



**PATIENT**

Hunter Williamson

**SPECIES**

Canine

**BREED**

Schnauzer Mix

**SEX**

MN

**AGE**

11yr

**WEIGHT**

11.4kg

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

**IMAGING PERFORMED BY**

Dr. Barthelemy

**HOSPITAL NAME**

Signal Hill Animal  
Clinic

**REFERRING VET**

Dr. Cumyn

**INVOICE**

11755ag

**DATE**

09/30/2022

**PRESENTING CLINICAL SIGNS**

History of cholecystectomy in 2019. Has pancreatitis with bouts of vomiting and inappetance. Marked bilirubin in and ALT/ALP elevations with icterus.

Abnormal PE/Chem/CBC/UA Results: Marked bilirubin elevation at 111. Elevated ALT AND ALP over 200. Icterus.

**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 were noted.

Normal size and margination was present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 5.2 cm in length. The right kidney measured 5.3 cm in length.

The area of the aortic trifurcation was free of pathology.

The area of the residual prostate was free of pathology.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.48 cm width at the caudal pole and 0.46 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.42 cm width at the caudal pole and 0.53 cm width at the cranial pole.

**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 normal in size with symmetrical capsule contour and decreased parenchyma echogenicity compared to the spleen. Moderate coarse echotexture was present. Diffuse areas of biliary tree mineralization along with regional lobar biliary tree dilation were present. The hepatic and portal vasculature were normal in appearance without signs of congestion.

No overt pathology in the area of the residual gallbladder. The residual CBD exhibiting subjective variable yet moderate dilation extending caudally to the level of the duodenum. Concurrent moderately sized residual CBD calculi were present proximal to the level of the duodenal papilla, an example measured 1.0 cm in diameter. The CBD dilation measured >1.0 cm in diameter in several areas.

