

**DATE**

9/13/21

**PRESENTING CLINICAL SIGNS**

History: Presented to ER on 9/7/21 with pleural effusion and found to have mild degenerative valve disease. Historic heart murmur monitored by echo q6months. Since ER visit - continuous panting and progressing abdominal distension- ascites found on 9/11. Abdominocentesis performed removed 200ml clear serous fluid. Possible liver mass.

**PATIENT**

Huckleberry Elways

Current Medications: Vetmedin, Enalapril, Furosemide started 9/9, increased Furosemide 9/11 to TID, Phenobarbital 32mg BID.

Lab Results: Not provided by the veterinarian.

Radiographs: Not provided by the veterinarian.

**SPECIES**

Canine

Date of Previous IntraPet Ultrasound: No previous IntraPet scans.

Sedation: Gabapentin 100mg administered prior to scan.

**BREED**

Dachshund

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended with anechoic urine. The bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, masses or cystic calculi.

**SEX**

Neutered male

The prostate is normal in size (1.3 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

**AGE**

6/17/07

The left kidney has a normal shape and size (4.51 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**WEIGHT**

18.2 lbs

The right kidney has a normal shape and size (4.7 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**INTERPRETED BY**

Kathleen Sennello  
DVM, MS, Diplomate  
ACVIM (Small Animal  
Internal Medicine)

**HOSPITAL NAME**

Eastern AH

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.61 cm at the caudal pole It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**REFERRING VET**

Dr. Sole

The right adrenal gland is normal in size measuring 0.56 cm at the caudal pole It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

**INVOICE**

91787

**Spleen**

The spleen is subjectively normal in size, echotexture is homogenous, and the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. No focal parenchymal abnormalities are visualized.

**Liver**

The liver is subjectively large in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and

biliary tract appear normal. There is a very large, solid, expansile mass that was visualized in the left side of the liver and measured 6.25 x 7.17 cm. The gallbladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. Luminal contents are primarily anechoic. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis:mucosa layer ratio. The duodenum measured as normal and the jejunum measured as normal (0.35 cm). Visualized peristalsis appears appropriate. There is a small section of abnormal bowel (between 0.61-0.72 cm in thickness) that appears to have a thickened wall with decreased detail and layering. There is free fluid surrounding this area so it could be edema, but there is concern for emerging focal lesion.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of subjective lymphadenomegaly. The Medial iliac nodes appear normal and there was no evidence of a caudal aortic thrombus at the bifurcation. A moderate amount of anechoic free fluid was noted. The omentum is of normal uniform echogenicity.

### ***Heart***

Pleural effusion is noted.

