



**PATIENT**

Copper Puglas

**SPECIES**

Canine

**BREED**

Chihuahua/Dachshund

**SEX**

Neutered Male

**AGE**

11 Years

**WEIGHT**

10.2 kg

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

**IMAGING PERFORMED BY**

Dr. Guenther

**HOSPITAL NAME**

Central Island Vet  
Emergency Hospital

**REFERRING VET**

Dr. Guenther

**INVOICE**

45411

**DATE**

2/23/23

**PRESENTING CLINICAL SIGNS**

Stranguria and pollakiuria noticed today but may have been going on longer. P inappetant today and seems lethargic.

Abnormal PE/Chem/CBC/UA Results: Bruising present on penis mucosa but not seen self-traumatizing. Abd mass palpated and seen on XR. No radio-opaque uroliths. Urinary catheter passed easily. UA USG 1.022 and normal. CBC WNL Chem mild ALT elevation (253) and mod ALP elevation (539)

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

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.

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

The right kidney is normal in size (5.41 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

The left kidney is normal in size (4.55 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**Adrenal Glands**

The right adrenal gland is normal in size (1.81 cm long x 0.85 cm at the cranial pole and 0.56 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (1.94 cm long x 0.47 cm at the cranial pole and 0.61 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

**Spleen**

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). A 4.0 cm x 5.0 cm heterogeneous cystic/cavitated mass that disrupts the splenic capsule is noted at the tail of the spleen. Splenic vasculature appears normal.

**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.

Gallbladder is moderately distended with anechoic bile as well as mild 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.



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**Gastrointestinal**

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.

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.

The visible colon is normal in wall thickness (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

**Pancreas**

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.

**Free Abdomen**

The images provided labeled "distal urethra" of the os penis demonstrate subjectively mildly prominent/thick soft tissue swelling of the penis and subcutaneous area around it.

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

**ULTRASONOGRAPHIC FINDINGS**

- **Heterogeneous, partially cavitated splenic mass** – concerning for infiltrative neoplasia such as sarcoma, versus round cell neoplasia versus other. Benign lesion such as hematoma, extramedullary hematopoiesis, etc. however can mimic infiltrative neoplasia and cannot be ruled out without tissue sampling.
- **Hyperechoic hepatomegaly** - This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy. Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.
- **Mild 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.
- **Subjective soft tissue swelling around the penis** – consistent with the reported bruising, etc. noted visibly. No evidence of mineral or other obstruction noted in these images.

**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.



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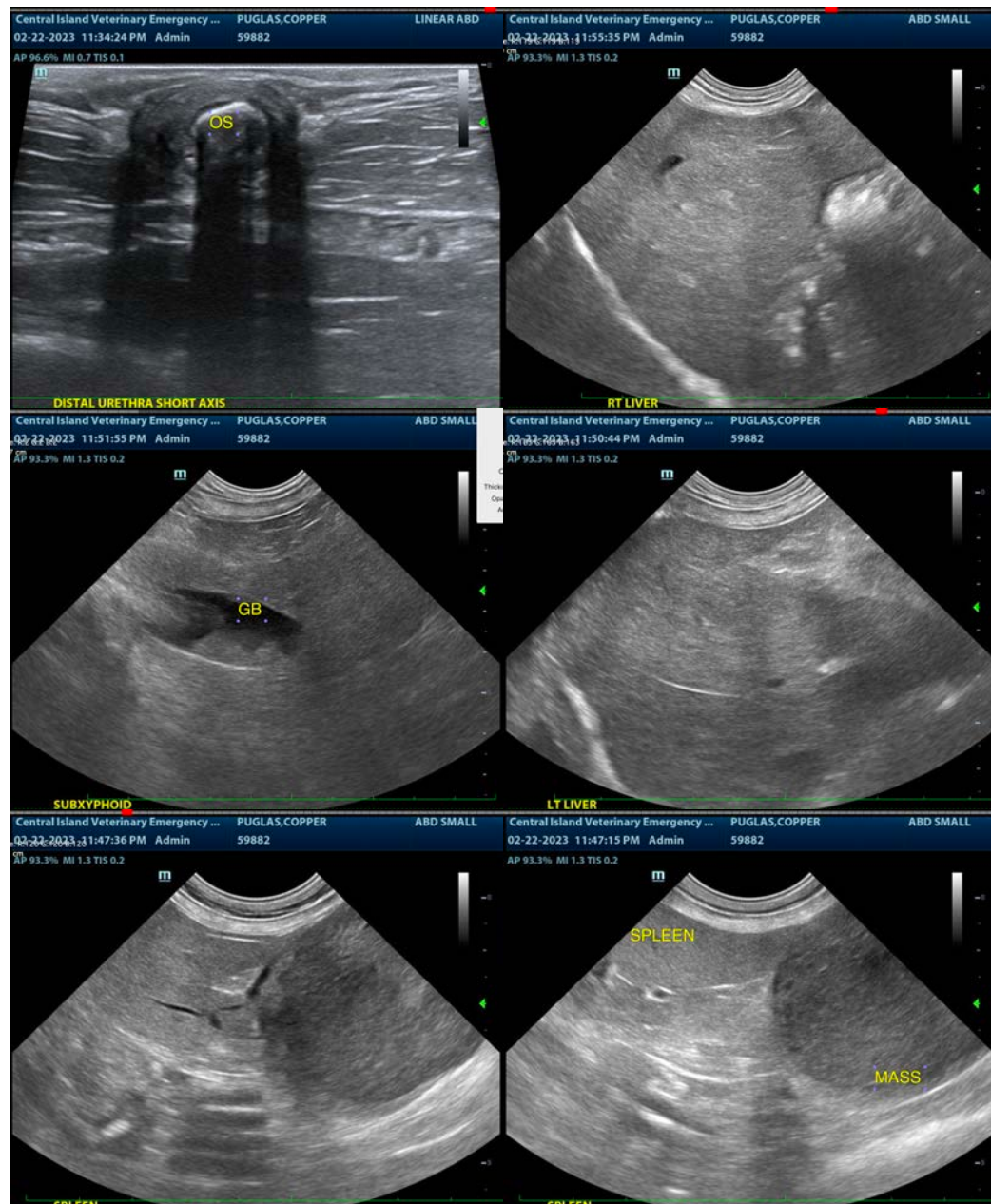
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Fine needle aspirates of both the splenic mass and liver could be considered if patient's coagulation status is appropriate.

