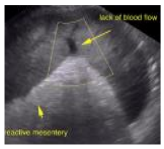
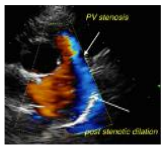
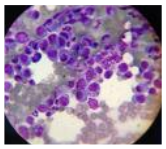
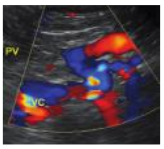
SonoPath
Clinical Sonography & Telecytology
EDUCATIONAL TELECONSULTATION SERVICES™

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

PATIENT

Hachi Norman

SPECIES

Canine

BREED

Miniature Schnauzer

SEX

Neutered Male

AGE

12 Years

WEIGHT

11.5 kg

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Hayley Heindel, CVT

HOSPITAL NAME

Mason Dixon AEH

REFERRING VET

Dr. Laura de Cordon

INVOICE

21702

DATE

3/18/23

PRESENTING CLINICAL SIGNS

History: O has 2 vets, one Regular vet and holistic vet yesterday was v+ and not eating and was lethargic. O took to the holistic vet and diagnosis with pancreatitis did eat a little bit of baby food. No v+ today that O is aware of. holistic vet rec raw goats milk and turkey/salmon

Abnormal PE/Chem/CBC/UA Results: Hydration-5-7% dehydrated GI - Abnormal, painful on abdominal palpation pendulous abdomen MS-Abnormal, possible cervical/thoracic spinal pain INTEG-Abnormal, multiple epidermal masses on ventrum Bloodwork PCV 46 TS 8

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder** itself was unremarkable yet a minor amount of sand and anechoic urine was present. The pelvic urethra was imaged 3.0 cm beyond the cystourethral junction.

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. Nonobstructive pinpoint mineralizations were noted. The right kidney measured 5.2 cm. The left kidney measured 5.4 cm.

Adrenal Glands

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 2.19 cm x 0.8 cm. The left adrenal gland measured 2.0 cm x 0.6 cm.

Spleen

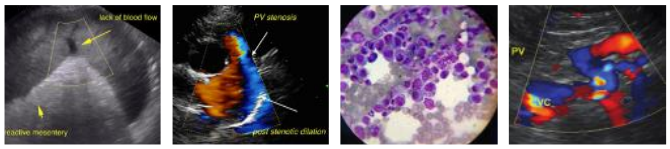
The **spleen** was normal size and relatively normal contour with multifocal hyperechoic areas of mineralization. This is a benign change; however, can be related to Cushing's disease or other endocrinopathies.

Liver

The **liver** was uniformly swollen with minor, excessive gallbladder debris and over distension with dependent and suspended bile without evidence of overt mucocele formation. However, excessive sludge was present. The liver presented coarse architecture with mildly increased portal markings and subtle, mixed echogenic changes. This is consistent with vacuolar hepatopathy and some level of remodeling and history of inflammatory component. There was no overt suspicion of neoplasia.

Gastrointestinal

The **gastrointestinal** presentation revealed mild uniform prominence of the gastric mucosa as well as areas of "ropey" small intestinal wall with slight disruption of the normal 1:3 muscularis/mucosal ratio. The intestinal submucosa was slightly irregular, thickened and hyperechoic suggestive of low grade, chronic disease. No concerning lymphadenopathy was visible. No evidence of obstruction was present. Chronic inflammatory bowel disease is likely with a low possibility of an early neoplastic event



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such as lymphoma. Full thickness tissue biopsies via open laparotomy, ideally guided by intraoperative ultrasound in order to obtain the most representative mural sample, would be necessary to rule out this possibility.

Pancreas

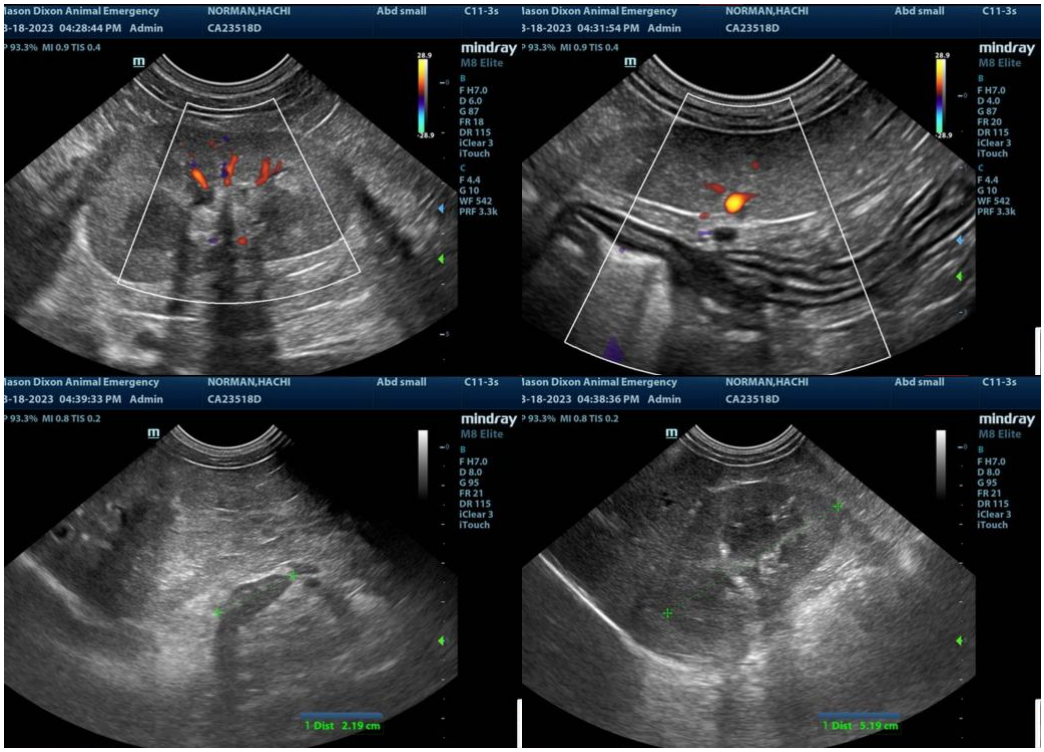
The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some mild parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

