



PATIENT PRESENTING CLINICAL SIGNS

Luna Acocella Mammary adenocarcinoma removed 2/1/2022, concern for possible abd. mets or lymph node involvement. Current meds: Novox 75mg, Gabapentin, Niacinamide, Tetracycline
 Abnormal PE/Chem/CBC/UA Results: 5/5/22- SDMI 51 (14 H); Bun 32 (27 H); ALB 1.5 (2.3 L); ALT 159 (125 H). U/A- USG 1.009

SPECIES

Canine

BREED

Pointer Mix

SEX

Spayed Female

AGE

7 years

WEIGHT

Not given

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Animal Hospital of
Sussex County

REFERRING VET

Dr. Obsharski

INVOICE

30234

DATE

5/10/22

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is inadequately filled, thereby affecting the ability to accurately measure wall thickness. The wall is very irregular, which appear as “scalloping” and projections of the mucosa. The latter are suggestive of polyps. However, the severe irregularity of the mucosa may be exaggerated as the urinary bladder is underfilled. No abnormalities are noted with the trigone. The proximal urethra is not visualized due to interference from the pelvis and gas in the colon. There is no evidence of sediment, cystoliths, or a mass. Note, the urinary bladder was re-evaluated at the end of the study. The mucosa is only mildly irregular now that it has filled with urine. No abnormalities are observed with one of the ureteral papillae.

Kidneys

The **left** kidney measures 4.70 cm. The capsule is smooth. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present, as well as small nephroliths, based on small acoustic shadows. There is no evidence of pyelectasia. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 4.78 cm. The capsule is smooth. The cortex is mildly hyperechoic and a mild loss of the normal definition of the cortico-medullary junction is present. Mineralizations of the diverticulae and pelvis are present. There is no evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic.

Aortic bifurcation/trifurcation

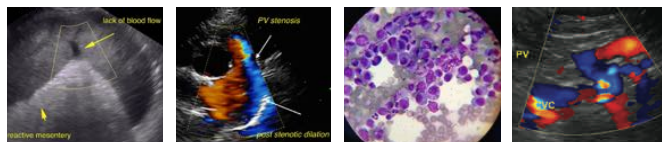
No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.51 cm at the cranial pole, 0.49 cm at the caudal pole and 1.78 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.

The **right** adrenal gland measures 0.68 cm at the cranial pole, 0.43 cm at the caudal pole and 1.86 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.

Spleen



PATIENT	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.
Luna Acocella	
SPECIES	Liver
Canine	Mild hepatomegaly is suspected. The liver's borders are smooth and sharp, with some that are very mildly rounded. A diffuse, mildly coarse or granular echotexture is observed, which may be due to a reactive hepatopathy. The walls of the portal veins are hyperechoic, which may occur secondary to inflammation, fat, mineralization and fibrosis. No obvious abnormalities are noted with the larger hepatic vessels. The mesentery surrounding the liver is moderately hyperechoic.
BREED	
Pointer Mix	
SEX	The gallbladder wall is within normal limits in thickness and echogenicity. There is no evidence of echogenic material within the GB or edema surrounding it. 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.
Spayed Female	
AGE	Gastrointestinal
7 years	Ingesta, gas and fluid are present within the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. Decreased peristalsis is observed.
WEIGHT	A large amount of ingesta, gas and fluid are present within the lumen of the duodenum.
Not given	Large amounts of ingesta, gas and fluid are present within the lumen of the small intestines. The ingesta is granular. The mucosa is thicker than usual and fogging of the mucosa is present.
INTERPRETED BY	Decreased peristalsis of the gastrointestinal tract is observed, i.e., a "to and fro" motion is noted
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	The colonic wall is not thickened and mural detail is considered normal. Formed stools are present within the colon.
IMAGING PERFORMED BY	Pancreas
Shari Reffi, CVT	An in-depth evaluation of the pancreas is difficult to perform due the large amount of gas, ingesta and fluid in the surrounding GI tract. The surrounding mesentery is moderately to severely hyperechoic.
HOSPITAL NAME	Other
Animal Hospital of Sussex County	Lymph nodes
REFERRING VET	A hypoechoic nodule in the region of the liver and stomach is observed. It may appear more prominent due to the severe hyperechogenicity of the mesentery. The nodule measures 4.70 mm in diameter x 5.76 mm in length. It is difficult to determine whether it is a lymph node or metastatic nodule, however, its location makes it more likely to be a lymph node.
Dr. Obsharski	
INVOICE	Abdominal effusion
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DATE	
5/10/22	



