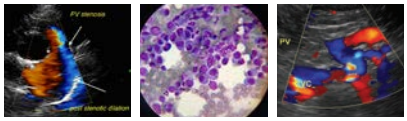
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

**DATE**

8/25/22

**PATIENT**

Winnie Cardwell

**SPECIES**

Canine

**BREED**

Mini Schnauzer

**SEX**

Spayed Female

**AGE**

11/2/12

**WEIGHT**

16 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**HOSPITAL NAME**

Animal Emergency Hospital

**REFERRING VET**

Dr. Kalwa

**INVOICE**

40755

## PRESENTING CLINICAL SIGNS

08-25-2022 Notes: 8/13: PC: Not eating, diarrhea, Diabetic Hx: Urinary incontinence, hooded vulva, UTIs-on proin + SO diet. Normally receives 11 Units BID Vetsulin 9a/9p Hx: Ultrasound in 2020- concern for cushings disease? No hx of ACTH stim test being performed Heart murmur 2/6 PCV/TP: 50/5.6 Glucose 324 --> 381 Ketones: Small

CBC/CHEM/LYTES: cbc wnl, kidney/liver values wnl, Lytes wnl UA: > 1050, ph 5, glucose and ketones in urine, blood, no obvious bacteria

Xrays: enlarged liver, thickened bowel Mass skin ventral abdomen Problems: - DKA- on CRI- able to discontinue - Anorexia- now eating -Diarrhea- much improved - Severe anxiety- was Os main concern- now more comfortable. Scripted diabetic diet. Saw improvement eating. Needed to decrease insulin dose. Sent home with reduced insulin (5 units), entyce, omeprazole, ondansetron, maropitant Recommended cushings testing, hypothyroid testing, recommended internal medicine consult (O already had one for other dog) 8/18/22: AEH PC: Diarrhea, PU/PD, didnt eat. UA: 1018, rods Glu 451 Given in hospital: Maropitant, polyflex Sent home with clavamox. 8/24/22: AEH PC: Bloody diarrhea, not eating Hx: Gives 5 U when eating Insulin; 3 U when not eating Hx: better with clavamox (for UTI) + Metronidazole (for diarrhea); saw improvement then restless, bloody diarrhea, not eating Switching to glycobalance diet Given in hospital: SQ fluids, maropitant injection Sent home with: Sucralfate, Tylosin, Fortiflora. Date: 08-25-2022 Notes: Winnie 9 yr 9 m FS Mini schnauzer PC (8/25): Not eating, lethargy Stool more firm.

No additional diagnostics (bloodwork/ UA/ Culture/ Xrays done today).

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The urinary bladder is moderately distended with anechoic urine. The Bladder wall appears mildly diffusely thickened and slightly irregular at 0.38 cm. The trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal and free of any calculi or mass lesions. Findings are most consistent with lack of urine distention or cystitis.

The left kidney has a normal shape and size (5.08 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 (5.15 cm). Overall echogenicity is slightly hyperechoic with poor corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of 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 0.61 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 XXcm 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. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

### *Liver*

The liver is large, and normal in echogenicity with smooth peripheral margins. The parenchyma is severely heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. The hepatic parenchyma is diffusely nodular with too numerous to count, irregular, ill-defined, hypoechoic nodules varying in size from 0.3-3.0 cm.

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 mild amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### *Gastrointestinal*

The stomach contains a large amount of fluid. 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 appears subjectively, mildly increased. Bowel loops follow a typical curvilinear path with distinct wall layering. Jejunum wall measures 0.34 cm. Visualized peristalsis appears appropriate. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with non-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 large 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*

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There are occasional prominent mesenteric lymph nodes. The omentum is hyperechoic around the pancreas.

## PRIMARY FINDINGS

- Prominent, hypoechoic pancreas surrounded by hyperechoic mesentery – The pancreatic changes are most consistent with mild/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, heterogeneous/nodular liver – 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 nodular appearance of the liver trends towards a more benign lesion, but underlying neoplasia cannot be ruled out.

- Subjectively thickened urinary bladder wall – Could be consistent with cystitis or lack of urine distention. Recommend urinalysis and culture.

- Large gastric fluid distention – This could be consistent with ileus/delayed gastric emptying or partial outflow tract obstruction (none visualized).

- Mildly thickened small intestine – The mild small intestinal wall changes may be a normal variant in this patient or could be consistent with an inflammatory process (e.g., inflammatory bowel disease).

- Fluid dilated colon – Consistent with diarrhea.

## SECONDARY FINDINGS

- Decreased corticomedullary distinction in both kidneys – The bilateral renal findings are consistent with age-related change.

