

**DATE PRESENTING CLINICAL SIGNS**

2/14/23 Pre-dental exam, muscle wasting, new heart murmur and prominent spleen noted on exam. One section of spleen appeared heterogenous, and bladder wall appeared irregular on in-house ultrasound.

PATIENT

Flash Beagle Yeater

Current Medications: None listed.
 Date of Previous IntraPet Ultrasound: No previous.
 Sedation: Not required to complete full diagnostic ultrasound.
 Stat Report: Not requested.
 Imaging Performed By: Andi Parkinson, BS, RDMS.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**BREED**

Beagle

Urinary System

The urinary bladder is moderately distended with echogenic urine. The Bladder wall appears severely irregular with a polypoid like mineralized mass effect in the trigone region of the urinary bladder, measuring at least 4.26 cm x 1.7 cm. This irregular tissue extends into the proximal and pre-prostatic urethra with sandy debris and mineralization and extends into the prostatic urethra. Additionally, there are other mass lesions within the urinary bladder more apical. There is a moderate amount of dependent sandy debris visualized as well.

SEX

Neutered Male

The prostate is large and heterogeneous, measuring 2.6 cm with irregular hyperechoic foci most consistent with mineralizations. Findings are concerning for possible prostatic neoplasia. The prostatic urethra appears slightly irregular, and this irregularity extends into the pre-prostatic urethra and urinary bladder.

AGE

8/7/09

WEIGHT

25 Pounds

The left kidney has a normal shape and size (5.28 cm). Overall echogenicity is normal with adequate 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.

INTERPRETED BY

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

The right kidney has a normal shape and size (5.28 cm). Overall echogenicity is normal with adequate 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.

HOSPITAL NAME

Timonium AH

Adrenal Glands

The left adrenal gland is normal in size measuring 0.53 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.

REFERRING VET

Dr. Stephens

The right adrenal gland is normal in size measuring 0.42 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.

INVOICE

45129

Spleen

The spleen is subjectively normal in size but irregular in shape. The blood flow through the hilus and splenic parenchyma appears normal. There is a mildly mixed echogenic, poorly defined "bulge" in the spleen proximal to the hilus, measuring approximately 3.33 cm x 1.56 cm. On the high frequency probe, part of this lesion appears focally hypoechoic, measuring 0.91 cm x 0.60 cm.

Liver

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous 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.

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.

Gastrointestinal

The stomach contains minimal luminal contents. 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) 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

- Multiple irregular polypoid mineralized bladder masses with extension into the pre-prostatic and prostatic urethra and a large, mineralized prostate – Findings are concerning for possible bladder neoplasia extending into the prostate. Correlate these findings with the age of neutering.
- Mixed echogenic/hypoechoic mass effect in the spleen – A focal solid mixed echogenic/hypoechoic mass is visualized associate with the spleen. This mass distorts the splenic capsule. Differentials include: benign lesions (lymphoid hyperplasia, hemangioma etc..) or cancerous lesions (hemangiosarcoma, lymphoma, histiocytic sarcoma etc..)

SECONDARY FINDINGS

- Large heterogeneous liver – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy.
- 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

