



## PATIENT

Jax Epp

## SPECIES

Canine

## BREED

Pug

## SEX

Neutered male

## AGE

9 years

## WEIGHT

10 kg

## INTERPRETED BY

Dr. Alicia Angosto  
Guerrero

## IMAGING PERFORMED BY

Pamela Veldman

## HOSPITAL NAME

Antler Hill VS

## REFERRING VET

Dr. Scheck

## INVOICE

69242

## DATE

12/12/25

## PRESENTING CLINICAL SIGNS

History: Has been an intermittent vomiter his whole life, recently has begun vomiting multiple times a week, has had intermittent diarrhea as well.

Abnormal PE/Chem/CBC/UA Results: Low total protein noted on bloodwork

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder lumen is normally distended, and the bladder wall appears thin and smooth. The urine is anechoic. The bladder neck and proximal urethra have a normal appearance. There are no calculi and no evidence of inflammatory or neoplastic changes.

The left kidney is normal in shape and size, measuring 3.78×2.28 cm, with a cortical thickness of 0.30 cm in the sagittal plane. The right kidney is normal in shape and size, measuring 3.75×2.50 cm, with a cortical thickness of 0.28 cm in the sagittal plane. In both kidneys, the renal cortex is isoechoic compared to the liver parenchyma. The corticomedullary ratio is normal, and corticomedullary definition is preserved. There is no evidence of pyelectasia, nephroliths, or hydronephrosis. Color Doppler demonstrates a normal perfusion pattern.

### *Adrenal Glands*

Both adrenal glands show normal shape and echogenicity. The left adrenal gland measures 0.31 cm at the cranial pole and 0.31 cm at the caudal pole. The right adrenal gland measures 0.33 cm at the cranial pole and 0.33 cm at the caudal pole.

### *Spleen*

Splenic thickness is 1.03 cm. The parenchyma demonstrates normal echogenicity and a fine, homogeneous echotexture without focal parenchymal abnormalities. The splenic capsule is smooth and regular.

### *Liver*

The liver is subjectively normal in size, with sharp edges and a regular contour. The hepatic parenchyma appears uniform and isoechoic compared to the falciform fat, with a normal echotexture. No hepatic lymphadenopathy is observed.

The gallbladder lumen is moderately distended. The wall is thin, and the contents are anechoic. No dilation of the cystic duct or common bile duct is observed.

### *Gastrointestinal*



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The stomach is empty and folded, with a liquid content pattern. The gastric mural thickness measures 3.89 mm, with preserved wall layering. The pylorus measures 6.10 mm, with a muscular layer thickness of 1.94 mm, and contains a small amount of fluid.

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The duodenum measures 5.50 mm proximally and 4.07 mm distally, with a small amount of fluid present. The jejunum measures 4.95 mm, with normal wall layering.

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The colon wall thickness measures 1.23 mm in the transverse colon, containing soft feces. The descending colon measures 1.93 mm, with very soft fecal material, though not liquid.

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### *Pancreas*

The pancreatic parenchyma is isoechoic relative to the adjacent omental fat. No evidence of active inflammation or neoplastic disease is identified.

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### *Peritoneal Cavity*

No abdominal effusion or evidence of peritonitis is observed. Cranial mesenteric lymph nodes are not visualized, but the surrounding regions appear unremarkable. The iliac trifurcation appears normal.

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## ULTRASONOGRAPHIC FINDINGS

- Increased gastric mural thickness with intraluminal fluid.
- Increased thickness of the pyloric region with mild fluid content.
- Mildly increased duodenal and jejunal wall thickness with preserved layering.
- Soft to very soft fecal material within the colon.

## IMAGING PERFORMED BY

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## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The increased gastric mural thickness, in combination with pyloric thickening and mildly increased duodenal and jejunal wall thickness, while maintaining preserved wall layering, is most consistent with a chronic inflammatory gastrointestinal process. The distribution and appearance of these changes support chronic gastritis and enteropathy, with differentials including chronic inflammatory bowel disease and protein-losing enteropathy, particularly given the documented low total protein on bloodwork.

