**PATIENT**

Buck Kelly

PRESENTING CLINICAL SIGNS

Asymptomatic, presented for routine bloodwork.
Abnormal PE/Chem/CBC/UA Results: Increased ALT, ALP, platelets, and TP.

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**Urinary System****BREED**

Rat Terrier

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

SEX

Neutered Male

Prostate

The prostate is homogenous and within normal limits for a neutered male.

AGE

13 years

Kidneys

The **left** kidney measures 4.70 cm. The capsule is smooth, however, the cortex is mildly hyperechoic and thicker than usual, and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

WEIGHT

22 Pounds

The **right** kidney measures 5.28 cm. The capsule is smooth, however, the cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. A small anechoic structure, consistent with a cyst is observed. Mineralizations of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. The surrounding mesentery is not hyperechoic.

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

Aortic bifurcation/trifurcation

No abnormalities observed.

IMAGING PERFORMED BY

Sarah Pender, CVT

Adrenal Glands**HOSPITAL NAME**

SVS Imaging QC

The **left** adrenal gland measures 0.52 cm at the cranial pole, 0.41 cm at the caudal pole and 1.67 cm in length. The cranial pole is slightly "plump", but is within normal limits in width. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

REFERRING VET

Dr. Shields

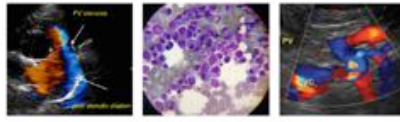
The **right** adrenal gland measures 0.93 cm at the cranial pole, 0.59 cm at the caudal pole and 1.98 cm in length. No abnormalities are noted with the gland's echogenicity or echotexture, however, the cranial pole is rounded, with the presence of a nodule with a subtle hyperechoic region. The latter may be due to fat or fibrosis. There are no obvious signs of neoplasia. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

INVOICE

99335

DATE

4/18/22

**PATIENT****Spleen**

Buck Kelly

The spleen is within normal limits in size, architecture, echotexture, and echogenicity. The capsule is smooth. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

SPECIES

Canine

Liver**BREED**

Rat Terrier

Subjectively, the liver appears mildly enlarged for a dog of Buck's stature. Its borders are smooth and mildly rounded. The liver is mildly heterogeneous with a coarse echotexture. It is mildly hypoechoic to the right kidney. Multiple ill-defined hyperechoic nodules are visualized, in addition to occasional hypoechoic nodules of variable size. Perivascular cuffing is present. No abnormalities are observed with the hepatic vessels visualized.

SEX

Neutered Male

The gall bladder is moderately distended with a mild to moderate amount of echogenic material (sludge) within the lumen. A small amount of the sludge is free floating. In one view, a hypoechoic nodule, measuring 6.4 mm in diameter x 8.8 mm in length, is visualized amongst the sludge, in addition to multiple smaller nodules.

AGE

13 years

However, the intercostal view shows multiple nodules that appear to be arising from the intramural wall, yielding a mass-effect. Some of the nodules are echogenic with irregular borders, for example, 0.63 cm in diameter x 1.10 cm in length. Others have a hypoechoic centre with a "hyperechoic capsule", which are suggestive of "target" lesions. The GB wall is not hyperechoic or thicker than normal,

WEIGHT

22 Pounds

The common bile duct (CBD) is dilated and appears filled with echogenic material in certain views, i.e. soft tissue structures. Severe dilation of the CBD with formation of a "pouch" is observed. A small amount of free floating echogenic debris (thick sludge) is present. are not dilated or tortuous, i.e. there are no signs of an obstruction. The area surrounding the CBD is severely hyperechoic.

INTERPRETED BY

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Gastrointestinal**IMAGING PERFORMED BY**

Sarah Pender, CVT

The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

Subjectively, stippling and mild fogging of the mucosa of the duodenum are observed. The duodenum is within normal limits in thickness, albeit at the high end of the normal reference range.

HOSPITAL NAME

SVS Imaging QC

The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. Abnormally dilated loops of bowel are not observed.

The colonic wall is not thickened and mural detail is considered normal.

REFERRING VET

Dr. Shields

Pancreas**INVOICE**

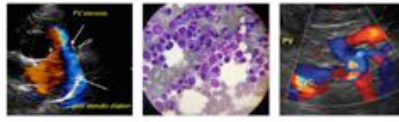
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The **right limb** measures 1.15 cm in diameter. It is heterogeneous, consisting of multiple hyper and a few hypoechoic nodules of variable size. It is diffusely hyperechoic and certain regions are more echogenic than others. The pancreatico-duodenal duct is dilated and echogenic material is present within its lumen.

