



PATIENT

Belle Clark

SPECIES

Canine

BREED

Boykin Spaniel

SEX

Neutered Male

AGE

4.3.2012

WEIGHT

14.8 kg

INTERPRETED BY

Andrea Nicastro,
DVM, Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Andrea Nicastro,
DVM, Diplomate ACVIM
(Small Animal Internal
Medicine)

HOSPITAL NAME

Blue Pearl Spec MP
Emerg

REFERRING VET

Caroline Andrews, DVM

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DATE

8.22.22

PRESENTING CLINICAL SIGNS

Clinical Exam Findings: Belle 10yo FS Boykin Spaniel presents for lethargy and incontinence. Pt had stone removed on 8/2/22 and has been doing well until about 2 weeks ago. 2 wks ago pt started leaking urine. Primary started pt on Proin. Proin was stopped on Sunday and on Tuesday pt started leaking urine again per o', primary restarted proin and cefpodoxime. O's went out of town on Thursday and pet sitter stated on Friday pt would only eat treats. Ni in eating on Saturday and pt was more lethargic than normal. Today still Ni in eating. Pt has been restless and panting all morning.

PE: Mentation: Quiet, alert and responsive. Nervous

Hydration: 5% dehydrated

Eyes, Ears, Nose: No ocular discharge OU, lenticular sclerosis OU; no nasal discharge and airflow present bilaterally; mild debris AU; no significant abnormalities noted

Oral Cavity: Moderate dental tartar and calculus; mucous membranes are pink and moist; CRT 2 sec; no evidence of petechiation or ulceration; no foreign object or mass appreciated

Cardiovascular: Mildly tachycardic, pulses were strong and synchronous.

Respiratory: Eupnea, normal bronchovesicular sounds on all lung fields, no cough elicited on tracheal palpation

Neurologic: Appropriate mentation, normal CNN, no pain elicited on manipulation and palpation of neck and spine; no obvious neurologic deficits noted (complete neurologic exam not performed).

Gastrointestinal/Urogenital: Soft and non-painful abdomen with no evidence of mass or organomegaly on palpation

Rectal: Normal stool color and consistency with no mass or foreign material evident; anal glands soft and small, not expressed

Peripheral Lymph Nodes: Small, soft, smooth, and symmetrical

Integument: Hair coat in good condition for age and breed, no ectoparasites or dermatitis noted, mild dorsal scale

Musculoskeletal: BCS 6/9, adequate musculature, no evidence of weakness or lameness during ambulation; no obvious orthopedic abnormalities noted (complete orthopedic exam not performed).

Abnormal lab-work values

Diagnostics:

- CBC: WNL (HCT 48.8, WBC 11.9, PLT 360)

- Chem: Creat 4.5 (H), BUN 75 (H), Ca >16 (H), Glob 4.6 (H)

- Lactate: 4.5

- UA: cysto, USG 1.020, pH 6.5, blood 250 ery/uL, WBC >50/hpf, RBC >50/hpf, suspect cocci and rods, nsEPI 6-10/hpf, suspect hyaline

Current Medications: cerenia, buprenex, unasyn

Radiographic Findings: 3v T&AXR (Submitted for radiologist review): Findings:

STUDY: Thorax and abdomen radiographs (6 images) dated August 21, 2022.

THORAX:

- The cardiac silhouette and pulmonary vessels are within normal limits.
- The pulmonary parenchyma is unremarkable.
- The pleural space and mediastinum are unremarkable.

ABDOMEN:

- The urinary bladder is unremarkable.
- The kidneys are within normal limits.
- The stomach and small intestine are within normal limits with no evidence of pathologic distention or plication.
- The liver and spleen are unremarkable.
- The abdominal serosal margin detail is normal.



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MUSCULOSKELETAL:

- The skeletal structures are unremarkable.

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Assessment:

1. Unremarkable urinary tract. No evidence of mineral opaque urinary calculi.
2. Otherwise, unremarkable abdomen.
3. Unremarkable thorax. No evidence of pulmonary metastasis or intrathoracic lymphadenopathy.

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Comments/Recommendations: If further evaluation of the urinary tract is clinically indicated, consider abdominal ultrasound.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

SEX

Neutered Male

Urinary System

The **urinary bladder** is mildly distended with mostly anechoic urine. The wall is thickened (up to 0.88 cm), particularly in the region of the apex, with an irregular mucosal surface. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

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The **left kidney** is normal size (5.69 cm in length); normal shape and smooth peripheral margins. The cortex is thickened and hyperechoic to mildly heterogenous in appearance. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is a hyperechoic medullary band adjacent to the corticomedullary junction. There is moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

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The **right kidney** is normal size (6.70 cm in length); normal shape and smooth peripheral margins. The cortex is thickened and hyperechoic to mildly heterogenous in appearance. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is a hyperechoic medullary band adjacent to the corticomedullary junction. A small cortical cyst is seen. There is moderate loss of corticomedullary distinction. Several nonobstructive nephroliths are visualized. There is no evidence of pyelectasia, infarcts or hydronephrosis. Renal vasculature is normal.

