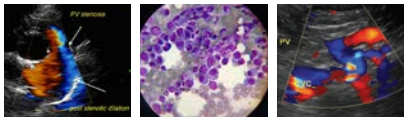
IMAGING PERFORMED BY

IntraPet.com



SonoPath
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DATE

10/18/22

PATIENT

Penelope Barnes

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

11/1/09

WEIGHT

6.9 Pounds

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Rachel Brilhart RDMS

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

Dr. Martinoli

INVOICE

42140

PRESENTING CLINICAL SIGNS

A couple months ago was vomiting; had AUS; also GI exploratory; negative; biopsies showed Helicobacter (unknown significance) and mild IBD. At that time BUN - 50 and Creatinine 1.5. T4 - 10. Started methimazole. After after about a month owner d/c the methimazole and started feeding y/d but was mixing with regular food. Restarted methimazole about 4 days ago (2.5 mg BID) 2 days ago went to rDVM for vomiting, weight loss. T4 rechecked -- 1.9. Renal values worsened; BUN - 154, Creatinine - 4.4, Ph. - 19

Current Medications: Cerenia, Elura, Buprenorphine.
Lab Results: ProBNP - >1500, BUN - 154; Creatinine - 4.4; Phos - 19; USG - 1.010.
Date of Previous IntraPet Ultrasound: 7/27/22. See attached.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder is adequately distended. The bladder wall is hyperechoic in appearance, primarily in the non-dependent portion of the wall, with an irregular dirty shadow produced by intramural gas. Contents are primarily anechoic with a large amount of both suspended and (settled along the dependent wall) echogenic debris. No masses or cystoliths are observed.

Kidneys are bilaterally uniformly enlarged/swollen with an overall hyperechoic echogenicity and slight loss of corticomedullary definition. Normal smooth peripheral margination and shape are maintained. The renal pelvis are dilated with anechoic fluid and hyperechoic thickened pelvic fat. No overt evidence of neoplasia. Non-obstructive linear multifocal hyperechoic diverticular foci with acoustic shadowing are noted in both kidneys. The perinephric area is enhanced by hyperechoic fat and mesentery. In addition, there is a scant amount of perinephric free fluid. The left kidney measures 3.75 cm. The right kidney measures 3.43 cm.

Adrenal Glands

Adrenal glands are bilaterally uniformly plump egg-shaped adrenals (left measures 0.67 cm, right measures 0.72 cm), hypoechoic in echogenicity with bilateral dystrophic mineralization noted. This is most likely a benign age-related change. This change can be caused by chronic stress/disease, so investigation for/management of other disease (chronic kidney disease, hyperthyroidism, etc.) is recommended.

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). No focal nodules or masses are observed. Splenic vasculature appears normal.

Liver

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.

The 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 mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction, foreign

material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. 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

Pancreas is prominent (enlarged) in size, hypoechoic to surrounding tissue and has a mildly irregular undulating contour. Parenchyma is coarse with mixed echogenic remodeling noted. Pancreatic duct dilation is noted.

Free Abdomen

Scant amount of anechoic free fluid and enhanced mesenteric fat noted around both kidneys.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Pyelonephritis –** These changes are most consistent with chronic pyelonephritis. Chronic scarring and fibrosis and/or chronic nephrolith passage can also result in these pelvic dilation changes. Early infiltrative disease cannot be ruled out but is considered less likely.
- Emphysematous cystitis is suspected with concurrent urinary bladder debris.
- Chronic active pancreatitis

