



PATIENT PRESENTING CLINICAL SIGNS

Sonny Seperich Had a little scuffle on Friday and one incisor appears crooked afterwards. This is not uncommon for them. He has stopped wagging his tail and acts very tired. He is not eating for 3 days now and has vomited at night. He is apparently deaf.

SPECIES Abnormal PE/Chem/CBC/UA Results: PE: Pale pink mm's, tacky mm's, firm/full cranial abdomen, advanced sclerosis normal for age, moderate anal gland fill, general muscle atrophy, soft mass at base of tail, mild lethargy, Stage III dental disease UA: sg 1.037, pH 9.0, 30mg/dL protein, quiet sediment UPC: 0.2 RBC: 5.18 M/uL, Hg: 11.8 g/dL, Eos 0.07 K/uL Potassium 3.4 mmol/L Snap cPL: Abnormal

Canine

BREED

Shih Tzu

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

SEX

Neutered male

Urinary bladder is adequately 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.

AGE

15 years

Prostate (neutered) is normal in size, echotexture and echogenicity for a neutered male.

WEIGHT

10.7 lbs

Kidneys are overall normal in size 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 cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. The left kidney measured 4.36 cm. The right kidney measured 4.59 cm.

INTERPRETED BY

Beth Johnson, DVM
DACVIM

Adrenal Glands

The left adrenal gland is enlarged (2.71 cm long, 1.2 cm at the cranial and 1.1 cm at the caudal) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

IMAGING PERFORMED BY

Dr. Anderson

The right adrenal gland is enlarged (2.65 cm long, 0.8 cm at the cranial pole and 1.15 cm at the caudal pole) with mild heterogenous parenchymal changes. Swollen capsular expansion is noted without evident capsular escape or vascular invasion.

HOSPITAL NAME

Elizabeth AH

Spleen

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). Multifocal well-demarcated hyperechoic homogenous nodules are noted. Splenic vasculature appears normal.

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Liver

Liver is subjectively enlarged (swollen contour) without disruption of architecture. It has a normal homogenous echotexture. Parenchyma is diffusely hyperechoic characterized by less prominent than normal portal vein walls and increased echogenicity relative to the spleen and falciform fat. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

DATE

6/13/22



PATIENT	Gallbladder is non-distended in size. The wall is smooth without visible thickening. Luminal contents are primarily anechoic. There is no evidence of cystic or common bile duct dilation.
Sonny Seperich	
SPECIES	Gastrointestinal
Canine	The visible stomach wall (except for suspected outflow tract) is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction or foreign material. The stomach contains a small amount of ingesta/fluid/chyme, but is not overly distended (see small bowel).
BREED	
Shih Tzu	The visible small intestines are normal in wall thickness and layering. 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, except for at the level of the pylorus/proximal duodenum, there is a corrugated section of small bowel with thick wall and loss of layering surrounded by enhanced hyperechoic mesentery.
SEX	
Neutered male	The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.
AGE	
15 years	Pancreas
WEIGHT	The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.
10.7 lbs	
INTERPRETED BY	Free Abdomen
Beth Johnson, DVM DACVIM	There is markedly hyperechoic fat and mesentery in the cranial abdomen surrounding the pylorus and proximal duodenum. There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.
IMAGING PERFORMED BY	ULTRASONOGRAPHIC FINDINGS
Dr. Anderson	PRIMARY FINDINGS:
HOSPITAL NAME	<ul style="list-style-type: none"> • Corrugated proximal small bowel with a thick wall and loss of layering that appears to include the pylorus and proximal duodenum surrounded by enhanced hyperechoic tissue that is suggestive of inflammation/focal peritonitis. The appearance of these changes is concerning for a pyloric or proximal duodenal mass/infiltrative disease. However, benign edema/inflammation etc. secondary to pancreatitis, severe gastroenteritis, etc. cannot be ruled out. Given the physical exam findings and the firm, palpable cranial abdominal mass, infiltrative neoplasia involving the proximal GI tract is suspected.
Elizabeth AH	<ul style="list-style-type: none"> • Bilateral adrenomegaly with some heterogenicity and capsular expansion noted. Differentials include bilateral adrenal adenomas versus hyperplasia secondary to pituitary dependent hyperadrenocorticism with concurrent normal aging change to the adrenal glands, etc. No capsular escape or vascular invasion is noted in these images to suggest a malignancy.
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PATIENT

Sonny Seperich

SPECIES

Canine

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Shih Tzu

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Neutered male

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SECONDARY FINDINGS:

- Age related renal changes. This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc.
- Hyperechoic splenic nodules – most consistent with benign myelolipomas. Other differentials such as fibrosis or calcification caused by old hematomas or infarcts, chronic inflammation, granulomatous disease or metastatic disease cannot be ruled out, but are considered less likely.
- Hyperechoic hepatomegaly (canine) – This appearance is most consistent with a benign steroid (endocrine) hepatopathy or reactive or idiopathic hepatopathy. Infiltrative neoplasia such as round cell neoplasia is also possible, but considered less likely.

