



PATIENT

Two Hahn

SPECIES

Canine

BREED

Australian Shepherd

SEX

Male, neutered

AGE

13 Yrs.

WEIGHT

17 kg

INTERPRETED BY

Andrea Nicastro, DVM,
Diplomate ACVIM
(Small Animal Internal
Medicine)

**IMAGING
PERFORMED BY**

Dr. Pati Mayfield

HOSPITAL NAME

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PRESENTING CLINICAL SIGNS

History: Two presented to BAESC referral ultrasound department for evaluation of elevated liver enzymes. Patient was evaluated 12/20/21 at primary care veterinarian for wellness exam and to evaluate dermal lesions. Routine blood work at the time revealed moderate/marked elevations of LE's as listed below. Patient began Denamarin. Blood work was re-evaluated on 1/17/2022, also listed below. Patient is scheduled for dental cleansing once AUS has been completed. MEDS: Denamarin Advanced SM/MED dog: 1 tab PO q 24 hours No noted PU/PD/PP No exercise intolerance noted. No profound panting appreciated.

Abnormal PE/Chem/CBC/UA Results: Physical exam: BARH. Lenticular sclerosis OU and palpebral mass (dorsal to medial canthus) OS. Overweight. Moderate dental disease. Pickwickian appearance with soft, doughy abdomen. no palpable masses. Proliferative dermal mass (~ 2 cm³) between the eyes consistent with adenoma/papilloma with diffuse presumptive adipose accumulation along the trunc/flank fold regions. 12/20/21: CBC/CHEM/T4/HW Ag to IDEXX (UA in house via sedivue-- no results noted) All WNL except for the following: ALT: 130 U/L (18-121) ALP: 843 U/L (5-160) CHOL: 357 mg/dL (131-345) LIPA: 582 U/L (0-250) LYMPH: 959/uL (1060-4950) 1/17/22: Liver Chemistries: ALT: 107 U/L (18-121) WNL ALP: 732 U/L (5-160) CHOL: 338 mg/dL (131-345) WNL

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder and visible portion of the pelvic urethra are normal for the degree of luminal distension. The urine is anechoic with no evidence of debris. Cystic calculi and discrete masses are not observed. The region of the trigone and the visible portion of the proximal urethra are normal.

The prostate is normal in size (1.04 cm in width) and shape. Parenchyma is homogenous. The prostatic urethra appears normal without evidence of dilation or obstruction.

The left kidney is normal size (5.20 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney is normal size (5.89 cm in length); normal shape and architecture with smooth peripheral margins. There is a normal 1:3 cortex to medulla ratio with normal corticomedullary distinction. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

Adrenal Glands

The left adrenal gland is enlarged (1.04 cm at cranial pole) (1.11 cm at caudal pole) (2.39 cm in length) with a slightly irregular shape. A 0.45 x 0.43 cm hyperechoic to mineralized nodule is observed at the cranial pole. In the remainder of the gland, the parenchyma is slightly heterogeneous with some loss of glandular detail. The phrenicoabdominal vein and surrounding vasculature are normal.

The right adrenal gland is normal size (1.29 cm at cranial pole) (0.51 cm at caudal pole) (2.19 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are



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unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

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Spleen

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The spleen is subjectively normal in size (1.67 cm in width at the level of the hilus) with slightly irregular peripheral contours. A 2.54 x 2.48 cm ill-defined isoechoic swelling is observed in the mid to caudal aspect. The parenchyma is otherwise slightly mottled in appearance. Splenic vasculature is normal with no evidence of thrombosis.

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Liver

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A 3.09 x 3.08 cm irregular isoechoic to heterogeneous mass/swelling is observed in the left lateral lobe. The remaining parenchyma is isoechoic relative to the spleen and mottled in appearance.

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Vascular and biliary tracts are of normal volume with no evidence of congestion. The portal vein: caudal vena cava ratio is approximately 1:1. The gall bladder lumen is moderately distended. The wall is normal in thickness. A few small polypoid like lesions are arising from the luminal surface. A small to moderate amount of aggregated echogenic mostly gravity-dependent sludge is observed within the lumen. The cystic and common bile ducts are normal/not seen.