PATIENT

Luna Acocella

- A scant amount of anechoic fluid is visualized between the diaphragm and the liver, as well as between the loops of bowel in the mid and caudal abdomen, just cranial to the urinary bladder. Fibrin is also noted.

SPECIES

Canine

Heart

A brief video clip of the heart was submitted. Pericardial and pleural effusion are not identified. A mass is not observed on evaluation of the right atrium or auricle. However, a mass may be overlooked in the absence of pericardial effusion.

BREED

Pointer Mix

SEX

Spayed Female

- Obvious metastases are not observed, however, a few abnormalities are observed on Luna's ultrasound to suggest possible metastatic disease or other comorbidities.

AGE

7 years

- Possible, very mild lymphadenomegaly of a gastric lymph node, however, one cannot rule out a metastatic nodule. Other nodules consistent with carcinomatosis are not observed throughout the abdomen.

WEIGHT

Not given

- A scant amount of anechoic fluid is visualized between the diaphragm and the liver and between the loops of bowel in the mid and caudal abdomen, just cranial to the urinary bladder. Free floating fibrin is noted in the caudal abdomen.

INTERPRETED BY

Lisa Carioto, DVM,
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- Pancreatitis or other reason for steatitis in the cranial abdomen. That is, the mesentery in the cranial abdomen is moderately to severely hyperechoic, particularly surrounding the liver and medial aspect of the stomach. An in-depth evaluation of the pancreas is difficult to perform due the large amount of gas, ingesta and fluid in the surrounding GI tract.

IMAGING PERFORMED BY

Shari Reffi, CVT

- Large amounts of ingesta, gas and fluid are present within the lumen of the gastrointestinal tract, and a diffuse ileus is observed. The mucosa of the small intestines is thicker than usual and fogging is present. These findings are suggestive of inflammation, possibly due to underlying inflammatory bowel disease (IBD), or possibly pancreatitis. Infiltrative disease, such as lymphoma or other round cell tumour, is less likely, but cannot be excluded.

HOSPITAL NAME

Animal Hospital of
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- The hepatic changes are suggestive of a reactive hepatopathy. Nodular hyperplasia may also be present. The parenchyma surrounding and ventral to the gallbladder is severely hyperechoic, which may be due to cholecystitis.

REFERRING VET

Dr. Obsharski

- Mild renal changes are present, which may be due to degeneration. However, glomerulonephritis must also be considered. Pyelonephritis cannot be excluded based on the absence of classical sonographic abnormalities.

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- A urinary tract infection is suspected based on the irregular mucosa of the urinary bladder.

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- Luna's weight is not available; the right adrenal gland, measuring 0.68 cm, may be mildly enlarged due to hyperplasia secondary to stress or chronic illness. There are no signs of a mass.



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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Thoracic radiographs (three-views) are recommended to exclude metastatic disease.

A urinalysis and culture and sensitivity are recommended to rule out a urinary tract infection and pyelonephritis, particularly with a urine specific gravity of 1.009.

If the urine culture is negative, a urine protein: creatinine ratio is suggested to exclude proteinuria due to glomerulonephritis.

A fundic exam is also recommended, as is an evaluation of the blood pressure, ideally in the presence of the client to minimize the effects of stress.

Obtaining a history regarding signs of GERD from the client is suggested. Treatment with an anti-acid, proton pump inhibitor may be required depending on the patient's history.

Gabapentin and buprenorphine or methadone are suggested to treat any pain Luna may be experiencing.

