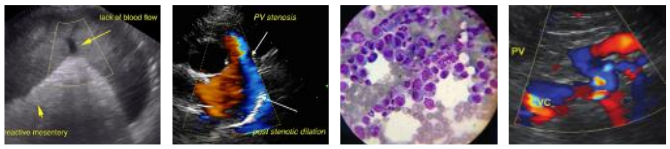
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Belle DeLay

SPECIES
Canine

BREED
Miniature Schnauzer

SEX
FS

AGE
10yr

WEIGHT
7.3kg

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

IMAGING PERFORMED BY
Bennett

HOSPITAL NAME
Wilvet South

REFERRING VET
Bennett

INVOICE
13329ag

DATE
03/30/23

PRESENTING CLINICAL SIGNS

Intermittent vomiting, diarrhea, & inappetence x 1 month. Hx of epilepsy and was on PHB for several years. **10/21/22** Routine blood work at rDVM: Chem: Crea 1.9, BUN 46, ALT 139, ALKP 1516 CBC unremarkable, HCT 51.2%. Started k/d. **3/7/23:** Seen at rDVM for diarrhea. HCT 40.8% Chem: Crea 3.0, BUN 113, ALKP (did not read), ALT >1000, cPL abnormal UA: USG 1.010, pH 6.0, PRO 500, quiet sediment. Fecal OP/G = all neg Hosp in clinic on IVF. D/C PHB. Add Denamarin & Ursodiol. **3/8/23:** Chem: Crea 2.7, BUN 118, ALKP (did not read), ALT >1000, Ca 12.9, Chol >520, Phos 14.2, Add Aluminum hydroxide & Entyce. Discharged to home. Was doing better for a few weeks. **3/30/23:** Not eating at all. Abdomen painful. Came to Wilvet south. Chem: Crea 3.3, BUN >130, ALT 747, ALKP 1944, Phos 8.7, Chol 455, LIPA 5746. CBC: HCT 37.3%, rest WNL. EPOC: pH 7.248, pCO2 29.8, HCO3 13, Na 153, K 4.5, Cl 128, Crea 2.66, BUN did not read, Glu 129, rest NSF. Abdominal rads: CONCLUSIONS: -Mild hepatomegaly, this is a nonspecific finding and can be associated with steroid/endocrine hepatopathy (including hyperadrenocorticism), hepatitis, nodular regeneration, and neoplasia. -Possible cranioventral peritonitis or scant peritoneal effusion. Thoracic rads: No evidence of metastatic lesions.

Abnormal PE/Chem/CBC/UA Results: Exam: MM pink, tacky, severe dental disease. H/L auscult wnl. Painful on cranial abdominal palpation. Matted coat. Diarrhea.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, 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 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 were 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 moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Areas of pinpoint medullary mineral and bilateral mild to moderate pyelectasia were present. No evidence of retroperitoneal inflammatory criteria or free fluid. The left kidney measured 4.7 cm in length. The right kidney measured 4.3 cm in length.

The area of the aortic trifurcation 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 0.64 cm width at the caudal pole and 0.47 cm width at the cranial pole. The right adrenal gland was not definitively visualized.

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/Gallbladder

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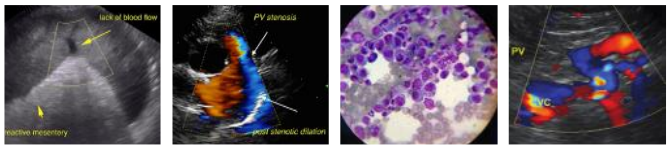

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The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically 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 echogenic, nonmineralized, nondependent biliary sludge. The biliary sludge was non organized with a hypoechoic to anechoic, irregular to interrupted rim visible between the nondependent sludge and inner wall. No signs of peripheral inflammation or free fluid.

Gastrointestinal

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Mild gastric distension with primarily anechoic fluid and luminal gas was present.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Discrete segmental non-specific duodenojejunal mucosal specking was present with minor duodenal corrugation. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Nonformed fecal matter was present in the colon lumen with lumen dilation.

