



PATIENT

Zeus O'Neil

SPECIES

Canine

BREED

Golden Doodle

SEX

Male Neutered

AGE

15

WEIGHT

21 Kg

INTERPRETED BY

Andrea Nicastro DVM
Diplomate ACVIM
(Sm Animal Internal Med)

**IMAGING
PERFORMED BY**

Andrea Nicastro DVM
Diplomate ACVIM
(Sm Animal Internal Med)

HOSPITAL NAME

VCA Palmetto AH

REFERRING VET

Vivian Ghiorzi

INVOICE

22816

DATE

4-3-26

PRESENTING CLINICAL SIGNS

Patient presented with a recent history of severe lethargy. Prior history of a lung mass that has been static. An abdominal mass was also noted this past summer (which also appears static). Globulins 4.1. Hematocrit 31%. Thoracic radiographs performed a few days ago reveal no changes from previous radiographs.

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder wall is normal in thickness. The mucosal surface is smooth. The bladder is distended. A scant amount of suspended echogenic debris is observed within the lumen. No cystic calculi are observed. The region of the trigone and the proximal urethra, visible to a depth of 2 cm, are normal.

The prostate is normal in size (1.09 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal in size (5.70 cm in length) with a normal shape, smooth peripheral margins, and normal internal architecture. There is mild loss of corticomedullary distinction. Several hyperechoic shadowing diverticular foci are observed. Mild- to moderate pyelectasia is present (0.30 cm in the longitudinal plane). There is no evidence of infarcts or hydronephrosis. Renal vasculature is normal.

The right kidney is normal in size (5.68 cm in length) with a slightly irregular shape. There is a normal 1:3 cortex to medulla ratio with mild- to moderate loss of corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, or hydronephrosis. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is normal in size (0.81 cm at cranial pole) (0.66 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal in size (0.81 cm at cranial pole) (0.57 cm at caudal pole) with a normal shape and homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

Spleen

The spleen is normal in size (1.75 cm in width at the level of the hilus) with a normal capsular contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

Liver

The liver is enlarged, with irregular peripheral contours. The parenchyma is isoechoic relative to the spleen and mildly heterogenous in appearance. A 10.2 x 4.8 cm isoechoic mass is arising from the caudal aspect left- to mid-liver. In addition, a 1.8 cm ill-defined, hyperechoic nodule is observed approximately mid-liver. Hepatic vasculature and intrahepatic biliary tracts are of normal volume with no evidence of congestion. The portal vein to caudal vena cava ratio is approximately 1: 1.

The gallbladder lumen is moderately distended. The wall is thin and smooth. A small- to moderate amount of gravity-dependent, echogenic- to mineralized debris/sand is observed within the lumen. The cystic and common bile ducts are normal/not seen.

Gastrointestinal

The gastric lumen is mildly- to moderately-distended with ingesta. The gastric wall and pylorus are normal



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in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is segmentally dilated with chyme. The small intestinal wall is normal in thickness with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The ileocecolic junction and colonic wall are normal. There is no evidence of an obstructive pattern.

Pancreas

The base and limbs of the pancreas are visible with normal curvilinear peripheral contours. The parenchyma is largely isoechoic relative to surrounding omental fat and slightly heterogenous in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

Lymph Nodes

One- to two cystic periportal lymph nodes are visualized (one measuring 3.4 x 2.0 cm).

Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion.

Other

A brief echocardiogram reveals no evidence of pericardial effusion or obvious right atrial/auricular mass.

ULTRASONOGRAPHIC FINDINGS

Primary Findings

- Large caudal hepatic mass left- to mid-liver. This lesion may represent an adenoma, adenocarcinoma, round cell tumor, other. The hyperechoic hepatic nodule likely represents a benign lesion (i.e., regenerative nodule, myelolipoma) with a lower possibility of more insidious pathology. The diffuse hepatic parenchymal changes are nonspecific, and could be secondary to regenerative nodular hyperplasia, age-related parenchymal remodeling, vacuolar hepatopathy, or less likely, infiltrative neoplasia, inflammatory disease, or other hepatopathy.

