



**PATIENT**

Polly Johnson

**SPECIES**

Canine

**BREED**

Boston Terrier

**SEX**

Spayed Female

**AGE**

11 years

**WEIGHT**

30 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Dr. Carter

**HOSPITAL NAME**

Willamette VH

**REFERRING VET**

Dr. Carter

**INVOICE**

14981

**DATE**

4/29/22

**PRESENTING CLINICAL SIGNS**

History: Referred from rDVM for abdominal US. Chronically elevated liver enzymes. Recurrent urinary tract infections. Owners report pu/pd. Exam; BAR, mm pink, LN wnl, heart and lungs wnl, Abdomen very distended, organomegaly, thin hair coat, thin skin. July of 2021 rDVM treated with galliprant, dasuquin, Denamarin, ursodiol

Abnormal PE/Chem/CBC/UA Results: July 2021 labs; ALT 250, ALP 501, GGT 42, Cholesterol 690, TG 232, specCPL 533., usg 1.030 Liver aspirates from today are pending

**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.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some moderate 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. Slight pyelectasia was noted in the left kidney. The left kidney measured 5.84 cm. The right kidney measured 5.54 cm.

**Adrenal Glands**

The **left adrenal gland** was 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 left adrenal gland measured 0.8 cm at the cranial pole and 0.7 cm at the caudal pole.

The **right adrenal** gland was enlarged, irregular and nodular, measuring up to 1.4 cm at the caudal pole. No evident vascular invasion noted.

**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.

**Liver**

Multifocal hypoechoic **liver** nodules noted in the midst of hyperechoic generalized coarse parenchyma. The nodules were mild to moderately disruptive. Generalized hepatomegaly present. The gallbladder was overdistended with dependent and suspended debris and polypoid changes on the cystic duct.

**Gastrointestinal**



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Examination of the **gastrointestinal tract** revealed a stomach and intestine 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. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

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**Pancreas**

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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.

**SEX**

Spayed Female

**ULTRASONOGRAPHIC FINDINGS**

- Pronounced nodular hyperplasia liver pattern
- Moderate degenerative renal changes with slight pyelectasia in the left kidney
- Enlarged right adrenal gland

**AGE**

11 years

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Bile acid profile, ultrasound guided FNA of the liver parenchyma (both general parenchyma and nodular changes) recommended. Differential on the right adrenal gland include, hyperplasia, pheochromocytoma, adenocarcinoma (less likely). If hypertension is present, then urine catecholamine indicated. The right adrenal gland does appear resectable, if necessary.

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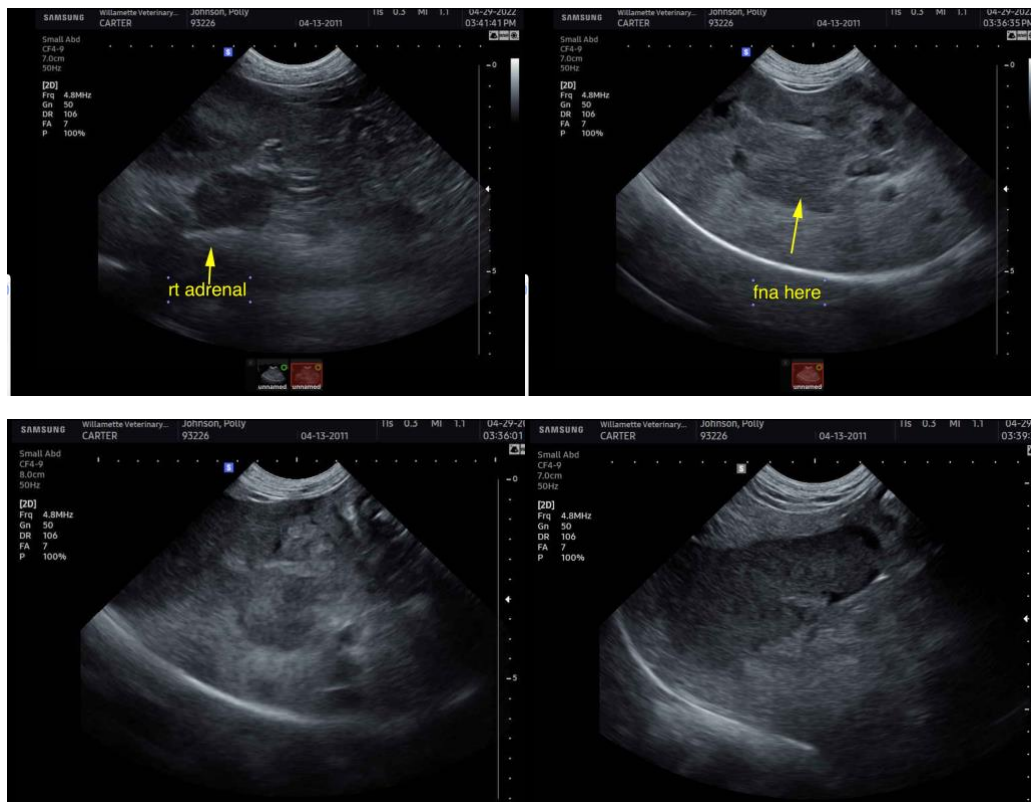
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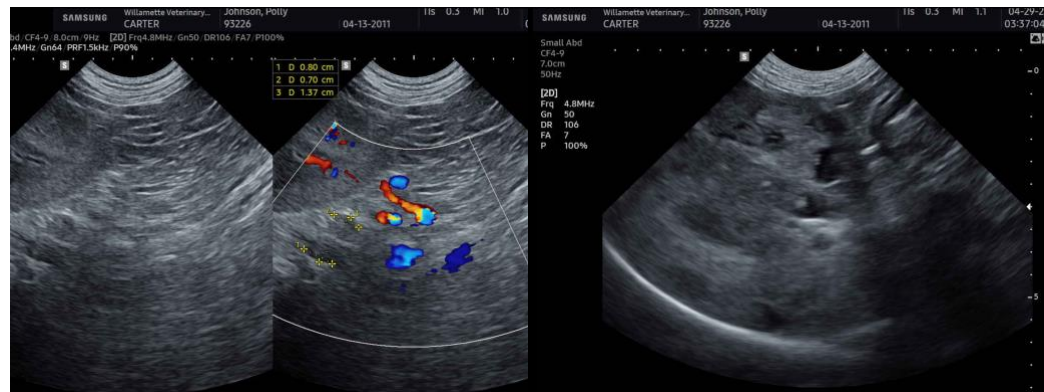
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
info@SonoPath.com