

**DATE PRESENTING CLINICAL SIGNS**

3/6/23

History: This is request for repeat AUS in about 2 months to reassess pyloric thickening, as well as other changes present in liver, adrenals, and spleen. Dodi currently does not have any clinical issues.

**PATIENT**

Dodi Vickery

Current Medications: None.

Date of Previous IntraPet Ultrasound: 1/2/23. See attached.

Sedation: Torbugesic IV.

**SPECIES**

Stat Report: Not requested.

Canine

Imaging Performed By: Stephanie Warga RDCS, RVT.

**BREED****ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Wirehair Fox Terrier

**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**SEX**

Spayed Female

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measures 4.78 cm. The right kidney measures 5.56 cm.

**AGE**

7/28/11

**WEIGHT**

21.9 Pounds

**Adrenal Glands**

Left adrenal gland is normal in size (2.19 cm long x 0.42 cm at cranial pole and 0.52 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The right adrenal gland is plump/swollen in size (2.48 cm long x 1.34 cm at cranial pole and 0.59 cm at caudal pole). Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. A hyperechoic nodule is noted in the cranial pole. Nodule does not disrupt normal shape and/or architecture.

**HOSPITAL NAME**

Essex Middle River VC

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Zulty

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

21494

Gallbladder is moderately distended with anechoic bile as well as moderate suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty, except for some subtle hyperechoic mucosal hypertrophy and mucosal remodeling in the area of the pylorus. The discreet hypoechoic pyloric thickening previously appreciated is not as distinct.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- The pyloric thickening previously appreciated appears more subtle/improved in these images, suggesting potentially resolution of a chronic ulcer or gastritis/granulomatous lesion, etc., or even different views of a normal patient variant. A more aggressive infiltrative process, such as neoplasia, as was considered a differential upon the last scan, is still possible but considered much less likely given the appearance of these images.
- Right adrenomegaly with a hyperechoic right adrenal nodule. This is consistent with possible adrenal hyperplasia, secondary to pituitary dependent hyperadrenocorticism vs an adrenal adenoma vs stress or even normal patient variant. Interpret in combination with clinical signs of hyperadrenocorticism. \*Differentials for the right adrenal nodule include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.
- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- Gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

