

**DATE PRESENTING CLINICAL SIGNS**

12/16/21 History: Patient is diabetic, who is not currently responding to insulin. Other than diabetic neuropathy, patient is not currently showing any other signs at home.

**PATIENT**

Earl Hagy Current Medications: Lantus 1unit BID.  
Lab Results: Full in-house bloodwork and urinalysis normal. BG's in 500's on 5 units of Prozac insulin. Switched to Lantus.

**SPECIES**

Feline Date of Previous IntraPet Ultrasound: No previous IntraPet scans.  
Sedation: Declined.  
Stat Report: Not requested.

**BREED**

DSH

**SEX**

Neutered Male

**AGE**

1/6/11

**WEIGHT**

14.3 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rachel Brilhart RDMS

**HOSPITAL NAME**

Eastern AH

**REFERRING VET**

Dr. McKnight

**INVOICE**

33512

**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 (4.54 cm) with a large cortical cyst measuring 1.17 cm and pyelectasia measuring 0.38 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (4.64 cm) with pyelectasia at 0.38 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 nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.47 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 0.41 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. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**Liver**

The liver is large in size, and normal in echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. No focal nodules or cystic lesions are observed.

The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.36cm 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 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. The duodenum measured as normal (between 0.13-0.38cm in wall thickness) and the jejunum measured as normal (between 0.15-0.36cm.) 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 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 and hypoechoic as compared to the surrounding isoechoic mesentery. In some areas, particularly caudal to the stomach, the pancreas appears somewhat irregular with ill-defined hypoechoic nodules. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

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.

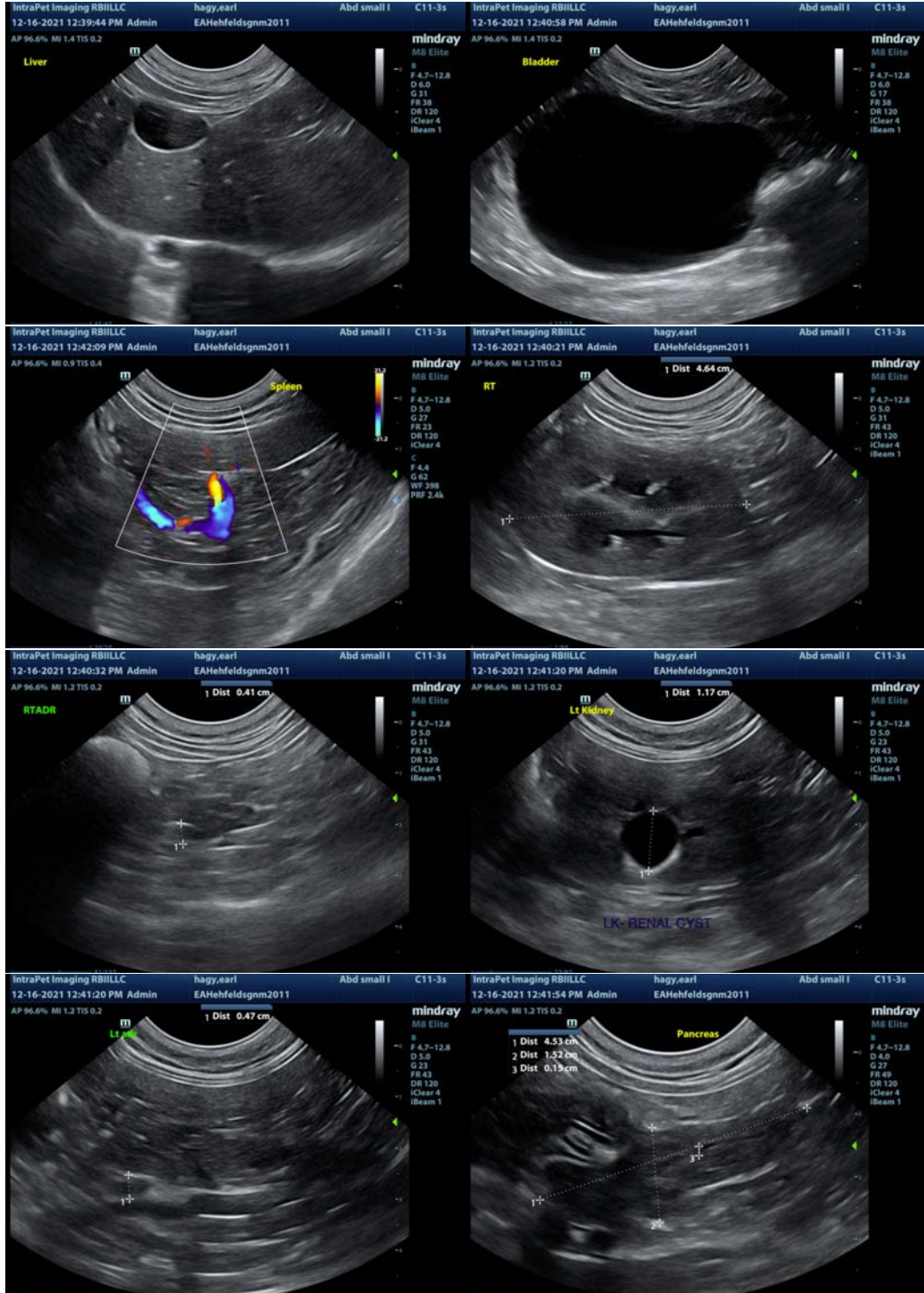
## **ULTRASONOGRAPHIC FINDINGS**

- Decreased corticomedullary distinction in both kidneys with bilateral pyelectasia – Mild loss of corticomedullary distinction in both kidneys could be consistent with chronic degenerative disease or interstitial nephrosis. Pyelectasia of the left/right kidney could be consistent with pyelonephritis, chronic renal disease, secondary to PU/PD or fluid therapy (if applicable), other.
- Hypoechoic, prominent pancreas with occasional ill-defined nodules – The pancreatic changes are most consistent with mild pancreatitis or a recent episode of pancreatic inflammation. The significance of the nodular lesions is unknown. Currently the appearance favors a benign nodular hyperplasia.
- Large, heterogeneous liver – Most consistent with a mild diabetic hepatopathy.

## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

An obvious cause for the possible insulin resistance is not noted. There is significant pyelectasia in both kidneys, so recommended urinalysis and culture to look for evidence of active pyelonephritis. Additionally, the pancreas is prominent, but not overtly inflamed. Consider a GI panel to Texas A&M for qualitative fPLI, TLI, cobalamin and folate to further evaluate the pancreas and to screen for concurrent small intestinal disease.

This is a large cat, and both adrenal glands appear relatively normal. If insulin resistance is definitively demonstrated, you could consider work up for growth hormone excess. Recommend a blood pressure evaluation, and in some instances I've had success using the freestyle libre (this really depends on how well the cat tolerates it) to try and make sure there are not episodes of hypoglycemia causing a somogyi effect.





**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.

Kathleen Sennello DVM,MS, Diplomate ACVIM (Small animal Internal Medicine)  
kathleen.sennello@sonopath.com