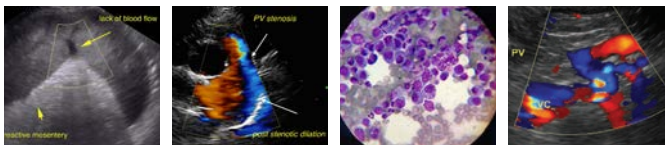
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Pirate Reed

SPECIES
Canine

BREED
Doberman Pinscher

SEX
Neutered Male

AGE
8 Years

WEIGHT
32 kg

INTERPRETED BY
Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY
Dr. Callihan/PCMV

HOSPITAL NAME
Pacific Crest Mobile

REFERRING VET
Dr. Harvey – Skagit AC

INVOICE
46132

DATE
3/22/23

PRESENTING CLINICAL SIGNS

Recent weight loss. History of diabetes mellitus well controlled with Vetsulin. Normally very good appetite but weight loss despite; intermittently since Christmas, owner notes pt is listless; past few days not seeming as hungry as he usually is. He is not PU/PD Has frequent/chronic intermittent soft stool Medications: 8 Units Vetsulin SC BID; gabapentin 300mg p.o. BID; Carprofen 100 mg p.o. q12h Had been eating w/d, 10 cups per day split into 3 meals. Present Diet is Kirkland kibble Due to concern for diabetic dysregulation, pt had normal breakfast and insulin this morning (~ 6 hrs prior to ultrasound)

Abnormal PE/Chem/CBC/UA Results: Labs: -glucose 300 mg/dL, anemia, mild elev neutrophils -panhypoproteinemia (TP 4.2; alb 2.0; glob 2.2) -CBC: mild anemia, non regenerative; mild neutrophilia -BUN, Cr, liver ez and lytes wnl -Fructosamine <100 umoL/L (ref 177-314) -Fecal O&P and Giardia: NEG -ACTH Stim in 1/2023 normal UA (3/3/2023): USG 1.042, prote 30+, glucose 100mg/dL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

Urinary bladder is adequately distended. It has a normal uniform wall thickness. Contents include primarily anechoic fluid with occasional echogenic non-shadowing debris, most consistent with exfoliated cells, mucous and/or small blood clots. Both sterile inflammation as well as urinary tract infection can also present with echogenic debris. No masses or cystoliths are observed. The trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is mildly enlarged (1.45 cm wide). Parenchyma is diffusely homogenous and relatively hyperechoic. Normal distinct margins and symmetrical bilobed shape are maintained. This finding is likely normal patient variant, especially if patient was neutered as an adult; however, if patient was neutered as a puppy, prostatitis or, less likely, infiltrative neoplasia cannot be ruled out. This finding should be interpreted in combination with clinical signs, urinalysis results, etc. and either further investigated or monitored, as indicated.

The right kidney is normal in size (8.23 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. A hyperechoic band parallel to the corticomedullary border is present.

The left kidney is normal in size (8.86 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. A hyperechoic band parallel to the corticomedullary border is present.

Adrenal Glands

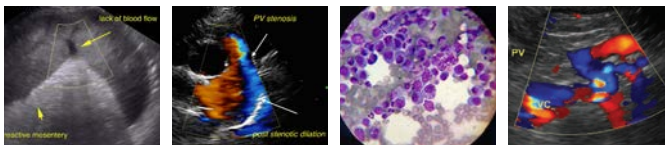
The right adrenal gland is normal in size (1.3 cm at the cranial pole and 0.98 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

The left adrenal gland is normal in size (0.57 cm at the cranial pole and 0.72 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). No focal nodules or masses are observed. Splenic vasculature appears normal.

SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™



SonoPath.com™
1-800-838-4268 info@sonopath.com

PATIENT
Pirate Reed

SPECIES
Canine

BREED
Doberman Pinscher

SEX
Neutered Male

AGE
8 Years

WEIGHT
32 kg

INTERPRETED BY
Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY
Dr. Callihan/PCMV

HOSPITAL NAME
Pacific Crest Mobile

REFERRING VET
Dr. Harvey – Skagit AC

INVOICE
46132

DATE
3/22/23

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.

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 stomach wall is mildly thick, measuring 0.5-0.6 cm with layering intact overall, but some hazy emerging loss of mural detail suspected. The lumen of the stomach is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is 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. Hyperechoic mucosal fogging or speckling is noted. Small intestinal motility appears adequate (1-3 contractions per min). The lumen is mildly distended with echogenic non-shadowing luminal contents and gas consistent with normal ingesta. There is no evidence of obstruction or foreign material noted.

