



PATIENT

Morgan Cain

SPECIES

Canine

BREED

Irish Setter/Labrador
Mix

SEX

Spayed Female

AGE

12 Years

WEIGHT

56.6 Pounds

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Chrissy Krell, DVM

HOSPITAL NAME

Paws & Prairie AC

REFERRING VET

Chrissy Krell, DVM

INVOICE

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DATE

4/4/22

PRESENTING CLINICAL SIGNS

History: Incidentally found a splenic mass when presented for inappropriate urination a few weeks ago. There are no other clinical symptoms, feeling well in general.

Abnormal PE/Chem/CBC/UA Results: Ab: Slightly pendulous abdomen, notable mass mid/ventral. Coat slightly dull. Grade 2/4 periodontal disease, vitals ownl. Hairloss on the tail (previous BW normal T4). Slight cough - suspect slightly sensitive trachea/allergies? Thoracic rads: Normal geriatric findings, no evidence of metastasis. Trachea wnl on x-ray. Cardiac silhouette wnl. Blood work: pending. UA: SG 1.013, ownl.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately filled. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

The left kidney and is within normal limits in size (5.69 cm) for the patient's weight and 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 are present without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic. Blood flow is considered within normal limits.

The right kidney is within normal limits in size (5.35 cm) for the patient's weight and 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 are present without evidence of nephroliths or pyelectasia. The surrounding mesentery is not hyperechoic. The portion of the kidney's blood flow evaluated is within normal limits.

Adrenal Glands

The left adrenal gland measures 0.77 cm (enlarged) at the cranial pole, 0.66 at the caudal pole, and 2.39 cm in length. The rounded effect at the cranial pole may be due to the development of a benign adenoma. An obvious mass and abnormalities with the echogenicity or echotexture are not identified. There are no signs of metastases or thrombi in the phrenicoabdominal veins or the surrounding vasculature of either gland. Although this finding is not considered clinically significant for the moment, the adrenal glands should be re-evaluated in the future.

The right adrenal gland measures 0.84 cm at the cranial pole, 0.97 at the caudal pole, and 2.73 cm in length. The gland is more "plump" and increased in size. A round, nodular effect is present at the caudal pole. The latter may be due to the development of a benign adenoma. An obvious mass and abnormalities with the echogenicity or echotexture are not identified. There are no signs of metastases or thrombi in the phrenicoabdominal veins or the surrounding vasculature of either gland.

Spleen

The majority of the spleen is homogeneous with a smooth capsule, normal architecture and echotexture. However, a large, well-defined mass with irregular borders is observed mid body. The mass measures 11.49 cm in length x 8.63 cm in diameter and appears to be originating from the spleen when evaluated at certain angles. A hypoechoic, slightly cavitory lesion, measuring 2.2 cm in length x 2.7 cm in diameter is present within the mass. The rest of the mass is primarily homogeneous with hyperechoic areas/nodules dispersed haphazardly throughout its parenchyma. Anechoic lesions are not present. The



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large portion of the mass evaluated with colour Doppler is avascular. Abnormalities of the splenic vasculature evaluated do not show any abnormalities. Perivascular cuffing is observed throughout, consistent with myelolipomas, which are clinically insignificant.

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A well-defined hyperechoic nodule is present, measuring 5.9 mm x 6.2 mm, within the body of the spleen. The nodule does not disrupt the integrity of the capsule. It appears benign; nodular hyperplasia is the most likely diagnosis.

Liver

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There are no obvious signs of hepatomegaly, and its borders are smooth and sharp. The liver's echotexture is mildly heterogeneous, suggestive of a reactive hepatopathy. No abnormalities are observed with the hepatic vessels. Perivascular cuffing of the blood vessels is observed, consistent with myelolipomas.

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A mild to moderate amount of echogenic material is visualized within the gallbladder, which is considered clinically insignificant. The biliary system is otherwise within normal limits.

Gastrointestinal

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The gastric wall is within normal limits in thickness. There is no loss of definition of the normal architecture of the wall layers. Gas is present within the lumen. No obvious abnormalities are observed with its peristalsis.

