



**PATIENT**

Tuesday Jendresen

**SPECIES**

Canine

**BREED**

Lab Mix

**SEX**

Spayed Female

**AGE**

11 years

**WEIGHT**

72 lbs

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Dr. Harris

**HOSPITAL NAME**

TotalBond VH Bethel

**REFERRING VET**

Dr. Spangler

**INVOICE**

30829

**DATE**

6/1/22

**PRESENTING CLINICAL SIGNS**

History: 11yo FS Lab mix presenting for eval of intermittent hematuria, no stranguria or pollakuria. Soft tissue mass visualized in the bladder. Suspect TCC. Started on Piroxicam 10mg PO SID. O wishes to pursue consultation with oncology.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

*Urinary System*

The **urinary bladder** is adequately distended. A trivial amount of echogenic debris that “scintillates” is present within the bladder lumen. The mucosa is mildly thickened and irregular along the apex and the cranial portion of the dorsal and ventral walls. At the apex, the wall measures 3.18 mm. Also at the apex, a 2.41 mm soft tissue, echogenic structure is seen extending from the mucosa (possible polyp). The mucosa measures 4.68 mm including the possible polyp. An echogenic pedunculated, “mass-like” structure is observed at the junction of the dorsal wall and the apex. It appears frond-like at a more oblique angle and measures 0.71 cm in diameter x 1.38 cm in length. At a more longitudinal angle, it appears more circular with slightly irregular borders; it measures 0.76 cm in diameter x 0.98 cm in length. A mineralization approximately 6 mm is noted along the ventral wall, in addition to multiple, small cystoliths.

*Kidneys*

The **left kidney** measures 8.12 cm. The capsule is smooth. The cortex is very mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

The **right kidney** measures 7.42 cm. The capsule is smooth. The cortex is very mildly hyperechoic and a very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of pyelectasia. Very small nephroliths are present based on the acoustic shadowing. The surrounding mesentery is not hyperechoic.

*Aortic bifurcation/trifurcation*

No abnormalities observed.

*Adrenal Glands*

The **left adrenal gland** measures 0.50 cm at the cranial pole. No abnormalities are noted with the gland’s overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right adrenal gland** is at the high end of the normal reference range to very mildly enlarged. It measures 0.76 cm at the cranial pole, 0.78 cm at the caudal pole and 1.88 cm in length. Both poles are “plump” and “nodular”. No abnormalities are noted with the gland’s overall echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.



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**Spleen**

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The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

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**Liver**

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There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver is homogeneous with a diffuse, very mildly coarse/granular echotexture. It is within normal limits in echogenicity. Focal lesions are not observed and no abnormalities are noted with the hepatic vessels.

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The gallbladder wall is within normal limits in thickness and echogenicity. A moderate amount of echogenic material is present within the GB. A slight acoustic shadow is suspected, i.e. cholelithiasis in its early stages cannot be excluded. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.

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**Gastrointestinal**

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Ingesta and gas are present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

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The small intestinal wall thickness, including the duodenum, is within normal limits and the definition of the wall layers is preserved. However, subjectively, the submucosa of the ileum is mildly prominent. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal. Formed stools are present within the colon.

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**Pancreas**

The pancreas has a mildly coarse echotexture, which is considered secondary to age related changes, and possibly fibrosis. Signs of active pancreatitis or neoplasia are not appreciated.

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**Other**

**Lymph nodes**

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No abnormalities are observed

**Abdominal effusion** is not visualized.

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**ULTRASONOGRAPHIC FINDINGS**

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- **Urinary bladder:**
  - Multiple cystoliths with secondary inflammation of the bladder mucosa.



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- The mass-like structure is most compatible with a *polyp*. This, in addition to the mildly thickened and irregular bladder wall and a smaller polyp at the apex, is suggestive of a polypoid cystitis. Subclinical bacteriuria is often present. Neoplasia, such as a transitional cell carcinoma, cannot be excluded, but is considered less likely.

