



**PATIENT PRESENTING CLINICAL SIGNS**

Ting Palmer

History: Recheck AUS. History PLE. History chronic loose stools/diarrhea. Current labwork: ALT 3,191; AST 442; ALP 4,375; GGT 78; BUN 90; creat 3.6; SDMA 42. Prior AUS 12/17/18 (Eric Lindquist, DVM, DABVP): mild multifocal lymphadenopathy, free fluid. \*Sedated with dexdomitor \* FNA of liver taken at time of ultrasound

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

Keeshond

**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.

**SEX**

Spayed Female

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 to moderate loss of corticomedullary symmetry and definition expected for the age of the patient. Mild pyelectasia was present in both kidneys. The left kidney measured 5.0 cm in length. The right kidney measured 5.6 cm in length.

**AGE**

12 Years

**Adrenal Glands**

**WEIGHT**

26 Pounds

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 0.59 cm width in the cranial pole and 0.68 cm width in the caudal pole. The right adrenal gland measured 0.67 cm width in the cranial pole and 0.47 cm width in the caudal pole.

**INTERPRETED BY**

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

**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.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**Liver**

**HOSPITAL NAME**

Deer Run VS

The liver was mildly enlarged. Normal hepatic parenchyma echogenicity exhibiting moderate coarse echotexture and evidence of minor generalized parenchymal remodeling. No masses or nodules noted. Subtle increased prominence of portal vascular borders.

**REFERRING VET**

Foster Palmer, DVM

The gallbladder was nondistended. Mild mineralized sediment was noted primarily along the inner luminal surface and primarily dependent. Anechoic content was noted otherwise in the gallbladder. No evidence of peripheral gallbladder inflammation. The cystic and common bile ducts were normal.

**INVOICE**

16376

**Gastrointestinal**

The stomach presented wall thickening secondary to echogenic mucosa hypertrophy. Intact wall layering was maintained and distinct. Prominent rugal folds were present. The gastric body wall measured 0.59 cm width. Mild to moderate retained anechoic fluid was present. No evidence of mechanical pyloric outflow obstruction.

**DATE**

6/27/22



**PATIENT**

Ting Palmer

The small intestine presented intact yet mildly prominent wall layering owing to generalized propensity for mildly prominent mucosa. Mild generalized duodenojejunal mucosal fogging was present, along with intermittent mildly hyperechoic mucosal lesions. No evidence of loss of intestinal wall layering or intestinal masses. The duodenum wall measured 0.54 cm. The jejunum wall measured 0.33 cm.

**SPECIES**

Canine

The colon walls presented intact yet prominent wall layering with mild thickened to echogenic submucosa. Semi-formed to soft feces was present in the colon lumen with lumen dilation, consistent with diarrhea. The colon wall measured 0.25 cm.

**BREED**

Keeshond

***Pancreas***

The pancreas exhibited normal size with heterogeneous to mild mixed echogenicity and intermittent parenchymal cysts. No evidence of peripancreatic inflammation.

**SEX**

Spayed Female

***Free Abdomen***

No overt lymphadenopathy or peritoneal effusion was present.

**AGE**

12 Years

**ULTRASONOGRAPHIC FINDINGS**

- Bilateral chronic renal changes with mild pyelectasia
- Hepatopathy
- Mild mineralized gallbladder debris
- Hypomotile gastritis pattern
- Chronic enterocolonopathy
- Heterogeneous to cystic pancreas- suspected age-related pancreatic changes (potentially incidental), possible low-grade chronic to chronic active or mixed pancreatic inflammatory pattern possible

**WEIGHT**

26 Pounds

**INTERPRETED BY**

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

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The pyelectasia may be owing to chronic renal changes, potential pelvic scarring possibly owing to previous calculi passage, IV fluid therapy (if applicable). Urine C/S and protein: creatinine ratio on sterile urine sample is recommended.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDMS

The overall appearance of the liver was nonspecific yet consistent yet exhibited both acute on chronic criteria, vacuolar hepatopathy, nonspecific hepatitis (viral, bacterial, leptospirosis, toxin, etc.), nonobstructive cholestasis, or other hepatopathy possible. Correlation with pending hepatic FNA recommended.

**HOSPITAL NAME**

Deer Run VS

A GI panel to include PLI/TLI/Cobalamin/Folate is recommended. Empirically, a limited antigen or hydrolyzed diet trial with potential long term dietary therapy, prophylactic deworming (Panacur 50 mg/kg SID x 5 consecutive days with repeat protocol in 3 weeks even if fecal testing is negative), high colony count probiotic (Provable or Visbiome), antibiotic trial and as needed gastrointestinal support with assessment of clinical response may prove beneficial.

