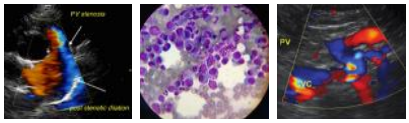
IMAGING PERFORMED BY

IntraPet.com



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™
1-800-838-4268 info@sonopath.com SonoPath.com

**DATE**

3/31/23

**PATIENT**

Mabel Brooks

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Spayed Female

**AGE**

3/30/10

**WEIGHT**

9.4 Pounds

**INTERPRETED BY**

Eric Lindquist, DMV
DABVP, Cert. IVUSS

**HOSPITAL NAME**

Banfield Bel Air

**REFERRING VET**

Dr. Falkowski

**INVOICE**

21880

## PRESENTING CLINICAL SIGNS

History: Diagnosed with Cushings disease 4/22. Well controlled on Vetoryl 15mg PO SID. Presenting for dental cleaning on 3/13/23. O reported the urine smelled very strong. Free catch UA dropped off on 3/15 showed yellow, hazy: SG=1.010, pH-8.0, protein 300, RBC TNTC, struvite 1/HPF, TNTC cocci, otherwise wnl. Dispensed Clavamox 62.5mg: 1 tab PO BID x 14 days. Weight loss of 4lbs in past year. Exam 3/13/23: Eyes: epiphora OU, cataract OU, visible portions of fundus appear normal OU (complete fundic exam not performed), corneal pigmentation OD. Ears: yellow discharge, excess hair AU, no inflammation, no odor, otoscopic exam WNL. Oral cavity: 2/4 dental calculus, gingivitis. Periodontal Dz Gr I. Underbite. Integument: Long nails. fur thin; comedomes along dorsum; ; 8mm mass top of head near L ear; 9mm mass back of neck, 7mm near left shoulder - sebaceous cyst with a keratinaceous horn, 1.5cm mass dorsal midline thorax, 1cm mass right hip. M/S: bilateral luxating patellas, gr 3/4; no pain on palpation of long bones, no gait deficits noted. Generalized muscle wasting. PLN: submandibular LNs enlarged; superficial cervical/axillary/popliteal nodes palpate normally

Current Medications: Vetoryl 15mg PO SID since 4/22. Clavamox 62.5mg PO BID x 14 days since 3/15/23.
Lab Results: 3/13: Fecal-negative. Cbc/Chem - WBC-HI-17.63, LYM-LO-0.97, MON-HI-1.57, NEU-HI-15.05, MCH-HI-24.8, PLT-HI-596, BUN-HI-48, ALT-HI-265, ALKP-HI-1558, GGT-HI-32, OTHERWISE WNL
3/15: UA (free catch): yellow, hazy:SG=1.010, pH-8.0, protein 300, RBC TNTC, struvite 1/HPF, TNTC cocci, otherwise wnl
Date of Previous IntraPet Ultrasound: No previous.
Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.
Imaging Performed By: Rachel Brilhart, RDMS.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The **urinary bladder** revealed multiple calculi, a grouping of which measured 2.0 cm.

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. Mineralization was noted in the corticomedullary junction and renal cortex of the right kidney. The largest calculus measured 0.34 cm. The right kidney measured 4.28 cm. Pelvic mineralization was noted in the left kidney, extending for approximately 2.0 cm. The left kidney measured 4.0 cm in length.

### *Adrenal Glands*

The **adrenal glands** appeared slightly enlarged and swollen. No evidence of focal capsular expansion or invasion into the phrenic veins were noted. No overt suspicion of neoplasia was noted. This is considered likely a hyperplastic change associated with stress or adrenal endocrinopathy (PDH). If isosthenuria is persistently present and the patient morphologically suggests Cushing's disease then ACTH testing would be indicated. This change is consistent with PDH. The right adrenal gland measured 3.12 cm x 1.0 cm at the cranial pole and 0.99 cm at the caudal pole. The left adrenal gland measured 3.04 cm x 1.28 cm at the caudal pole and 1.05 cm at the cranial pole.

### *Spleen*

The **spleen** was normal size and relatively normal contour with moderate multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

### *Liver*

The **liver** was uniformly swollen. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is a mild change, consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia. Gallbladder debris and calculi were noted.

