



PATIENT

Mr. Raggs Mackovyak

SPECIES

Canine

BREED

Scottie Mix

SEX

Neutered Male

AGE

11 Years

WEIGHT

29 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

Briarwood VH

INVOICE

17929

DATE

10/31/22

PRESENTING CLINICAL SIGNS

History: History of elevated liver enzymes. Previous AUS read by Dr. Sennello July of this year.

Abnormal PE/Chem/CBC/UA Results: See previous AUS report.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size, echotexture and echogenicity for a neutered male.

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. Small cortical cysts are noted in the left kidney. The left kidney measures 5.48 cm. The right kidney measures 5.79 cm.

Adrenal Glands

Left adrenal gland is normal in size (0.46 cm at cranial pole and 0.54 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Right adrenal gland is normal in size (0.45 cm at cranial pole and 0.48 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

Spleen

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). An approximately 1.0 cm – 1.1 cm round hypoechoic non-capsule-disrupting nodule is noted in the mid body of the spleen. Splenic vasculature appears normal.

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is diffusely heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion. A relatively solid isoechoic mass is noted in the caudal left liver, measuring approximately 2.0 cm x 3.0 cm in size.

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 visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of



PATIENT	obstruction, foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.
Mr. Raggs Mackovyak	
SPECIES	The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.
Canine	
BREED	Pancreas
Scottie Mix	The observed pancreas appears appropriately isoechoic to surrounding omental fat. The capsule is mildly irregular in shape. Parenchyma is mildly heterogenous and coarse. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.
SEX	Free Abdomen
Neutered Male	There is no evidence of peritoneal effusion.
AGE	The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.
11 Years	
WEIGHT	ULTRASONOGRAPHIC FINDINGS
29 Pounds	Primary Findings
INTERPRETED BY	<ul style="list-style-type: none"> Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely Diffusely heterogenous liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia. Specifically, the discreet focal nodule is relatively unchanged since the previous ultrasound and trends toward benign in appearance, as can be seen with marked nodular hyperplasia or potentially a benign adenoma/hepatoma. Malignant disease, such as a well differentiated hepatocellular carcinoma cannot be definitively ruled out but is considered much less likely, especially given the lack of progression.
Beth Johnson, DVM DACVIM	
IMAGING PERFORMED BY	Secondary Findings
Amy Mayhew, LVT	<ul style="list-style-type: none"> Hypo to anechoic splenic nodule – likely represents a benign lesion such as a cyst, hematoma, nodular hyperplasia, extramedullary hematopoiesis, etc., however while considered less likely, infiltrative neoplasia can mimic benign lesions, and cannot be ruled out. This appears very similar to the last ultrasound. Age-related kidney changes with small cortical cysts in the left kidney Relatively static gallbladder debris, unchanged from the previous exam- Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical
HOSPITAL NAME	
SVS Imaging Michigan	
REFERRING VET	
Briarwood VH	
INVOICE	
17929	
DATE	
10/31/22	



PATIENT

Mr. Raggs Mackovyak

signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

SPECIES

Canine

- Pancreatic age-related remodeling – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.

BREED

Scottie Mix

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The appearance of this study is relatively unchanged from the previous exam, therefore, recommendations are dependent on diagnostics that may or may not have already been done, such as a fine needle aspirate of the liver nodule/mass and dependent on patients clinical status. If not already evaluated, a fine needle aspirate is recommended if patients coagulation status is appropriate and if patient is otherwise doing well, continued routine monitoring is recommended.

