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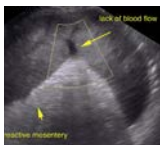
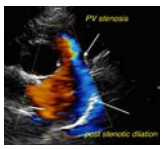
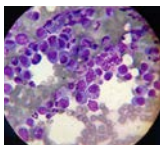
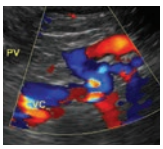

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT
Chaco Williams

SPECIES
Canine

BREED
Chihahua X

SEX
Neutered Male

AGE
12 Years

WEIGHT
11.8 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Dr. Carter

HOSPITAL NAME
Willamette Vet Hospital

REFERRING VET
Dr. Guy/Grove

INVOICE
40647

DATE
8/19/22

PRESENTING CLINICAL SIGNS

Diabetes mellitus. Chronically elevated liver values. Having episodes of nystagmus that owner thinks is related to low blood sugar, but BG has not gone below 167 when owner is doing readings. Was relying on Freestyle Libre and may not have been reading correctly?? Weight loss. History of pancreatitis and ear infections

Abnormal PE/Chem/CBC/UA Results: BG yesterday 6am 385, 11 am 188, 6 pm 565, 9 pm 357 ALP 507, ALT 308, cholesterol 523, glucose 462 USG 1.045, 3+ glucose, 2+ ketones LDDS in Feb ; pre cortisol 3.6, 4 hr post 0.5, 8 hr post 0.3; normal

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

The **kidneys** were normal in size and contour; however, a minor hyperechoic ring was noted at the corticomedullary junction. This is consistent with diabetic nephropathy. This is likely from glucosuria. However, assessment for proteinuria is also warranted. This is an idiopathic finding, but an expected finding in diabetic patients. The right kidney measured 4.85 cm. The left kidney measured 4.46 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 left adrenal gland measured 1.75 cm x 0.48 cm at the cranial pole and 0.57 cm at the caudal pole. The right adrenal gland measured 2.22 cm x 0.54 cm at the caudal pole and 0.36 cm at the cranial pole.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

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

Minor retention of ingesta noted in the **stomach**. The small intestine and colon were unremarkable.

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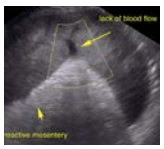
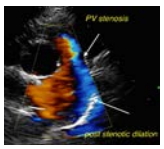
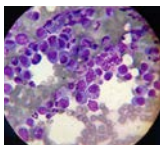
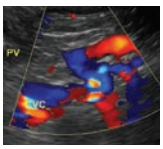

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Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some 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

- Diabetic nephropathy
- Vacuolar hepatopathy pattern

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

No evidence of specific disease influencing the current diabetic state. FNA of the liver could be considered for further definition, yet no evidence of neoplasia noted.

Potential Causes of Diabetic Dysregulation

This is a suggestive checkoff list when faced with an unregulated diabetic patient:

UTI

Dietary indiscretion/intolerance

Pancreatitis

Hyperthyroidism/hypothyroidism

Exogenous steroids (including topical eye meds)

Cushing's

Acromegaly

Owner compliance

Insulin quality issues

Antibodies to insulin

Underlying Neoplasia

Diffuse liver disease

For an additional charge, internal medicine consult can be utilized through Sonopath.com. You can select the internal medicine drop down at http://spa.sonopath.com/.

One of the world's top internists & SonoPath associate Dr. Remo Lobetti BVSc, MMedVet, PhD, DECVIM can evaluate your case through SonoPath. https://sonopath.com/resources/sonopath-services/internal-medicine-teleconsultation-services

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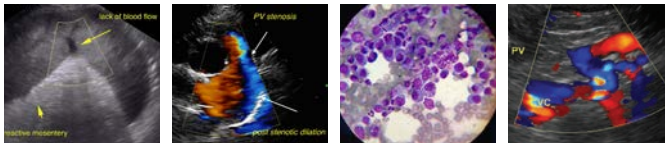

