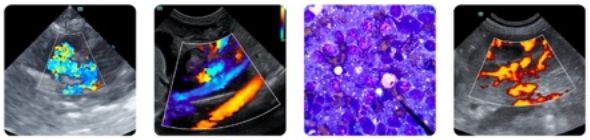


PATIENT

Kneeshaa Davis

SPECIES

Canine

BREED

Pomeranian Mix

SEX

Spayed female

AGE

13 years

WEIGHT

4.4 kg

INTERPRETED BY

Dr. Alicia Angosto Guerrero

IMAGING PERFORMED BY

Dr. Mariusz Chmielinski

HOSPITAL NAME

Apex VS

REFERRING VET

Alpine 24/7 ER Doctor

INVOICE

71780

DATE

2/19/26

PRESENTING CLINICAL SIGNS

- Transfer for progressive anorexia, weight loss, abdominal pain, and worsening renal parameters.
- Prior pectoral carcinoma (incomplete margins)
- Progressive chronic kidney disease
- Systolic heart murmur
- Confirmed pancreatitis (Spec cPL 772)
- Dental disease
- Reported submandibular lymphadenopathy
- PE T37.8°C, Heart Rate: 148 bpm, RR Panting (anxious), RE: 0 mm Pink, tacky/ CRT: < 2 sec, Hydration: ~6% dehydrated Hematology CBC largely within normal limits. Mild platelet clumping. Chemistry azotemia: Creatinine 247 µmol/L, BUN 27.5 mmol/L, SDMA 38 µg/dL Hyperphosphatemia: 3.6 mmol/L Hypercalcemia: 2.9 mmol/L Hyperkalemia: 6.1 mmol/L Hyponatremia: 135 mmol/L Low Na:K ratio: 22 Elevated ALP: 490 IU/L Hypercholesterolemia: 14.8 mmol/L Elevated lipase: 831 IU/L Spec cPL: 772 µg/L (consistent with pancreatitis) Gross lipemia noted. Endocrinology Total T4 low-normal.

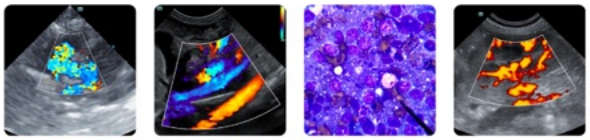
ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The bladder lumen is normally distended. The urinary bladder wall appears mildly thickened and irregular along the dorsal wall at the cranial aspect, corresponding to the location of small calculi producing a twinkling artifact on Doppler interrogation. The remainder of the urine is anechoic. Normal appearance of the bladder neck and proximal urethra.

The left kidney measures 4.48 x 2.28 cm in the sagittal plane. The contour is irregular. Cortical thickness measures 0.59 cm. The cortex is hyperechoic compared to the liver parenchyma. The renal parenchyma contains multiple small cysts, the majority subcentimeter, with the largest measuring 1 x 0.79 cm. Multifocal punctate hyperechoic foci are present and may represent small mineralization foci. A mild medullary rim sign is observed. Mild pyelectasia is present (1.13 mm). There is no evidence of nephrolithiasis or hydronephrosis.

The right kidney measures 4.54 x 2.65 cm in the sagittal plane. Cortical thickness measures 0.5 cm. The cortex is hyperechoic compared to the liver parenchyma. The parenchyma contains multiple small cysts, most approximately 2 mm, with some up to 4.5 mm. A mild medullary rim sign is present. Mild pyelectasia is noted (1.95 mm). There is no evidence of nephrolithiasis or hydronephrosis.



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Adrenal Glands

Dorsoventral diameters measured in the sagittal plane: The left adrenal gland measures 0.59 cm at the cranial pole and 0.60 cm at the caudal pole. The right adrenal gland measures 0.61 cm at the cranial pole and 0.79 cm at the caudal pole (maximum of three measurements obtained).

Spleen

Splenic thickness is 0.99 cm. The parenchyma demonstrates normal echogenicity and a fine homogeneous echotexture, with several hyperechoic nodules; one of the largest measures 0.57 x 0.83 cm. The splenic capsule is smooth and regular. Multiple punctate hyperechoic foci with twinkling artifact are observed within the splenic parenchyma.

Liver

The liver is subjectively small in size with a very irregular contour. The hepatic parenchyma appears uniform and isoechoic compared to the falciform fat, with a normal echotexture. A few isolated small cystic lesions measuring 2–3 mm are observed. No hepatic lymphadenopathy is identified.