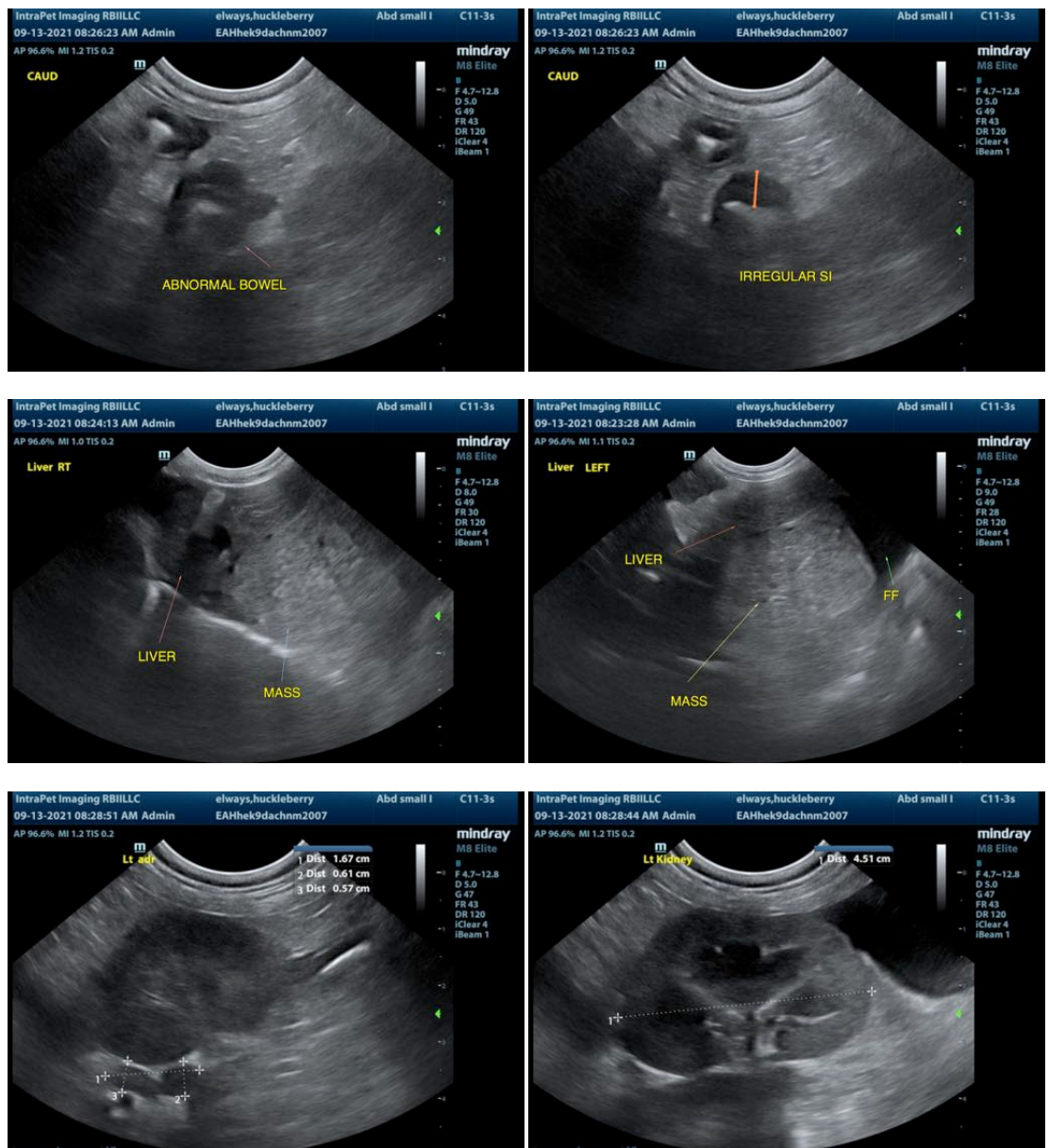
## **ULTRASONOGRAPHIC FINDINGS**

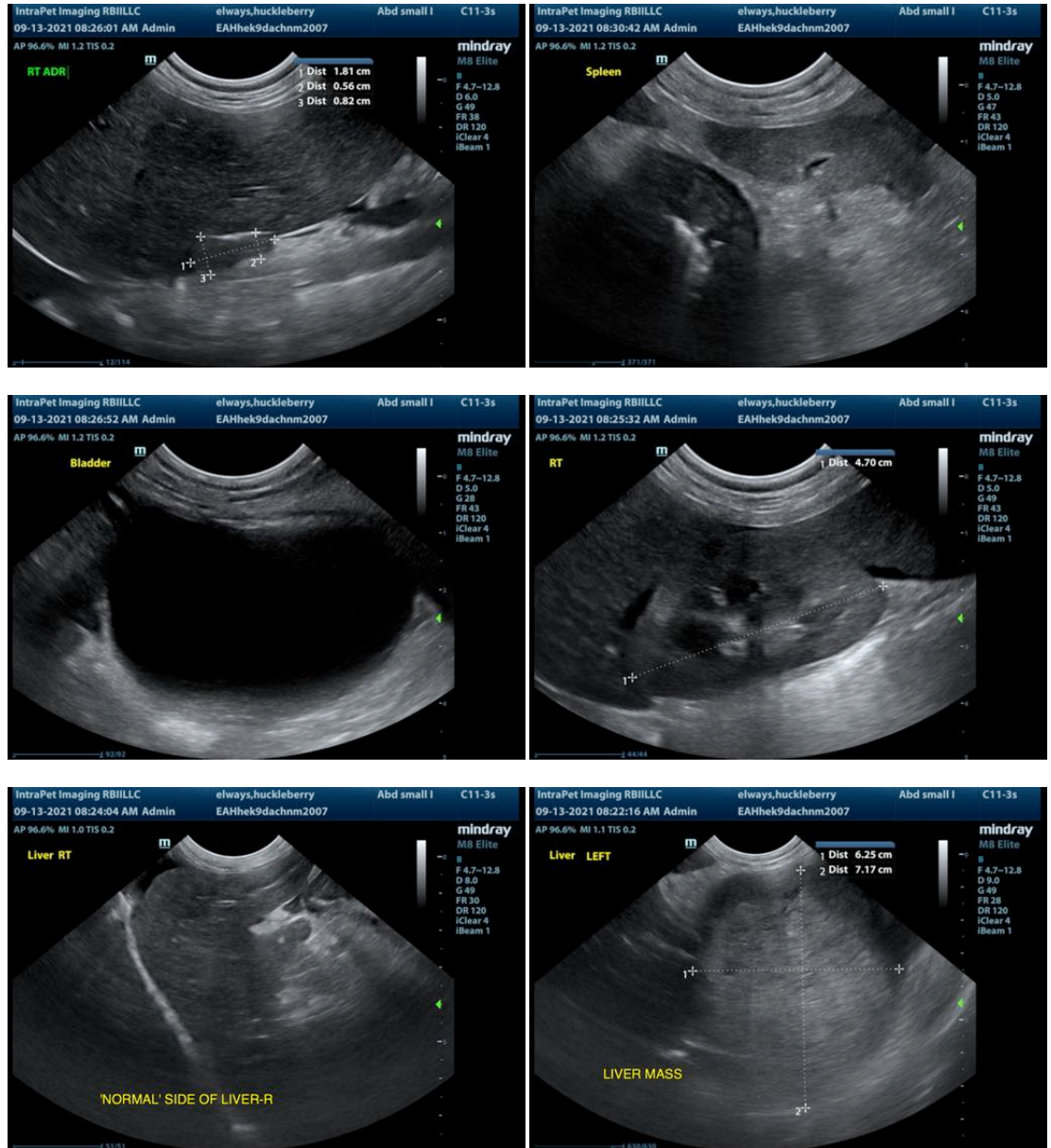
### **PRIMARY FINDINGS:**

- Large heterogenous liver with large, solid, left-sided liver mass. The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. Appearance favors a primary hepatic mass such as an adenoma or carcinoma.
- Focal area of thickened bowel with decreased layering detail. The bowel wall thickening could be consistent with inflammation, edema, or infiltrative neoplasia.
- Pleural and abdominal effusion.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

There is a large, left-sided liver mass that is likely contributing to the presence of the abdominal fluid. Additionally, there is a section of bowel that appears abnormal. This could be edema from the free fluid, but there is concern for an emerging bowel mass. Additionally, it is somewhat unusual to have pleural effusion in a dog secondary to heart disease. I recommend cardiac ultrasound, three view thoracic radiographs, and likely a CT of the thorax and abdomen to evaluate this patient as a surgical candidate. You can consider a FNA of the liver to rule out lymphoma, although a primary hepatic mass is more likely. If possible you can consider a FNA of the abnormal bowel loop and sampling of the abdominal effusion for fluid analysis and cytology. Correlate findings with blood work. If hypoalbuminemia is present then this would be a likely etiology.





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.

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