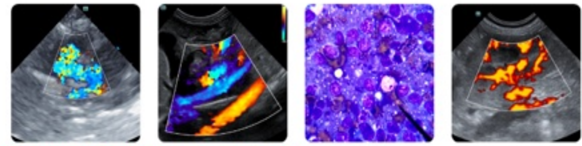

PATIENT
Violet Hylton

SPECIES
Canine

BREED
Puggle

SEX
Spayed female

AGE
15 years

WEIGHT
14.3 kg

INTERPRETED BY
Remo Lobetti, BVSc, MMedVet (Med), PhD, Dipl. ECVIM

IMAGING PERFORMED BY
Amanda Stewart

HOSPITAL NAME
Yates VS

REFERRING VET
Dr. Dr. Merkel

INVOICE
69920

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1/7/26

PRESENTING CLINICAL SIGNS

History: Previous hx of Struvite uroliths - cystotomy performed in 2021. Eats c/d canned developed hematuria, stranguria Oct 23/35 - U/A showed hematuria, pyuria and bacteriuria (rods). Treated with Amoxi/Clav - client notes no improvement Repeat UA Nov 14/25 almost identical to one performed in October. Cysto sample acquired and submitted for culture. Transitioned to Baytril. Culture results show Klebsiella spp, susceptible to most abx. Continued course with Baytril and added in Onsior With this drug combo, pet could sleep through the night, but still hematuric and still stranguric. Pet returned to clinic Dec 3/25 for BW which reveals mild increase in ALT, cholesterol; moderate increase in ALP. Single lateral radiograph reveals no obvious uroliths; neck of bladder appears dilated. Current Medications Baytril 75mg SID, Onsior 20mg SID, Prazosin 1mg BID
Abnormal PE/Chem/CBC/UA Results: See attached lab work Radiographic Findings No uroliths visible, though there is a mineral opacity potentially along a ureter (vs artifact). Dilation of bladder neck present. Primary Question to Be Answered in This Exam Potential cause for ongoing hematuria/stranguria. Biggest concern for neoplastic change vs cystitis/inflammatory potential changes to adrenals (Cushing's?) to explain elevated ALP, cholesterol. Client reports no pu/pd, no other classical signs of Cushing's

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is small with a diffuse thickened and irregular appearance of the wall measuring up to 1.3 cm. Normal anechoic urine with no sediment or uroliths evident.

Normal appearance of the trigone area, proximal urethra, and iliac blood vessels.

Normal appearance and size of the iliac lymph nodes. Ureters not visualized, which can be considered a normal finding.

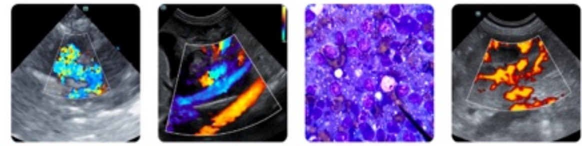
Normal left renal size (5.2 cm) with increased echogenic appearance, some loss of corticomedullary differentiation, pyelectasia and a regular curvilinear capsule. No infarcts, mineralization or renoliths evident. The right kidney is poorly visualized but appears to be of a similar appearance as that of the left kidney.

Adrenal Glands

The adrenal glands are bilaterally enlarged and maintained normal echogenic appearance, shape, position, and appearance of the visible peri-adrenal vasculature. Left adrenal gland measured 2.06 cm in length x 1.45 cm and 0.66 cm in width. The right adrenal gland measured 1.56 cm in length x 0.65 cm and 1.05 cm in width.

Spleen

Normal size and echogenic appearance. Smooth homogenous parenchyma and regular curvilinear capsule. Normal volume of the splenic vasculature without any overt congestion or thrombosis evident. No inflammatory, neoplastic, infarction, or infiltrative changes evident. The spleen measured 1.5 cm in width.



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Liver

Normal size with a diffuse increased echogenic and coarse appearance, normal portal markings, and regular curvilinear capsule. No nodules or masses evident. Normal appearance of the hepatic and portal vasculature.

Gallbladder

The gallbladder is full containing a small amount of adhered, hyperechoic sediment. Normal thickness and echogenic appearance of the wall. Normal size and appearance of the cystic and common bile duct.

Gastrointestinal

Normal appearance of the stomach, duodenum, small intestine, ileo-cecal junction, and colon with no loss of layering, 1:3 muscularis to mucosa ratio, normal wall thickness and peristaltic activity, and no distension of the lumen.

Pancreas

The visible sections of the pancreas are of normal size and echogenic appearance with a regular capsule. Normal echogenic appearance of the mesentery and fat surrounding the pancreas.

Free Abdomen

Normal mesenteric lymph nodes.

No ascites evident.