The gallbladder lumen is moderately distended. The wall is thin. The contents are primarily anechoic with organized biliary sludge. The appearance resembles an early (grade I) mucocele. No dilation of the cystic duct or common bile duct is observed.

Gastrointestinal

The stomach is empty and folded, with mural thickness of 2.36 mm and preserved wall layering. The pylorus measures 4.95 mm. Duodenum: 3.37 mm, with punctate hyperechoic foci within the mucosa.

Jejunum: 2.70 mm, normal wall layering. Ileocecal junction: 1.54 mm. No signs of inflammation, ileus, or foreign material are identified.

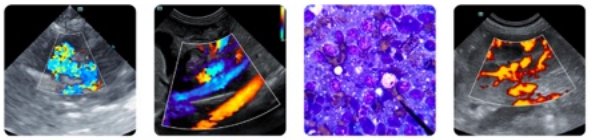
Colon: ascending colon 0.88 mm with pasty content; descending colon 0.98 mm with more formed feces.

Pancreas

The evaluated pancreatic regions do not show ultrasonographic evidence of overt inflammation.

Peritoneal Cavity

No abdominal effusion or sonographic evidence of peritonitis is observed. No abdominal lymphadenomegaly is identified. The iliac trifurcation appears within normal limits.



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ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS

- Bilateral small, irregular kidneys with cortical thinning and hyperechogenicity. Multiple bilateral renal cysts. Mild bilateral pyelectasia.
- Focal bladder wall thickening associated with cystolithiasis.
- Mild enlargement of the right adrenal gland.
- Subjectively small, irregular liver.
- Organized biliary sludge consistent with early mucocele.

SECONDARY FINDINGS

- Splenic nodules and parenchymal mineral foci.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The bilateral renal findings are most consistent with chronic kidney disease and correlate with the documented azotemia. The multiple bilateral renal cysts are most compatible with acquired cystic degeneration secondary to chronic renal disease. Mild bilateral pelvic fluid within physiologic limits, likely functional (diuresis or reduced concentrating ability associated with chronic kidney disease), without sonographic evidence of obstruction.

The small cystoliths with associated focal dorsal bladder wall thickening are most consistent with reactive inflammatory change secondary to mechanical irritation, without evidence of obstruction.

The liver is subjectively small with an irregular contour, raising concern for chronic hepatopathy (fibrosis), although the parenchymal echotexture remains relatively homogeneous. The organized biliary sludge, with a thin wall and no ductal dilation, is most consistent with early mucocele formation or marked inspissated bile, without current evidence of extrahepatic biliary obstruction.

The splenic hyperechoic nodules are most consistent with benign nodular hyperplasia or myelolipomatous change, commonly incidental in older small-breed dogs. The multifocal punctate hyperechoic foci with twinkling artifact likely represent mineralization; while this finding has been described in dogs with hyperadrenocorticism, it is nonspecific and may also occur as an age-related or metabolic change.

The right adrenal gland demonstrates mild enlargement (maximum 0.79 cm), while the left adrenal gland remains within normal limits. Given the marked ALP elevation, hypercholesterolemia, early gallbladder mucocele appearance, and splenic mineral foci, hyperadrenocorticism represents a reasonable differential consideration.

Despite the elevated Spec cPL no overt ultrasonographic evidence of pancreatitis is identified. This does not exclude active or resolving pancreatitis, as ultrasonographic sensitivity is variable and imaging findings may be absent in mild or chronic disease.

Mild punctate hyperechoic foci are present within the duodenal mucosa. This finding has been described in association with lacteal dilation and chronic inflammatory enteropathies; however, in this patient the duodenal wall thickness is within normal limits for a small-breed dog and wall layering is preserved. In the absence of ultrasonographic features of enteropathy or compatible clinical signs, this finding is considered nonspecific and likely incidental at this time. Clinical correlation is recommended should gastrointestinal signs develop.