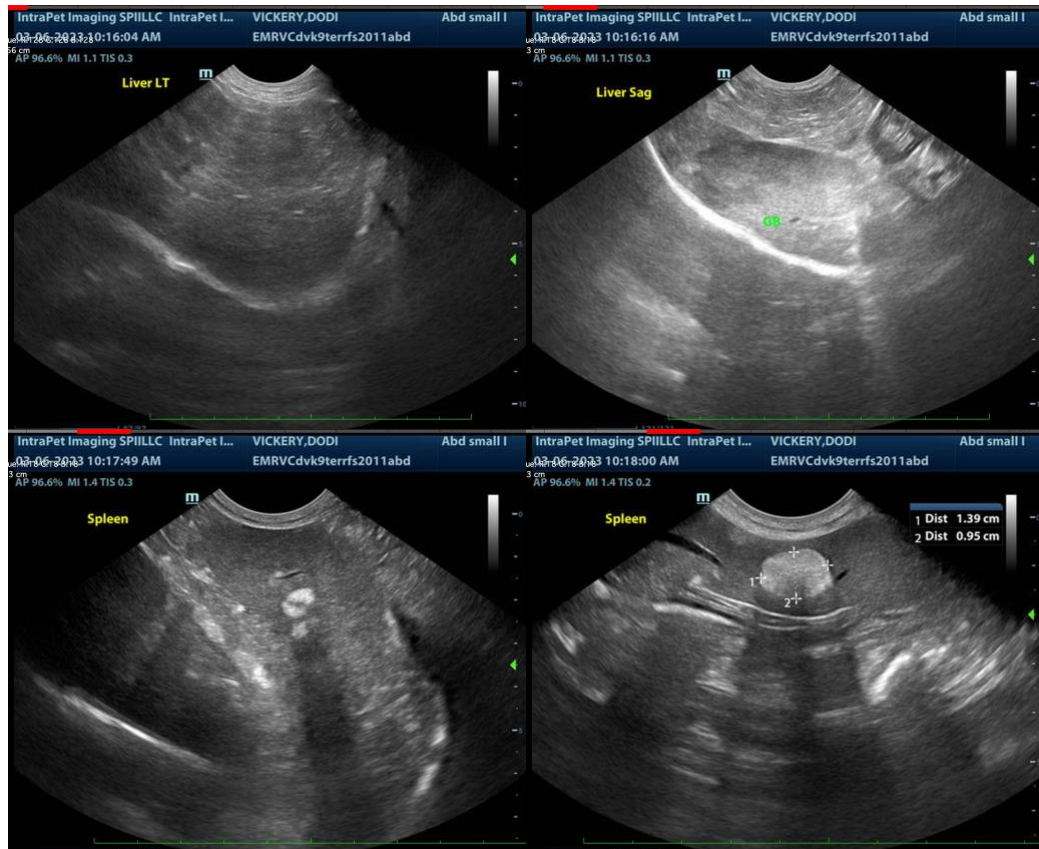
### **Secondary Findings**

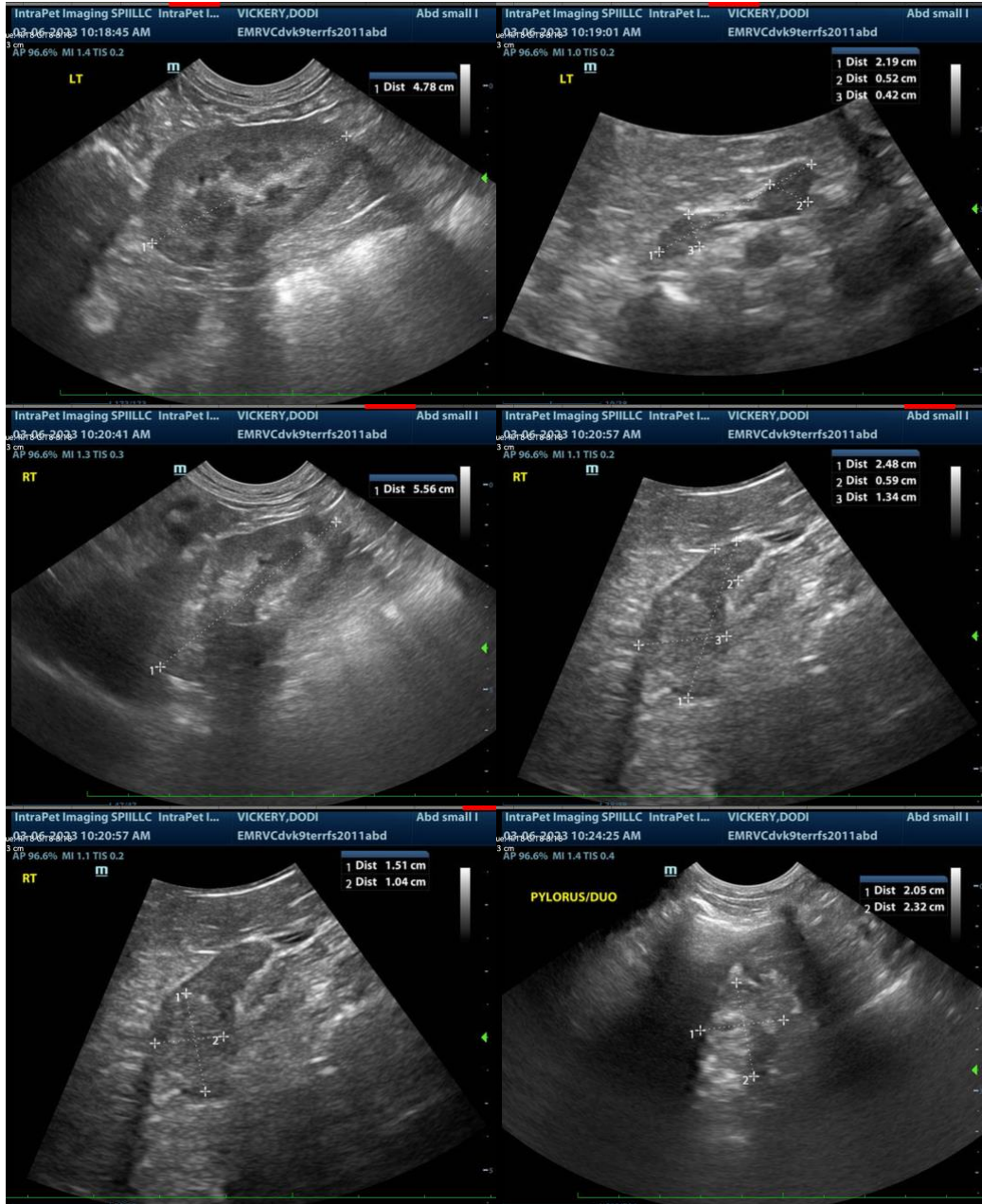
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- Age-related kidney changes

