



PATIENT

Shammy Capps

SPECIES

Canine

BREED

Alaskan Malamute
Cross

SEX

Spayed Female

AGE

11 years

WEIGHT

78 lbs

INTERPRETED BY

Lisa Carioto, DVM,
DVSc, Diplomate
ACVIM

**IMAGING
PERFORMED BY**

Sara Hansen

HOSPITAL NAME

Ark AH

REFERRING VET

Dr. Jackson

DATE

5/19/22

Invoice
30526

PRESENTING CLINICAL SIGNS

History: Pt currently being treated for diabetes mellitus. ALKP enzyme increase. Possibly has Cushing's. Crystalluria

Abnormal PE/Chem/CBC/UA Results: Labs from 5/17/22: Chemistry _ALKP decreased from 3400 to approx 2000 Complete Blood Count _thrombocytopenia Urinalysis _proteinuria amorphous phosphate crystals/struvite crystals _pH elevation +1 ketones glucosuria +2 Labs from 4/19/22 Urinalysis _Glucosuria _proteinuria hematuria trace ketones Current Medications Vetsulin 17 units BID, gabapentin 200mg BID, trazodone 200mg PRN Radiographic Findings Radiographs - The liver extends mildly beyond the last rib, the kidneys, urinary bladder and spleen all appear of normal shape and size, the stomach is empty, there is small amount of ingest and gas in the small intestines and the colon has moderate amount of material present. What is visible of the thorax appears normal. Hocks bilaterally - osteophyte formations on the medial aspect of the tarsal bones bilaterally. Carpii - Osteophytes forming on the accessory carpal bones bilaterally on caudal aspect. Rest of skeletal systems appear normal. Suspected osteoarthritis at carpi and tarsi bilaterally with hepatopathy of unknown cause at this time.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular, however, it is moderately thickened. No abnormalities are noted with the trigone or proximal urethra, and there is no evidence of sediment, cystoliths, polyps or a mass.

Kidneys

The **left** kidney measures 8.11 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, without evidence of nephroliths or pyelectasia. An accumulation of intrapelvic fat is noted. Blood flow is adequate. The surrounding mesentery is not hyperechoic.

The **right** kidney measures 8.56 cm. Findings are similar to the left kidney.

Aortic bifurcation/trifurcation

No abnormalities observed.

Adrenal Glands

The **left** adrenal gland measures 0.70 cm at the cranial pole, 0.60 cm at the caudal pole and 3.63 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 has the shape of a "boomerang". It measures 0.63 cm at the cranial pole, 0.61 cm at the caudal pole. It is difficult to measure its length due to its shape. No abnormalities are noted with the gland's overall architecture, echogenicity or echotexture. The phrenico-abdominal vein and surrounding vasculature are unremarkable. The surrounding mesentery is mildly hyperechoic.



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Spleen

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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.

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Liver

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Mild hepatomegaly is suspected. The liver's borders are smooth and sharp. A few, very small, anechoic lesions are noted at the dorsal aspect of the left liver; these may be due to emerging cysts.

Alaskan Malamute
Cross

The liver is mildly hyperechoic i.e. it is iso to hyperechoic to the falciform fat. It appears isoechoic to the spleen depending on the view.

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A diffuse, mildly coarse or granular echotexture is observed, which may be due to a reactive hepatopathy. No obvious abnormalities are noted with the hepatic vessels.

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The gallbladder wall is within normal limits in thickness and echogenicity. A very small amount of echogenic material is present within the GB. The portions of the cystic observed is not dilated or tortuous. The common bile duct is not visualized. There are no obvious signs of an obstruction.

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Gastrointestinal

Ingesta and gas are present in the lumen of the stomach. The gastric wall is within normal limits in thickness and the wall layers are well defined. No obvious abnormalities are observed with its peristalsis.

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A small amount of ingesta is present in the duodenum.

The duodenum is within normal limits in thickness and the definition of wall layers is preserved. No abnormalities are noted with the small intestines with regard to thickness or architecture of wall layers. Abnormally dilated loops of bowel are not observed.

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Gas is present in the transverse colon.

The colonic wall is not thickened and mural detail is considered normal.

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

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Pancreas

The **left** and **right limbs** have smooth contours, but are mildly hypoechoic. The surrounding mesenteric fat is very mildly hyperechoic, which is suggestive of steatitis. These findings are suggestive of active pancreatitis. Overt signs of neoplasia are not noted.

