

**DATE PRESENTING CLINICAL SIGNS**

11/29/22 Increasing ALP over the last couple years. PU/PD- intermittent.

PATIENT Current Medications: Phenobarbital 32.4mg BID, Keppra 250mg TID, Gabapentin 100mg BID.
Lab Results: ALP 1058.

Chase Hamer Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

SPECIES

Canine

BREED

Dachshund

SEX

Neutered Male

AGE

3/7/13

WEIGHT

26.1 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Rachel Brillhart RDMS

HOSPITAL NAME

All Creatures
Veterinary Service

REFERRING VET

Dr. Keys

INVOICE

43010

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

The right kidney is normal in size (5.16 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.

The left kidney is normal in size (5.04 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.

Adrenal Glands

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The right adrenal gland measures 2.06 cm long x 0.72 cm at the cranial pole and 0.75 cm at the caudal pole. The left adrenal gland measures 2.4 cm long x 0.66 cm at the cranial pole and 0.71 cm at the caudal pole.

Spleen

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is diffusely heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Focally, in the right cranial liver, there is a 3.8 cm x 3.3 cm, heterogeneous, primarily hypoechoic mass. Focally, in the caudal left liver, there is an approximately 3.0 cm x 2.0 cm similar appearing, heterogeneous, primarily hypoechoic second mass. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. 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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign

material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen is empty with no evidence of obstruction or foreign material.

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

Pancreas

The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Bilateral adrenomegaly** – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.
- **Nodular Liver** - This finding is concerning for infiltrative disease such as round cell neoplasia or metastatic neoplasia. Benign disease (nodular hyperplasia, steroid or vacuolar hepatopathy, extramedullary hematopoiesis, etc.) cannot be ruled out but is considered less likely.

SECONDARY FINDINGS

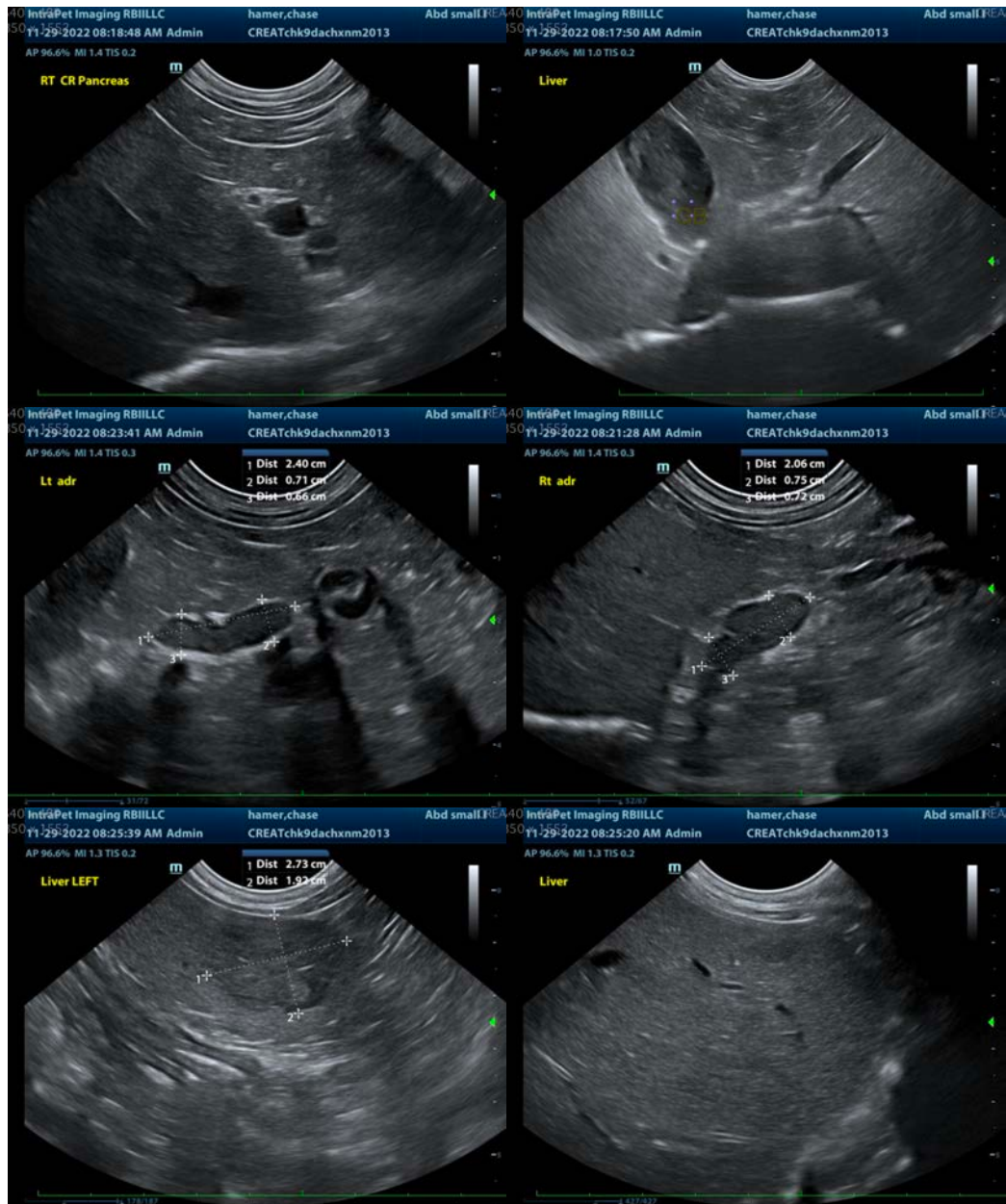
- **Pancreatic age-related remodeling** – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- **Mucosal speckling** – Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- **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.

