

**DATE**

6/24/22

PRESENTING CLINICAL SIGNS

Panting more, lethargy +/-, drinking a bit more. Slight increase in weight (overweight), senior pet, mild otitis externa, numerous skin tags/ SQ lumps (lipomas, SQ tumors), apparent 8mm "epulis" rostral/ mandible
Current Medications: Mometavet AU SID x 14 days started 6/9/22

PATIENT

Scooter Kuzniarski

Malacetic Ultra started 6/9/22.

Lab Results: increased ALT 126, decreased RBC 4.8, increased PLT 432, decreased Hgb 11.3, increased ALKP 694, decreased Hct 34, increased GGTP 99, increased WBC 16.3 t4 1.1, increased lymph 4727, increased TSH 0.85, increased mono 1141, ft4 (ED)11.8.

SPECIES

Canine

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

BREED

Cockapoo

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System****SEX**

Neutered male

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, mucosal irregularities, masses or cystic calculi.

AGE

5/7/08

The prostate is normal at 1.04 cm.

WEIGHT

40.4 lbs

The left kidney has a normal shape and size (6.16 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (6.4 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 pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

INTERPRETED BY

Kathleen Sennello
DVM, MS, Diplomate
ACVIM (Small Animal
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Adrenal Glands

The left adrenal gland is normal in size measuring 0.67 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.

HOSPITAL NAME

Bel Air Vet

The right adrenal gland is normal in size measuring 0.74 cm at the caudal pole, 0.58 cm in the caudal pole and 2.93 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 somewhat irregular in appearance and there is a hyperechoic nodule in the cranial pole measuring 0.59 x 1.12 cm. This lesion does not appear to deform the adrenal margins significantly.

REFERRING VET

Dr. Stevenson

INVOICE

31246

Spleen

The spleen is subjectively (normal or large) in size The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. There are two somewhat irregular, hypoechoic nodules visualized in the splenic parenchyma (at least two). One is visualized and measures 1.57 x 1.5 cm. The other nodule measures at 0.46 cm.

Liver

The liver is subjectively (normal, large, small, normal/large, normal/small) in size, and 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, solid, isoechoic to hyperechoic, somewhat ill-defined mass lesion visualized on the left side of the liver and measures approximately 6.26 x 4.72 cm. The gallbladder has a moderate amount of debris.

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

No pericardial effusion was seen.

There is a cystic and somewhat irregular lesion visualized and measured 2.36 x 1.73 cm on the right side deep in the region of the portal hilus. The lesion deviates the vasculature in this region, but there is no evidence of direct vascular invasion observed.

ULTRASONOGRAPHIC FINDINGS

PRIMARY FINDINGS:

- Mildly mottled spleen with two hypoechoic nodules. There are several, non-cavitated, hypoechoic splenic nodules visualized. Differentials include lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis
- Large heterogenous liver with a large, mixed echogenic, hyperechoic, ill-defined hepatic mass on the left side. 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. There is a large mass effect visualized and is most consistent with a primary hepatic mass (adenoma, carcinoma, etc.).

- 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.
- Hyperechoic nodule on the cranial pole of the right adrenal gland.
- Cystic lesion near the portal hilus (this could be a benign lesion, omental cyst, cystic lymph node, etc.) or an early neoplastic lesion.

SECONDARY FINDINGS:

Decreased corticomedullary distinction. Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a focal mass effect in the liver, which is most consistent with a primary liver mass. These can be benign or malignant and can have a good prognosis if surgically removed. Consider a contrast CT scan to better define this mass lesion and evaluate the left adrenal gland and the cystic lesion near the hilus. Based on these results surgical options can be better evaluated.

Consider three view thoracic radiographs to rule out concurrent thoracic disease/involvement. There are hypoechoic nodules visualized within the splenic parenchyma. These could represent benign or neoplastic lesions. You can consider a FNA of the spleen or possibly removal of the spleen at the time of the removal of the hepatic mass.

