

**DATE**

8/23/22

PRESENTING CLINICAL SIGNS

History: 5 day history of ADR. Vomited once on Saturday, has had soft stool since Saturday, and has been anorexic since Saturday.

PATIENT

Borzoo Ghasri

Current Medications: None listed.

Lab Results: ALP 490, ALT 437, GGT 13

Radiographs: Poor serosal detail; Questionable mass effect in right cranial abdomen

SPECIES

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Canine

Stat Report: DVM requested.

BREED

Imaging Performed By: Stephanie Pearce, RDCS, RVT.

Boxer

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**SEX**

Neutered Male

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.

AGE

11/11/11

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

WEIGHT

66.6 Pounds

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 7.22 cm. The right kidney measures 7.21 cm.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

Left adrenal gland is normal in size (3.17 cm long x 0.66 cm at cranial pole and 0.75 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Eastern AH

In the area of the right adrenal gland, there is a hypoechoic irregular mineralized mass, that obscures visualization of the vena cava with suspicion for invasion of the vena cava. The area around the mineralized mass is markedly enhanced/hyperechoic.

REFERRING VET

Dr. Valero

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

INVOICE

17009

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. Specifically, a small 1.0 cm cyst is present in the deep left liver and several discreet hyperechoic nodules in the right liver.

Gallbladder is moderately distended with anechoic bile as well as 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 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. 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. A peripancreatic area is hyperechoic with enhanced fat and mesentery.

Free Abdomen

There is a scant amount of anechoic free fluid noted, as well as ring-downs noted at the level of the diaphragm.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- A large mineralized right adrenal mass with capsular escape and suspicion of vascular invasion, surrounded by changes consistent with a marked inflammatory response. This finding is most suggestive of an adrenal adenocarcinoma. Other adrenal tumors, such as a pheochromocytoma, metastatic disease, etc. cannot be ruled out, but are considered less likely. Benign change is considered very unlikely.
- Heterogenous Liver with discreet hyperechoic liver nodules – 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. Differentials for the discrete liver nodules include primarily benign changes such as nodular hyperplasia, fibrosis of an old hematoma, granuloma, etc.; however, while considered less likely, primary hepatic neoplasia, infiltrative round cell neoplasia and metastatic disease can mimic benign lesions and cannot be definitively ruled out.
- The inflammatory changes in the cranial abdomen, suggestive of concurrent mild acute pancreatitis, may be related to the adrenal tumor versus pancreatitis. However, mild pancreatitis cannot be ruled out.

Secondary Findings

- Age-related kidney change
- 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

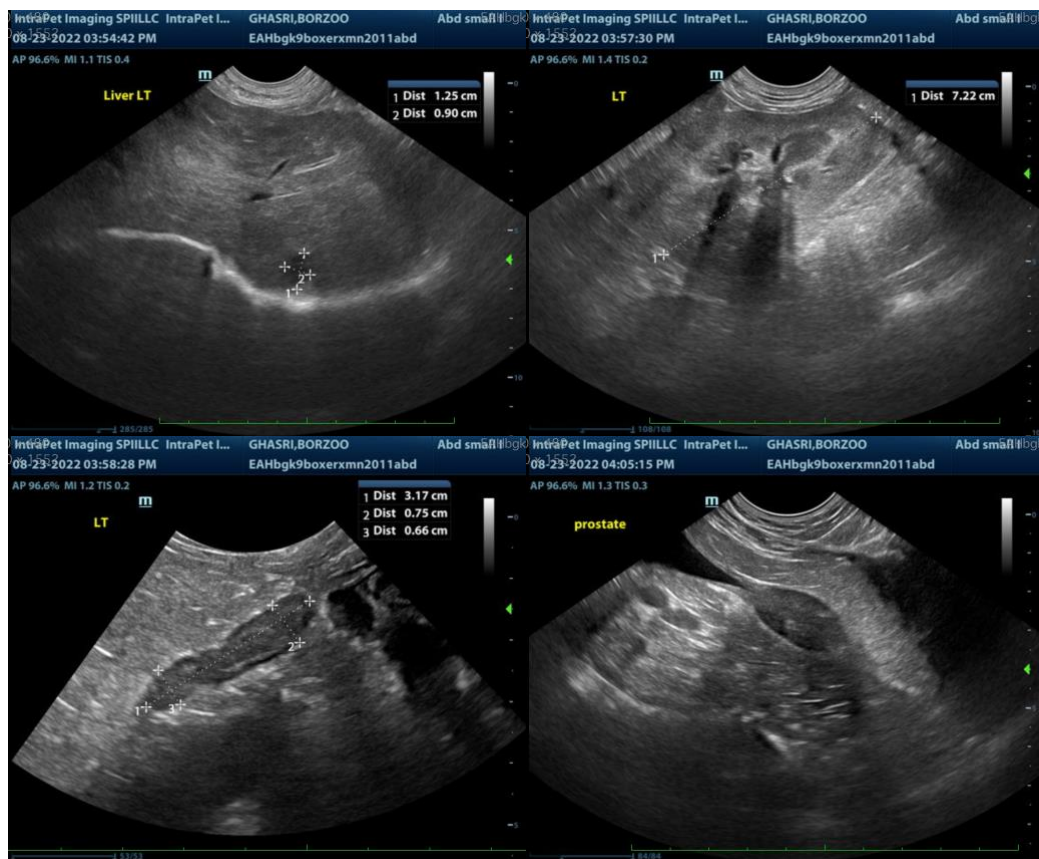
combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