Pancreas

The parenchyma of the pancreas was hyperechoic to adjacent omental fat with diffuse parenchyma remodeling. The capsule of the pancreas was mildly asymmetrical in contour without evidence of peripancreatic inflammation. These changes may suggest chronic inflammation, fibrosis, or saponification if there is a previous history of pancreatitis. No overt signs of pancreatic neoplasia.

Free Abdomen

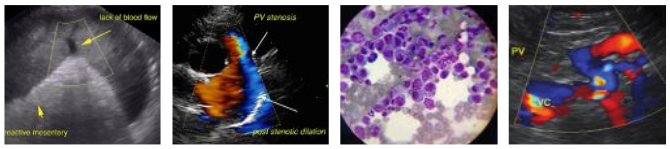
No omental masses, overt lymphadenopathy or significant peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Chronic nephropathy with bilateral pyelectasia.
- Hepatopathy-non-specific yet subjectively benign, vacuolar hepatopathy, Cholestasis, inflammatory/immune mediated disease, hematopoiesis, hyperplasia, fibrosis or other hepatopathy possible. Neoplastic criteria considered less likely.
- Immature gallbladder mucocele.
- Chronic pancreatitis pattern with possible fibrosis.
- Gastroenterocolitis pattern.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bilateral pyelectasia may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous calculi passage, IV fluid therapy (if applicable) or less likely pyelonephritis. Urine C/S and protein: creatinine ratio on sterile urine sample is recommended. Assessment and monitoring of systemic BP is suggested. Potential for emerging end stage renal disease possible. The appearance of the pancreas was not consistent with current significant or active pancreatitis and is more suggestive of chronic pancreatitis and fibrosis. No overt evidence of intra-abdominal neoplastic criteria. IN addition to renal therapy, hepatosupportive medications, as needed GI support and empirical therapy for chronic pancreatitis would be reasonable. A guarded prognosis is indicated given the appearance of the kidneys and degree of azotemia. Depending upon clinical response, monitoring for evidence of