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Gastrointestinal

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The stomach and intestine are free of stasis and exhibit normal peristaltic activity. The gastric lumen is not distended. The gastric wall and pylorus are normal in thickness with a normal layering pattern. The pyloric outflow tract is patent. The small intestinal lumen is not dilated. The small intestinal wall thickness is normal with a normal layering pattern and appropriate mural detail. Discreet masses are not identified. The colonic wall is normal. No obstructive disease is noted.

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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 mottled in appearance. The pancreatic duct is visible but not overtly dilated. There is no evidence of peripancreatic inflammation or effusion.

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Free Abdomen

The peritoneal cavity is normal. There is no evidence of inflammation or effusion. The abdominal lymph nodes are normal/not visible.

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ULTRASONOGRAPHIC FINDINGS

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Primary Findings:

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- Left adrenomegaly (right adrenal gland is normal). Differentials nodular hyperplasia, emerging neoplasia, other.
- Left hepatic swelling/mass. Differentials include adenoma, adenocarcinoma, myelolipoma, other. The diffuse hepatic parenchymal changes are non-specific and may be secondary to a benign age-related process (i.e., regenerative nodular hyperplasia, vacuolar hepatopathy).

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Alternatively, another hepatopathy may be present. Inflammatory disease is considered unlikely in light of the normal ALT.

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- Splenic swelling. Differentials include benign process (i.e., lymphoid hyperplasia or extramedullary hematopoiesis). Alternatively, emerging neoplasia is possible.

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Secondary Findings:

- Age-related pancreatic remodeling +/- fibrosis. Low-grade pancreatitis may be present, particularly if the patient exhibits discomfort on cranial abdominal palpation.

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- To further assess the left adrenal gland, further testing for a functional tumor (i.e., a low dose dexamethasone suppression test, urine/blood catecholamine levels) can be considered. A baseline blood pressure measurement is also recommended. A urinalysis should be submitted to assess for isosthenuria and proteinuria.

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- Given the hepatic and splenic swellings, fine needle aspirates of both lesions are recommended (if clotting status is appropriate). 25-gauge needles should be used. If aspirates are not pursued at this time, consider a repeat ultrasound in 1-2 months to assess for progression.

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- Three-view thoracic radiographs are recommended to assess cardiopulmonary status.