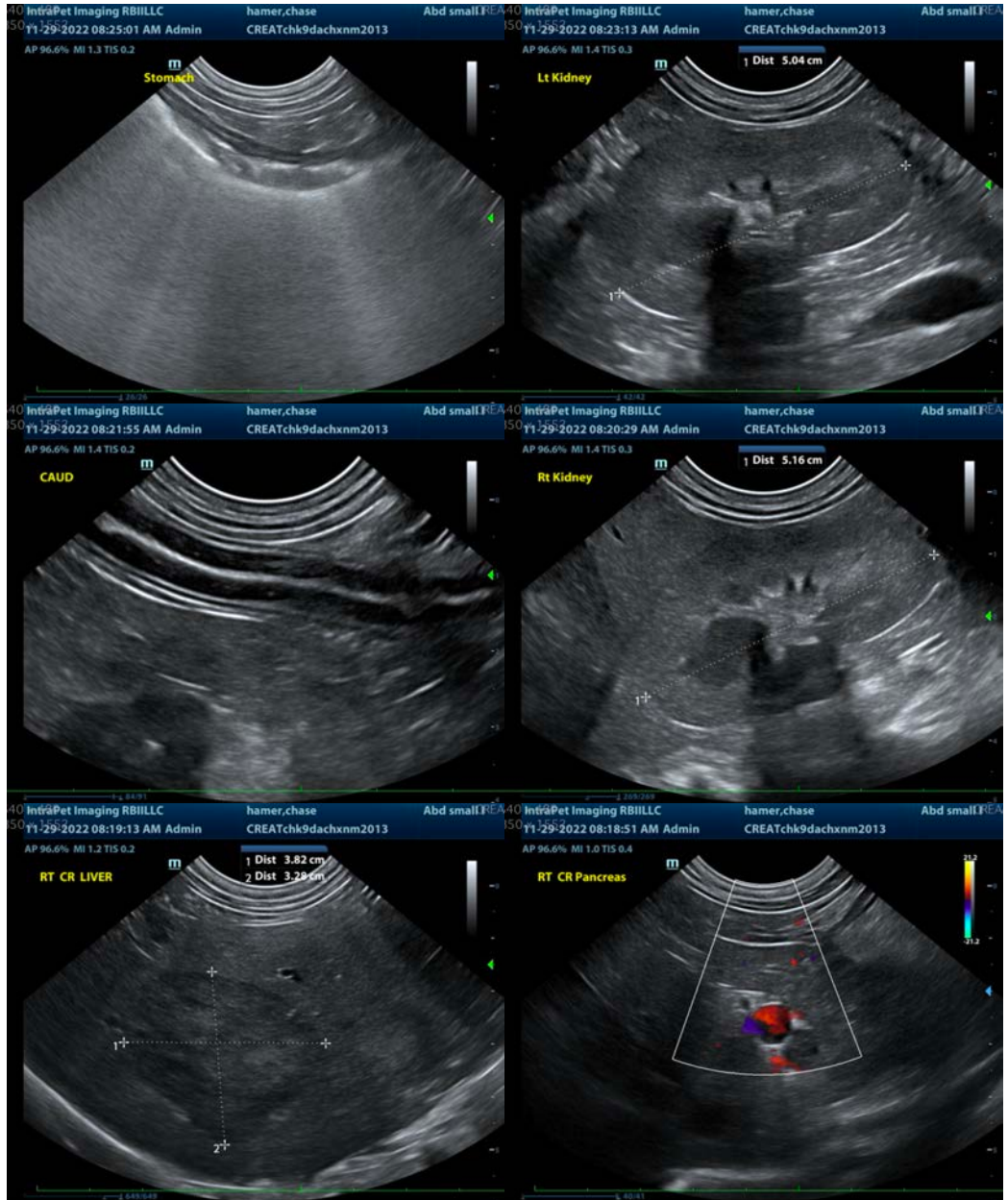
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

