



**PATIENT**

Daphne Patterson

**SPECIES**

Canine

**BREED**

Boxer X

**SEX**

FS

**AGE**

11 years

**WEIGHT**

35.8 kg

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Dr. Alastair Westcott

**HOSPITAL NAME**

Dr. Alastair Westcott,  
DVM

**REFERRING VET**

Dr. Alastair Westcott

**INVOICE**

12610

**DATE**

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**PRESENTING CLINICAL SIGNS**

Has been vomiting once daily at night, on an empty stomach for almost a month. She has had bloodwork done at her regular veterinarian and it has been unremarkable. No imaging has been done and an ultrasound has been scheduled for a week's time. She has been placed on a Maropitant orally and has been taking it for the last 48 hours. Last night was very restless; pacing and drooling excessively. She ate dinner last night but refused food this morning. There has been no diarrhea. She has been drinking a whole lot in the last 2 days. She was originally on a raw food diet and has been recently switched to kibble/canned food in the last week.

Abnormal PE/Chem/CBC/UA Results: Overweight, tense abdomen, thickened stifles, drooling/nauseous Neutrophilic inflammation Stress lymphopenia Very mild elevation in ALT Normal cPL Normal TT4 Urinalysis: Adequate concentration Mild hematuria - sampling Few WBCs Otherwise unremarkable Thoracic radiographs: Normal cardiac dimensions with no pulmonary vessel dilation noted. Mild Broncho interstitial patterning which may reflect a chronic or acute airway issue. On views of the abdomen noted, the stomach contains some ingesta and there is an impression of gastric wall, segmental thickening. This may be radiographic artifact or positioning, but given history, this is where the sonographic study will be focused.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm 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.

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 7.2 cm in length. The right kidney measured 7.3 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 2.5 cm length x 0.71 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.4 cm length x 0.72 cm width at the caudal 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.



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***Liver/ Gallbladder***

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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 minor benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance without signs of congestion. No evidence of hepatosplenic masses or nodules was noted. 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 exhibited variable yet primarily moderate to significant mural thickening with subjective decreased mural echogenicity and loss of distinct wall layering primarily in the area of the gastric antrum, pylorus, and likely upper duodenum. Areas of potential yet indistinct cratering along the luminal surface were noted. The pylorus wall width measured 1.0 cm. The antrum wall width measured 1.5 cm. A moderate amount of retained primarily anechoic fluid with mild nonspecific ingesta was noted in the gastric fundus and body with sonographically unremarkable fundus and mid to left gastric body walls. By comparison, ventral fundus body wall width measured 0.35 cm.

The mid to descending duodenum, as well as the jejunum and ileum to the level of the colon, were sonographically unremarkable. The descending duodenum wall width measured 0.54 cm. The jejunum wall width measured 0.40 cm. The upper duodenum just distal to the gastroduodenal junction subjectively measured 0.8 cm wall width.

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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.

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***Free Abdomen***

Subtle evidence of perigastric reactive mesentery was present. Intermittent gastric and likely pancreaticoduodenal lymph nodes were present. These lymph nodes were homogenous, mildly hypoechoic and smoothly marginated. A normal width: length ratio was maintained (<0.5). Evidence of perilymphatic inflammation was evident. An example of the lymph nodes measured 1.5 cm diameter.

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**ULTRASONOGRAPHIC FINDINGS**

***Primary Findings***

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- Variable moderate to significant mural thickening, Involving the gastric antrum, pylorus, and likely upper duodenum with loss of distinct wall layering and potential ulceration
- Concurrent generalized gastric hypomotility exhibited by retained gastric fluid and nonspecific ingesta - potential secondary to some degree of mechanical pyloric outflow obstruction
- Associated gastric and likely pancreaticoduodenal lymphadenopathy - lymphoid hyperplasia, reactive lymphadenitis, or early neoplastic lymphadenopathy possible
- Heterogeneous pancreas - nonspecific



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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Considerations for the thickened areas of the stomach may include acute to chronic gastritis (idiopathic, Infectious, or other), while primary concern for neoplastic infiltrative gastric mural disease, although not definitive, is warranted. Further assessment including endoscopic biopsies in the area of gastric thickening for histopathology is recommended.

The pancreas may indicate a patient or reactive variant, although the potential for concurrent low-grade to chronic pancreatitis, which may present as essentially sonographically normal may be possible.

Although considered unlikely, resting cortisol level to rule out occult Addison's Disease may be considered prior to endoscopy. If empirical therapy is elected, some or all of the following protocol may be considered.