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Adrenal Glands

The **left adrenal gland** is normal size (0.58 cm at cranial pole) (0.64 cm at caudal pole) (2.34 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

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The **right adrenal gland** is normal size (0.92 cm at cranial pole) (0.49 cm at caudal pole) (2.61 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

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Spleen

The **spleen** is normal in size (1.81 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

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Liver

The **liver** is subjectively normal in size with normal curvilinear peripheral contours. The parenchyma is hypoechoic relative to the spleen with minor changes consistent with age-related remodeling. No focal lesions are observed. Hepatic vasculature and biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

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The **gall bladder** is distended. The wall is normal in thickness. A small amount of suspended, echogenic debris is observed within the lumen. Luminal contents are anechoic. The cystic and common bile ducts are normal/not seen.

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Gastrointestinal

The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The wall of the descending colon is moderately thickened (up to 0.47 cm) with retention of the normal layering pattern. There is no evidence of an obstructive pattern.

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Pancreas

The left limb of the pancreas is visible with normal curvilinear peripheral contours. The parenchyma is largely hypoechoic relative to surrounding omental fat and slightly mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

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Free Abdomen

The **peritoneal cavity** is normal. There is no evidence of inflammation or effusion. The abdominal **lymph nodes** are normal/not visible.

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Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

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ULTRASONOGRAPHIC FINDINGS

Primary Findings

- The bilateral renal changes are consistent with chronic interstitial nephrosis/nephritis, with nonobstructive nephrolithiasis and dystrophic mineralization.
- The urinary bladder wall changes are most consistent with cystitis, particularly given the recent history of a cystotomy. Infiltrative neoplasia (i.e., transitional cell carcinoma) is possible, but considered less likely in light of the patient's history.

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Secondary Findings

- The hepatic changes are consistent with age-related parenchymal remodeling and are not considered clinically significant at this time.
- Gall bladder debris, non-mucocele.
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- The colonic wall changes are most consistent with an inflammatory process (i.e., cholitis). Correlation with the patient's clinical history is recommended.

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INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

1. A urine culture and sensitivity is recommended.
2. Consider a UPC if proteinuria is present, in the absence of infection.



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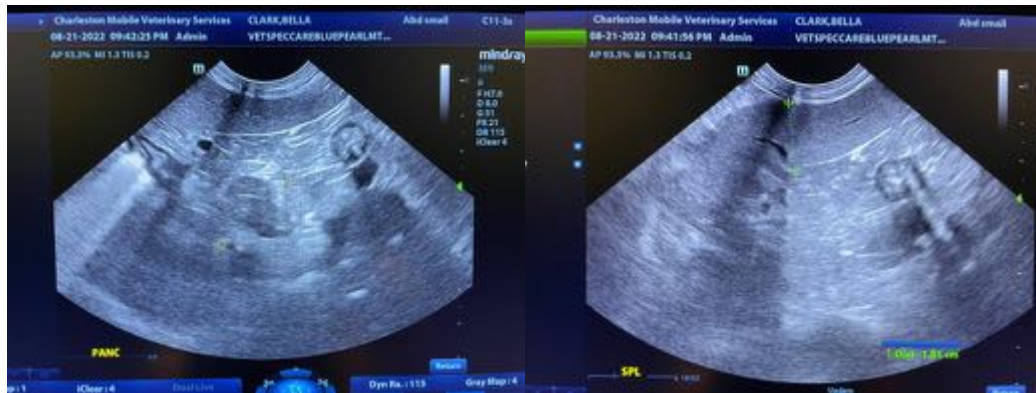
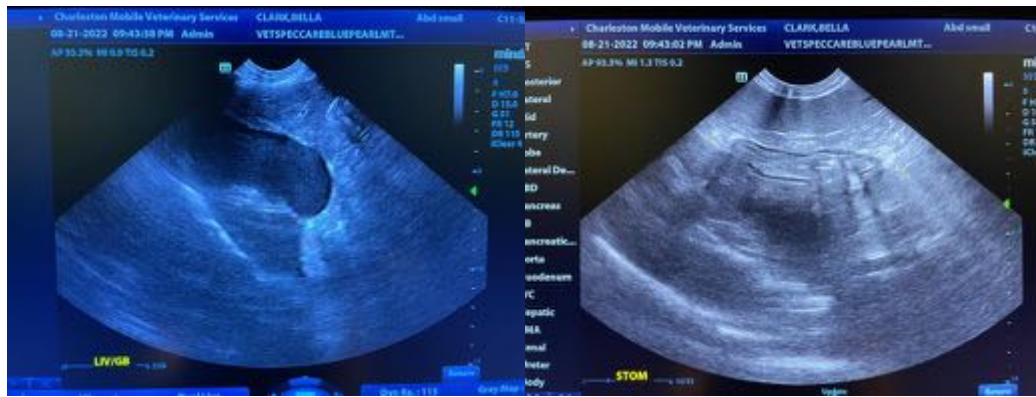
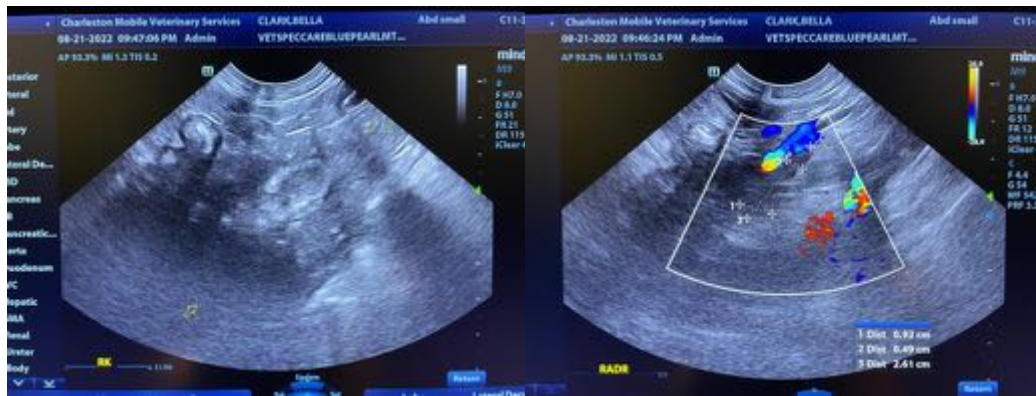
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3. A baseline blood pressure measurement is recommended.
4. Regarding the azotemia, IV fluid diuresis and symptomatic care is recommended, with broad-spectrum antibiotic therapy (i.e., fluoroquinolone) while awaiting urine culture and sensitivity results.
5. Given the hypercalcemia, an ionized calcium/PTH/PTHrP are recommended. Also consider three-view thoracic radiographs to assess for occult neoplasia and a rectal examination to assess for anal gland tumors.





