

**DATE PRESENTING CLINICAL SIGNS**

11/15/22 Presented on 11/14/22 for cough that's been going on for a few weeks but worsening the last few days. On doxycycline for anaplasmosis.

**PATIENT**

Gus Flower Current Medications: Hydrocodone 10mg BID PRN for cough, Doxycycline (unsure of dose, started in Maine)  
Radiographs: ~2.5cm nodule L cranial lung lobe

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**SPECIES**

Canine

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

Golden Retriever

**Urinary System**

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.

**SEX**

Neutered Male

The right kidney is normal in size (7.64 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.

**AGE**

5/6/17

The left kidney is normal in size (7.39 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.

**WEIGHT**

99.7 Pounds

**Adrenal Glands**

The right adrenal gland is normal in size (2.37 cm long x 0.69 cm at the cranial pole and 0.66 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

The left adrenal gland is normal in size (2.97 cm long x 0.54 cm at the cranial pole and 0.77 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**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.

**HOSPITAL NAME**

Timonium AH

**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. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**REFERRING VET**

Dr. Stephens

**INVOICE**

42712

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 mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign

material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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.

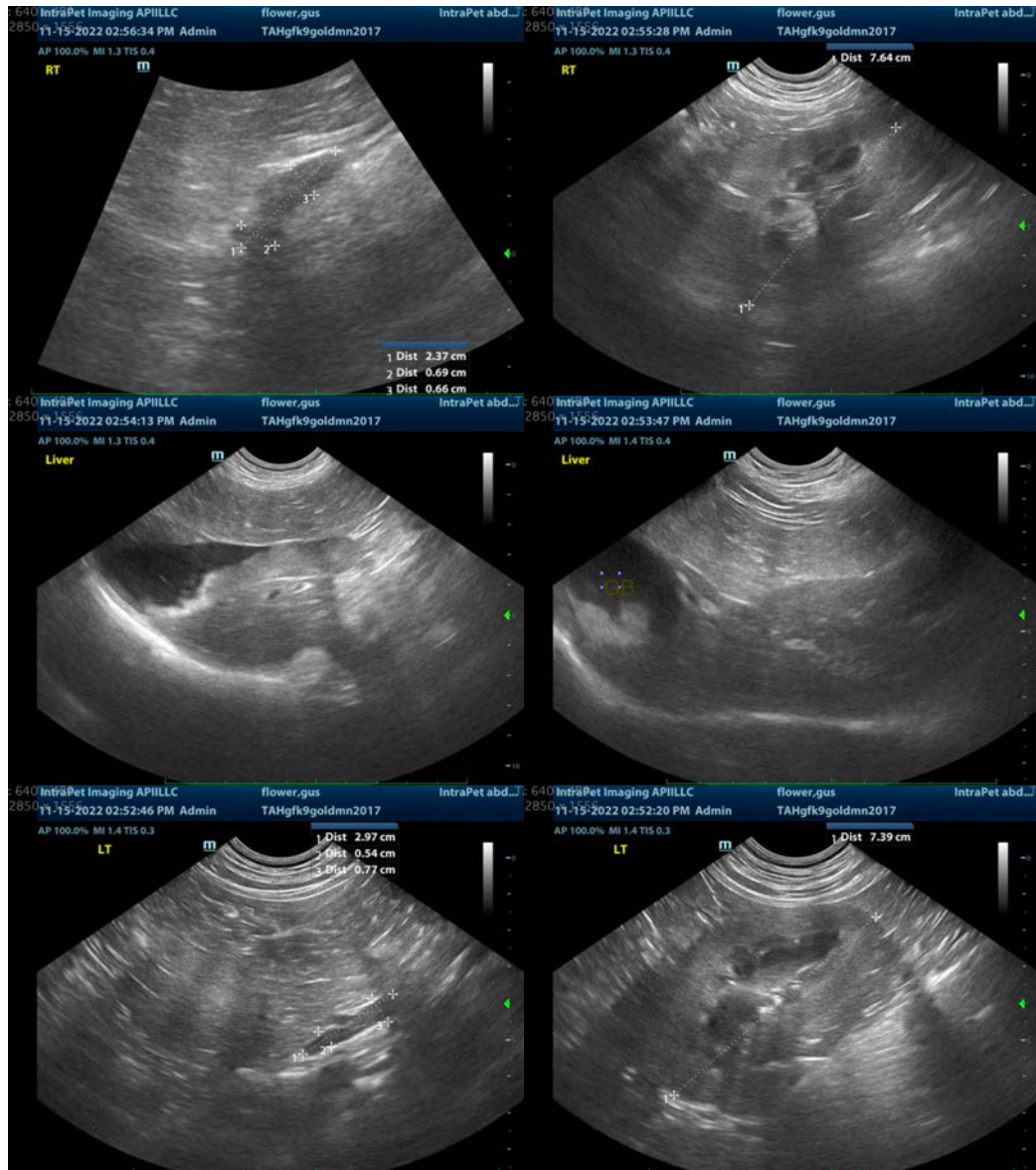
## **ULTRASONOGRAPHIC FINDINGS**

- **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.
- Otherwise, normal/unremarkable abdomen without any evidence of a primary disease that could have metted to the thorax, resulting in the reported pulmonary nodules.

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

Recommendations include further physical exam evaluation, if not already performed, paying close attention to the cervical area/thyroid, rectal exam, mammary chain palpation, etc. as other sources for possible neoplasia that could metastasize and result in the pulmonary nodule. Otherwise, thoracic CT scan could be considered with potential CT guided fine needle aspirate of the nodule, if possible, versus a less aggressive approach, which would be radiographic monitoring of the nodule for progression.

Incidentally, a discrete focal pulmonary nodule typically does not result in the cough described in this patient. Therefore, further evaluation for other causes of cough including cardiogenic, infectious, inflammatory, lower airway, etc. should be considered, and could include a lower airway wash.



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**  
Beth.Johnson@sonopath.com