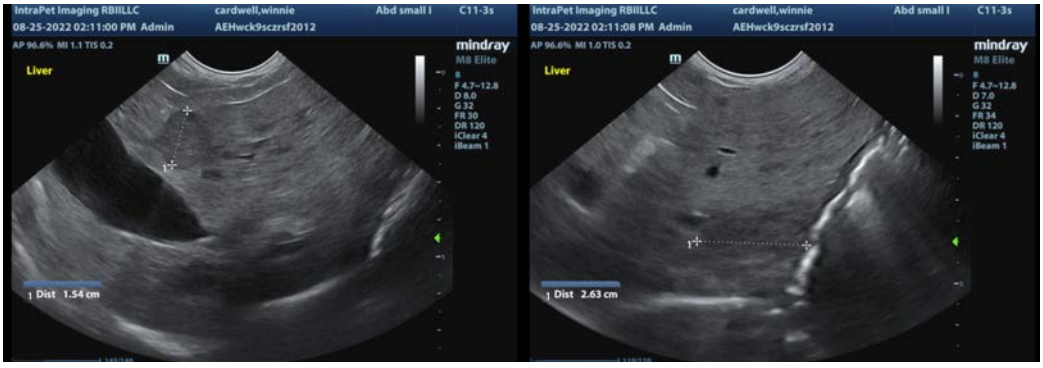
- Mild gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.

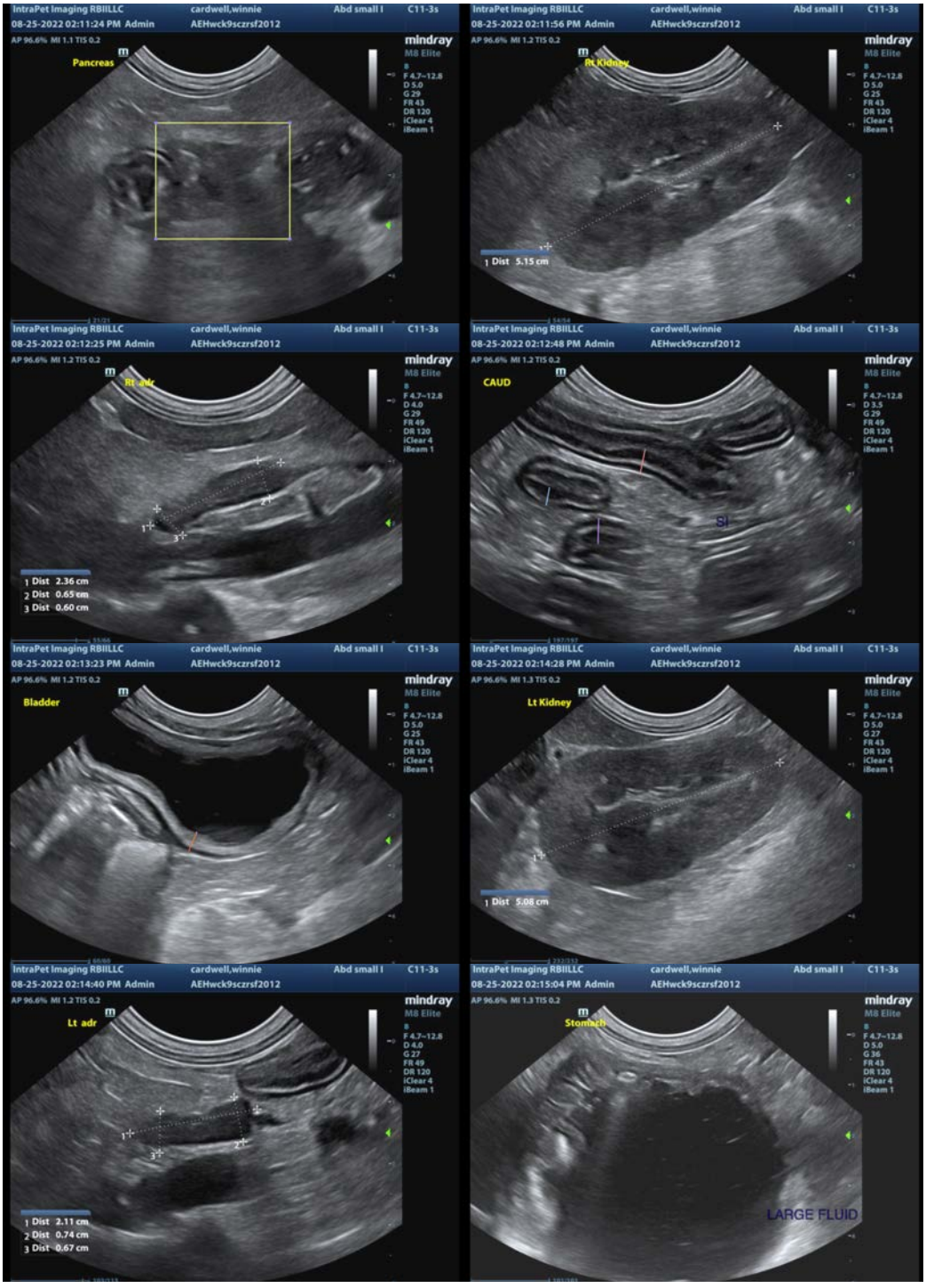
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