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PATIENT	<i>Other</i>
Shammy Capps	<i>Lymph nodes</i> No abnormalities are observed
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Alaskan Malamute Cross	<i>Right auricle</i> No obvious abnormalities are noted in the right auricle, however, a mass may be overlooked in the absence of pericardial effusion.
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11 years	<ul style="list-style-type: none"> Mixed vacuolar and reactive hepatopathies are suspected, which are likely due to diabetes mellitus, a smoldering, active pancreatitis, as well as possible age-related changes. There are no obvious signs of neoplasia. Emerging cysts in the left liver cannot be excluded.
WEIGHT	
78 lbs	<ul style="list-style-type: none"> The thickened wall of the urinary bladder may be secondary to a urinary tract infection. The renal changes are suggestive of age-related changes, however, pyelonephritis cannot be excluded.
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Lisa Carioto, DVM, DVSc, Diplomate ACVIM	<ul style="list-style-type: none"> Adrenal glands within the normal reference range does not exclude hyperadrenocorticism (HAC).
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Ark AH	<i>Interpretation of the findings & further recommendations</i> A urinalysis and urine culture and sensitivity are recommended to exclude a urinary tract infection and possible pyelonephritis. If negative, a urine protein: creatinine ratio is recommended to exclude proteinuria secondary to diabetes mellitus. Treatment with detemir or long acting glargine (Tujeo) is suggested in large breed dogs, particularly if the diabetes is difficult to regulate.
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Dr. Jackson	A spec cPL may be performed to confirm pancreatitis, however, it will not necessarily change Sammy's treatment. Treatment with analgesia, other than non-steroidal anti-inflammatories, is strongly recommended, including gabapentin every 8 hours, laser therapy, etc. Acetaminophen at 10 mg/kg PO every 12 hours may be administered as well providing hepatic and renal function are within normal limits (i.e. albumin, cholesterol, urea. Serum bile acids may be performed to assess hepatic function, but may be increased
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in dogs with HAC. Methadone is another option, although I am not sure how costly it is for a large breed dog in the United States.

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A sonographic re-evaluation of the liver may be performed in 6-8 weeks, or once the diabetes mellitus is regulated. If the anechoic structures are larger or if vascularized, a fine needle aspirate of the affected area is suggested following a coagulation profile.

