



**PATIENT PRESENTING CLINICAL SIGNS**

Fenway Sidoli History: Vomiting, abdominal distension, history of elevated liver enzymes.

**SPECIES**

Canine

**BREED**

Pug Mix

**SEX**

Neutered Male

**AGE**

9 years

**WEIGHT**

24.6 lbs

**INTERPRETED BY**

Andrea Nicastro, DVM,  
Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Val Shumskaya

**HOSPITAL NAME**

AH of Roxbury

**REFERRING VET**

Dr. Hickenbottom

**INVOICE**

12677

**DATE**

4.5.23

Abnormal PE/Chem/CBC/UA Results: Chem - ALK phos 928, CBC PLT 500

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is mildly to moderately distended. The wall is of appropriate thickness with a smooth mucosal surface. A 0.18 cm cystic calculus is observed within the lumen. The region of the trigone and visible portion of the proximal urethra are normal.

The prostate is normal in size (1.32 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (4.40 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal in size (5.10 cm in length) with a normal shape, architecture and smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with mild to moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size (0.45 cm at cranial pole) (0.39 cm at caudal pole) (1.70 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

The right adrenal gland is in normal size (1.21 cm at cranial pole) (0.60 cm at caudal pole) (1.86 cm in length) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature appear normal.

**Spleen**

The spleen is normal in size (1.48 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature appears normal.

**Liver**

The liver is subjectively prominent in size with swollen peripheral contours. The parenchyma is isoechoic relative to the spleen with a few ill-defined hypoechoic areas deep on the left side. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small to moderate amount of mostly gravity-dependent echogenic debris is observed within the lumen. The cystic and common bile ducts are normal/not seen.

### ***Gastrointestinal***

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. There is no evidence of an obstructive pattern.

### ***Pancreas***

The right limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

### ***Free Abdomen***

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- The hepatic changes, in conjunction with the liver enzyme pattern is most consistent with a benign process (i.e., vacuolar hepatopathy and/or regenerative nodular hyperplasia) with a lower possibility of inflammatory disease, infiltrative neoplasia or other hepatopathy.
- Gall bladder debris - non-mucocele
- Cystic calculus