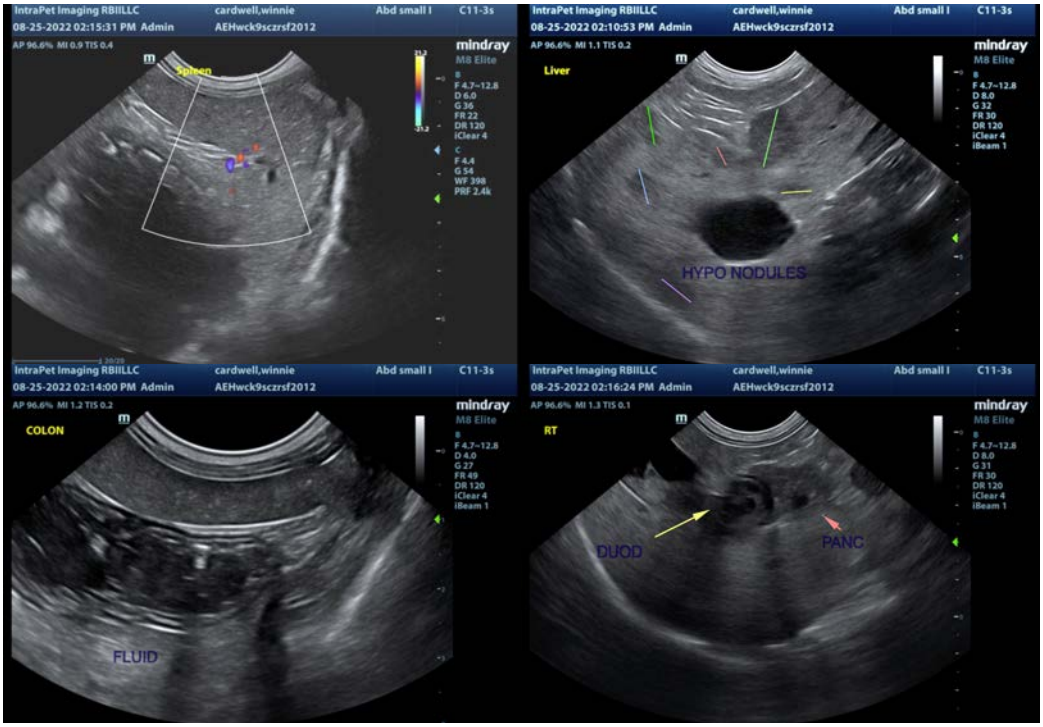
The pancreas appears prominent and inflamed, most consistent with active pancreatitis. Recommend an ultra-low-fat diet and medical treatment for pancreatitis. Additionally, the liver is large and nodular. This could be a diabetic hepatopathy with regenerative nodules but consider a fine needle aspirate to look for evidence of underlying neoplastic change (provided coagulation parameters permit).

The stomach is large, and fluid dilated. I suspect this is ileus secondary to the pancreatitis. Consider promotility medications or even placement of a nasogastric tube and decompression of the stomach.

The urinary bladder wall appears mildly thickened. With the history of urinary tract infections and diabetes, recommend a urinalysis and culture. Recommend the use of probiotic therapy whenever this patient is put on antibiotics.




IntraPet Imaging RBIILLC
cardwell,winnie
Abd small I
C11-3s
08-25-2022 02:11:24 PM Admin
AEHwck9sczrsf2012
mindray
Pancreas
08-25-2022 02:11:56 PM Admin
Rt Kidney
1 Dist 5.15 cm
08-25-2022 02:12:25 PM Admin
Rt adr
1 Dist 2.36 cm
2 Dist 0.65 cm
3 Dist 0.60 cm
08-25-2022 02:12:48 PM Admin
CAUD
SI
08-25-2022 02:13:23 PM Admin
Bladder
08-25-2022 02:14:28 PM Admin
Lt Kidney
1 Dist 5.08 cm
08-25-2022 02:14:40 PM Admin
Lt adr
1 Dist 2.11 cm
2 Dist 0.74 cm
3 Dist 0.67 cm
08-25-2022 02:15:04 PM Admin
Stomach
LARGE FLUID




**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)
kathleen.sennello@sonopath.com