

**PATIENT PRESENTING CLINICAL SIGNS**

Misha Montanez  
Historical elevation of ALP over the last year. O reports p is mildly PU/PD, polyphagic, increase in panting, and has had chronic skin issues. On exam, does have mild skin changes and suspected degenerative joint disease of hips/stifles. ALP 1090.

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

German Shepherd X

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**SEX**

Spayed Female

The left kidney has a normal shape and size (7.98 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**AGE**

10 Years

The right kidney has a normal shape and size (6.77 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of focal perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

80.8 Pounds

**Adrenal Glands**

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

The left adrenal gland is normal in size measuring 0.75 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.92 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There is an ill-defined, mixed echogenic mass effect visualized within the splenic parenchyma measuring 1.65 cm x 2.72 cm. This does not appear to deviate the splenic capsule. Additionally, there are numerous hyperechoic foci consistent with benign myelolipomas.

**HOSPITAL NAME**

Anchor AH

**Liver**

**REFERRING VET**

Dr. Nicole Mulready

The liver is large with smooth peripheral margins. The parenchyma is hyperechoic and heterogeneous in echotexture. The visible portions of the vasculature and biliary tract appear normal. There are numerous ill-defined hypoechoic nodules visualized throughout the parenchyma, one of which measures at 1.44 cm. On average they vary in size from 0.50-1.5 cm. There is a small cystic structure visualized in the left side of the liver measuring 0.65 cm x 0.92 cm, most consistent with a benign hepatic cyst.

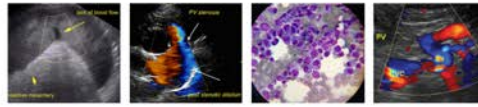
**INVOICE**

43818

**DATE**

7/6/23

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. In the dependent portion there is some hyperechoic shadowing sandy debris. The cystic and common bile ducts are normal/not visible.



**PATIENT**

***Gastrointestinal***

Misha Montanez

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

**SPECIES**

Canine

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. Duodenum wall measures 0.38 cm. Jejunum wall measures 0.30 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

**BREED**

German Shepherd X

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

**SEX**

Spayed Female

***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

**AGE**

10 Years

***Free Abdomen***

**WEIGHT**

80.8 Pounds

Evaluation of the peritoneal cavity did not reveal any evidence of effusion, or subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. The omentum is of normal uniform echogenicity.

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Kathleen Sennello DVM,  
 MS, Diplomate ACVIM  
 (Small Animal Internal  
 Medicine)

**ULTRASONOGRAPHIC FINDINGS**

- Mixed echogenic mass effect visualized within the splenic parenchyma – This could represent a benign (hyperplasia, hematoma, etc.) or neoplastic process (hemangiosarcoma, round cell neoplasia, etc.). Recommend a fine needle aspirate.
- Large, hyperechoic, heterogeneous liver with ill-defined hypoechoic nodules – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. The nodules observed trend toward a more benign process but underlying neoplasia cannot be ruled out.
- Moderate gallbladder debris – The significance of the aggregated gallbladder debris is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting but seems unlikely to be causing a current issue. Recommend continued monitoring.

**IMAGING PERFORMED BY**

Pamela Harrigan, RDCS

**HOSPITAL NAME**

Anchor AH

**REFERRING VET**

Dr. Nicole Mulready

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

While the adrenal glands are not overtly enlarged on today's exam, they could be consistent with a patient with pituitary dependent Cushing's disease. Given the symptoms described are fairly consistent, if the patient clinically appears consistent with Cushing's, recommend adrenal function testing.

**INVOICE**

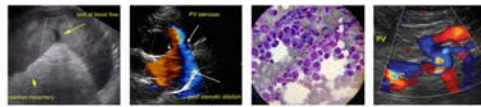
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There is a mixed echogenic lesion visualized within the spleen. Options moving forward would include a fine needle aspirate of this lesion, a splenectomy, or continued monitoring with ultrasound. At this time this does not deviate the splenic capsule, possibly favoring a more benign lesion.

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The changes visualized associated with the liver could be consistent with a vacuolar hepatopathy or regenerative nodules. Underlying neoplastic change cannot be definitively ruled out but seems less likely.



