

**DATE**

7/29/22

**PRESENTING CLINICAL SIGNS****PATIENT**

Roxy Caplinger

History: Roxy is a 9 y/o FI lab who presents for ADR - normal the morning, ate normally - O out of town, Father watching pet - in evening found laying in urine, would not get up - regurgitated food from morning - no diarrhea - recently started heat cycle- was panting when laying down - has chewed up things in the past, no known toxin ingestion - no C/S Medications: - none, unsure about preventatives

**SPECIES**

Canine

**BREED**

Labrador Retriever

**SEX**

Intact Female

Current Medications: ondanestron, buprenorphine, protonix, ampicillin

Lab Results: See attached.

Radiographs: definitive cause not ID- poor serosal detail abdomen- +- peritoneal fluid 2. no convincing uterine distention- mild uterine enlargement may not be evident on xray 3. no mets in chest, widened cranial mediastinum- fat - sternal lymph cannot be excluded. Recommend: AUS.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

Imaging Performed By: Rachel Brillhart, RDMS.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****AGE**

7/26/2013

**Urinary System**

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.

**WEIGHT**

86 Pounds

Left kidney is normal is size (7.55 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.

**INTERPRETED BY**

Beth Johnson, DVM  
DACVIM

Right kidney is normal is size (8.05 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.

**HOSPITAL NAME**

Animal Emergency  
Hospital

**Adrenal Glands**

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. Hyperechoic nodules in the cranial pole of both adrenal glands noted with no evidence of capsular escape. The left adrenal gland is 3.4 cm long x 1.77 cm at the cranial pole and 1.13 cm at the caudal pole. The right adrenal gland measures 3.54 cm long x 1.8 cm at the cranial pole and 1.1 cm at the caudal pole.

**REFERRING VET**

Dr. Thompson

**Spleen**

Spleen is generally normal in size and shape with a smooth capsular contour. Parenchyma is diffusely nodular in appearance characterized by small discrete hypoechoic nodules. Splenic vasculature appears normal.

**INVOICE**

16595

**Liver**

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

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.

### ***Gastrointestinal***

The visible stomach wall is normal in thickness 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. 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 and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

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.

### ***Free Abdomen***

There is no apparent lymphadenopathy noted in these images.

Both ovaries are examined without evident pathology. In the caudal abdomen, the uterine wall appears mildly thickened, hyperechoic and irregular with endometrial cysts suspected.

There is a scant amount of anechoic free fluid and enhanced hyperechoic mesentery surrounding the uterine body and urinary bladder in the caudal abdomen.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Suspect cystic endometrial hyperplasia with early muco- or pyometra unable to be ruled out given the concern for inflammatory changes (free fluid, enhanced fat and mesentery) around the thickened uterus. Normal patient variant given the current heat cycle status is possible. This finding should be interpreted in combination with clinical signs, vaginal discharge, etc.
- Bilateral adrenomegaly with bilateral hyperechoic adrenal nodules – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism. Given the bilateral nodules, bilateral adenomas or even less likely pheochromocytomas, adenomas, etc. can't be ruled out.
- Heterogenous Liver – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.

