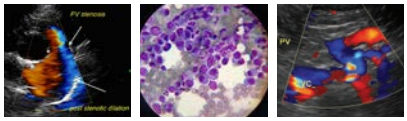
IMAGING PERFORMED BY

IntraPet.com



SonoPath

Clinical Sonography & Telecytology

EDUCATIONAL TELECONSULTATION SERVICES™

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

DATE

6/22/23

PATIENT

Amber Solomon

SPECIES

Canine

BREED

Shiba Inu

SEX

Spayed Female

AGE

10/4/12

WEIGHT

18.9 Pounds

INTERPRETED BY

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

HOSPITAL NAME

Bayside AMC

REFERRING VET

Dr. Beigel

INVOICE

43391

PRESENTING CLINICAL SIGNS

Hx of PU/PD and urine leaking; BW demonstrated elevated liver enzymes; recent hx of rapid weight loss (23 to 19 lbs), anorexia and intermittent Diarrhea.

Current Medications: Cerenia, Entyce, Denamarin.
Lab Results: See attached.
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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.

The left kidney has a normal shape and size (4.95 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.

The right kidney has a normal shape and size (4.61 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.

Adrenal Glands

The left adrenal gland is normal in size measuring 0.64 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 0.69 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.

Spleen

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. When evaluated with color doppler, the large splenic vessels subjectively have reduced flow, but vascularization of the splenic parenchyma appears adequate.

Liver

The liver is large in size and irregular. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There are numerous, somewhat ill-defined hypoechoic mass effects visualized associated with the liver. On the right side there is a mass effect measuring 4.75 cm x 4.69 cm. Additionally, there is a mass effect measuring 2.9 cm x 2.24 cm, and other more poorly defined hypoechoic nodules.

The gall bladder lumen is moderately distended. The wall of the gall bladder appears slightly thickened at 0.28 cm. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

Gastrointestinal

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.

The visualized areas of duodenum, jejunum and ileum have a uniform diameter with minimal fluid distension. Wall thickness is increased. Bowel loops follow a typical curvilinear path. Some areas have reduced detail of wall layering. Jejunum wall measures 0.35 cm. Visualized peristalsis appears appropriate. There is a focal section of small intestine that appears severely thickened, irregular, and has complete loss of layering. In this region the bowel wall measures 0.88 cm in thickness. This area appears to extend for approximately 3.3 cm and is surrounded by hyperechoic mesentery and echogenic fluid.

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.

Pancreas

The pancreas is prominent, mottled, irregular and hypoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is evidence of regional mesenteric inflammation. Consistent with moderate pancreatitis.

Free Abdomen

There is a moderate amount of echogenic free fluid. There are occasional prominent lymph nodes visualized. One such mesenteric lymph node measures at 0.50 cm. The omentum is diffusely severely hyperechoic, particularly in the region of the pancreas and the bowel mass.

PRIMARY FINDINGS

- Large, irregular, mottled, hypoechoic pancreas surrounded by hyperechoic mesentery – The pancreatic changes are most consistent with moderate pancreatitis/pancreatic inflammation. Recommend fPLI testing and continued monitoring for improvement or possible development of a pancreatic abscess. Consider fine needle aspirate if not improving.

- Large, irregular, heterogeneous liver with hypoechoic mass lesions – 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 appearance of the mass lesions is concerning for a possible neoplastic process, although large benign lesions (regenerative nodules, etc.) are possible.

- Diffusely thickened small intestine with an area of focal irregularity, thickening, and loss of layering – Findings are most consistent with a primary bowel mass. Recommend a fine needle aspirate.

- Moderate volume echogenic free fluid – Findings are concerning for peritonitis (sterile versus bacterial).

SECONDARY FINDINGS

- Subjectively reduced blood flow through the large vessels of the spleen – The significance of this is uncertain. Vascularity of the parenchyma appears adequate, and no clot lesions are visualized. Recommend continued monitoring.

- Distended gallbladder with mildly thickened gallbladder wall – Findings could be consistent with mild cholecystitis +/- a partial post-hepatic obstruction from the pancreatic inflammation.

