



PATIENT PRESENTING CLINICAL SIGNS

Blizzard Kerak Painful abdomen for 8 days, elevated liver enzymes, intermittent appetite Amoxicillin, Flagyl, Denamarin

SPECIES WBC 18.9 with neutrophilia, Platelets 471, ALP 209, ALT 306

Canine **ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

BREED *Urinary System*

Spaniel Mix The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra to a depth of 4.0 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.

SEX MN The residual prostate was symmetrically normal in size with uniform parenchyma and slight coarse echotexture measuring 0.86 cm in diameter.

AGE 2012 The area of the aortic trifurcation was free of pathology.

WEIGHT 45 Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. No evidence of pelvic dilation was present. The left kidney measured 6.1 cm in length. The right kidney measured 6.5 cm in length.

INTERPRETED BY *Adrenal Glands*

R. McKenzie Daniel, DVM, DABVP (Canine and Feline) The left adrenal gland exhibited generalized enlargement and asymmetrical capsule contour with nonhomogeneous, focally mineralized parenchyma. The left adrenal gland measured 4.5 cm length x 2.4 cm width at the cranial pole and 1.40 cm width at the caudal pole. Vascular invasion associated with the left adrenal gland including phrenicoabdominal and caudal vena cava invasion was present. The area of caudal vena cava vascular invasion subjectively measured approximately 3.5 cm length x 1.2 cm width. The vascular invasion was not overtly obstructive to caudal vena cava flow. The overall caudal vena cava appeared to be overtly normal in size with subtle distention around the area of vascular invasion. Potential for caudal vena thrombus is possible yet thought less likely.

HOSPITAL NAME Maple Hills VH The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 2.4 cm length x 0.67 cm width at the caudal pole and was without evidence of enlargement or neoplastic criteria.

REFERRING VET *Spleen*

Dr. Shoop The spleen was overall normal in size and contour with subtle generalized splenic parenchyma heterogeneity. A solitary hypoechoic to subtly expansive nodule was noted in the lateral parenchyma, measuring 0.85 cm diameter. Normal splenic vascularity was noted.

INVOICE 13705 *Liver/ Gallbladder*

DATE 4/21/22 The liver exhibited moderate generalized enlargement. An expansive, nonhomogeneous to cystic mass occupying the majority of the subjective mild to left liver measuring approximately 8.0-9.0 cm in



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diameter, was present. Non-involved hepatic parenchyma exhibited normal echogenicity with mild to moderate coarse echotexture. The gallbladder was non distended in size containing primarily anechoic content with mild hyperechoic gallbladder sludge. The cystic duct and common bile ducts were normal without evidence of dilation.

SPECIES

Canine

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.

BREED

Spaniel 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.

SEX

MN

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

Pancreas

AGE

2012

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

WEIGHT

45

No overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Focally mineralized left adrenal mass with associated vascular invasion
- Generalized hepatomegaly with moderately sized to expansive nonhomogeneous to cystic mass
- Nonspecific yet suspicious splenic nodule

Secondary Findings

- Mild gallbladder debris (non-mucocele)
- Bilateral mild chronic renal changes

INTERPRETED BY

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

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the presence of vascular invasion associated with the left adrenal mass, neoplastic criteria is present, i.e., adenocarcinoma, pheochromocytoma, or other. Multicentric adrenal and hepatosplenic neoplasia are highly possible, although the nonhomogeneous to cystic mass, as well as the focal splenic nodule may indicate separate and potentially benign etiologies.

IMAGING PERFORMED BY

Rebekah Jakum, CVT
ARDMS/RVT

INVOICE

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Assuming normal clotting status, hepatic mass and splenic nodule FNA using a 25-gauge needle could be considered for screening cytology. Assessment of systemic blood pressure for evidence of hypertension, which may allude to a left pheochromocytoma, is recommended. Surgical options appear to be precluded in this case. Unfortunately, an overall unfavorable prognosis is likely indicated.

DATE

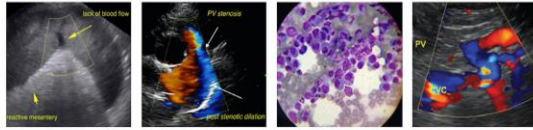
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HOSPITAL NAME

