



**PATIENT PRESENTING CLINICAL SIGNS**

Sebastian Barone

History: First time seen, Presenting for gradual weight loss over past 6 months . Known obesity. Past 3-4 days vomiting, diarrhea. More lethargic Admin SQ fluids and Cerenia last night, Disp I/D low fat US today and starting on Insulin injections. Not going to go for 24 hour care .  
Abnormal PE/Chem/CBC/UA Results: BCS 6/9 , Grade 2 dental disease, few SubQ fatty masses.  
Glucose 572 mg/dL BUN 57 mg/dL ALKP >2000 U/L GGT 16 U/L, AMYL : 2485 U/L, Lipase 5364 U/L Na 131 mmol/L Cl 91 mmol/L UA: Glucose 3+, Ketone 1+ UPC 1.1

**SPECIES**

Canine

**BREED**

Puggle

**SEX**

Neutered male

**AGE**

11 years

**WEIGHT**

32.8 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Ammeraal

**HOSPITAL NAME**

Sova AH

**REFERRING VET**

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**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** were normal in size and contour; however, a minor hyperechoic ring was noted at the corticomedullary junction. This is consistent with diabetic nephropathy. This is likely from glucosuria. However, assessment for proteinuria is also warranted. This is an idiopathic finding, but an expected finding in diabetic patients. The left kidney measured 6.2 cm. The right kidney measured 6.4 cm.

**Adrenal Glands**

Both **adrenal glands** were slightly enlarged and mildly irregular. The right adrenal gland measured 2.21 x 1.24 cm at the caudal pole and 1.12 cm at the cranial pole. The left adrenal gland measured 2.72 x 0.95 cm at the caudal pole and 0.64 cm at the cranial pole.

**Spleen**

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes was noted.

**Liver**

The **liver** was mildly swollen in contour with increased portal markings without evidence of masses. The gallbladder was slightly thickened with a minor amount of debris. The common bile duct was uneventful. Minor evidence of hepatic lymphadenopathy was noted with this presentation most consistent with chronic active hepatitis, which may be of current or past active state dependent on the enzymatic elevations which may vary depending on the moment of blood sampling. Ultrasound guided biopsy could be considered to further define these changes and rule out underlying copper storage disease and define cell type and structural changes with the liver and rule out underlying neoplasia which is not overtly suspected.



**PATIENT**

**Gastrointestinal**

Sebastian Barone

The **gastrointestinal tract** was deviated caudally owing to the hepatomegaly. Examination of the **gastrointestinal tract** revealed an unremarkable stomach and small intestine regarding structure. There were minor areas of luminal fluid noted. There was no evidence of obstructive pattern.

**SPECIES**

Canine

Curvilinear patterns were retained throughout the gastrointestinal tract. Areas of hyperperistalsis were noted. This is consistent with response to irritation. The colon was unremarkable. .

**BREED**

Puggle

**Pancreas**

The **pancreas** was prominent and mildly hypoechoic. There was no obvious evidence of inflammation, yet generalized enlargement was present.

**SEX**

Neutered male

**ULTRASONOGRAPHIC FINDINGS**

Gastroenteritis.

**AGE**

11 years

Diabetic nephropathy.

Diabetic hepatopathy.

**WEIGHT**

32.8 lbs

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Fecal exam and IV fluid support are recommended for diabetic state. There was no obvious evidence of predisposing issues unless the patient is a pituitary dependent Cushingoid. This should be evaluated once this immediate crisis has been managed.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Potential Causes of Diabetic Dysregulation**

This is a suggestive checkoff list when faced with an unregulated diabetic patient:

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Dietary indiscretion/intolerance

Pancreatitis

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Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