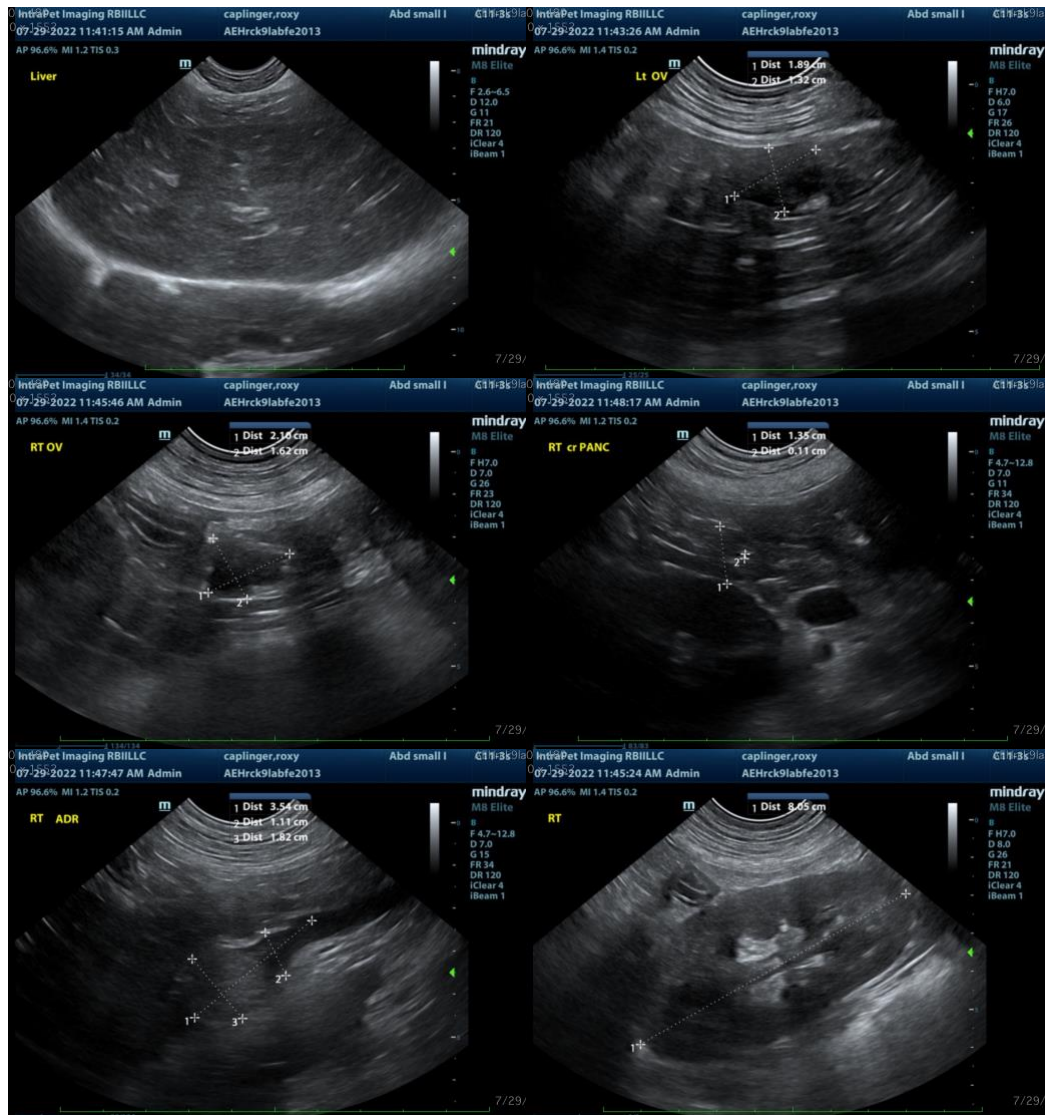
### **Secondary Findings**

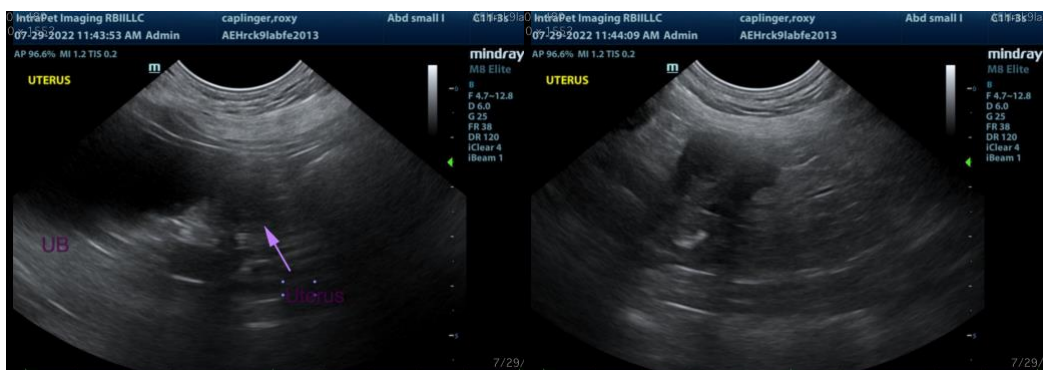
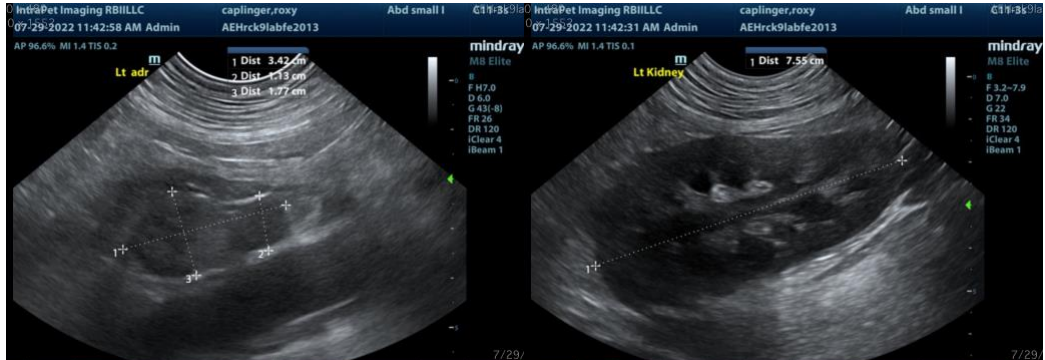
- Splenic micronodular hyperplasia – This nodular change is often associated with benign aging nodular hyperplasia. Infiltrative neoplasia, however, including both early hemangiosarcoma as well as round cell neoplasia cannot be ruled out.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given this patient's adrenal changes and history of collapse, a blood pressure is recommended, if not recently evaluated. Further adrenal testing, to rule in/out hyperadrenocorticism, etc. is not recommended until the patient's current illness has improved/resolved, as false positive testing can occur in the face of concurrent illness, and even at that time, testing is only recommended if clinical signs of hyperadrenocorticism, such as PU/PD, panting, etc., are present. In the meantime, supportive symptomatic medical management of the clinical signs with fluid support (as needed), antiemetics, gastroprotectants, appetite stimulants (if necessary), etc., is recommended with close monitoring of the patient for signs of progressing muco- or pyometra.

Alternatively, spaying the patient as soon as it's medically safe to do so could be considered to prevent the risk of emerging uterine disease.





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.

**Beth Johnson, DVM DACVIM**

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