



PATIENT PRESENTING CLINICAL SIGNS

Carly Garner Elevated liver enzymes.
 Medication: Clavamox
SPECIES
 ALP 393, ALT 311, AST 193
 Canine Normal Albumin, BUN, Glucose, and Cholesterol
BREED
 Urine specific gravity 1.037 with active sediment

Shih Tzu Mix

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX *Urinary System*

FS The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 3.0 cm exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.

AGE

2014 The area of the aortic trifurcation was free of pathology.

WEIGHT

26

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation or pyelectasia. The left kidney measured 4.3 cm in length. The right kidney measured 4.7 cm in length.

INTERPRETED BY

R. McKenzie Daniel,
 DVM, DABVP
 (Canine and Feline)

Adrenal Glands

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.9 cm length x 0.36 cm width at the caudal pole. A discrete, non-disruptive, homogeneous, nonmineralized nodule was present in the cranial right adrenal gland with mild associated symmetrical capsule expansion. The nodule did not exhibit signs of mineralization or vascular invasion. The nodule measured 0.84 cm x 0.58 cm. The overall right adrenal gland measured 1.8 cm x 0.59 cm. Both adrenal glands were within normal limits for size based on caudal pole width measurement in light of body weight.

IMAGING PERFORMED BY
 Rebekah Jakum, CVT
 ARDMS/RVT

HOSPITAL NAME

Alburtis AH

Spleen

The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

REFERRING VET

Dr. Borelli

INVOICE

15746

Liver/ Gallbladder

The liver presented mild to possibly moderately enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma

DATE
 12/29/22



PATIENT

Carly Garner

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

FS

AGE

2014

WEIGHT

26

INTERPRETED BY

R. McKenzie Daniel,
 DVM, DABVP
 (Canine and Feline)

IMAGING PERFORMED BY

Rebekah Jakum, CVT
 ARDMS/RVT

HOSPITAL NAME

Alburtis AH

REFERRING VET

Dr. Borelli

INVOICE

15746

DATE

12/29/22

was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size containing primarily anechoic content with mild, nonorganized, echogenic gallbladder debris primarily in the mid to caudal lumen and gallbladder neck. No evidence of gallbladder or peripheral gallbladder inflammatory criteria was noted. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.

Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

- Nonspecific hepatopathy - benign, vacuolar hepatopathy, nonobstructive cholestasis, inflammatory / immune-mediated disease, hyperplasia, hematopoiesis, or other hepatopathy possible, no evidence of hepatic or hepatobiliary neoplasia
- Mild gallbladder debris (non-mucocele)
- Sonographically unremarkable bilateral kidneys and urinary bladder
- Nonspecific cranial right adrenal nodule - adenoma, hyperplasia, or lipogranuloma are suspected, potential for emerging nodular adrenal neoplastic criteria i.e., pheochromocytoma, adenocarcinoma, or other are technically possible yet thought less likely

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the lack of clinical signs suggestive of Cushing's Syndrome in addition to normal urine concentration, a functional right adrenal nodule is considered unlikely. Adrenal testing would only be suggested if clinical signs consistent with Cushing's Syndrome arise. Assessment of systemic BP is suggested for evidence of hypertension, which may potentially allude to an emerging right pheochromocytoma. Sonographic monitoring of the right adrenal nodule for evidence of progression is likely ideal.

Screening hepatic FNA cytology, assuming normal clotting status, could be considered primarily to assess for evidence of inflammatory cells. Hepatosupportive medications including Denamarin and