Since aggressive chemotherapy has not been pursued for the treatment of the mammary adenocarcinoma, one could consider administration of toceranib (Palladia®), a tyrosine kinase inhibitor. This medication can help slow down the progression of the tumour. It is administered by mouth three days a week, for example, Mondays, Wednesdays, Fridays. Routine blood work, consisting of a CBC and serum biochemical profile, is required to monitor for neutropenia and elevated liver enzyme activities.

Referral to an oncologist or internist is suggested to discuss the above treatment protocol.

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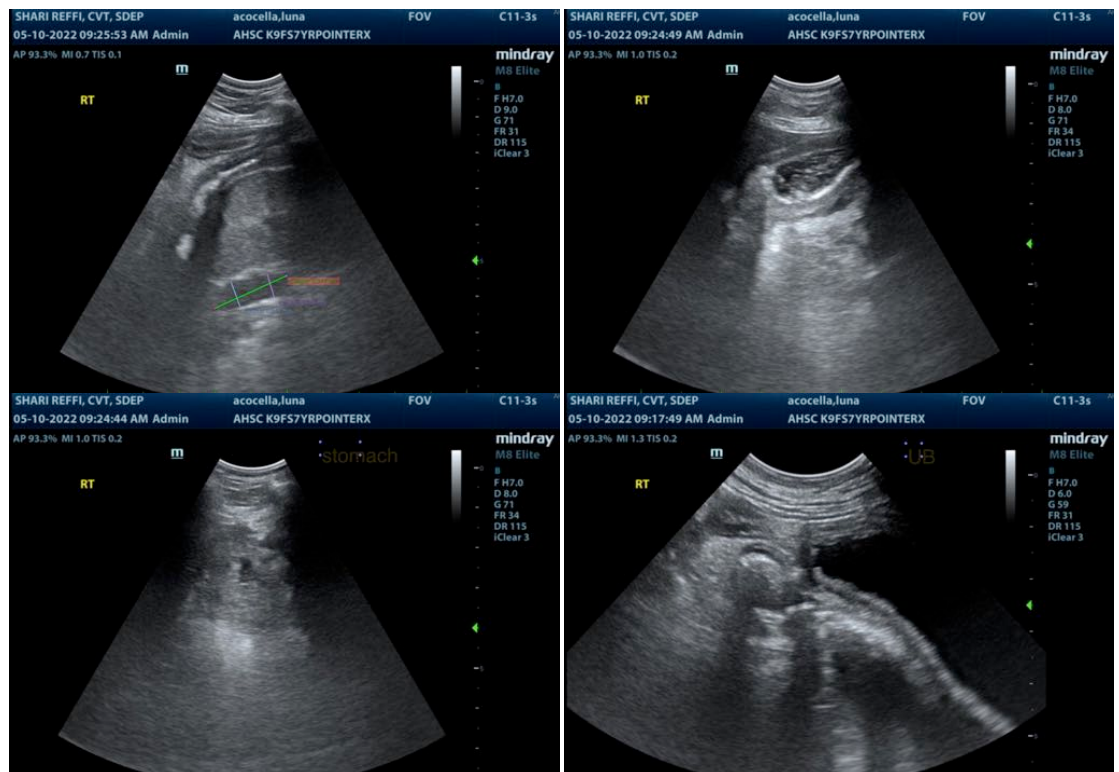
Dr. Obsharski

