



**PATIENT PRESENTING CLINICAL SIGNS**

Butterscotch  
Wilkinson

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Neutered male

**AGE**

14 ½ years

**WEIGHT**

69 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Haley Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

Dr. Crawford

**INVOICE**

42399

**DATE**

12/28/22

History: New patient to us, recently relocated to VT from Boston area. Dog had hepatocellular carcinoma excised via liver lobectomy in summer 2020. Had been having abd U/S to track liver every 4-6 mos thereafter until fall 2021 when a small liver mass was noted in central liver and determined to be inoperable. Dog presented yesterday for 24 hour history weakness, lethargy, anorexia and vomiting. Owner reports dog much improved in the hours prior to presentation for PE. On exam dog afebrile, mm pink and hydration wnl, cranial organomegaly, diarrhea on rectal exam, Abnormal PE/Chem/CBC/UA Results: Labwork 12/27/22: Chem panel revealed mkd ALT elevation ALT 1813, ALP 378 (one month prior ALT 122, ALP 165). HCT 41%, mild thrombocytopenia plt 120,000, all else wnl. Abd rads reveal liver mass, full stomach, mixed gas pattern/evidence of ileus within small int tract. Recommend 12 hr fast overnight and reassess rads (stomach empty and GI axis wnl). Recommend abd U/S to reassess liver mass and look for evidence of mets, other dz. Sept 2021: ULTRASOUND REPORT Primary Concern: Hepatocellular carcinoma left medial liver removed 9/2020. A few nodules were seen in the adjacent liver. Patient is doing well clinically, recheck abdomen. Area Scanned: Abdomen Date of Ultrasound: 9/9/2021 compared to 4/1/2021 US and CT 4/27 ULTRASOUND REPORT Ultrasonographic Findings: Liver: The liver is again diffusely increased in echogenicity and is isoechoic to the spleen. The previously seen, two small poorly defined <1cm hyperechoic foci seen in the left liver are no longer visible. The previously seen right dorsal liver mass along the diaphragm dorsal to the gallbladder has enlarged now measuring ~3-3.5cm (compared to ~2.5-3cm) and has two central anechoic regions measuring ~1cm. Gallbladder / Biliary Tract: A mild amount of hyperechoic mobile bile is seen in the gallbladder. The gallbladder mucosa is hypoechoic. Spleen: The spleen is prominent but is normal in echogenicity. No nodules or masses are seen. Diagnostic Impressions: - No evidence of local recurrence of the previously removed left liver mass is noted. - Mild enlargement of the right liver mass over a 5month period with new cavitation. This mass may represent a malignant process such as a carcinoma or sarcoma or a benign process such as a cystic adenoma. The location of this new mass again precludes ultrasound guided tissue sampling. - Generalized increased liver echogenicity along with prominent(still normal) adrenal glands. Concurrent Cushing's disease should be considered. - Mild renal changes R/O chronic nephropathy.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction and appeared normal. 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 largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The left kidney measured 6.0 cm. The right kidney measured 7.4 cm.

**Adrenal Glands**

The left adrenal gland revealed heterogenous parenchymal changes and measured 1.2 cm at the caudal pole and 1.1 cm at the cranial pole. The right adrenal gland was at the upper limits of normal and measured 1.5 cm at the cranial pole and 1.0 cm at the caudal pole.

**Spleen**

The **spleen** was mildly enlarged with slight, swollen contour and minor heterogenous parenchymal changes. There were no overt masses present.



**PATIENT**

Butterscotch  
Wilkinson

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Neutered male

**AGE**

14 ½ years

**WEIGHT**

69 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Haley Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

Dr. Crawford

**INVOICE**

42399

**DATE**

12/28/22

**Liver**

The **left liver** revealed a mixed echogenic mass with ill-defined margins measuring approximately 8-10 cm. A right cranial liver mass was noted and measured 6.0 cm. This impinged upon the diaphragm. The gallbladder and common bile duct were unremarkable.

**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.

**ULTRASONOGRAPHIC FINDINGS**

2 separate liver masses in the right and left liver, cavitated.  
Bilateral adrenal hypertrophy, potential underlying Cushing's disease.  
Reactive spleen.

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Hemangiosarcoma, carcinoma and less likely abscessation. Ultrasound-guided FNA of the parenchymal portions of the masses as well as drainage and cytology of the fluid filled portion is recommended. Prognosis is guarded depending on cytology results. The left mass is potentially resectable, yet the right mass is not resectable.





**PATIENT**

Butterscotch  
Wilkinson

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Neutered male

**AGE**

14 ½ years

**WEIGHT**

69 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Haley Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

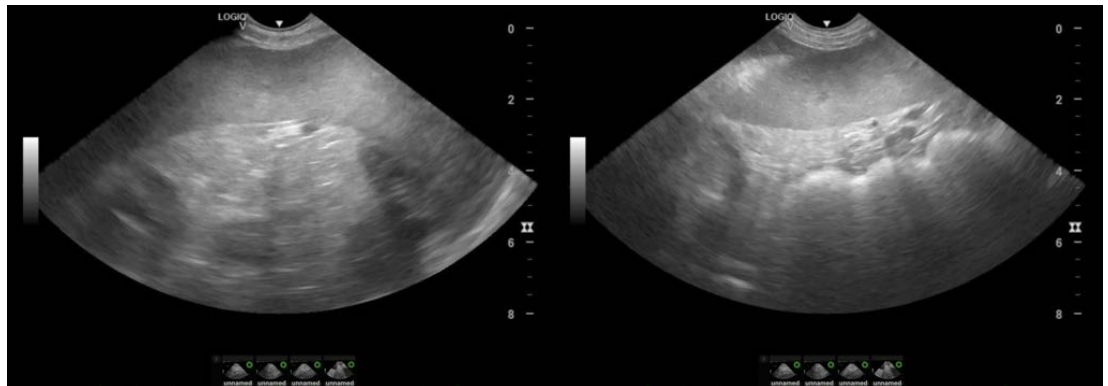
Dr. Crawford

**INVOICE**

42399

**DATE**

12/28/22





**PATIENT**

Butterscotch  
Wilkinson

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Neutered male

**AGE**

14 ½ years

**WEIGHT**

69 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING  
PERFORMED BY**

Haley Harasimowicz

**HOSPITAL NAME**

Waterbury VH

**REFERRING VET**

Dr. Crawford

**INVOICE**

42399

**DATE**

12/28/22

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.

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