AGE

11 Years

WEIGHT

29 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

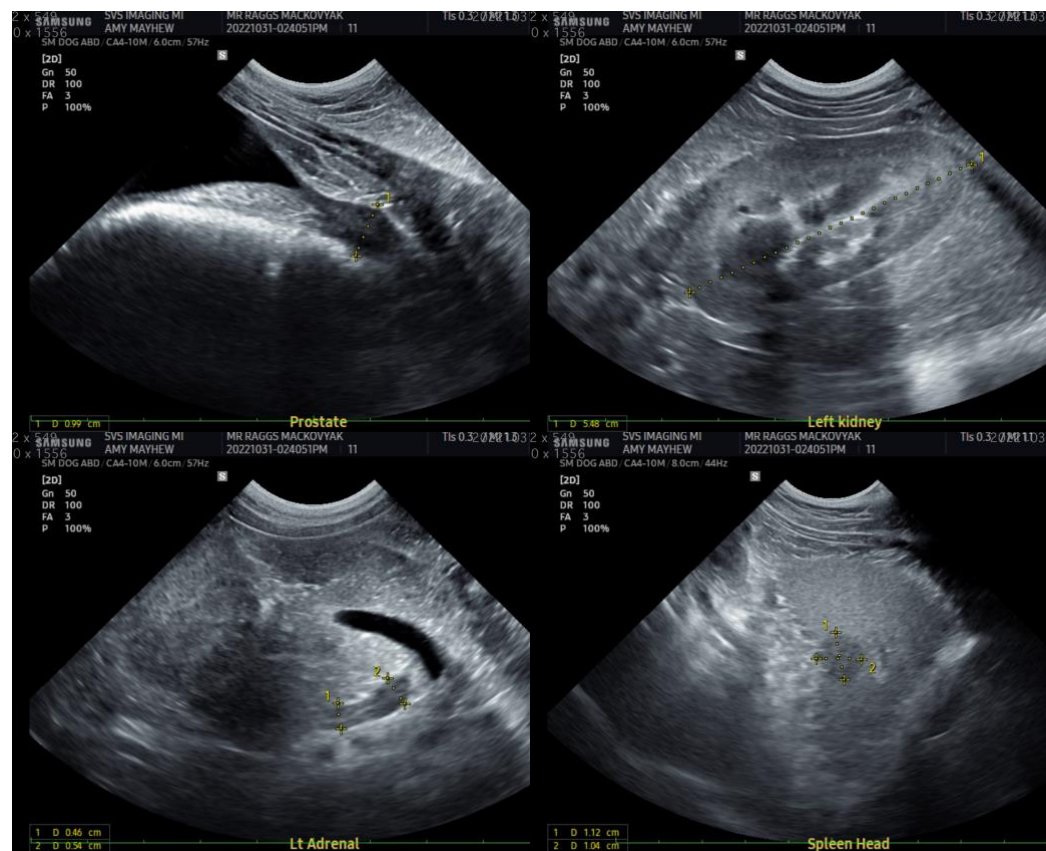
Briarwood VH

INVOICE

17929

DATE

10/31/22





PATIENT

Mr. Raggs Mackovyak

SPECIES

Canine

BREED

Scottie Mix

SEX

Neutered Male

AGE

11 Years

WEIGHT

29 Pounds

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Amy Mayhew, LVT

HOSPITAL NAME

SVS Imaging Michigan

REFERRING VET

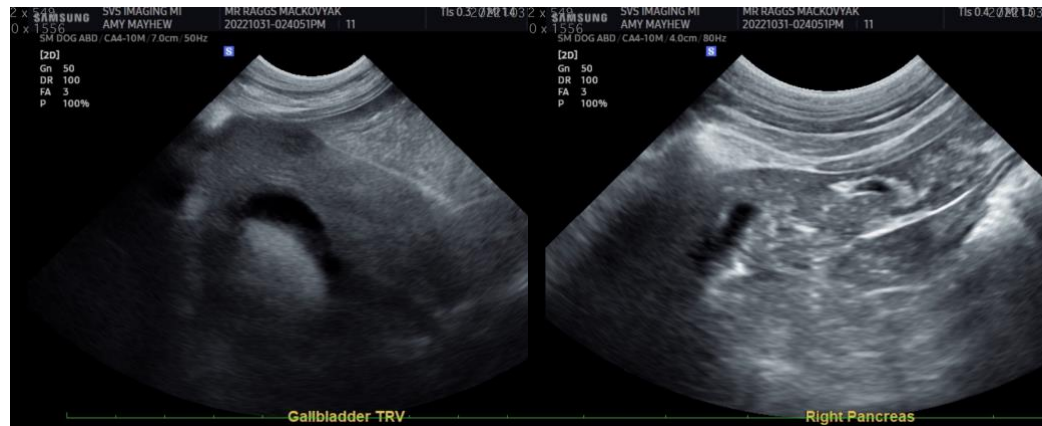
Briarwood VH

INVOICE

17929

DATE

10/31/22



The information and recommendations provided are based on the images presented by the referring veterinarian. 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.

Beth Johnson, DVM DACVIM

Beth.Johnson@SonoPath.com