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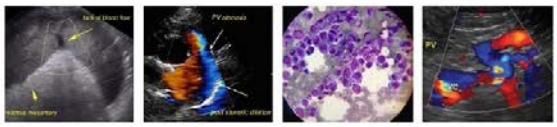

THE FOCAL ZONE
IMAGING PERFORMED BY
289-808-2608 info@thefocalzone.com

PATIENT

Dharma Manning

SPECIES

Canine

BREED

American Bulldog X

SEX

Spayed Female

AGE

13.5 Years

WEIGHT

14.8 kg

INTERPRETED BY

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

IMAGING PERFORMED BY

Crystal Hill

HOSPITAL NAME

BPH Stoney Creek

REFERRING VET

INVOICE

44317

DATE

1/18/23

PRESENTING CLINICAL SIGNS

Presented for urinating in house, usually between 5-9pm, very unusual for this dog. Owner says stops to pee frequently on walks, drinking a bit more but has always drunk a lot in one sitting. Chronic frequent urination. Summer bloodwork and thyroid panel was unremarkable. U/A showed infection and culture showed mixed growth. Had two rounds of antibiotics Clavaseptin but continued with frequent urination. On rads no evidence of stones. No meds currently.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall at the level of the trigone and apical wall appears very irregular and thickened. In the apical region there is a mass effect with some hyperechoic densities concerning for possible mineralization. This mass effect is measured at 1.6 cm x 2.19 cm. The irregularity of the trigone does not create a mass effect, but changes that could be consistent with cystitis or extension of a mass lesions. No evidence of cystic calculi observed.

The left kidney has a normal shape and size (5.29 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. The cortex is hyperechoic with hyperechoic striations and numerous small cortical cysts. 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 (5.95 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. The cortex is hyperechoic with hyperechoic striations and numerous small cortical cysts. 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 0.82 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 0.67 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 subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is homogenous echotexture. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

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.

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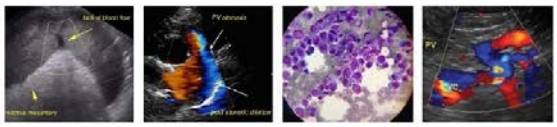

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Gastrointestinal

The stomach is moderately dilated with fluid and irregular shadowing material most consistent with normal ingesta and gas. 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 layering 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. Duodenum wall measures 0.38 cm. Jejunum wall measures 0.29 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, irregular, mineralized mass effect in the apical portion of the urinary bladder with irregular thickened wall at the level of the trigone – Findings are concerning for a primary bladder mass (transitional cell carcinoma) with possible concurrent cystitis.
- Decreased corticomedullary distinction in both kidneys with small cortical cysts – The bilateral renal findings are consistent with age-related change.

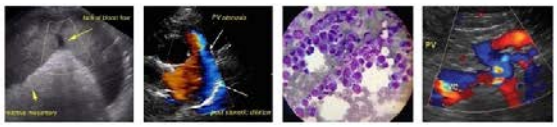
SECONDARY FINDINGS

- Moderate shadowing ingesta in the stomach – This is most consistent with a non-fasted patient.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large mass effect primarily located in the apical region of the urinary bladder. In some images, it almost appears to be extending beyond the lumen of the urinary bladder, but this is questionable. Additionally, there is abnormal tissue at the level of the trigone. Options to obtain a diagnosis would include fluid analysis and cytology on a free catch urine if it is a cellular sample, a traumatic catheterization to obtain cells for fluid analysis and cytology, cystoscopy to biopsy the bladder mass and evaluate the extent of the bladder wall irregularities, or a urine BRAF test. A positive BRAF test in combination with the ultrasonographic findings would be highly suggestive for transitional cell carcinoma. A negative BRAF test is not diagnostic, and additional diagnostic testing would be necessary.

