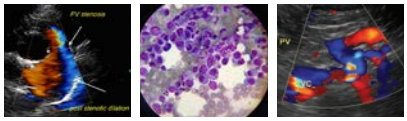
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

DATE

5/3/23

PATIENT

Bella Cegielski

SPECIES

Canine

BREED

Labrador Retriever

SEX

Spayed Female

AGE

7/20/10

WEIGHT

94 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Airpark AH

REFERRING VET

Dr. Marciszewski

INVOICE

47082

PRESENTING CLINICAL SIGNS

Lower urinary tract signs started 1 month ago; pollakiuria; conscious of urination; no blood/discoloration of urine. Normal appetite, mentation and drinking volume. Presented initially 1 month ago for these signs; RXed Amoxicillin + Gabapentin; U/A: USG 1.028, proteinuria, CBC WNL, Chemistry-mild ALT elevation; rechecked by primary GP- signs persistent; radiographs WNL; multiple suspected myelolipomas on spleen otherwise NSF on aFAST. Augmentin + Rimadyl trial; minimal response; Recheck of cbc/chemistry/4dx/fecal-anaplasma +. No response to Doxycycline trial

Current Medications: Doxycycline PO q 12 hours 5 mg/kg
Lab Results: See attached.
Radiographs: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Dexdomitor/Torbugesic IV.
Stat Report: Not requested.
Imaging Performed By: Stephanie Warga RDCS, RVT.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The apical bladder wall appears relatively normal with a smooth mucosal surface, measuring at 0.40 cm in thickness. The bladder wall in the area of the trigone changes and becomes more irregular and thickened, measuring up to 0.84 cm with some mineralization of the irregular tissue noted. Visualization is somewhat hindered by lack of urine distention. No calculi are observed, and visualization of the proximal urethra is somewhat limited.

The left kidney is large and slightly irregular, measuring 8.44 cm in length. 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.

A right kidney was not clearly visualized.

Adrenal Glands

The left adrenal gland is large and abnormal, measuring 2.14 cm x 3.61 cm. It is observed in its normal position cranial to the left renal artery. It is abnormal in that is has a somewhat ovoid appearance without distinct cranial and caudal poles, and it has a large area of hyperechoic shadowing mineralization in the center measuring approximately 1.1 cm x 1.42 cm. Findings are concerning for an adrenal mass.

The region of the right adrenal (between right cranial kidney and vena cava) is unremarkable, but the adrenal is not distinctly visualized. No evidence of a mass effect is visualized.

Spleen

The spleen is subjectively normal in size but slightly irregular in shape. The blood flow through the hilus and splenic parenchyma appears normal. The contours of the caudal aspect of the spleen are slightly irregular, creating an isoechoic “bulge” effect with no discrete mass observed.

Liver

The liver is subjectively normal in size, and hypoechoic 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. There are too numerous to count, ill-defined, hypoechoic nodules visualized within the liver. The largest visualized measures 3.08 cm x 1.48 cm on the right side.

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 mild 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 0.44 cm. Duodenum wall measures 0.51 cm. Visualized peristalsis appears appropriate. There are some areas of small bowel that have intraluminal shadowing material. Without evidence of an obstructive pattern, this could be normal ingesta, ingested foreign material, etc. Recommend continued monitoring.

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.

PRIMARY FINDINGS

- Thickened, irregular, mineralized bladder wall at the level of the trigone – Differentials would include focal inflammation, neoplastic change, etc.
- Large, mineralized left adrenal gland – Adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Subjectively large left kidney with no right kidney visualized – This could be due to an abnormal small right kidney or agenesis.
- Heterogeneous liver with ill-defined hypoechoic nodules – 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. The nodules observed trend toward a more benign process but underlying neoplasia cannot be ruled out.

SECONDARY FINDINGS

- Isoechoic “bulge” of the caudal aspect of the spleen – I suspect this is a normal anatomic variation. The irregular contours in this region should be monitored.
- 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 focal thickening and mineralization of the urinary bladder at the trigone is concerning. Although a discrete mass effect is not visualized, the calcification is concerning for possible carcinoma. Recommend a traumatic catheterization or cystoscopic biopsies of this region. Additionally, recommend a urinalysis and culture (if not already done). Additionally, a urine BRAF test could be considered. If this test is positive, the likelihood of an underlying neoplastic process is significantly increased. If it is negative, the test is non-diagnostic, and additional evaluation is required. Lack of urine distention impairs full evaluation of the bladder and proximal urethra.

