



**PATIENT PRESENTING CLINICAL SIGNS**

**Darcy Vernon** Patient presents for bloody anal area, was seen last evening, vomiting. Vomited 3 times overnight, has not eaten, having liquid, bloody, diarrhea. R/O HGE vs. gastritis vs. other. Current meds: Pepcid, Apoquel, potassium, on prescription diet.

**SPECIES** Abnormal PE/Chem/CBC/UA Results: Chem: BUN 6, ALT 133, ALP 274, cholesterol 411, WBC 17.06, neutrophils 14.64, MPV 13.6.

Canine

**BREED ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**  
*Urinary System*

**Havanese** The **urinary bladder** presented a relatively uniform thickening of the cranioventral and craniodorsal mucosae with micropolypoid mucosal changes without involvement of the submucosae. The urine presented some echogenicity consistent with suspended debris. No evidence of urethral pathology was present. This presentation is most consistent with chronic cystitis. Technically transitional cell carcinoma cannot be ruled out without histopathological review but is not overtly suspected based on this pattern. Cystocentesis and urine culture +/- pathological review of urine cytology would be warranted. Calculi were noted and measured up to 0.3 cm.

**SEX**

Neutered male

**AGE** The pelvic urethra and prostate were unremarkable. The prostate measured 0.5 cm.

**WEIGHT** The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Mild mineralization was noted in the kidneys. The right kidney measured 4.6 cm. The left kidney measured 4.8 cm.

**INTERPRETED BY**

Eric Lindquist, DMV,  
DABVP, Cert. IVUSS,  
CEO of SonoPath.com

**Adrenal Glands**

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.53 x 0.51 cm at the caudal pole and 0.63 cm at the cranial pole. The left adrenal gland measured 1.8 x 0.64 cm at the caudal pole and 0.46 cm at the cranial pole.

**IMAGING PERFORMED BY**

Kelly Vazquez, CVT

**HOSPITAL NAME**

Westwood Regional  
VH

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**REFERRING VET**

Dr. Goldman

**INVOICE**

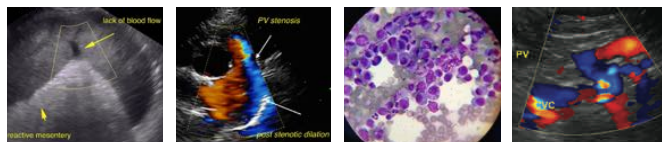
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**Liver**

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Multi-focal, hypoechoic nodular changes were noted and mildly

**DATE**

5/4/22



**PATIENT**

disruptive. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder and common bile duct were unremarkable.

Darcy Vernon

**SPECIES**

**Gastrointestinal**

Canine

The duodenum was mildly thickened and hyperperistaltic. The intestines were free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. The colon in this patient is also thickened with increased submucosal echogenicity. Wall thickness measured 0.4 cm. This is consistent with colitis.

**BREED**

Havanese

**SEX**

**Pancreas**

Neutered male

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**AGE**

9 years

**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

Bladder calculi, non-obstructive. Chronic cystitis bladder pattern.

23.4 lbs

Renal calculi, non-obstructive. The patient is likely passing calculi periodically.

Gastritis.

**INTERPRETED BY**

Age related hepatic changes.

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CEO of SonoPath.com

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**IMAGING PERFORMED BY**

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I recommend treatment for gastritis. Suggested protocol may prove effective. If any NSAID treatment is being utilized I recommend stopping until the presentation is well resolved. Eventual cystotomy, stone analysis, bladder wall biopsy and culture is all indicated. There is no overt evidence of transitional cell carcinoma; however, this cannot be ruled out. Anti-parasitic protocol is indicated.

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**Helicobacter/Gastritis protocol**

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.)**, **Sucralfate (0.5-2 g/dog PO)** and **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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**SPECIES**

