

“What’s Your Diagnosis?”

Signalment:

Species: Canine
Breed: Golden Retriever
Sex: Female (spayed)
Date of Birth: 04/01/99

Presenting Complaint:

- + Acute onset of lethargy
- + Vomited twice (partially digested food)
- + Normal stools
- + Previous history of vomiting three times within the last month

Physical Examination:

- + Depressed and lethargic
- + Tachycardia
- + Tacky mucous membranes
- + Pendulous abdomen
- + Palpable fluid wave in abdomen
- + Weak and asynchronous pulses
- + CRT= 2 seconds

Diagnostic plan:

- + ECG
- + Thoracic radiographs
- + Abdominal ultrasound
- + Echo

CBC/Chem Results:

- + Lymphopenia (0.9 K/uL)
- + Decreased erythrocyte concentration (5.29 M/uL)
- + Decreased hematocrit (35%)
- + Decreased plasma protein by refractometry (4.7 g/dL)
- + Decreased total protein (4.1 g/dL)
- + Decreased albumin (2.7 g/dL)
- + Decreased total calcium (8.9 mg/dL)
- + Increased creatine kinase (686 U/L)

Radiographs

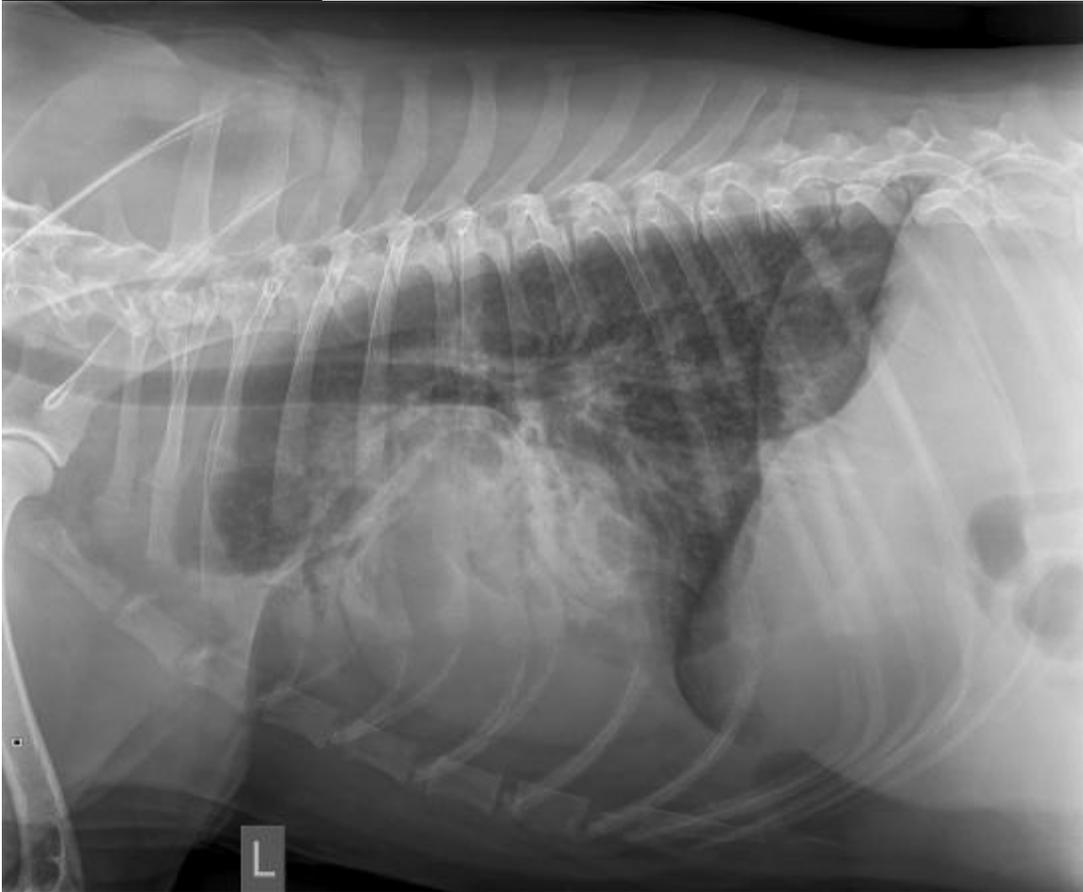
VD Thorax



Right Lateral Thorax



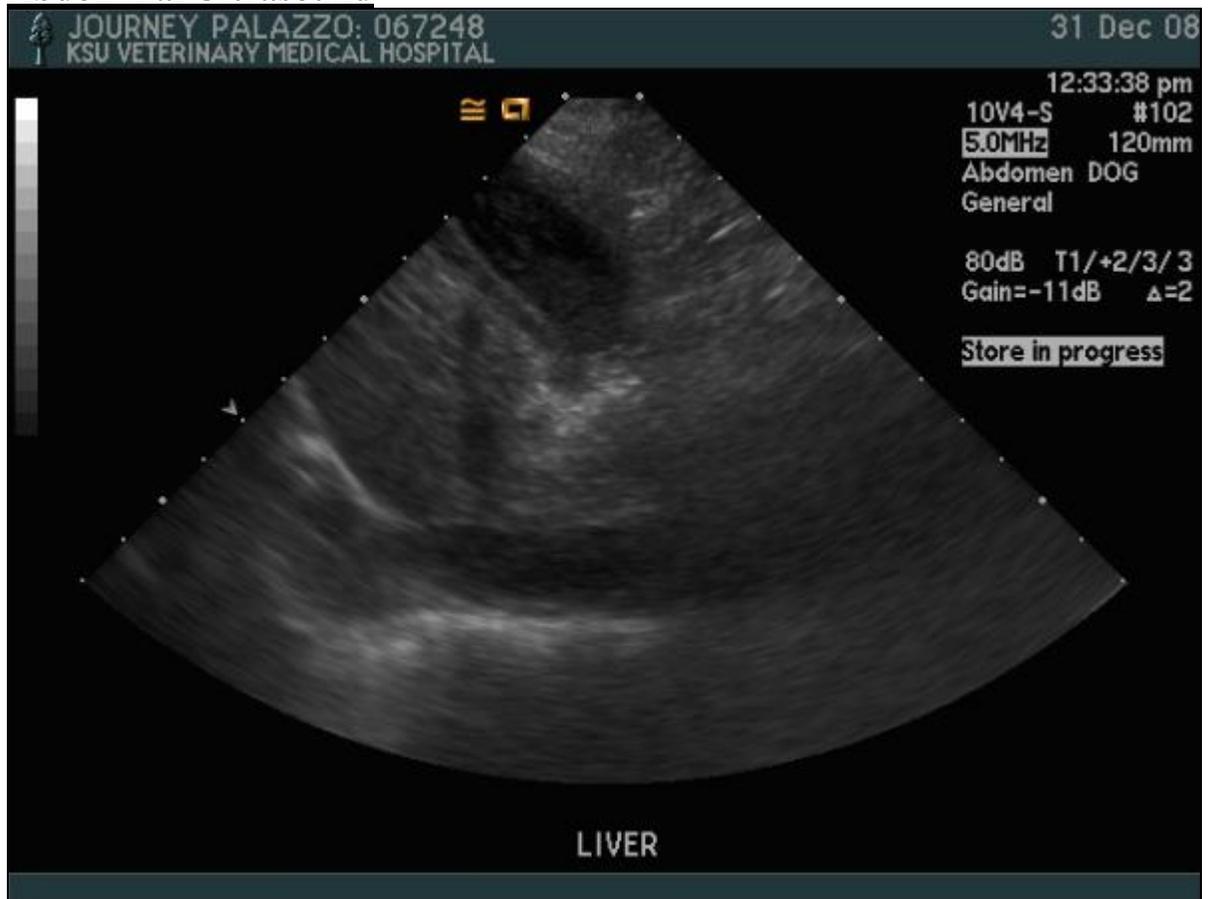
Left Lateral Thorax



Radiographic Findings: There is scalloping of the ventral margin of the lungs, there is rounding of the costophrenic angles of the right and left lung lobe, there are multiple pleural fissure lines widest at the periphery. Increased soft tissue opacity and air bronchograms are present in the mid-zone and periphery of the right cranial, right middle, and caudal subsegment of the left cranial lung lobes. There is a generalized increase in pulmonary soft tissue opacity and increased prominence of end-on bronchi. The cardiac silhouette is enlarged with a vertebral heart score of 11 but there is no specific chamber enlargement. There is an increase in soft tissue or fluid opacity in the abdominal cavity.

Radiographic Impressions: Multifocal ventral alveolar and generalized unstructured pulmonary patterns. Pleural and peritoneal effusion.