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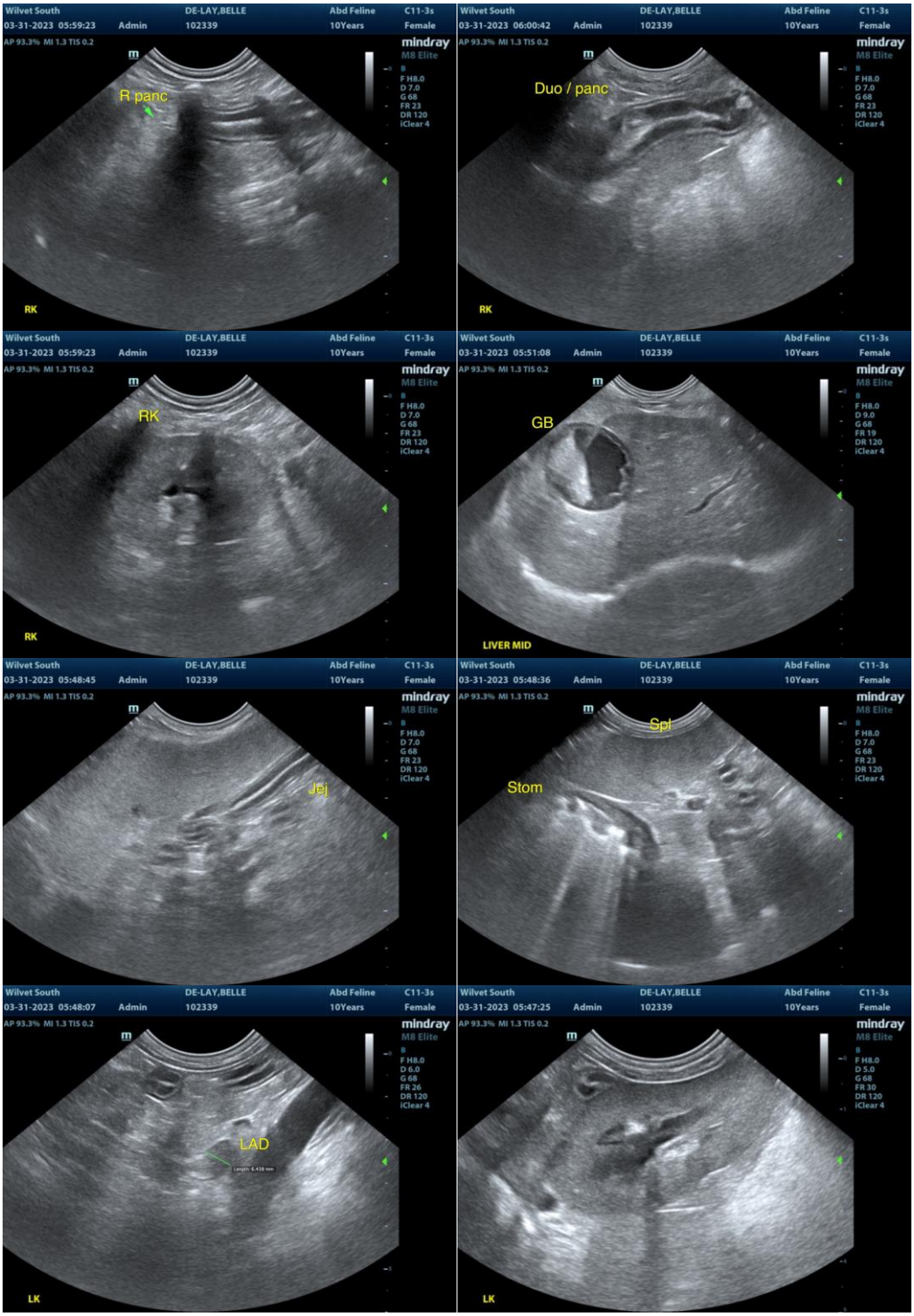
progressive hepatic enzyme elevation/cholestasis and potential sonographic reassessment of the gallbladder may be indicated, although the gallbladder does not appear to be surgical at this stage.



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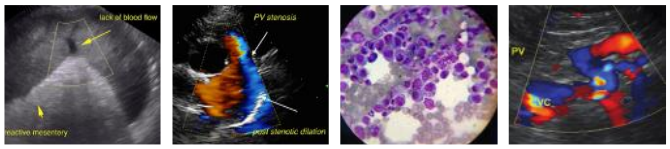

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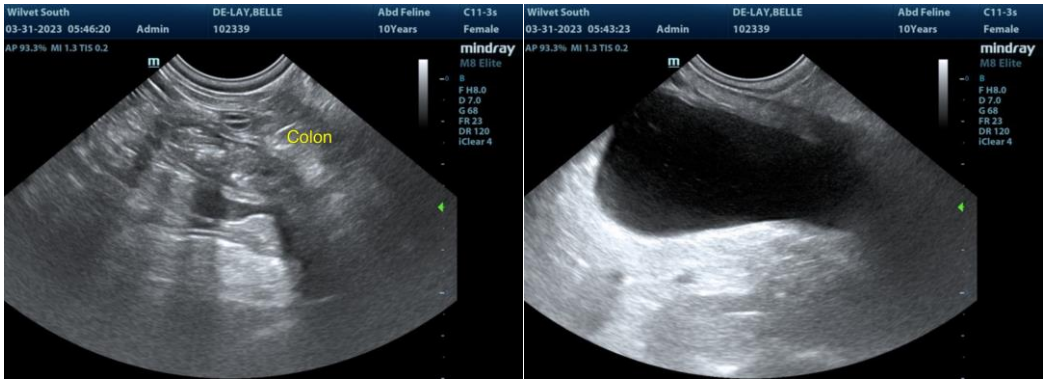

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)
mac.daniel@sonopath.com