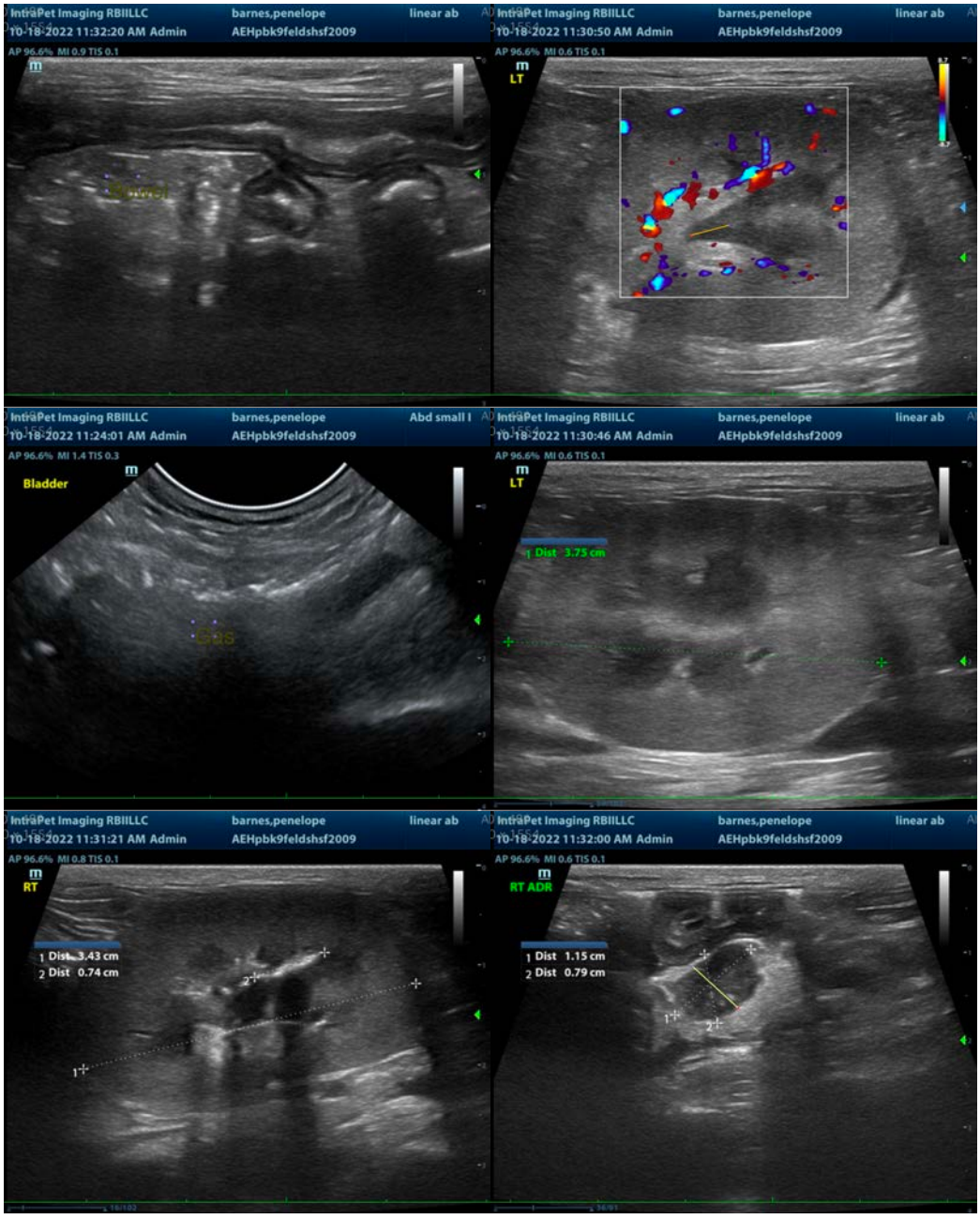
SECONDARY FINDINGS

- Age related adrenal gland changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

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.