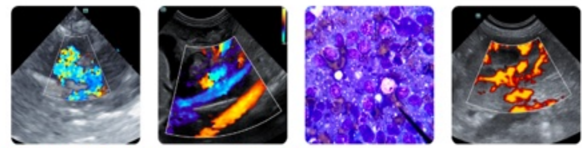
ULTRASONOGRAPHIC FINDINGS

- Urinary bladder thickening.
- Hepatopathy.
- Bilateral adrenomegaly.
- Age related renal changes versus early chronic kidney disease.
- Gallbladder sediment.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Etiologies for the urinary bladder would be chornic bacterial cystitis, granulomatous disease and neoplasia.

Etiologies for the hepatopathy would be age related reactive hyperplasia, early nodular hyperplasia, vacuolar and metabolic with hepatitis and infiltrative neoplasia a highly unlikely differential diagnosis.



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Etiologies for the adrenomegaly would be disease, stress, age related reactive hyperplasia and possibly emerging pituitary dependent Cushing's disease.

Although the pyelectasia is most likely secondary to the chronic kidney changes, differential diagnosis would be low-grade pyelonephritis and early obstructive uropathy.

The gallbladder sediment can be considered an incidental finding.

Further assessment would be BRAF analysis and/or a catheter assisted aspirate/biopsy of the urinary bladder wall for cytology/histopathology and culture.

Additional diagnostics would be FNA cytology of the liver and urine cortisol to creatinine ratio. If the latter is abnormal then adrenal function testing (ACTH stimulation/LDDST test) could be considered.

Specific therapy would be dependent on an etiological diagnosis.

Palliative therapy for urinary bladder neoplasia

Medical palliation

- NSAIDs such as piroxicam (0.3 mg/kg SID), firocoxib 5 mg/kg SID), deracoxib 2–3 mg/kg SID).
- NSAIDs combined with palladia.

Chemotherapy (combined with NSAIDs)

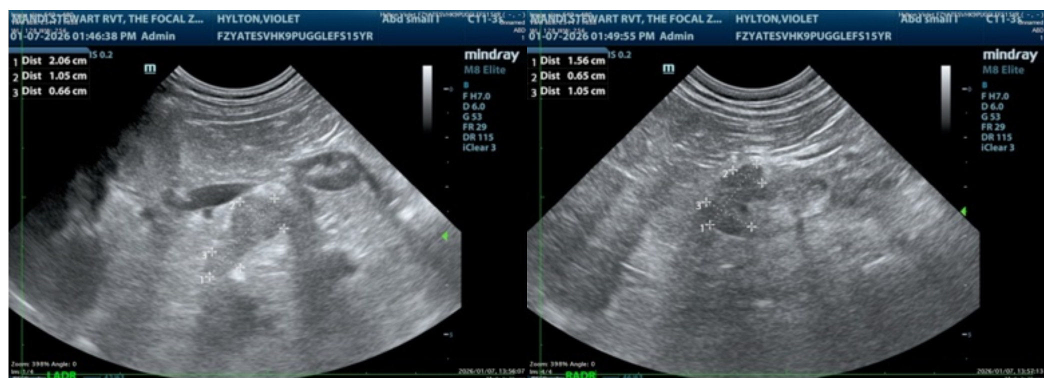
- Mitoxantrone 5–6 mg/m² IV q3wk
- Vinblastine 2 mg/m² IV q2wk.
- Carboplatin 300 mg/m² IV q3–4wk
- Chlorambucil 4 mg/m² PO q24–48h.

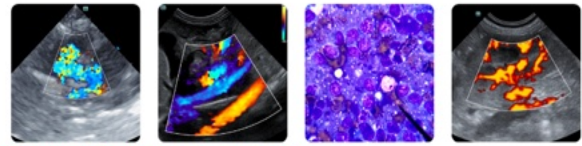
Supportive care

- Pain control: gabapentin ± tramadol.
- Manage dysuria with prazosin or phenoxybenzamine.
- Treat UTIs based on culture.
- Control hematuria with hydration and NSAIDs.
- Manage constipation with lactulose.

Interventional palliation

- Urethral stent – relieves obstruction, improves quality of life.
- Cystostomy tube – long-term bladder drainage.
- Palliative radiation – reduces tumor bulk, hematuria, dysuria.
- Laser ablation or debulking.





