

PATIENT PRESENTING CLINICAL SIGNS

PATIENT Islay Park
SPECIES Canine
BREED Labradoodle
SEX Female
AGE 1 year 7 months
WEIGHT 25.8 Pounds

History: Islay is a young adult (1 yr 7 months) that has struggled to maintain weight, has a poor appetite, and history of low immune system concerns (had parvovirus despite vaccines and papillovirus). In addition, high ALT value 292 (10-125) on 08/28/21 (see below). Evaluating for underlying liver shunt or other causes for clinical signs / results above. Current medications Heartgard Denamarin
Abnormal PE/Chem/CBC/UA Results: ALT 292 (10-125) on 8/28/21 ALT 148 on 7/1/21 ALT 185 on 5/28/21 - post starting Denamarin for 1 month ALT 155 on 4/22/21 (performed preventative care panel) - started Denamarin 225mg Karen declined bile acids - wanted to go straight to ultrasound.

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. A minor amount of suspended debris was noted and a trace amount of sand. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

The **kidneys** were swollen and uniform with slight areas of mineralization. The right kidney measured 5.15 cm. The left kidney measured 5.6 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 1.86 x 0.5 cm. The left adrenal gland measured 0.33 cm at the caudal pole and 0.32 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 subnormal in size with uniform parenchyma. Intrahepatic parenchymal vascularity presented subnormal volume. The portal vein was followed to the portal hilus. A large vessel measuring approximately 1.3 cm in width was noted and deviated ventrally and then caudal dorsally just caudal to the pylorus. It likely entered into the vena cava as the vena cava was excessively large and continued into the diaphragm. The pattern would suggest gastrocaval shunt and appears extrahepatic. This should be further defined by CT with surgical consultation. The gallbladder and common bile duct were unremarkable.

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Loetitia Saint-Jacques, RVT

HOSPITAL NAME

MountainView AH

REFERRING VET

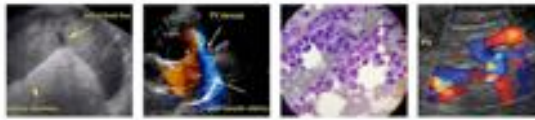
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92229

DATE

6/30/21



PATIENT *Gastrointestinal*

Islay Park 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. The mesenteric lymph nodes were reactive and measured up to 0.58 cm.

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Pancreas

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.

ULTRASONOGRAPHIC FINDINGS

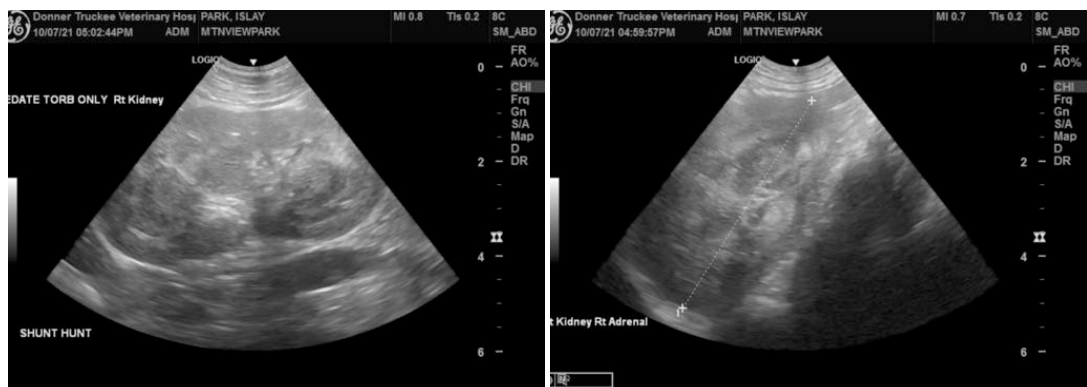
Pattern suggests gastrocaval shunt.

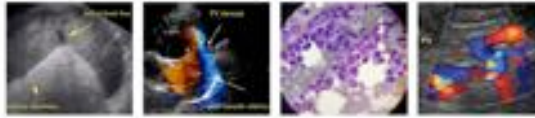
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend medical management. Bile acid profile is indicated to assess the functional significance of the shunt, which is suspected. Bile acids are suspected to be very elevated as the shunt fraction is very large in this patient. CT is recommended to further define.

Hepatic Support for Bile Acid Elevation +/- Hepatic Encephalopathy

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.