Cushing's

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Acromegaly

Owner compliance

Insulin quality issues

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Antibodies to insulin



**PATIENT** Underlying Neoplasia

Sebastian Barone Diffuse liver disease

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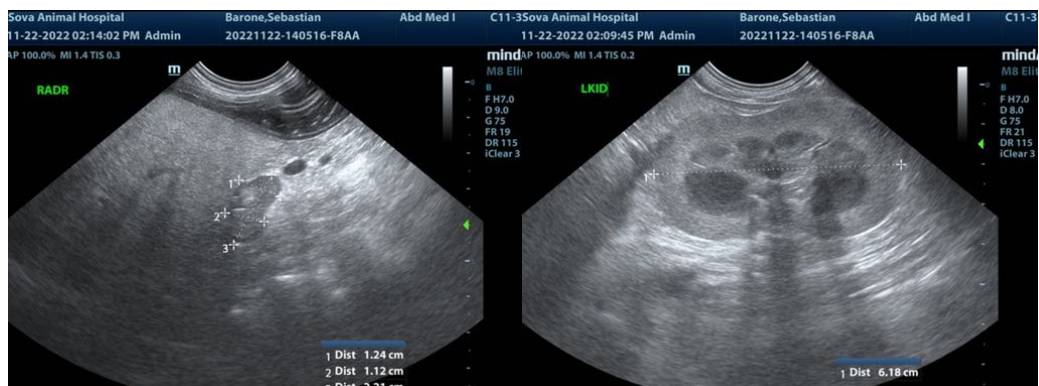
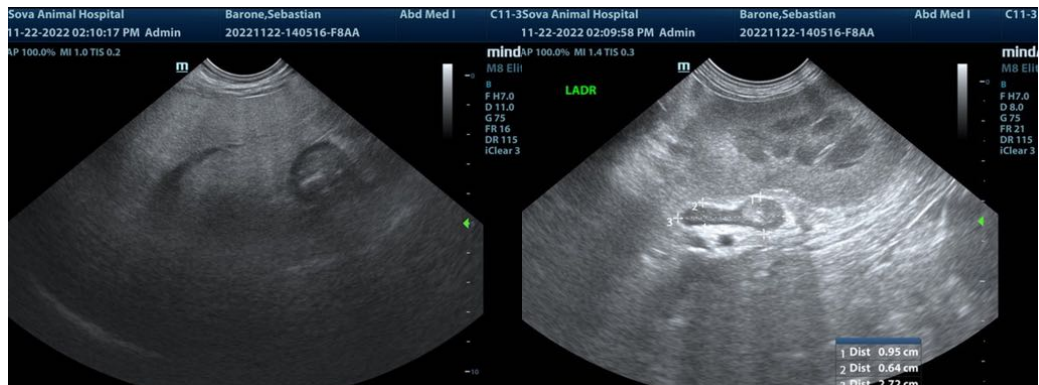
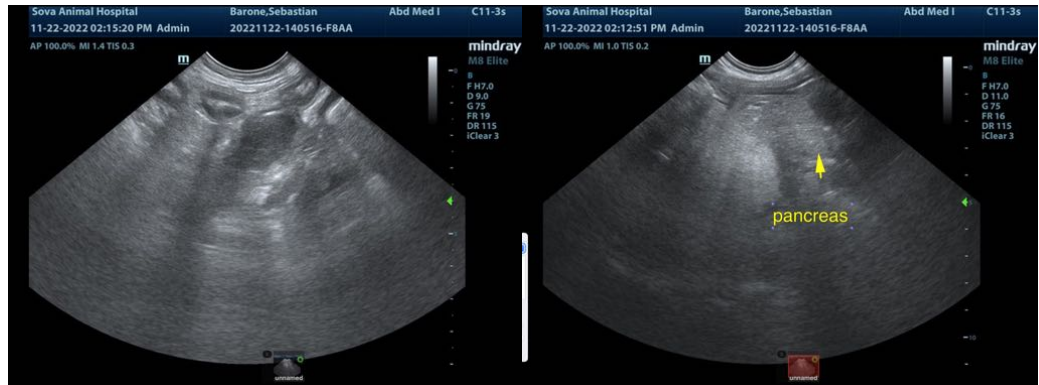
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.



**PATIENT**

Sebastian Barone

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com  
info@SonoPath.com

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