**REFERRING VET**

Foster Palmer, DVM

**INVOICE**

16376

Empirical hepatosupportive medications and hospitalization with 48-72 hour IV fluid protocol with assessment of hepatic enzymes and renal parameters may prove beneficial.

**DATE**

6/27/22



**PATIENT**

Ting Palmer

**SPECIES**

Canine

**BREED**

Keeshond

**SEX**

Spayed Female

**AGE**

12 Years

**WEIGHT**

26 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**HOSPITAL NAME**

Deer Run VS

**REFERRING VET**

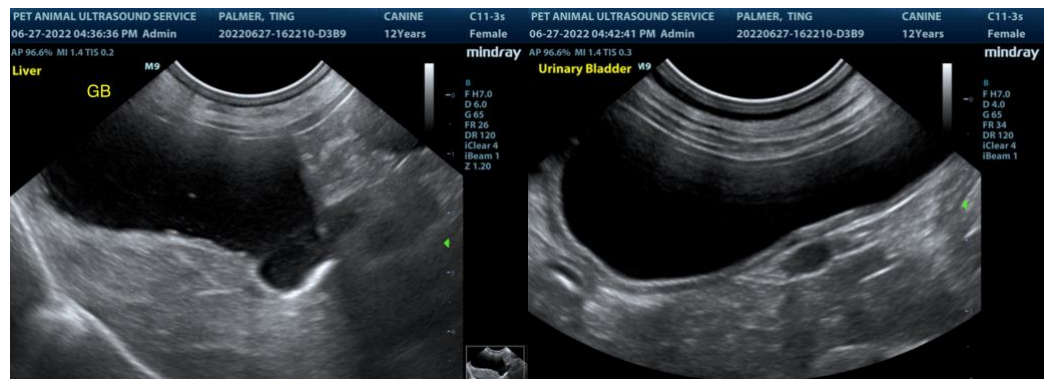
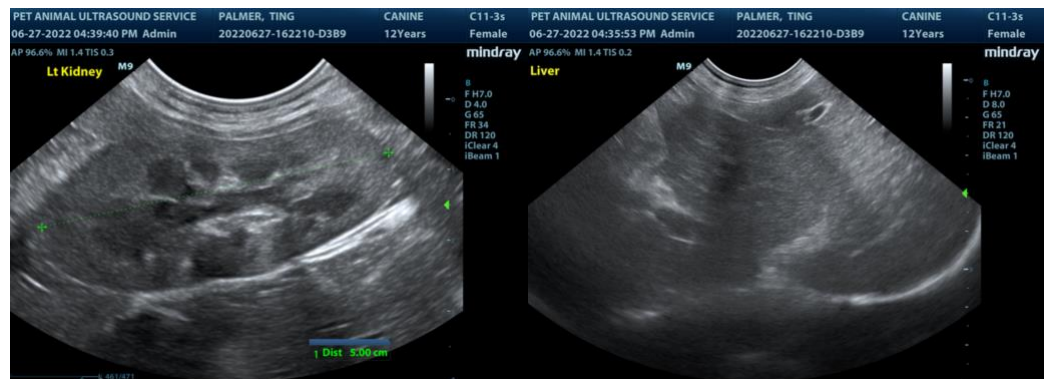
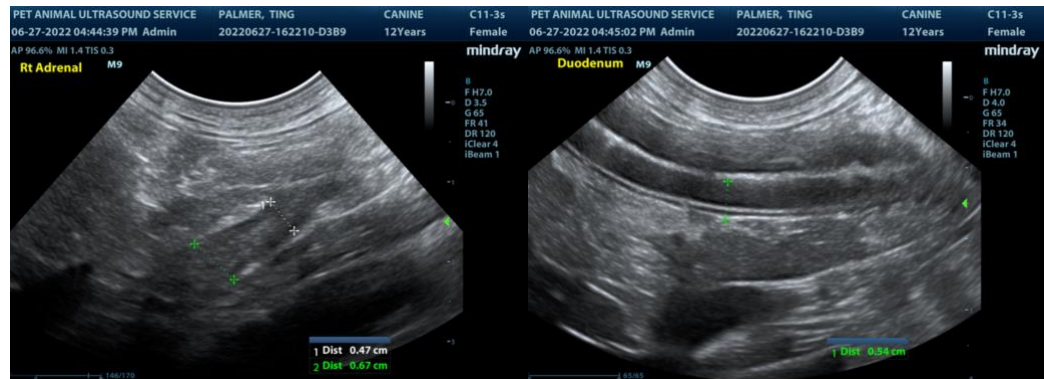
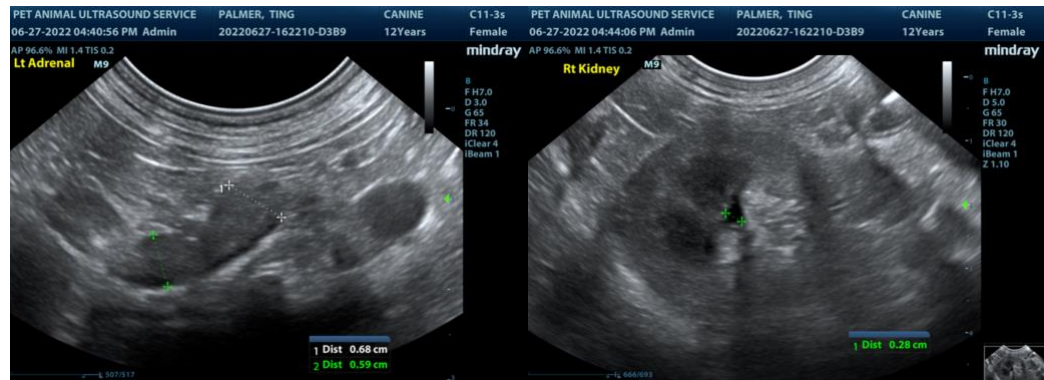
Foster Palmer, DVM