The nature of the cystic lesion near the portal hilus is uncertain. This can represent a benign cystic lesion or an early neoplastic lesion. Options include continued monitoring with ultrasound or CT for surgical evaluation.

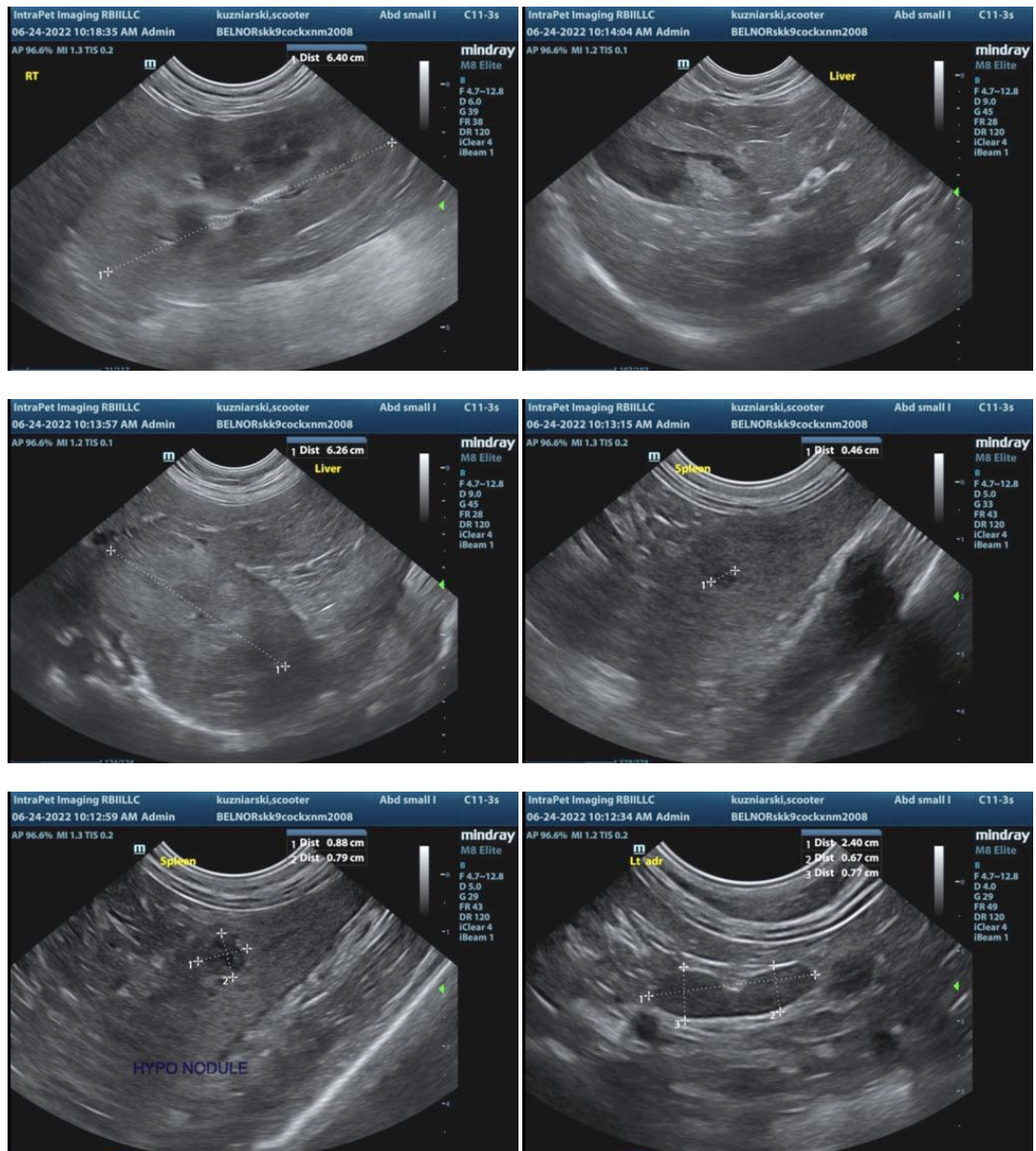
There is a relatively small, hyperechoic nodule on the cranial pole of the right adrenal gland. These lesions can be benign or malignant and can secrete hormone or be non-active. These are recommendations for further evaluation of an adrenal nodule.

