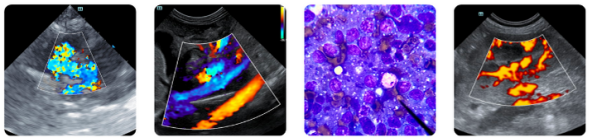


PATIENT

Penny Frandsen

SPECIES

Canine

BREED

Shih Tzu

SEX

SF

AGE

15 years

WEIGHT

9.5 lbs

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Karen Hemmerich

HOSPITAL NAME

Tigard Animal Hospital

REFERRING VET

Dr. Michelle Appleton

INVOICE

11599

DATE

3/31/2026

PRESENTING CLINICAL SIGNS

The owner reports that the patient has been drinking more water and having some accidents in the house. Continued weight loss over the past couple of years, with the patient going from 12 lbs to 9.5 lbs. T A new behavior of licking paws, blankets, and towels has also been noted recently. Appetite is reported as being up and down. The patient is on a low-fat diet which has successfully prevented pancreatitis flare-ups. Hx inc liver enzymes - bilateral enucleation at age 5 due to trauma/infection (puppy mill rescue)

Abnormal PE/Chem/CBC/UA Results: Muscle cachexia 3/9 Possible calcinosis cutis Severe dental disease CBC: Eosinophils: 0.056 K/µL (0.141–1.927) ↓ Platelets: 518 K/µL (120–412) ↑ Chemistry: SDMA: 18 µg/dL (0–14) ↑ Chloride: 104 mmol/L (108–119) ↓ ALT: 239 U/L (18–121) ↑ ALP: 4213 U/L (5–160) ↑ GGT: 50 U/L (0–13) ↑ Spec cPL: 394 µg/L (0–200) ↑ Urinalysis: USG: 1.014 (1.030–1.098) ↓ Urine Protein: 2+ (negative) ↑ Mucus: Present (none expected) Endocrinology: Urine Cortisol:Creatinine Ratio: 179 (<34) ↑.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately 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.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. Pinpoint non-obstructive mineral densities are noted bilaterally. There is no evidence of pyelectasia or infarcts observed. Left kidney measures 3.81 cm and the right kidney measures 3.7 cm.

Adrenal Glands

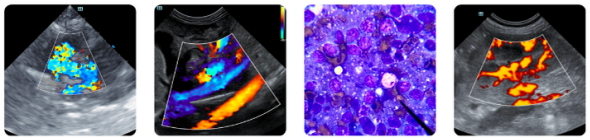
The right adrenal gland is enlarged (2.3 cm at the cranial pole and 0.88 cm at the caudal pole) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted (at the cranial pole which measures 2.3 cm in diameter) without evident capsular escape or vascular invasion.

The left adrenal gland is mildly plump/swollen in size, primarily at the caudal pole (0.54 cm at the cranial pole and 0.8 cm at the caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

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



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Liver is subjectively enlarged with mildly irregular margins. Parenchyma is mildly heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. 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 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. 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 pancreas that is observed appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

Free Abdomen

There is no visible free peritoneal effusion noted in these images.

There is no apparent pathologic lymphadenopathy noted in these images.

PRIMARY FINDINGS

- The adrenal glands are mildly bilaterally enlarged with more of a mass like appearance involving the cranial pole of the right adrenal gland. Differentials include adrenal hyperplasia, adenoma, with adenocarcinoma, pheochromocytoma, other unable to be definitively ruled out. Non-functional, incidental adrenomegaly is also possible. This finding should be interpreted in combination with patient's clinical history.
- Mildly heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Moderate 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.