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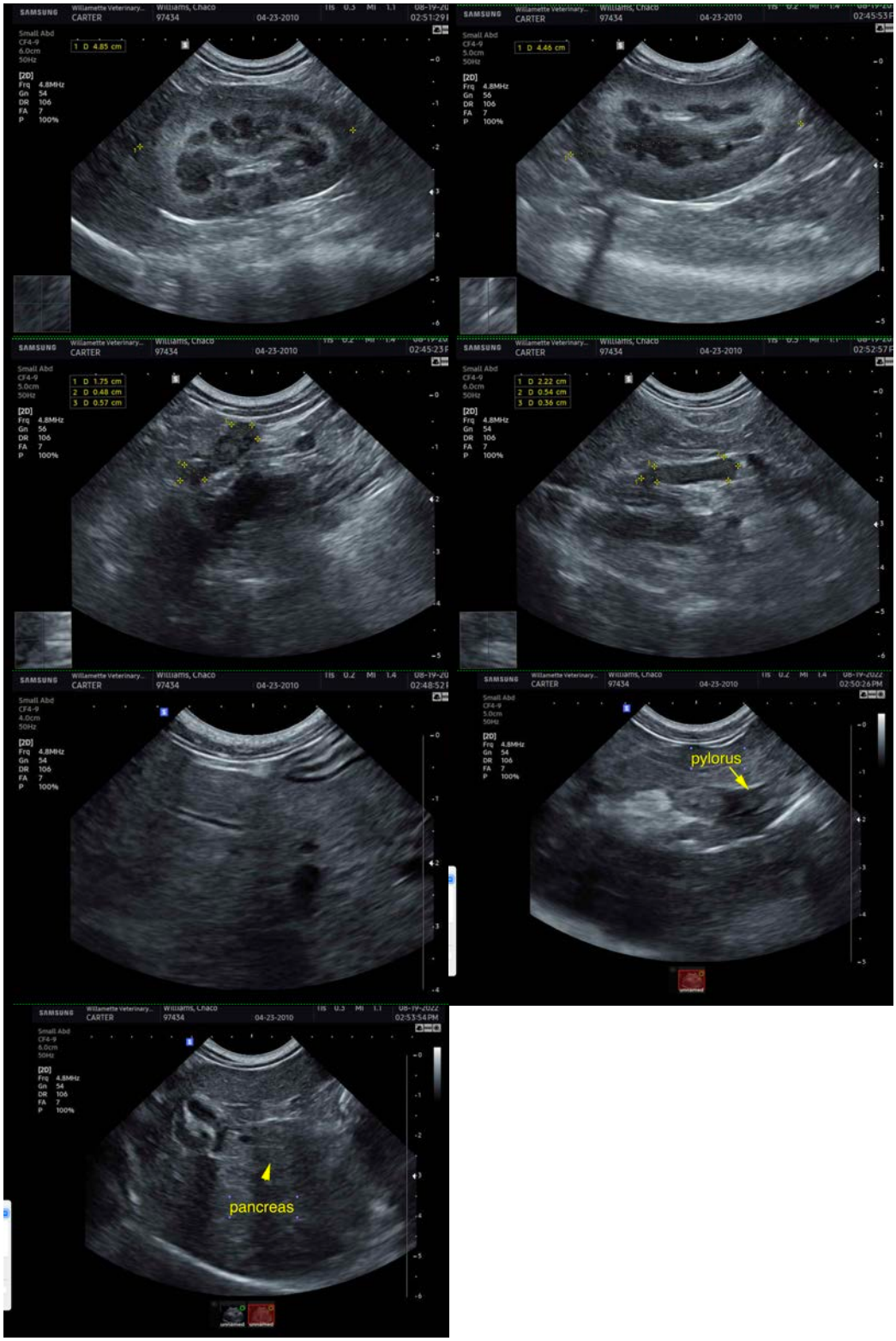

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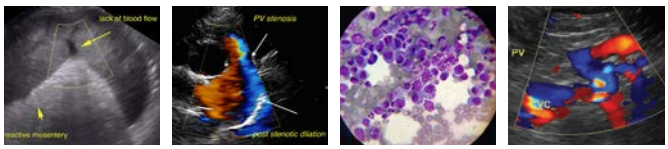

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

info@SonoPath.com