PATIENT

Carly Garner

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

FS

AGE

2014

WEIGHT

26

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

IMAGING PERFORMED BY

Rebekah Jakum, CVT
ARDMS/RVT

HOSPITAL NAME

Alburtis AH

REFERRING VET

Dr. Borelli

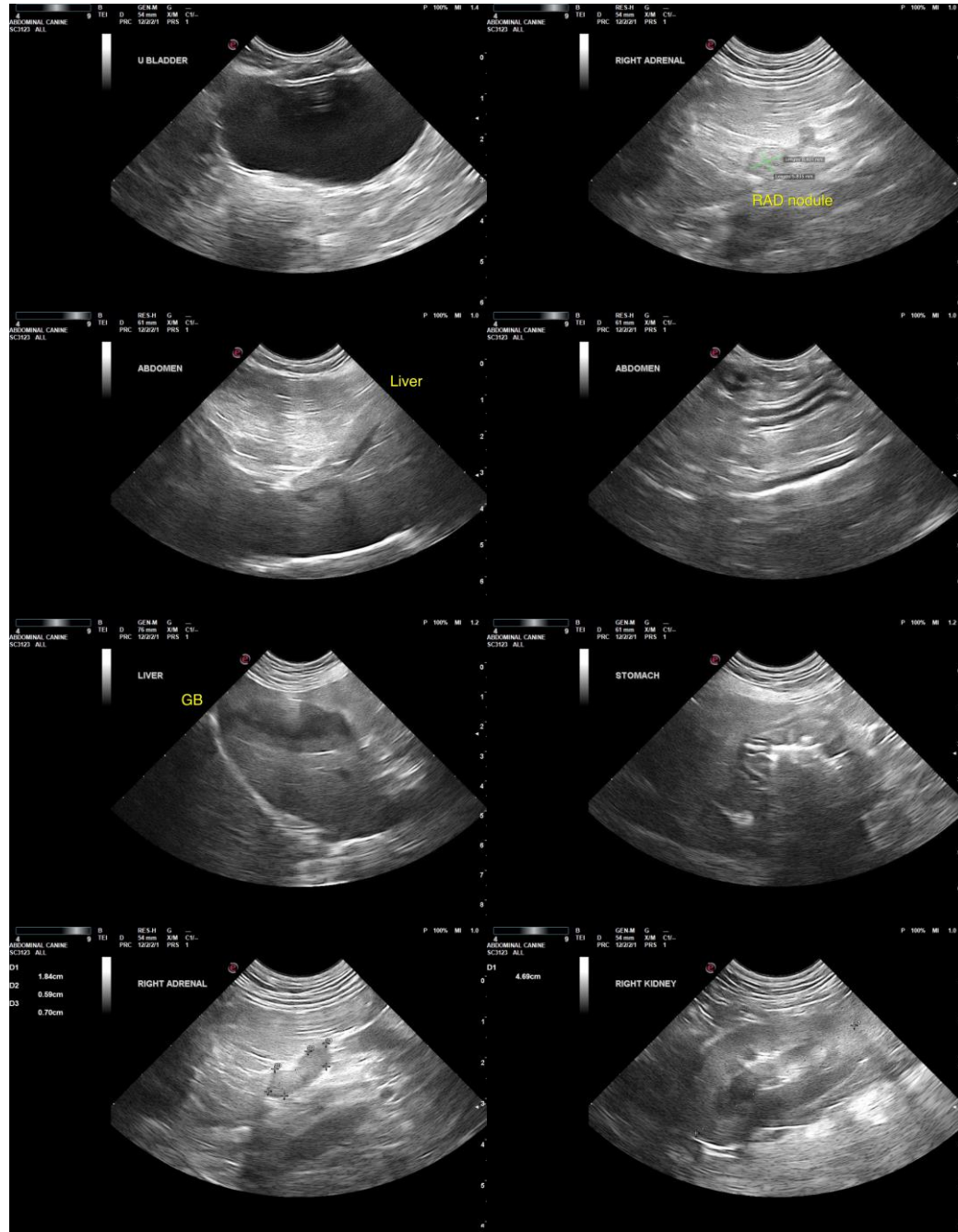
INVOICE

15746

DATE

12/29/22

Ursodiol may prove beneficial. No anesthetic contraindications, given the evidence of normal hepatic functionality.





PATIENT

Carly Garner

SPECIES

Canine

BREED

Shih Tzu Mix

SEX

FS

AGE

2014

WEIGHT

26



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.

R. McKenzie Daniel, DVM, DABVP (Canine/Feline Practice)
mac.daniel@sonopath.com

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

**IMAGING
PERFORMED BY**

Rebekah Jakum, CVT
ARDMS/RVT

HOSPITAL NAME

Alburtis AH

REFERRING VET

Dr. Borelli

INVOICE

15746

DATE

12/29/22