

IMAGING PERFORMED BY

IntraPet.com



**SonoPath**

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

1-800-838-4268 info@sonopath.com SonoPath.com

**DATE PRESENTING CLINICAL SIGNS**

4/20/23 Recheck ultrasound at owner request.

**PATIENT**

Current Medications: Rimadyl 25mg ½ PRN.  
Date of Previous IntraPet Ultrasound: 6/16/22. See attached.  
Sedation: Not required to complete full diagnostic ultrasound.  
Stat Report: Not requested.  
Imaging Performed By: Rachel Brillhart, RDMS.

**SPECIES**

Canine

**BREED**

Miniature Poodle

**SEX**

Spayed Female

**AGE**

5/19/09

**WEIGHT**

13.3 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**HOSPITAL NAME**

Severna Park VH

**REFERRING VET**

Dr. Heard

**INVOICE**

46822

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The urinary bladder is moderately distended with anechoic contents. No masses or inflammatory changes. Multiple punctate, less than 0.1 cm in diameter cystoliths are present within the urinary bladder lumen and traveling through the urethral lumen without evidence of obstruction noted. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

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 or infarcts observed. Small punctate non-obstructive nephroliths are noted bilaterally. The left kidney has a small cortical cyst. The right kidney has a large 3.0 cm x 4.0 cm cortical cyst in the caudal pole. The left kidney measures 4.05 cm. The right kidney measures 5.87 cm.

**Adrenal Glands**

The right adrenal gland is normal in size (1.81 cm long x 0.62 cm at the cranial pole and 0.52 cm at the caudal pole), shape and contour. A hyperechoic nodule is noted in the cranial pole. Nodule does not disrupt normal shape and/or architecture. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.84 cm long x 0.81 cm at the cranial pole and 0.80 cm at the caudal pole), shape and contour. A hyperechoic nodule is noted in the cranial pole. Nodule does not disrupt normal shape and/or architecture. 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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

**Liver**

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild 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 wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

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.

### ***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

An enlarged, heterogeneous, cystic pancreaticoduodenal lymph node is noted that measures 0.60 cm thick.

## **PRIMARY FINDINGS**

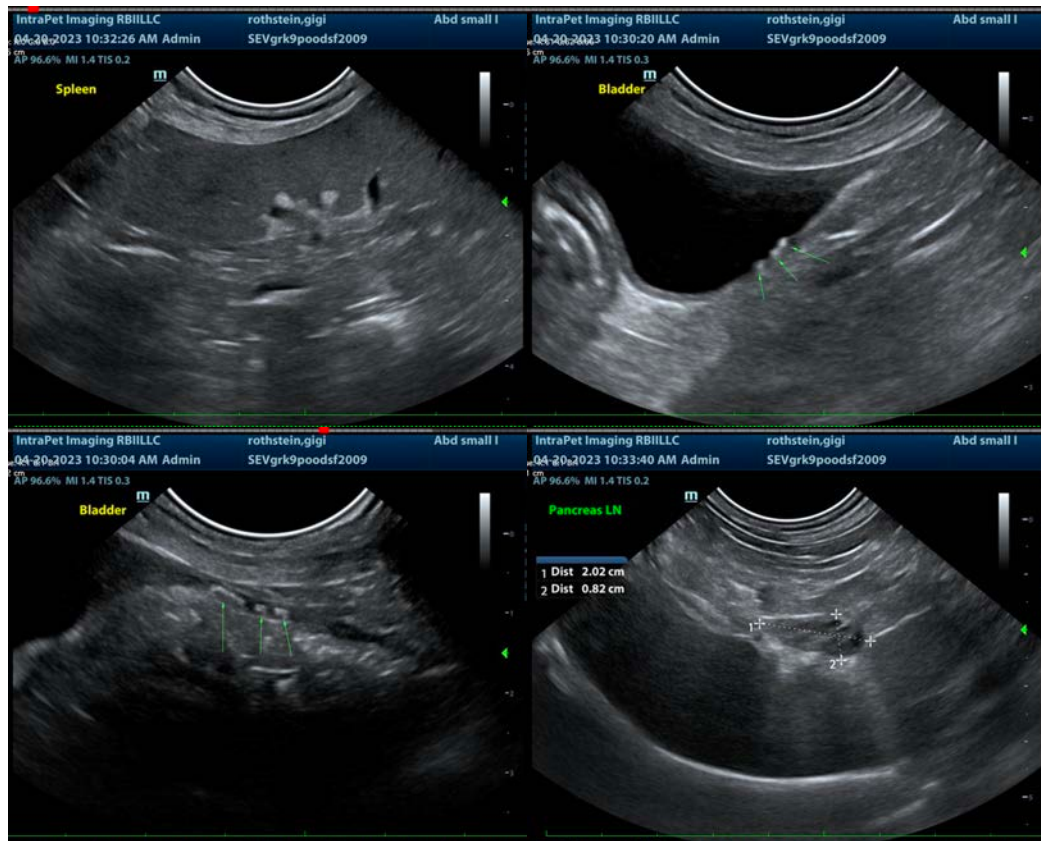
- Age related kidney changes with non-obstructive nephrolithiasis noted bilaterally and bilateral cortical cysts. The large cyst in the right kidney has progressed mildly in size from last year's ultrasound.
- Punctate urinary bladder cystoliths and urethroliths.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Mild gallbladder debris** - 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 signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Pancreaticoduodenal lymphadenopathy is noted and is likely reactive. However, infiltrative neoplasia is possible and cannot be differentiated without tissue sampling.
- **Bilateral hyperechoic adrenal nodules** - Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored. This finding is relatively static to the previous exam.