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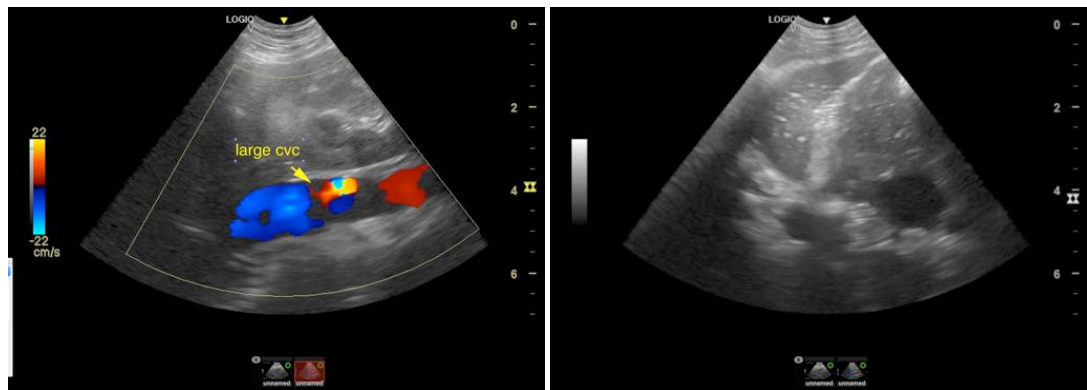
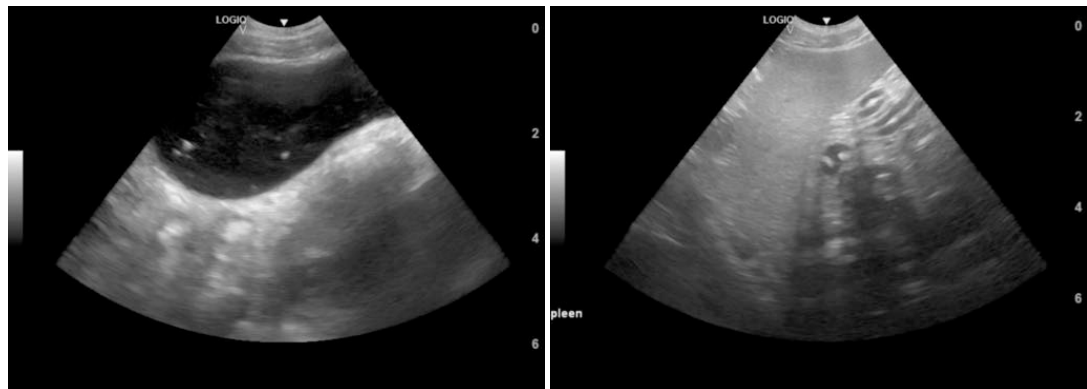
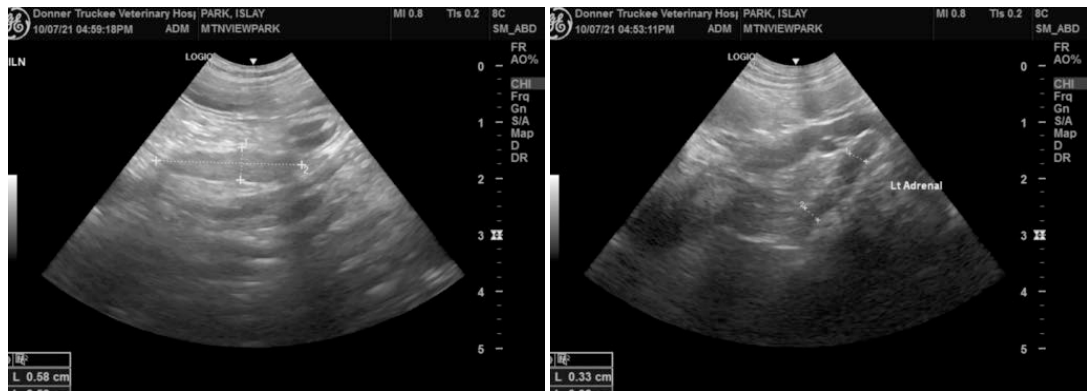
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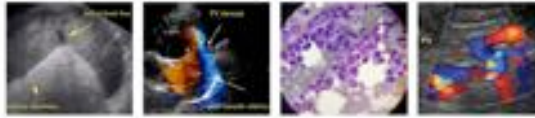
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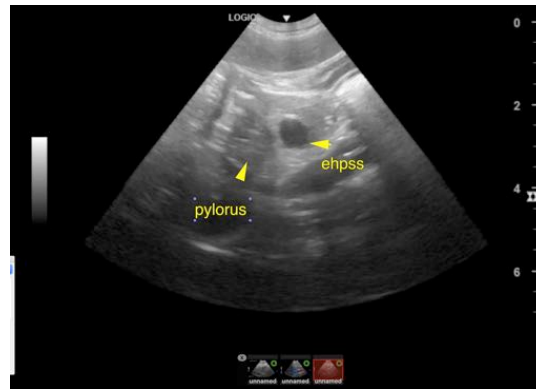
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The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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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