

PATIENT

Bruce Wren

PRESENTING CLINICAL SIGNS

History: enlarged liver on x-rays taken at emergency clinic 7-2-22
Current Medications Galliprant

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** is adequately 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.

BREED

Staffordshire Terrier

The **prostate** is homogenous and measures 1.50 cm; within normal limits for a neutered male.

SEX

Neutered male

Kidneys

The **left kidney** measures 7.18 cm. The capsule is smooth. Its overall architecture, including the definition of the cortico-medullary junction, is preserved. Very mild mineralization of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

AGE

8 years

The **right kidney** measures 7.64 cm. The cortex is isoechoic to the liver. A hyperechoic “band” is noted along the medulla, traversing parallel to the corticomedullary junction, which accentuates the definition of the cortico-medullary junction. Very mild mineralization of the diverticulae and pelvis are present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

WEIGHT

43 kg

Aortic bifurcation/trifurcation No abnormalities observed.

INTERPRETED BY

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Adrenal Glands

The **left adrenal gland** measures 0.57 cm at the cranial pole, 0.59 cm at the caudal pole and 3.27 cm in length. No abnormalities are noted with the gland’s overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

IMAGING PERFORMED BY

Jenna Walsh, CVT

The **right adrenal gland** is not well visualized due to panting artifact and the enlarged vessels in the cranial abdomen.

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Spleen

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.

REFERRING VET

Dr. Mills

Liver

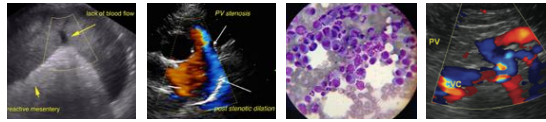
There are no obvious signs of hepatomegaly. The liver’s borders are smooth, but vary between sharp to mildly rounded. It is within normal limits in echogenicity, i.e., it is hypoechoic to the spleen. Focal lesions

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are not observed, however, a false impression of a heterogeneous echotexture is obtained by the hyperechoic walls and dilated hepatic arteries *and* the hyperechoic walls of the portal veins.

The **intrahepatic portal vein** measures 0.88 cm. A **caudal vena cava** is dilated; it measures approximately 1.61 cm in diameter. The **aorta** measures 1.01 cm a few centimeters caudal to where the caudal vena cava was measured (the three vessels are not present in the same image and cannot be measured concurrently).

The cranial vena cava is severely dilated.

The **gallbladder** wall is within normal limits in thickness and echogenicity. A small amount of echogenic material is present within the GB. The cystic and common bile ducts are not observed, however, intrahepatic biliary dilation is not evident, i.e. there are no signs of an obstruction.

Gastrointestinal

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

The small intestinal wall thickness, including the duodenum, 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.

There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.

Pancreas

The **left limb** has a mildly coarse echotexture, which is considered secondary to age related changes, however, previous episodes of pancreatitis cannot be excluded. There are no signs of active pancreatitis or neoplasia.

Only a small portion of the right limb is visualized; it has a coarse echotexture, and is mildly heterogeneous. Age-related changes are suspected, however, mild hypoechogenicity due to acute pancreatitis may be present. There is very mild hyperechogenicity of the surrounding mesentery.

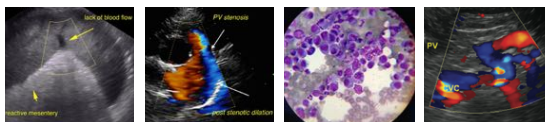
Other

Lymph nodes No abnormalities are observed

Abdominal effusion is not visualized.

Thorax

Pleural effusion is evident upon evaluation of the liver and diaphragm.



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A mildly to moderately heterogeneous mass measuring approximately 13.4 cm is visualized adjacent to the right heart. It is compressing the right atrium and a portion of the right ventricle. Some of the areas may be calcified based on the acoustic shadowing.

