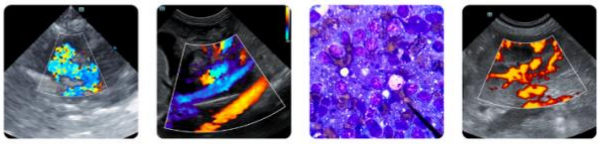


**PATIENT**

Hunter Arnold

**SPECIES**

Canine

**BREED**

Shepherd

**SEX**

Neutered Male

**AGE**

12 Years 11 Months

**WEIGHT**

45.2 lbs

**INTERPRETED BY**

Greg Kuhlman, DVM, DACVIM (SAIM)

**IMAGING PERFORMED BY**

Kerri Becker

**HOSPITAL NAME**

Ramapo Valley Animal Hospital

**REFERRING VET**

Dr. Katara

**INVOICE**

16478

**DATE**

05/22/26

## PRESENTING CLINICAL SIGNS

neoplasia check, poor appetite and weakness is progressive- derc appetite is acute. Most severe neut of my career. Significant anemia.

Abnormal PE/Chem/CBC/UA Results: retic-2.3 abs retic-98,900 alb-1.8 glob-5.3 wbc-66.5 neu-62510 mono-2660 t4<0.5

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder contains minimal urine in the cranial aspect of the urinary bladder. There is hyperechoic debris that appears to be adhered along the luminal surface of the urinary bladder.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 6.0 cm. The right kidney measures 6.3 cm.

### *Adrenal Glands*

The left adrenal gland presents normal shape and homogenous parenchyma. The phrenic vasculature is unremarkable. The cranial pole measures 5.9 mm and the caudal pole measures 9.3 mm.

The right adrenal gland presents moderately enlarged. The cranial pole measures 15.9 mm and the caudal pole measures 7.9 mm. There appears to be a mass lesion at the cranial pole of the right adrenal gland.

### *Spleen*

In the head of the spleen, there is a mass with a hypoechoic echogenicity and a heteroechoic echotexture, it measures 2.9 cm by 3.5 cm and is cavitated. It does appear to have mild blood flow. The remainder of the spleen appears enlarged and has scalloped margins. The splenic mass is most likely a malignant hemangiosarcoma, less likely a benign hemangioma, infiltrative neoplasia unlikely.

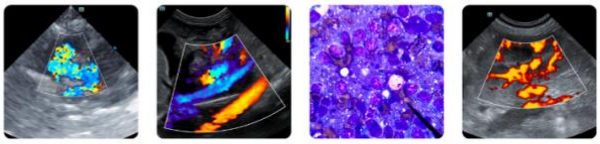
### *Liver*

Liver is relatively normal in size and contour. Parenchyma is mildly heterogenous and coarse with mild likely age-related parenchymal remodeling noted. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion. No obvious evidence of metastatic disease is seen within the liver.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

### *Gastrointestinal*

The stomach and intestines have normal wall layering and thickness. Colon contains normal contents with normal wall thickness.





SonoPath www.SonoPath.com info@sonopath.com 800.838.4268

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### *Pancreas*

The right limb of the pancreas is markedly enlarged and hypoechoic and measures 4.0 cm in width with marked surrounding hypoechoic fat, There is an enlarged peripancreatic lymph node that is hypoechoic and rounded and measures 12 mm x 9 mm in size. The pancreas itself has a nodular echotexture present throughout. Changes to the pancreas may be due to severe pancreatitis or possibly due to pancreatic carcinoma.

### *Free Abdomen*

There are no enlarged abdominal lymph nodes seen on this exam. No free abdominal fluid is seen.

Cardiac image provided revealed no right atrial mass or pericardial effusion appreciated.

## ULTRASONOGRAPHIC FINDINGS

- Right adrenal mass.
- Age-related renal changes.
- Urinary bladder debris.
- Splenic mass.
- Gallbladder debris.
- Enlarged right pancreas.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Two important things about the right adrenal mass, one being the functionality should be determined. Recommend screening patient for hyperadrenocorticism via urine cortisol: creatinine ratio. If elevated, recommend performing low-dose dexamethasone suppression test. Also consider screening patient for pheochromocytoma by submitting urine metanephrine. A conservative plan where re-ultrasound in two to three months to determine if it is changing in size. If it is enlarging in size in that time frame, consider CT scan of abdomen for pre-surgical planning and left-sided adrenalectomy, or the other alternative would be to consider CT scan at this time to pursue left-sided adrenalectomy. Malignancy cannot be determined on this ultrasound. It is possible this is a benign adrenal adenoma or could possibly be an adrenal carcinoma. Only histopathology could provide that information.

if urinalysis has not been performed, recommend urinalysis, and if active urine sediment, recommend urine culture antibiotic sensitivity to determine if urinary tract infection may be the cause for changes seen within the urinary bladder. If treatment for urinary tract infection does not resolve the changes seen within the urinary bladder or a urinary tract infection is not diagnosed, then consider cystoscopy to obtain biopsies of cranial urinary bladder wall for histopathology and for culture.

Consider fine needle aspirate of the splenic mass for cytology prior to considering splenectomy. Given the appearance in this mass, direct splenectomy would be appropriate as well.