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.

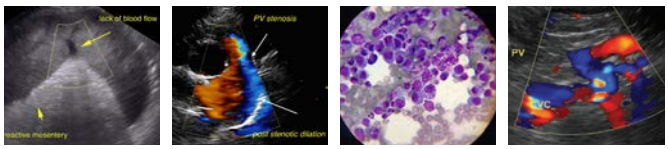
Free Abdomen

A very scant amount of anechoic free fluid is noted, likely secondary to this patient's reported hypoalbuminemia.

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

PRIMARY FINDINGS

- **Mucosal speckling –** Mucosal speckling is often present with inflammatory bowel disease (IBD). It is not specific for type or severity of disease. Mild speckling change can occur as a normal patient variant in the post-prandial state.
- **Thick, "hazy" gastric wall –** This is likely the same underlying process that is affecting the small bowel and may be an infiltrative infectious, parasitic, or benign inflammatory disease, or may even be (while considered less likely) infiltrative neoplasia. Histopathology is necessary to definitively determine the underlying cause.
- **Reactive mesenteric lymph nodes –** infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- **Hyperechoic hepatomegaly -** This appearance is non-specific and most consistent with a benign steroid (endocrine) or vacuolar hepatopathy or reactive or idiopathic hepatopathy.



SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Pirate Reed

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Neutered Male

AGE

8 Years

WEIGHT

32 kg

INTERPRETED BY

Beth Johnson, DVM DACVIM

IMAGING PERFORMED BY

Dr. Callihan/PCMV

HOSPITAL NAME

Pacific Crest Mobile

REFERRING VET

Dr. Harvey – Skagit AC

INVOICE

46132

DATE

3/22/23

Inflammatory and/or infiltrative disease (such as round cell neoplasia) are also possible, but considered less likely.

- **Subtle bilateral medullary rim sign –** This finding is of unknown clinical significance and can be a normal variant, often idiopathic. Medullary rim sign can be present with renal disease including FIP, lymphoma, hypercalcemic nephropathy, Leptospirosis, tubular disease, other and should be interpreted in combination with other more specific indications of kidney disease such as isosthenuria, proteinuria, azotemia, etc. This is a common incidental finding in patients with diabetes mellitus.

ULTRASONOGRAPHIC FINDINGS

- Prostatomegaly as described above
- Urinary bladder debris

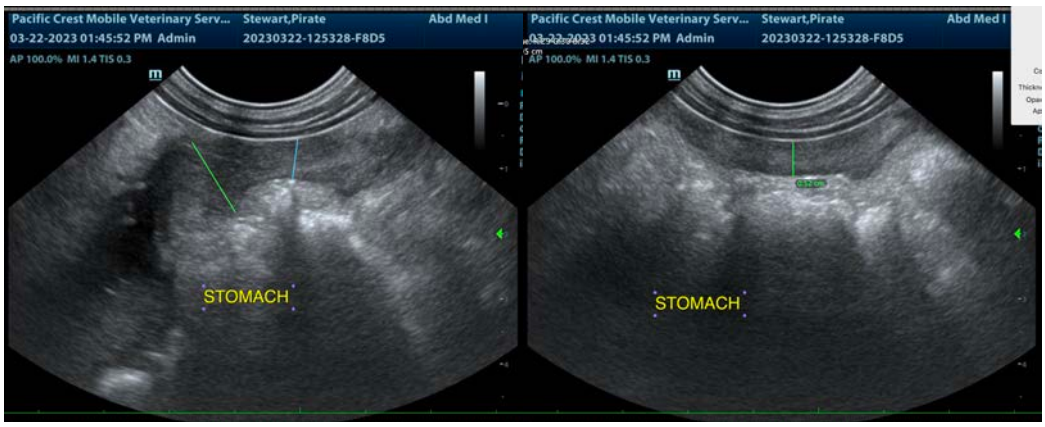
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

A gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory is recommended for further evaluation of GI and pancreatic function.

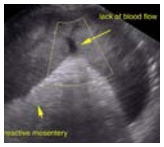
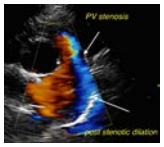
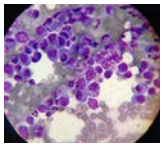
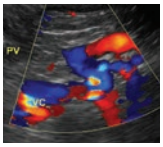
Ideally, biopsies of the GI tract (including the stomach) are recommended to definitively diagnose and therefore manage the infiltrative bowel process.