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



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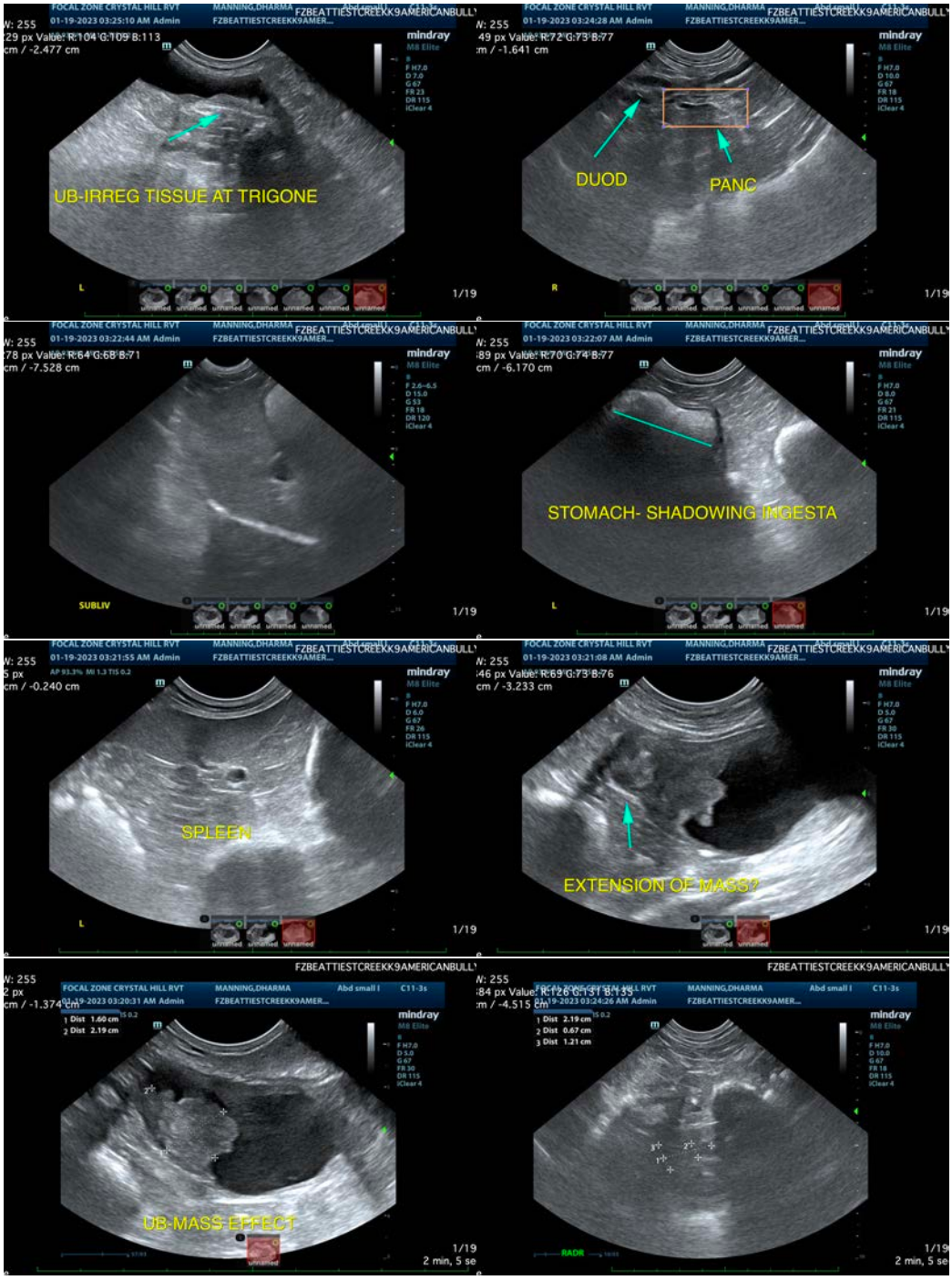
Once a cytologic diagnosis can be obtained, consider consultation with a veterinary oncologist regarding possible treatment options and prognosis. Additionally, recommend a urinalysis and culture, looking for concurrent infection, and consider revaluation of the trigone area if that is under control.



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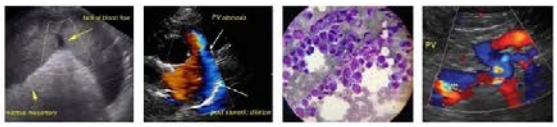

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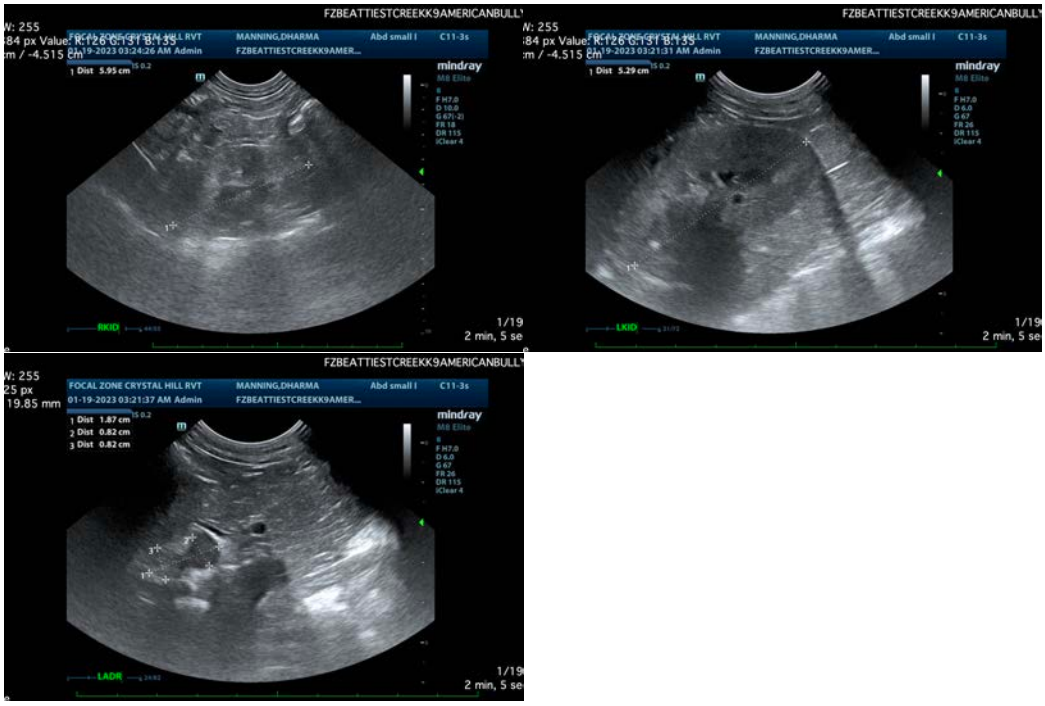

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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