**PATIENT**

Recommend three view thoracic radiographs to evaluate for possible concurrent thoracic disease/involvement.

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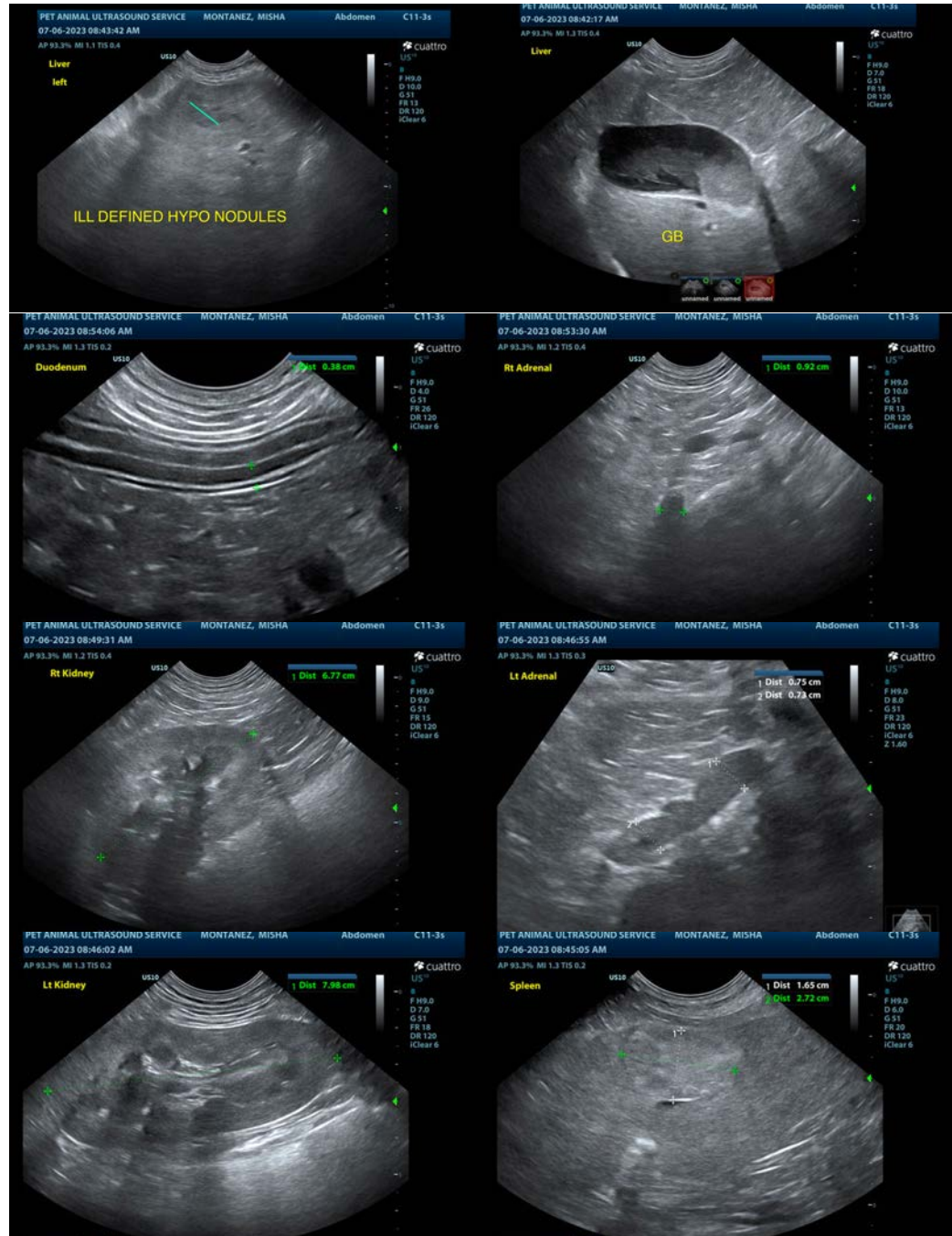
Dr. Nicole Mulready

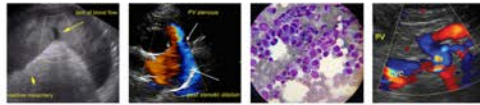
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)

info@sonopath.com