



**PATIENT**

Turbo Smyth

**SPECIES**

Feline

**BREED**

DSH

**SEX**

Male Neuter

**AGE**

14

**WEIGHT**

4.7 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Belan

**HOSPITAL NAME**

Beddington Trail AH

**REFERRING VET**

Dr. Banahur

**INVOICE**

14229

**DATE**

7/6/22

**PRESENTING CLINICAL SIGNS**

Weight loss and muscle wasting last 4-6 months. Large pendulous abdomen .

Abnormal PE/Chem/CBC/UA Results: Elevated protein level in blood renal enzymes normal UA and chest x rays pending

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder was mildly distended in size yet with normal tone. Anechoic urine was present with mild primarily nondependent, particulate, pinpoint, hyperechoic, urinary bladder sediment. No evidence of inflammatory or neoplastic mural changes was noted. The urethra was normal in structure and tone to a depth of 2.0 cm.

The area of the aortic trifurcation was free of pathology.

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 mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 3.7 cm in length. The right kidney measured 4.1 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 0.44 cm width. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.48 cm width.

**Spleen**

The spleen exhibited primarily finely textured parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Mild generalized parenchyma heterogeneity was present without evidence of nodular changes. 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. The parenchymal heterogeneity is likely consistent with benign changes such as extramedullary hematopoiesis or age-related remodeling with minor potential for inflammatory or neoplastic disease. The spleen was normal in size measuring 1.0 cm in width.

**Liver/ Gallbladder**

The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. A solitary nonhomogeneous hyperechoic nondisruptive intraparenchymal nodule measuring 0.85 cm in diameter. The hepatic and portal vasculature were normal in appearance without signs of congestion. Subjectively normal hepatic vascular volume without overt evidence of congestion was noted. The visualized cranial abdominal caudal vena cava exhibited subjective normal volume. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.



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***Gastrointestinal***

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained moderate, variably echogenic yet nonshadowing ingesta most consistent with post prandial presentation without signs of ileus, obstruction or foreign material. No overt evidence of mechanical pyloric outflow obstruction was noted. The gastric body wall width measured 0.20 cm.

The visualized segments of small intestine exhibited intact wall layering and maintained 1:3 muscularis / mucosa ratio. No overt evidence of intestinal masses or loss of intestinal wall layering. The jejunum wall measured 0.24 cm width. The ileocolic wall measured 0.40 cm width.

Normal visible colon wall layers were present with apparent formed feces in lumen.

***Pancreas***

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***

Mildly prominent yet subjectively benign / reactive intermittent colic lymph nodes were present. An example measured 0.26 cm in width. Moderate volume, primarily anechoic peritoneal free fluid was noted. Subtle nonuniform mesentery was noted with no overt evidence of omental masses or significant lymphadenopathy.

**ULTRASONOGRAPHIC FINDINGS**

- Mild particulate to pinpoint hyperechoic urinary bladder sediment - crystalline vs. cellular debris, potential for mucus
- Bilateral chronic renal changes
- Heterogeneous pancreas
- Hepatic parenchymal remodeling exhibiting subjective normal hepatic vascular volume, solitary nondisruptive subjectively benign intraparenchymal nodule - nodules suggestive of focal hyperplasia or cystic biliary adenoma
- Moderate volume primarily anechoic peritoneal free fluid

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Given that no reported subnormal albumin levels that would diminish oncotic pressure to the point of causing free fluid, no overt evidence of passive hepatic congestion, or significant diffuse hepatic disease, as well as no evidence of overt intestinal mural pathology that would be responsible for peritoneal free fluid, an obvious cause of the effusion was not definitively evident.

Potential for some degree of pancreatitis could be present yet subjectively, and if present, the degree of pancreatitis was not overtly consistent with severe pancreatitis or pancreatic neoplastic criteria. Likewise, given the reported weight loss and muscle wasting in this patient, a structurally insignificant gastrointestinal disease could be present. A GI panel to include PLI/TLI/Cobalamin/Folate is recommended.