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There is no sonographic evidence of mechanical obstruction, foreign material, focal mass lesions, or loss of mural stratification, making an obstructive or overtly infiltrative neoplastic process less likely based on imaging alone. However, low-grade inflammatory or infiltrative disease cannot be excluded, as such conditions may not produce definitive ultrasonographic abnormalities.

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The remainder of the abdominal organs, including the liver, pancreas, kidneys, adrenal glands, spleen, and urinary bladder, appear within normal limits.



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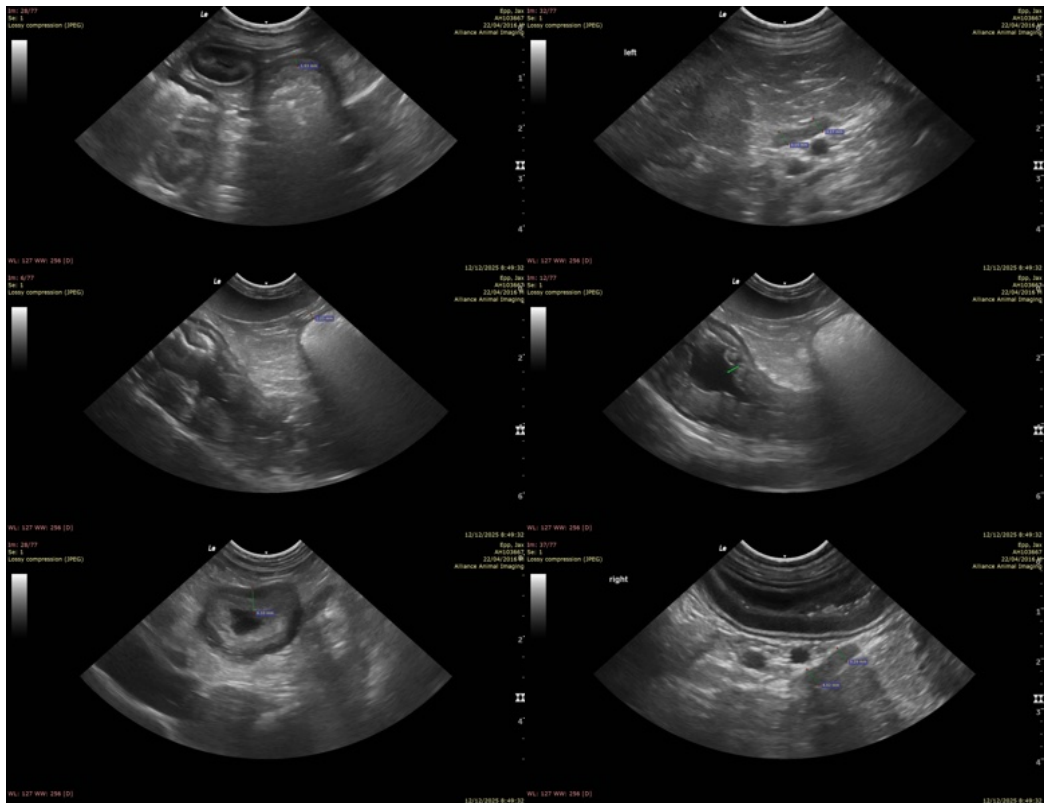
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Overall, the findings support a chronic inflammatory gastrointestinal disorder as the most likely underlying process contributing to the patient's long-standing vomiting and recent clinical deterioration.

## Recommendations

- Further evaluation with a comprehensive gastrointestinal panel, including assessment of cobalamin, folate, pancreatic function, and protein loss, is recommended to further characterize the suspected chronic enteropathy.
- Definitive diagnosis may ultimately require endoscopic or full-thickness intestinal biopsies if clinical signs persist or fail to respond to medical and dietary management. Ongoing clinical correlation and monitoring of serum protein levels are advised.



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.

Alicia Angosto Guerrero, DMV, PgDip, MSc.

MV Esp Ultrasound in Domestic and Wild Animals

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