



**PATIENT**

Bentley Haverstick

**SPECIES**

Canine

**BREED**

Labrador Retriever mix

**SEX**

Netuered male

**AGE**

12 years

**WEIGHT**

21 kg

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Haley Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

Dr. Crawford

**INVOICE**

42085

**DATE**

1/12/23

**PRESENTING CLINICAL SIGNS**

History: Dog presented for wellness visit late December. Only concern by owner is dog's recent anxiety, seems to "sundown" and get very antsy. Dog has recently gained wt but is still thin BCS 2.5/5. Routine senior labwork done and revealed azotemia and SDMA elevation. Rechecked for confirmation and to rule out lab error.

Abnormal PE/Chem/CBC/UA Results: Chem: SDMA 27, creatinine 3.3, BUN 111, electrolytes and all else wnl. CBC all wnl U/A well concentrated, inactive sediment, no protein but multiple hyaline casts seen. Leptospirosis titers are low/negative, 4dx all neg, urine culture negative/no growth.

**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 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. Corticomedullary mineralization and microinfarcts were noted in the right kidney. The left kidney measured 4.5 cm. Anechoic cysts were noted at the cranial pole of the left kidney and measured 0.6 cm. The right kidney measured 5.0 cm.

**Adrenal Glands**

The left **adrenal gland** revealed an enlarged caudal pole at 1.6 cm at the cranial pole and 0.8 cm at the caudal pole. The left adrenal gland appeared fairly vascular on color flow assessment. An isoechoic, flattened structure consistent with the right adrenal gland was noted and measured 0.6 cm in width. However, I cannot be absolutely sure that this is the right adrenal gland. The mass in the area of the left adrenal gland may be extending to the right. There is concern for pheochromocytoma.

**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**

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



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clinically significant at this time. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder was mildly over distended with suspended and dependent debris, yet not to the level of emerging mucocele, yet sludge appears to be mildly excessive. No adjunctive inflammation was noted.

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**Gastrointestinal**

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**

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.

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**ULTRASONOGRAPHIC FINDINGS**

**WEIGHT**

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Moderate degenerative renal changes with mineralization and cortical infarcts.

Enlarged caudal pole of the left adrenal gland. Concern for pheochromocytoma.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Blood pressure measurements are warranted. If hypertension is an issue then urine catecholamine is indicated. 72-hour IV fluid protocol is recommended to correct azotemia. I am concerned for potential pheochromocytoma driving the azotemia in this patient. Full adrenal panel would be warranted for further definition. CT evaluation would be ideal for potential surgical planning and to confirm that only the left adrenal gland is involved. Other adrenal potentials include carcinoma or pronounced adenoma.