The left adrenal gland appears large, abnormal, and is mineralized. This is concerning for a possible mass effect. This could represent a benign or neoplastic lesion and could be secreting hormone or be non-secretory. These are potential steps for further evaluation of a unilateral adrenal mass.

- 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.

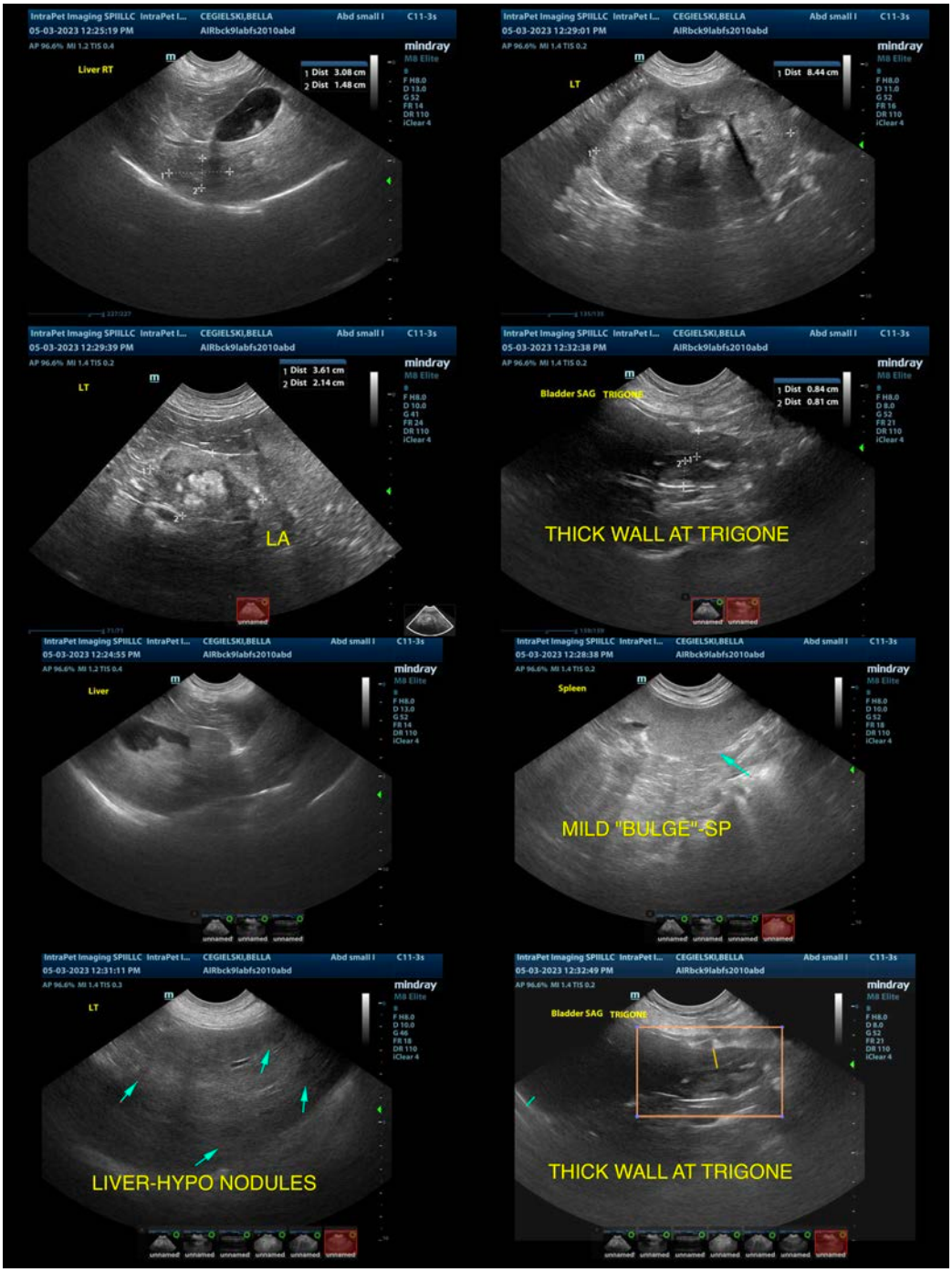
- Some aggressive adrenal tumors can grow quickly and there is risk for acute hemorrhage from vascular invasion.