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The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. 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.

Pancreas

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The right limb of the pancreas has a coarse echotexture and is mildly heterogeneous. These abnormalities are most likely due to nodular hyperplasia, an age related change and areas of fibrosis, also age related and possibly secondary to previous episodes of pancreatitis. There are no signs of active pancreatitis.

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The left limb of the pancreas is not visualized.

Free Abdomen

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Lymph nodes: No obvious abnormalities are observed.

Abdominal effusion is not visualized.

Heart

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A brief video clip of the heart was submitted. No pericardial or pleural effusion is identified.

ULTRASONOGRAPHIC FINDINGS

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

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- Bilateral adrenomegaly and the rounded left cranial pole and right caudal pole of the adrenal glands may be due to hyperplasia secondary to pituitary dependent hyperadrenocorticism or a benign adenoma, respectively. There are no signs of a mass. These changes may be associated with the inappropriate urination Morgan demonstrated a few weeks ago, particularly



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if polydipsia is present. The hair loss on her tail and mild pendulous abdomen may also be explained by hyperadrenocorticism. It may be worthwhile asking the clients if Morgan has been panting more than usual.

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- The splenic mass is not well vascularized, but does not have a typical cavitory appearance consistent with hemangiosarcoma. Its appearance is not typical of a sarcoma either. The hypoechoic nodule within the mass may represent previous hemorrhage within the mass. Differential diagnoses include extramedullary hematopoiesis or an organized hematoma, particularly if Morgan has experienced a trauma in the past.

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- The hepatic changes are most consistent with nodular hyperplasia and a reactive hepatopathy. However, some of the changes may also be consistent with previous episodes of chronic hepatitis. There are no obvious signs of active hepatitis or cholecystitis.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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A SDMA is recommended to evaluate renal function due to the degenerative changes observed and the decreased urine specific gravity. A urine culture is suggested. Most importantly, a urine protein:creatinine ratio is recommended, particularly if hyperadrenocorticism is suspected.

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An arterial blood pressure is recommended to rule out hypertension associated with hyperadrenocorticism.

A fine needle aspirate of the spleen may be performed, however, another option, although much more invasive, would be to perform a splenectomy, as the latter is both diagnostic and therapeutic.

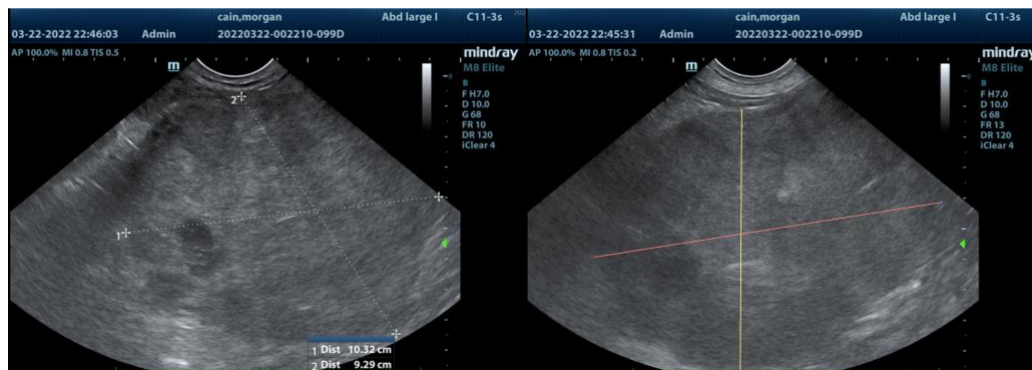
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If Morgan is Cushinoid and surgery will be performed, it may be prudent to perform surgery after 10-14 days of trilostane therapy to decrease the risks associated with hyperadrenocorticism, i.e. thromboembolic disease, decreased ability to heal.