Maple Hills VH

REFERRING VET

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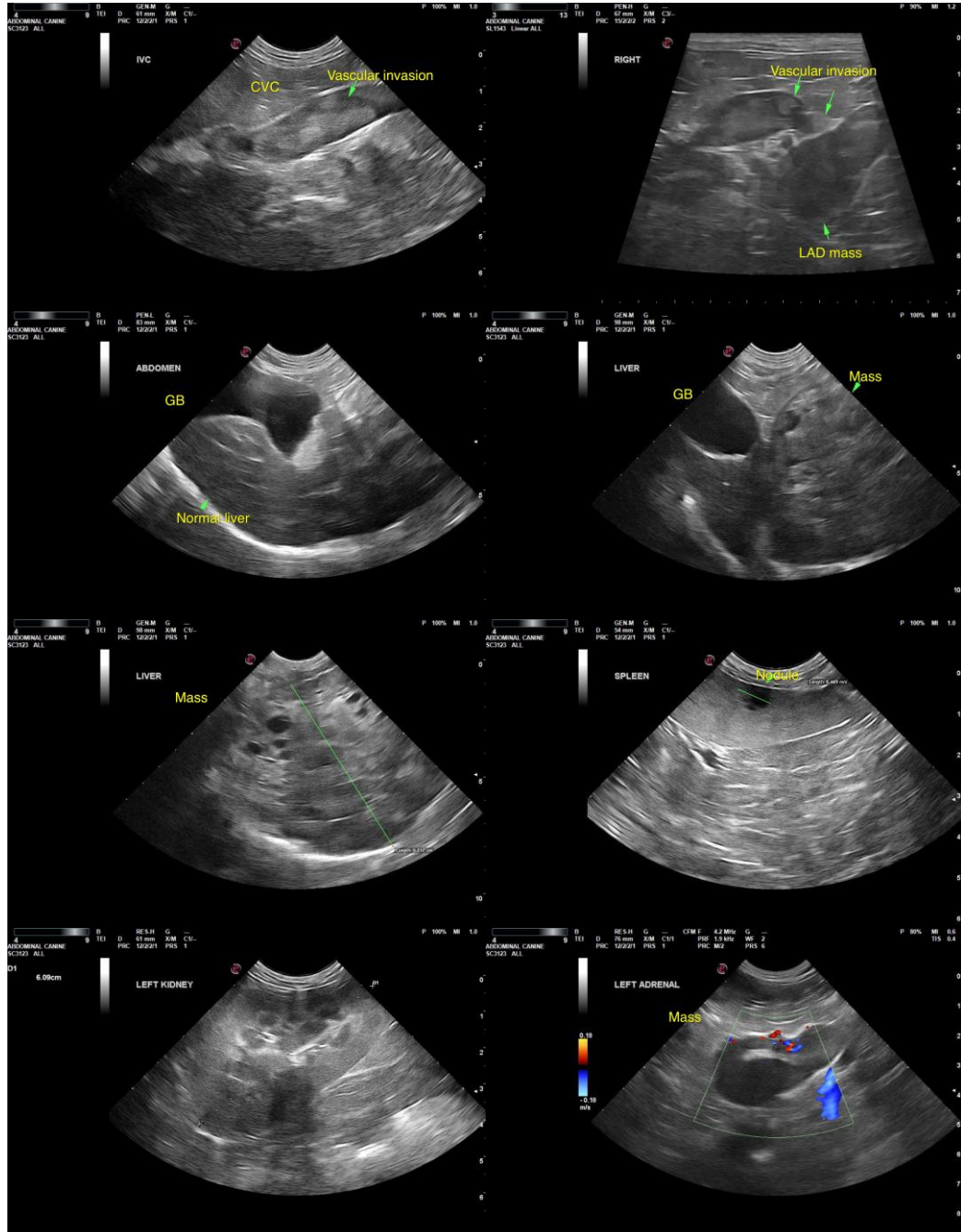
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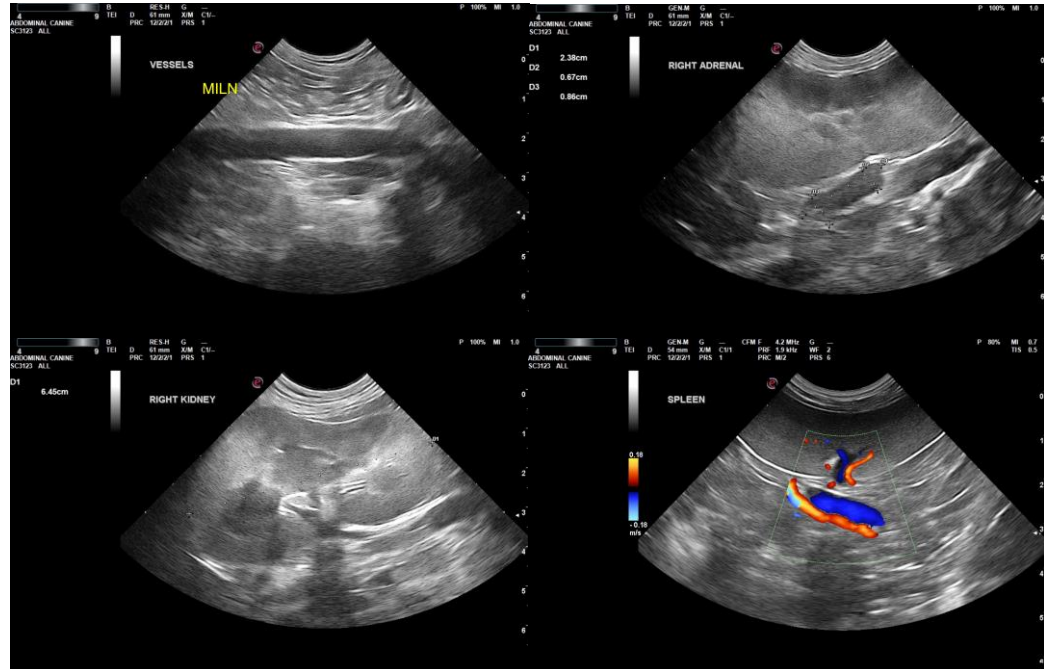
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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