

**DATE**

11/1/21

**PRESENTING CLINICAL SIGNS**

History: **Presenting Complaint:** Vomiting. **Date:** 10-30-2021 **Notes:** Enlarged heart, liver, throwing up. Oonagh Has Thrown Up 12 Or 13 Times In The Last 12 Hours Or So. Brought her to rDVM and they told Owner to come to ER. rDVM phone call: 14 yrs; vomited 10-12 x, weight loss, dehydrated, corneal ulcer- dry eye on OTC med, inc RR AUS- June- possible chronic pancreatitis, enlarged liver, mucocele; CPL neg, Inc Tbili, ALT and ALKP Inc. X ray- enlarged liver and heart. Risk for aspiration and heart disease. O gave Cerenia today- ATO- issues since the springtime (vomiting and diarrhea)--started on Pepcid (1/2 pill) owners noted extensive thirst and urination recently. US done in June with rDVM--concern for severe pancreatitis. Last night she began vomiting which continues through the morning--about 12x. Went to rdvm this morning, anti-nausea meds were given and were sent here for further workup and diagnostics. No murmur heard on PE; Concerned for neoplasia vs chronic pancreatitis vs GB mucocele; Concerned for hypertension, concerned for Cushing's- Os state she was never tested for this. **Plan:** IV catheter, fluid therapy, and further treatment as needed

**PATIENT**

Oonagh Boutilier

**SPECIES**

Canine

**BREED**

Puggle

**SEX**

Spayed Female

**AGE**

10/07

**WEIGHT**

33.8 lbs

**INTERPRETED BY**Eric Lindquist, DMV  
DABVP, Cert. IVUSS**HOSPITAL NAME**Animal Emergency  
Hospital**REFERRING VET**

Dr. Kalwa

**INVOICE**

92766

**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. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes was noted. Ureteral papillae were normal.

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. The capsules were acceptably uniform without significant irregularities. The left kidney measured 6.13 cm with slight pyelectasia that measured 0.21 cm.

**Adrenal Glands**

The right **adrenal gland** was similar to the prior sonogram and slightly heterogenous measuring 2.76 x 1.15 cm at the cranial pole and 0.67 cm at the caudal pole. The left adrenal gland has progressed in size and measured 3.24 x 1.68 cm at the cranial pole and 1.19 cm at the caudal pole with enhanced surrounding mesentery, irregular contour and dramatically hypoechoic parenchyma. Regional inflammation is associated with the left adrenal gland.

**Spleen**

The **spleen** revealed persistent 2.6 x 1.14 cm mildly hypoechoic, non-disruptive nodule. Other heterogenous nodular changes were noted in the spleen. They subjectively appear benign, yet emerging neoplastic event in the spleen cannot be completely ruled out.

## Liver

The **liver** revealed slight coarse architecture with mildly increased portal markings. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder was over distended with striating bile and enhanced mesentery. This is consistent with inflamed gallbladder mucocoele. Regional free fluid was noted around the gallbladder. The common bile duct was dilated in this patient with echogenic debris and measured 0.5 cm. Regional inflammation was noted around the gallbladder, pyloric outflow and right pancreatic limb. However, this appears to be related to the gallbladder.

## 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.

## Free Abdomen

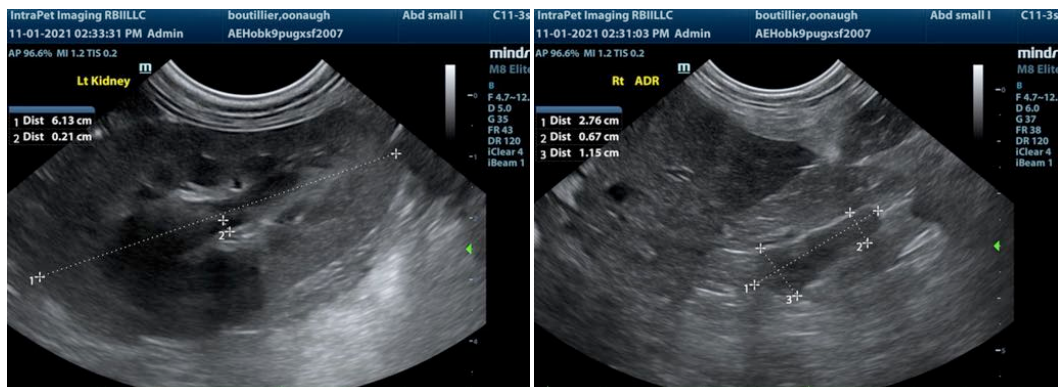
Trace amounts of free fluid was noted in the midcaudal abdomen.

