IMAGING PERFORMED BY

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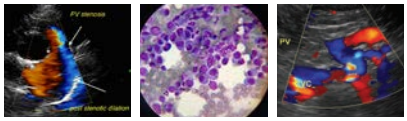

SonoPath
Clinical Sonography & Telecytology
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DATE

1/20/22

PATIENT

Beckham Douglas

SPECIES

Canine

BREED

Beagle

SEX

Neutered Male

AGE

6/18/06

WEIGHT

39 Pounds

INTERPRETED BY

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

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Bayside AMC

REFERRING VET

Dr. Buchanan

INVOICE

34959

PRESENTING CLINICAL SIGNS

History: On recheck PE after acute vestibular event noted almost 10lbs of weight loss on PE. BW revealed ALT >1000, ALKP ~400. Tentative DDX: vestibular +/- hepatopathy.

Current Medications: LRS SQ.
Lab Results: Attached separately within request.
Date of Previous IntraPet Ultrasound: No previous IntraPet scans.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening or mucosal irregularities. There was a small isolated, hyperechoic, smooth mass effect visualized in the caudal half of the urinary bladder, measuring 0.95 cm. Findings are most consistent with an early mass effect or a polyp.

The prostate is normal in size (0.90 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (5.79 cm) with pyelectasia at 0.42 cm. Overall echogenicity is slightly hyperechoic with mildly decreased corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.58 cm) with pyelectasia at 0.28 cm. Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is large in size measuring 1.13 cm at the cranial pole, 0.62 cm at the caudal pole, and 2.89 cm in length. It is observed in its normal position cranial to the left renal artery. It is somewhat irregular in appearance in that the cranial pole is large with a hyperechoic area measuring 1.14 cm x 0.87 cm, most consistent with an ill-defined nodule in the cranial pole. No evidence of vascular invasion is visualized.

The right adrenal gland is normal in size measuring 0.68 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. There is a well-defined hyperechoic nodule at the periphery of the spleen measuring 1.44 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. There is a large, mottled, somewhat cystic/cavitated mass effect on the caudal portion of the liver measuring 7.62 cm x 5.53 cm.

The gall bladder lumen is moderately distended. The wall of the gall bladder has irregular polypoid projections and 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.

Other

A brief view of the heart was submitted. No significant pericardial effusion was seen.

PRIMARY FINDINGS

- Heterogeneous liver with large cavitated/cystic hepatic mass – This could be consistent with either a benign or cancerous process.
- Small, well defined, hyperechoic mass effect in the urinary bladder – Possible differentials include neoplasia or a polypoid mass.
- Hyperechoic nodule in the cranial pole of the left adrenal gland – Left adrenomegaly could be consistent with neoplasia (e.g., adenoma, carcinoma, pheochromocytoma), hyperplasia, inflammation, other.
- Decreased corticomedullary distinction in both kidneys with mild pyelectasia – The bilateral renal findings are consistent with age-related change. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Hyperechoic nodule on the periphery of the spleen – The appearance of this nodule favors a benign process, but an underlying neoplastic lesion cannot be ruled out.

SECONDARY FINDINGS

- Mild gallbladder polyps – The significance of the gall bladder polyps and debris is unclear. This could represent an early mucocele, cholestasis, or chronic inflammation, or could be an incidental finding.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large cystic/cavitated mass effect in the liver. This is the likely source of the liver enzyme elevation noted. There is a somewhat cystic center, which could represent a benign cystic area, an area of necrosis/abscessation, or hemorrhage. Options moving forward include continued monitoring or CT scan to further evaluate for surgical removal. Recommend 3-view thoracic radiographs.

There is a small, smooth mass effect in the urinary bladder. This could be a benign or polypoid lesion. It is very small and does not appear close to any area to cause an imminent obstruction. Options include:

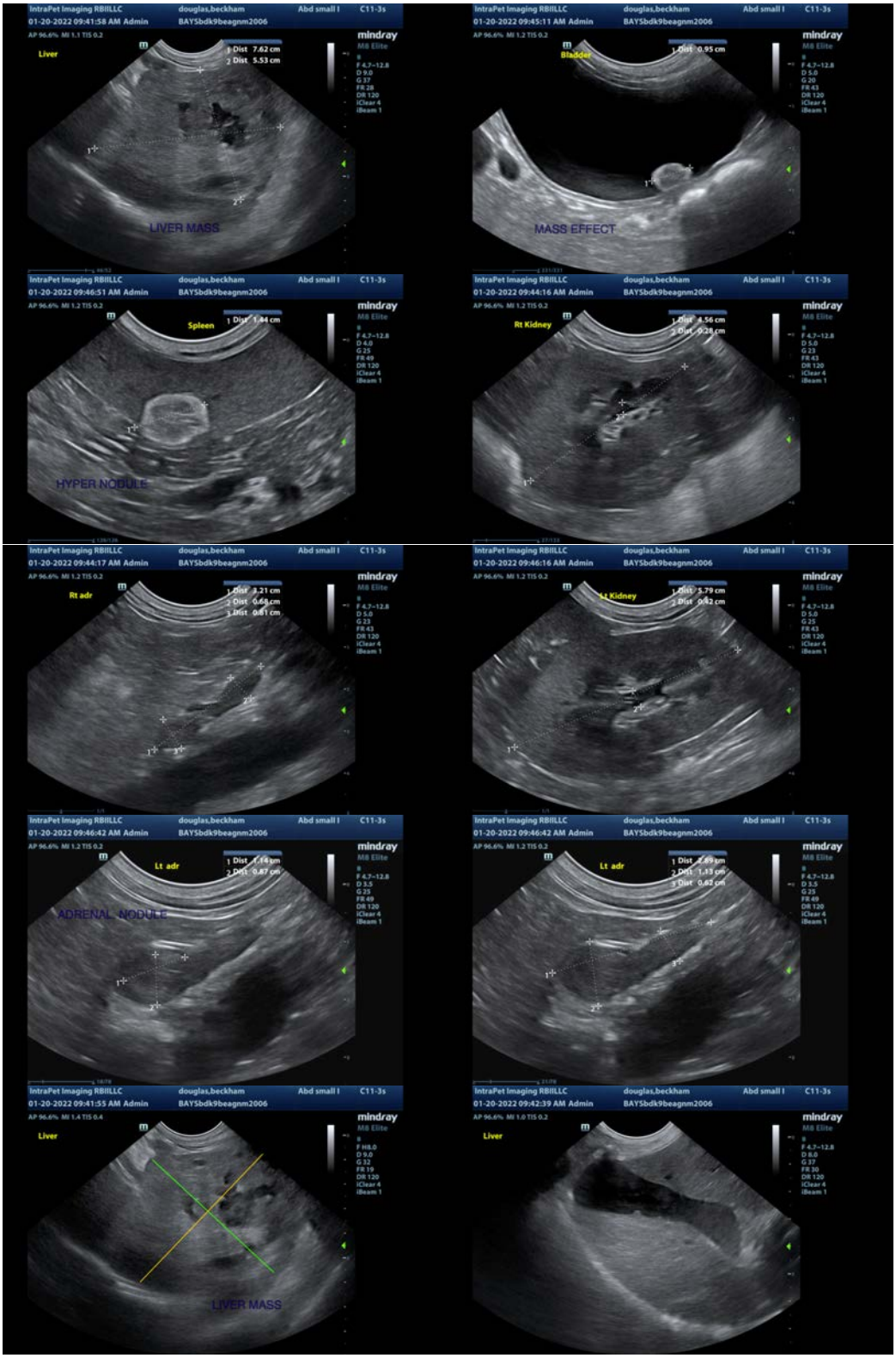
-Recommend urine evaluation for BRAF mutation seen in patients with transitional cell carcinomas. A positive test is diagnostic, a negative test is inconclusive and will need further diagnostics.
-If negative or non-diagnostic BRAF consider traumatic catheterization to obtain representative cells for cytology, or biopsy sampling via either cystoscopy (if a female) or surgery.
-Patients with bladder pathology should always have urinalysis and culture performed. Ideally cystocentesis should be avoided in patients with suspected bladder masses to try and prevent tracking of tumor cells along the needle path.
-If TCC is confirmed consider referral to/consultation with a board certified. Veterinary oncologist for recommendations regarding treatment options and prognosis.

There is nodule present on the left adrenal gland. This nodule is relatively small and is not deforming the adrenal gland significantly and doesn't appear to have any evidence of vascular invasion.
These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving forward include:

- 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 or consider surgical removal (recommend referral to a board certified veterinary surgeon and possible pre op CT)
- Recommend blood pressure evaluation-if hypertensive consider testing catecholamine levels for a possible pheochromocytoma
- If no symptoms of cushings are present, consider either referral for surgery or continued monitoring with ultrasound (in 3-4 months).
- Many of these nodules can be benign and incidental in nature, unfortunately that is difficult to determine with a single ultrasound.

There is age related change in both kidneys with bilateral pyelectasia. Recommend urinalysis, culture and blood pressure evaluation.

There is a prominent, hyperechoic nodule visualized in the spleen. The appearance of this trends towards a benign etiology, but this cannot be 100% determined without cytology.


IntraPet Imaging RBIILLC
douglas.beckham
Abd small I
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BAYSbdk9beagnm2006
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Liver
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2 Dist 5.53 cm
LIVER MASS
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Bladder
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MASS EFFECT
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3 Dist 0.81 cm
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Liver
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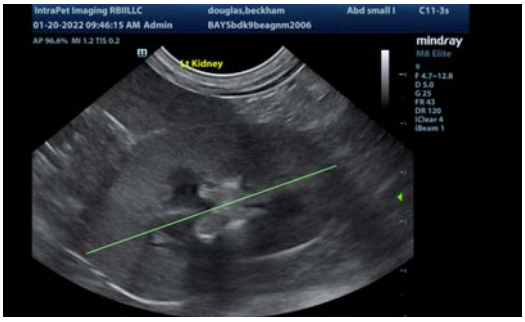
Liver



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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