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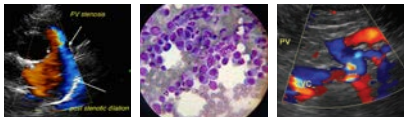

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**DATE**

6/9/22

**PATIENT**

Zeva Wineke

**SPECIES**

Canine

**BREED**

Labradoodle

**SEX**

Spayed Female

**AGE**

2/18/12

**WEIGHT**

46 Pounds

**INTERPRETED BY**

Beth Johnson, DVM DACVIM

**IMAGING PERFORMED BY**

Stephanie Pearce RDCS, RVT

**HOSPITAL NAME**

Everhart Vet Hospital

**REFERRING VET**

Dr. Notarangelo

**INVOICE**

38569

## PRESENTING CLINICAL SIGNS

Asymptomatic dog with history of persistent Calcium and liver value elevations.

Current Medications: Preventions.
Lab Results: 5/12/22: ALKP 537, Ca 12.2, PSL 202. 10/1/21 ALKP 401, ALT 182, Ca 11.8, PSL 179. 9/13/21: ALKP 419, Ca 12, phos 1.8
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

Urinary bladder is moderately distended. It has a normal uniform wall thickness (<0.2 cm). Contents include primarily anechoic fluid combined with both gravity dependent and suspended echogenic non-shadowing debris within the fluid. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

The right kidney is normal in size (5.89 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

The left kidney is normal in size (5.6 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted.

### *Adrenal Glands*

The left adrenal gland is plump/swollen in size (2.6 cm long x 0.78 cm at the cranial pole and 0.90 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The right adrenal gland is plump/swollen in size (2.61 cm long x 1.0 cm at the cranial pole and 0.76 cm at the caudal pole). Normal shape and contour are maintained. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

### *Spleen*

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are present. Splenic vasculature appears normal.

### *Liver*

Liver is subjectively enlarged. Margins are smooth but round. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

GB is moderately distended with anechoic bile and gravity dependent echogenic sediment. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### *Gastrointestinal*

The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### *Pancreas*

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### *Free Abdomen*

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

## PRIMARY FINDINGS

- Bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary depending hyperadrenocorticism vs normal variant.

- Hyperechoic hepatomegaly – most consistent with benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.

- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

- Urinary bladder sediment – Urine changes are most consistent with cellular debris or crystalluria.

## SECONDARY FINDINGS

- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are less likely.

- Non-obstructive dystrophic mineralization bilaterally in the kidneys.

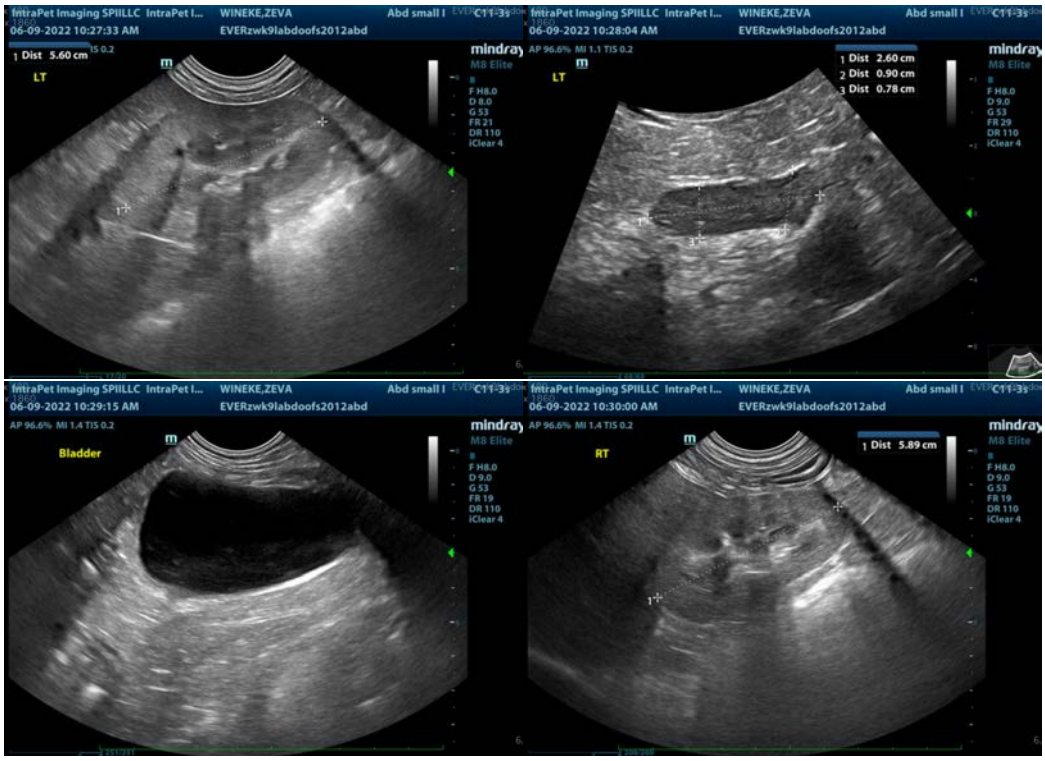
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