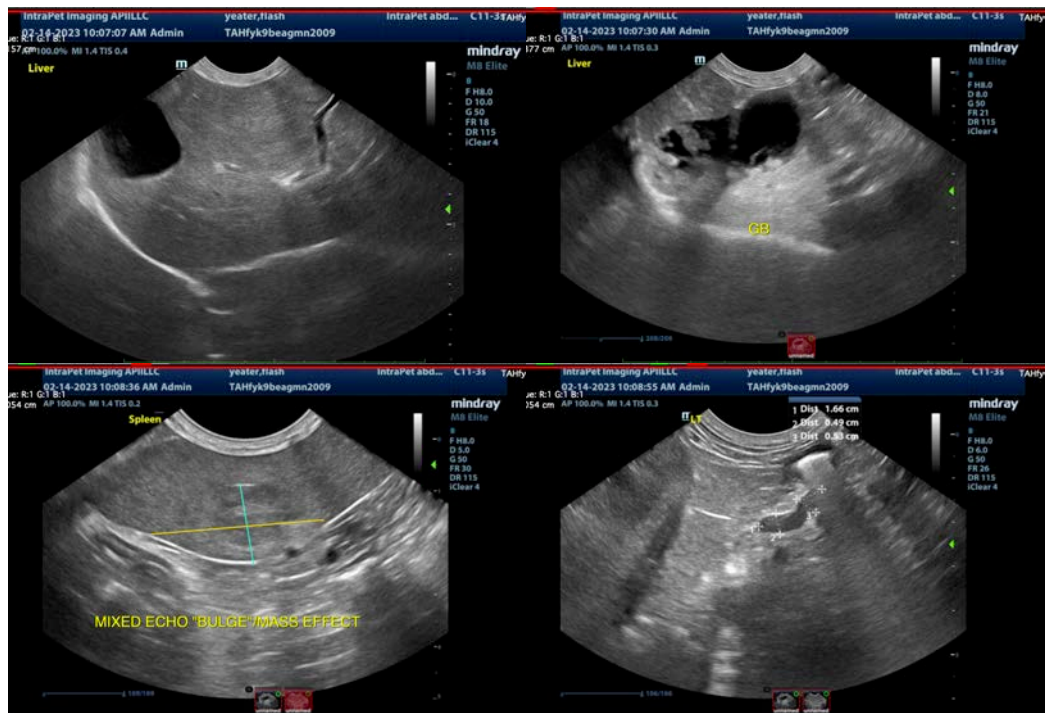
be causing a current issue. Recommend continued monitoring.

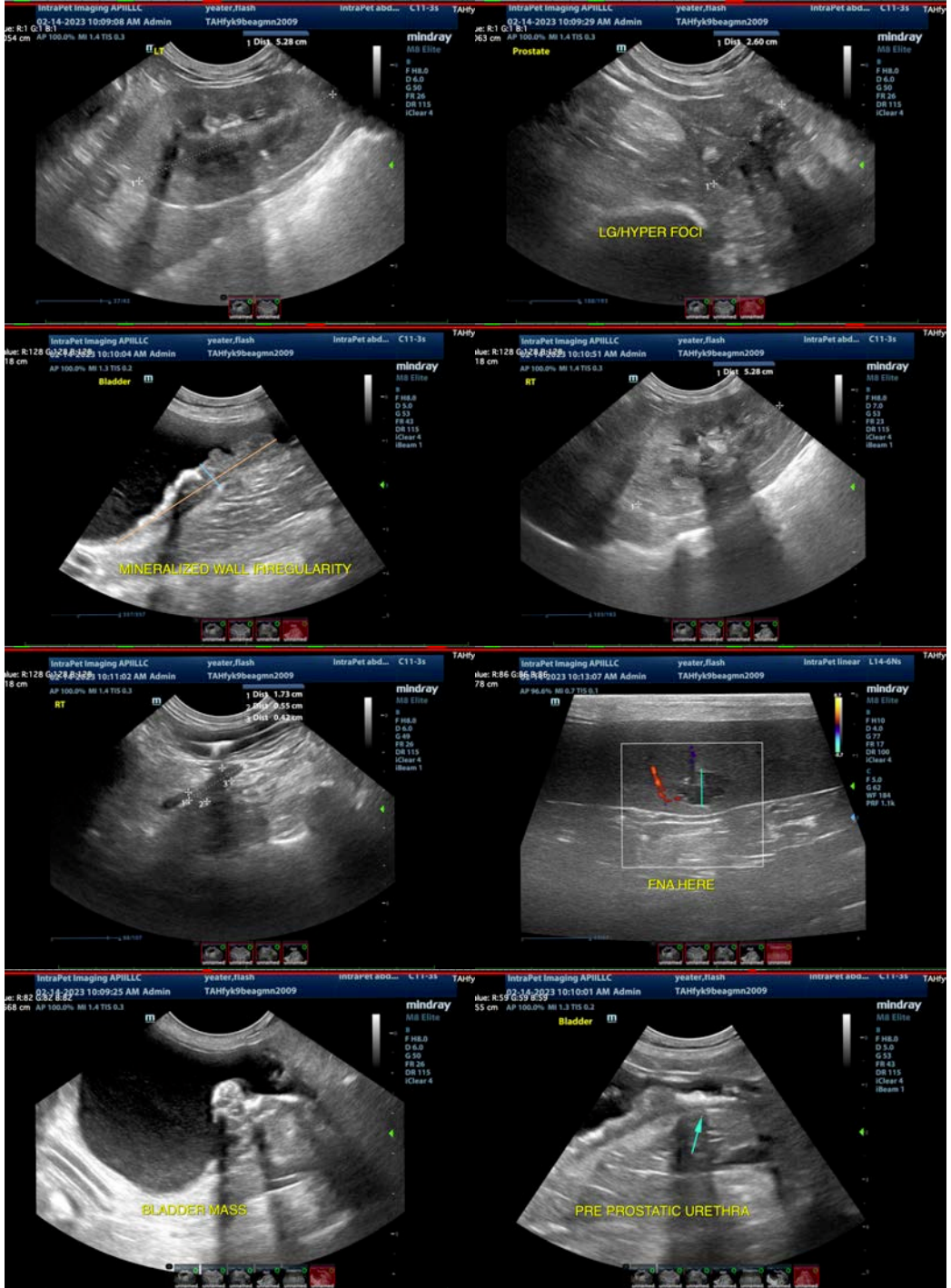
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

