**PATIENT**Quirkey Wisniewski  
252818**SPECIES**

Canine

**BREED**

Greyhound

**SEX**

Neutered Male

**AGE**

11 Years 7 Months

**WEIGHT**

36.7 kg

**INTERPRETED BY**Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM**IMAGING  
PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

WVRC - Dr. Sevide

**INVOICE**

39927

**DATE**

7/28/22

**PRESENTING CLINICAL SIGNS**

Quirkey presented to WVRC on 7/27/22 for evaluation of coughing and acting painful. He is breathing hard and panting. Quirkey has been coughing as of this morning. When they got home last night he was panting but kept panting throughout the night. He refused treats and then started coughing at 1:30 am. Got up went to bathroom which was normal but he was painful.

Abnormal PE/Chem/CBC/UA Results: CBC: WBC 17.6 (H), Neu 16.4 (H), Lym 474 (L), MPV 21.2 (H) -> stress leukogram Chem: Mg++ 1.4 (L), K+ 3.5 (L), Na:K+ 41 (H), TP 7.2 (H), Glob 4.0 (H), AST 48 (H), T.Bil 0.5 (H), Chol 403 (H) UA: Dark yellow, trace ketones, 1+ bld, U-prot: 2+, RBC 6-10 (H), rare struvite Urine C/S: submitted 4DX: Negative TXR: 2 view: Cardiac silhouette (appears slightly enlarged however is typical variant for breed), trachea, and pulmonary structures appear normal. No obvious pleural/pulmonary nodules/fluid noted. Visible cranial abdominal and orthopedic structures appear normal. Rads sent out for routine consult. -- Radiographs were taken after fluid resuscitation which may contribute to the plumpness of his vessels

**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.

The **prostate** is homogenous and measures 1.14 cm; within normal limits for a neutered male.

**Kidneys**

The **left kidney** measures 7.40 cm. The capsule is smooth. A very mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations and very small nephroliths of the diverticulae and pelvis are present, without evidence of pyelectasia. The surrounding mesentery is not hyperechoic.

The **right kidney** measures 7.68 cm. Findings are similar to the left kidney.

**Aortic bifurcation/trifurcation** No abnormalities observed.

**Adrenal Glands**

The **left adrenal gland** measures 1.04 cm at the cranial pole, 0.69 cm at the caudal pole. The cranial pole is enlarged and "plump", however, a discrete mass or nodule is not visualized. An ill-defined hyperechoic region is noted adjacent to the phrenico-abdominal vein on the side of cranial pole. The affected area is suggestive of fat, mineralization, and/or fibrosis. The and surrounding vasculature and mesentery are unremarkable.

The **right adrenal gland** measures 0.75 cm at the cranial pole, 0.77 cm at the caudal pole. The diameter at the centre of the gland is 1.10 cm. The gland then tapers as it extends towards the poles, both of which are slightly enlarged compared to the normal reference range. The gland has the shape of a "candy enveloped in a wrapper with wings on either side". Despite its shape, an obvious mass or nodule is not noted and no abnormalities are observed with the gland's echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

**Spleen**

Splenomegaly is suspected. The capsule is smooth. A slightly hypo (almost isoechoic) nodule is noted mid-body (1.08 cm in diameter x 0.96 cm in length). Its overall echogenicity within normal limits (it is hyperechoic to the liver and kidneys), however, a mildly heterogeneous or mottled echotexture is

**PATIENT**Quirkey Wisniewski  
252818**SPECIES**

Canine

**BREED**

Greyhound

**SEX**

Neutered Male

**AGE**

11 Years 7 Months

**WEIGHT**

36.7 kg

**INTERPRETED BY**Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

WVRC - Dr. Sevide

**INVOICE**

39927

**DATE**

7/28/22

observed with occasional hypoechoic nodules scattered throughout the parenchyma. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.

**Liver**

Mild hepatomegaly may be present, however, this is better characterized at the time of the ultrasound or radiographically. The liver's borders are smooth and sharp. It is homogeneous and within normal limits in echogenicity. Focal lesions are not observed and no abnormalities are noted with the hepatic vessels other than mildly prominent walls of the portal veins.

The **gallbladder (GB)** is mildly distended with a moderate amount of free floating, gravity-dependent and inspissated echogenic material (sludge). The GB wall is mildly thickened 2.0 mm and mildly hyperechoic. The cystic and common bile ducts cannot be followed due to the large amount of gas in the surrounding GI tract. There are no obvious signs of an obstruction.

**Gastrointestinal**

The gastric wall is within normal limits in thickness and the wall layers are well defined.

The small intestinal wall thickness (jejunum = 0.39 cm, 0.40 cm), including the duodenum, is within normal limits and the definition of the wall layers is preserved.

