



PATIENT	PRESENTING CLINICAL SIGNS
Bentley Pietrowicz	Possible focal seizures, increased liver values, poor appetite, diarrhea, Concern for infectious toxicity vs shunt. Stomach was full yesterday when tried to scan, owner said dog ate dinner not breakfast. Patient stayed overnight and was fed dinner. Ileus secondary to hepatitis, cholangiohepatitis
SPECIES	Abnormal PE/Chem/CBC/UA Results: Bile acids pending
Canine	ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN
BREED	Urinary System
Aussie	The urinary bladder exhibited normal thickness and tone. Anechoic urine was present in the lumen. No mineral/calculi. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes were noted.
SEX	The prostate exhibited expected presentation for a young intact male canine.
Male	The area of the aortic trifurcation was free of pathology.
AGE	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio and normal corticomedullary definition were maintained. The echogenicity of the cortex was similar to or slightly less than normal liver parenchyma while the medulla echogenicity was hypoechoic to the cortex with no evidence of pelvic dilation. No evidence of renomegaly or renal mineralization/calculi. The left kidney measured 6.3 cm. The right kidney measured 6.2 cm.
6 Months	Adrenal Glands
WEIGHT	The adrenal glands were uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 1.8 cm length x 0.38 cm at the caudal pole. The right adrenal gland measured 2.1 cm length x 0.60 cm at the caudal pole.
49 Pounds	Spleen
INTERPRETED BY	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.
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Liver
IMAGING PERFORMED BY	The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The visualized portal vein and cranial abdominal caudal vena cava appeared to be overtly normal, exhibiting laminar flow on doppler. Portal vein measured approximately 0.85 cm diameter. Caudal vena cava measured approximately 1.0 cm in diameter. By comparison, the aorta measured 1.1 cm in diameter. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.
Jenn	Gastrointestinal
HOSPITAL NAME	The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach contained a mild amount of non-shadowing ingesta/chyme.
Rockaway AH	The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction or foreign material.
REFERRING VET	Normal visible colon wall layers were present with apparent formed feces in lumen.
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PATIENT

Bentley Pietrowicz

Pancreas

SPECIES

Canine

The parenchyma of the left limb, body and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease was evident.

Free Abdomen

BREED

Aussie

No overt lymphadenopathy or peritoneal effusion was present.

SEX

Male

ULTRASONOGRAPHIC FINDINGS

- Hepatopathy exhibiting subjective normal hepatic volume
- Overtly normal gastrointestinal tract with mild non-shadowing gastric ingesta/chyme
- Normal bilateral kidneys and urinary bladder – no evidence of mineral/calculi.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

AGE

6 Months

Given the subjective normal hepatic volume, overtly normal portal vein/caudal vena cava, and without evidence of commonly seen abnormalities such as urinary bladder or renal mineralization, an intrahepatic or extrahepatic shunt is considered unlikely. Considerations for the liver may include primary parenchymal disease, i.e., non-specific hepatitis (viral, bacterial, leptospirosis, toxin, etc.), with possibility of portal hypoplasia/microvascular dysplasia.

WEIGHT

49 Pounds

Correlation with pending bile acid testing is recommended. Hepatic FNA could be considered for cytology and potential identification of inflammatory cell type, if present. Core biopsy or surgical biopsy may be necessary for further definition histopathologically, or to assess for portal hypoplasia/microvascular dysplasia. If significantly post-prandial bile acids, which may indicate non-obvious shunt, gold standard CT with contrast may be indicated. Pending bile acid testing, some or all of the following protocol could be considered empirically.

INTERPRETED BY

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

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

IMAGING PERFORMED BY

Jenn

Royal Canin Hepatic Support diet or Hills L/D, Metronidazole (7.5 mg/kg PO bid) over the next 14 days, Lactulose (Oral: 3.1-3.7 g/5 ml lactulose in a syrup base) long term to target 2-3 soft stools/day, with a high-quality protein supplement of minor amount of yogurt or cheddar cheese. Monitor bile acids, with attention paid to dropping albumin, BUN or cholesterol. SAME and nutraceuticals as needed. Ursodiol (10-15 mg/kg p.o. q24h) can be considered as hepatoprotectant and to enhance bile flow. Zinc serum level keep between 200–500 ug/dl. If deficient then Tx zinc acetate 1-3 mg/kg/day. Gastrointestinal protectants are recommended if the patient is anorexic.