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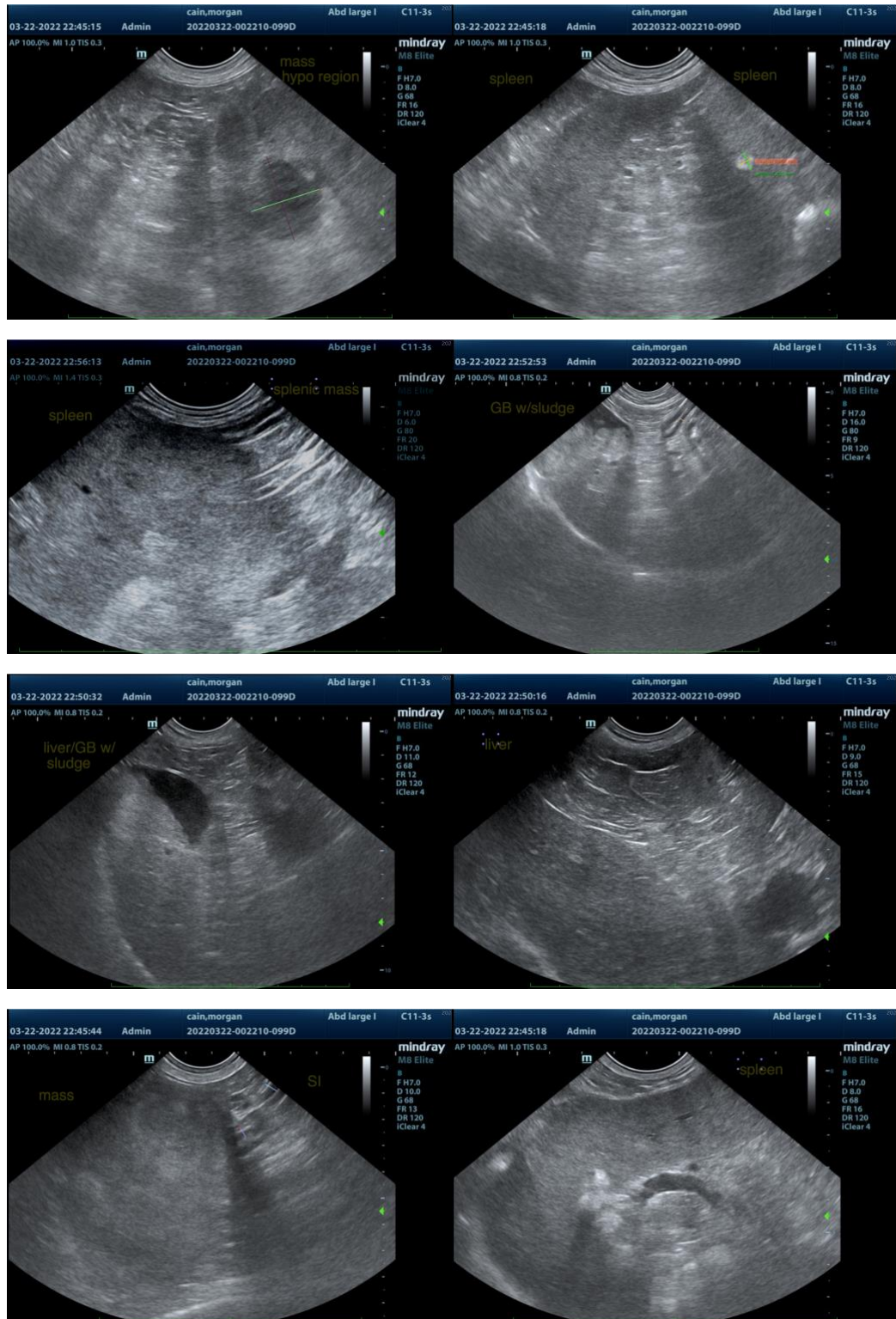
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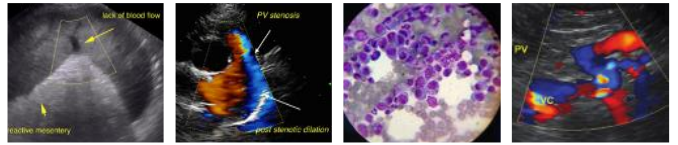
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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