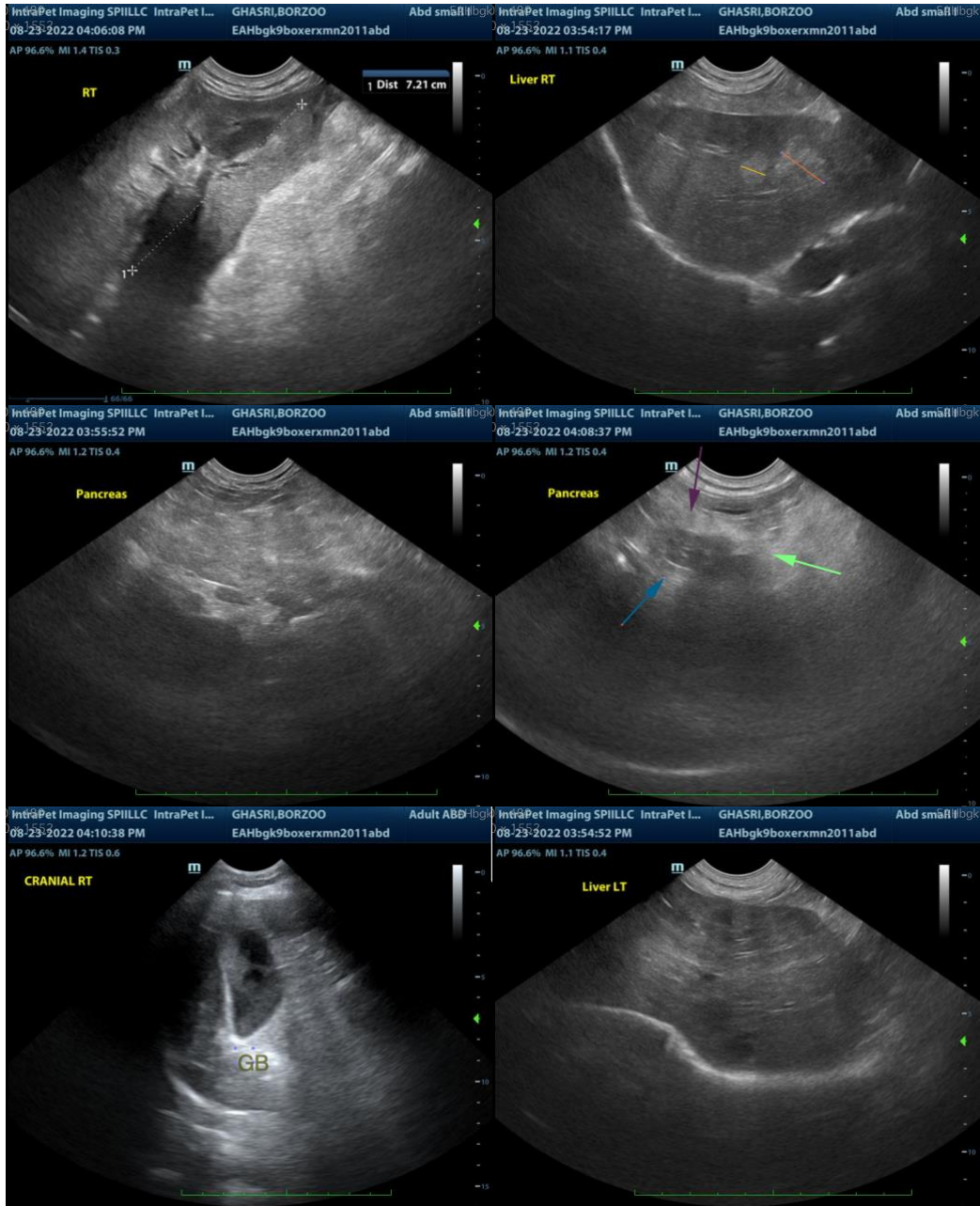
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

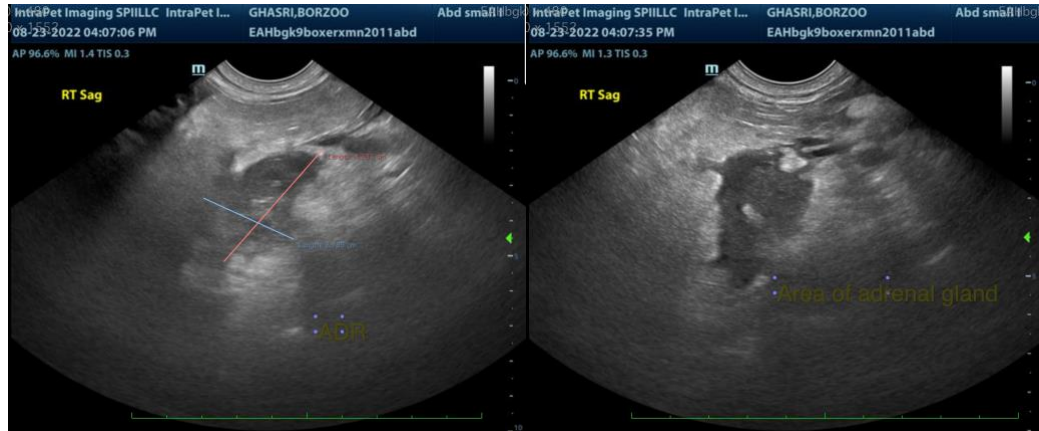
Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.

Ultimately, a right adrenalectomy is the treatment of choice for a right adrenal gland tumor suspicious of being an adenocarcinoma. However, given the degree of inflammation +/- possible vascular invasion, etc. combined with the concurrent pathology, a presurgical planning abdominal CT scan is recommended prior to pursuing surgery. A blood pressure is recommended, if not recently evaluated.

In the meantime, supportive/symptomatic medical management of clinical signs with antiemetics, gastroprotectants, appetite stimulants, pain management, etc. is recommended.







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
Beth.Johnson@SonoPath.com