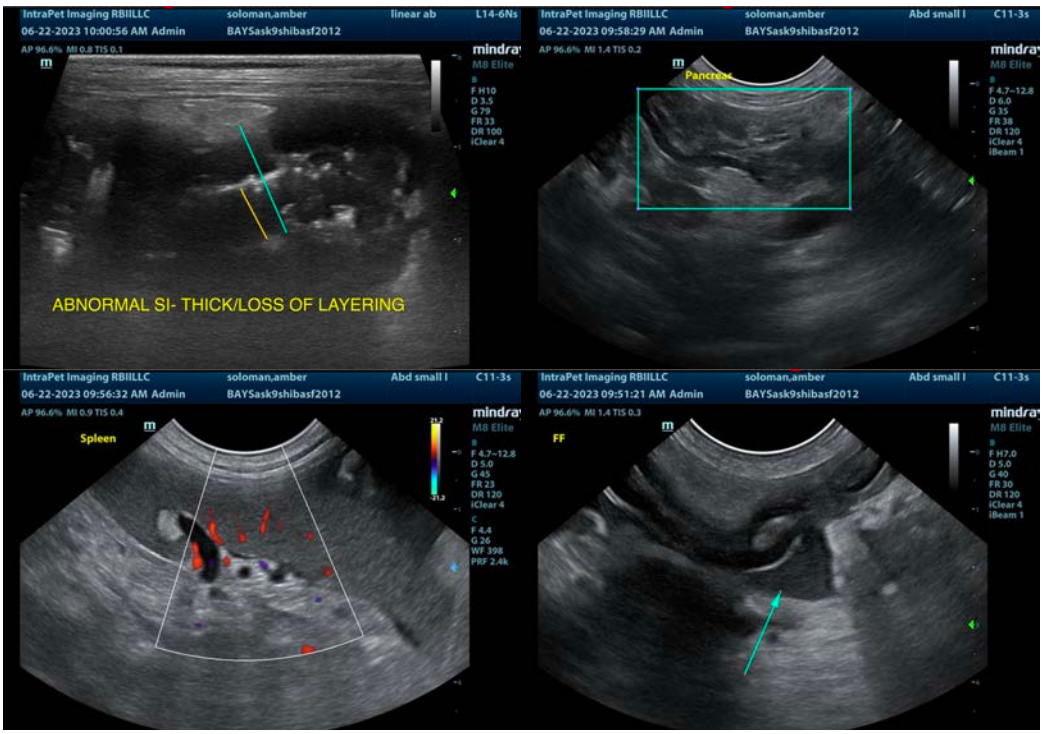
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