- Urinary bladder sand
- Splenic mineralization
- Diffuse intestinal thickening
- Minor pancreatic remodeling
- Benign hepatopathy with remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Given the splenic mineralization and hepatic presentation, if the patient is PU/PD, then emerging PDH/Cushings may be an issue, even though structurally the adrenals still measure within normal limits. The splenic mineralization and hepatic presentation would suggest potential emerging Cushings disease. The cause of lethargy and anorexia is not overtly evident, however, GI protectants protocol and treatment for low grade pancreatitis could be justified and reassessment of the clinical signs. Other causes of anorexia, such as orthopedic, CNS or thoracic disease should be considered.



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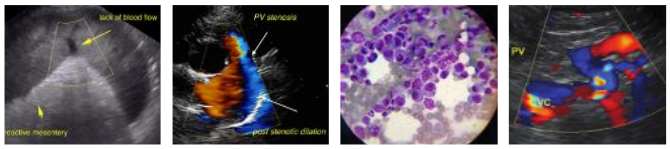

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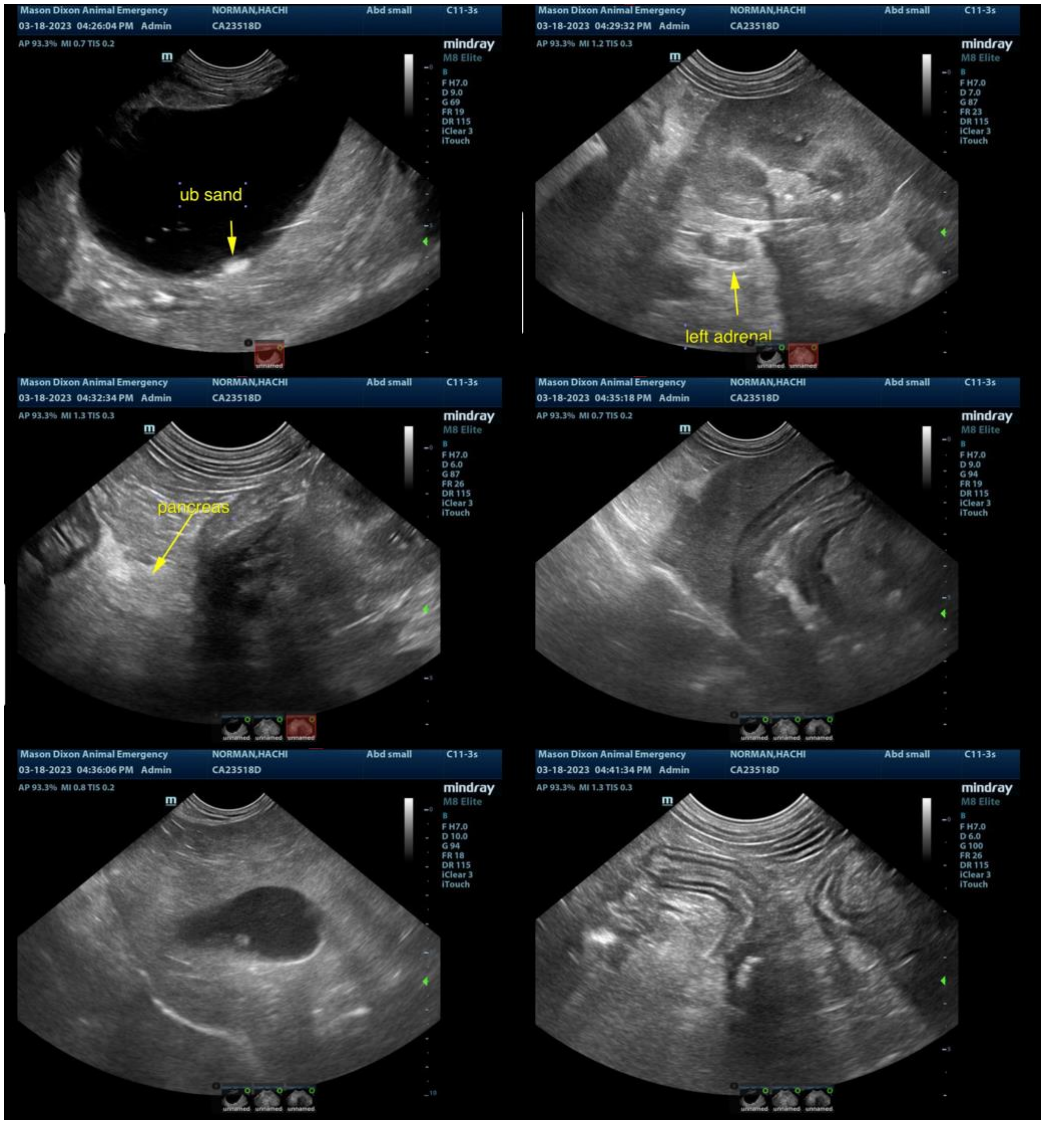

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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