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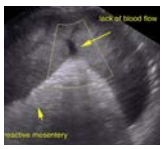
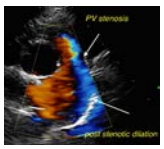
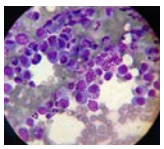
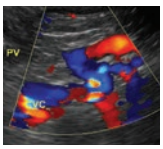

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1-800-838-4268 info@sonopath.com

PATIENT

Molli Holdsworth

SPECIES

Canine

BREED

Toy Poodle

SEX

Spayed Female

AGE

13.5 Years

WEIGHT

4.63 Pounds

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Judy Schroeder

HOSPITAL NAME

Animal Health Associates

REFERRING VET

Dr. Judy Schroeder

INVOICE

43471

DATE

12/15/22

PRESENTING CLINICAL SIGNS

Molli is a diabetic with a history of mild increase in ALP and dental disease. Last night she was very lethargic, vomited, and had difficulty waking. She did not want to eat in the am which is very unlike her. On her blood work today her liver enzymes were extremely elevated, which has not been noted on previous labs.

Abnormal PE/Chem/CBC/UA Results: 5% dehydrated, depressed. Low body condition, significant weight loss CBC shows monocytosis 1320/ul ALT 1776 U/l ALP 1952 U/l GGT 144 U/l bilirubin 0.4 mg/dl Cholesterol 516 mg/dl Glucose 484 mg/dl In house cPL snap Abnormal

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 pelvic urethra was imaged 2.0 cm beyond the cystourethral junction.

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 3.35 cm. The left kidney measured 3.05 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 0.47 cm at the cranial pole and 0.37 cm at the caudal pole. The right adrenal gland measured 0.56 cm at the caudal pole and 0.61 cm at the cranial pole.

Spleen

The **spleen** revealed an expansive, hypoechoic, 1.42 cm x 0.98 cm nodule at the cranial pole.

Liver

The **liver** was mildly swollen with slight hypoechoic right cranial liver nodule, non-disruptive, measuring 1.26 cm. Other heterogeneous parenchymal changes noted throughout the liver. The gallbladder was overdistended and double layered with echogenic immobile debris, consistent with gallbladder mucocele and chronic cholangitis. The common bile duct was unremarkable, no evidence of post-hepatic obstruction, measuring 2.0 mm in width.

Gastrointestinal

Examination of the **gastrointestinal tract** revealed an unremarkable stomach and small intestine regarding structure. There were minor areas of luminal fluid noted. There was no evidence of obstructive pattern. Curvilinear patterns were retained throughout the gastrointestinal tract. Areas of hyperperistalsis were noted. This is consistent with response to irritation. The colon was unremarkable.

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.

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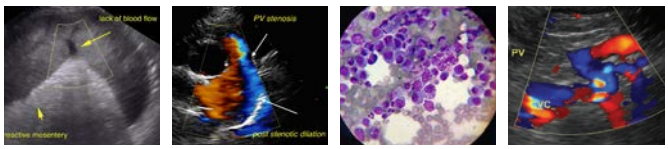

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Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxyphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

ULTRASONOGRAPHIC FINDINGS

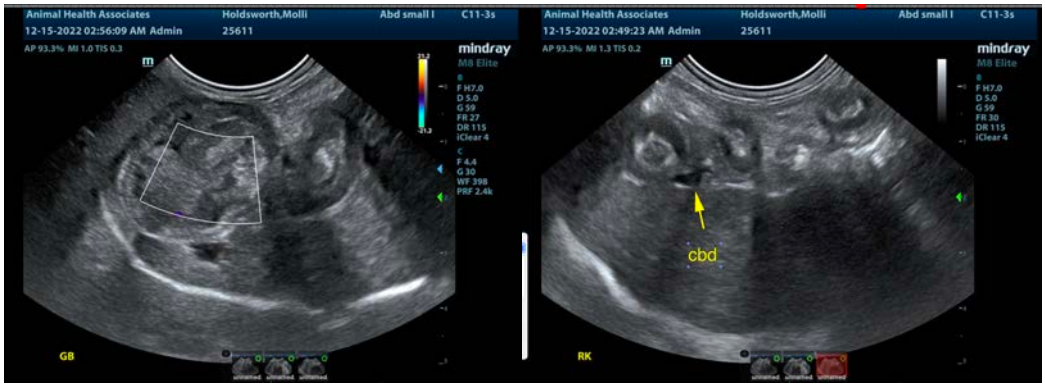
- Atypical gallbladder mucocele with chronic cholangitis pattern
- Undefined splenic nodule – round cell neoplasia, abscessation, hemangiosarcoma, hyperplasia all possible.
- Mild gastroenteritis pattern
- Diabetic nephropathy
- Pancreatic remodeling

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The gallbladder is likely causing clinical issues in this patient. Stabilization of the diabetic state with GI protectants, fluid support, broad-spectrum antibiotics, followed by cholecystectomy +/- splenectomy recommended. FNA of the spleen and liver could be considered for further definition, yet I feel the gallbladder is likely a primary clinical player in this patient. Given the chronic changes with the gallbladder, medical management will not likely be very effective. Therefore, cholecystectomy is encouraged in this patient with appropriate biopsies +/- splenectomy.