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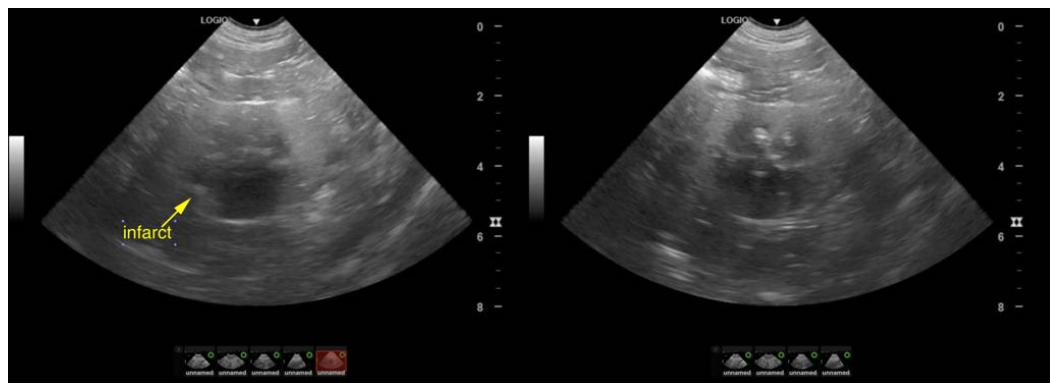
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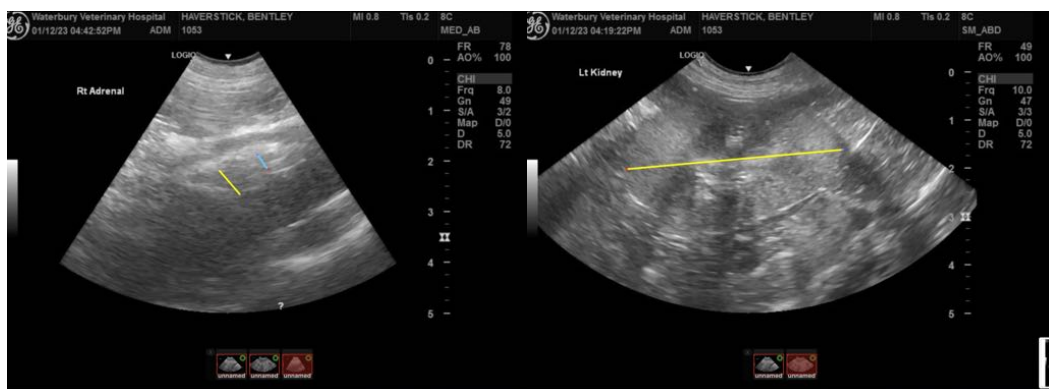
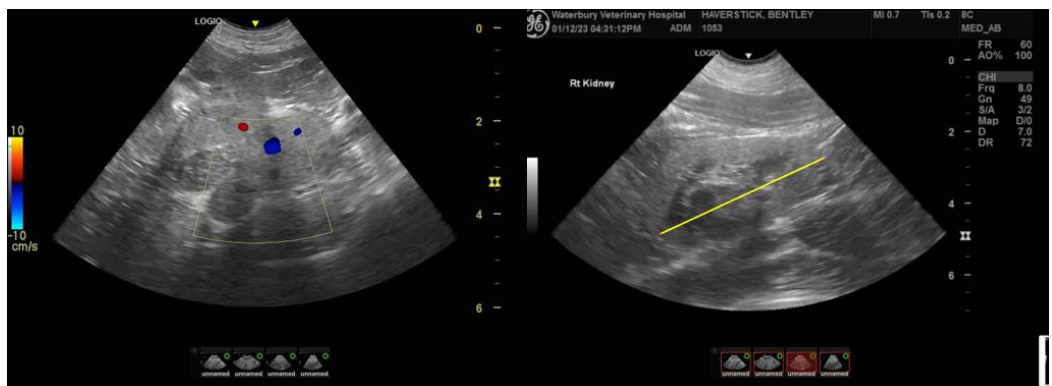
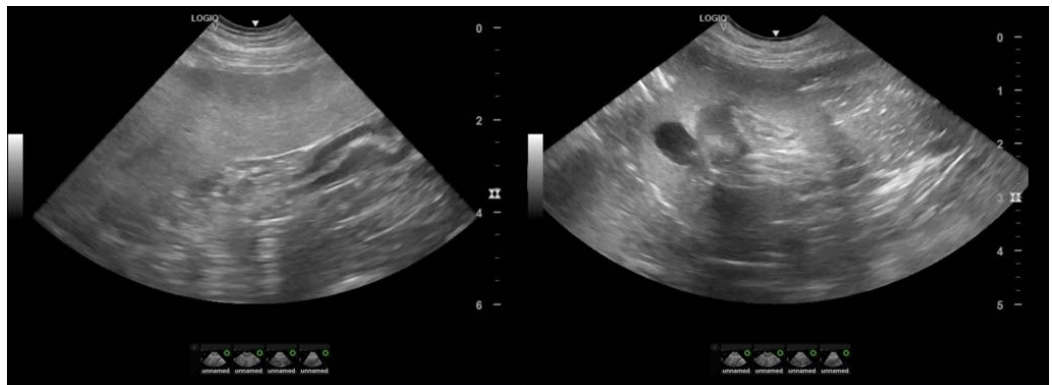
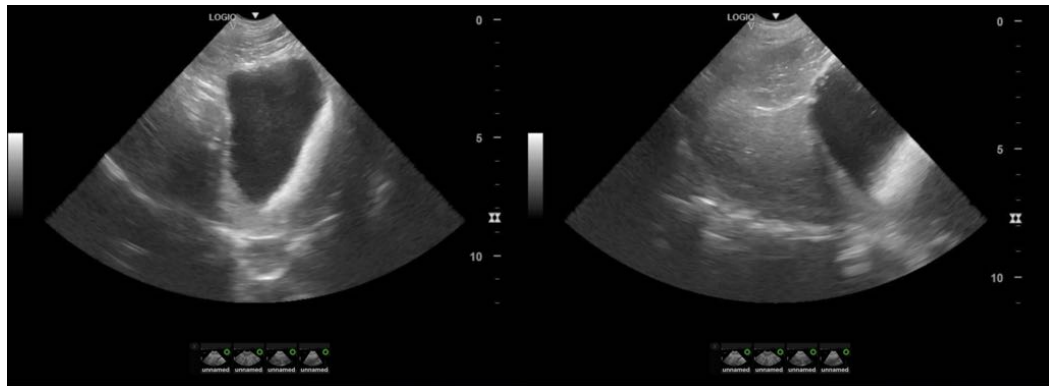
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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  
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