SPECIES

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ULTRASONOGRAPHIC FINDINGS

BREED

Staffordshire Terrier

- Intrathoracic mass, possibly calcified, causing compression of the right heart and increased pressure of the vena cava and intrahepatic vessels. Pleural effusion likely due to compression of the intrathoracic duct.
- Differential diagnoses include thymoma, thyroid carcinoma (if calcification present), lymphoma, etc.
- Pancreatitis of the right limb due to edema may be present, in addition to age-related changes.
- Gallbladder sludge is not likely clinically significant.
- Kidneys: Possible glomerulonephritis or interstitial nephritis of the right kidney.
- Cardiac function looks within normal limits, however, measurements not performed.

SEX

Neutered male

AGE

8 years

WEIGHT

43 kg

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Thoracic radiographs (three views) to assess for pulmonary metastases

Palpate cervical neck to thoracic inlet

Baseline blood work and urinalysis.

+/- Ultrasound of cervical region

Referral to a board certified oncologist for further diagnostics, fine needle aspirates of mass, etc. is suggested to discuss different treatment protocols, for example, thymomas can be surgically excised, lymphoma may be treated, etc. Intralesional chemotherapy also possible for certain neoplasms.

Palliative care is possible with analgesics and non-steroidal anti-inflammatories, such as meloxicam or deracoxib, both of which have anti-neoplastic effects, may be prescribed, in addition to gabapentin.