**INVOICE**

16376

**DATE**

6/27/22





**PATIENT**

Ting Palmer

**SPECIES**

Canine

**BREED**

Keeshond

**SEX**

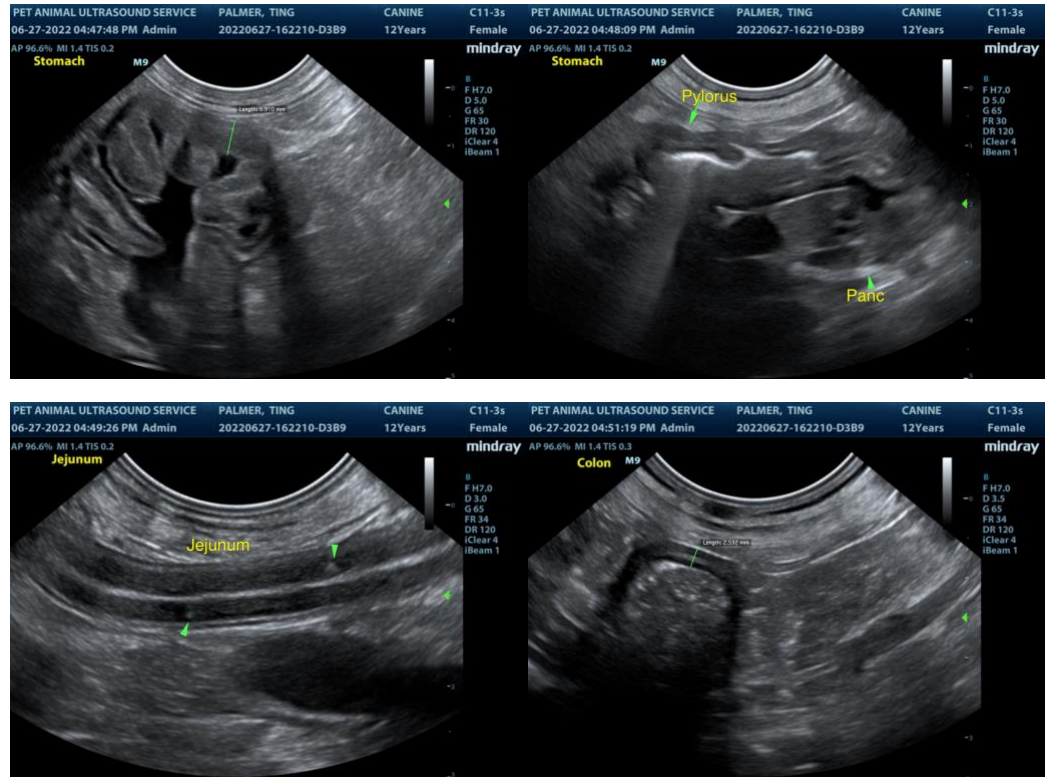
Spayed Female

**AGE**

12 Years

**WEIGHT**

26 Pounds



**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**HOSPITAL NAME**

Deer Run VS

**REFERRING VET**

Foster Palmer, DVM

**INVOICE**

16376

**DATE**

6/27/22

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.

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**