SonoPath
Clinical Sonography & Telecytology
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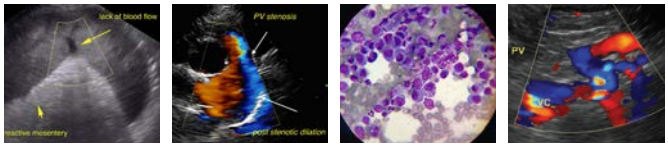

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Max Schultz

SPECIES

Canine

BREED

Chihuahua X

SEX

Neutered Male

AGE

11 Years

WEIGHT

15.5 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Dr. Amanda Favis

HOSPITAL NAME

Ruidoso AC

REFERRING VET

Dr. Amanda Favis

INVOICE

45395

DATE

2/21/23

PRESENTING CLINICAL SIGNS

Intermittent abdominal pain, blood noted in urine at end of stream.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with echogenic urine. There is a large hyperechoic, somewhat lobulated mass effect visualized that appears to be arising from the dorsal apical portion of the urinary bladder, measuring 2.36 cm x 2.73 cm. It is broad based and involves a large portion of the bladder wall. The region of the trigone appears relatively normal with no overt mass effects or calculi visualized.

The visualized areas of prostate and surrounding tissue appear normal. Unfortunately, the prostate is not fully visualized likely due to its intrapelvic location. Correlate with rectal exam findings.

The left kidney has a normal shape and size (4.84 cm) with numerous small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (5.28 cm) with small cortical cysts. Overall echogenicity is slightly hyperechoic with poor 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 hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.61 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.53 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.

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.

Liver

The liver is large in size and slightly irregular. The parenchyma is hyperechoic and homogenous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There is a mixed echogenic, somewhat lobulated mass effect visualized in the ventral portion of the liver, deep to the stomach. Areas of this lesions are hyperechoic and others are hypoechoic with mixed echogenicity in both regions. This mass lesions >3.78 cm x 2.9 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

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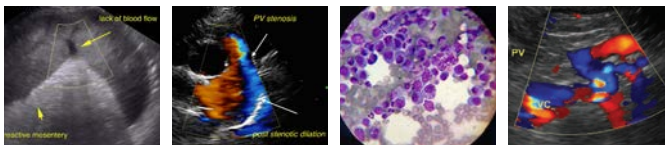

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Gastrointestinal

The stomach contains mild to moderate fluid. 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.

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. Jejunum wall measures 0.37 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 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.

PRIMARY FINDINGS

- Large focal soft tissue mass effect visualized in the urinary bladder – Findings are most concerning for transitional cell carcinoma, although other differentials are possible.
- Large, hyperechoic liver with a mixed echogenic caudoventral mass effect – The diffuse hepatic changes are non-specific and can be seen with vacuolar hepatopathy, reactive change, nodular hyperplasia or, less likely, inflammatory/immune-mediated disease, infiltrative neoplasia, or other hepatopathy. The mass lesion visualized has characteristics most consistent with a primary hepatic mass and could represent a benign or neoplastic lesion (adenoma, carcinoma, etc.).

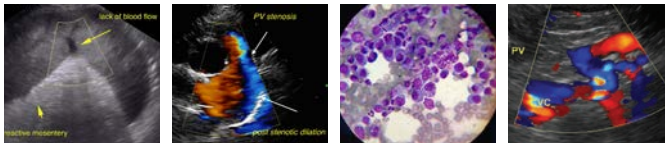
SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys with small cortical cysts – The bilateral renal findings are consistent with age-related change.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large mass effect in the urinary bladder, which is likely responsible for the blood visualized in the urine. This has characteristics most consistent with a transitional cell carcinoma, but cytologic or histopathologic confirmation is needed.

- If a free catch urine sample is highly cellular, you could consider cytology on this, looking for atypical cells.



