

**PATIENT PRESENTING CLINICAL SIGNS**

Julie Arnst History: New murmur grade III/VI, collapsing episode, enlargement of sublumbar lymph node/constipation. No current meds.  
 Abnormal PE/Chem/CBC/UA Results: Rbc 4.97 (5.39-8.7), Hct 35.2( 38.3 L), Hgb 11.8 (13.4 L), PLT 79, Lymph 0.587 (1.06-4.95)SDMA 46 (0-14), Creat 4.4 (0.5-1.5), Bun 74 (9-31), Phos 6.8(2.5-6/1), chol 367 (131-345), Amyl 7,223 (337-1469), Lipase 837 (0-250)

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**BREED**

**Urinary System**

Mix

The urinary bladder is well distended with anechoic contents. The wall is smooth and regular. No abnormalities are present with the trigone or proximal urethra. A small amount of free floating sediment is present, however, there is no evidence of cystoliths, polyps or a mass. Ureteral papillae are visualized and unremarkable.

**SEX**

Spayed Female

**AGE**

**Kidneys**

14 years

The **left** kidney measures 4.32 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. Very mild pyelectasia is present at 1.6 mm (longitudinal view). An accumulation of intrapelvic fat is noted. Subjectively blood flow appears mildly decreased. The surrounding mesentery is very mildly hyperechoic.

**WEIGHT**

23.6 lbs

The **right** kidney measures 4.03 cm. Findings are similar to the left kidney.

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**Aortic bifurcation/trifurcation**

No abnormalities observed.

**IMAGING PERFORMED BY**

Shari Reffi, CVT

**Adrenal Glands**

**HOSPITAL NAME**

Blairstown AH

The **left** adrenal gland measures 0.51 cm at the cranial pole, 0.54 cm at the caudal pole and 2.21 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 0.48 cm at the cranial pole, 0.47 cm at the caudal pole and 1.93 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.

**REFERRING VET**

Dr. Clegg

**Spleen**

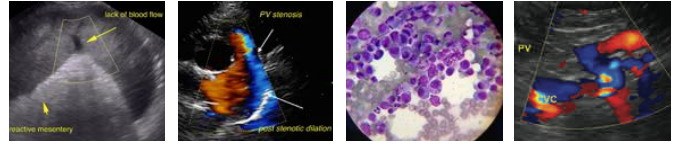
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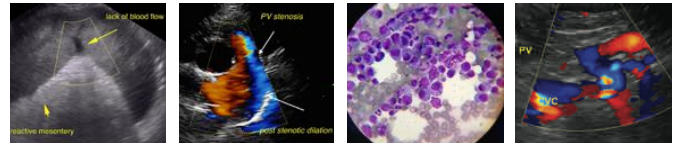
The spleen is within normal limits in size, architecture, echotexture, and echogenicity. A hyperechic nodule is observed mid-body. It measures 0.60 cm in diameter x 0.64 cm in length. The capsule is smooth. Occasional perivascular cuffing is visualized, which is suggestive of myelolipomas. The latter are considered clinically insignificant. A subcapsular, ill-defined hyperechoic region is present at the dorsal aspect of the spleen. The region is suggestive of mineralization, fat, fibrosis and possibly

**DATE**

5/18/22



<b>PATIENT</b>	ischemia. No abnormalities are observed with its vasculature, i.e. congestion and thrombi are not identified.
Julie Arnst	
<b>SPECIES</b>	<b>Liver</b>
Canine	There are no obvious signs of hepatomegaly. The liver's borders are smooth and sharp. 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.
<b>BREED</b>	
Mix	The gallbladder (GB) wall is mildly thickened (1.9 mm) and mildly hyperechoic. A small to moderate amount of free floating echogenic material is present within the GB. A small amount of inspissated, nodular sludge is also present within the gallbladder and the cystic duct. The initial portion of the cystic duct is mildly to moderately dilated at 5.7 mm. It cannot be followed to the common bile duct due to the large amount of gas and fluid in the GI tract, however, there are no signs of an obstruction.
<b>SEX</b>	
Spayed Female	
<b>AGE</b>	<b>Gastrointestinal</b>
14 years	A small amount of 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. No obvious abnormalities are observed with its peristalsis.
<b>WEIGHT</b>	
23.6 lbs	The small intestinal wall thickness is within normal limits and the definition of the wall layers is preserved. A small amount of fluid is present in the small intestines. Abnormally dilated loops of bowel are not observed. The mesentery surrounding the small intestines is mildly hyperechoic.
<b>INTERPRETED BY</b>	The colonic wall is not thickened and mural detail is considered normal.
Lisa Carioto, DVM, DVSc, Diplomate ACVIM	<b>Pancreas</b>
<b>IMAGING PERFORMED BY</b>	The left limb has a mildly coarse echotexture, which is considered secondary to age related changes. There are no signs of active pancreatitis or neoplasia.
Shari Reffi, CVT	An in-depth evaluation of the right limb is not possible due to gas in the surrounding GI tract.
<b>HOSPITAL NAME</b>	<b>Other</b>
Blairstown AH	<b>Lymph nodes</b>
<b>REFERRING VET</b>	No abnormalities are observed
Dr. Clegg	<b>Abdominal effusion</b> is not visualized.
<b>INVOICE</b>	<b>ULTRASONOGRAPHIC FINDINGS</b>
30479	<ul style="list-style-type: none"> <li>The hepatic changes are suggestive of a reactive hepatopathy, however, one cannot rule out cholangitis/cholangiohepatitis with the abnormalities observed with the gallbladder. Other differential diagnoses include cholecystitis, as well as suppurative cholecystitis.</li> </ul>
<b>DATE</b>	
5/18/22	



