



PATIENT

Jimmy Maurino

SPECIES

Canine

BREED

Mixed

SEX

MN

AGE

8yr

PRESENTING CLINICAL SIGNS

- vomiting
- lethargic
- anorexic
- history of DKA
- hypoglycemia (50 mg/dl)
- ketones 4 + in the UA
- owner give insuline at 9 am (10 IU vetsuline)

Abnormal PE/Chem/CBC/UA Results: UA ketones 4+ Glucose 51 74 - 143 mg/dL 410 305 Creatinine 0.8 0.5 - 1.8 mg/dL 0.7 0.4 BUN 36 7 - 27 mg/dL 30 25 BUN: Creatinine Ratio 45 43 63 Phosphorus 3.7 2.5 - 6.8 mg/dL 3.7 Calcium 7.8 7.9 - 12.0 mg/dL 8.0 Sodium 141 144 - 160 mmol/L 139 145 Potassium 3.6 3.5 - 5.8 mmol/L 3.8 4.2 Na: K Ratio 39 37 35 Chloride 109 109 - 122 mmol/L 92 103 Total Protein 6.2 5.2 - 8.2 g/dL 5.0 5.3 Albumin 4.0 2.3 - 4.0 g/dL 2.7 3.0 Globulin 2.2 2.5 - 4.5 g/dL 2.3 2.3 Albumin: Globulin Ratio 1.8 1.2 1.3 ALT 52 10 - 125 U/L 78 98 ALP 151 23 - 212 U/L 675 384 GGT 3 0 - 11 U/L 8 Bilirubin - Total 0.7 0.0 - 0.9 mg/dL 0.5 Cholesterol 332 110 - 320 mg/dL 220 Amylase 1,405 500 - 1,500 U/L 299 Lipase 576 200 - 1,800 U/L 474 Osmolality 285 mmol/kg

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

WEIGHT

41lb

Urinary System

The urinary bladder presented uniformly moderately thickened wall isoechoic to the adjacent normal urinary bladder wall primarily visualized the cranial / apical urinary bladder. The luminal margin of the thickened urinary bladder wall was mildly asymmetrical in contour. Mineralization or echogenic foci within the thickened areas of urinary bladder wall was not present. The urinary bladder, trigone, cystourethral junction, and visible pelvic urethra exhibited normal tone. Anechoic urine was present in the lumen with moderate to significant non-dependent to dependent lumen sediment and focal mineral. The ureteral papillae were normal. The ureters were not visible which is normal.

INTERPRETED BY

R. McKenzie Daniel,
DVM, DABVP
(Canine and Feline)

Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition. No evidence of pelvic dilation was present. The left kidney measured 7.1 cm in length. The right kidney measured 8.0 cm in length.

HOSPITAL NAME

CJAH

The area of the aortic trifurcation was free of pathology.

The residual prostate appeared normal and free of pathology.

Adrenal Glands

REFERRING VET

Jeremiah Gabriel

The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.47 cm width at the caudal pole. The right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.63 cm width at the caudal pole.

INVOICE

23848

Spleen

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IMAGING PERFORMED BY

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The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.

Liver/Gallbladder

The liver presented increased in size. The parenchyma of the liver was subjectively increased in echogenicity compared to the spleen and renal cortices. The echotexture of the liver parenchyma was uniform with a mild coarse echotexture. The capsule of the liver was symmetrical in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild non-organized debris. The cystic and common bile ducts were normal.

Gastrointestinal

The stomach presented mild thickened wall. Intact wall layering was maintained and distinct. The stomach contained a moderate amount of anechoic fluid and shadowing chyme.

The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. Mild hyperechoic intestinal mucosal speckling was present. The lumen of the small intestine was empty with no signs of mechanical/metabolic ileus, obstruction or foreign material.

Normal visible colon wall layers were present with apparent formed feces in lumen.

Pancreas

The right limb of the pancreas presented hypoechoic to heterogeneous echogenicity compared to adjacent omental fat. Mild asymmetrical capsule margination was present with mild variable parenchymal swelling and mild peripancreatic reactivity / inflammation. No overt evidence of neoplasia. The left limb of the pancreas was normal in size with mild remodeled parenchyma.