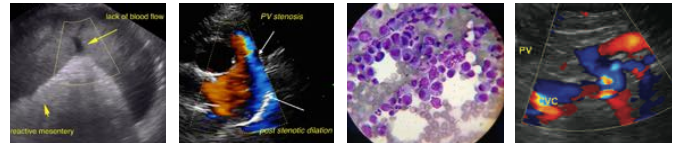
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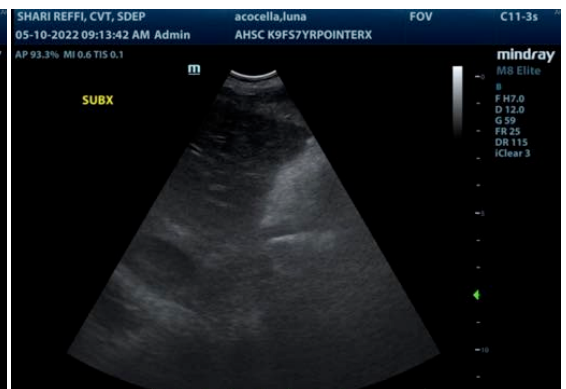
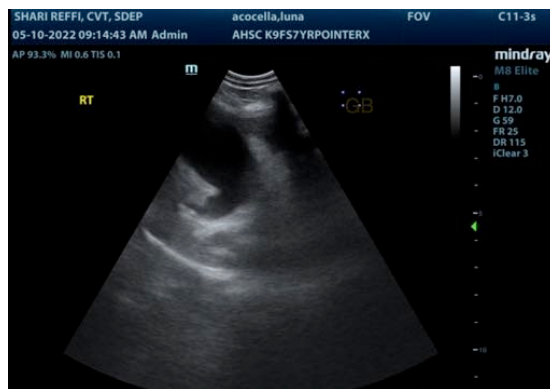
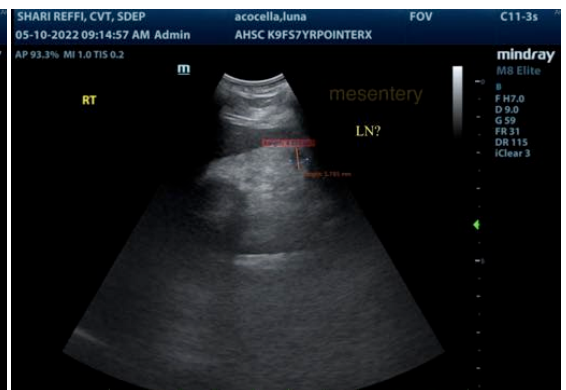
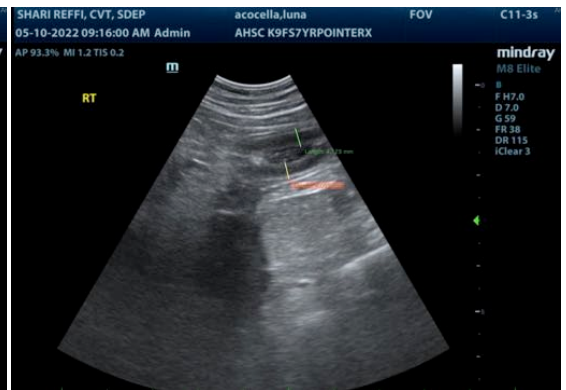
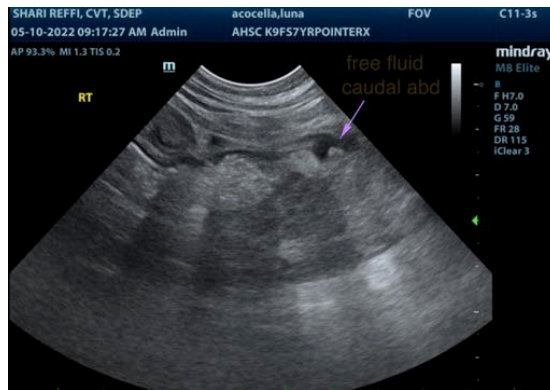