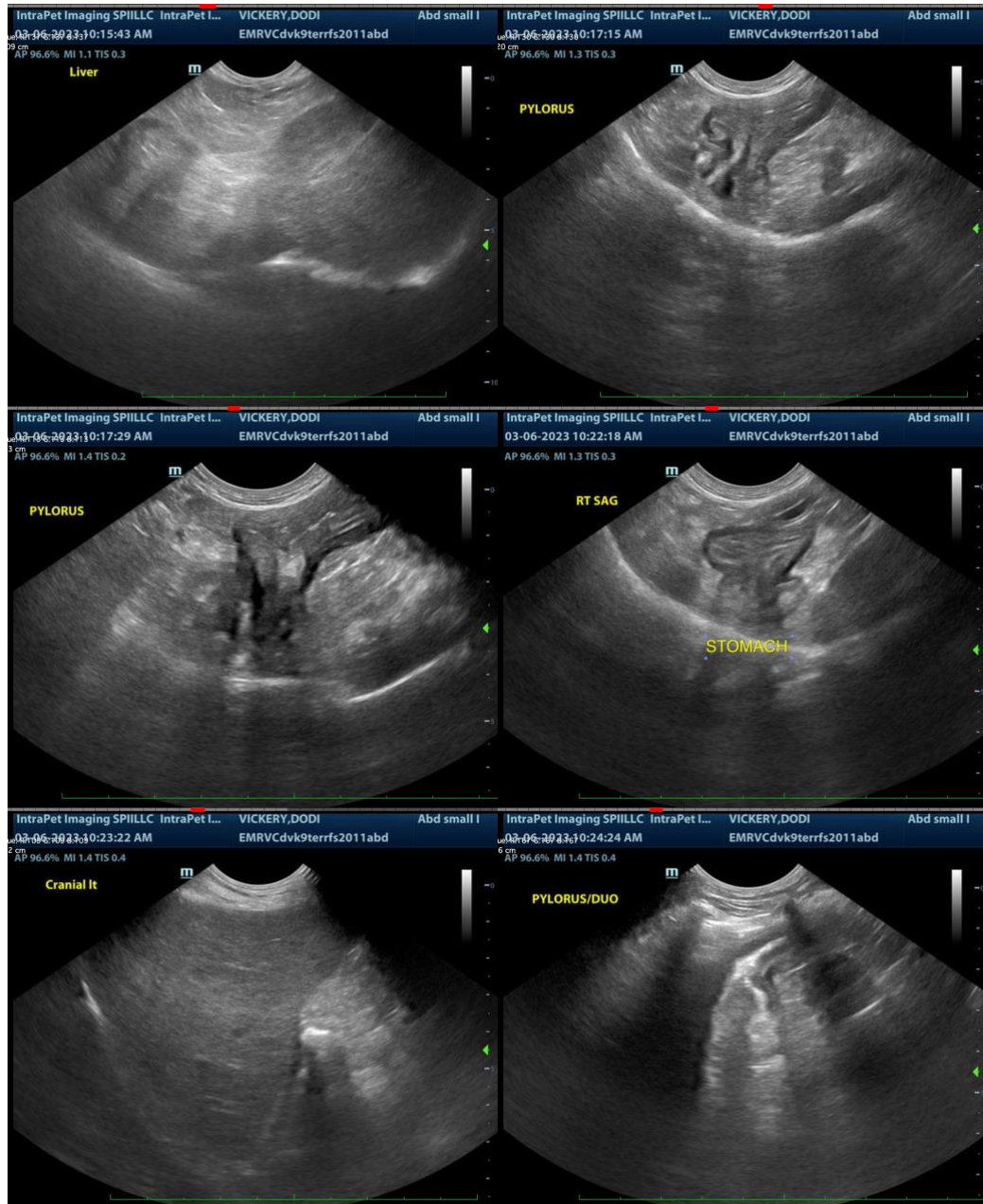
### **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The most concerning pathology noted on the last scan was the pyloric thickening, which appears improved/primarily resolved. That, combined with the lack of clinical signs, makes an infiltrative disease process much less likely. Recommendations are to follow up if/when patient clinical signs develop without additional follow up necessary, unless they do.

The remainder of the changes are static and should be interpreted as previously recommended, pending clinical signs.







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.

**Beth Johnson, DVM DACVIM**

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