



<b>PATIENT</b>	<b>PRESENTING CLINICAL SIGNS</b>
Beaver Roscoe	<p>Patient presents for not eating and drinking, vomiting and diarrhea for 3 days. Heart murmur. Patient is improved today, did eat this morning. Current meds: Flagyl and Endosorb. 3-view radiology report finding: "Large ovoid shaped soft tissue and partially mineralized mass within the right cranial abdomen causing medial displacement of the duodenum. This is of uncertain etiology but primary consideration is given to hepatic mass (primary hepatic neoplasia is prioritized over metastatic neoplasia)."</p> <p>Abnormal PE/Chem/CBC/UA Results: ALT 200, Alk. Phosphate 3026, GGT 58, creatinine 0.4, BUN/Creat ratio 30, calcium 8.6, potassium 3.5, Na/K ratio 43, PrecisionPSL 325, WBC 15.9, platelet 745, neutrophils 14151.</p>
<b>SPECIES</b>	
Canine	
<b>BREED</b>	
Shih Tzu	<b>ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN</b>
	<b>Urinary System</b>
<b>SEX</b>	<p>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.</p>
Neutered Male	
<b>AGE</b>	<p>For a neutered dog, the prostate is symmetrically enlarged with smooth margins that are well differentiated from surrounding tissue. A normal bilobed shape is maintained. Parenchyma is heterogeneous and relatively hyperechoic to surrounding tissue.</p> <p>The right kidney is normal in size (4.86 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted, primarily in the diverticular of the kidney.</p>
15 Years	
<b>WEIGHT</b>	<p>The left kidney is normal in size (4.88 cm) and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased echogenicity and mild loss of corticomedullary distinction. There is no evidence of pyelectasia or infarcts observed. Non-obstructive areas of mineralization/nephroliths are noted, primarily in the diverticular of the kidney.</p>
21.4 Pounds	
<b>INTERPRETED BY</b>	<p>The left adrenal gland is unable to be fully visualized due to the large mass in that area.</p>
Beth Johnson, DVM DACVIM	
<b>IMAGING PERFORMED BY</b>	<b>Adrenal Glands</b>
Kelly Vazquez	<p>The left adrenal gland is normal in size (1.3 cm long x 0.43 cm at the cranial pole and 0.43 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.</p>
<b>HOSPITAL NAME</b>	
Ramsey AC	
<b>REFERRING VET</b>	<b>Spleen</b>
Dr. Bishnoi	<p>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.</p>
<b>INVOICE</b>	
38996	<b>Liver</b>
<b>DATE</b>	<p>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. **See other.</p>
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<b>PATIENT</b>	
Beaver Roscoe	The 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.
<b>SPECIES</b>	<b>Gastrointestinal</b>
Canine	The stomach wall is normal in thickness (canine < 0.5 cm and feline < 0.4 cm) and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.
<b>BREED</b>	
Shih Tzu	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.
<b>SEX</b>	
Neutered Male	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
<b>AGE</b>	<b>Pancreas</b>
15 Years	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. **See other.
<b>WEIGHT</b>	<b>Other</b>
21.4 Pounds	There is a 9.0 cm mixed heterogeneous, partially cavitated mass in the right cranial abdomen that is adjacent to the right caudal liver and extends caudal to the stomach and is adjacent to the cranial pole of the right kidney, the top differential for which is a right caudal liver mass. However, pancreatic tissue or even adrenal, while considered much less likely, is possible.
<b>INTERPRETED BY</b>	
Beth Johnson, DVM DACVIM	There appears to be a scant amount of pleural effusion at the level of the diaphragm. No free fluid or lymphadenopathy is appreciated in the abdominal images.
<b>IMAGING PERFORMED BY</b>	<b>PRIMARY FINDINGS</b>
Kelly Vazquez	<ul style="list-style-type: none"> <li>Large, heterogeneous, cavitated right cranial abdominal mass – suspected to be a primary hepatic neoplasia such as hepatocellular carcinoma versus sarcoma versus other. Association with the liver cannot be 100% definitively identified. Other much less likely differentials being that the mass is pancreatic in origin or even less likely possibly right adrenal.</li> </ul>
<b>HOSPITAL NAME</b>	<ul style="list-style-type: none"> <li>Mild heterogeneous prostatomegaly for a dog neutered as a puppy – differentials include prostatitis versus infiltrative neoplasia, which is less likely, but cannot be ruled out. If this patient was neutered later in life, this finding is much less significant.</li> </ul>
Ramsey AC	<b>SECONDARY FINDINGS</b>
<b>REFERRING VET</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Dr. Bishnoi	
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**PATIENT**