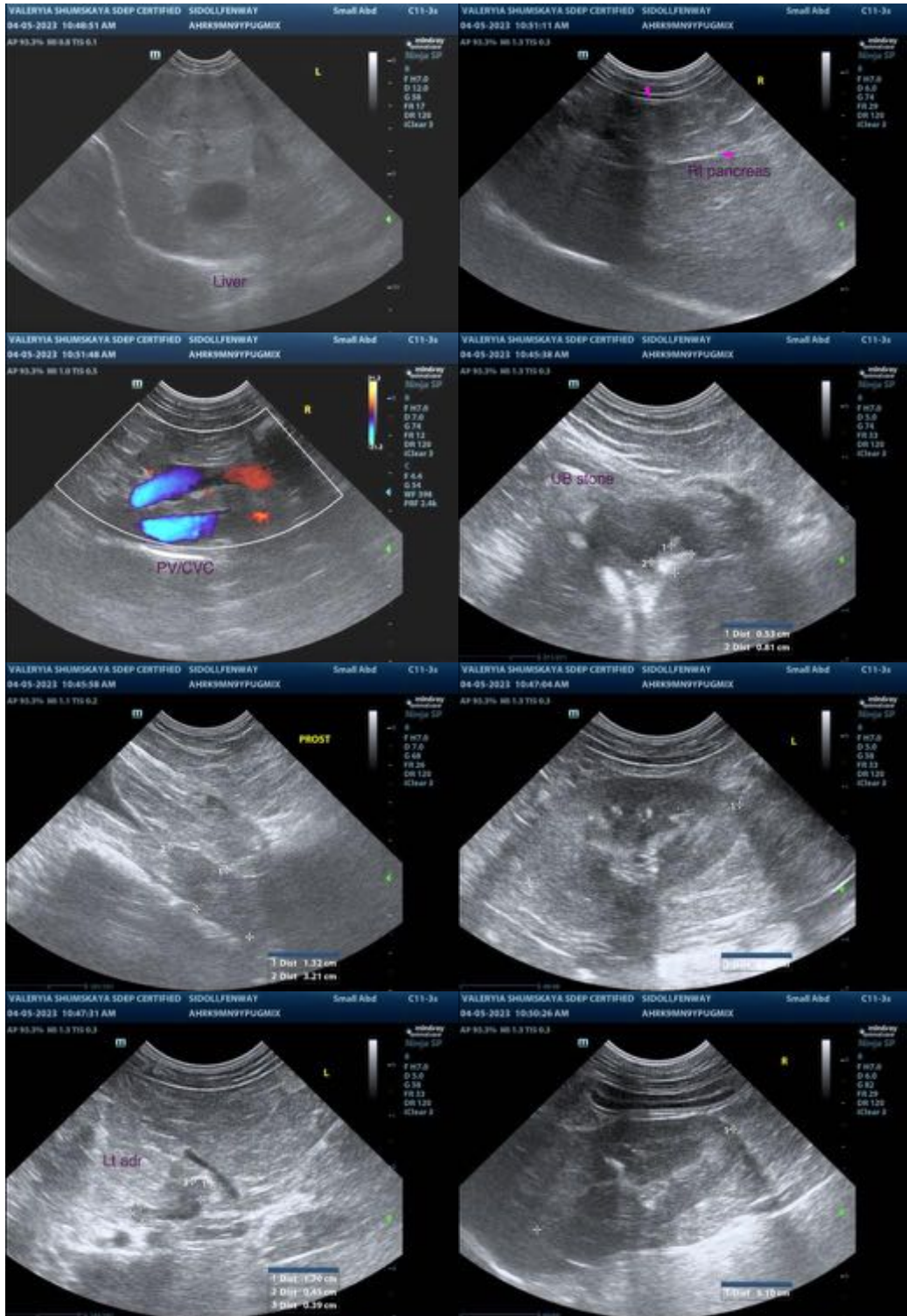
### **Secondary Findings**

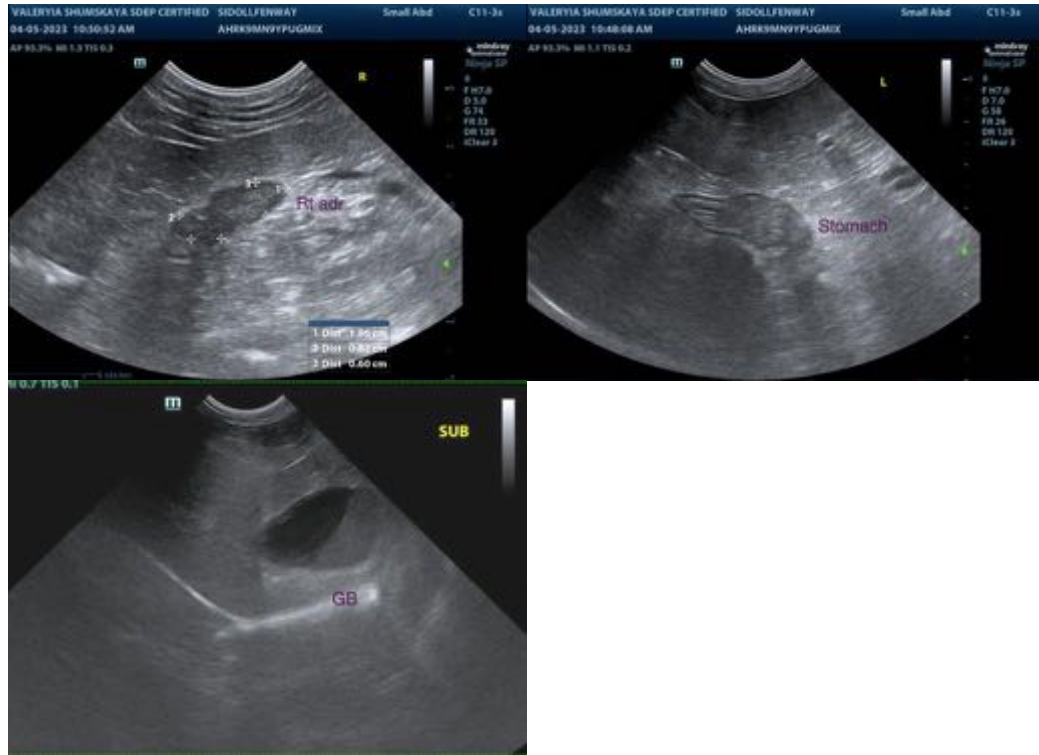
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral chronic age-related renal changes with nonobstructive nephrolithiasis

\*An obvious cause for the patient's vomiting is not definitively identified in this study. Considerations include microscopic gastrointestinal disease, underlying metabolic issue, low-grade pancreatitis, other.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Three-view thoracic radiographs are recommended to assess for occult esophageal disease.
- Consider a fecal evaluation for ova and Giardia, as well as a malabsorption panel, including serum cobalamin and folate, TLI and PLI
- Also consider pre-and postprandial serum bile acids and a resting cortisol level. A fine-needle aspirate of the liver may also be warranted.
- Ultimately, endoscopic, or surgical gastrointestinal biopsies may be necessary to get a definitive diagnosis.





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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