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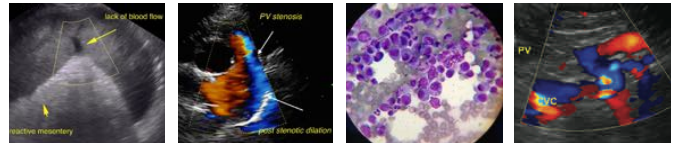
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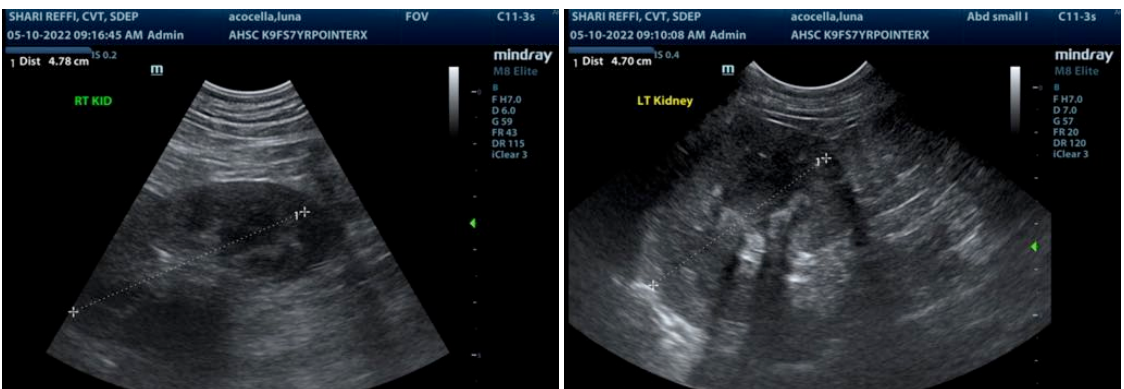
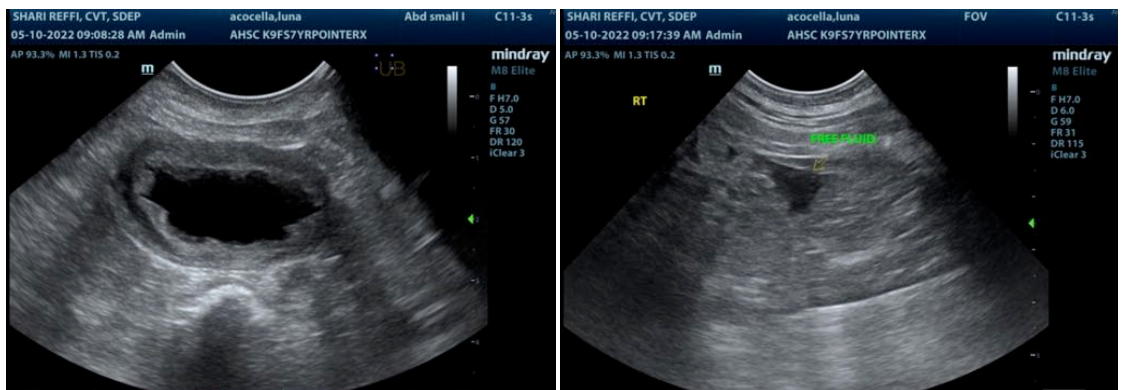
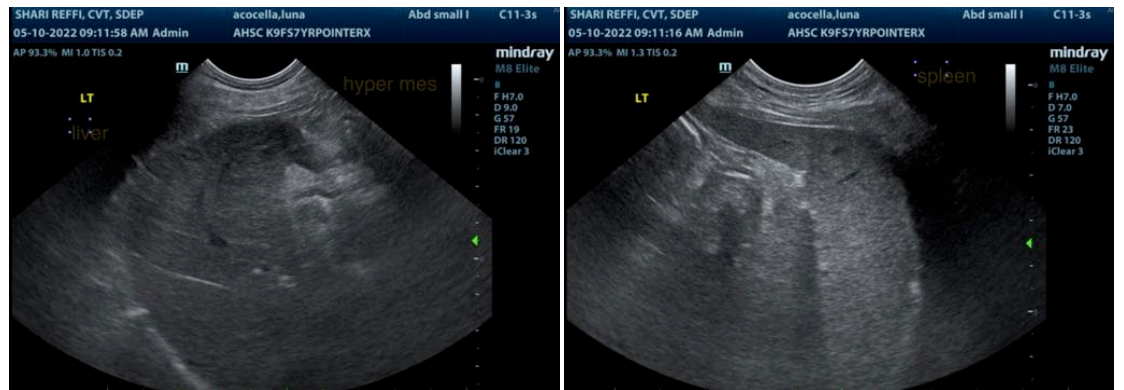
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

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