**PATIENT**

Julie Arnst

- The renal changes are suggestive of age related to degeneration. However, the mild pyelectasia may be due to polydipsia and polyuria. Pyelonephritis cannot be excluded.

**SPECIES**

Canine

- The pancreas shows age related changes. Pancreatitis cannot be excluded despite the absence of sonographic abnormalities.

**BREED**

Mix

- There are no signs of lymphadenomegaly or other abnormalities to suggest lymphoreticular neoplasia. However, this does not exclude emerging neoplasia. A fine needle aspirate of the spleen may be considered.

**SEX**

Spayed Female

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

A urinalysis and urine culture are recommended to exclude pyelonephritis.

If negative, a urine protein: creatinine ratio is suggested.

**AGE**

14 years

A fundic exam is suggested; evaluate for signs of hypertension and petechiae.

An evaluation of Julie’s travel history is recommended to exclude infectious diseases.

**WEIGHT**

23.6 lbs

A SNAP 4Dx is recommended, including PCR for leptospirosis due to the thrombocytopenia. Vector borne diseases may also cause myocarditis and syncope.

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

A baseline cortisol is suggested to exclude hypoadrenocorticism as the cause of the anemia, and abnormalities of the renal parameters, including the phosphorus.

A fine needle aspirate of the spleen may be considered to rule out emerging neoplasia, particularly, lymphoreticular neoplasia, in light of the elevated SDMA and enlarged submandibular lymph nodes.

Fine needle aspirates of the peripheral lymph nodes may also be considered, even if not enlarged.

**IMAGING PERFORMED BY**

Shari Reffi, CVT

A spec cPL may be considered depending on clinical signs.

**HOSPITAL NAME**

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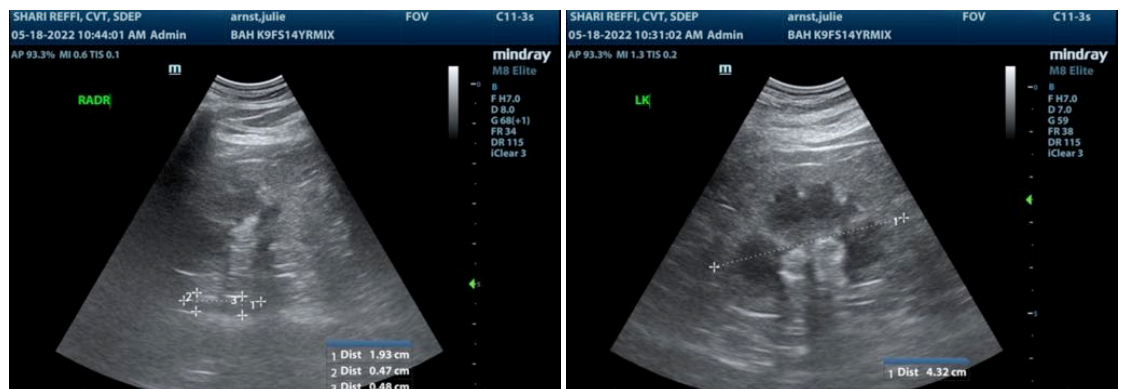
Dr. Clegg

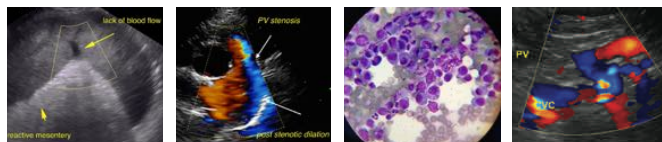
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**DATE**