HOSPITAL NAME

Rockaway AH

REFERRING VET

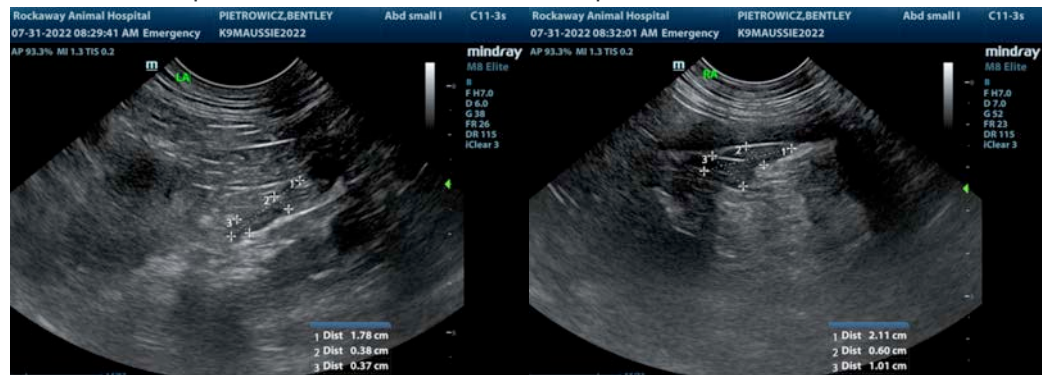
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Bentley Pietrowicz