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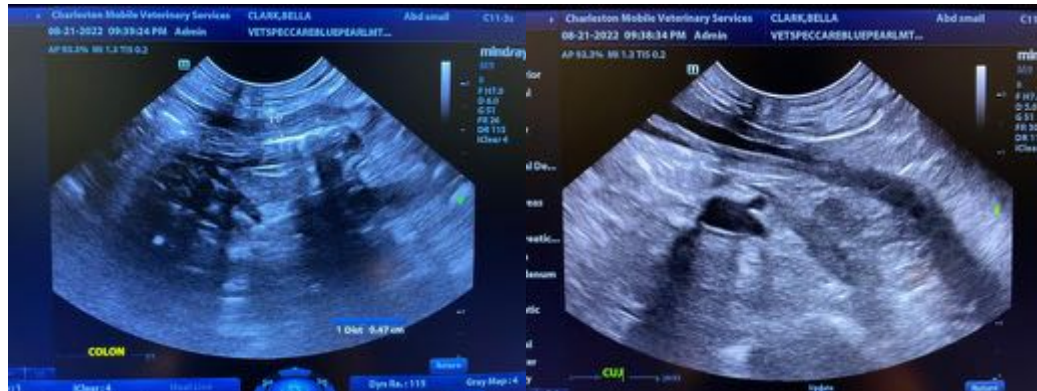
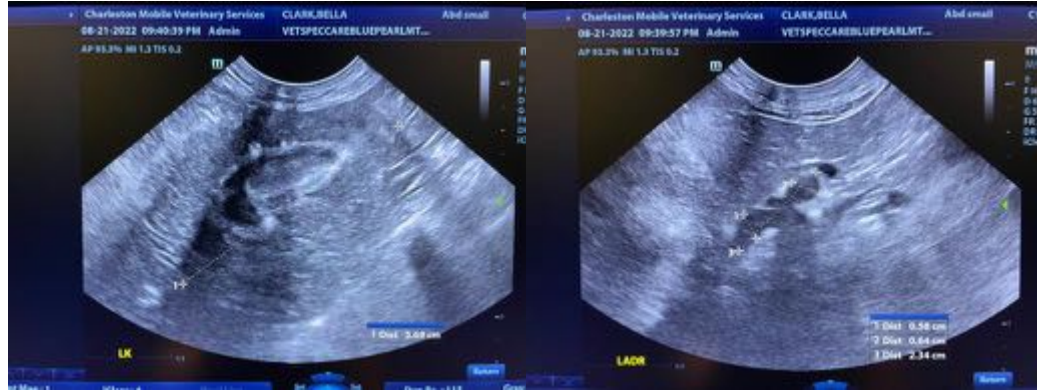
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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