Canine

**BREED**

Havanese

**SEX**

Neutered male

**AGE**

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**WEIGHT**

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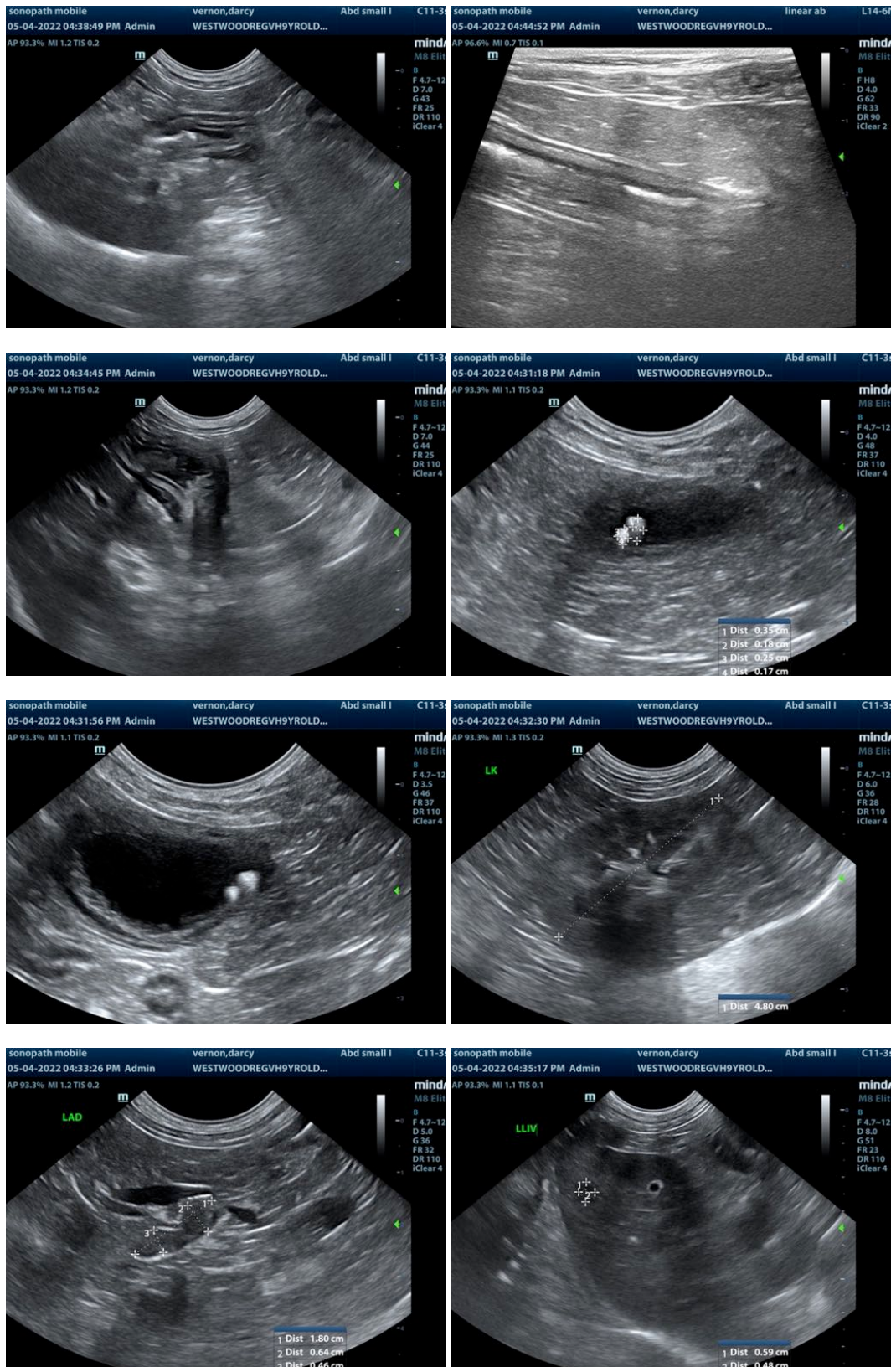
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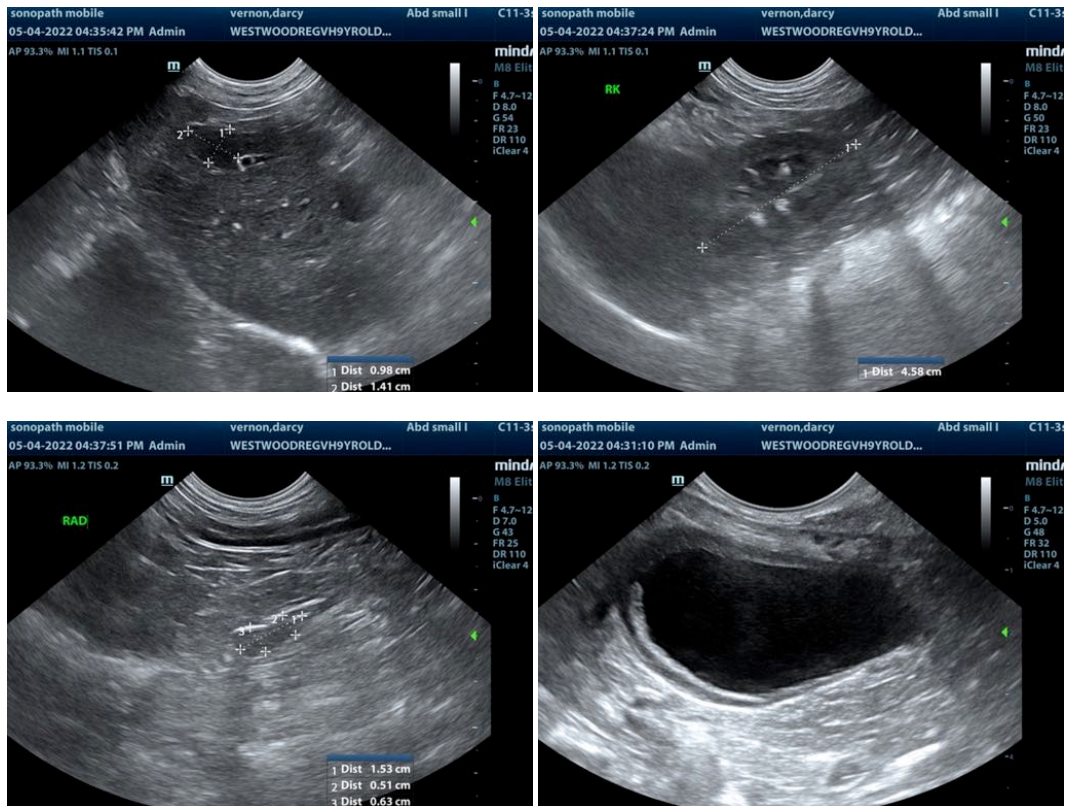
Neutered male

**AGE**

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**WEIGHT**

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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.

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