



**PATIENT**

Yoffi Elbaum

**PRESENTING CLINICAL SIGNS**

History: hx of diabetes, Cushing's, lethargic, vomiting anorexia

**SPECIES**

Canine

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

**BREED**

Poodle Mix

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.

**SEX**

Neutered male

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 right kidney measured 6.02 cm.

**AGE**

10 years

**Adrenal Glands**

**WEIGHT**

11 lbs

The right **adrenal gland** was enlarged and irregular measuring 3.47 x 1.9 cm at the cranial pole and 1.08 cm at the caudal pole. The left adrenal gland was at the upper limits of normal and measured 1.95 x 0.8 cm at the caudal pole and 0.67 cm at the cranial pole.

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Spleen**

**IMAGING PERFORMED BY**

Jenn

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.

**HOSPITAL NAME**

Rockaway AH

**Liver**

**REFERRING VET**

Dr. Maniar

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

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**Gastrointestinal**

**DATE**

12/20/22

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.



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**Pancreas**

**SPECIES**

Canine

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

**BREED**

Poodle Mix

**Free Abdomen**

Enhanced fat was noted around the left kidney. This is suggestive for nephritis and should be evaluated in light of urinalysis results.

**SEX**

Neutered male

**ULTRASONOGRAPHIC FINDINGS**

Bilateral adrenal hypertrophy, suspect underlying PDH.

**AGE**

10 years

Diabetic hepatopathy.

Diabetic nephropathy.

**WEIGHT**

11 lbs

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**Efficient & Accurate Cushing's Work up-Lindquist**

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**Notes regarding Cushing's Clinical Presentations:**

*Nearly all Cushing's dogs have SAP elevations and true PU/PD (USG < 1.025) and most are polyphagic.*

*Cushing's dogs are > 6 years and usually > 9 years old, usually have poor skin coats, body scores > 3/5, and are usually sedentary animals.*

*Its important to remember that Cushing's dogs usually look and play the part and other diseases cause false + stress related cortisol spikes. On rare occasion a Cushing's dog will not follow the rules but this is truly an exception.*

*Potential Cushing's patient workups can be costly and frustrating if not definitive and, in my experience, the non-definitive patient usually has something else going on that may be contributing to some of the clinical signs a Cushing's dog will have, especially SAP elevations or PU/PD. Based on this prelude of information I came up with the following algorithm in the spirit of diagnostic efficiency.*

*The following suggested protocol is based on current available literature on Cushing's disease and extensive clinical-sonographic experience evaluation + Cushing's and False + LDDST & ACTH stim. cases in order to maximize the efficiency of a Cushing's workup in practice.*

**IMAGING PERFORMED BY**

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**Potential Causes of Diabetic Dysregulation**

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

UTI

**DATE**

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Dietary indiscretion/intolerance

Pancreatitis



**PATIENT** Hyperthyroidism/hypothyroidism

Yoffi Elbaum Exogenous steroids (including topical eye meds)

**SPECIES** Cushing's

Canine Acromegaly

**BREED** Owner compliance

Poodle Mix Insulin quality issues

Antibodies to insulin

**SEX** Underlying Neoplasia

Neutered male Diffuse liver disease

**AGE**

10 years

**WEIGHT**

11 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Jenn

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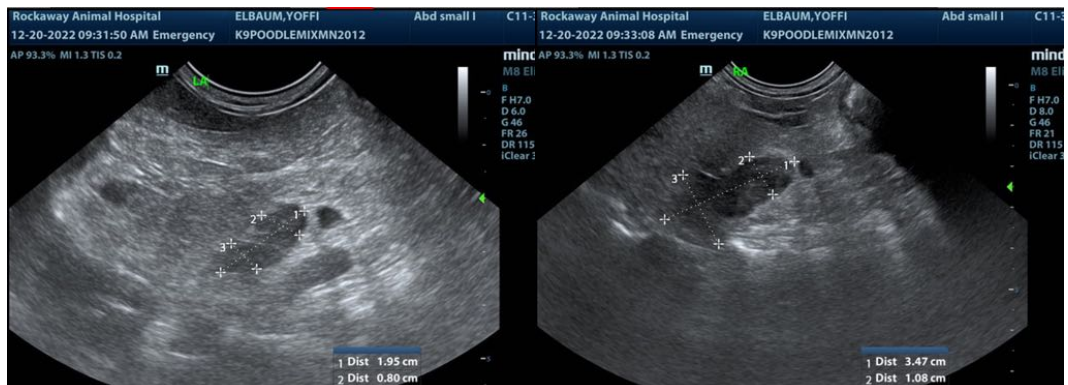
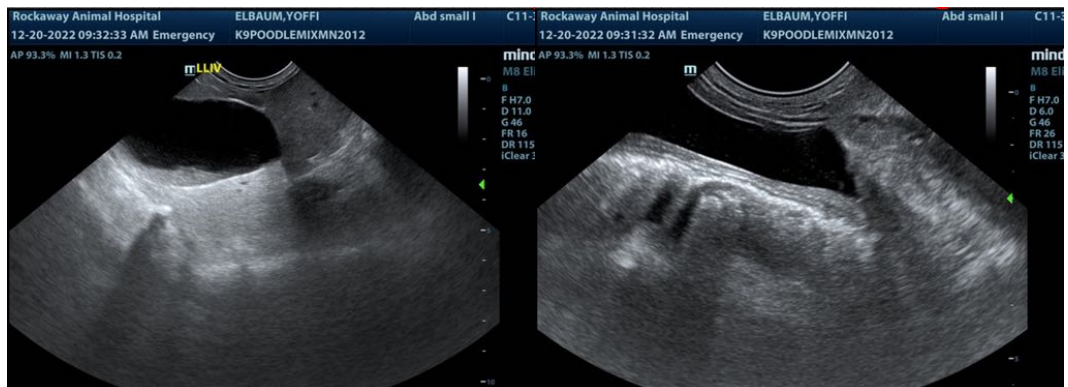
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**SPECIES**

Canine

**BREED**

Poodle Mix

**SEX**

Neutered male

**AGE**

10 years

**WEIGHT**

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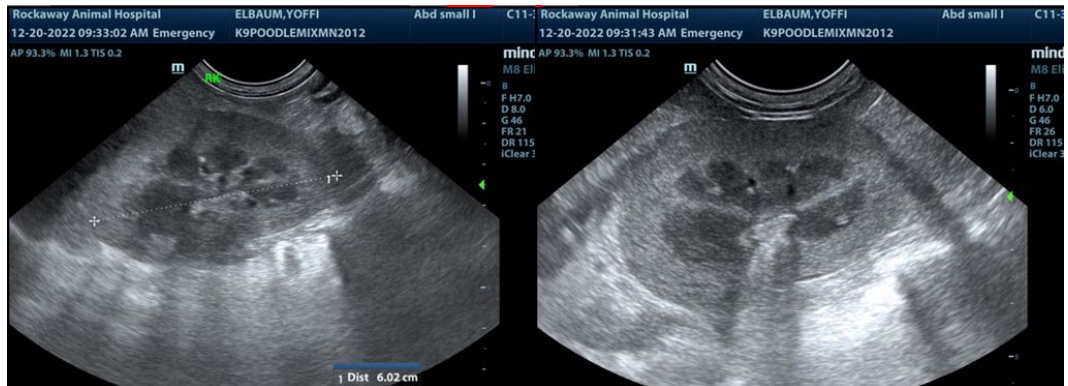
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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