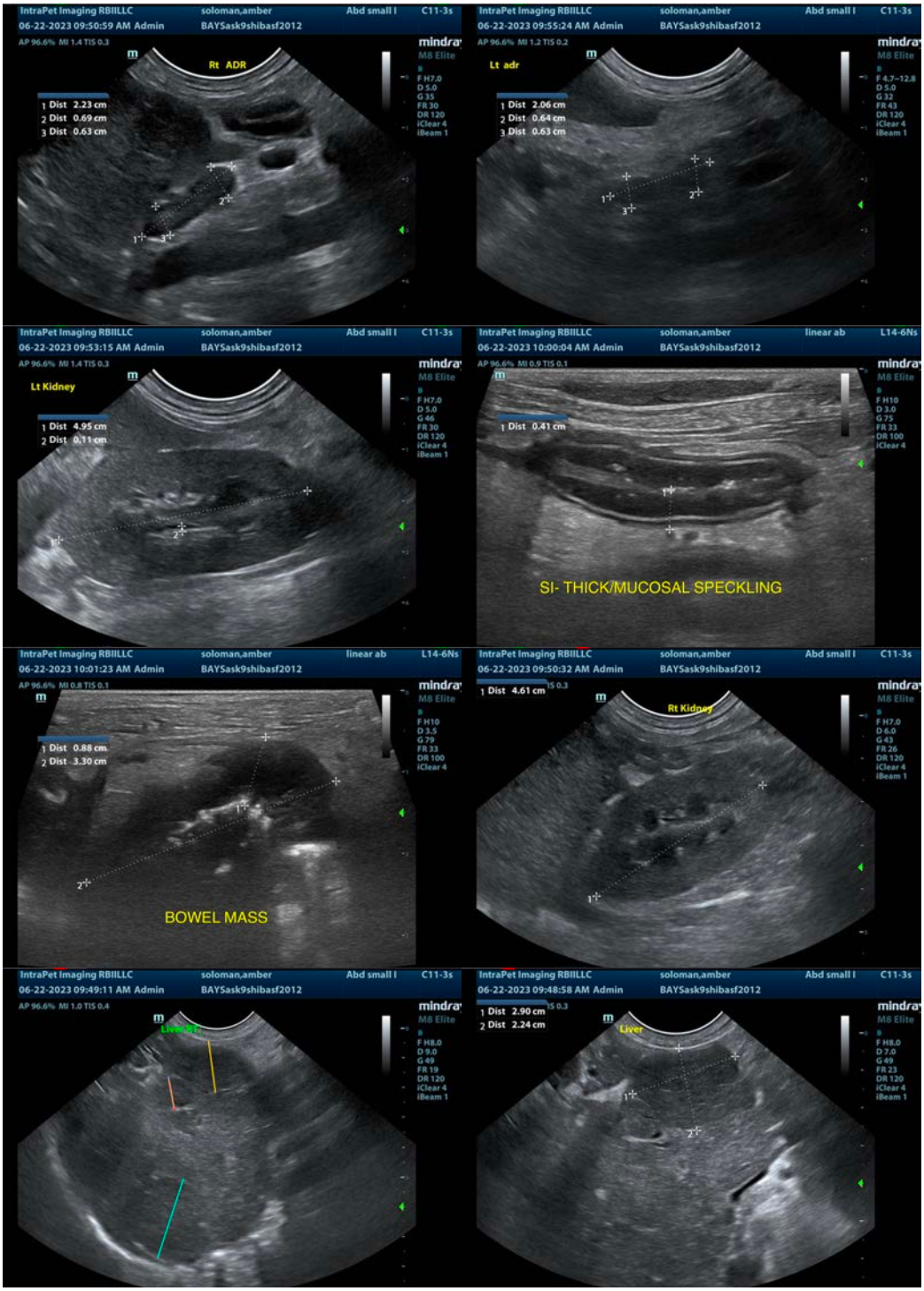
There is severe generalized inflammation of the abdomen with echogenic free fluid, most consistent with peritonitis. This could be inflammatory, neoplastic, or septic. Recommend sampling for fluid analysis, cytology +/- aerobic and anaerobic cultures. There is a focal area of irregular thickened small intestine with loss of layering. This is highly concerning for a focal bowel mass. Recommend a fine needle aspirate.

Additionally, there are large hypoechoic, somewhat ill-defined mass effects in the liver. These could represent metastatic lesions or could be unrelated. Consider a fine needle aspirate of a hepatic mass lesion. If surgical intervention is considered, ideally a contrast CT scan would be recommended to further evaluate for the extent of disease and surgical planning.

The pancreas appears prominent and mottled. These findings combined with the surrounding inflammation would be most consistent with significant pancreatitis, although the generalized peritonitis present makes this challenging to truly assess.

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




IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:50:59 AM Admin
BAYSask9shibasf2012
Rt ADR
1 Dist 2.23 cm
2 Dist 0.69 cm
3 Dist 0.63 cm
IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:55:24 AM Admin
BAYSask9shibasf2012
Lt adr
1 Dist 2.06 cm
2 Dist 0.64 cm
3 Dist 0.63 cm
IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:53:15 AM Admin
BAYSask9shibasf2012
Lt Kidney
1 Dist 4.95 cm
2 Dist 0.11 cm
IntraPet Imaging RBIILLC
soloman,amber
linear ab
L14-6Ns
06-22-2023 10:00:04 AM Admin
BAYSask9shibasf2012
1 Dist 0.41 cm
SI- THICK/MUCOSAL SPECKLING
IntraPet Imaging RBIILLC
soloman,amber
linear ab
L14-6Ns
06-22-2023 10:01:23 AM Admin
BAYSask9shibasf2012
1 Dist 0.88 cm
2 Dist 3.30 cm
BOWEL MASS
IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:50:32 AM Admin
BAYSask9shibasf2012
1 Dist 4.61 cm
Rt Kidney
IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:49:11 AM Admin
BAYSask9shibasf2012
IntraPet Imaging RBIILLC
soloman,amber
Abd small I
C11-3s
06-22-2023 09:48:58 AM Admin
BAYSask9shibasf2012
1 Dist 2.90 cm
2 Dist 2.24 cm
Liver

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