



**DATE PRESENTING CLINICAL SIGNS**

03/31/26

Patient History: Presented 3/26 a second opinion on a possible portosystemic shunt. Has frequently seemed to behave abnormally (hiding, seeming "spacey"), especially following a meal. Frequent periods of GI upset w/ stool seeming bright in color, often w/ maldigested food, frequent hypersalivation. Hx of elevated ALT (361) w/ elevated pre-prandial bile acids (29.1), normal post-prandial bile acids (7.5). Often winded secondary to brachycephalic airway syndrome and elongated soft palate. O notes that seems to overheat very quickly, becomes short of breath easily, is very concern for elongated soft palate and heat intolerance w/ improvement in weather and wants to have airway surgery ASAP. On PE, brachycephalic conformation and retained maxillary incisors but otherwise WNL.

**PATIENT**

Libby Baker

**SPECIES**

Canine

**BREED**

French Bulldog

**SEX**

Intact Female

Current Medications: N/A currently.

Labwork Results: Labwork attached, reported as: 3/1 fecal neg for parasites. 3/14 CBC/CHEM: ALT (361) UA 2+ proteinuria, pH 8.5, 2+ AMMONIUM MG PHOSPHATE (6-20)/HPF 3/23. 3/23 elevated pre-prandial bile acids (29.1), normal post-prandial bile acids (7.6)

Date of Previous IntraPet Ultrasound: No previous.

Sedation: IV Torb, deeper sedation required if further imaging recommended.

Stat Report: Not requested.

Imaging Performed by: Rachel Brillhart, RDMS.

**AGE**

04/01/25

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**WEIGHT**

19.6 pounds

**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 were noted. Ureteral papillae were normal.

**INTERPRETED BY**

Eric Lindquist, DMV,  
DABVP(CFM), Cert.  
IVUSS

The **uterus** was uniform and empty measuring up to 0.60 cm. The ovaries were normal with the left measuring 0.90 cm.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The left kidney measured 3.93 cm in length. The right kidney measured 4.53 cm in length.

**HOSPITAL NAME**

Chadwell Animal  
Hospital

**Adrenal Glands**

**REFERRING VET**

Dr. Mengers

The **left adrenal gland** was 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 left adrenal gland measured 1.92 cm x 0.44 cm width at the caudal pole and 0.44 cm width at the cranial pole.

**INVOICE**

14767

The **right adrenal gland** was slightly subnormal in size and measured 2.0 cm x 0.38 cm width at the cranial pole and 0.28 cm width at the caudal 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 were noted.

### **Liver**

The **liver** revealed a hyperechoic nodule that appeared nondisruptive measuring 1.9 cm in the left cranial liver. The liver was mildly subnormal in size measuring 3.8 cm. The portal hilus in this patient revealed an abnormal extrahepatic shunt that appeared to be in the position of splenic shunt yet was directed dorsally through the aortic hiatus to create a double aorta sign. This is consistent with spleno-azygos shunt which is at a late phase. The portal vein itself was relatively normal in size if not slightly subnormal measuring 0.65 cm in width. The extrahepatic shunt measured 0.86 cm in width.

### **Gastrointestinal**

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.

### **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**

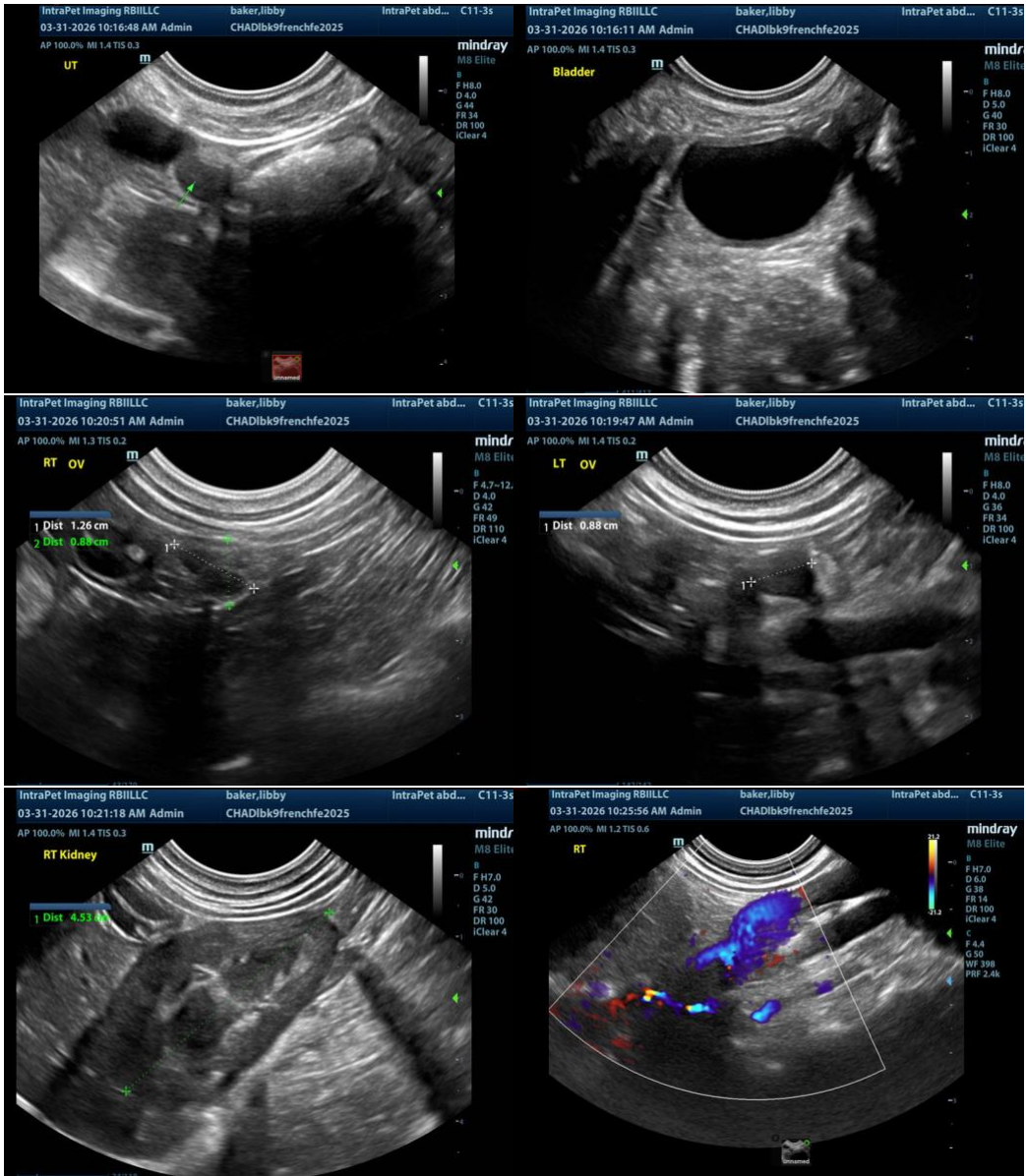
- Extrahepatic portosystemic shunt consistent with spleno-azygos shunt.
- Slightly subnormal liver size with hepatic nodule.
- Subnormal right adrenal gland.