Abdominal Ultrasound

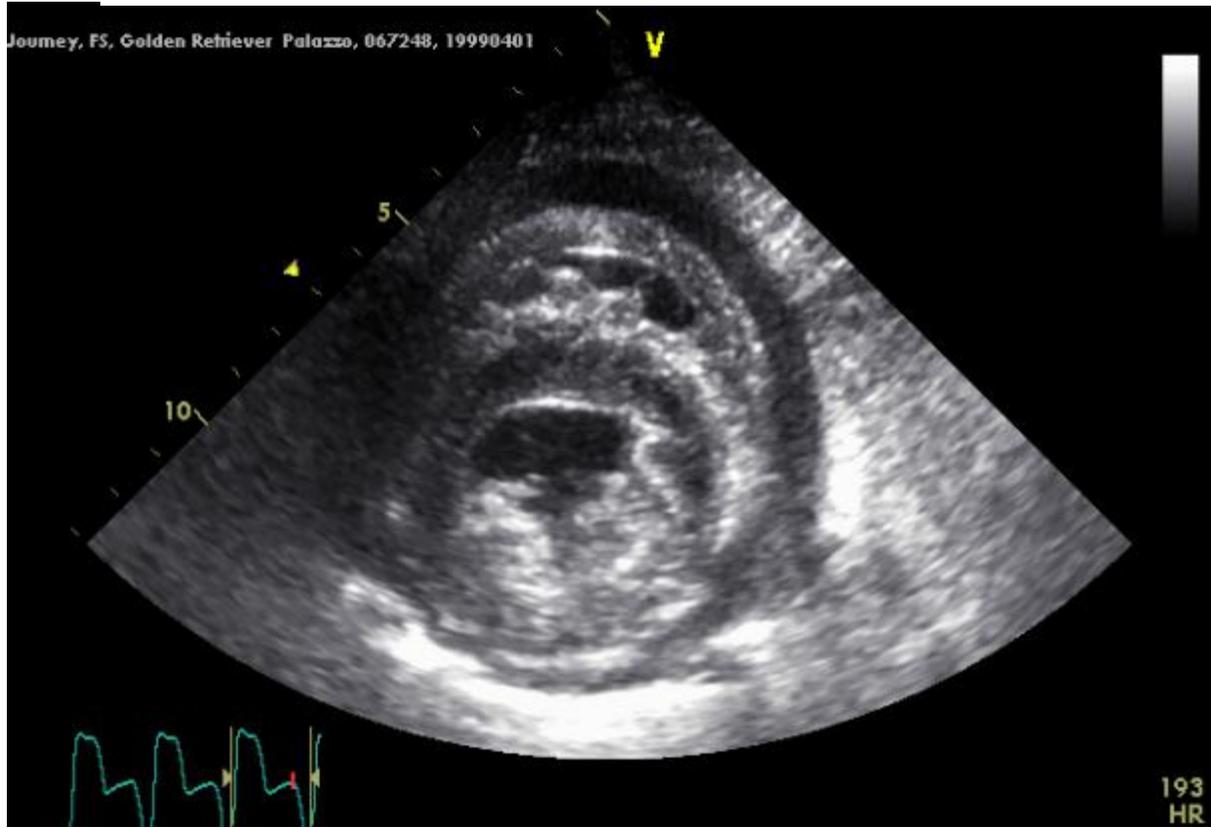




Ultrasonographic Findings: There is a nodule in the liver ventral to the gallbladder measuring 2.0cm x 2.6cm. This nodule has an echotexture similar to normal liver with an isoechoic center and hypoechoic peripheral margin. There are multiple ill-defined hypoechoic nodules seen involving the left liver. There is moderate to severe abdominal effusion. The liver is enlarged with increased size of the caudal vena cava, hepatic veins, and portal veins. The body of the pancreas is enlarged, hypoechoic, and irregularly marginated. The mesentery is diffusely hyperechoic. A single jejunal lymph node is seen and is hypoechoic and increased in size measuring 0.68cm. Diagnostic abdominocentesis and fine needle aspiration of the large liver nodule was performed.

Ultrasonographic Impressions: Hepatic and pancreatic congestion with rule outs for liver nodules including neoplasia, nodular hyperplasia, and extramedullary hematopoiesis; additional considerations for the pancreas include edema, pancreatitis and neoplasia.

Echo:



Echo Findings: Pericardial and pleural effusion present. Abnormal soft tissue structure visualized in the right auricle.

Echo Impressions: Pleural and pericardial effusion with rule outs for the soft tissue structure associated with right auricle including neoplasia most notably hemangiosarcoma with lesser consideration given to other neoplasias including heartbase tumors (chemodectoma), and a large blood clot. Thoracocentesis was performed.

Abdominocentesis Results: Blood tinged and cloudy before centrifugation, light yellow and clear after centrifugation, protein by refractometry 3.6g/dL, Hct<3%, TNCC 1.1 K/uL (80% neutrophils, <5% lymphocytes, 10% macrophages, and reactive mesothelial cells). No organisms or neoplastic cells found. Suspect hypocellular exudates but could be protein-rich transudate and mild inflammatory response.

Fine Needle Aspirate Results: Highly nucleated cellularity, infrequent RBC, many lysed cells. Cells have fine granular chromatin pattern, scant cytoplasm, indistinct nucleoli. Histiocytic neoplasia is considered most likely and lesser consideration given to lymphoid neoplasia, granulocytic neoplasia, and neuroendocrine neoplasia.

Thoracocentesis Results: Blood tinged and cloudy before centrifugation, light yellow and clear after centrifugation, protein 2.4 g/dL, Hct<3%, TNCC 1.0k/uL (20% neutrophils, <10% lymphocytes, 40% macrophages, many reactive mesothelial cells). No organisms found.

Therapeutic Conclusion: Further diagnostic options and poor prognosis were discussed with the owners and they elected for euthanasia. They decided to donate the dog to necropsy. A level 2 necropsy was performed and tissues were submitted for histopathology.

Histopathologic Diagnosis:

1. Liver: Cholangiocarcinoma
2. Heart:
 - a) Hemangiosarcoma
 - b) Myocardial degeneration and necrosis, multifocal, moderate
3. Lungs: edema and congestion, diffuse
4. Pancreas: Hemorrhage, focal