



PATIENT

Sophie O'Neill

PRESENTING CLINICAL SIGNS

History: Hx of Vomiting and Diarrhea

SPECIES

Canine

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

BREED

Border Collie Mix

Kidneys

SEX

Spayed female

The **left kidney** measures 5.88 cm. The capsule is smooth. A mild loss of the normal definition of the cortico-medullary junction is present. Mild mineralization of the diverticulae and pelvis is present, without evidence of nephroliths or pyelectasia. Blood flow is within normal limits. The surrounding mesentery is not hyperechoic.

AGE

9 years

The **right kidney** measures 6.61 cm. The capsule is smooth. A mild loss of the normal definition of the cortico-medullary junction is present. Mild mineralization of the diverticulae and pelvis is present, without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

WEIGHT

64.6 lbs

Aortic bifurcation/trifurcation No abnormalities observed.

Adrenal Glands

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

The **left adrenal gland** measures 0.45 cm at the cranial pole, 0.37 cm at the caudal pole. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature and mesentery are unremarkable.

The **right adrenal gland** measures 0.54 cm at the cranial pole, 0.54 cm at the caudal pole. 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

Dr. Velasco

Spleen

HOSPITAL NAME

Bethany Family Pet
Clinic

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. Velasco

Liver

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There are no obvious signs of hepatomegaly and its borders are smooth and sharp. The liver is homogeneous, but mildly hyperechoic, i.e. it is isoechoic to the falciform fat. A mass effect is noted in one of the lobes. It is comprised of anechoic, lacunae, which are surrounded by a subtle hyperechoic capsule. The entire region (encapsulated area) measures 2.36 cm in diameter x 5.04 cm in length. The lacunae portion of the lesion measures approximately 1.56 cm in diameter x 2.64 cm in length. This is most consistent with a cyst-like lesion, e.g., cystadenoma. No abnormalities are observed with the hepatic vessels.

DATE

7/16/22



PATIENT	The gallbladder (GB) is mildly dilated. A trivial amount of echogenic material is present within the GB. The portions of the cystic and/or common bile ducts observed are not dilated or tortuous, i.e. there are no signs of an obstruction.
Sophie O'Neill	
SPECIES	Gastrointestinal
Canine	A large amount of gas and fluid are present in the lumen of the stomach. The gastric wall is mildly thickened (0.62 cm). The wall layers are well defined, however, multifocal areas of fogging of the mucosa are present, while other areas show prominent and fogging of the muscularis or a prominent submucosa. An obvious ulcer or erosions are not visualized. The mesentery surrounding the body of the stomach is hyperechoic where gastric fluid has accumulated and the submucosa is prominent. Peristalsis is decreased.
BREED	
Border Collie Mix	
SEX	Duodenum : Within normal limits regarding wall thickness and the definition of the wall layers. Gas and fluid are present within the lumen.
Spayed female	Jejunum: 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.
AGE	The colonic wall is not thickened and mural detail is considered normal.
9 years	There are no obvious signs of a mass, foreign body, infiltrative disease or an obstruction in the gastrointestinal tract.
WEIGHT	
64.6 lbs	
INTERPRETED BY	Pancreas
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	Right limb/body: A well-circumscribed hyperechoic nodule, measuring 2.13 mm in diameter x 2.22 mm in length is noted amongst the parenchyma. Nodular regeneration, a lipoma and fibrosis are possible differential diagnoses. Subjectively, it is mildly hypoechoic with smooth contours. The surrounding mesentery is mildly to moderately hyperechoic. It is difficult to determine if the latter is due to gastric inflammation.
IMAGING PERFORMED BY	The pancreas has a very 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.
Dr. Velasco	
HOSPITAL NAME	Other
Bethany Family Pet Clinic	Lymph nodes No abnormalities are observed
REFERRING VET	Abdominal effusion is not visualized.
Dr. Velasco	
INVOICE	ULTRASONOGRAPHIC FINDINGS
31743	<ul style="list-style-type: none"> Gastrointestinal tract: Mild ileus of the stomach with changes suggestive of inflammation. One cannot determine if the inflammation is due to Sophia's vomiting episodes or if a component of the changes are due to an underlying chronic gastroenteropathy, e.g., inflammatory bowel disease, food intolerance, dysbiosis, etc. Although the definition of the wall layers is preserved, one cannot exclude infiltrative disease definitively, (e.g., lymphoma or other round cell tumour), without performing tissue biopsies.
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SPECIES