**Gastrointestinal**



<b>PATIENT</b>	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained mild retained non-shadowing ingesta/chyme with no signs of ileus, obstruction or foreign material.
Hunter Williamson	
<b>SPECIES</b>	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.
Canine	Normal visible colon wall layers were present with apparent formed feces in lumen.
<b>BREED</b>	<b>Pancreas</b>
Schnauzer Mix	The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.
<b>SEX</b>	<b>Free Abdomen</b>
MN	No overt lymphadenopathy or peritoneal effusion was present.
<b>AGE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
11yr	<ul style="list-style-type: none"> <li>• Acute on chronic hepatopathy pattern with diffuse biliary tree mineralization and mild lobar biliary tree dilation</li> <li>• Subjective variable moderate to marked distended residual CBD to the level of the duodenal papilla with moderate choledocholithiasis</li> <li>• Mild chronic renal changes</li> <li>• Mild heterogeneous pancreas-remodeling owing to age related changes or previous inflammation, potential for low grade to chronic pancreatitis possible</li> </ul>
<b>WEIGHT</b>	
11.4kg	
<b>INTERPRETED BY</b>	<b>INTERPRETATION OF THE FINDINGS &amp; FURTHER RECOMMENDATIONS</b>
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	The diffuse biliary tree mineralization is non-specific and may be associated with chronic hepatobiliary inflammation. Given the decreased hepatic parenchyma echogenicity at this time, acute on chronic hepatobiliary inflammation is suspected. Occult hepatic neoplasia considered less likely.
<b>IMAGING PERFORMED BY</b>	Assuming normal clotting status and using a 25g needle, a hepatic FNA for screening cytology is warranted for further assessment. Concern for residual CBD obstruction is also warranted. Possibility of pathology at the level of the duodenal papilla cannot be excluded yet is considered less likely.
Dr. Barthelemy	
<b>HOSPITAL NAME</b>	Referral for further assessment as well as surgical options is advised if possible. Aggressive therapy for acute on chronic cholangiohepatitis with as needed GI support would be reasonable.
Signal Hill Animal Clinic	
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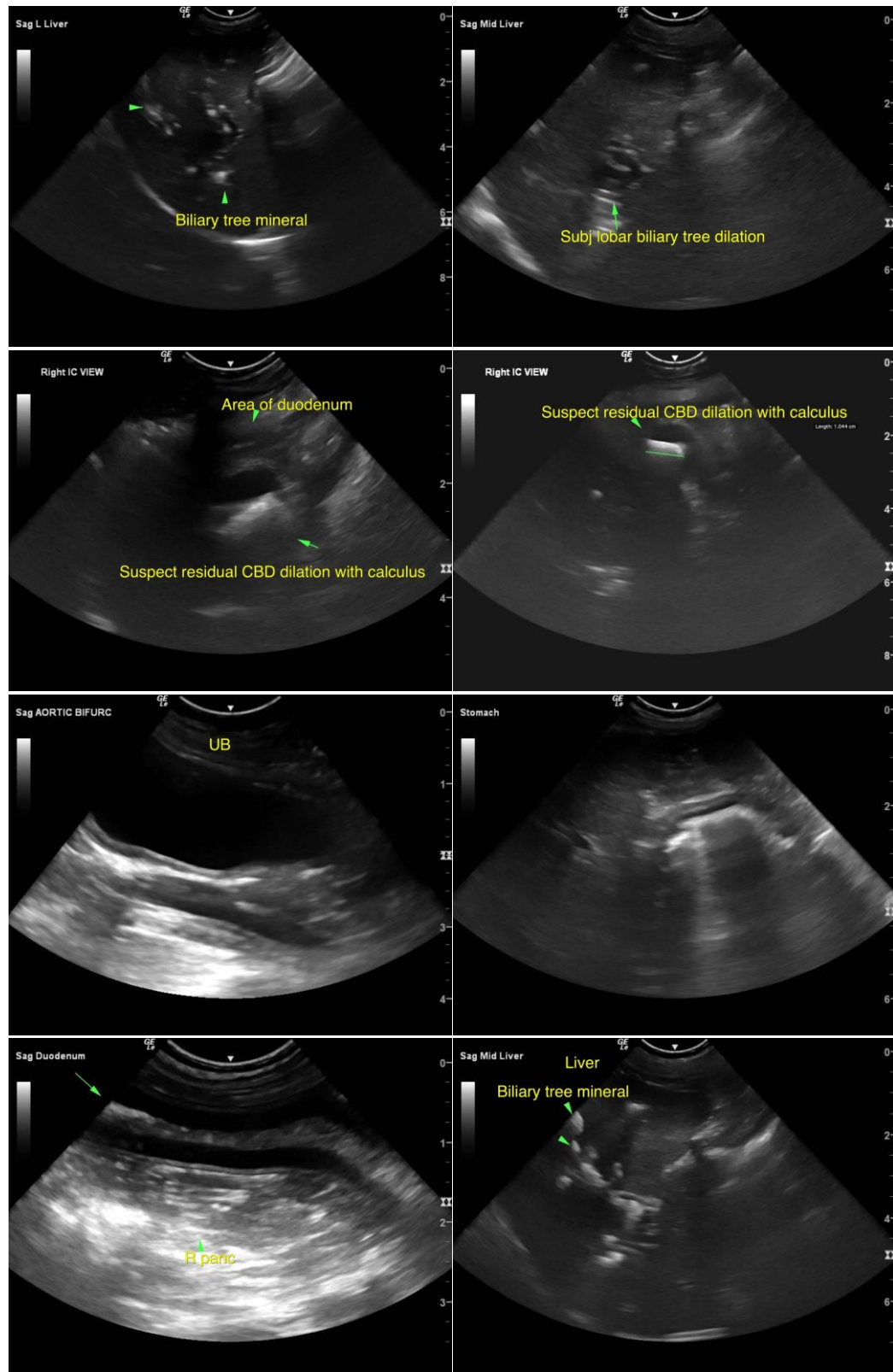
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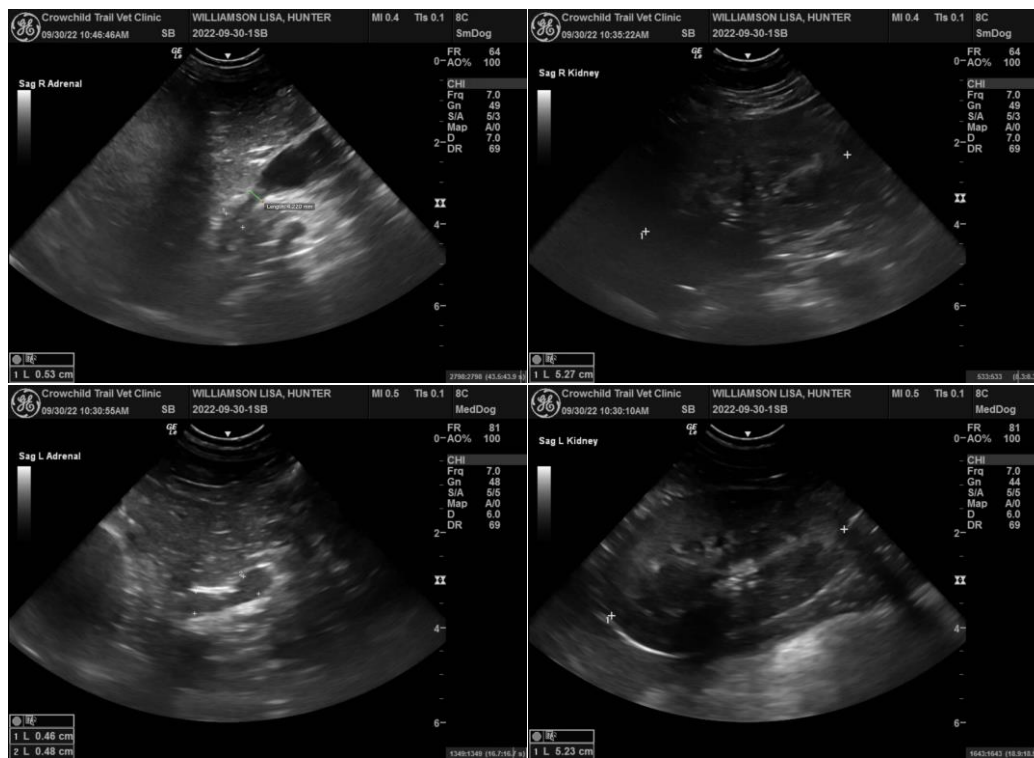
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)

info@SonoPath.com