A large amount of gas is present in the small intestines with "ineffective" peristalsis, i.e. a "to and fro" motion

The colonic wall is not thickened and mural detail is considered normal. Formed stools are present in the colon.

**Pancreas**

Hypoechoic nodules of variable size are observed throughout the small portion of the **left limb** visualized. Nodular hyperplasia is suspected. No overt abnormalities are otherwise observed with its architecture or contours. There is no evidence of hyperechogenicity of the surrounding mesentery, i.e., signs of active pancreatitis are not present.

The **right limb** has a mildly coarse echotexture, consisting of ill-defined hyperechoic regions scattered throughout the parenchyma. Fibrosis due to age-related changes, secondary to previous episodes of pancreatitis, mineralization and amyloid deposition may be the cause of the changes observed, however, overt signs of active pancreatitis or neoplasia are not appreciated.

**Other****Lymph nodes**

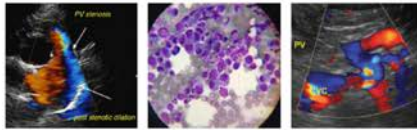
*Medial iliac lymph nodes:* Within normal limits (WNL)

*Mesenteric lymph node:* very mildly enlarged, measuring 0.60 cm in diameter x 5.57 cm in length. No abnormalities are observed with its echogenicity echotexture or architecture.

**Abdominal effusion** is not visualized.

**ULTRASONOGRAPHIC FINDINGS**

- **Gastrointestinal (GI) tract:** A large amount of *gas* in the GI tract with a *mild ileus*, possibly causing cramps and abdominal discomfort. No other abnormalities are observed.
- **Spleen:** *Splenomegaly* with a slightly *mottled appearance* and *occasional hypoechoic nodule*. Extramedullary hematopoiesis with nodular and lymphoid hyperplasia and possibly splenitis or

**PATIENT**Quirkey Wisniewski  
252818**SPECIES**

Canine

**BREED**

Greyhound

**SEX**

Neutered Male

**AGE**

11 Years 7 Months

**WEIGHT**

36.7 kg

reactive hyperplasia are considered more likely differential diagnoses compared to neoplasia. Although a round cell tumour (lymphoma, mast cell tumour, etc.) is possible, it is considered less likely. A fine needle aspirate is required to obtain a definitive diagnosis.

- **Gallbladder:** *Cholecystitis* is suspected. A *suppurative component* cannot be excluded. Choleliths are not visualized and there are no obvious signs of an obstruction.
- **Liver:** Although mild hepatomegaly is suspected, no obvious abnormalities are noted with the architecture, echogenicity or echotexture.
- **Adrenal glands:** *Bilateral adrenomegaly* (left more severe than right). Abnormal architecture of the right gland is present; although an obvious mass or nodule is not visualized, one cannot exclude an underlying neoplasm, (pheochromocytoma or adenocarcinoma). Severe and acute hypertension associated with a pheochromocytoma is an unlikely cause of Quirkey's clinical signs, however, evaluation of his *arterial blood pressure* is suggested. *Adrenal hyperplasia* due to stress is considered the most likely cause of the bilateral adrenomegaly, with cancer much lower on the list of differential diagnoses.
- **Pancreas:** Signs of *nodular hyperplasia* in left limb. *Fibrosis* of the right limb due to age-related changes, secondary to previous episodes of pancreatitis, mineralization and amyloid deposition may be the cause of the changes observed, however, overt signs of active pancreatitis or neoplasia are not appreciated.
- **Kidneys:** Mild *age-related* changes are observed.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS****INTERPRETED BY**Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

The following are suggested/recommended

Analgesia to exclude visceral pain (fentanyl CRI, methadone, gabapentin)

Arterial blood pressure, with the client present, once Quirkey's abdominal discomfort is well controlled.

+/- Fine needle aspirate of spleen; although only if no clinical improvement as sonographic changes are more suggestive of extramedullary hematopoiesis, nodular and lymphoid hyperplasia and possibly splenitis compared to neoplasia.

Obtaining a history regarding signs of GERD from the client is suggested to determine if GB sludge is significant, whether a chronic enteropathy may be present and whether further diagnostics for GI abnormalities are warranted.

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

Possible aspiration pneumonia to explain the cough if suffering from GERD or possibly vomited or regurgitated without the clients realizing it.

