



**PATIENT**

Minnie Tang

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

FS

**AGE**

10 years

**WEIGHT**

3.4 kg

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Dr. Sarah Barthelemy

**HOSPITAL NAME**

Healing Traditions  
Vet Clinic

**REFERRING VET**

Dr. Vockeroth

**INVOICE**

17212

**DATE**

6/29/23

**PRESENTING CLINICAL SIGNS**

History since April of intermittently reduced appetite and diarrhea. Sometimes formed stools but will be coated in mucus. Will not eat for prolonged period and then vomit bile sometimes. Grade 2-3 murmur. Has also been coughing.

Abnormal PE/Chem/CBC/UA Results: Mild ALT elevation

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, and cystourethral junction 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 was noted.

No evidence of pathology in the area of the aortic trifurcation.

Normal size and contour 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 minor indistinct corticomedullary border demarcation was noted. Pinpoint medullary mineral were noted. No evidence of pelvic dilation was present. The left kidney measured 3.3 cm in length. The right kidney measured 3.7 cm in length.

**Adrenal Glands**

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.38 cm width at the caudal pole and 0.27 cm width at the cranial pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.39 cm width at the caudal pole and 0.43 cm width at the cranial pole.

**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**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. 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 gastric body wall width measured 0.31 cm. The pylorus wall width measured 0.26 cm.



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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Minor segmental jejunal ileus was noted yet no obstructive pattern. The duodenum wall measured 0.35 cm width. The jejunum wall measured 0.23 cm width.

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Normal visible colon wall layers were present with semi-formed to soft fecal matter.

***Pancreas***

**BREED**

Shih Tzu

The pancreas was normal in size and contour with isoechoic to heterogeneous parenchyma compared to adjacent omentum. No signs of active inflammation or neoplasia.

***Free Abdomen***

**SEX**

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Focal to intermittent mildly prominent mesenteric lymph nodes were present. The lymph nodes were essentially isoechoic to adjacent omentum without evidence of peripheral inflammation and maintaining a normal width: length ratio (<0.5). An example lymph node measured 1.0 cm x 0.33 cm.

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**ULTRASONOGRAPHIC FINDINGS**

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- Structurally unremarkable gastrointestinal tract with minor jejunal ileus
- Semi-formed / soft fecal matter
- Mild heterogeneous pancreas
- Pinpoint renal medullary mineral
- Intermittent minor sonographically benign mesenteric lymph nodes
- Low grade hepatopathy

**INTERPRETED BY**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Sonographically, there was no evidence of significant visceral pathology as an obvious cause or contributing factor to the patient's clinical signs.

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At times, the gastroenterocolic sonographic presentation may not correlate with a history of chronic to intermittent gastrointestinal signs. Considerations may include dietary intolerance / food hypersensitivity, dysbiosis, structurally insignificant inflammatory bowel, low-grade to chronic pancreatitis, which may present as sonographically normal, occult parasitism, less likely occult Addison's Disease, or infiltrative neoplasia. A GI panel to include PLI/TLI/Cobalamin/Folate and screening resting cortisol level is recommended.

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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.

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Intestinal biopsies may be indicated if GI signs continue despite empirical therapy.



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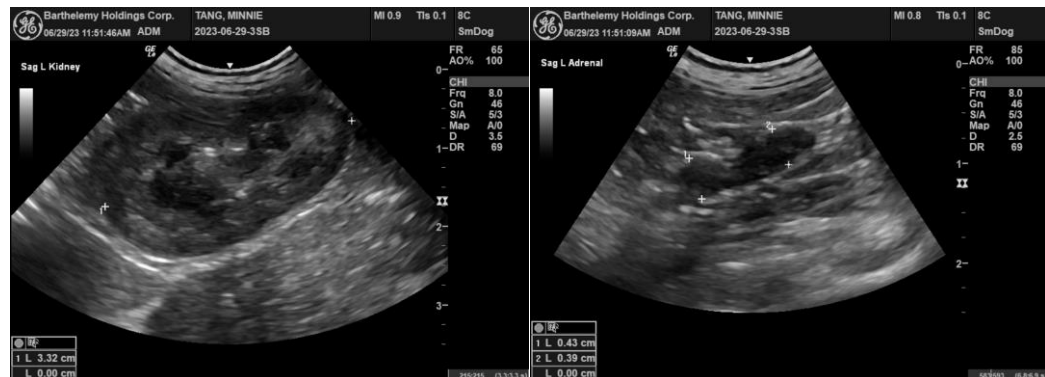
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)**  
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