Secondary Findings

- Gallbladder debris/sand, non-mucocele
- The pancreatic changes are most consistent with age-related parenchymal remodeling, potentially secondary to a prior inflammatory episode, early fibrosis or chronic pancreatitis.
- Bilateral nonspecific age-related renal changes with mild left pyelectasia
- The significance of the prominent cystic periportal lymph node is unclear. It is likely a benign incidental finding, particularly in light of the normal liver values. However, emerging neoplasia cannot be excluded.
- If the patient was fasted for this study, the presence of ingesta within the gastric lumen could suggest delayed gastric emptying.

*An obvious cause for the patient's clinical signs is not definitively identified in this study. Considerations include orthopedic or neurologic disease, occult neoplasia, underlying metabolic issue, other.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS



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- Orthopedic and neurologic evaluation is recommended.

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- Other considerations include the following:

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1. T4/free T4 by equilibrium dialysis
2. Urinalysis with culture and sensitivity to assess for occult infection
3. A comprehensive tick panel, including PCR and serology (submission to North Carolina State University's Vector Borne Disease Diagnostic Lab is recommended. <https://cvm.ncsu.edu/research/labs/clinical-sciences/vector-borne-disease>)
4. Baseline blood pressure measurement
5. +/- consultation with a board-certified neurologist and/or orthopedic surgeon +/- arthrocentesis