If biopsies cannot be obtained safely due to low albumin or patient stability, etc., empirical therapies could include diet change to an ultra-low fat diet, empirical deworming with a 5 day course of Panacur, cobalamin supplementation (unless cobalamin level is evaluated and supplementation is not warranted) a probiotic and prednisolone (if not contraindicated based on patient contraindications, co-morbidities, etc.). Calcium monitoring, and supplementation if necessary, is also recommended.

Given the reported proteinuria, a urine protein to creatinine ratio to quantify the proteinuria is also recommended if not recently evaluated to help determine the contribution of protein losing nephropathy, if any, to the hypoalbuminemia.



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Pirate Reed

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Neutered Male

AGE

8 Years

WEIGHT

32 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Callihan/PCMV

HOSPITAL NAME

Pacific Crest Mobile

REFERRING VET

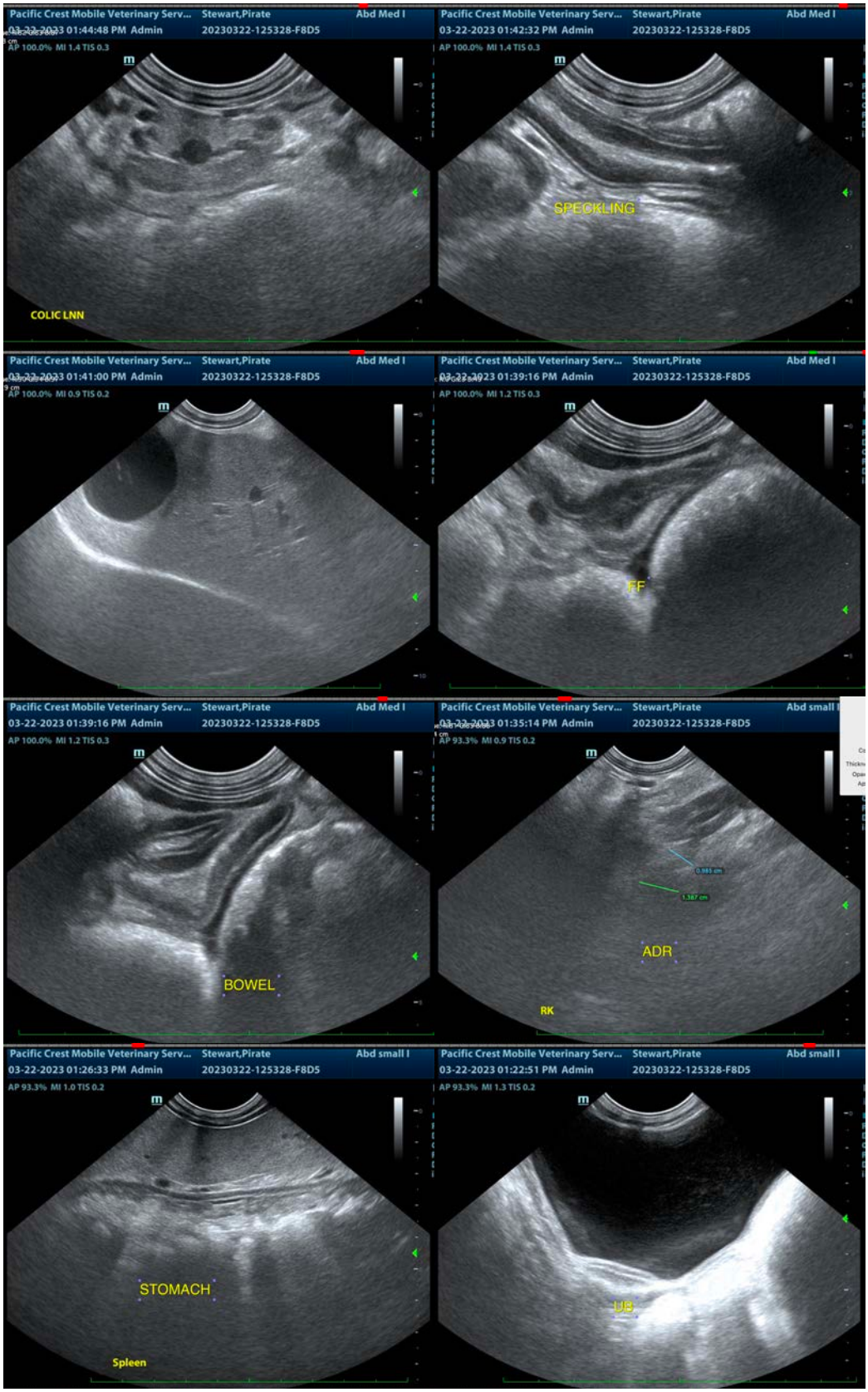
Dr. Harvey – Skagit AC

INVOICE

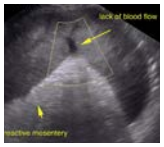
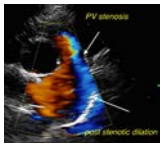
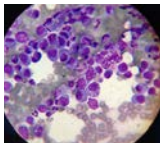
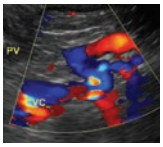
46132

DATE

3/22/23



SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Pirate Reed

SPECIES

Canine

BREED

Doberman Pinscher

SEX

Neutered Male

AGE

8 Years

WEIGHT

32 kg

INTERPRETED BY

Beth Johnson, DVM
DACVIM

IMAGING PERFORMED BY

Dr. Callihan/PCMV

HOSPITAL NAME

Pacific Crest Mobile

REFERRING VET

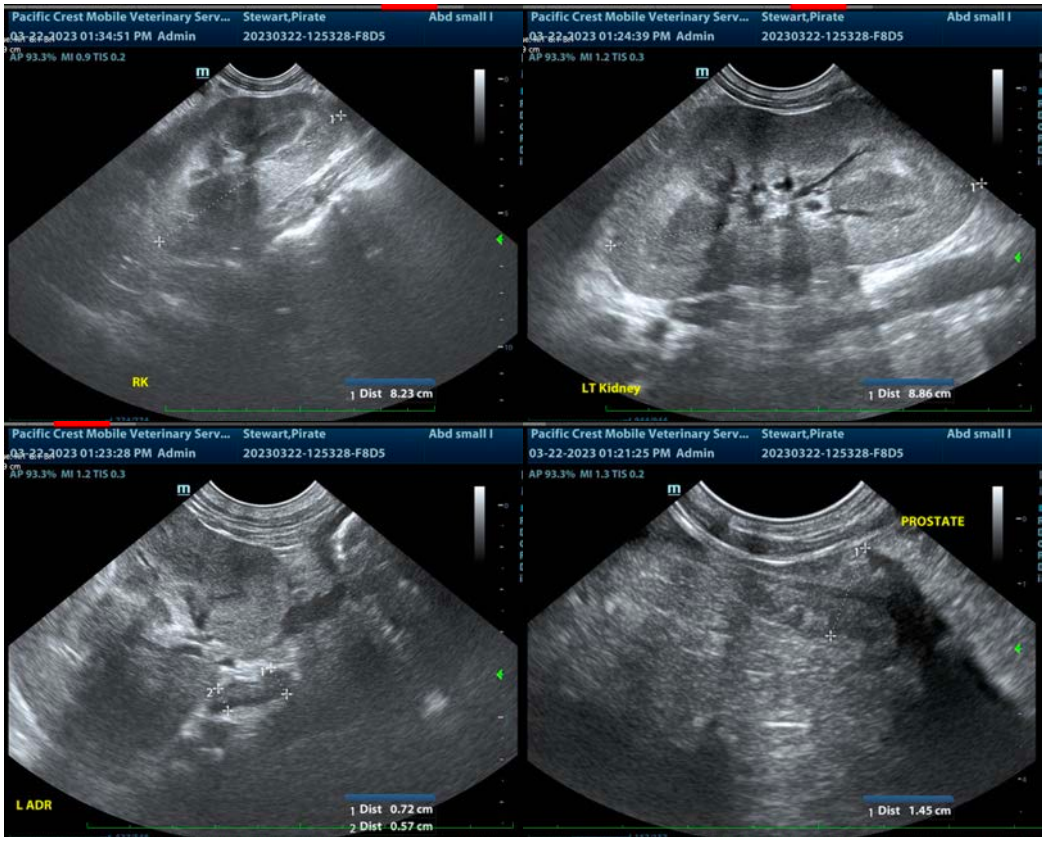
Dr. Harvey – Skagit AC

INVOICE

46132

DATE

3/22/23



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