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Border Collie Mix

SEX

Spayed female

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9 years

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- **Pancreas:** Age-related changes are present, in addition to mild changes suggestive of a smoldering pancreatitis. Signs of neoplasia are not appreciated.
- **Liver:** A vacuolar hepatopathy secondary to stress and chronic illness is suspected. The cyst-like mass is most likely a benign cystadenoma. A cystadenocarcinoma is considered unlikely.
- **Gallbladder:** Trivial amount of gallbladder sludge, which is most likely clinically insignificant. However, gastroesophageal reflux disease (GERD) and esophagitis, can occur in some patients, therefore, obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid or proton pump inhibitor may be required.
- **Kidneys:** Very mild age-related changes are noted. Signs of glomerulonephritis and pyelonephritis are not visualized.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

*Hypoadrenocorticism cannot be excluded despite the adrenal glands within the normal reference range, therefore, a baseline cortisol is strongly recommended.

Deworming, such as fenbendazole, even if she receives monthly heartworm prevention

Evaluation of Sophia's history for signs of gastroesophageal reflux disease (GERD) and pica

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

TLI, serum cobalamin, folate, +/- spec cPL, to exclude malabsorptive and maldigestive diseases, including exocrine pancreatic insufficiency. Note, TLI may be falsely elevated if pancreatitis is present. A fasted sample is recommended for this test.

Supplementation with cobalamin

Hill's Biome diet or addition of fibre (psyllium) to current diet (if well balanced)

Diet trial (veterinary prescription brand hypoallergenic, novel protein, or ideally, a hydrolyzed diet). The latter are low in fibre, therefore, supplementation with psyllium may be required.

+/- Administration of a paste containing montmorillonite clay, with or without a synbiotic (product that contains both a pre and probiotic)

Endoscopy and biopsies of the upper and lower GI tract diet, if no response to deworming and diet trials.



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Border Collie Mix

SEX

Spayed female

AGE

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**IMAGING
PERFORMED BY**

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HOSPITAL NAME

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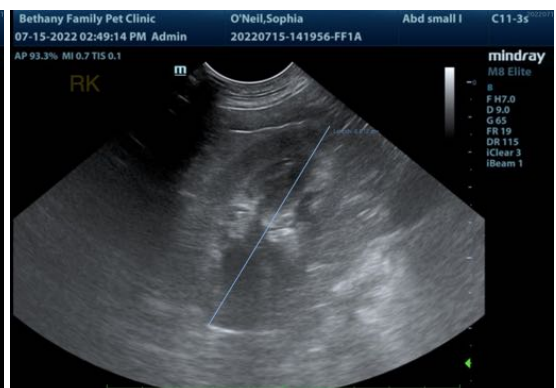
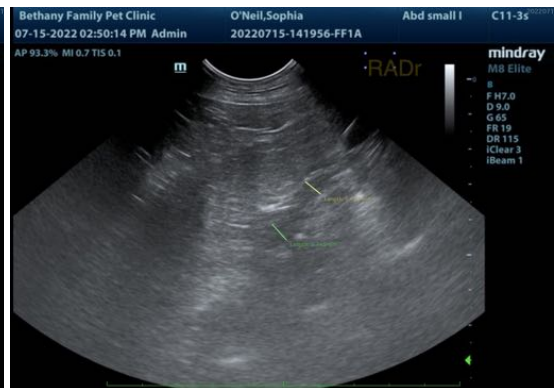
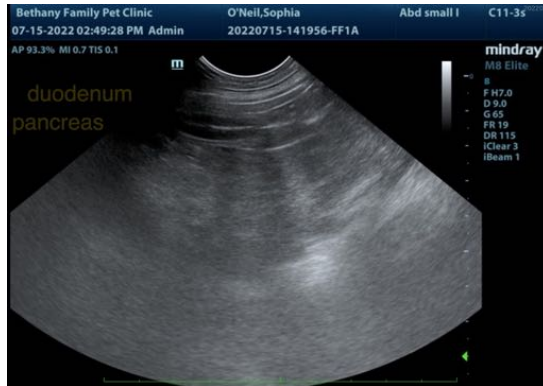
Dr. Velasco