**REFERRING VET**

WVRC - Dr. Sevde

If signs of GERD are present currently, 10-14 day trial with famotidine or omeprazole (0.7-1 mg/kg PO q12h)

If history of signs of GERD,

**INVOICE**

39927

- Evaluation of fasting triglycerides to exclude hyperlipidemia as underlying cause of or contributor to gallbladder sludge

**DATE**

7/28/22

- ursodeoxycholic acid may be required depending on the patient's history. If ursodeoxycholic acid (Ursodiol) is pursued, a total dose of 10-15 mg/kg *divided* twice daily is suggested. The dose should be gradually uptitrated (over a few weeks) until the maximum dose is achieved to

**IMAGING PERFORMED BY**

SVS Mobile Imaging CT 262-366-5970  
fredgromalak@gmail.com



**PATIENT**

Quirkey Wisniewski  
252818

**SPECIES**

Canine

**BREED**

Greyhound

**SEX**

Neutered Male

**AGE**

11 Years 7 Months

**WEIGHT**

36.7 kg

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

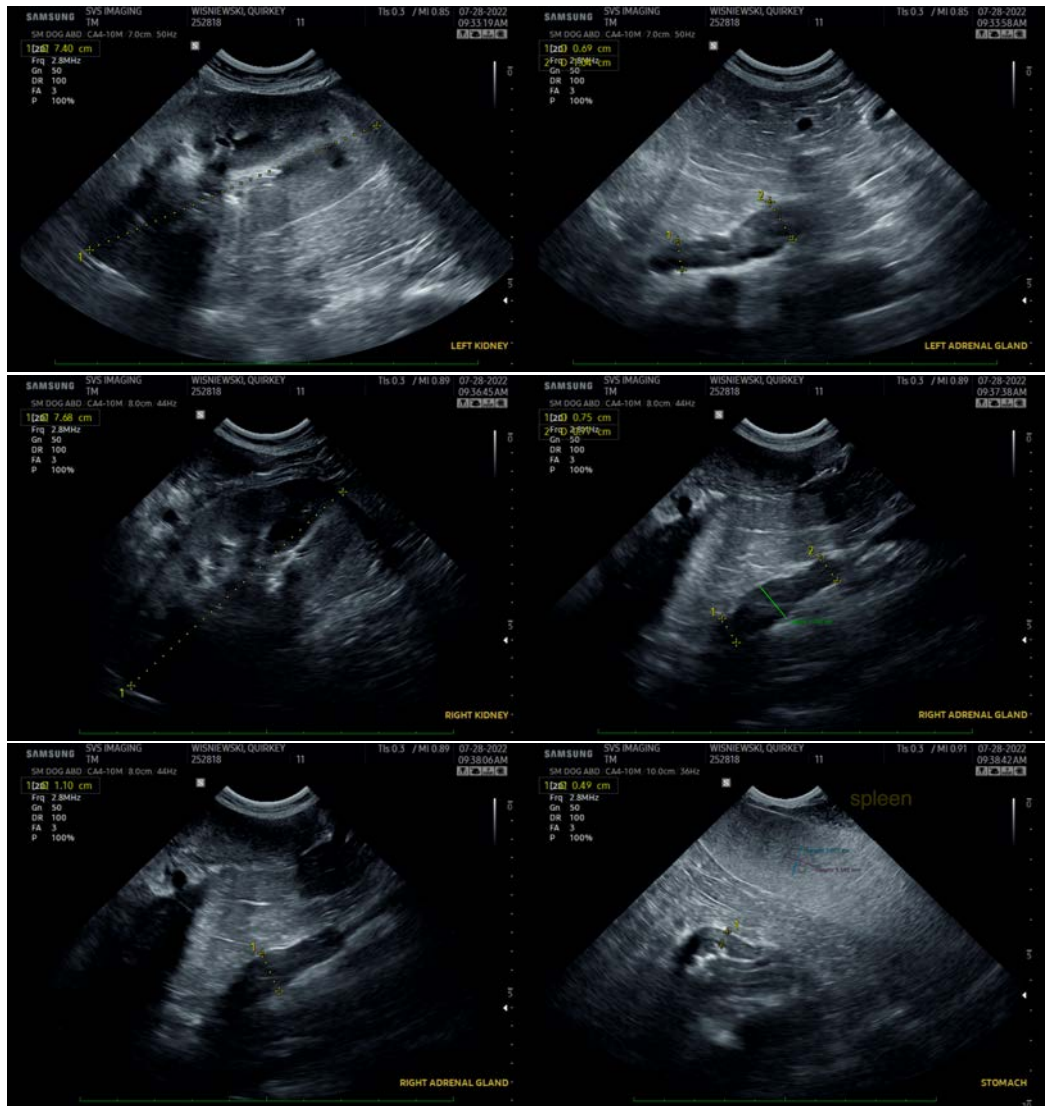
WVRC - Dr. Sevide

avoid GI side effects. Always administer with a meal to decrease risks of GI side effects. A sonographic re-evaluation of the gallbladder is strongly suggested 2-4 months following the initiation of ursodeoxycholic acid to ensure it is effective.

+/- spec cPL (depending on clinical status and evolution)

Small, frequent meals

Diet change depending on results of above tests.