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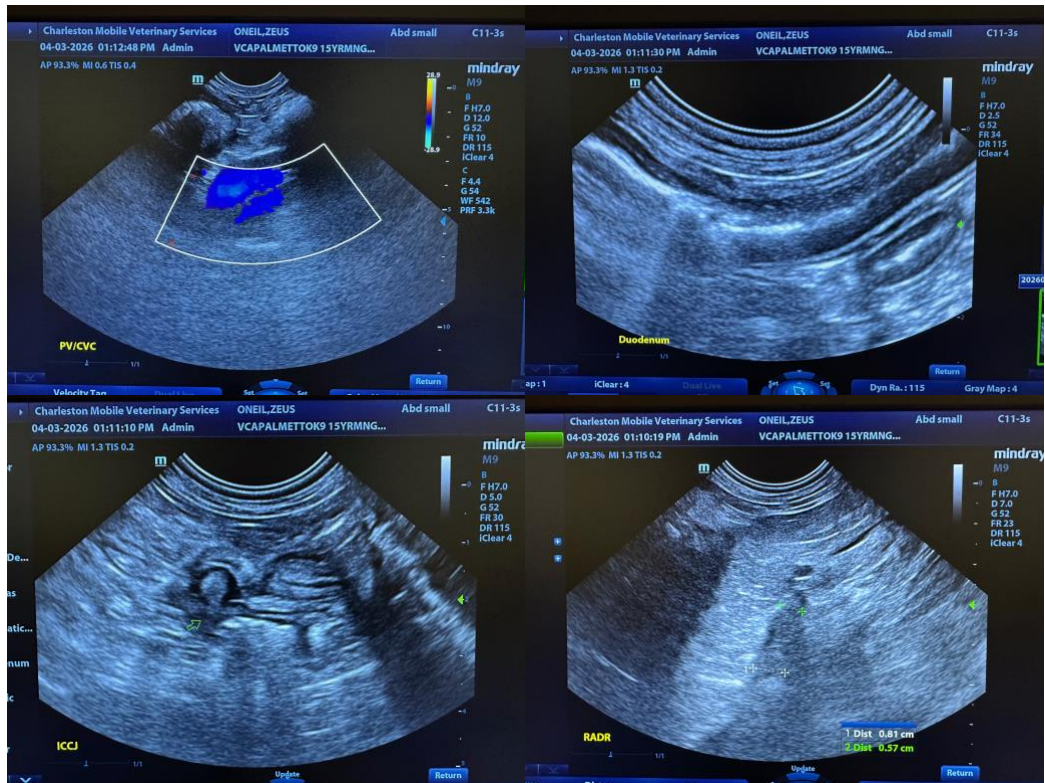
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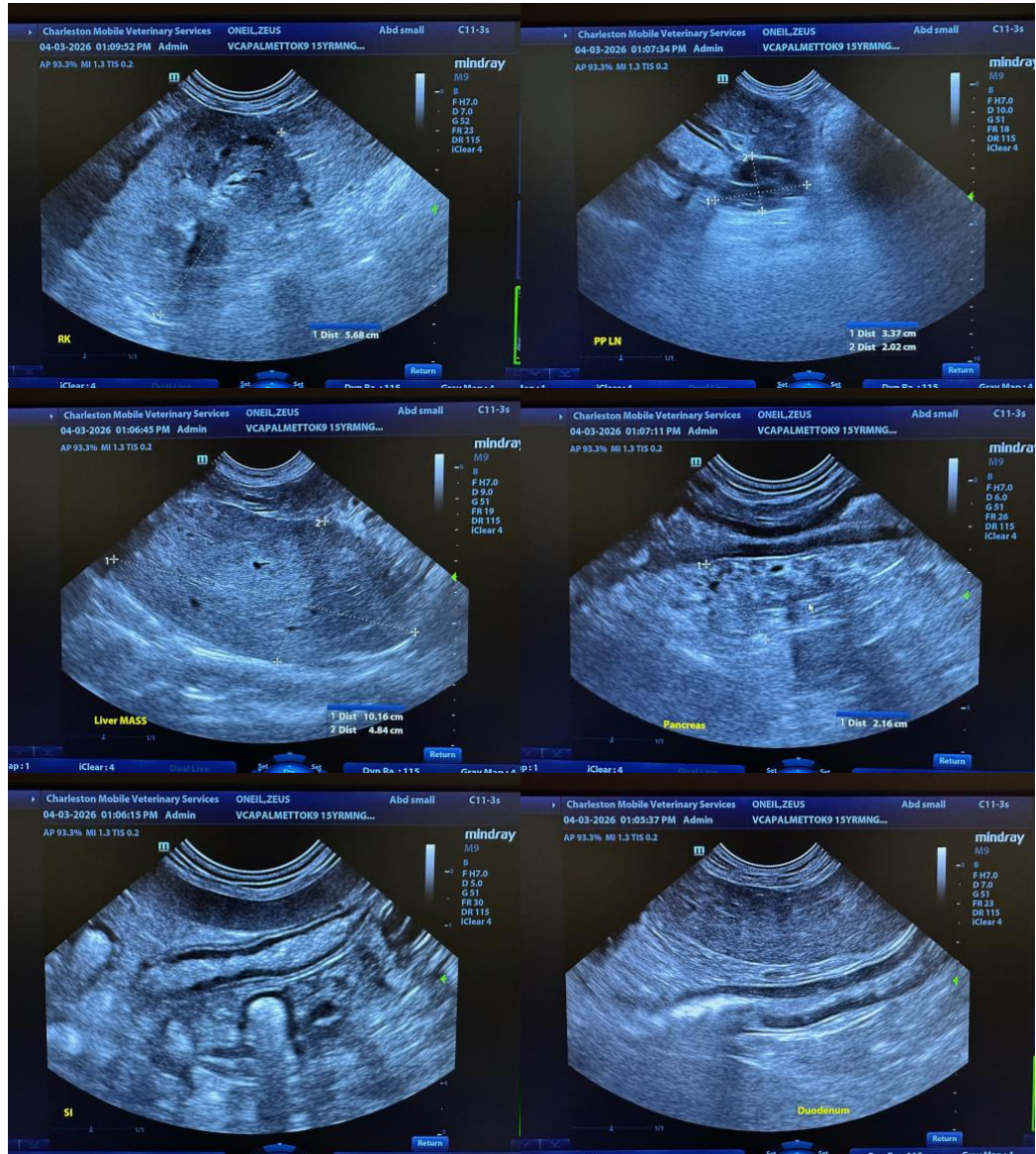
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