Free Abdomen

No omental masses, overt lymphadenopathy or peritoneal effusion was present.

ULTRASONOGRAPHIC FINDINGS

Primary

- Pancreatitis dash more prominent in right pancreatic limb.
- Hepatomegaly exhibiting parenchyma hyperechogenicity- diabetic, reactive or vacuolar hepatopathy, inflammatory disease, lipidosis, cholestasis, and less likely occult neoplasia all potentials.
- Mild non-organized gallbladder debris (non-mucocele)
- Gastroenteritis pattern accentuated by moderate non-obstructive hypomotile stomach.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Hospitalization with empirical therapy for diabetic ketoacidosis and pancreatitis with concurrent gastrointestinal support is recommended. Clinical and as needed sonographic monitoring if evidence of progressive hepatopathy, ketonuria or clinical signs suggestive of progressive pancreatitis is indicated.



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No evidence of mechanical gastrointestinal obstruction.

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

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- UTI
- Dietary indiscretion/intolerance
- Pancreatitis
- Hyperthyroidism/hypothyroidism
- Exogenous steroids (including topical eye meds)
- Cushing's
- Acromegaly
- Owner compliance
- Insulin quality issues
- Antibodies to insulin
- Underlying Neoplasia
- Diffuse liver disease

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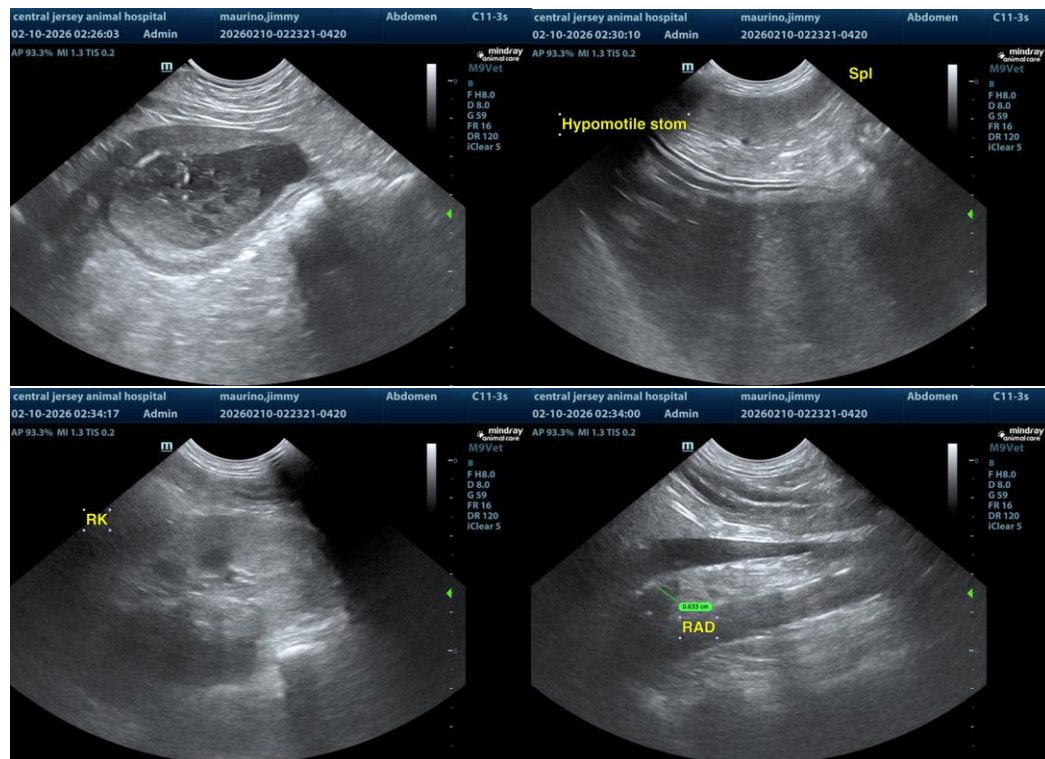
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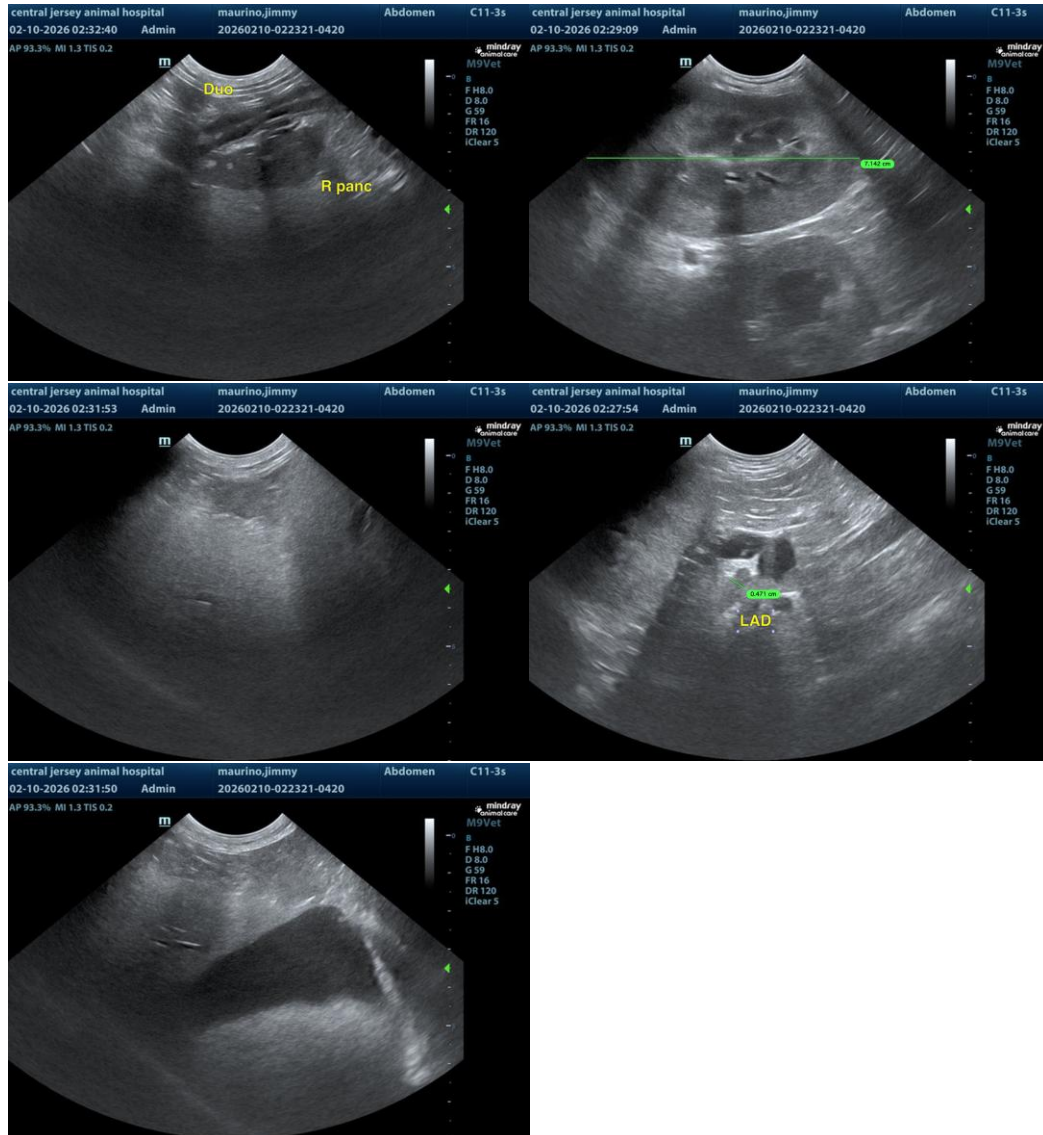
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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