DATE

4/18/22

Left limb. Similar findings are observed compared to the right, however, they are not as severe.



PATIENT

Other

Buck Kelly

Lymph nodes

SPECIES

Canine

Abdominal effusion is not visualized.

BREED

Rat Terrier

A hypoechoic mass effect, measuring 0.69 cm in diameter x 1.7 cm in length is visualized traversing the portal vein, in the region where the dilated CBD and distended pancreaticoduodenal duct are noted.

SEX

Neutered Male

- The characteristics of the contents within the gall bladder are more suggestive of neoplasia than “sludge”. A biliary adenocarcinoma or carcinoma with metastases to the common bile duct, pancreaticoduodenal duct and the pancreas is possible. Although less likely, one cannot exclude an insulinoma.

AGE

13 years

- The hepatic changes may be multifactorial, consisting of age-related changes, such as nodular hyperplasia, as well as signs of fibrosis and possibly fat. However, neoplasia cannot be excluded.

WEIGHT

22 Pounds

- The rounded, nodular effect of the cranial pole of the right adrenal gland may be due to adrenal hyperplasia secondary to stress (chronic illness) or development of a benign adenoma. Hyperadrenocorticism (HAC) is considered less likely based on the absence of clinical signs. There are no obvious signs of neoplasia.

INTERPRETED BY

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ACVIM

- Mild degenerative changes of both kidneys, which are suggestive of age related degeneration.

IMAGING PERFORMED BY

Sarah Pender, CVT

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Fine needle aspirates of the liver and peripancreatic region may be performed to confirm the diagnosis, however, there is a risk of seeding the abdomen with neoplastic cells.

HOSPITAL NAME

SVS Imaging QC

Referral to a board certified oncologist is recommended to discuss treatment options.

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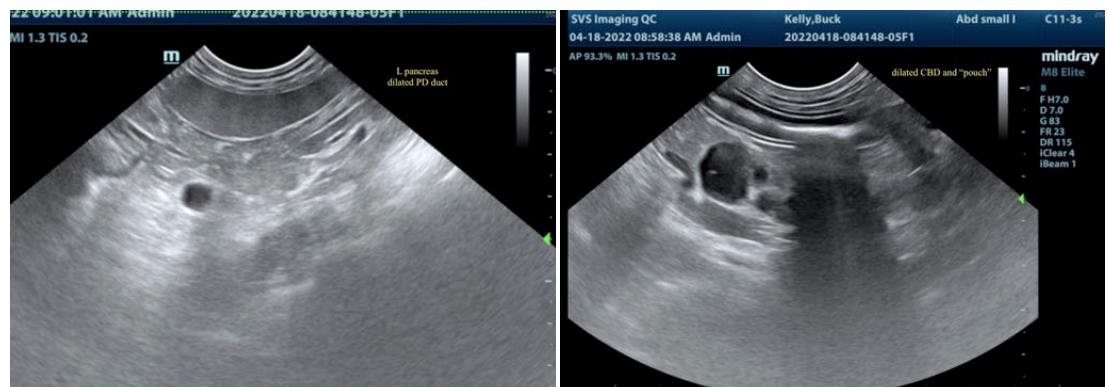
Dr. Shields

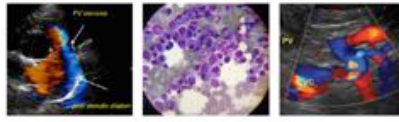
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PATIENT

