



**PATIENT PRESENTING CLINICAL SIGNS**

Ozzee Walters

**SPECIES**

Canine

**BREED**

Bichon Frise

**SEX**

Neutered male

**AGE**

13 years

**WEIGHT**

23 lbs

History: On 13 April, at referral clinic, patient presented for shaking and appeared painful in the abdomen. Eating well until 12 April. Single episode of vomiting bile on 10 April. Tense abdomen uncomfortable on palpation. O reports he has always had a painful abdomen. 5/6 systolic heart murmur. Radiologist reports severe hepatomegaly. Main concern is that his gallbladder appears to have a thick mucous plug that may be limiting the flow of bile (+/- mucocele).  
Abnormal PE/Chem/CBC/UA Results: cPL normal, ALT (719), ALP (>2000), GGT (30), TBIL (1.3), Chol (>520) elevated.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and a minimal amount of anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. Trace pyelectasia was noted in the kidneys along with slight mineralization. The left and right kidney measured 4.7 cm.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.6 cm.

**IMAGING PERFORMED BY**

Jamie Baugh

**HOSPITAL NAME**

**Spleen**

The **spleen** revealed subtle, hypoechoic, granular appearance.

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**Liver**

The **liver** was swollen and irregular in contour with a pronounced left lateral lobe with minor vascular congestion. Slight coarse architecture was noted with multi-focal, mixed echogenic nodular changes. This is consistent with remodeling. The gallbladder was thickened with an echogenic wall and a minor amount of debris. Enhanced mesentery was noted around the gallbladder. This is suggestive for cholangitis. There is a possible history of mucocele leakage. The common bile duct was dilated at 0.75 cm. Mucous debris was noted within the common bile duct.

**INVOICE**

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**DATE**

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**Gastrointestinal**

The primary pain point is a 4.0 x 3.0 cm region in the right limb involving the upper gastrointestinal tract. The stomach and small intestine were unremarkable other than regional pancreatitis noted around the duodenum.

**Pancreas**

Hypochoic, irregular **pancreatic** tissue was noted with enhanced mesentery. This is suggestive for pancreatitis.

**ULTRASONOGRAPHIC FINDINGS**

Chronic cholangitis, possible history of mucocele leakage. Mucoduct and post hepatic obstruction owing to focal right limb pancreatitis.

Pain noted in the upper gastrointestinal tract.

Hypochoic, granular splenic appearance.

Age related renal changes elsewhere.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Aggressive medical management is warranted in this patient. The primary pain point is a 4.0 x 3.0 cm region in the right limb involving the upper gastrointestinal tract. The stomach and small intestine were unremarkable other than regional pancreatitis noted around the duodenum. Treatment for pancreatitis and cholangitis is warranted. IV fluid support, plasma expanders, FNA of the liver, cytology, culture and Leptospirosis titers are also indicated. Pain management and GI protectants are recommended. If the liver values begin to diminish then a recheck sonogram is recommended in 48-72 hours. However, if bilirubin and ALKP continue to elevate then surgical intervention may be necessary for bile duct deviation, biliary lavage and cholecystectomy.





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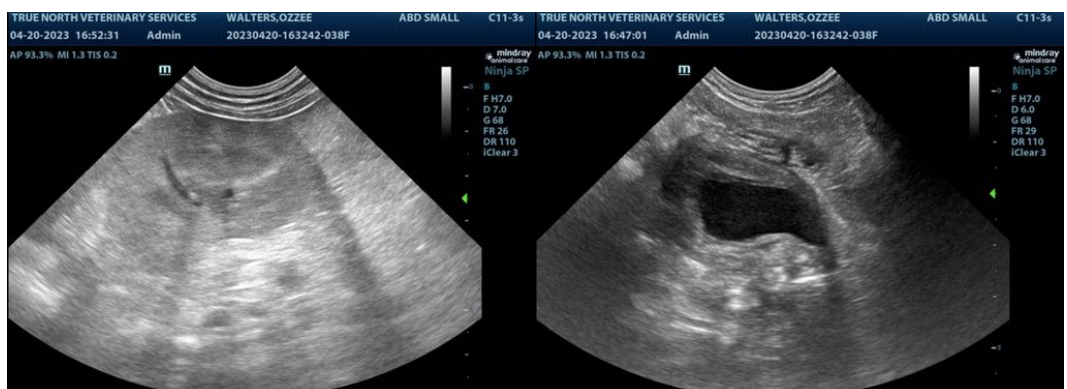
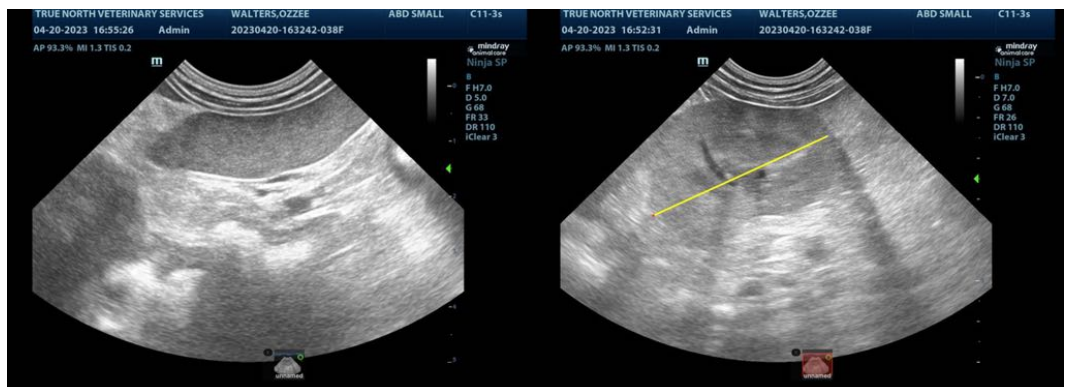
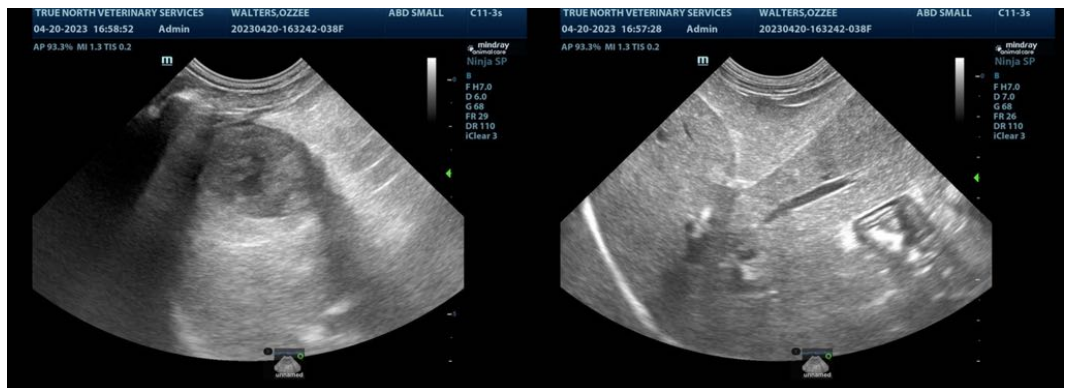
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com