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SECONDARY FINDINGS

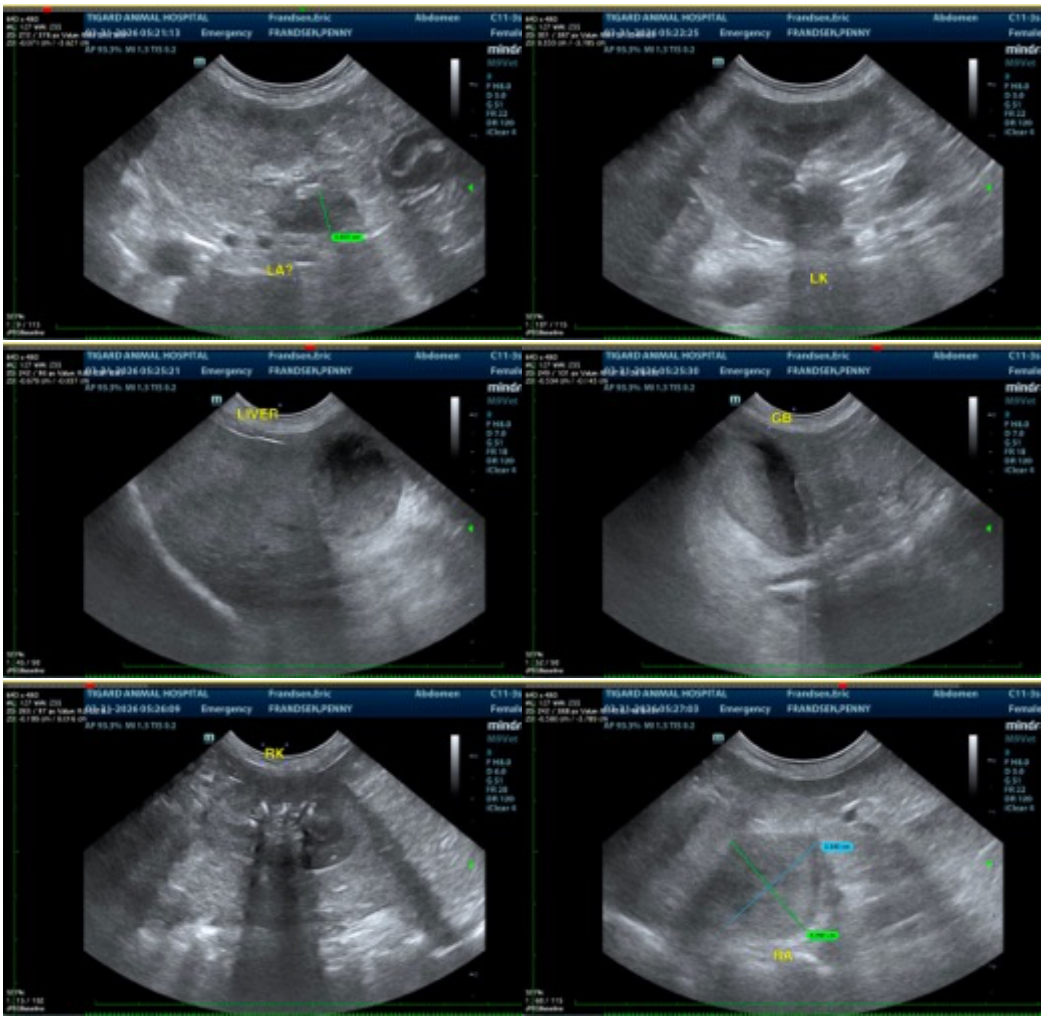
- Age related kidney changes with bilateral non-obstructive mineral.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If not recently evaluated, a blood pressure is recommended.

Given patient's adrenal gland changes, combined with the reported clinical history, hormone testing may be appropriate beginning with a low dose dexamethasone suppression test.

Having said that, however, hyperadrenocorticism typically does not result in decreased appetite and/or weight loss, except in the rare cases of a pituitary macroadenoma which requires advanced imaging of the pituitary gland to diagnose. Therefore, concurrent or additional workup of other concurrent diseases, including malabsorptive or maldigestive disease, etc. may also be indicated.



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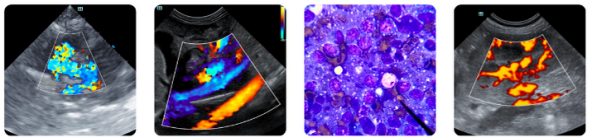

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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
info@sonopath.com