Buck Kelly

SPECIES

Canine

BREED

Rat Terrier

SEX

Neutered Male

AGE

13 years

WEIGHT

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HOSPITAL NAME

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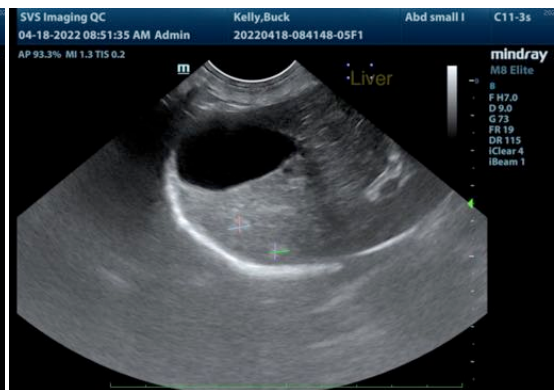
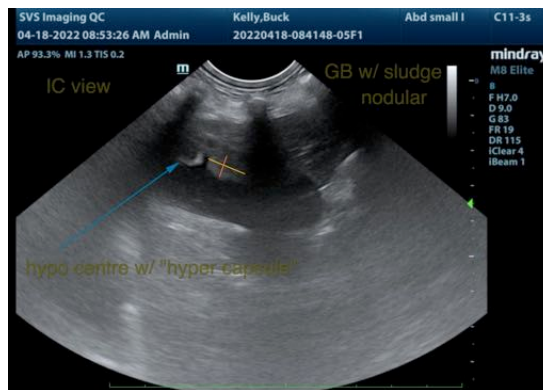
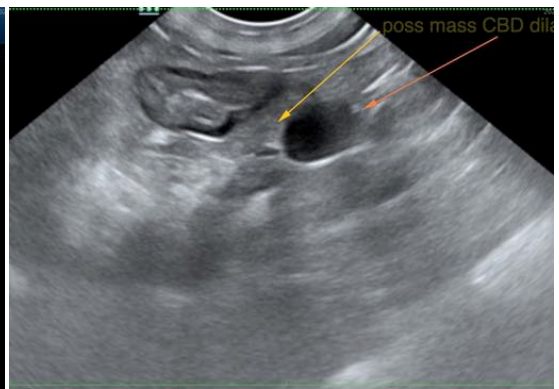
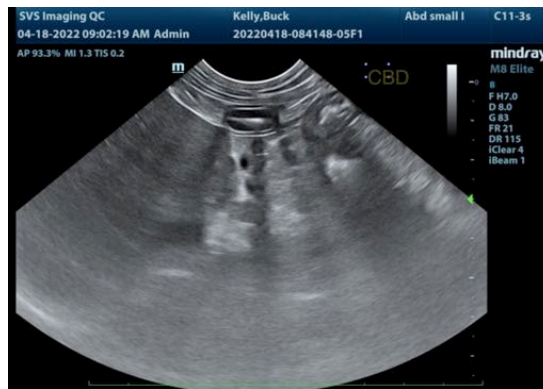
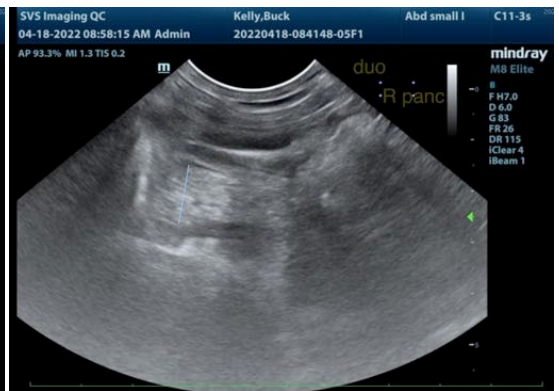
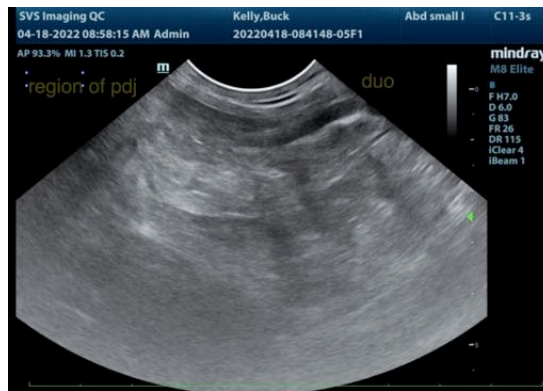
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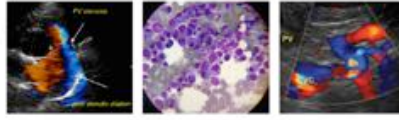
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Neutered Male

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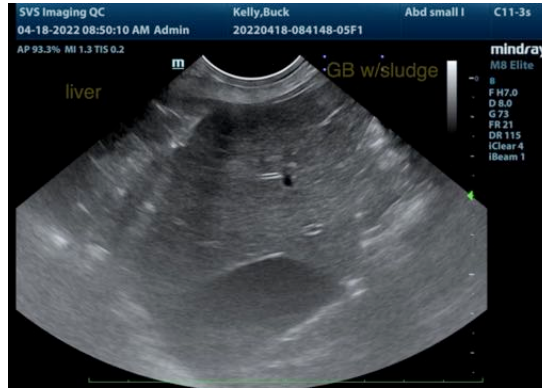
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com