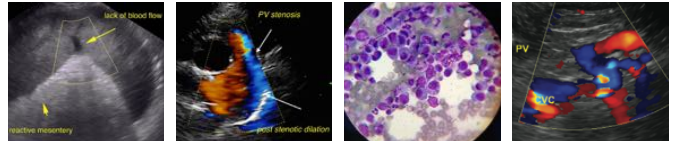
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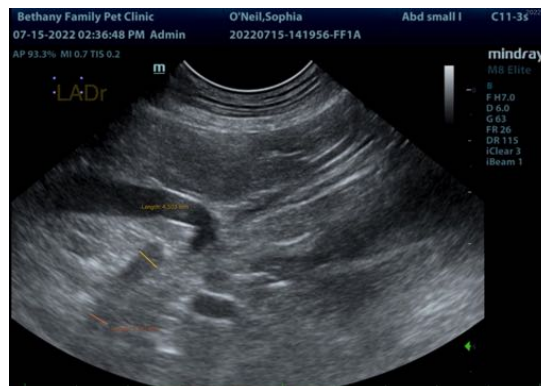
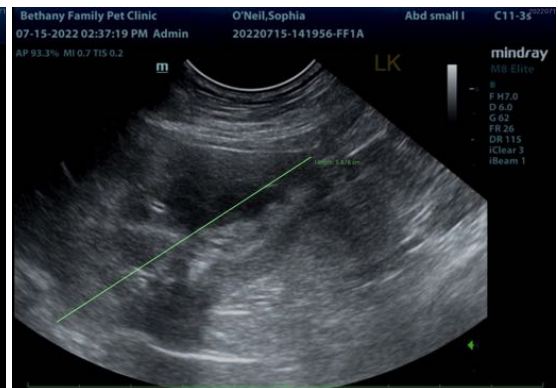
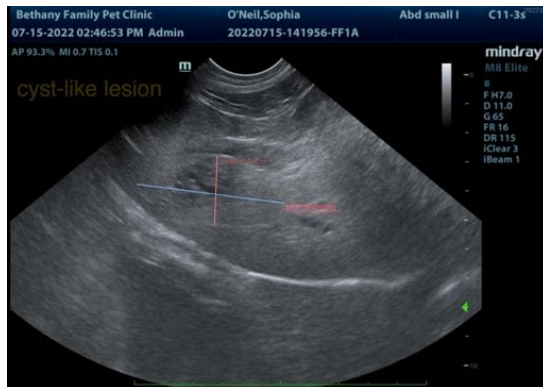
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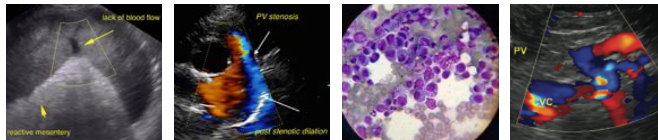
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

SPECIES

Canine

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.

BREED

Border Collie Mix

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

Lisa.Carioto@sonopath.com

SEX

Spayed female

AGE

9 years

WEIGHT

64.6 lbs

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