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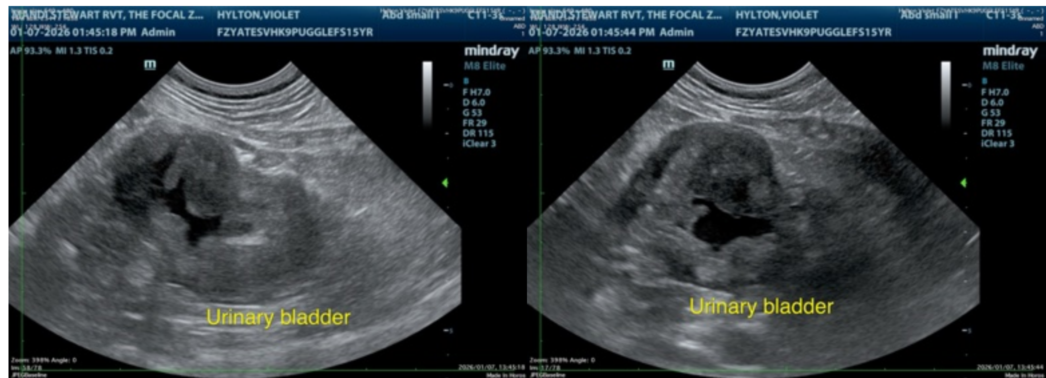

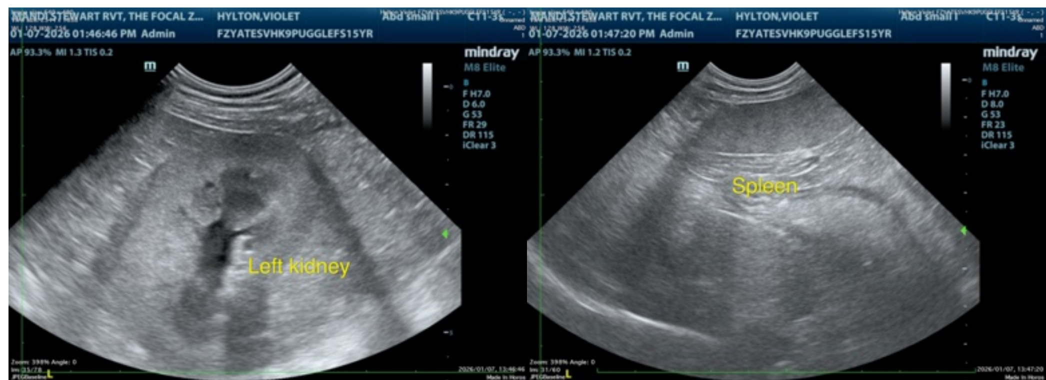

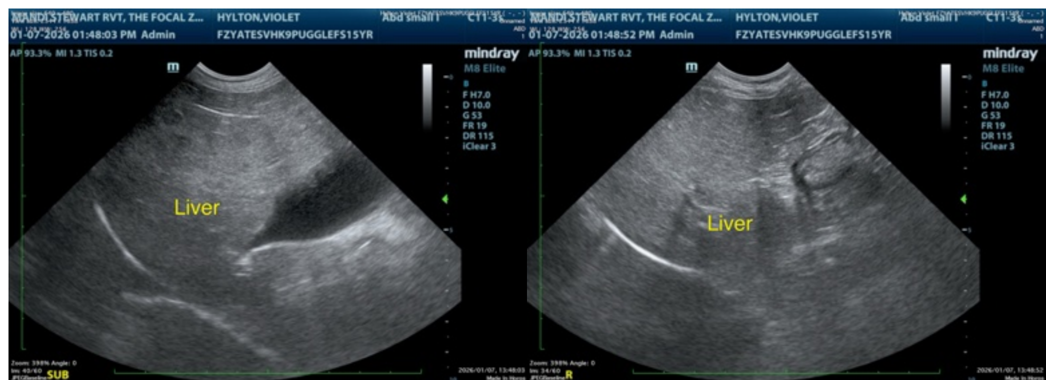

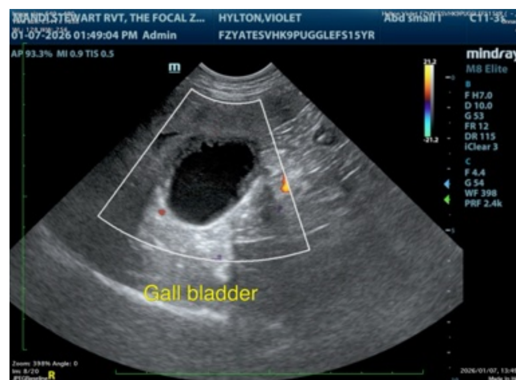

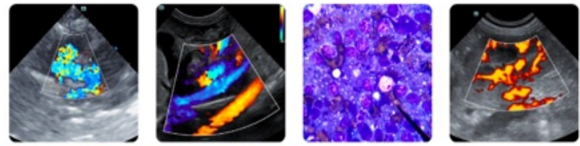

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Remo Lobetti, BVSc, MMedVet (Med), PhD, Dipl. ECVIM (Internal Medicine)

info@sonopath.com