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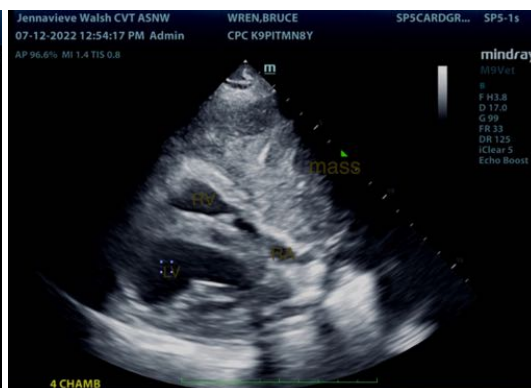
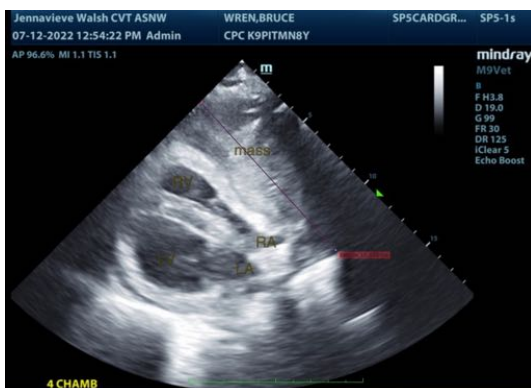
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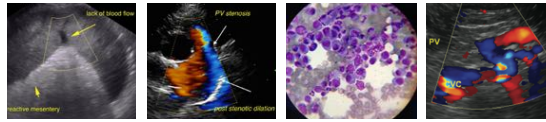
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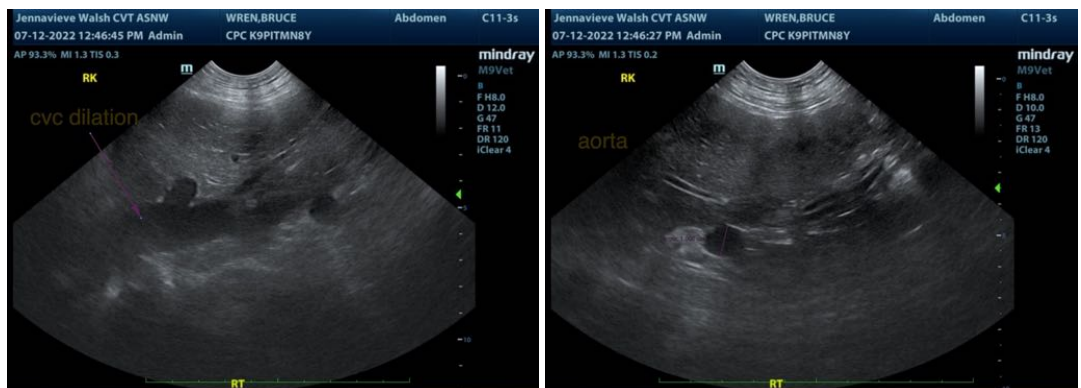
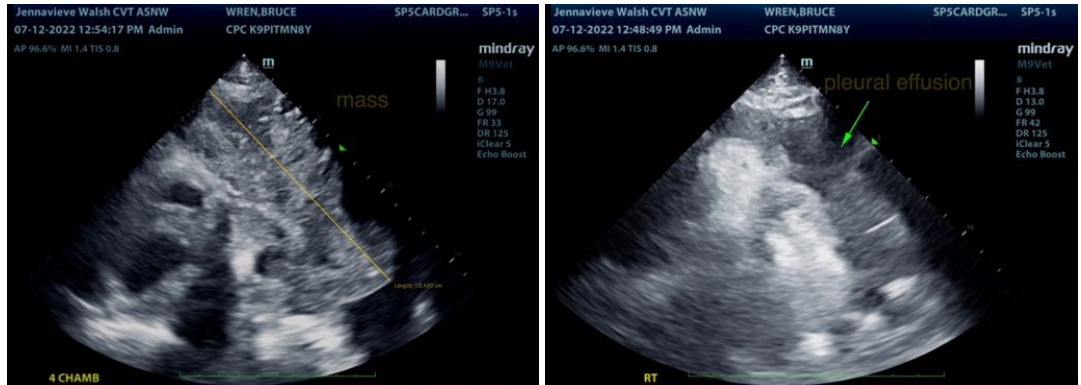
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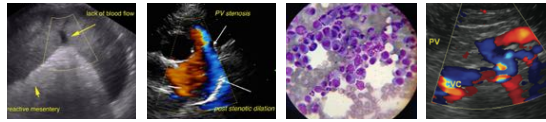