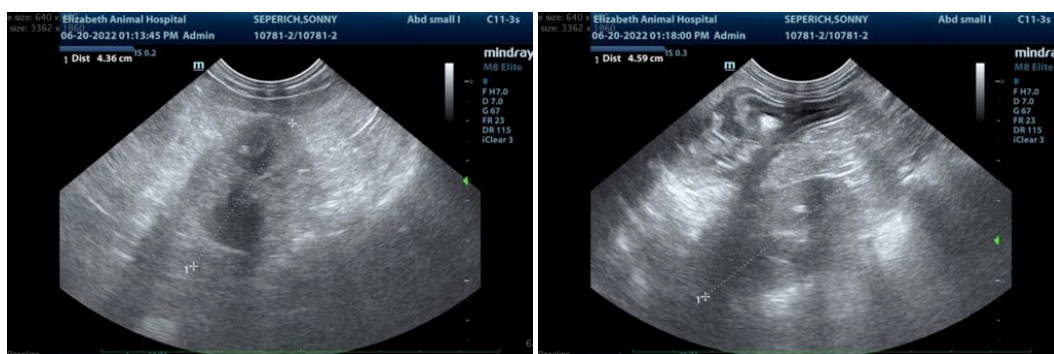
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

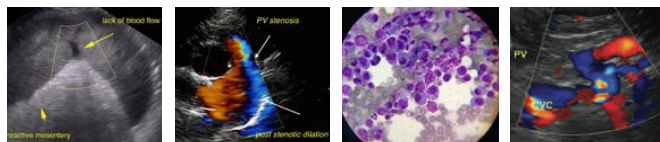
A conservative approach for the cranial abdominal changes could include aggressive medical management of gastroenteritis and pancreatitis with anti-emetics, gastroprotectants, fluid support and pain management as indicated, etc. with a recheck/follow-up ultrasound of the stomach and duodenum, fasted, in another 24-48 hours.

Or, additional imaging could be evaluated with abdominal radiographs +/- barium study to further identify the location of the pathology as well as patency of the proximal GI tract, etc., and/or an abdominal CT scan.

If confirmed, the cranial abdominal pathology could be sampled via either FNA of the abnormal tissue versus either surgical or endoscopic biopsies.

In the meantime, 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.





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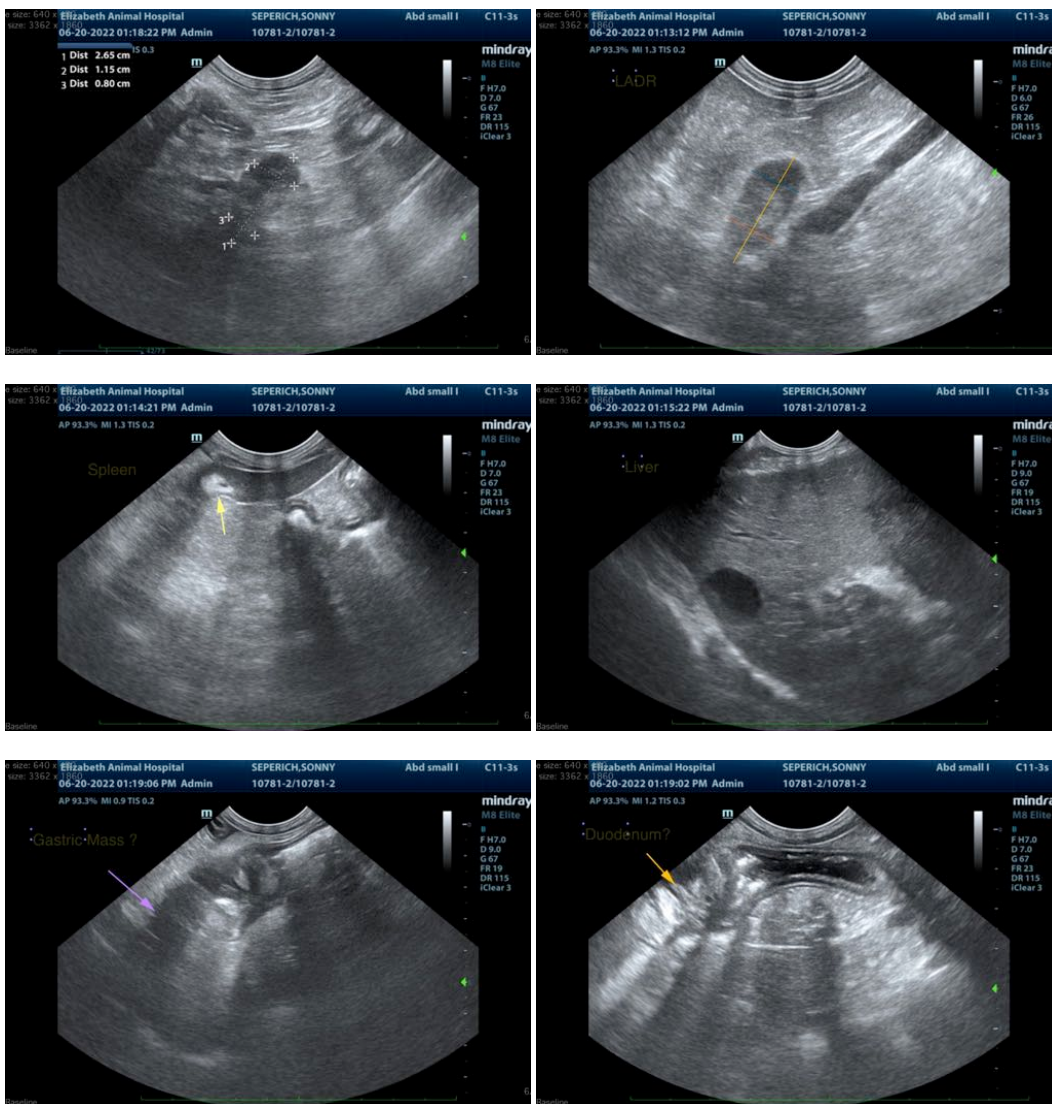
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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