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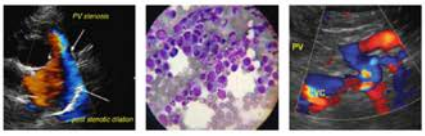

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PATIENT
Clover MacDonald

SPECIES
Feline

BREED
DSH

SEX
Spayed Female

AGE
11 Years

WEIGHT
10 Pounds

INTERPRETED BY
Jessica Midence, DVM, DACVIM (SAIM)

IMAGING PERFORMED BY
Amy Mayhew, LVT

HOSPITAL NAME
SVS Imaging MI

REFERRING VET
Dr. Stephanie Dueweke

INVOICE
44762

DATE
2/3/23

PRESENTING CLINICAL SIGNS

Decreased appetite for the last week. Pet has a history of chronic renal disease and is currently on K/D diet. No V/D/C/S noted.

Abnormal PE/Chem/CBC/UA Results: Bloodwork done on 1/26 revealed T4 was normal at 1.7 (0.8-4.0). CBC was normal. Chemistry revealed elevated BUN 45 (14-36), elevated Creatinine 2.9 (0.6-2.4), elevated SDMA 18.4 (<15), elevated Calcium 11.1 (8.2-10.8), elevated Cholesterol 319 (75-22), elevated Amylase 1880 (100-1200) and elevated PSL 28 (8-26).

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder contains a small volume of urine. Along almost the entire ventral surface of the bladder is a mass that at its largest measures 0.78 cm x 1.22 cm with fine pinpoint mineralization along its mucosal surface. The bladder mucosa surrounding the mass is severely thickened and irregular and appears infiltrated cranially and caudally, and in certain ultrasound video loops it appears to extend circumferentially to the dorsal surface in the trigone area, where another small nodule can be measured at 0.22 cm x 0.28 cm. While the ureters cannot be followed along their entire path to the ureterovesical junction, on certain video loops there is a hint of dilated ureter (measuring up to 1.0 mm in the far field, suggestive of a low-grade partial ureteral obstruction.

The left kidney is small (2.5 cm in length) with moderately decreased corticomedullary distinction. The cortex appears thin. There is moderate pyelectasia measuring 0.39 cm.

The right kidney is also mildly small (3.35 cm in length) and has mild to moderate pyelectasia of 0.31 cm. The cranial pole is very slightly flattened, suggesting prior infarct. There is mildly decreased corticomedullary distinction.

Adrenal Glands

The left adrenal gland is normal in size at 0.44 cm thick. The left adrenal gland has normal shape and it is normal in appearance and echogenicity.

The right adrenal gland is normal in size at 0.41 cm thick. The right adrenal gland has normal shape and it is normal in appearance and echogenicity.

Spleen

The splenic echotexture is homogeneous with parenchyma hyperechoic to liver and renal cortical parenchyma. There is a very slight undulating contour. The splenic vasculature is normal without signs of congestion or thrombosis.

Liver

The liver is subjectively normal in size with normal contours, structure, with smooth peripheral margins. The echogenicity appears normal with normal portal markings. No overt evidence of inflammatory, infiltrative or regenerative pathology is evident. The visible portions of the vasculature and biliary tract appear normal. No pathological hepatic lymphadenopathy observed.

The gallbladder lumen is moderately distended. The wall is a normal thickness and smooth. Luminal contents are anechoic. The common bile duct measures 0.27 cm, which can be normal in older cats.

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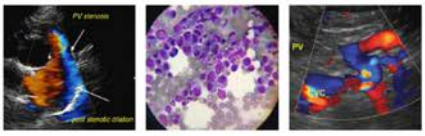

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Gastrointestinal

The gastric lumen is empty. The stomach wall is of normal wall thickness with some variability due to rugal folds. There is normal gastric wall layering. There are no masses or focal lesions observed and the pyloric outflow tract appears normal.