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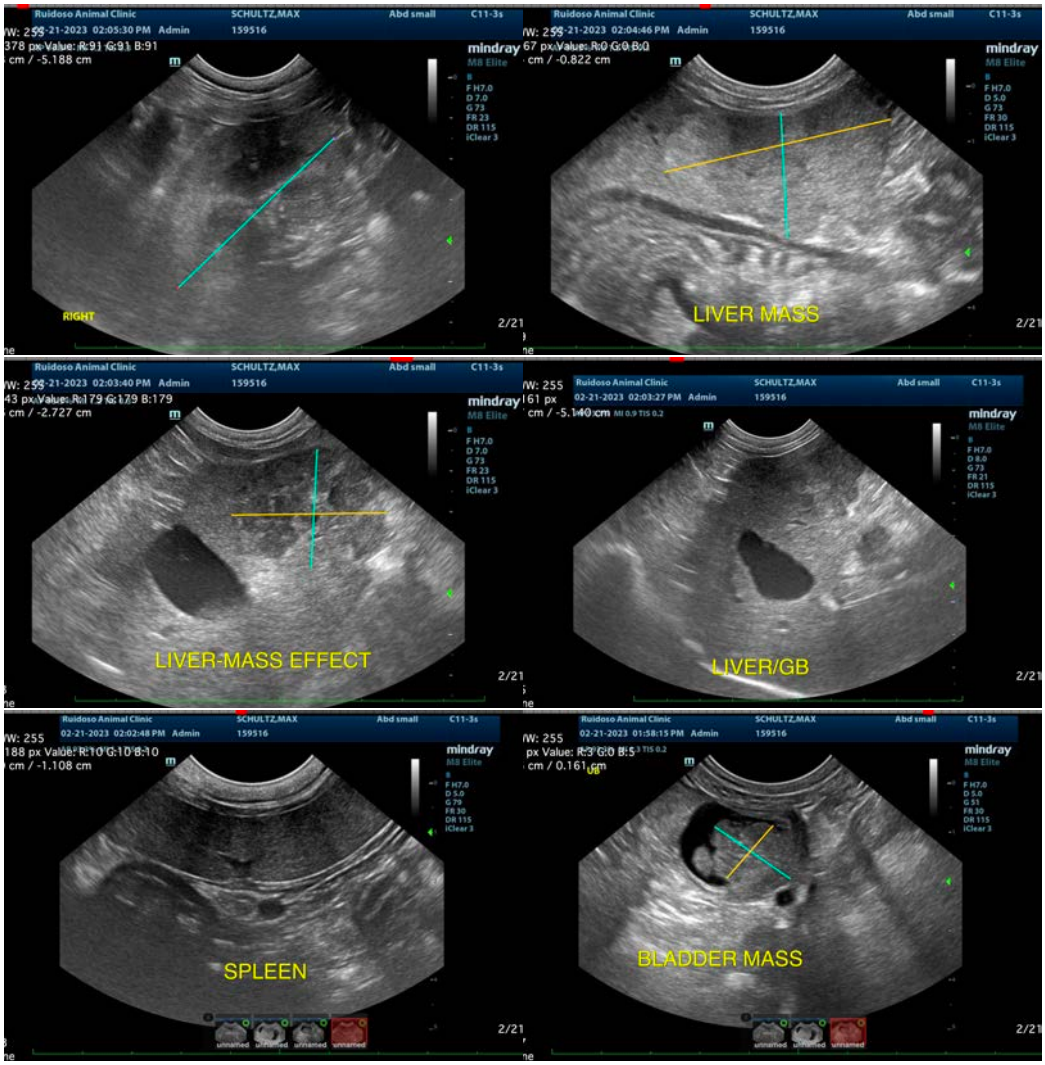
- If this is not possible, consider traumatic catheterization to obtain a sample for cytology.
- Recommend urinalysis and culture to rule out concurrent infection.

If a cytologic diagnosis can be confirmed, consider consultation with a veterinary oncologist regarding treatment options and prognosis.

Additionally, there is a mass effect on the liver. This is most consistent with a primary hepatic mass lesion and is likely somewhat asymptomatic at this time. Correlate with liver enzyme elevations and consider a fine needle aspirate of this mass lesion (provided coagulation parameters are normal). This could be a good candidate for surgical removal, but the concurrent bladder tumor complicates this patient's long-term prognosis.