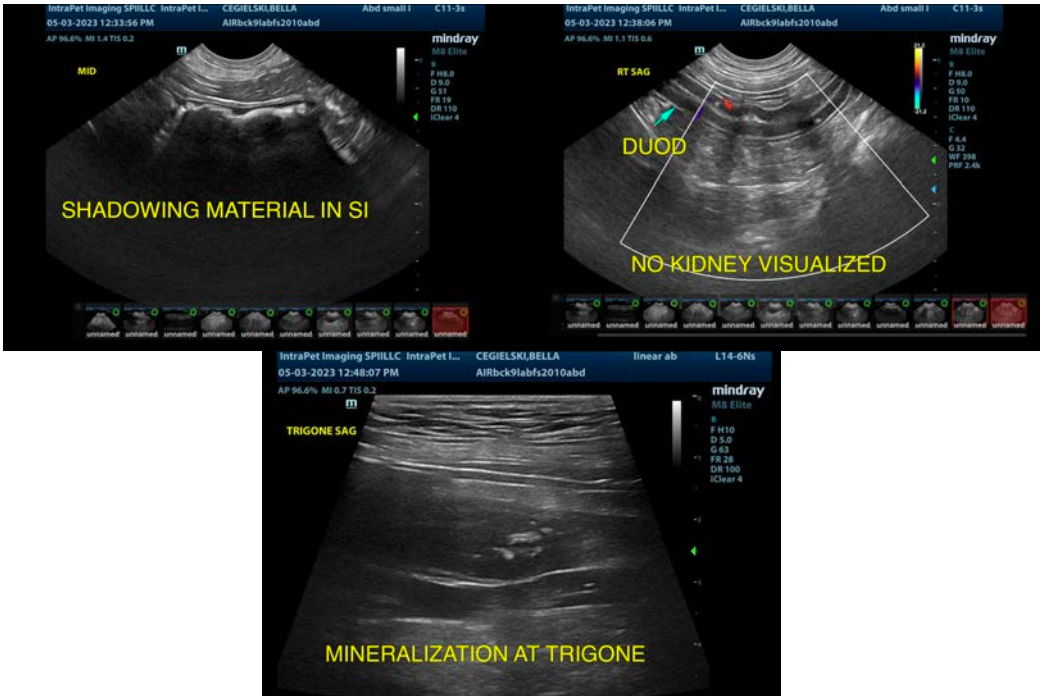
If surgical evaluation is unlikely and there are no signs of Cushing's, then consider a blood pressure evaluation and continued monitoring with ultrasound. The mineralization of this lesion increases the concern for a possible carcinoma.

The liver is heterogeneous with ill-defined hypoechoic nodules. The significance of this is unclear. The appearance of the hypoechoic nodules trends towards a benign process. If further evaluation is desired, a fine needle aspirate could be considered (provided coagulation parameters are normal).

There is some shadowing material visualized within the bowel lumen with no evidence of an obstructive pattern. If GI signs develop, recommend reevaluation.

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


IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:25:19 PM AIRbck9labfs2010abd
mindray
Liver RT
1 Dist 3.08 cm
2 Dist 1.48 cm
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:29:01 PM AIRbck9labfs2010abd
mindray
LT
1 Dist 8.44 cm
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:29:39 PM AIRbck9labfs2010abd
mindray
LT
1 Dist 3.61 cm
2 Dist 2.14 cm
LA
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:32:38 PM AIRbck9labfs2010abd
mindray
Bladder SAG TRIGONE
1 Dist 0.84 cm
2 Dist 0.81 cm
THICK WALL AT TRIGONE
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:24:55 PM AIRbck9labfs2010abd
mindray
Liver
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:28:38 PM AIRbck9labfs2010abd
mindray
Spleen
MILD "BULGE"-SP
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:31:11 PM AIRbck9labfs2010abd
mindray
LT
LIVER-HYPO NODULES
IntraPet Imaging SPIILLC IntraPet I... CEGIELSKI,BELLA Abd small I C11-3s
05-03-2023 12:32:49 PM AIRbck9labfs2010abd
mindray
Bladder SAG TRIGONE
THICK WALL AT TRIGONE



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