



**PATIENT**

Rufus Runne

**PRESENTING CLINICAL SIGNS**

History: Falling over, distended abd, past elevated liver values  
Abnormal PE/Chem/CBC/UA Results: Platelets 1,072, ALP 1,642, Lipase 426

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

**BREED**

Yorkshire Terrier

**SEX**

Neutered male

The residual prostate measured 0.7 cm.

**AGE**

14 years

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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Slight mineralization was noted in the kidneys. The right kidney measured 3.88 cm. The left kidney measured 3.56 cm.

**WEIGHT**

**Adrenal Glands**

The left adrenal gland was enlarged and irregular measuring 2.23 x 0.81 cm at the cranial pole and 0.69 cm at the caudal pole with an irregular, midbody right adrenal gland. The left phrenic vein appeared to be occupied in this patient. The right adrenal gland measured 1.15 x 0.77 cm at the cranial pole and 0.37 cm at the caudal pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Valeryia Shumskaya

**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.

**HOSPITAL NAME**

Lake Hopatcong VC

**REFERRING VET**

Dr. Batta

**Liver**

The **liver** was uniformly swollen. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. The gallbladder wall was echogenic with striating debris and polypoid changes. The vena cava did not appear invaded.

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**Gastrointestinal**

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There was some residual chyme and gas was noted in the **stomach**, yet not pathological. This is consistent with end post prandial presentation. Transit of chyme into the small intestine was normal. Curvilinear patterns were maintained throughout the GI tract. No evidence of pathology. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

**BREED**

Yorkshire Terrier

**Pancreas**

**SEX**

Neutered male

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

**AGE**

14 years

**Free Abdomen**

**WEIGHT**

A large amount of abdominal fat was noted on radiographs.

**ULTRASONOGRAPHIC FINDINGS**

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Eric Lindquist, DMV  
DABVP, Cert. IVUSS

Geriatric abdomen with benign hepatopathy and irregular left adrenal gland.

Heterogenous right adrenal gland.

Gallbladder debris and polypoid changes.

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Large amount of abdominal fat.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

There is a potential of pheochromocytoma of the left adrenal gland versus carcinoma, hyperplasia with phrenic vein occupation less likely. Serial blood pressure measurements are warranted. The distended abdomen is due to excessive fat. If the patient appears Cushingoid then adrenal dependent Cushing's is a potential. Blood pressure measurements are warranted. If systolic pressure is > 160 then urine catecholamine is indicated to assess for pheochromocytoma. Other causes of the clinical signs include paroxysmal arrhythmia/cardiac disease. Holter monitor would be appropriate. This may be obtained from our office. Otherwise, orthopedic and CNS disease should be considered. Eventual CT of the abdomen would be ideal for surgical planning of the left adrenal gland.

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**ABOUT SONOPATH CT SERVICES:**

**SonoPath CT Services** are offered at the SonoPath Imaging and Veterinary Education Center, 141 Main St (rt 206), Andover, New Jersey, a 20-minute drive west on route 80/206 North from the route 80/287 interchange/Parsippany, New Jersey. More information can be found at <https://sonopath.com/resources/sonopaths-teleconsultation-services-and-sdep-certification/sonopath-ct-services>