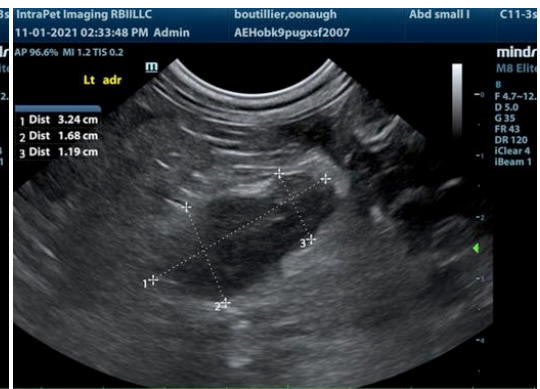
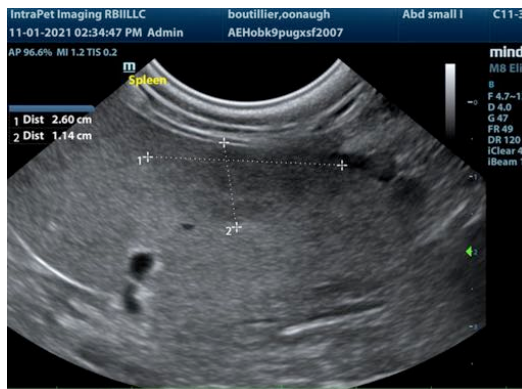
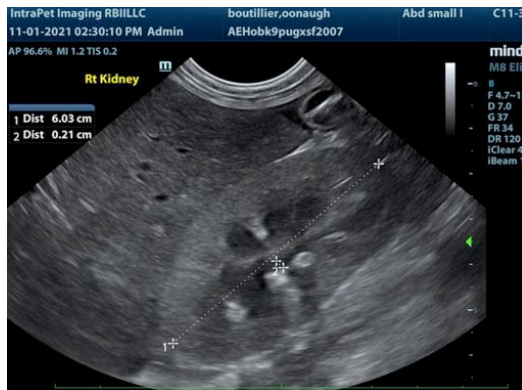
## ULTRASONOGRAPHIC FINDINGS

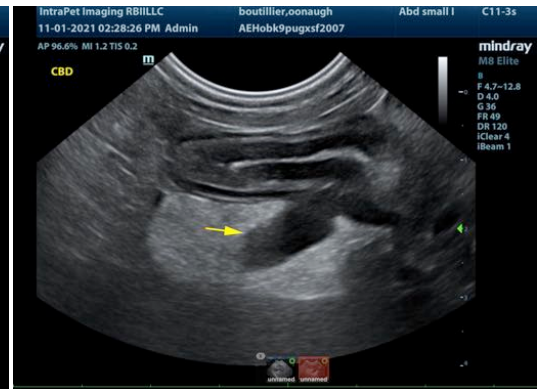
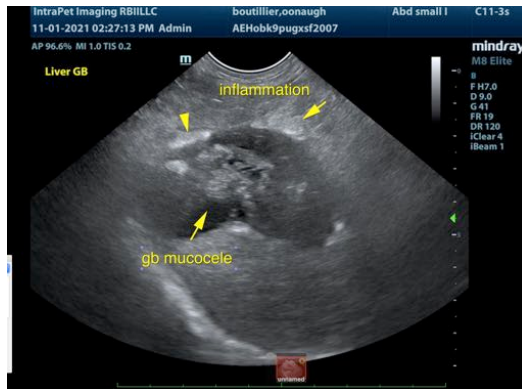
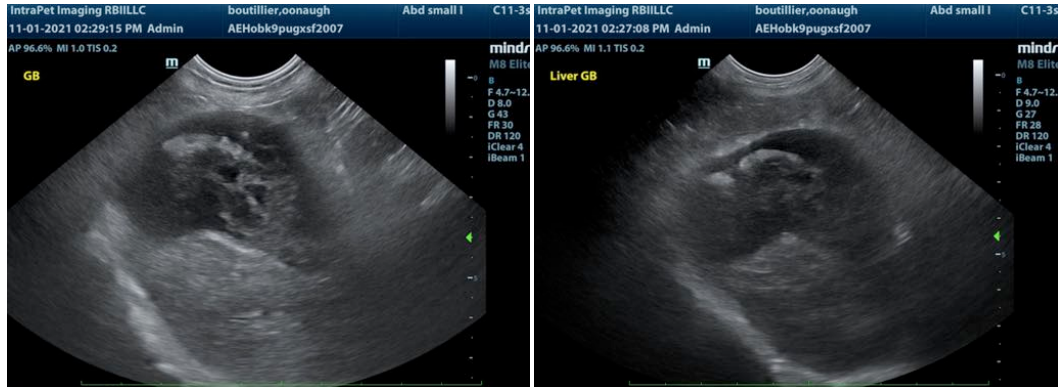
Inflamed gallbladder mucocoele with mucoduct. Regional inflammation was noted around the gallbladder. Enlarged, irregular left adrenal gland. Carcinoma versus pheochromocytoma is suspected. No obvious caval invasion noted by the left adrenal gland.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

I recommend immediate cholecystectomy and common bile duct lavage and liver biopsy as well as left adrenalectomy. Inspection of the spleen is warranted as direct splenectomy may be in this patient's best interest. The changes in the spleen appear benign, yet emerging neoplastic event in the spleen cannot be completely ruled out. The gallbladder is a surgical emergency and the left adrenal gland has progressed to suggest a malignant process. Guarded prognosis.







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.

**Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com**  
 Eric.Lindquist@SonoPath.com