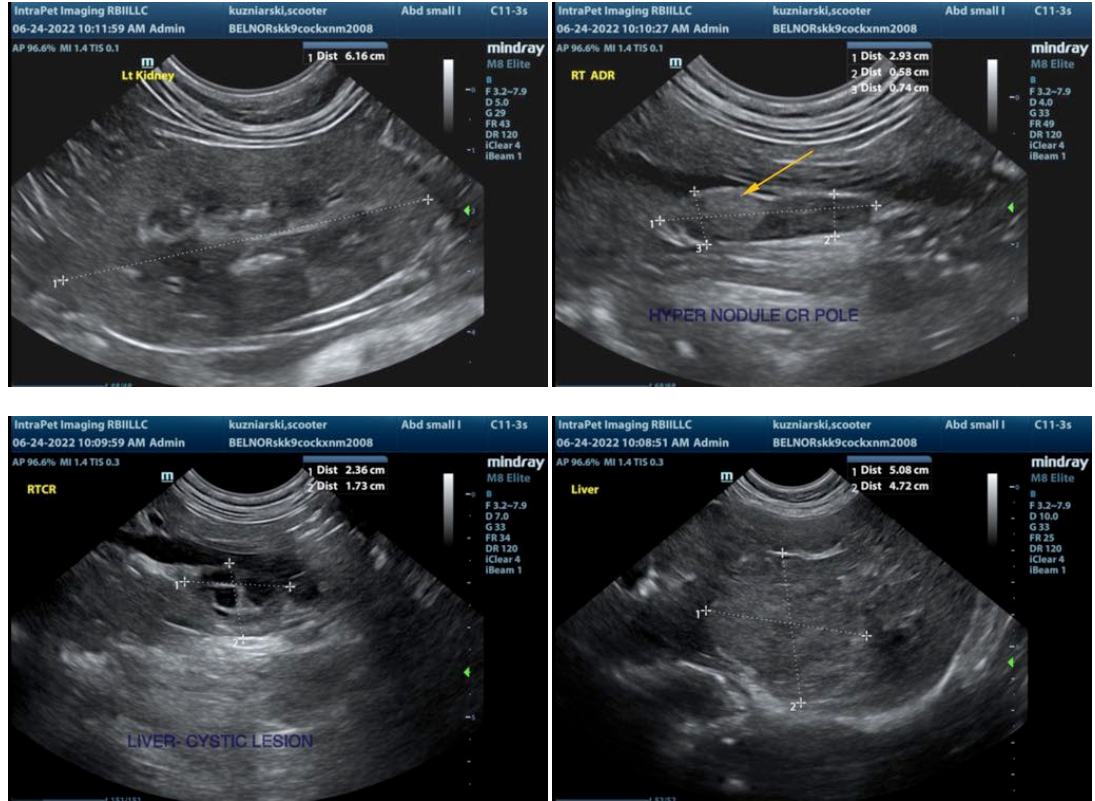
There is nodule present on the Left/right adrenal gland. This nodule is relatively small and is not deforming the adrenal gland significantly and doesn't appear to have any evidence of vascular invasion. These nodules can be benign or malignant and can secrete hormones or be non-active. Options moving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

- If signs of Cushing's 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 Cushing's 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 Cushing's 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.

If a more conservative approach is desired you can consider a FNA of the liver and spleen and continue monitoring the other lesions with ultrasound keeping in mind that progression of these lesions would potentially make surgical options less available, but I am hoping that the liver lesion could be slow growing and the other lesions while in difficult locations if they progress can also represent benign lesions. Unfortunately it is difficult to determine this without obtaining samples.





The information and recommendations provided are based on the images presented by the referring veterinarian. 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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