**INVOICE**

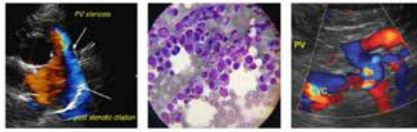
39927

**DATE**

7/28/22

**IMAGING PERFORMED BY**

SVS Mobile Imaging CT 262-366-5970  
fredgromalak@gmail.com



**PATIENT**

Quirkey Wisniewski  
252818

**SPECIES**

Canine

**BREED**

Greyhound

**SEX**

Neutered Male

**AGE**

11 Years 7 Months

**WEIGHT**

36.7 kg

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING  
PERFORMED BY**

Tom McNeill

**HOSPITAL NAME**

SVS Imaging CT

**REFERRING VET**

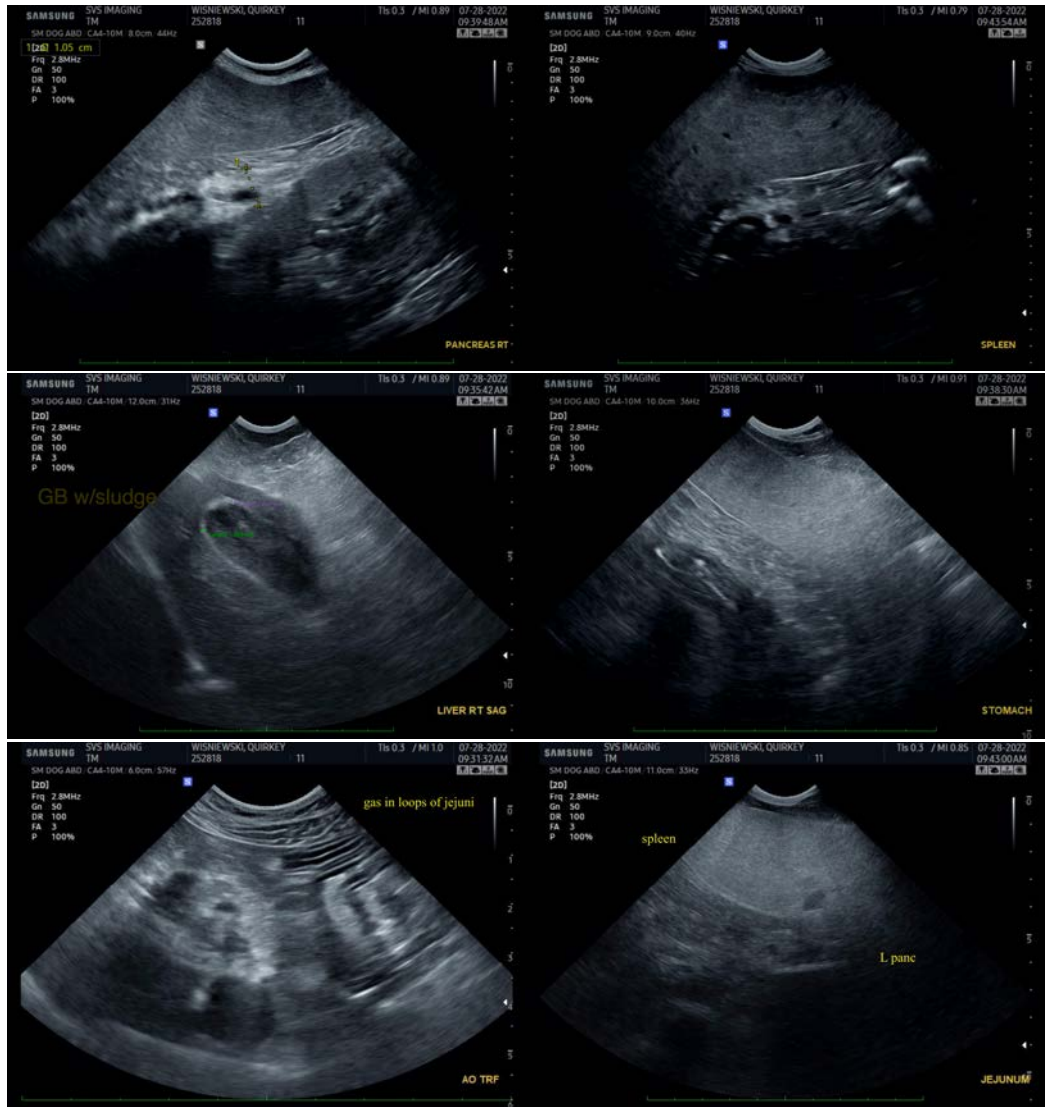
WVRC - Dr. Sevide

**INVOICE**

39927

**DATE**

7/28/22



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](mailto:Lisa.Carioto@sonopath.com)