



**PATIENT PRESENTING CLINICAL SIGNS**

Dakota Quante Decreased appetite, elevated renal values, hematuria/bacteriuria.  
Medication: Clavamox

**SPECIES** Abnormal PE/Chem/CBC/UA Results: USG 1.010 1+ pro ALP 158 BUN 76 CREAT 5.3 SDMA 42.9  
ALB 2.8  
Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED** *Urinary System*

Siberian Husky The urinary bladder was normal in size and tone. The trigone, cystourethral junction, and visible pelvic urethra to a depth of 3 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The visualized right ureteral papillae was normal, the left ureteral papilla exhibited potential for caudal location possibly within the area of urinary bladder neck. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.

**SEX** The left kidney exhibited severe hydronephrosis with obliteration of discernable medullary parenchyma replaced by anechoic fluid. No evidence of left kidney calculi was present. Severe generalized left hydroureter exiting the left kidney extending caudal to the level of the ureteral papilla was present. No overt evidence of ureteral calculi, stricture or definitive mass. Left ureter dilation measured 1.5 cm in diameter. The left kidney measured 8.0 cm in length.

**AGE** 2010 The right kidney measured 7.3 cm in length.

**WEIGHT** 49.4 Normal size and margination were present in the right kidney. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortex was uniform in texture with some increased echogenicity and loss of corticomedullary symmetry and definition expected for the age of the patient. Mild right kidney pyelectasia was present. The right kidney measured 7.3 cm in length.

**INTERPRETED BY** R. McKenzie Daniel, DVM, DABVP (Canine and Feline) The area of the aortic trifurcation was free of pathology.  
The area of the residual prostate appeared normal and free of pathology measuring 1.2 cm in diameter.

**IMAGING PERFORMED BY** Rebekah Jakum, CVT ARDMS/RVT *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 at the caudal pole and 3.0 cm length. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.58 cm width at the caudal pole and 3.4 cm length.

**HOSPITAL NAME** Littlestown VH *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.

**REFERRING VET** Kubala *Liver/Gallbladder*  
The liver was mildly enlarged in size. A mildly expansive to irregular caudal intraparenchymal nodule resulting in mild distortion of the caudal capsule was present measuring 3.4 cm in diameter. Intermittent concurrent non-disruptive isoechoic separate intraparenchymal nodules were present. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal

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**DATE** 02/03/2023



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MN

**AGE**

2010

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cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with primarily anechoic luminal content and mild echogenic debris in the caudal lumen and gallbladder neck. The cystic and common bile ducts were normal.

**Gastrointestinal**

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.

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.

**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 omental masses, overt lymphadenopathy or peritoneal effusion was present.

**ULTRASONOGRAPHIC FINDINGS**

- Normal urinary bladder and residual prostate
- Severe left kidney hydronephrosis with concurrent severe generalized left hydroureter
- Right kidney moderate chronic degenerative changes with minor pyelectasia-no evidence of concurrent right hydroureter
- Non-specific mildly expansive to irregular caudal hepatic macronodule/small mass
- Mild gallbladder debris (non-mucocele)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A definitive cause of left ureter obstruction was not overtly visualized yet the degree of left hydroureter and concurrent left hydronephrosis is consistent with obstruction. The left kidney is likely non-functional while the right kidney is consistent with probable chronic renal failure. Further renal staging to include urine C/S and protein: creatinine ratio on sterile urine sample may be considered. A screening BRAF assay could be considered to assess for non-obvious obstructive neoplastic criteria.

Assuming normal clotting status and if accessible a caudal hepatic macronodule/small mass FNA for screening cytology could be considered for further assessment vs sonographic monitoring of evidence of progression.

An extremely guarded prognosis is indicated.



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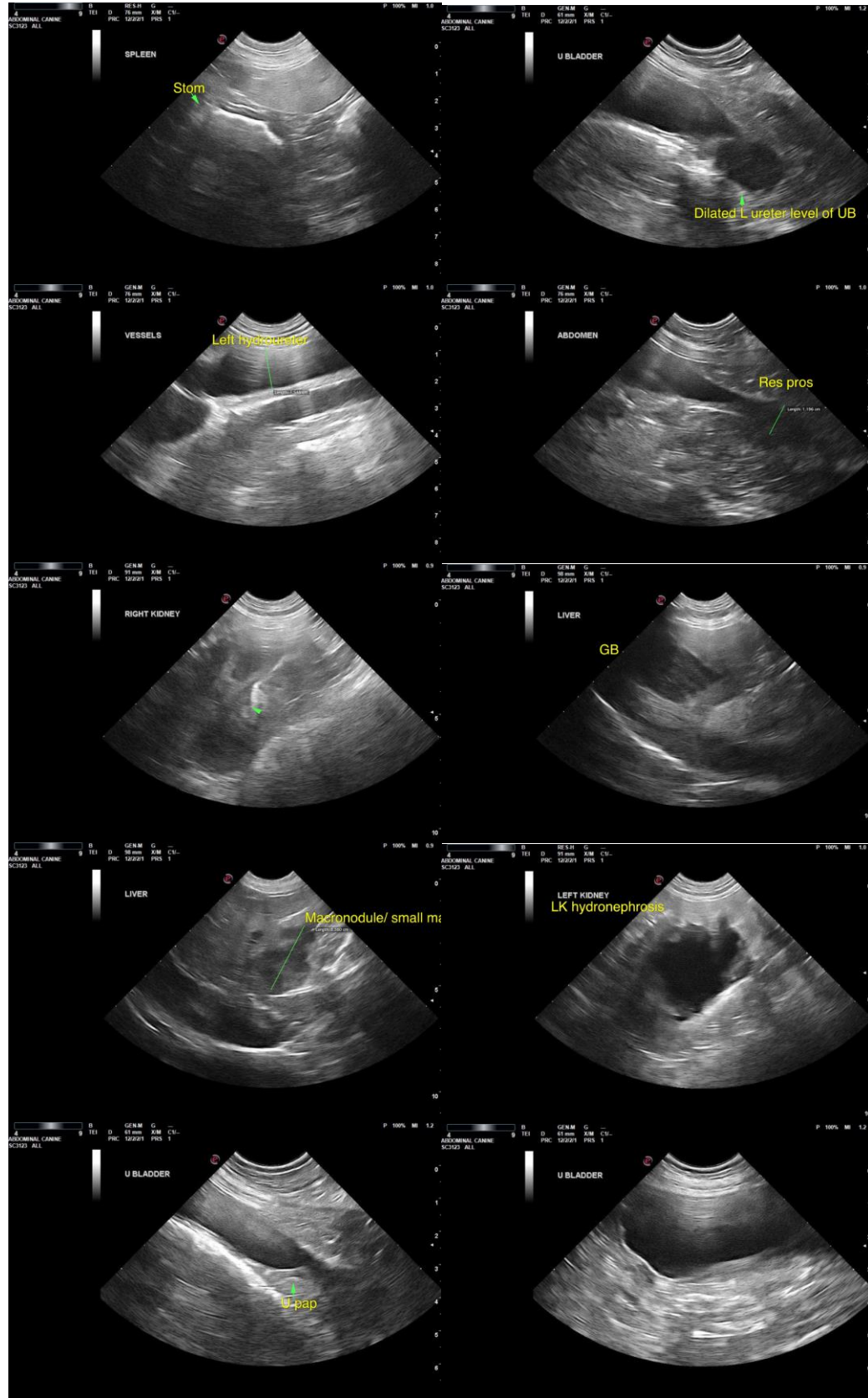
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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