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Abdominocentesis for fluid analysis, cytology +/- C/S if clinically indicated for further assessment, is recommended. Neoplasia such as carcinomatosis, lymphomatosis, or similar, may also be considered a differential diagnosis. Correlation with pending thoracic radiographs is recommended.





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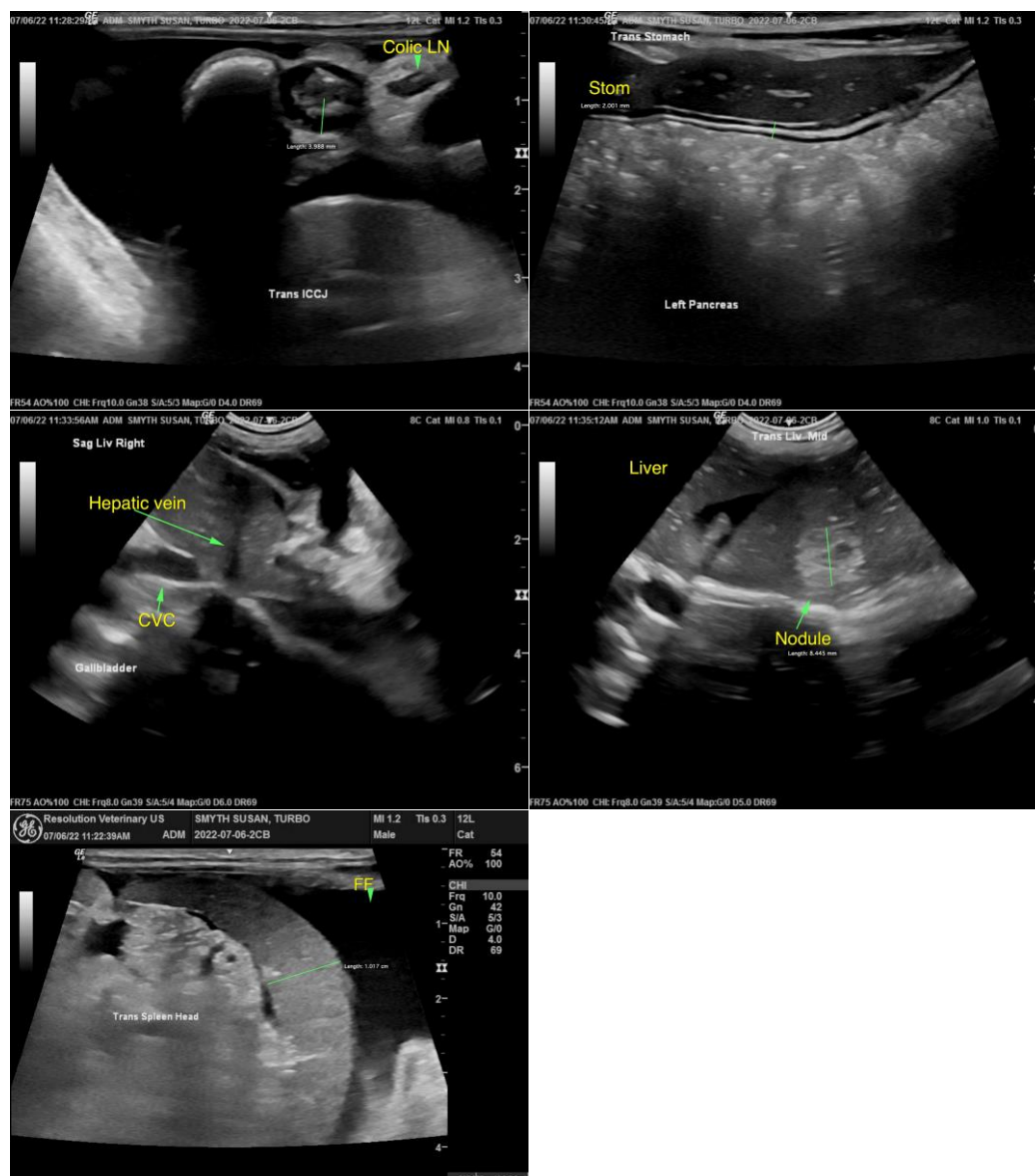
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)  
info@SonoPath.com