### *Gastrointestinal*

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

### *Pancreas*

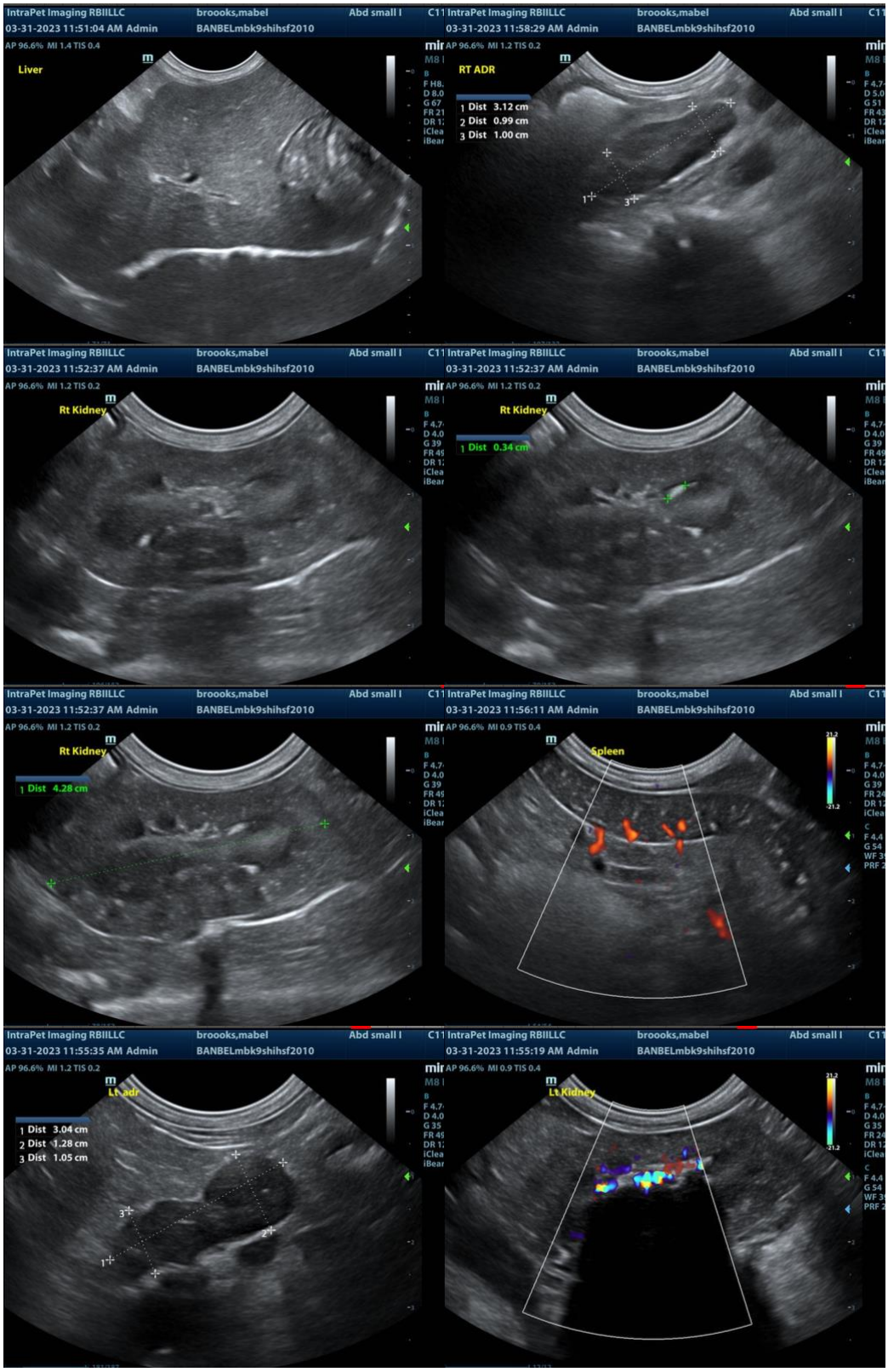
Diffuse hyperechoic changes were present in the area of the **pancreas**. The pancreatic remodeling was evident with multifocal to diffuse hyperechoic changes. These changes are consistent with fibrosis, amyloid, saponification of fat and may contain areas of low-grade chronic active inflammation especially if pain on imaging (+ Murphy sign) was present +/- focal subxyphoid palpation reveals pain response. No overt masses were noted.

## ULTRASONOGRAPHIC FINDINGS

- Bilateral adrenal hypertrophy
- Moderate degenerative renal changes with nonobstructive nephrolithiasis
- Multiple urinary bladder calculi- the patient is likely passing calculi periodically from the kidneys to the bladder
- Pancreatic fibrosis
- Enlarged/swollen liver with increased portal markings
- Gallbladder debris and calculi
- Mineralized spleen