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



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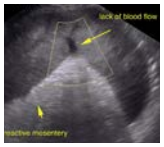
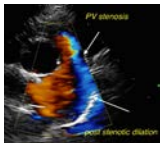
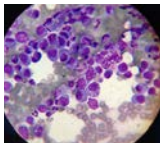
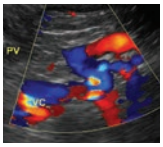

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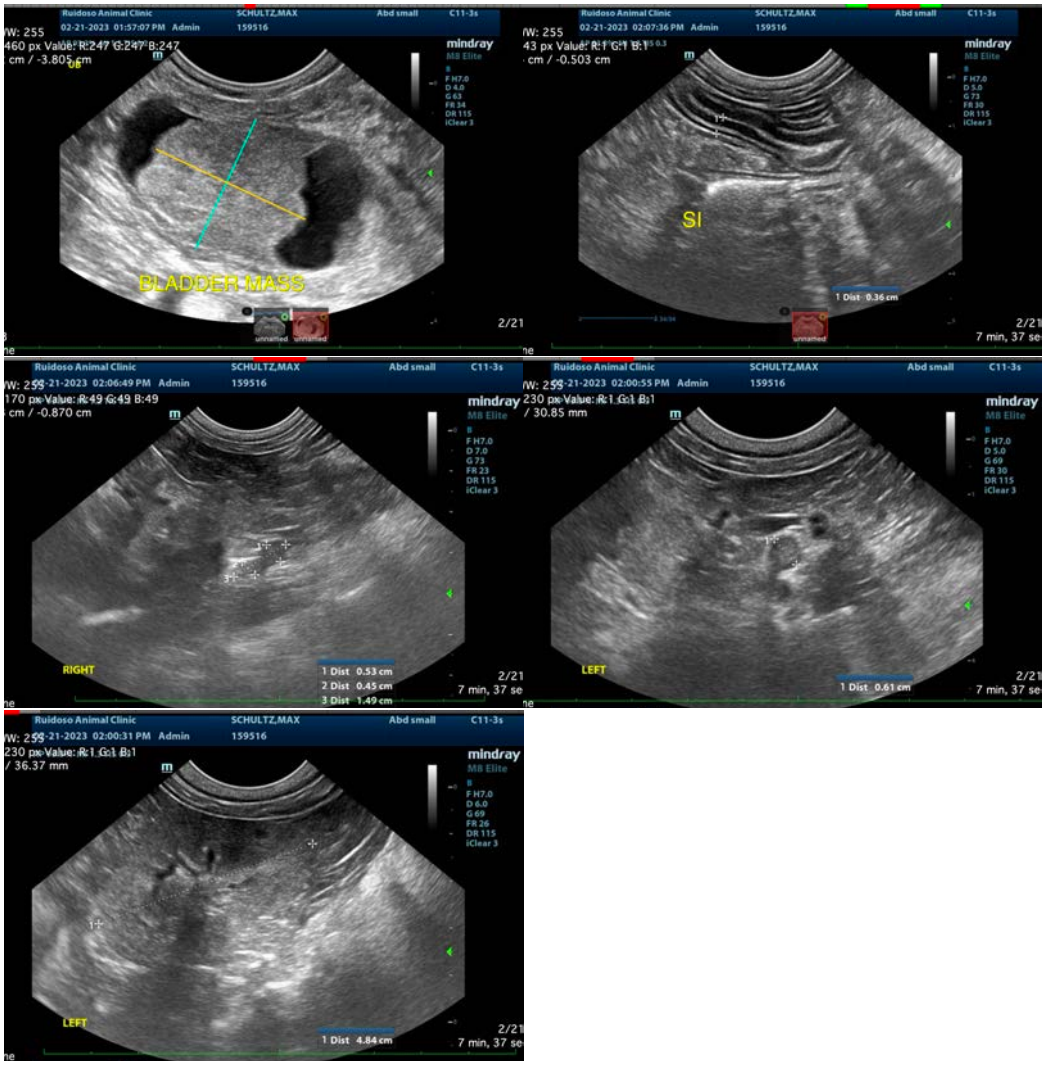

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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