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**PATIENT**

Julie Arnst

**SPECIES**

Canine

**BREED**

Mix

**SEX**

Spayed Female

**AGE**

14 years

**WEIGHT**

23.6 lbs

**INTERPRETED BY**

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**IMAGING  
PERFORMED BY**

Shari Reffi, CVT

**HOSPITAL NAME**

Blairstown AH

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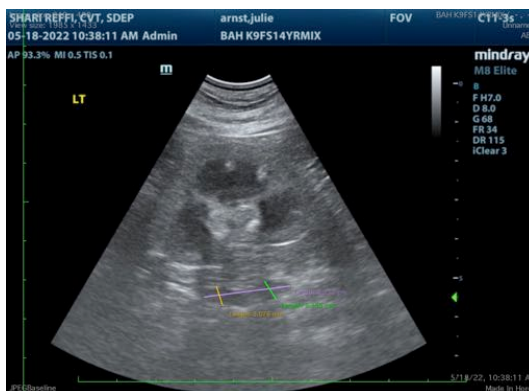
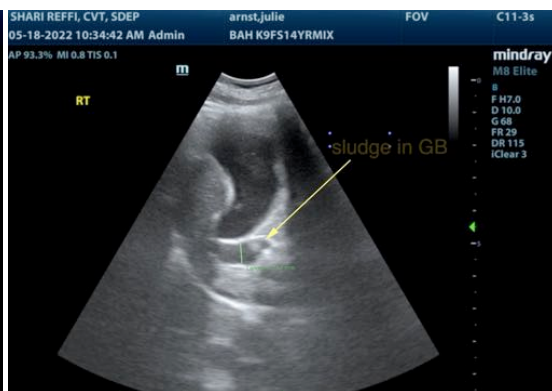
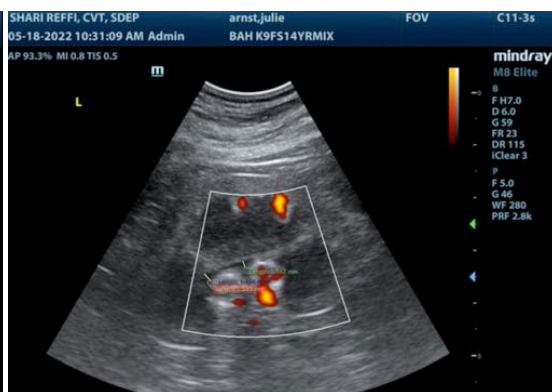
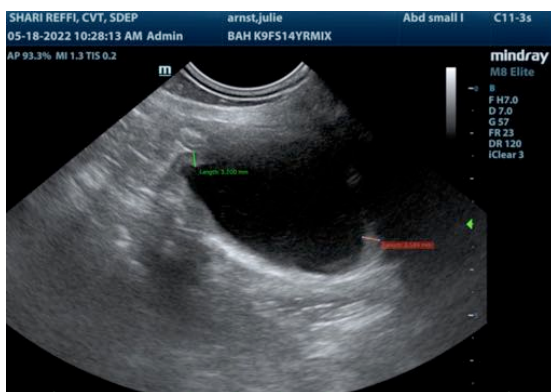
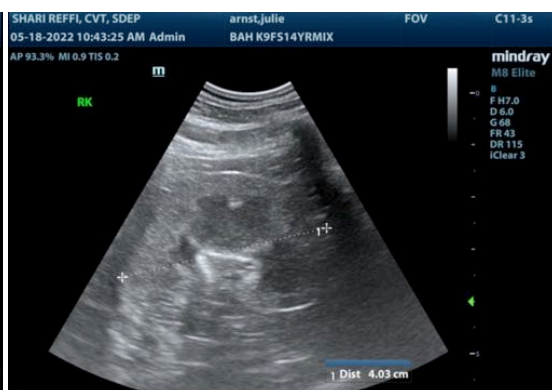
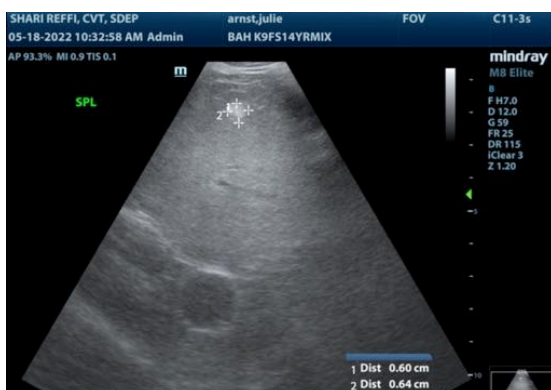
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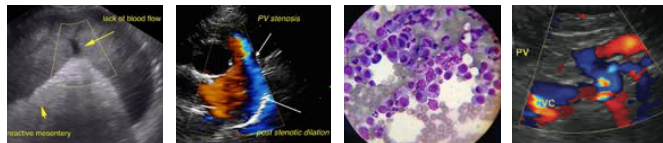
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**DATE**

5/18/22





**PATIENT**

Julie Arnst

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.

Lisa Carioto, DVM, DVSc, Diplomate ACVIM

**BREED**

Mix

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

**SEX**

Spayed Female

**AGE**

14 years

**WEIGHT**

23.6 lbs

**INTERPRETED BY**

Lisa Carioto, DVM,  
DVSc, Diplomate  
ACVIM

**IMAGING  
PERFORMED BY**

Shari Reffi, CVT

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