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



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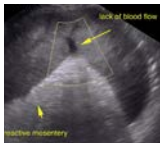
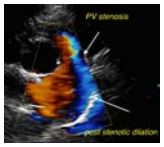
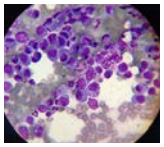
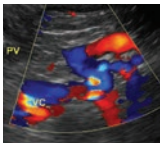

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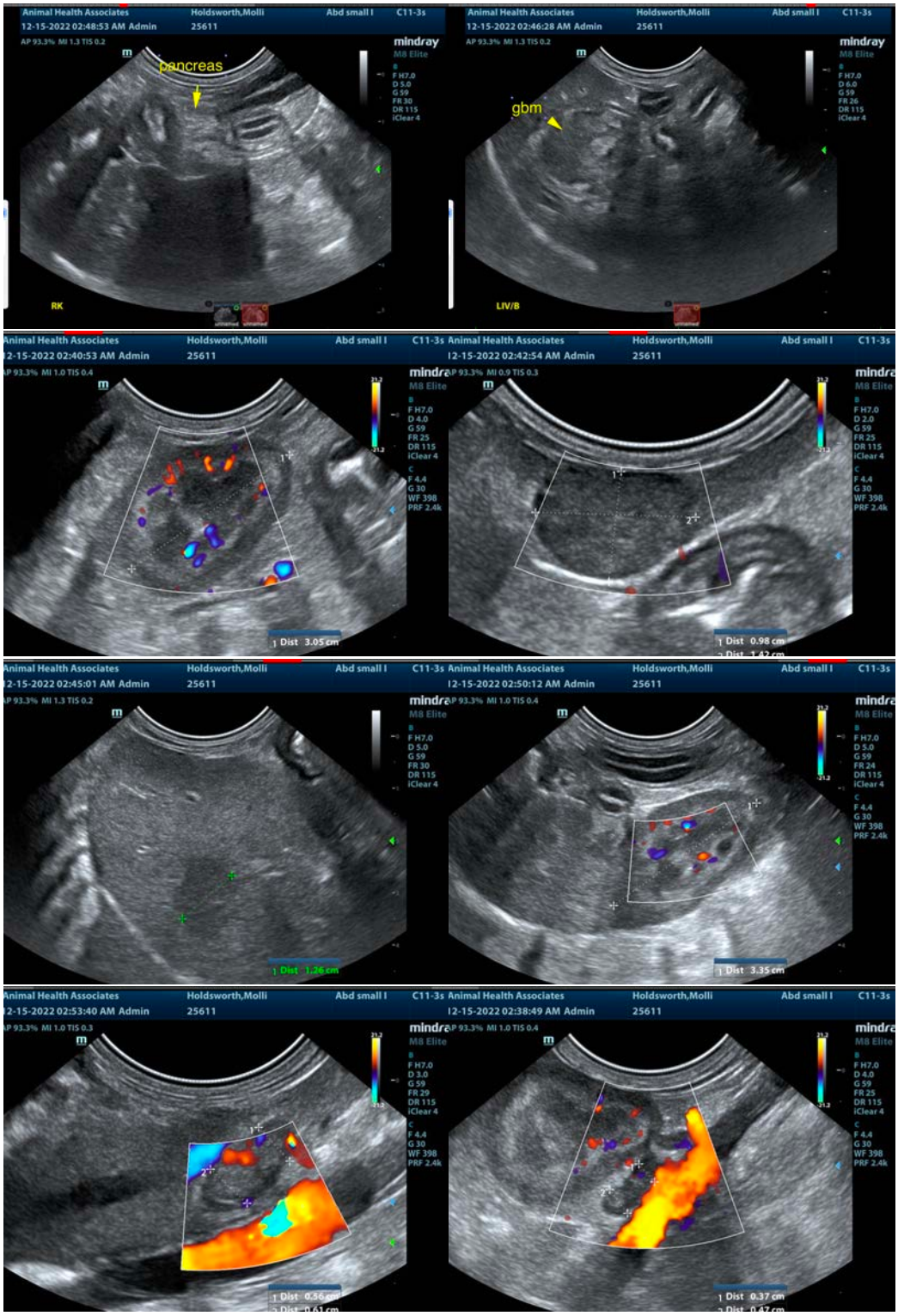

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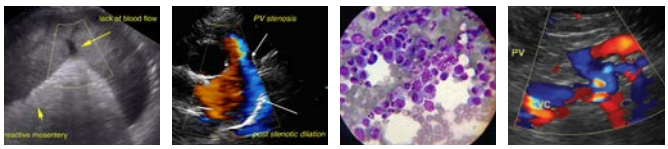

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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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