Recommend FNA of the pancreas via ultrasound guidance and if possible, of the enlarged peripancreatic lymph node to determine if pancreatic neoplasia is present. The enlarged lymph node may suggest that there may be metastatic neoplasia present so that would be why we would recommend aspirating the enlarged peripancreatic lymph node. Recommend starting diagnostic pathway by obtaining three view chest x-rays if not already done, to rule out obvious pulmonary metastatic disease. If pulmonary metastatic disease is ruled out, then recommend performing diagnostics for pancreas. If pancreatic neoplasia is not suspected in this case, then recommend pursuing further diagnostics and treatment for splenic disease.

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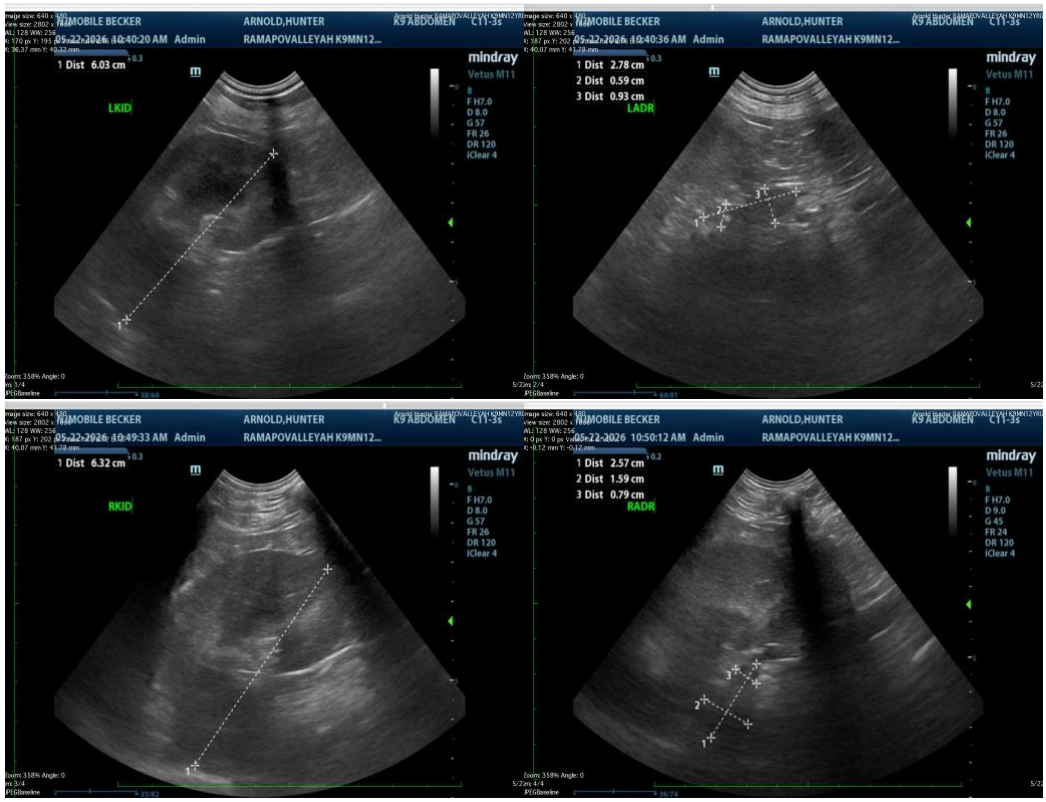
At this time, patient's prognosis appears poor to guarded and pending results are recommended for further diagnostics.



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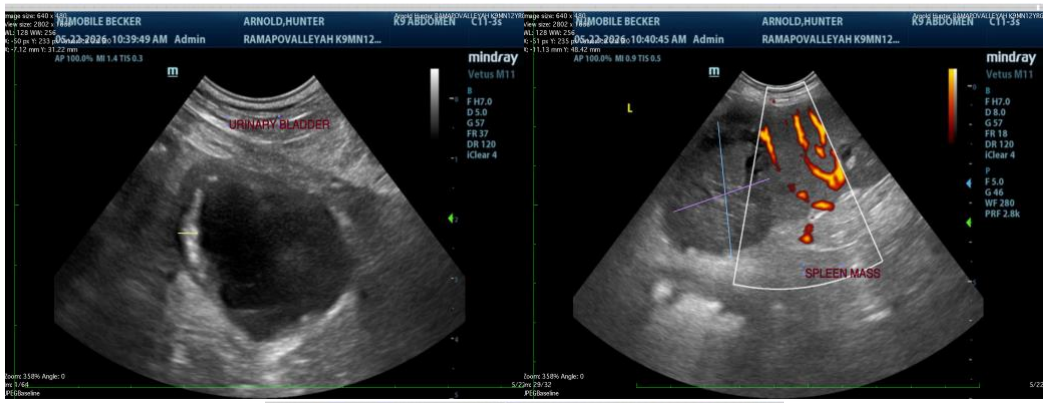


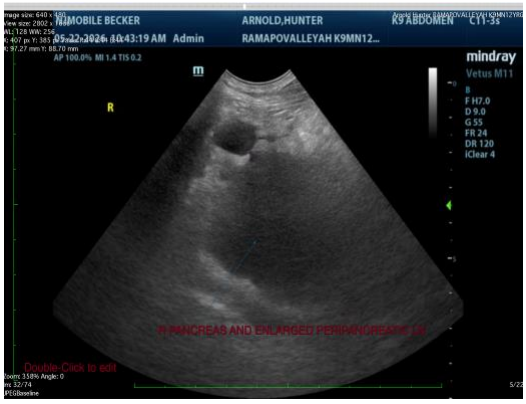


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

**Greg Kuhlman**, DVM, DACVIM (SAIM)
Veterinary Internal Medicine Specialist
info@SonoPath.com