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- **Adrenal glands:** Both poles of the **right** adrenal are “plump” and “nodular”. Signs of malignancy are not noted. The gland is also borderline enlarged. The most likely differential diagnoses include benign adenomas and/or lipomas, however, a carcinoma or pheochromocytoma in its early development cannot be excluded. The surrounding vasculature is unremarkable.

**BREED**

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- **Gallbladder:** Gallbladder sludge is often clinically insignificant, however, gastroesophageal reflux disease (GERD), can occur in some patients. Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor may be required. Administration of ursodeoxycholic acid is suggested due to possible cholelithiasis (see below).

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- **Kidneys:** Mineralization and very small nephroliths, in addition to mild changes suggestive of age-related degeneration.

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The following is suggested/recommended

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- Urine culture and sensitivity
- Cystoliths - possible calcium oxalates based on crystalluria on urinalysis, therefore, cystotomy will likely be required. Biopsy and culture of mucosa and a cystolith, and resection of polyp at time of cystotomy. Appropriate diet change and increased water consumption.
- Arterial blood pressure – obtain a baseline due to right adrenal gland
- Evaluation of conformation - vulva and perivulvar region; if abnormal, consider basic hygiene to decrease risk of recurrence of urinary tract infections.
- Once urinary issues have been dealt with, consider introduction of ursodeoxycholic acid; 10-15 mg/kg divided BID, given with a meal to decrease GI side effects. Recheck ultrasound 3-4 months following initiation of medication to assess response to therapy.