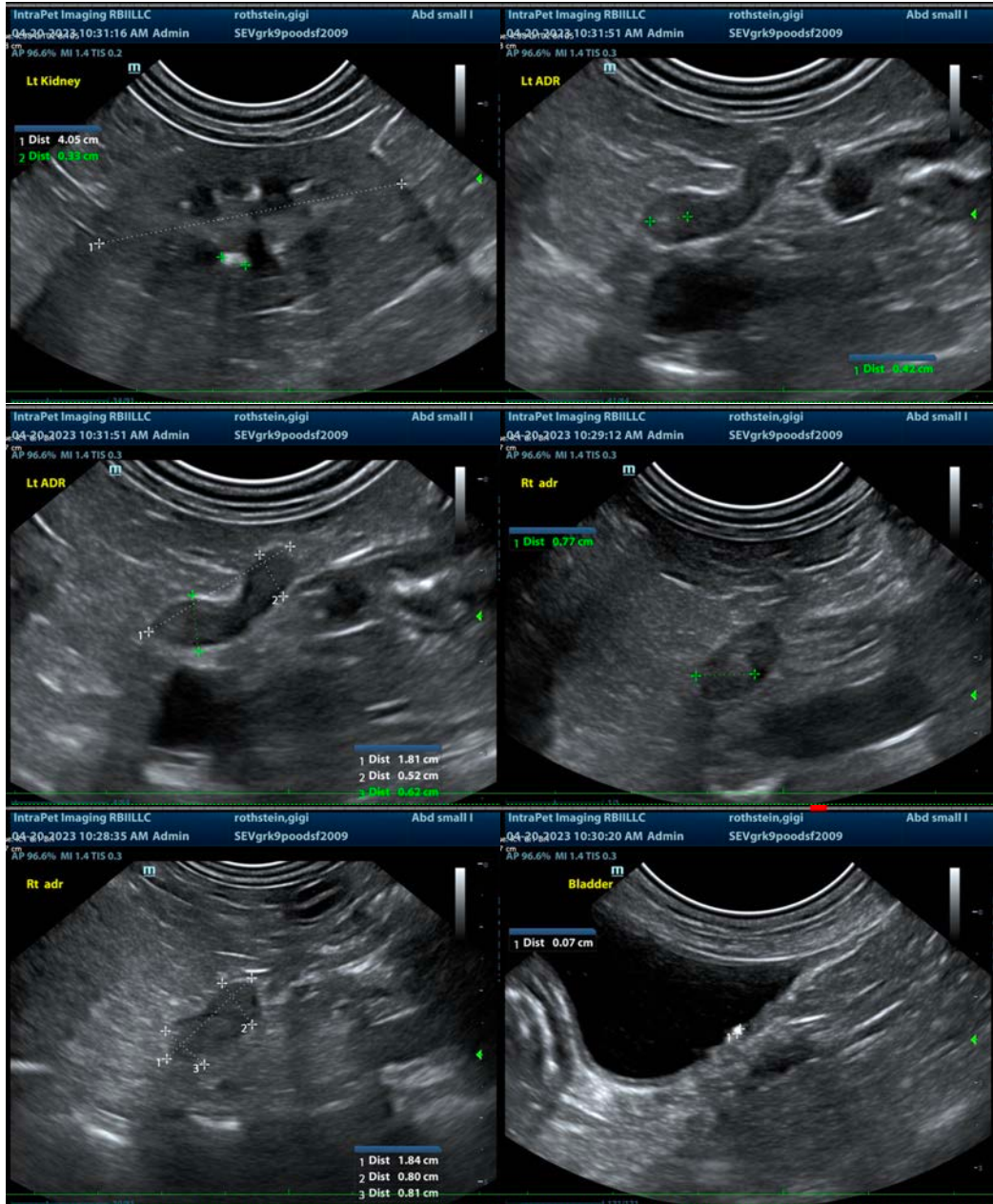
## SECONDARY FINDINGS

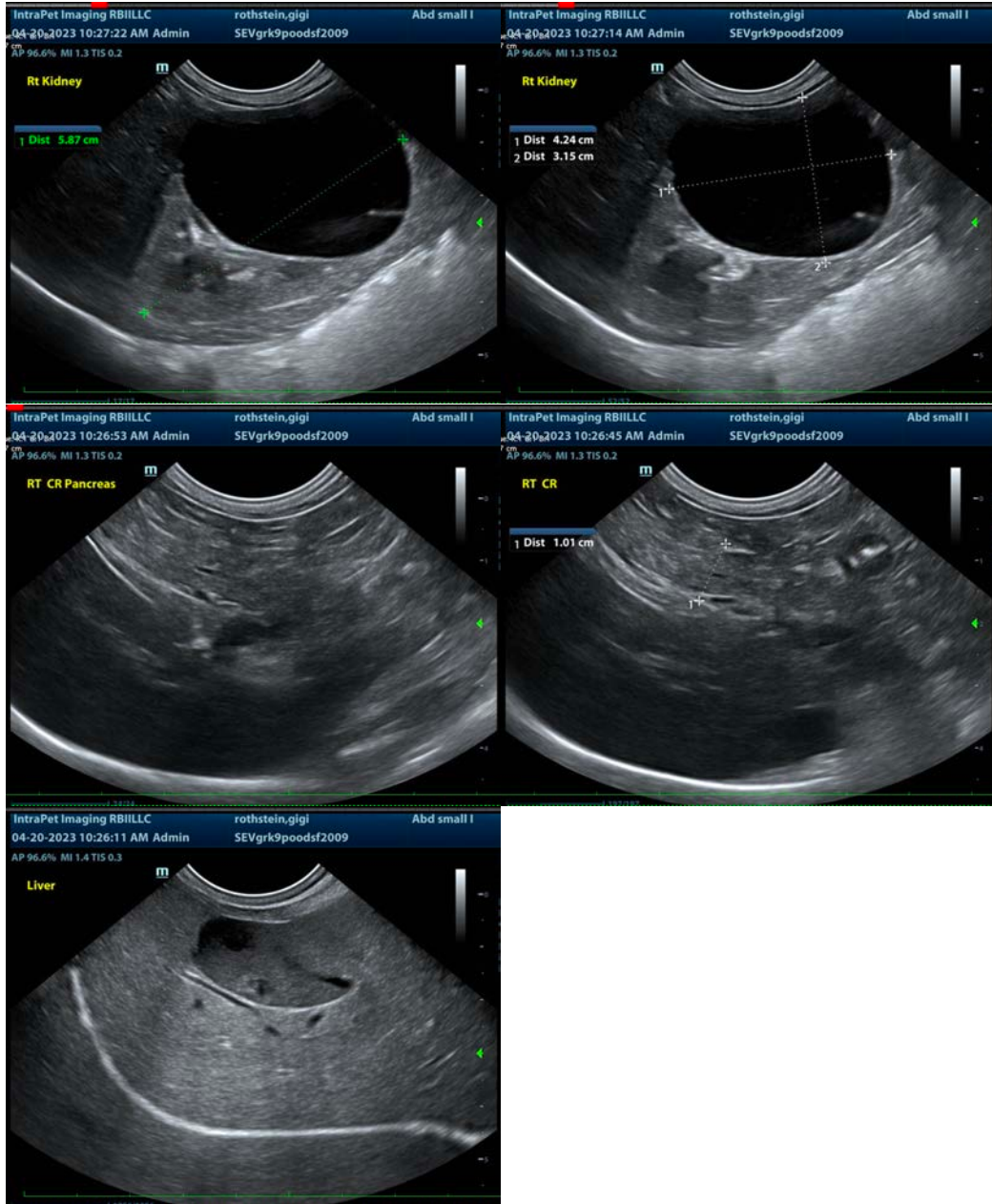
- **Pancreatic age-related remodeling** – Mild irregularities are consistent with benign age-related change. Low-grade smoldering chronic pancreatitis cannot be ruled out and should be suspected in the face of appropriate clinical signs.
- **Hyperechoic splenic nodules** – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Overall, while there are signs of mild progression, for example a larger cyst in the right kidney, and the new finding of most likely reactive lymphadenopathy surrounding the pancreas, etc., this exam is relatively static to last year's exam without notable or alarming pathology appreciated. Therefore, further recommendations are dependent on patient's clinical status/clinical signs, laboratory changes, etc.







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.

**Beth Johnson, DVM, DACVIM**  
Beth.Johnson@sonopath.com