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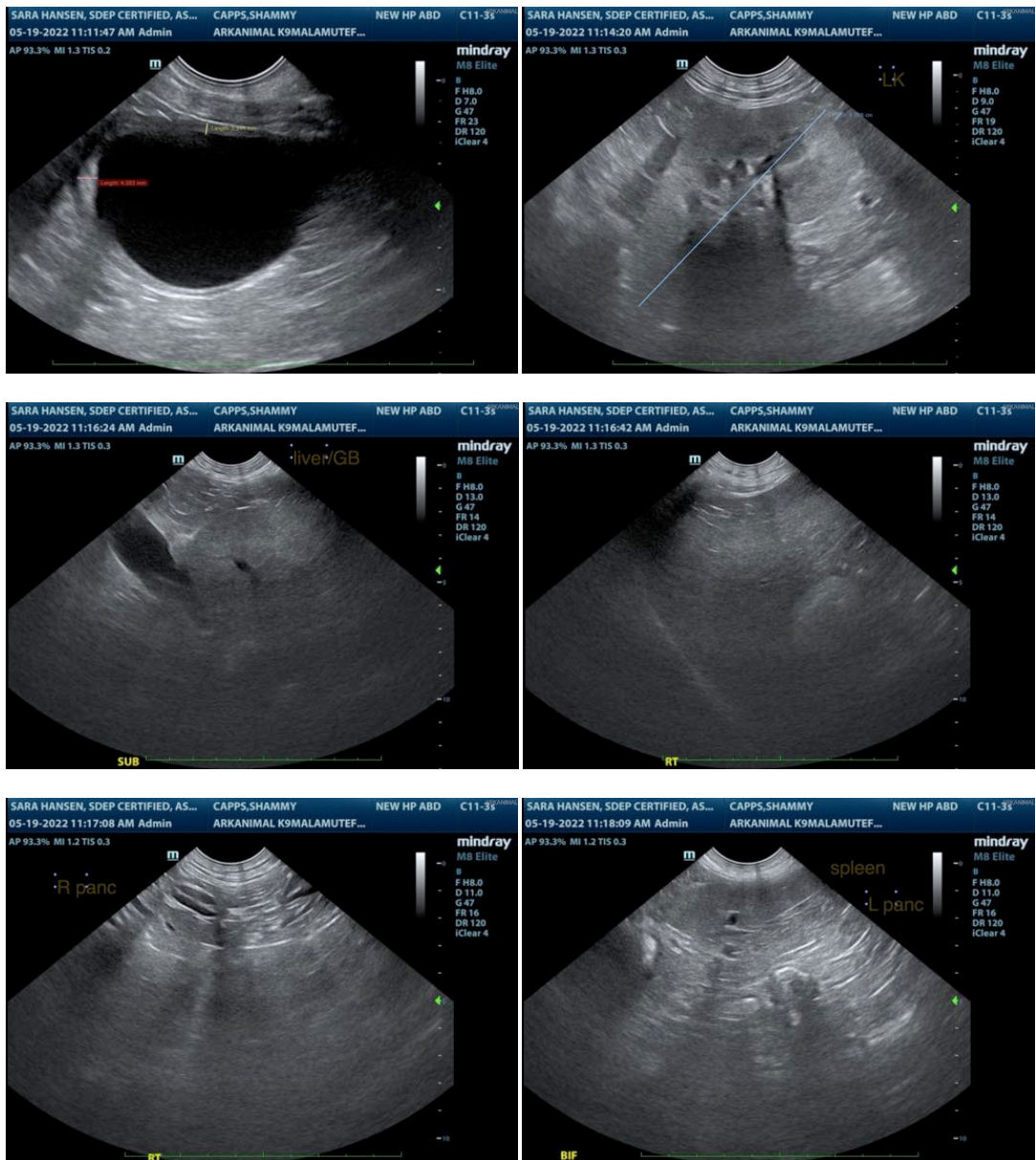
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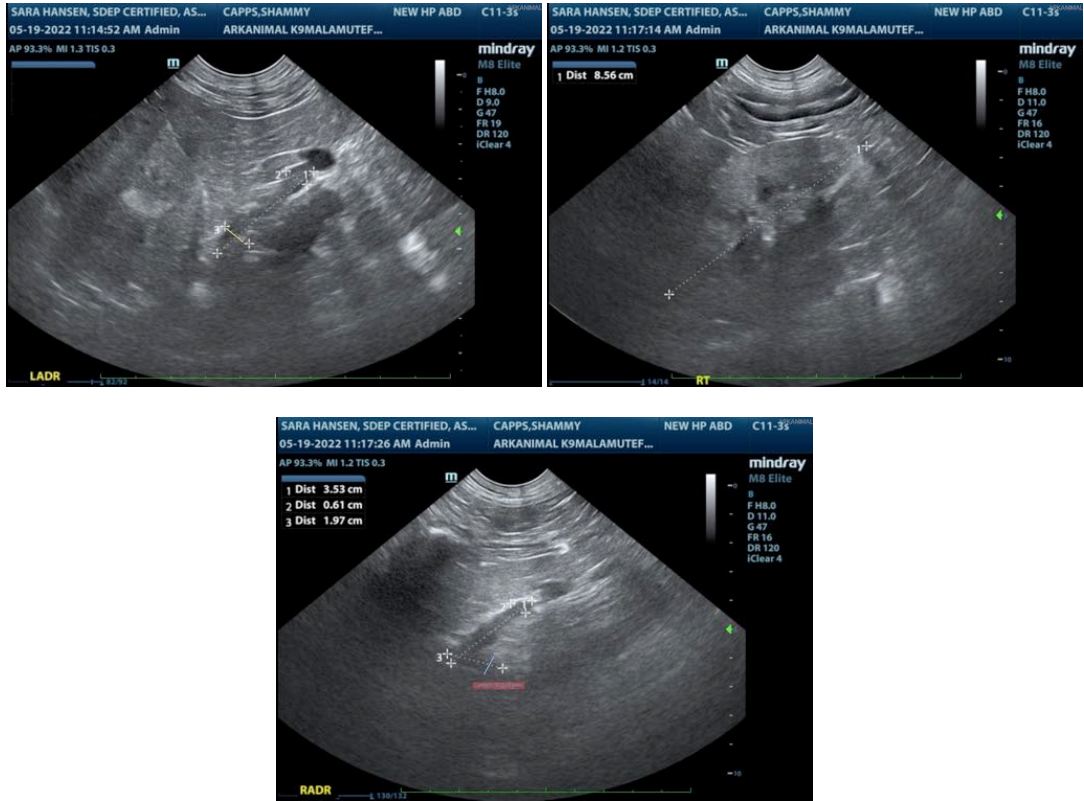
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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