Additionally, given the reported bruising of the penis combined with the subjectively prominent soft tissue, if there is a palpable abnormality in that area, fine needle aspirate of that could potentially be considered as well. Given the bruising without apparent trauma and normal coagulation status, mast cell tumor is one differential. Alternatively, given the risk of a hemoabdomen with even a benign partially cavitated splenic mass, an exploratory laparotomy for planned splenectomy and liver biopsy could be considered. Having said that, the presence of the splenic mass may be an incidental finding unrelated to the presenting complaint of stranguria, etc., and given the lack of visible physical obstructions, other differentials including reflex dyssynergy, etc. (i.e., underlying neurologic disease) should be considered.

Additionally, testing for Leptospirosis is indicated.





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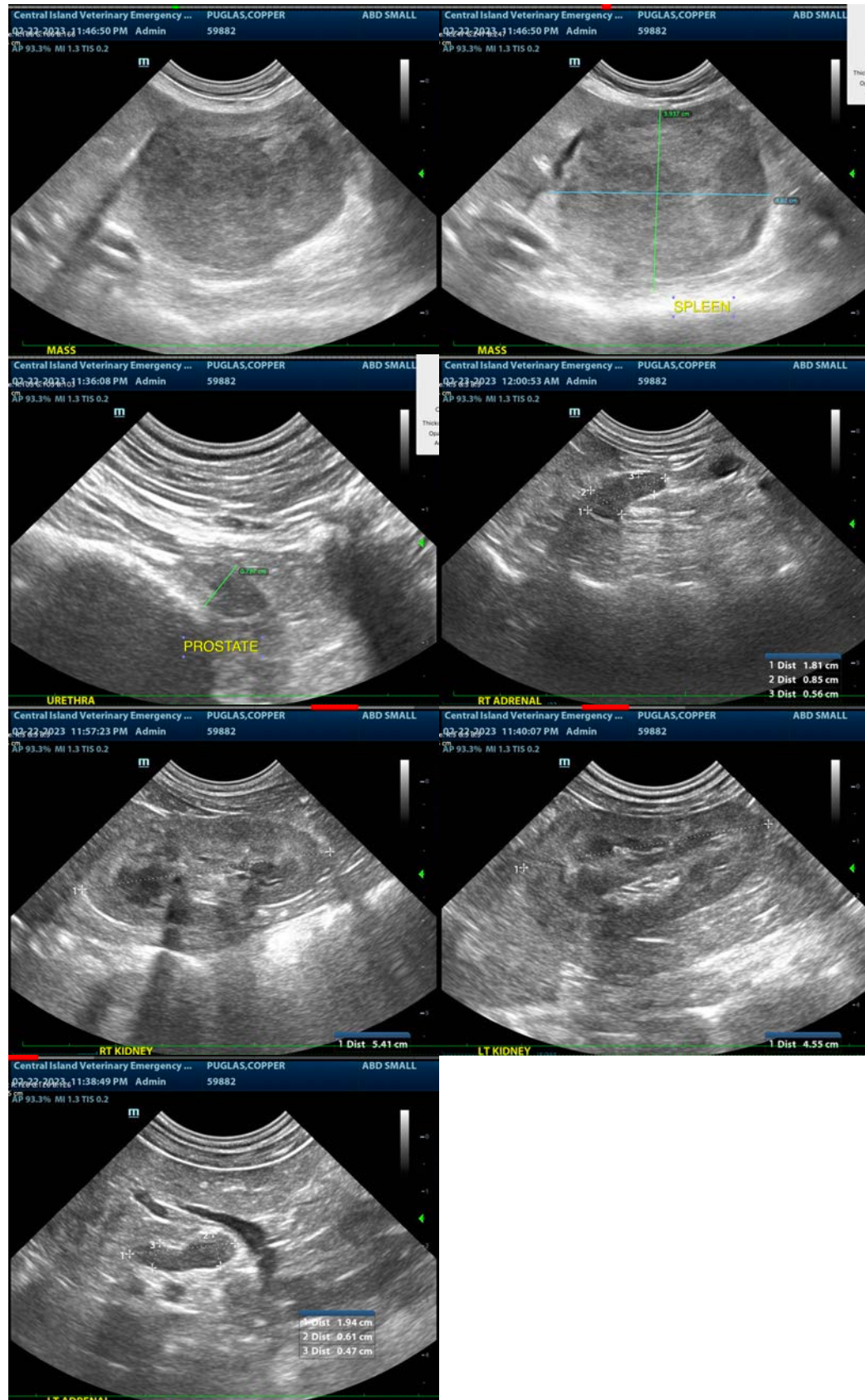
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**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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