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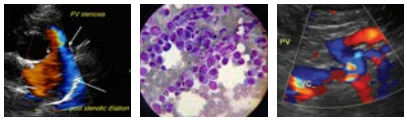
IntraPet.com



SonoPath

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DATE

4/25/23

PATIENT

Luna Snyder

SPECIES

Canine

BREED

Scottish Terrier

SEX

Spayed Female

AGE

2/11/14

WEIGHT

22.4 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Festival Vet Clinic

REFERRING VET

Dr. Harvey

INVOICE

46911

PRESENTING CLINICAL SIGNS

Progressive elevation in ALP since September. Previously diagnosed TCC April 2022, bladder surgery with Blue Pearl May 2022, TCC recurrence appreciated 9/2022. On 12.5 mg Deramaxx q24 for anti-cancer effects. Denamarin trial March-April 2023 did not show improvement in ALP. DDX- neoplasia vs breed associated vs hepatopathy vs other.

Current Medications: On 12.5 mg Deramaxx q24 for anti-cancer effects. Denamarin trial March-April 2023 did not show improvement in ALP.
Lab Results: Alk Phos 811, slight increase in protein
Date of Previous IntraPet Ultrasound: 4/1/22. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
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 region of the urinary bladder near the trigone, proximal urethra and ureters appears normal with no evidence of a mass effect, calculi, etc. In the apical region of the urinary bladder, there is a large irregular mass effect measuring approximately 2.34 cm x 1.78 cm, as well as a smaller pedunculated mass effect measuring 1.57 cm x 0.91 cm. In this resion, the bladder wall is diffusely irregular and most consistent with a mass effect.

The left kidney has a normal shape and size (5.62 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.

The right kidney has a normal shape and size (5.34 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.33 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 large and irregular in appearance, measuring 0.30 cm at the cranial pole, 1.25 cm at the caudal pole, and 3.07 cm in length. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is abnormal in appearance in that the caudal pole is enlarged, creating a nodule or mass effect. No evidence of vascular invasion is visualized.

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 with smooth peripheral margins. The parenchyma is hyperechoic and homogenous in echotexture. The liver appears adequately vascular. The previously described connection between the vena cava and aorta is visualized with no significant changes. 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 large shadowing ingesta. 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 0.21 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 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.

ULTRASONOGRAPHIC FINDINGS

- Large, irregular mass effect with smaller pedunculated mass effect visualized in the apex of the urinary bladder – Findings are consistent with recurrence of the previously diagnosed transitional cell carcinoma.

- Large, hyperechoic liver with abnormal vascular anatomy – 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 vascular abnormalities appear unchanged from the previous scan.

- 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.

- Large shadowing ingesta within the gastric lumen – Correlate with the feeding history and abdominal radiographs. If the patient was adequately fasted consider such differentials as delayed gastric emptying, a partial outflow tract obstruction (none seen) or ingested foreign material.

- Large caudal pole of the right adrenal gland – Left/right adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The previously diagnosed and resected transitional cell carcinoma shows evidence of recurrence on today's scan. Recommend consultation with veterinary oncologist regarding treatment options to ideally slow progression. There is no apparent interference with the trigone region of the urinary bladder at this time.

No focal lesions are visualized associated with the hepatic parenchyma, but there is an enlargement in the caudal pole of the right adrenal gland. This could represent a benign or neoplastic lesion, and it could be secretory or non-active. This could be associated with the ALP elevation if this is secreting cortisol. Consider the following:

- 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

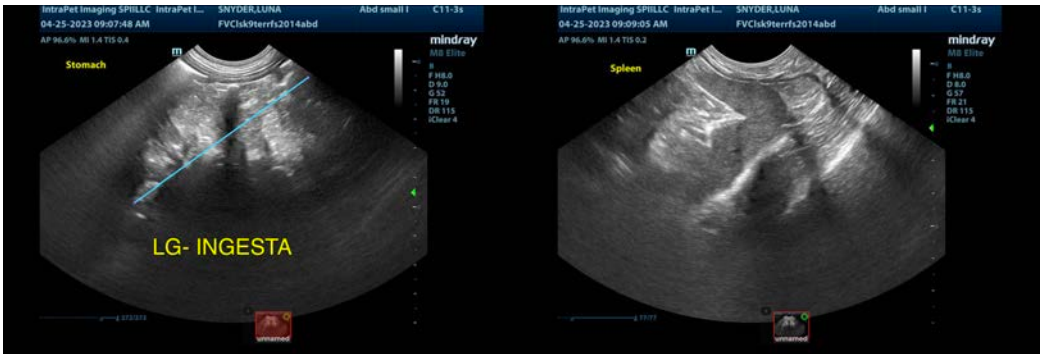
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma

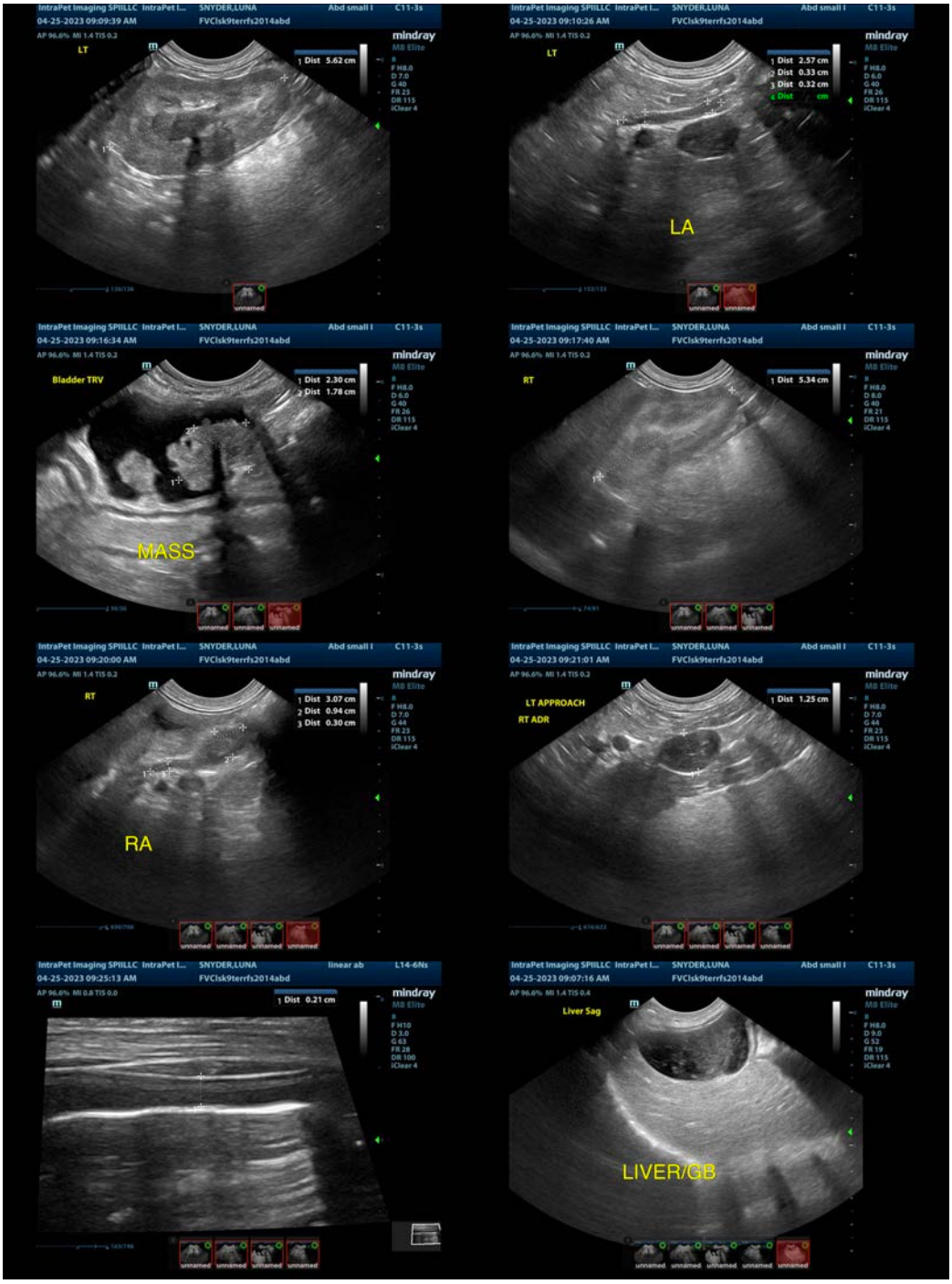
- Due to the invasive nature of these masses a CT scan is recommended to evaluate for metastasis and vascular invasion.

- 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 additional evaluation is not desired, then consider following this lesion with ultrasound. There is also the possibility that this is a benign lesion, and that the liver enzyme elevations are due to a vacuolar hepatopathy (Scottie hepatopathy). The previously described vascular anomaly appears unchanged.




LT
LA
Bladder TRV
MASS
RT
RA
LT APPROACH
RT ADR
Liver Sag
LIVER/GB

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)
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