



PATIENT

Frankie Shoemaker

PRESENTING CLINICAL SIGNS

History: Elevated liver values, hind end ataxia (likely LS changes)

Medication: Benazepril, Denamarin

SPECIES

Canine

ALT 421, ALP 489, AST 58, GT 18, BUN 49, Creatinine 1.9

BREED

Hound Mix

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

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

12 years

The area of the aortic trifurcation was free of pathology.

WEIGHT

40 Pounds

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. No evidence of pyelectasia was noted. A lateral cortical infarction was present in the left kidney. The left kidney measured 5.2 cm in length. The right kidney measured 5.6 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 2.2 cm length x 0.71 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.1 cm length x 0.61 cm width at the caudal pole.

IMAGING PERFORMED BY

Rebekah Jakum, CVT
ARDMS/RVT

Spleen

The spleen exhibited primarily finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. Multifocal, well-defined, symmetrical, echogenic nodules were present throughout the cranial to caudal parenchyma. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory or neoplastic changes were not noted. The echogenic nodules tend to trend benign and are most consistent with benign hyperplasia or myelolipomas. An example of a splenic nodule in the caudal spleen measured 0.53 cm diameter. Potential areas of splenic capsule fibrosis are possible.

HOSPITAL NAME

Stanglein VC

REFERRING VET

Dr. Hoffman

Liver/ Gallbladder

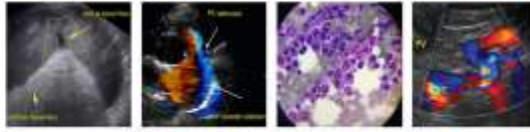
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The liver was subjectively normal in size, structure, and contour. The liver parenchyma was mildly nonuniform and hypoechoic to the spleen with a moderate coarse echotexture and subjective mild to benign parenchymal remodeling. The hepatic and portal vasculature were normal in appearance

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without signs of congestion. Mild, nonorganized, nonmineralized gallbladder debris was noted primarily in the caudal lumen and gallbladder neck. The gallbladder was otherwise normal. The cystic and common bile ducts were normal.

SPECIES *Gastrointestinal*

Canine
 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.

BREED
 Hound Mix
 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.

SEX *Pancreas*

FS
 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.

AGE
 12 years
Free Abdomen

No overt lymphadenopathy or peritoneal effusion was present.

WEIGHT **ULTRASONOGRAPHIC FINDINGS**

40 Pounds

Primary Findings

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 DVM, DABVP
 (Canine and Feline)

- Age-related spleen with probable benign splenic nodules with potential for areas of capsule fibrosis - nodules likely consistent with myelolipomas, nodular hyperplasia, or previous infarctions
- Chronic hepatopathy - subjectively benign, vacuolar hepatopathy, nonspecific chronic hepatitis (cholangiohepatitis, early fibrosis), or other hepatopathy possible with neoplasia considered an unlikely differential diagnosis
- Mild gallbladder debris (non-mucocele)
- Bilateral nonspecific chronic renal changes

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 ARDMS/RVT

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

REFERRING VET

Dr. Hoffman

Further assessment of the liver may include, assuming normal clotting status and using a 25-gauge needle, ultrasound guided hepatic FNA of screening cytology. In addition to Denamarin, Ursodiol is recommended due to the presence of minor gallbladder debris which may indicate non-clinical cholestasis, given the ALP/GGT combination, but also due to its antioxidant and immunomodulatory effect within the liver.

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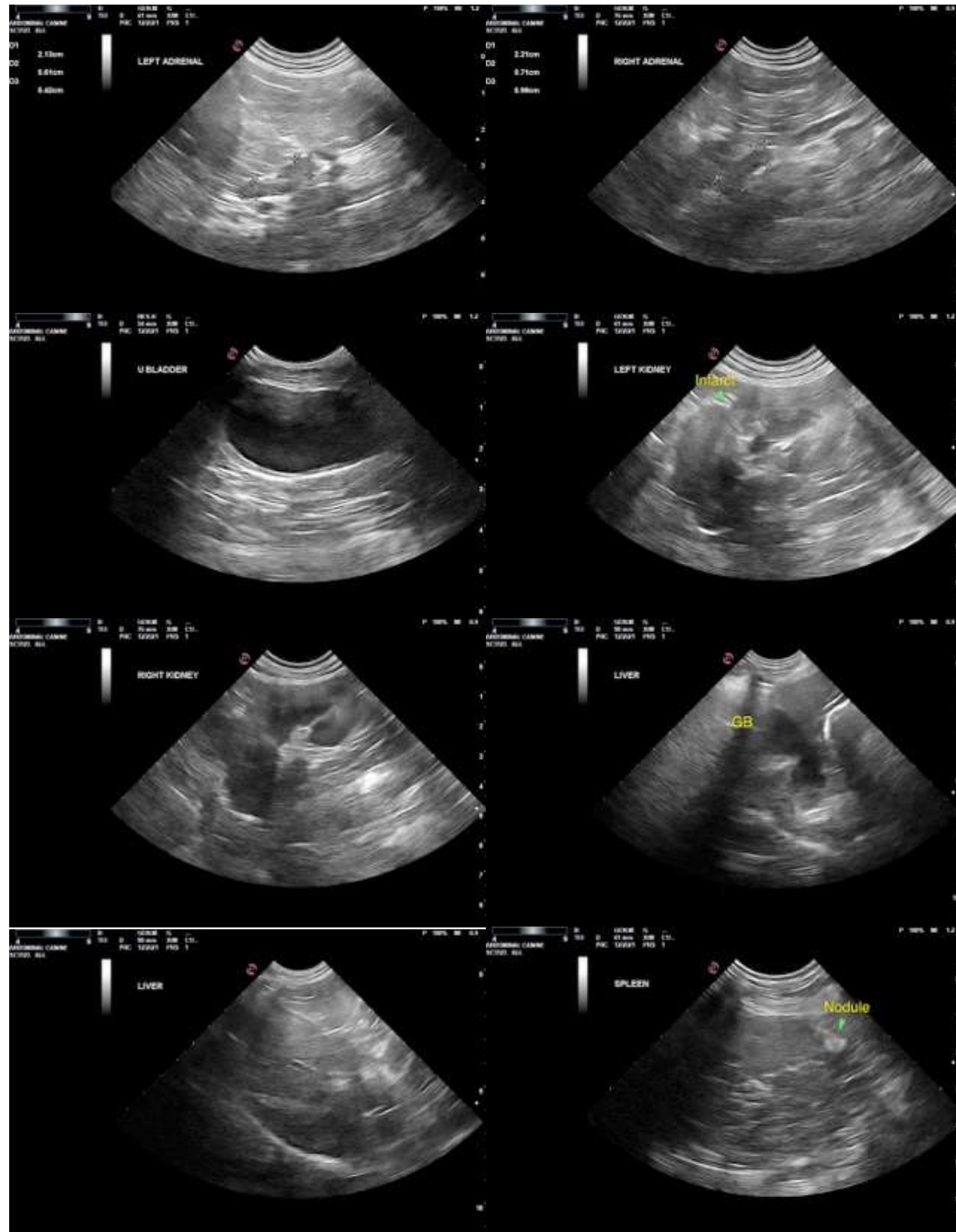
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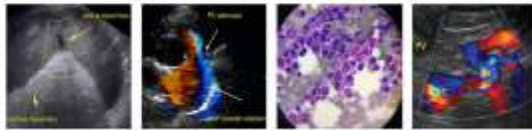
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.



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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.

SPECIES

Canine

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Hound Mix

SEX

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AGE

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WEIGHT

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