



**PATIENT PRESENTING CLINICAL SIGNS**

Mischief Enney Diagnosed with Stage 2 CKD June 2021. On K/D diet and Buprenorphine PRN arthritis. Occasional bouts of decreased appetite and slight weight loss, but has actually gained weight since last exam. Abnormal PE/Chem/CBC/UA Results: BUN 37, Cre 2.0, PSL 40, USG 1.015

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Feline

**Urinary System**

Full examination of the urinary bladder is inhibited by an empty urinary bladder. However, no evident pathology is appreciated.

**BREED**

Siamese

The left kidney is normal in size (3.9 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia, mineral (unless described separately) or infarcts observed.

**SEX**

Spayed Female

The right kidney is normal in size (3.8 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia, mineral (unless described separately) or infarcts observed.

**AGE**

15 Years

**Adrenal Glands**

Right adrenal gland is normal in size (0.98 cm long x 0.47 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**WEIGHT**

14.18 Pounds

Left adrenal gland is normal in size (0.7 cm long x 0.26 cm thick), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

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Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

**REFERRING VET**

Dr. Amanda Olsen

**Gastrointestinal**

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

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Mischief Enney

Normal layering is maintained in the small intestine except for a diffusely disproportionately thick muscularis layer relative to mucosa. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

**SPECIES**

Feline

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**Pancreas**

Pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

**BREED**

Siamese

**Free Abdomen**

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC FINDINGS**

**AGE**

15 Years

- Age related kidney change – This finding is expected/consistent with age-related mild degenerative disease and should be interpreted clinically in combination with laboratory changes.
- Thick muscularis – This finding has been reported in cats with infiltrative bowel disease including both benign inflammatory disease as well as infiltrative neoplasia such as lymphoma.

**WEIGHT**

14.18 Pounds

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Recommendations for this patient given the chronic kidney disease include urine culture to rule out occult urinary tract infection if not already evaluated, as well as urine protein/creatinine ratio if there is protein in the urine and the culture is negative. Blood pressure is also recommended if not already evaluated. Given this patient's weight loss and the thick muscularis layer in these images, a gastrointestinal malabsorption/maldigestion panel including TLI, PLI, folate and cobalamin to Texas A&M GI laboratory is recommended as is T4.

**INTERPRETED BY**

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DACVIM

Pending the results of the GI panel, next steps to further assess the weight loss may be biopsies of gastrointestinal tract, either full thickness surgical biopsies or endoscopic biopsies, being sure to include the ileum if possible. If no further evidence of gastrointestinal malabsorption or maldigestion is present, empirical therapy for decreased appetite in the face of chronic kidney disease could include antiemetics, gastroprotectants, appetite simulants and/or subcutaneous fluid therapy, which occasionally will result in improved appetite in patients with chronic kidney disease.

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**SPECIES**

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**AGE**

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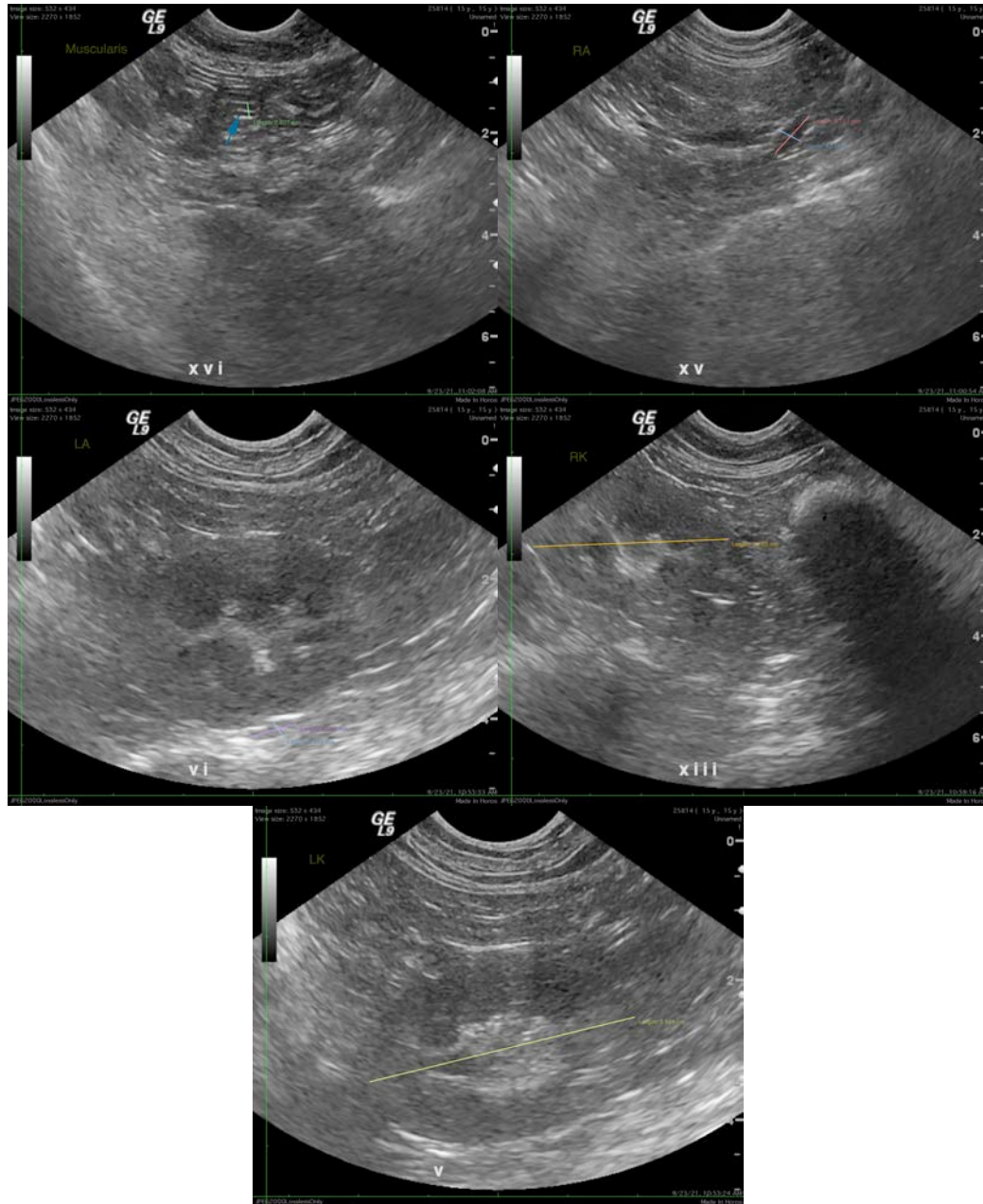
Dr. Amanda Olsen

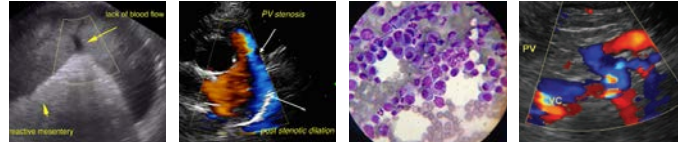
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**PATIENT**

Mischief Enney

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

**SPECIES**

Feline

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.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com

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Siamese

**SEX**

Spayed Female

**AGE**

15 Years

**WEIGHT**

14.18 Pounds

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