A clinical trial of **Zithromax (Dogs: 5-10 mg/kg p.o. q24h. May increase dosing interval to q48h after 3-5 days of treatment), Metronidazole (10-20 mg/kg p.o. b.i.d.), Pepcid (0.5-1 mg/kg s.i.d.) and Sucralfate (0.5-2 g/dog PO) or Omeprazole (1 mg/kg p.o. s.i.d.)** over the next 3 weeks along with a **novel-protein or hydrolyzed diet** with slurry feeding b.i.d./t.i.d. over the next 2-4 days and then increase to canned diet bid. Dry food should be avoided over the next 4 weeks. A recheck sonogram to assess GI improvement or progression would be ideal in 4 weeks.

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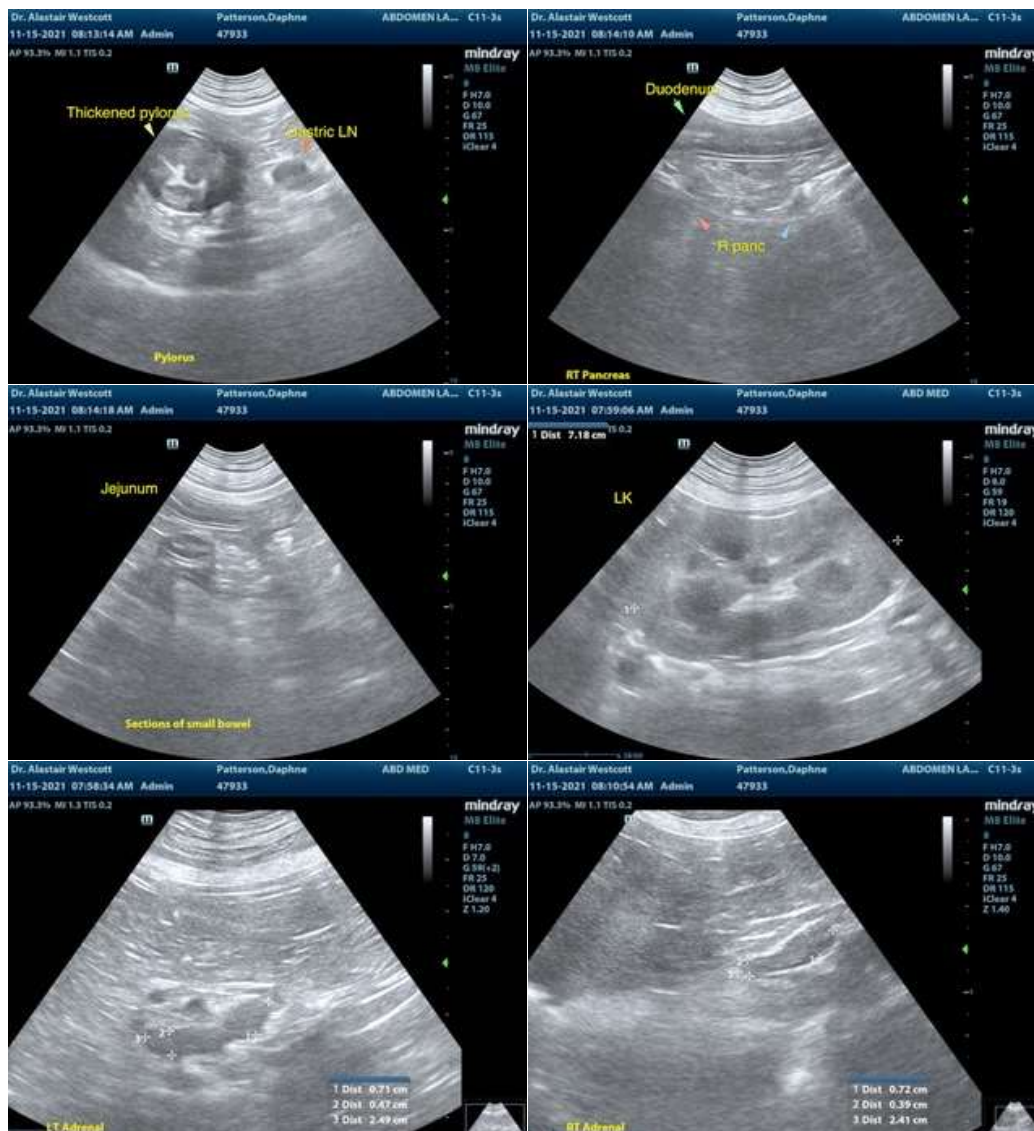
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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info@SonoPath.com