Beaver Roscoe

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Neutered Male

**AGE**

15 Years

**WEIGHT**

21.4 Pounds

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Kelly Vazquez

**HOSPITAL NAME**

Ramsey AC

**REFERRING VET**

Dr. Bishnoi

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated.
- Urinalysis and, if indicated based on urinalysis results, urine culture are recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended. Urine could also be submitted to look for BRAF gene mutation, which is associated with urinary bladder and prostatic carcinoma, and is recommended if there are any lower urinary tract signs, straining to urinate, defecate, etc. A more conservative approach to the mild prostatomegaly is monitoring closely, especially pending the outcome of the cranial abdominal mass.
- A fine needle aspirate of the cranial abdominal mass could be considered if patient's coagulation status is appropriate. However, given the risk of hemorrhage, necrosis, etc. with a mass this size, an exploratory laparotomy with excisional biopsy/mass removal is recommended. A pre-surgical planning CT scan of the abdomen could be considered for definitive diagnosis of tissue origin.



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Neutered Male

**AGE**

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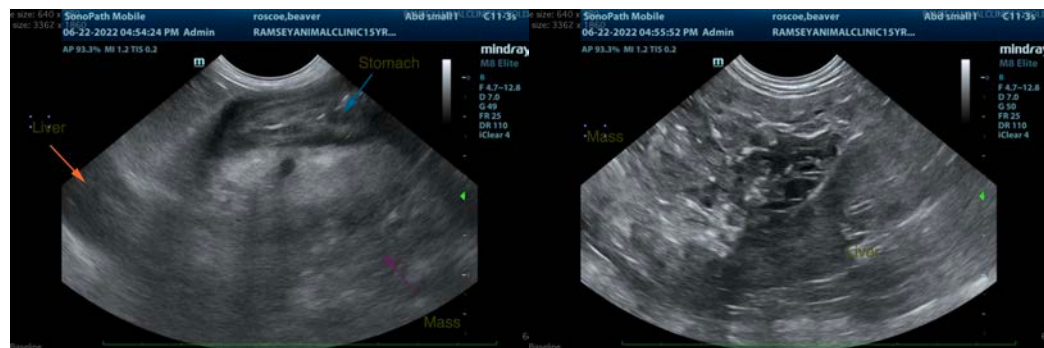
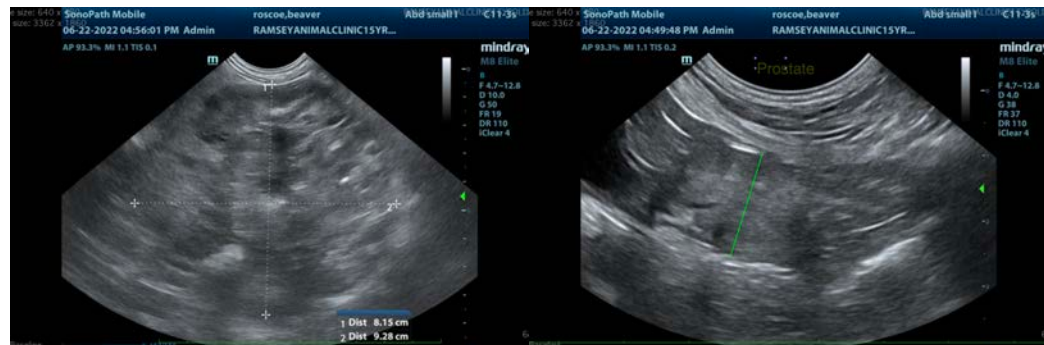
Dr. Bishnoi

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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