

**DATE PRESENTING CLINICAL SIGNS**

7/13/23

Patient presented for ptyalism, vomiting, and hyporexia. Owner reported that these were similar symptoms to what were seen prior to surgery for PRAA. Physical exam was unremarkable.

**PATIENT**

Socrates Schweinforth

Current Medications: DENAMARIN ADV TAB LG #30: 1 tablet PO SID, Cerenia 60mg Tablet: 1 tablet PO SID.

Lab Results: Chem 17 - ALP 586, ALT 306.

**SPECIES**

Canine

Radiographs: (chest and abdomen) - chest appears free of metastatic lesions and no obvious deviations of trachea or esophagus that would be consistent with recurrent PRAA. Liver appears mildly large on radiographs. Limited ultrasound - well-circumscribed, circular, and hyperechoic mass effect in liver compared to surrounding liver tissue.

**BREED**

Bulldog

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

**SEX**

Neutered Male

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System****AGE**

9/14/14

The urinary bladder is moderately 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.

**WEIGHT**

65 Pounds

Prostate is normal in size, echotexture and echogenicity for a neutered male.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM

The right kidney is normal in size (6.65 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**HOSPITAL NAME**

Everhart VH

The left kidney is normal in size (6.29 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed. A hyperechoic band parallel to the corticomedullary border is present.

**REFERRING VET**

Dr. Kerr

**Adrenal Glands**

The right adrenal gland is normal in size (0.65 cm at the cranial pole and 0.75 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INVOICE**

43837

The left adrenal gland is normal in size (0.66 cm at the cranial pole and 0.80 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

The 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

The liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in

echotexture. In the deep right liver, a 5.0 cm x 5.5 cm, mildly heterogeneous, primarily hyperechoic discrete mass is noted. Visible vasculature and biliary tree appear normal without distension or congestion.

The gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.

### ***Gastrointestinal***

The stomach wall is thick in what appears to be the caudal aspect of the fundus, measuring 1.39 cm thick with a mildly heterogeneous, hypoechoic loss of layering noted. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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 (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The pancreatic parenchyma is appropriately isoechoic to surrounding tissue. Visible capsule is smooth and normal in contour. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

## **ULTRASONOGRAPHIC FINDINGS**

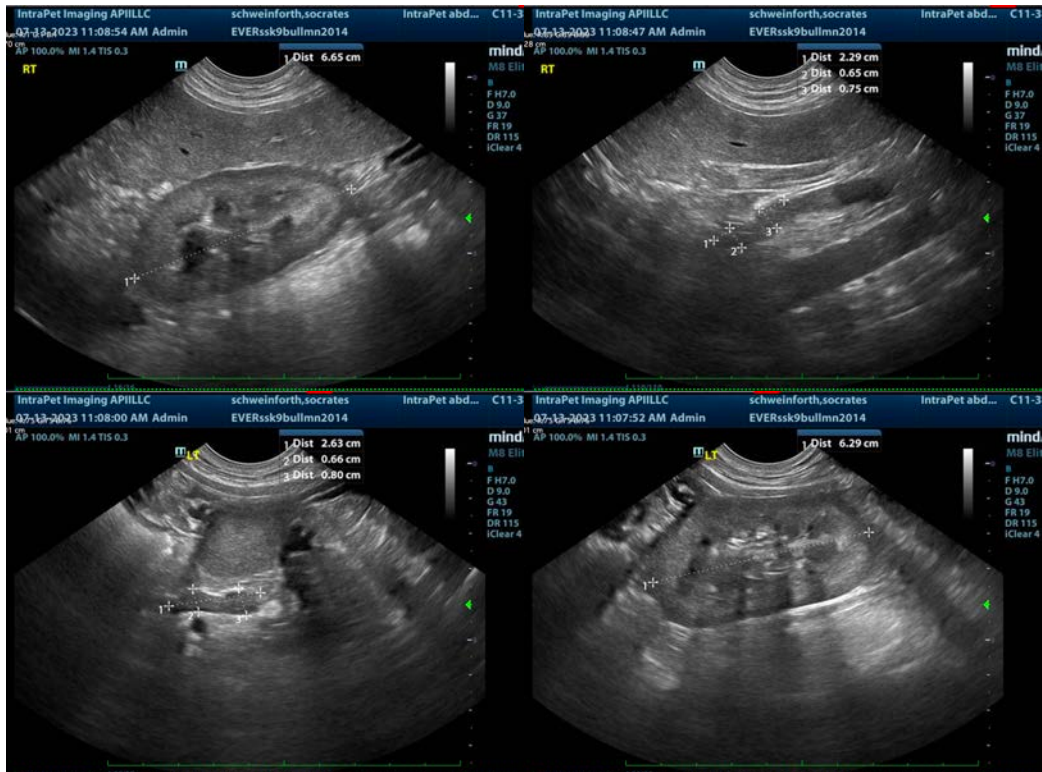
- Focally thick gastric wall with loss of layering, which is a characteristic of malignancy and could be associated with infiltrative neoplasia such as lymphoma versus adenocarcinoma versus other. However, benign inflammatory, infectious, even parasitic, etc. disease can't be ruled out without tissue sampling.
- Mildly heterogeneous, primarily hyperechoic liver mass – Differentials include infiltrative neoplasia including round cell neoplasia versus primary hepatic neoplasia (i.e., hepatocellular carcinoma, sarcoma, other, versus benign hepatoma/adenoma or even marked nodular hyperplasia, etc. again can't be differentiated without tissue sampling.
- Bilateral medullary rim sign - This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