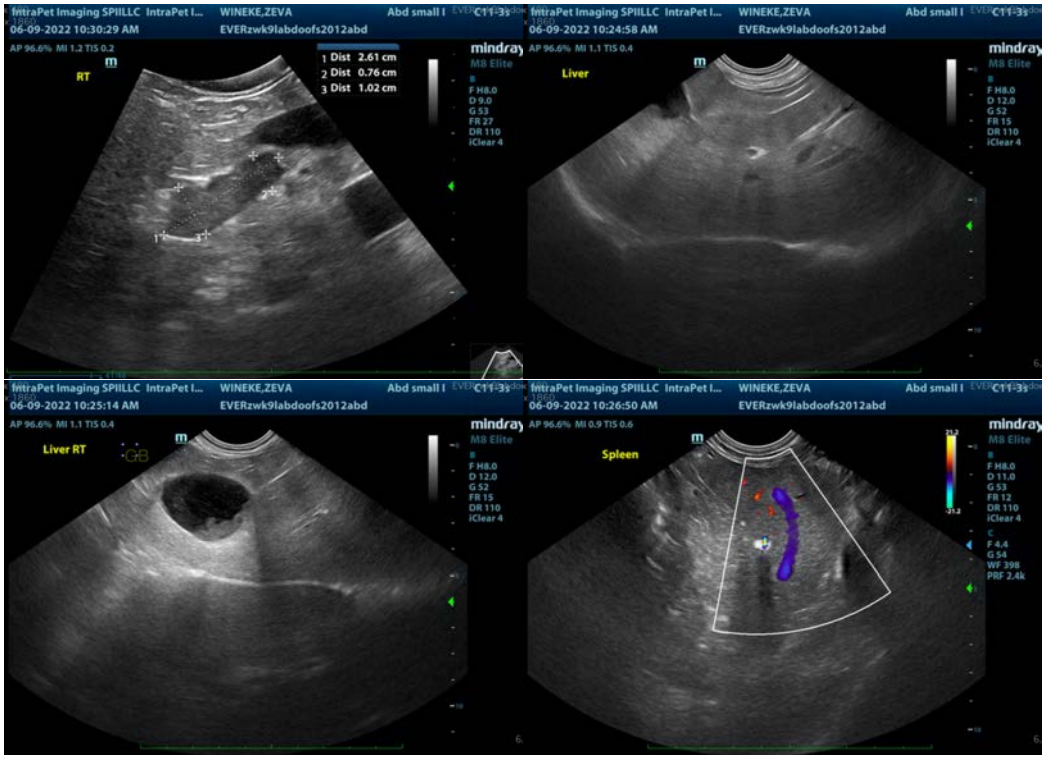
There are multiple findings consistent with possible hyperadrenocorticism, including the adrenal, liver and gallbladder changes, as well the historical bacteriuria, etc. Therefore, if clinical signs of hyperadrenocorticism are present and/or develop, testing in the form of a low-dose Dexamethasone suppression test could be considered. Testing is less indicated if clinical signs of hyperadrenocorticism are not present.

A blood pressure is recommended if not recently evaluated.

A urine culture is recommended, given the bacteriuria on the most recent urinalysis as well as suspicion for hyperadrenocorticism.

Finally, given the progressive hypercalcemia, a workup of hypercalcemia is recommended with the next steps being 3-view thoracic radiographs to look for other evidence of possible neoplasia, as well as a malignancy panel including PTH, PTHrP, and ionized calcium.






**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.

**Beth Johnson**, DVM, DACVIM
Beth.Johnson@sonopath.com