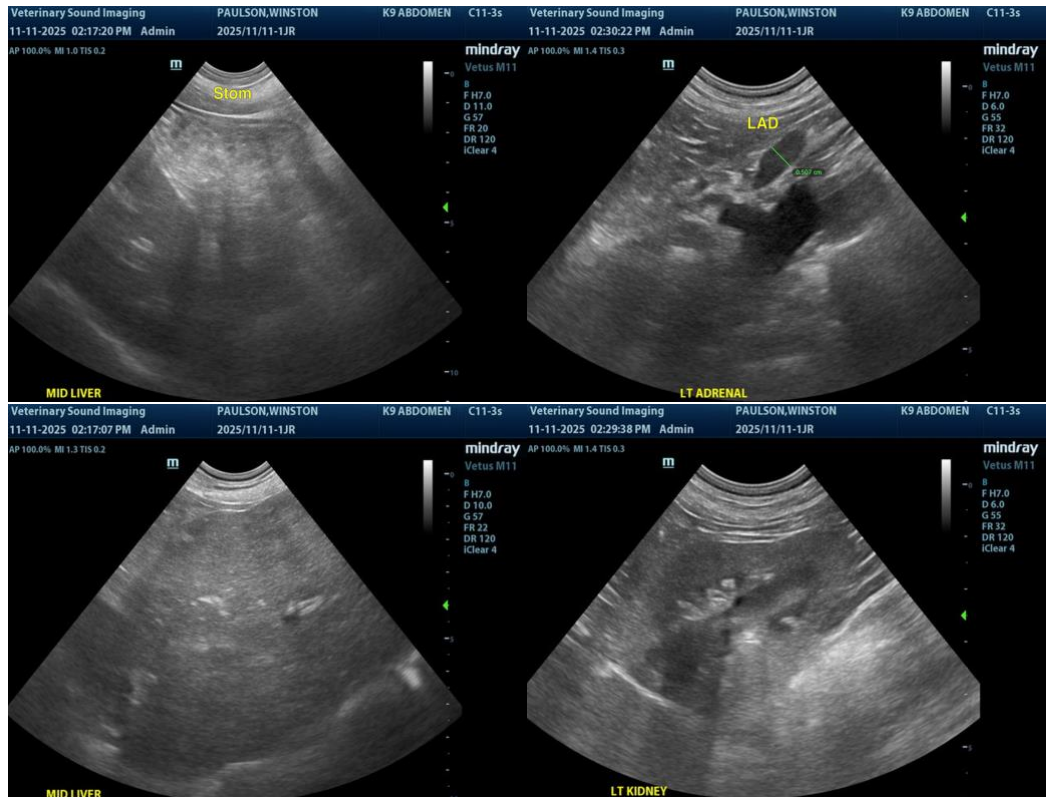
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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