There is likely some sub- or preclinical chronic kidney disease exacerbated by the currently euthyroid state. However, an acute on chronic insult, likely caused by urinary tract infection/pyelonephritis, is suspected. Therefore, in addition to aggressive diuresis, if tolerated, supportive/symptomatic medical management of gastrointestinal signs with antiemetics, gastroprotectants, appetite stimulants, etc., broad-spectrum antibiotics (ideally based on culture and sensitivity results) are recommended. Antibiotic therapy should continue for at least 4-6 weeks and be followed with a follow up culture a week to 10 days after finishing antibiotics to ensure full clearance.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barnes,penelope
linear ab
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Bowel
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linear ab
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LT
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Abd small l
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Bladder
Gas
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linear ab
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LT
1 Dist 3.75 cm
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linear ab
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RT
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2 Dist 0.74 cm
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barnes,penelope
linear ab
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RT ADR
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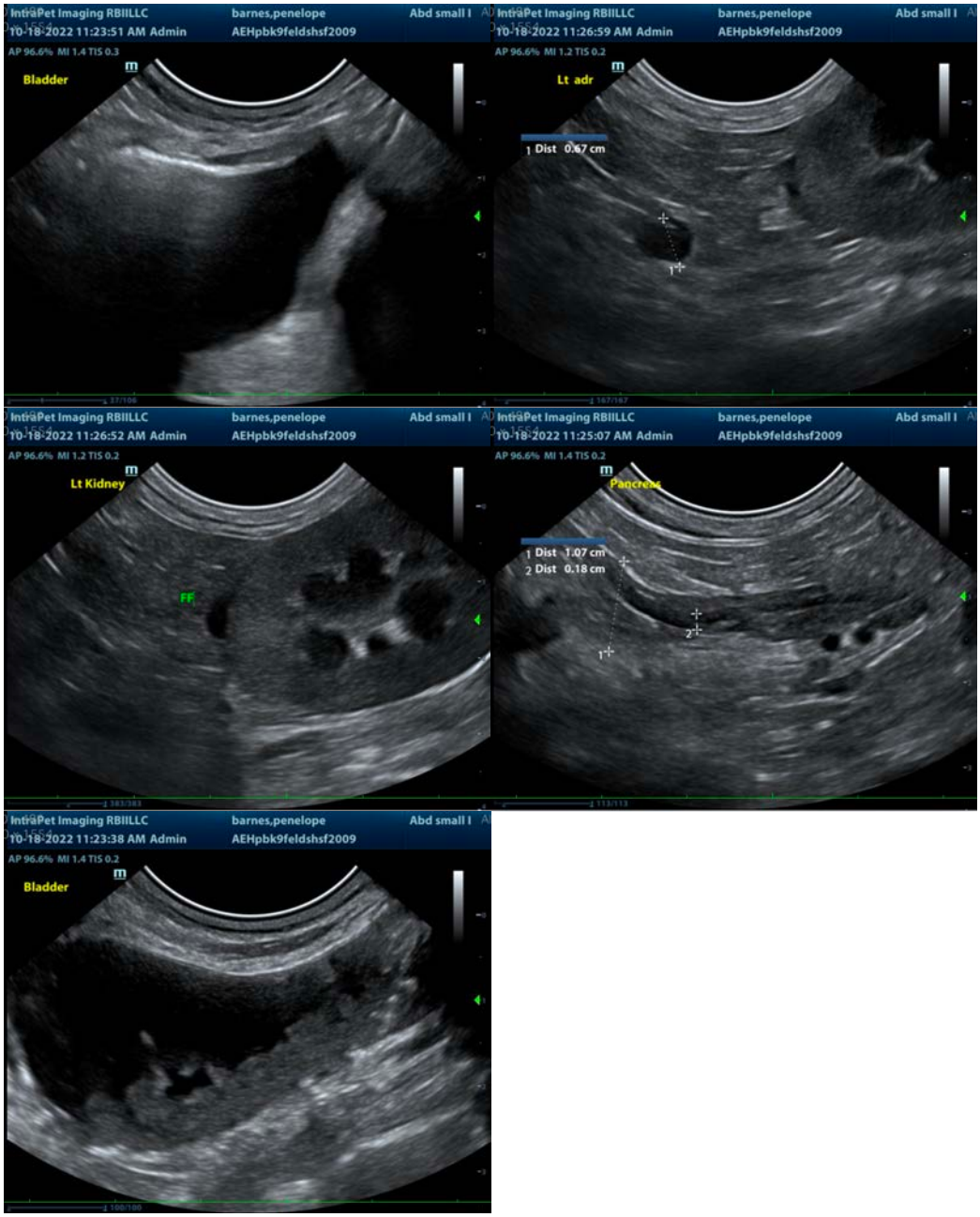
2 Dist 0.79 cm



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
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