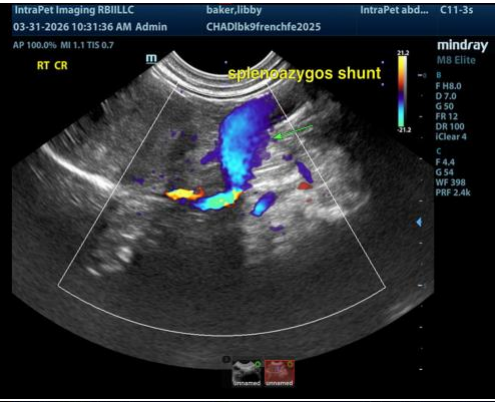
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

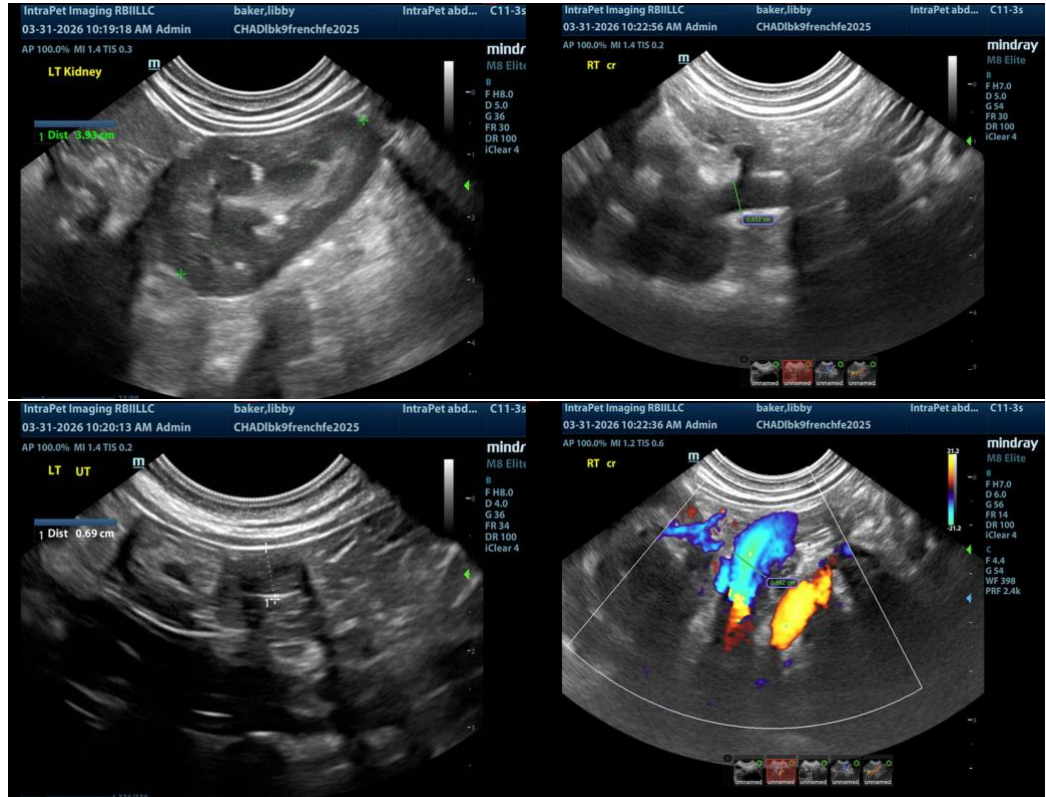
Spleno-azygos shunt should be confirmed on CT with contrast. Screening for concurrent Addison's is also indicated. This may be a medically manageable case. The following protocol is recommended.

### **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.







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(CFM), Cert. IVUSS,

CEO, Owner, Founder -- SonoPath.com

[info@SonoPath.com](mailto:info@SonoPath.com)