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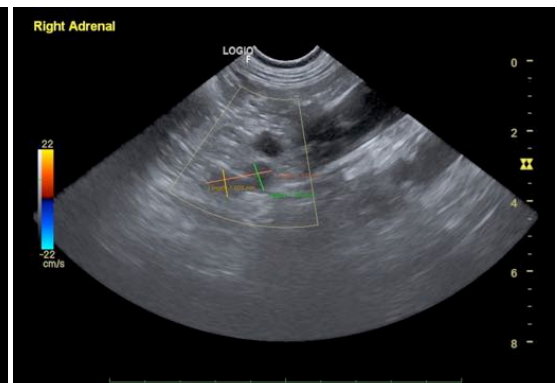
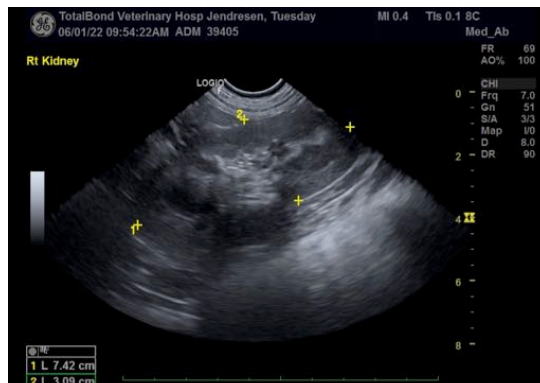
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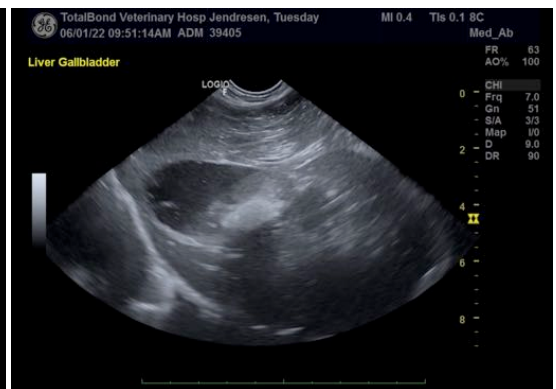
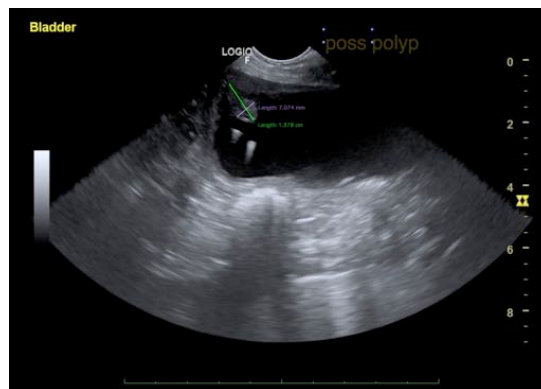
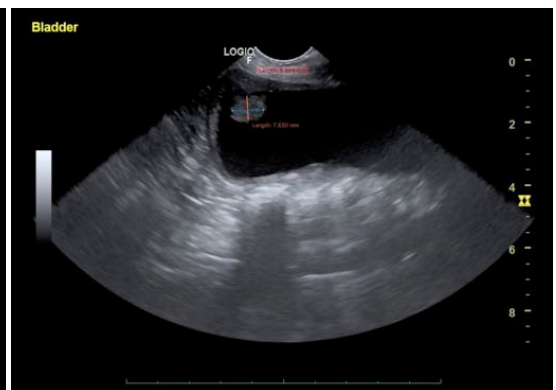
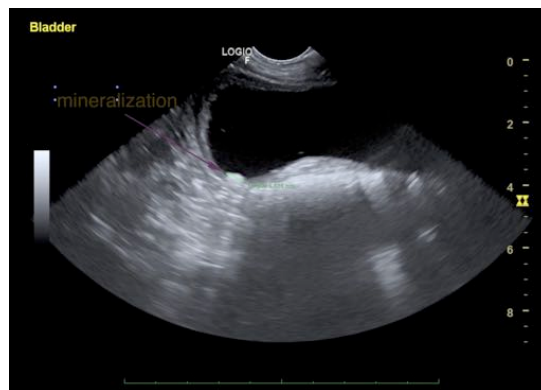
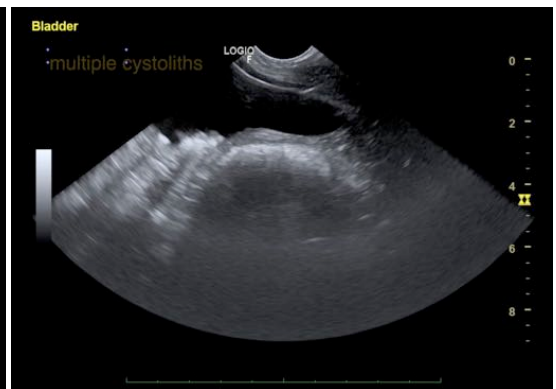
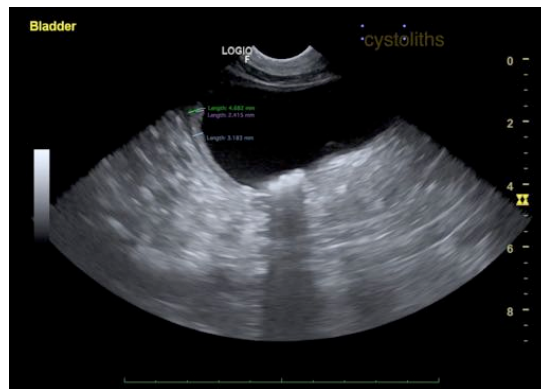
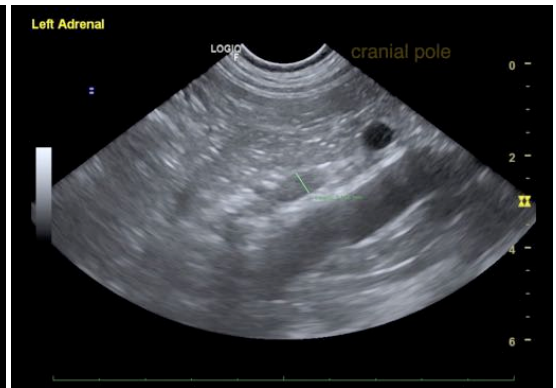
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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