The small intestines are diffusely empty. Some loops measure normal while other loops measure just over normal, with the jejunum measuring 0.27 cm in certain areas (normal is 0.25 cm). The duodenum measures 0.27 cm (0.25 cm is normal). In these thicker areas, the muscularis layer is very mildly thickened. The layering is preserved. There is mildly hyperechoic fat in the region of the ileocolic junction, though there are no reactive lymph nodes, and the ileocolic junction measures normal.

The colon measures normal. There is no observed focal or generalized colon wall thickening or loss of layering.

Pancreas

The pancreas is heterogeneous with diffuse changes. The contour is slightly irregular, and the pancreas contains hypoechoic nodules and is hypoechoic to surrounding fat, though the fat appears of normal echogenicity. The pancreatic duct measures 1.8 mm, which can be normal in aging cats. These changes are consistent with adenomatous hyperplasia, which can be considered normal in an aging cat.

Free Abdomen

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The omentum is of normal uniform echogenicity.

PRIMARY FINDINGS

- Bladder tumor, most consistent with transitional cell carcinoma
- Moderate chronic renal changes, left worse than right with bilateral pyelectasia and possible partial ureteral obstruction

SECONDARY FINDINGS

- Mild gastroenteritis
- Reactive spleen
- Pancreatic changes consistent with aging changes versus chronic/resolved pancreatitis

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of the bladder mass is most consistent with transitional cell carcinoma, and while there are moderate chronic renal changes, there is also some concern for low-grade partial obstruction from this mass, given the bilateral pyelectasia, although some pyelectasia is expected in animals that are PU/PD from chronic kidney disease as well as from pyelonephritis. To diagnose more definitively, consider BRAF urine testing, urine cytology, or fine needle aspiration (with associated low-risk of seeding the needle tract), given the challenge of obtaining urine in cats by free catch or catheterization.

Given that this is a female cat, traumatic catheterization could also be considered. The mass appears very diffuse and is not considered amenable to surgical excision. Palliative options are limited, given the chronic renal disease. There is mild gastroenteritis and changes to the pancreas that could be contributing to the poor appetite, as could the azotemia. Consider urine culture and treating for a urinary tract infection as well as gastroprotectants (e.g., anti-nausea medications, appetite stimulation, etc.).

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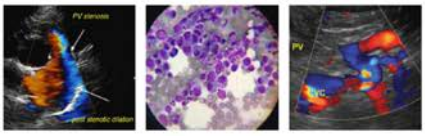

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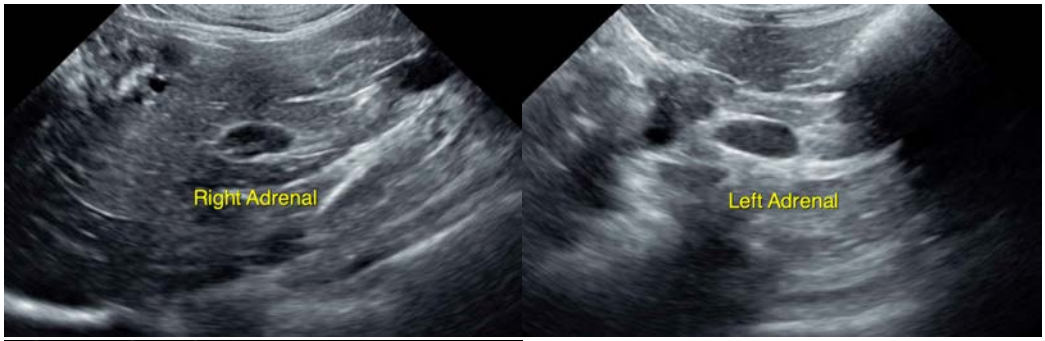