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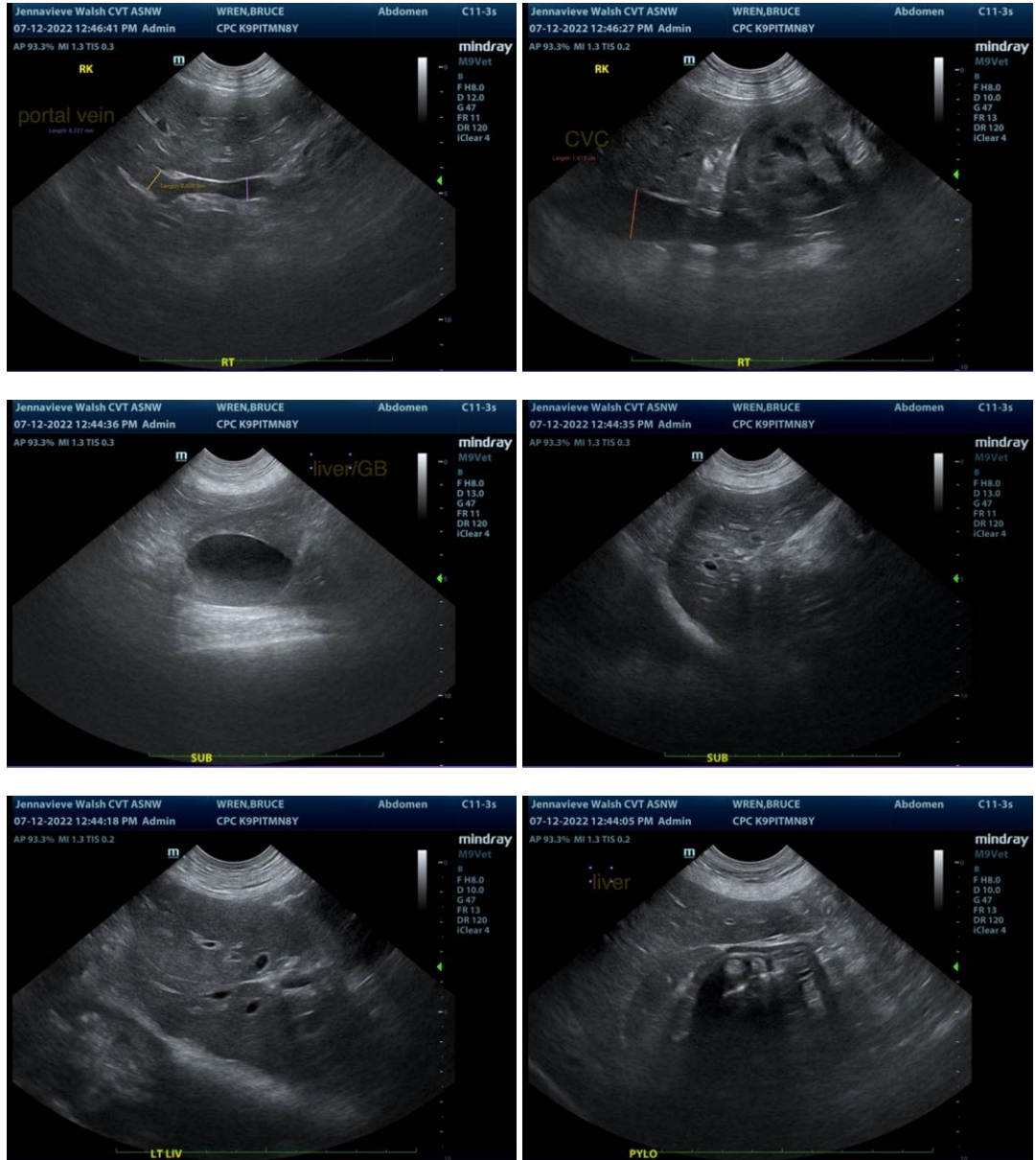
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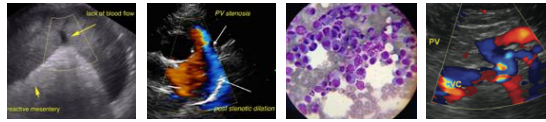
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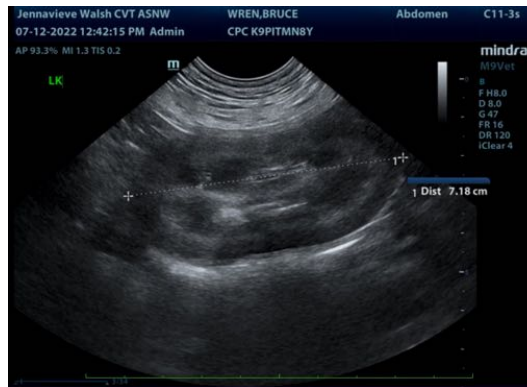
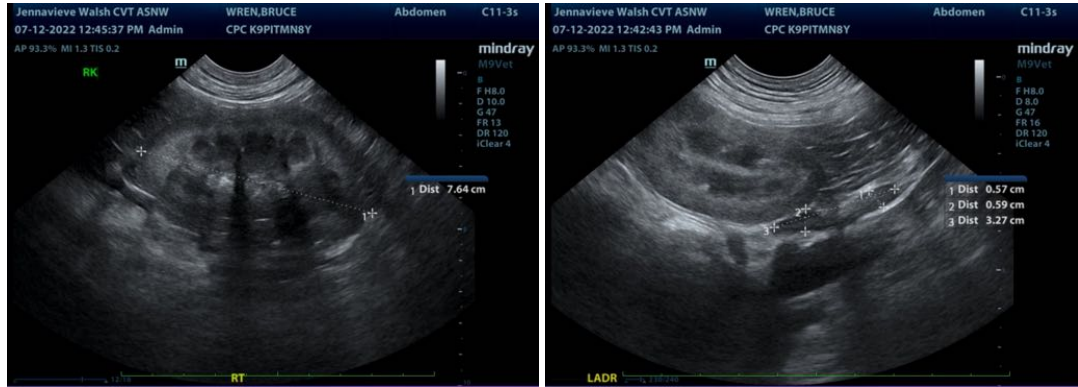
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

IMAGING PERFORMED BY

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