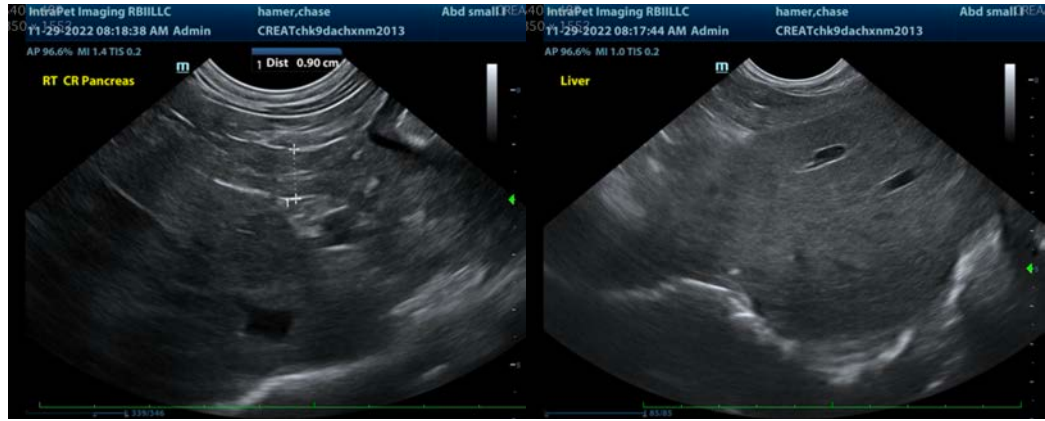
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

A fine needle aspirate of the liver, paying special attention to the larger nodules/masses described above, is recommended if patient's coagulation status is appropriate.

Given this patient's liver enzyme changes, polyuria/polydipsia, adrenal gland changes, etc., concurrent hyperadrenocorticism is also possible. However, Phenobarbital can mimic clinical signs of hyperadrenocorticism, so diagnosis should be made cautiously, especially since a low-dose Dexamethasone suppression test can be falsely positive with Phenobarb administration as well. Therefore, if further workup of hyperadrenocorticism is elected, an ACTH stimulation test is the recommended diagnostic option.







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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