

PATIENT PRESENTING CLINICAL SIGNS

Molly Merriam Blood in urine since Jan 2023, multiple rounds of ab's not effective

SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Canine **Urinary System**

BREED The urinary bladder is moderately distended with anechoic urine. Much of the bladder wall appears relatively normal, but in the trigone region there is a large irregular, polypoid, partially mineralized mass effect measuring at least 2.62 cm x 1.99 cm. This mass appears to extend through the trigone into the cystourethral junction. Additional visualization of the urethra is not possible. Findings are most consistent with a mass effect in the trigone of the urinary bladder.

Lhasa Apso

SEX

Spayed Female The left kidney has a normal shape and size (4.85 cm). Overall echogenicity is slightly hyperechoic with mildly decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

AGE

8 Years

WEIGHT

22 Pounds

The right kidney has a normal shape and size (5.33 cm). Overall echogenicity is slightly hyperechoic with mildly decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello DVM,
MS, Diplomate ACVIM
(Small Animal Internal
Medicine)

Adrenal Glands

The left adrenal gland is large and irregular in shape, measuring approximately 2.1 cm x 1.8 cm. It is observed in its normal position cranial to the left renal artery. It is somewhat heterogeneous and hyperechoic in appearance. No definitive evidence of vascular invasion is visualized.

IMAGING PERFORMED BY

Kelly Reschny

The right adrenal gland is normal in size measuring 0.63 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

HOSPITAL NAME

Mountain AH

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

REFERRING VET

Dr. McKenzie

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogeneous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

INVOICE

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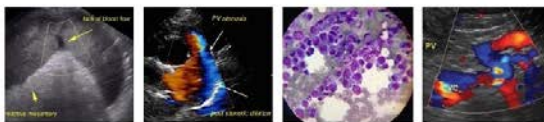
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4/4/23

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are mild and primarily anechoic. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

The stomach contains a moderate amount of ingesta. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.



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The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.52 cm. Jejunum wall measures 0.42 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The area of the pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

ULTRASONOGRAPHIC FINDINGS

- Large, irregular, mineralized mass effect in the trigone of the urinary bladder – findings are very concerning for possible transitional cell carcinoma. Recommend cytologic evaluation.
- Large, irregular left adrenal gland – findings are most consistent with an adrenal mass effect. Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Mildly reduced corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.
- Moderate ingesta visualized within the gastric lumen – findings are most consistent with a non-fasted patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

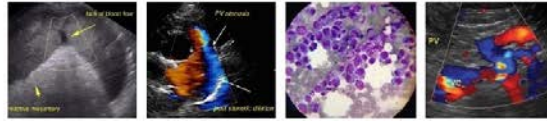
A focal mass effect is visualized in the urinary bladder. This mass effect has characteristics most consistent with a neoplastic lesion, but polyps and inflammatory lesions can sometimes have a similar appearance. Additionally, there is concern for possible early invasion to the proximal urethra. Recommend a digital rectal exam to palpate for possible urethral thickening. Consider the following:

- Consider traumatic catheterization to obtain representative cells for cytology, or biopsy sampling via either cystoscopy (if a female) or surgery.

-If a cytologic sample is not available consider urine evaluation for BRAF mutation seen in patients with transitional cell carcinomas. A positive test is consistent with a TCC, a negative test is inconclusive and will need further diagnostics.

-Patients with bladder pathology should always have urinalysis and culture performed. Ideally cystocentesis should be avoided in patients with suspected bladder masses to try and prevent tracking of tumor cells along the needle path.

-If TCC is confirmed consider referral to/consultation with a board certified. Veterinary oncologist for recommendations regarding treatment options and prognosis.



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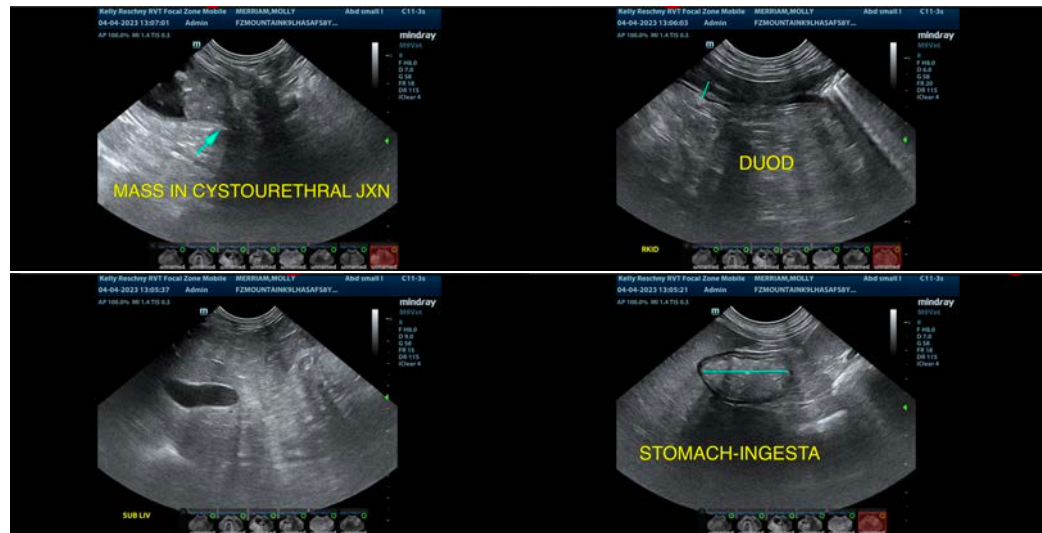
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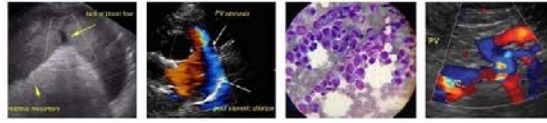
There is a focal mass effect in the region of the left adrenal. This lesion could be benign or malignant and could be secreting hormones or be non-active. Further evaluation could include:

- If signs of cushings are present, consider adrenal function testing. I prefer an ACTH stimulation test combined with an adrenal panel to the University of Tennessee's endocrine lab to look for atypical adrenal hormones as well as cortisol. (other testing can suffice)
- If adrenal dependent cushings is suspected and supported by adrenal function testing consider medical therapy with lysodren or trilostane and/or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)-This can be a challenging surgery with significant risk for complication
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.
- If no symptoms of cushings are present, consider either referral for surgery or if surgery is not an option consultation with a veterinary oncologist regarding chemotherapeutic options and continued monitoring with ultrasound (in 4-6 weeks) can be considered.
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

Unfortunately, I suspect the bladder mass lesion will a problem before the adrenal mass, and it should likely take priority other than considering a blood pressure evaluation at this time.

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.





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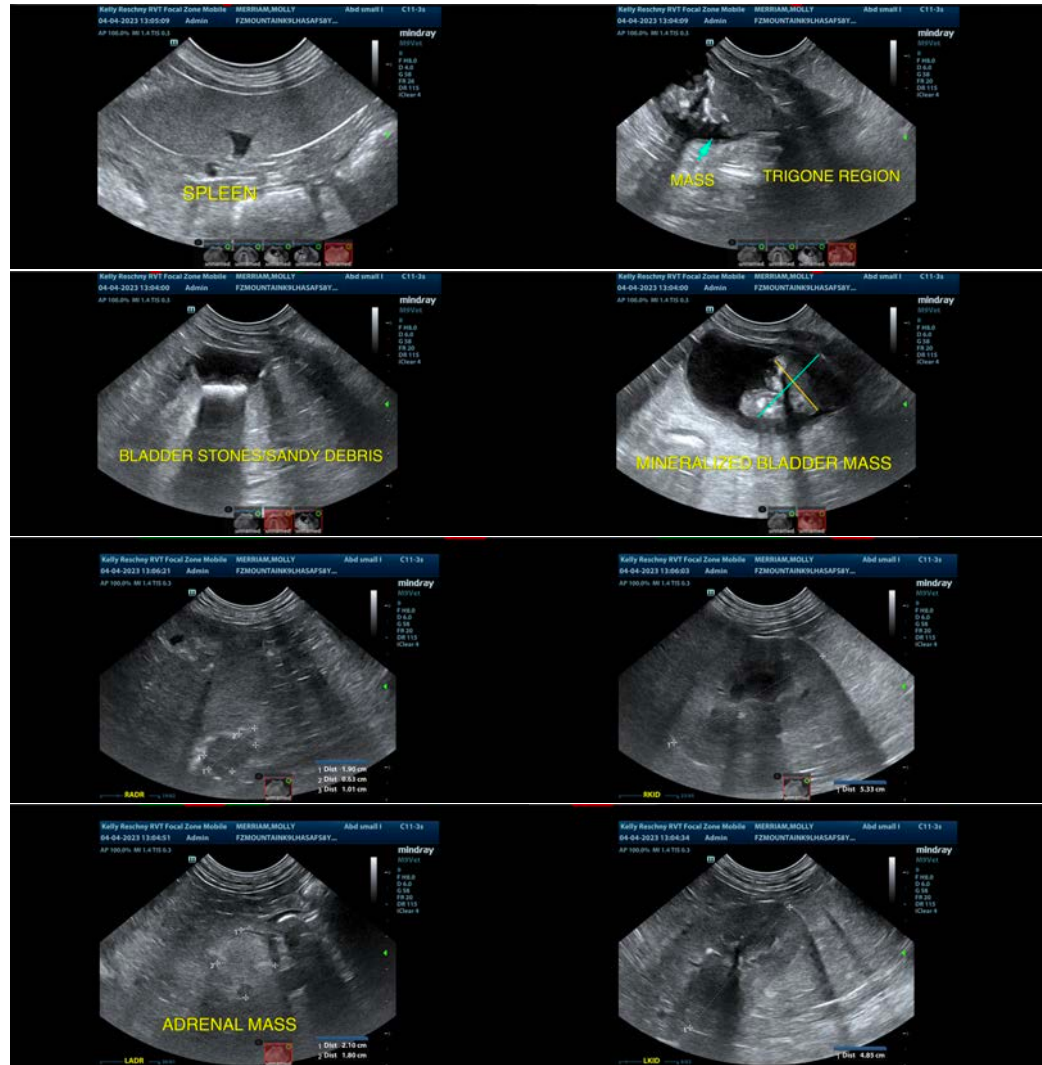
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

kathleen.sennello@sonopath.com