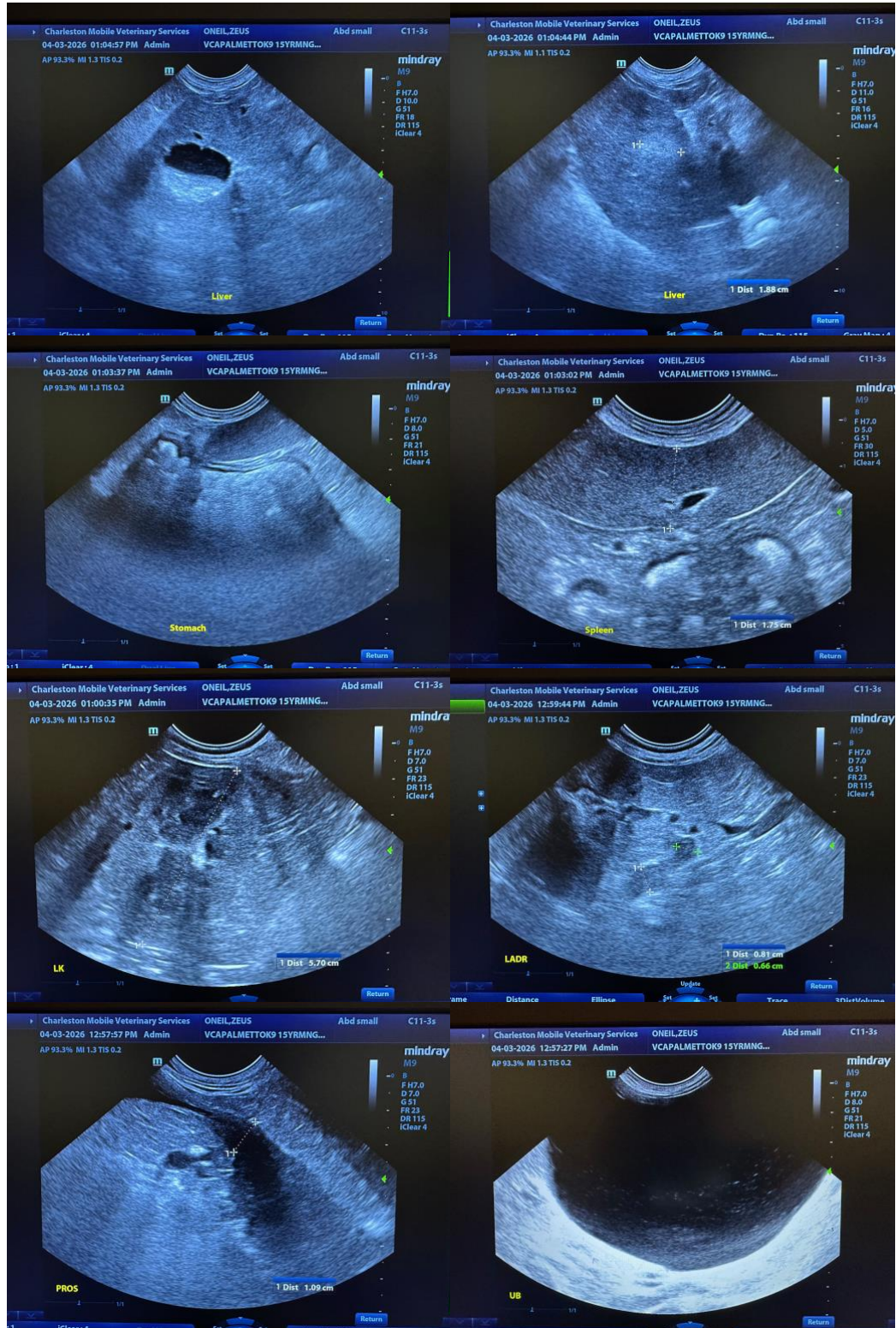
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Andrea Nicastro, MPH, DVM, Diplomate DACVIM (Small Animal Internal Medicine)
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