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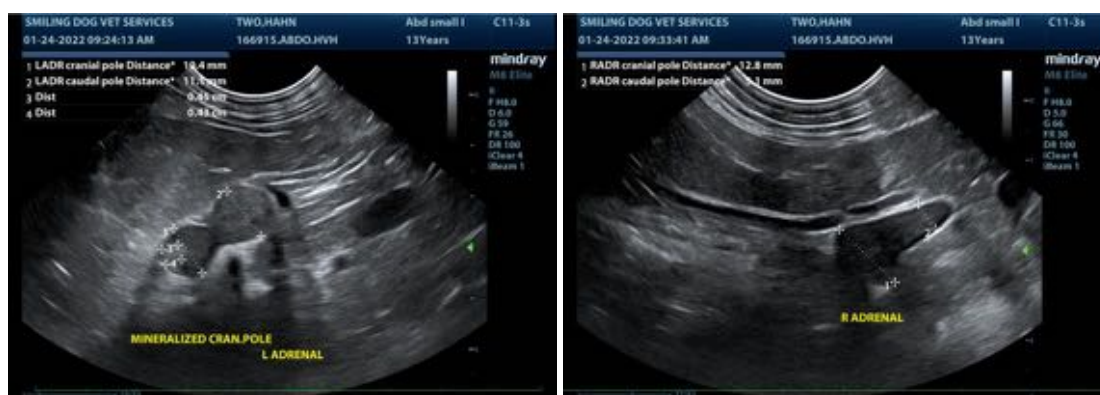
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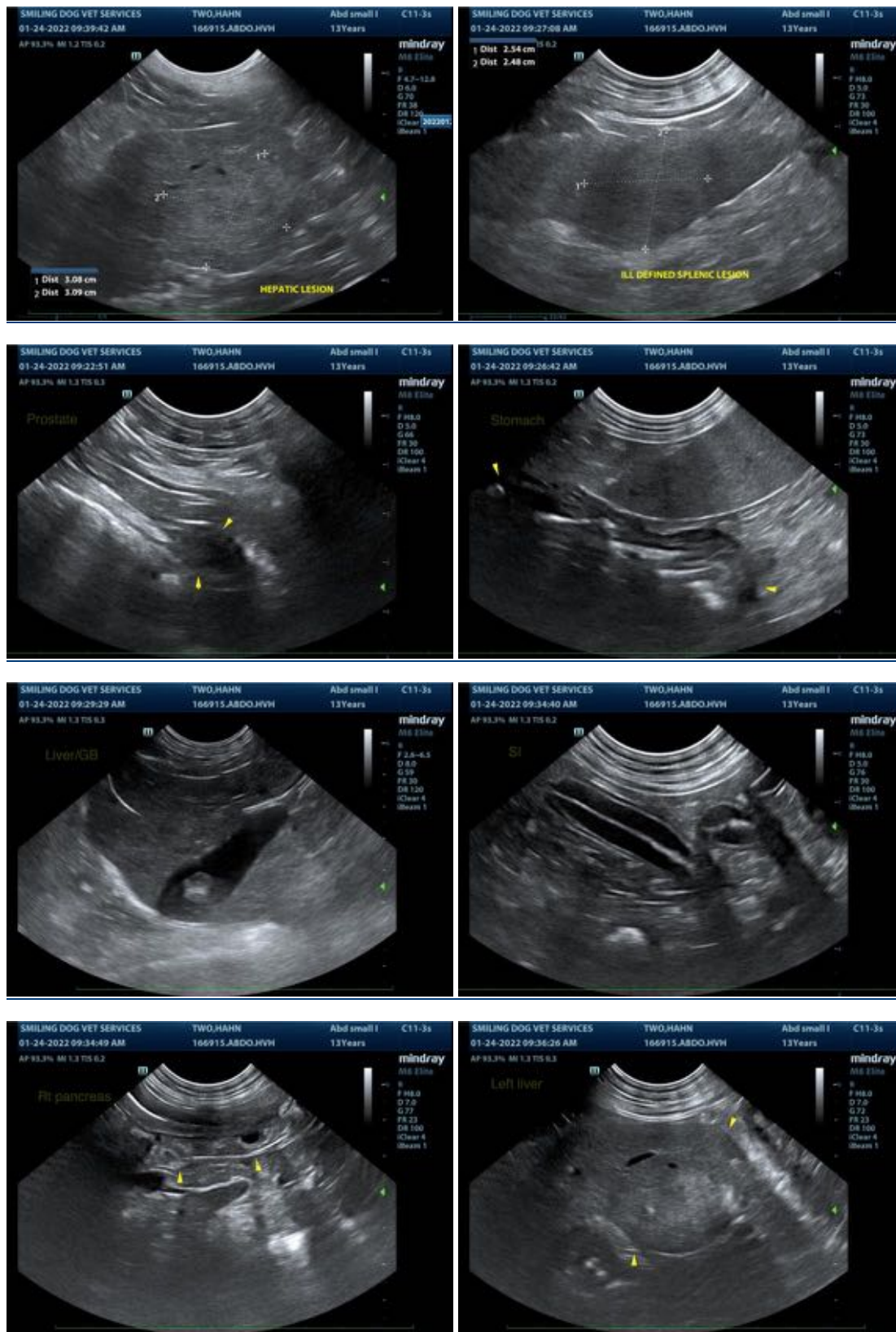
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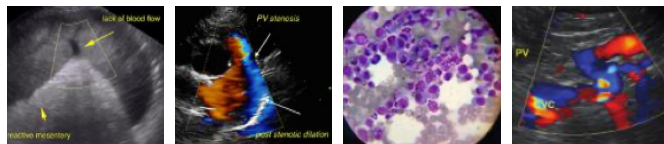
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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