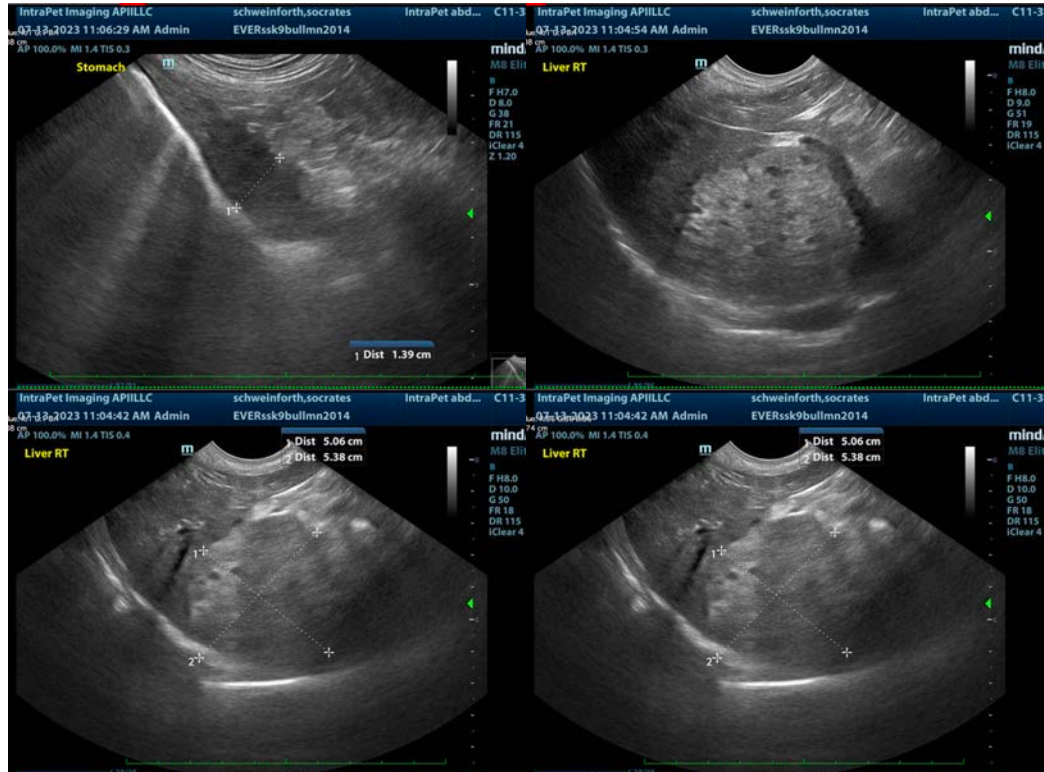
## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

If possible to reach the deep liver mass, fine needle aspirates of both the liver and stomach could be considered if patient's coagulation status is appropriate. Alternatively, an exploratory laparotomy for planned gastric wall thickening biopsy and liver lobectomy could be considered. The liver mass is deep but appears focal and likely fully resectable. However, if surgery is elected, a pre-surgical planning abdominal CT scan may be beneficial.

In the meantime, empirical deworming with a 5-day course of Panacur is recommended, as is an empirical course of therapy for helicobacter and medical management for possible concurrent GERD.





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.

**Beth Johnson, DVM, DACVIM**  
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