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of neoplasia. Eventual cystotomy could be justified with sand analysis and culture. This is likely oxalate given the echotexture. Blood pressure measurements are indicated. Subxiphoid palpation is recommended to assess for pain or discomfort associated with the pancreas. The remainder of the changes could be justified owing to the cushingoid status. The urinary sand and UTI are likely playing a major role in the immediate clinical issue. Assessment of the vaginal vestibule, for concurrent disease contributing to the clinical urinary profile, is recommended.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Liver
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RT ADR
1 Dist 3.12 cm
2 Dist 0.99 cm
3 Dist 1.00 cm
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Abd small I
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Rt Kidney
IntraPet Imaging RBIILLC
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AP 96.6% MI 1.2 TIS 0.2
Rt Kidney
1 Dist 0.34 cm
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AP 96.6% MI 1.2 TIS 0.2
Rt Kidney
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Spleen
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Lt adr
1 Dist 3.04 cm
2 Dist 1.28 cm
3 Dist 1.05 cm
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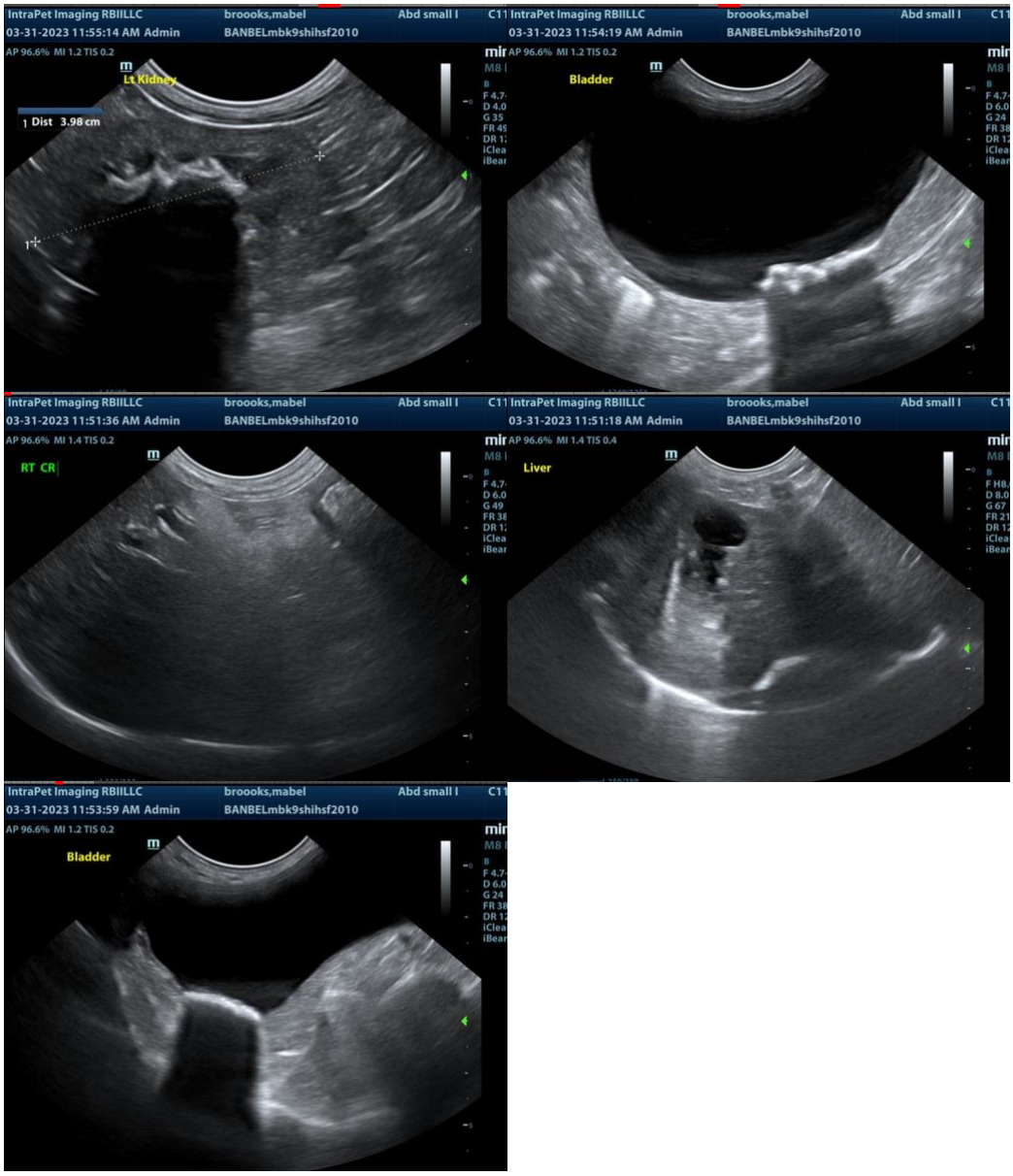
AP 96.6% MI 0.9 TIS 0.4
Lt Kidney




**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.

**Eric Lindquist**, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com
info@SonoPath.com