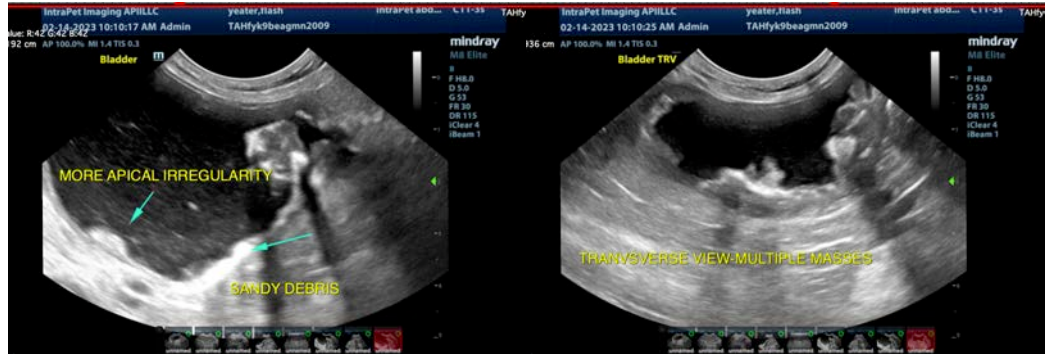
The multiple mass lesions in the urinary bladder and the irregularity in the prostate is highly concerning for a neoplastic process. These lesions are unlikely to be surgical due to their multifocal nature. Consider a fine needle aspirate of the prostate and a urine BRAF test (if urine BRAF test is positive, this would increase the likelihood that this is a neoplastic process, if it is negative this is non-diagnostic and requires additional testing). If a diagnosis cannot be obtained off this evaluation, then consider a traumatic catheterization and/or a cytologic evaluation of a urine sample, particularly if it is highly cellular, looking for atypical cells. Additionally, consider a urinalysis and culture. Once a diagnosis is obtained, consider consultation with a veterinary oncologist regarding possible treatment options and prognosis.

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

Additionally, there is an ill-defined mass effect/bulge on the spleen. This could represent a benign or neoplastic process. Recommend a fine needle aspirate.







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.

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