



PATIENT	PRESENTING CLINICAL SIGNS
Scotty Scott	Elevated liver enzymes. Abnormal PE/Chem/CBC/UA Results: ALT 198, AST 128, PSL Lipa 155 (H140), TLI 37.9 (H35)
SPECIES	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
Canine	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 (neutered) is normal in size, echotexture and echogenicity for a neutered male.
BREED	
Golden Retriever	
SEX	
Neutered Male	The right kidney is normal in size (6.27 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.
AGE	
8 Years	The left kidney is normal in size (6.47 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.
WEIGHT	
73 Pounds	
INTERPRETED BY	Adrenal Glands
Beth Johnson, DVM DACVIM	The left adrenal gland is normal in size (2.38 cm x 0.53 cm at the cranial pole and 0.51 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
	The right adrenal gland is normal in size (2.59 cm x 1.08 cm at the cranial pole and 0.63 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.
IMAGING PERFORMED BY	Spleen
Shari Reffi, CVT	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.
HOSPITAL NAME	Liver
Summit Dog & Cat Hospital	The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion. Note: Full visualization was mildly inhibited by patient conformation, as, and artifact from ribs.
REFERRING VET	
Dr. Levitian	The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.
INVOICE	Gastrointestinal
35063	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.
DATE	
1/25/22	



PATIENT

Scotty Scott

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.

SPECIES

Canine

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

Pancreas

BREED

Golden Retriever

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.

SEX

Neutered Male

Free Abdomen

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

ULTRASONOGRAPHIC FINDINGS

AGE

8 Years

- Unremarkable abdomen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

WEIGHT

73 Pounds

Alanine Aminotransferase (ALT) - ALT is more liver specific than other enzymes. It is a good indicator of active liver damage (cell membrane disruption, cellular necrosis) if the value is increased by at least 3-4 times normal. Differentials include infectious disease, including Leptospirosis, inflammatory disease (ie. active hepatitis, copper, other), toxic insult as well as infiltrative neoplasia.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

ALT levels vary in cases of vascular anomalies such as microvascular dysplasia and portosystemic shunts (PSS), but are often less significantly increased.

IMAGING PERFORMED BY

Shari Reffi, CVT

Non primary hepatic causes of increased ALT can include a variety of other metabolic conditions including, but not limited to, pancreatitis, gastroenteritis, parasitic disease, dental disease, vacuolar or endocrine hepatopathy from diabetes mellitus or hyperadrenocorticism (steroid-induced), hypoadrenocorticism, certain drugs (e.g. phenobarbital, corticosteroids, azathioprine, etc.), and muscle ALT (more likely if AST and CK concurrently increased).

HOSPITAL NAME

Summit Dog & Cat
Hospital

Recommendations for this patient include testing for Leptospirosis (if not already performed) followed by an empirical course of antibiotics and Denamarin with monitoring of the ALT for improvement versus progression. If the increased ALT does not resolve and/or progresses, the next step recommended is a liver biopsy.

REFERRING VET

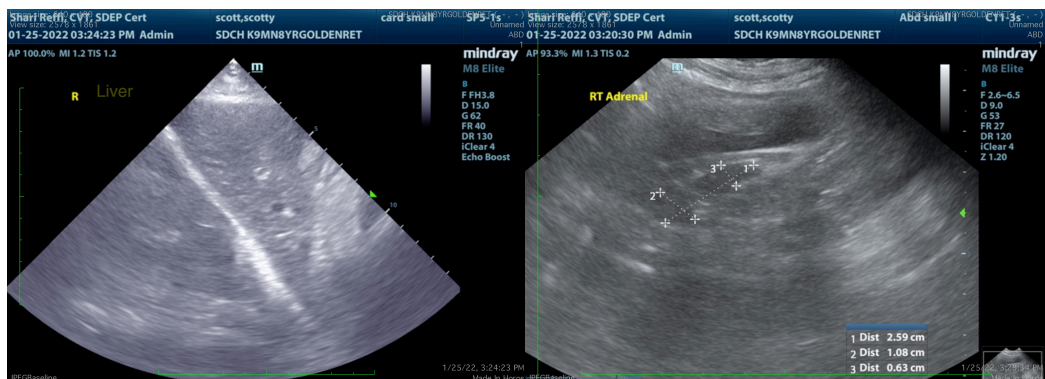
Dr. Levitian

INVOICE

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DATE

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PATIENT

Scotty Scott

SPECIES

Canine

BREED

Golden Retriever

SEX

Neutered Male

AGE

8 Years

WEIGHT

73 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

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Hospital

REFERRING VET

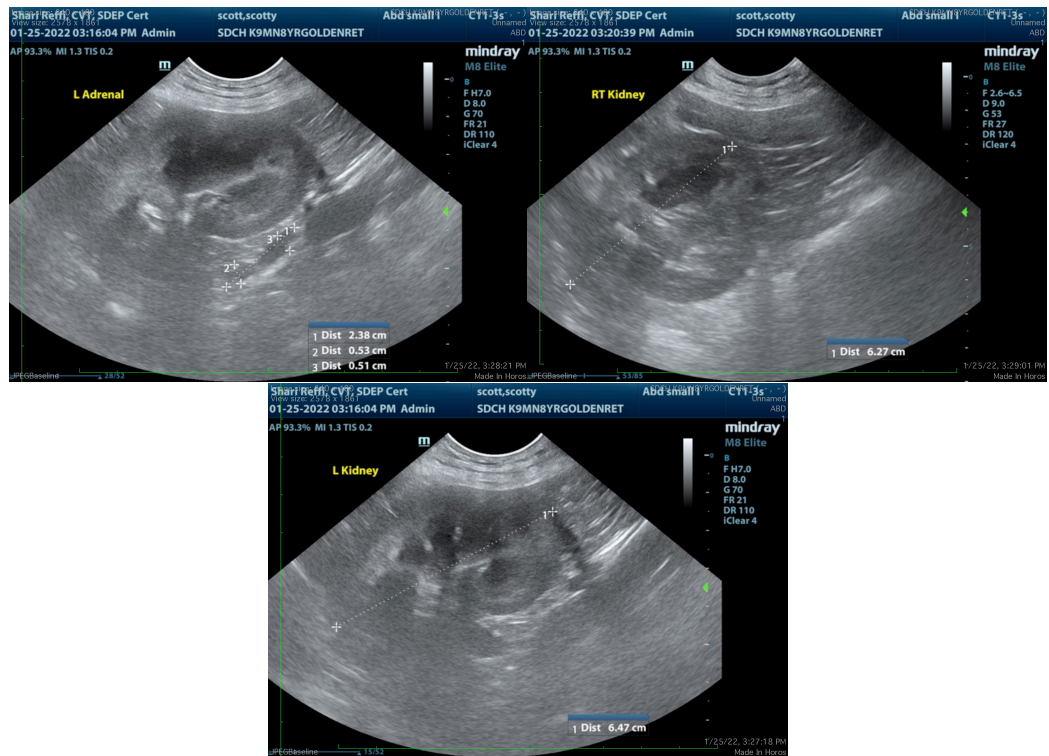
Dr. Levitian

INVOICE

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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
Beth.Johnson@sonopath.com