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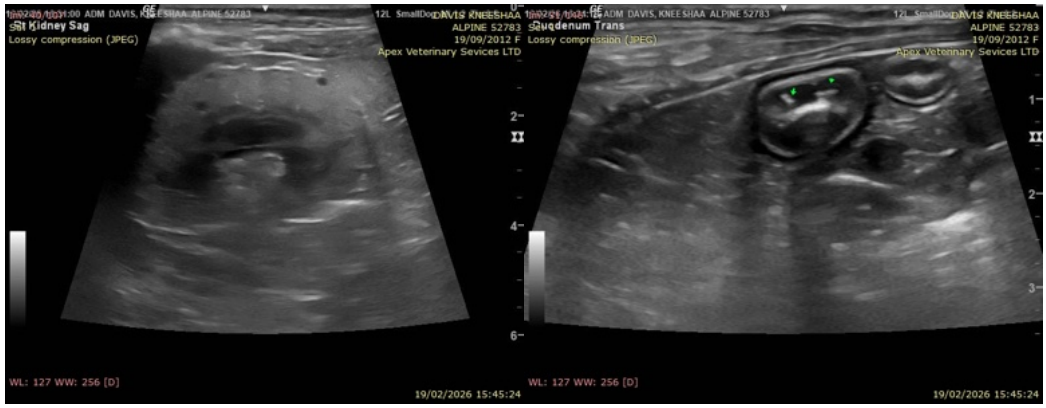
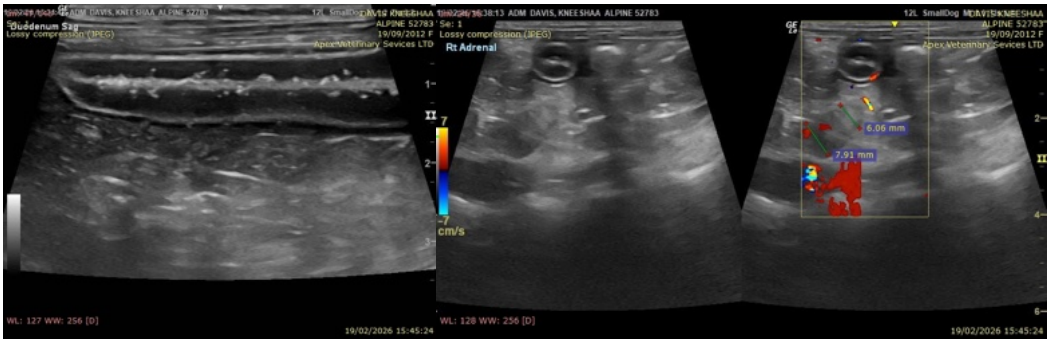
Recommendations

- Reassessment of renal parameters after correction of dehydration to better characterize chronicity and confirm IRIS staging.
- Blood pressure measurement and urine protein:creatinine ratio for complete renal staging and management planning.
- Screening for hyperadrenocorticism may also be considered in light of marked ALP elevation, hypercholesterolemia, borderline right adrenal enlargement, and early gallbladder mucocele appearance.
- Periodic ultrasonographic monitoring of the gallbladder to assess for progression of organized sludge/mucocele formation.
- Complete urinalysis with sediment examination and urine culture in view of cystolithiasis and focal bladder wall thickening.
- Clinical management of suspected pancreatitis based primarily on clinical evolution, as ultrasonography may be normal in mild or early disease.





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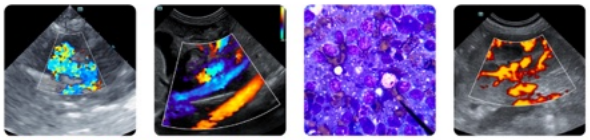

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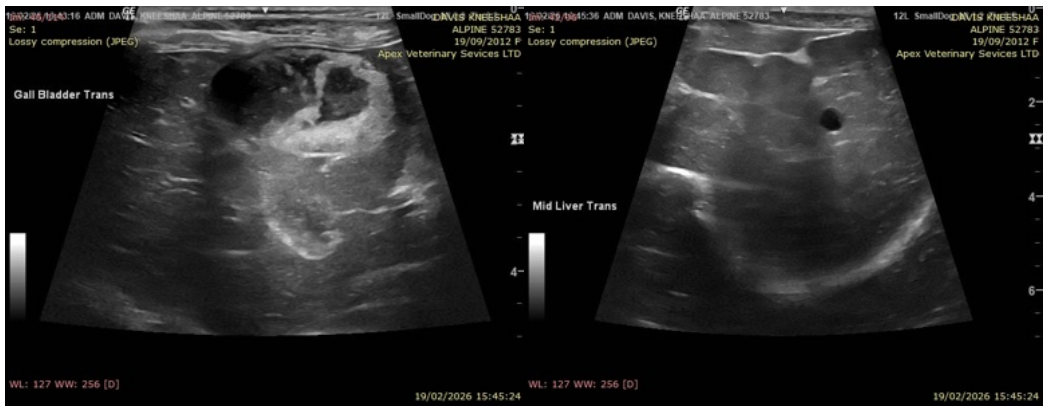