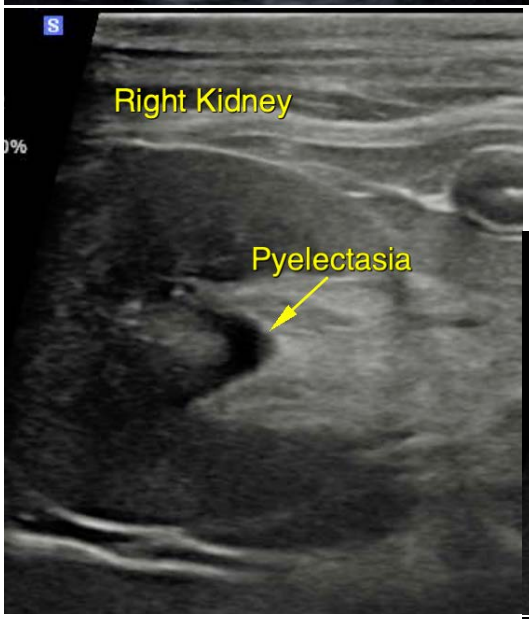

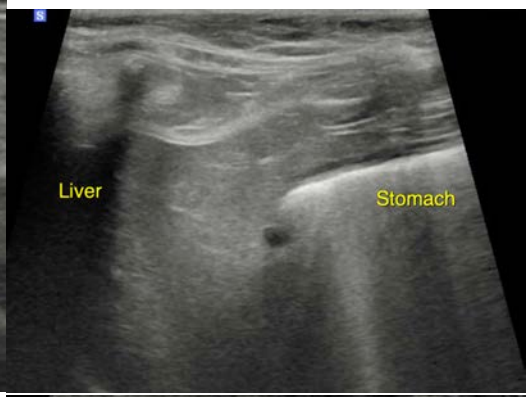

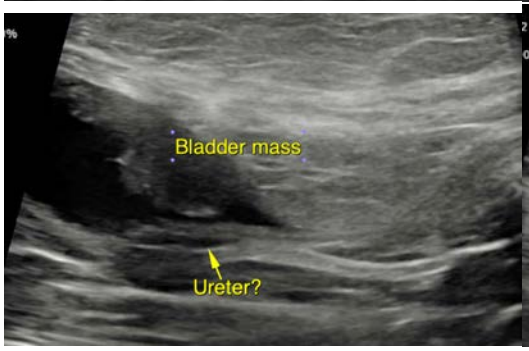

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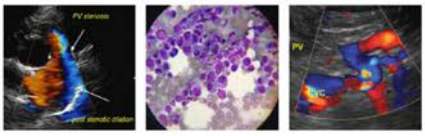

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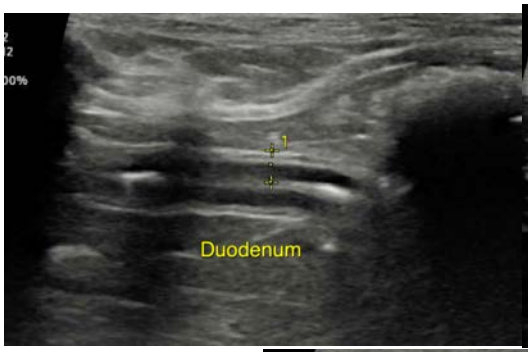

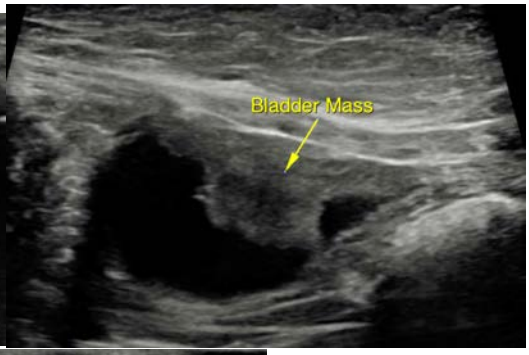

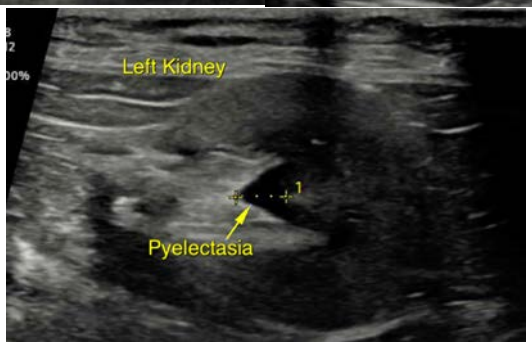

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Jessica Midence, DVM, DACVIM (SAIM)

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