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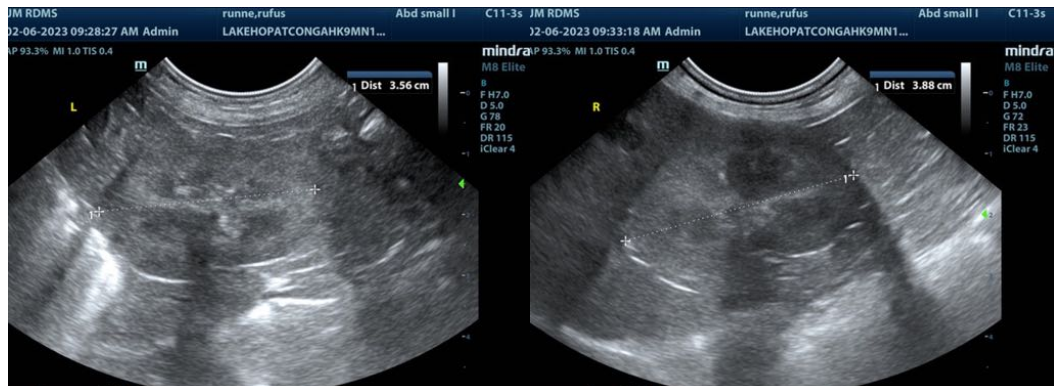
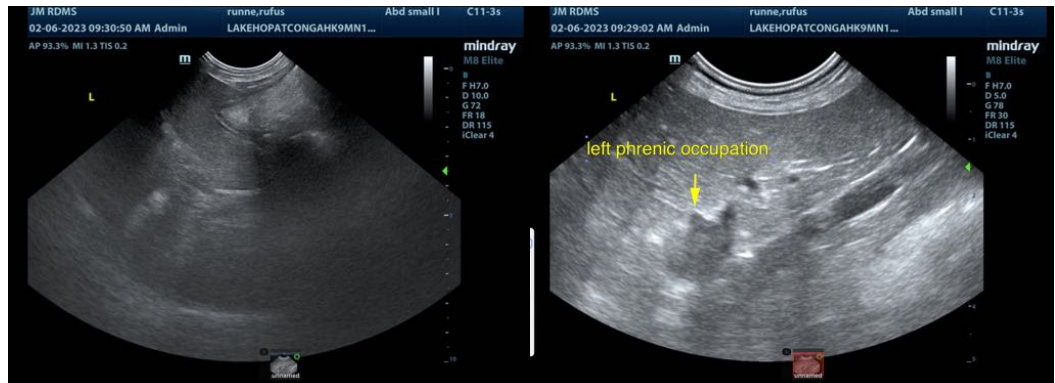
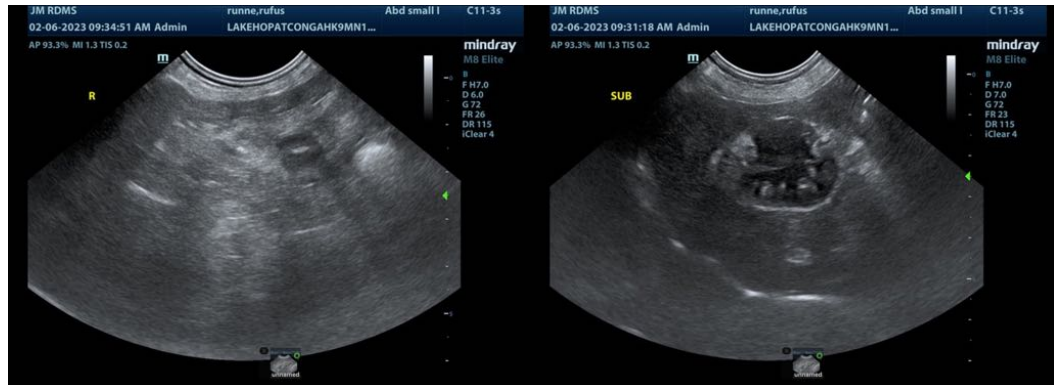
Dr. Batta

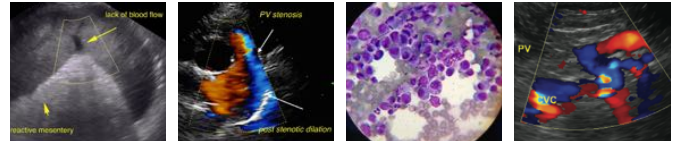
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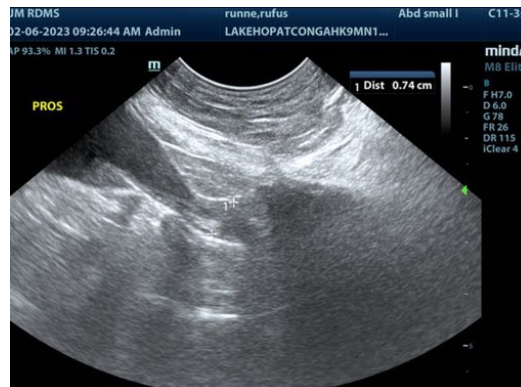
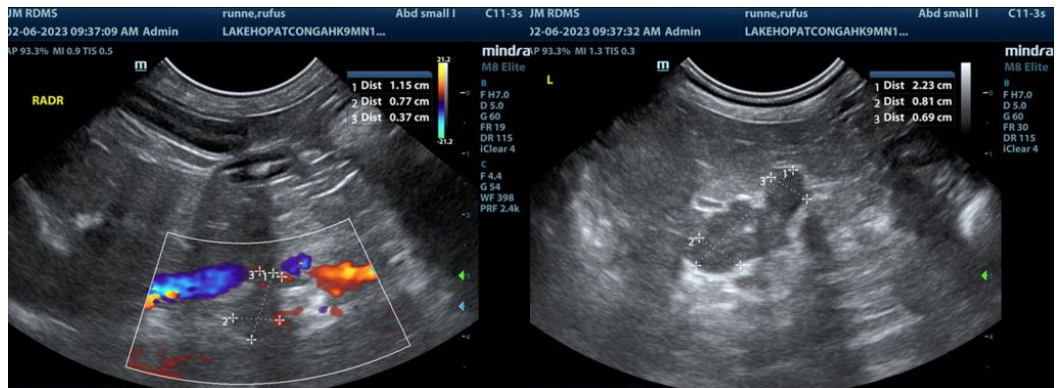
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**WEIGHT**



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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.

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