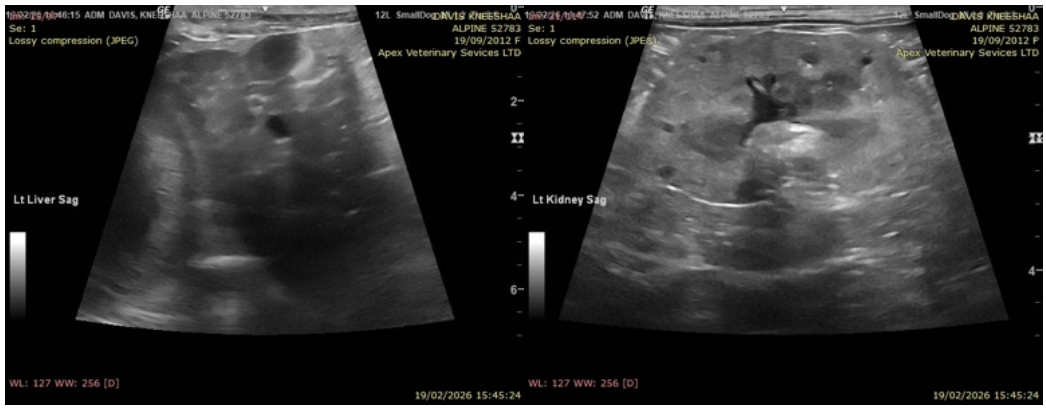

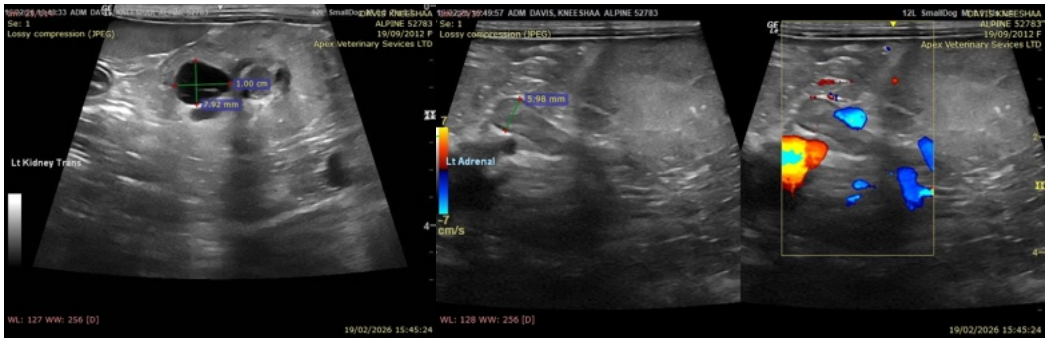

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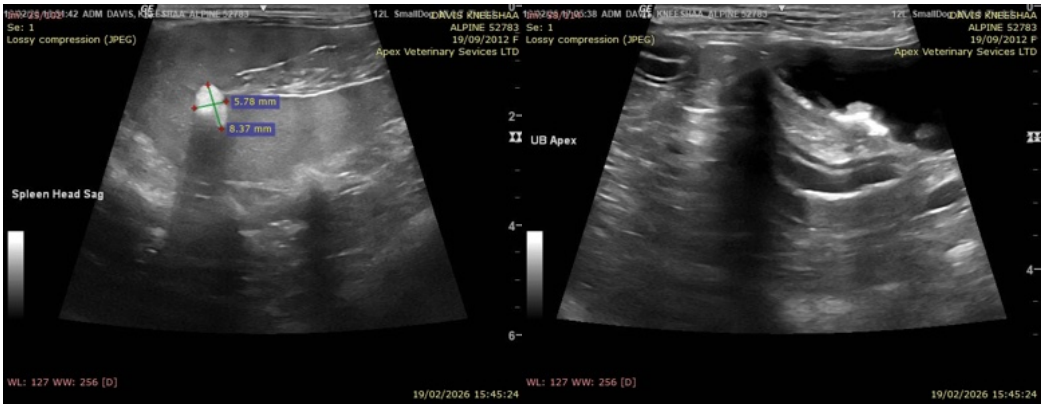

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

info@SonoPath.com