SPECIES

Canine

BREED

Aussie

SEX

Male

AGE

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49 Pounds

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HOSPITAL NAME

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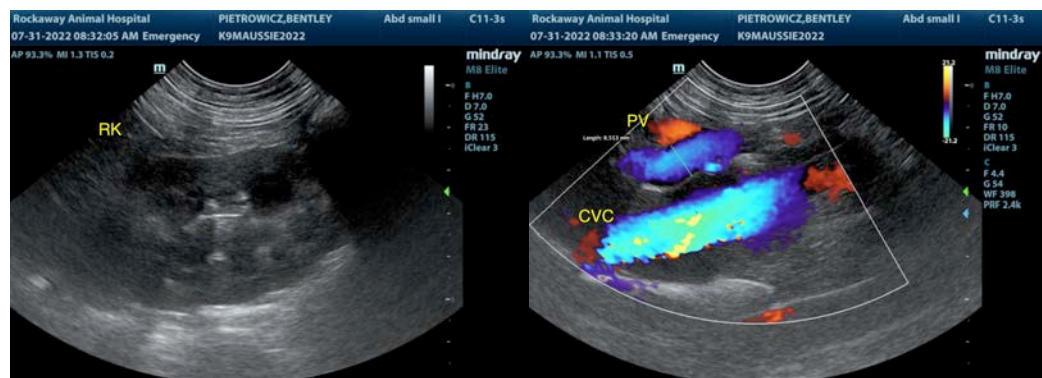
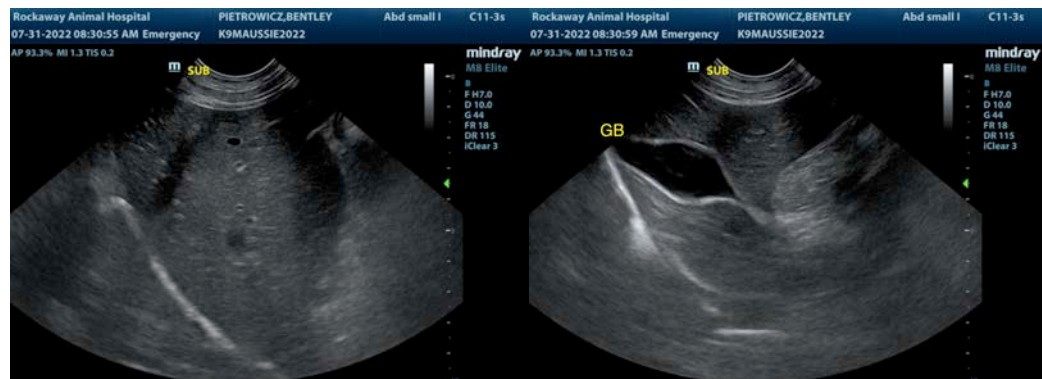
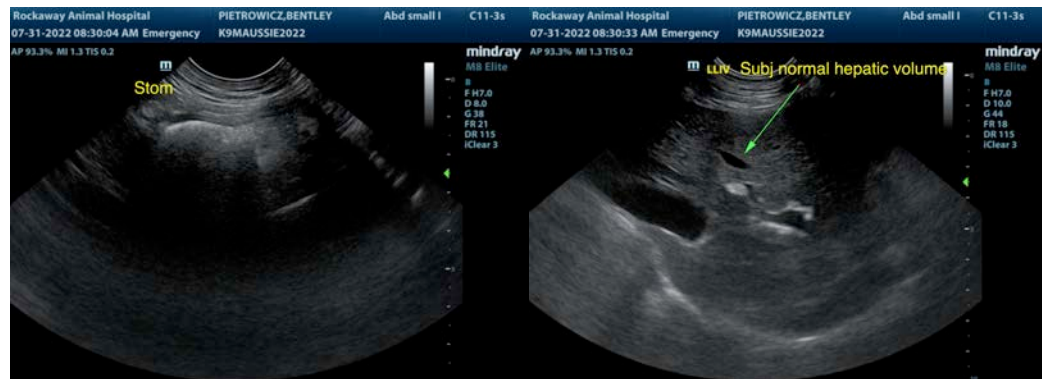
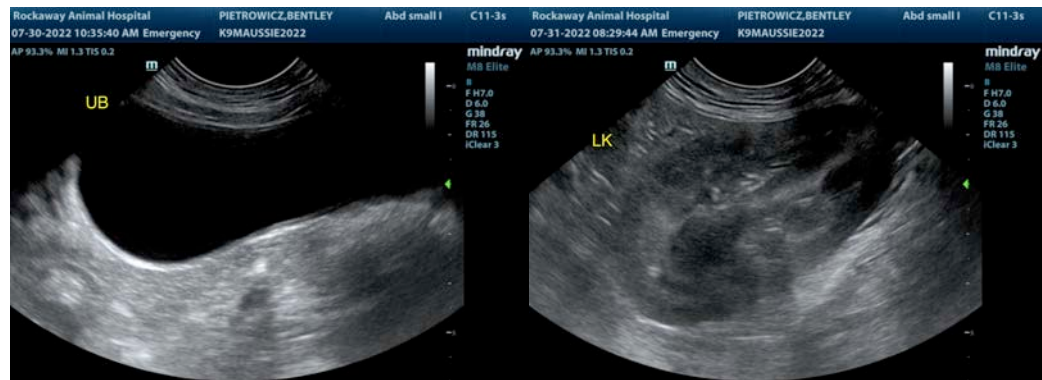
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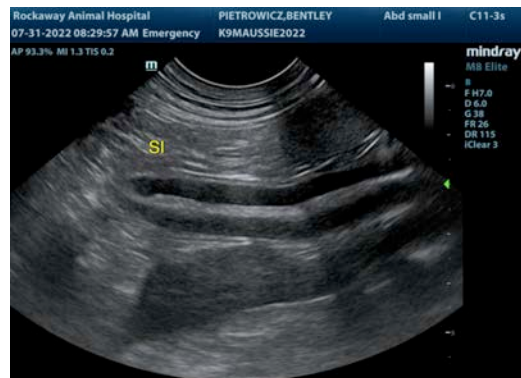
Bentley Pietrowicz

SPECIES

Canine

BREED

Aussie



SEX

Male

AGE

6 Months

WEIGHT

49 Pounds

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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)

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INTERPRETED BY

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**IMAGING
PERFORMED BY**

Jenn

HOSPITAL NAME

Rockway AH

REFERRING VET

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