

**PATIENT PRESENTING CLINICAL SIGNS**

Chelsea Olsen History: Elevated liver enzymes, pre-anesthesia, L/D, Denamarin. Additional History: Sept 2021 ALP 490

**SPECIES ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

Canine **Urinary System**

**BREED** The urinary bladder, trigone, and pelvic urethra are normal in thickness and the mucosal surface is smooth. The bladder lumen is moderately distended with anechoic urine. No masses, inflammatory changes or calculi are observed. Ureteral papillae and visualized portion of the proximal urethra, visible to a depth of 2 cm, are normal.

X

**SEX**

Spayed Female

The left kidney presented normal size (5.55 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. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis.

**AGE**

2016

The right kidney presented normal size (4.93 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. Pinpoint hyperechoic to mineralized foci are observed within the cortex. There is no evidence of pyelectasia, nephroliths, infarcts or hydronephrosis.

**WEIGHT**

35 Pounds

**Adrenal Glands**

**INTERPRETED BY**

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

The left adrenal gland is normal size (0.39 cm at cranial pole) (0.47 cm at caudal pole) (2.15 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**IMAGING**

**PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

The right adrenal gland is normal size (0.66 cm at cranial pole) (0.46 cm at caudal pole) (2.29 cm in length); normal shape; homogenous parenchyma. The glandular echogenicity and detail are unremarkable. Capsule, cortex, and medullary definition are normal. The phrenicoabdominal vein and surrounding vasculature are normal.

**HOSPITAL NAME**

White Haven VH

**Spleen**

The spleen is subjectively normal in size (1.60 cm in width at the level of the hilus) with a slightly undulating peripheral contour. There is appropriate echogenicity and echotexture. No focal lesions are observed. Splenic vasculature is normal.

**REFERRING VET**

Dr. Dengler

**Liver**

The liver is subjectively normal in size with normal contours and structure. There is appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion. No pathological hepatic lymphadenopathy observed.

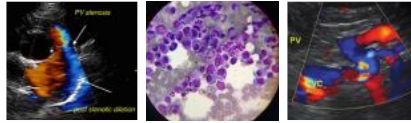
**INVOICE**

13974

**DATE**

2/17/22

The gall bladder lumen is moderately distended. The wall is thin and smooth. A small amount of



**PATIENT**

aggregated echogenic mostly gravity dependent debris/sludge is observed within the lumen. The cystic and common bile ducts are normal.

Chelsea Olsen

**SPECIES**

Canine

**BREED**

X

**SEX**

Spayed Female

**AGE**

2016

**WEIGHT**

35 Pounds

**INTERPRETED BY**

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

**IMAGING PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

White Haven VH

**REFERRING VET**

Dr. Dengler

**INVOICE**

13974

**DATE**

2/17/22

**Gastrointestinal**

The gastric lumen is not distended. The gastric wall in the region of the fundus is normal in thickness with a normal layering pattern. In the region of the pylorus, the wall is prominent to thickened (up to 1.05 cm) with apparent retention of the 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. The lumen of the descending colon contains shadowing fecal material. There is no obvious evidence of an obstructive pattern.

**Pancreas**

The region of the pancreas is isoechoic relative to surrounding omental fat. No obvious parenchymal abnormalities are observed. There is no evidence of regional inflammation or effusion.

**Free Abdomen**

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

**ULTRASONOGRAPHIC FINDINGS**

**Primary Findings**

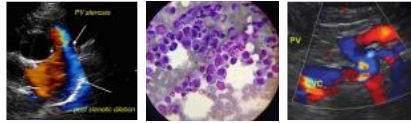
- An obvious cause for the patients elevated ALP is not identified in the study. However, a benign hepatopathy, such as regenerative nodular hyperplasia and/or vacuolar hepatopathy is considered likely, particularly given the normal ALT (on September 2021 lab work).

**Secondary Findings**

- The prominent pyloric wall may be a normal variant for this patient or could be secondary to inflammation, hypertrophy or less likely, infiltrative neoplasia. Correlation with clinical findings is recommended.
- Minor renal cortical dystrophic mineralization- incidental

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

- Serial monitoring (i.e., every 3-4 months) of the patient's liver values is recommended. Ideally, blood work should be performed at this time to see if values have worsened since September. If values continue to increase over time, a repeat abdominal ultrasound +/- hepatic tissue sampling may be warranted.
- Regarding the prominent pylorus, if clinical signs (i.e., vomiting, loss of appetite) are present, further work up (i.e., biopsies) may be warranted. Otherwise, consider repeat imaging if the patient develops clinical signs.



**PATIENT**

Chelsea Olsen

**SPECIES**

Canine

**BREED**

X

**SEX**

Spayed Female

**AGE**

2016

**WEIGHT**

35 Pounds

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

White Haven VH

**REFERRING VET**

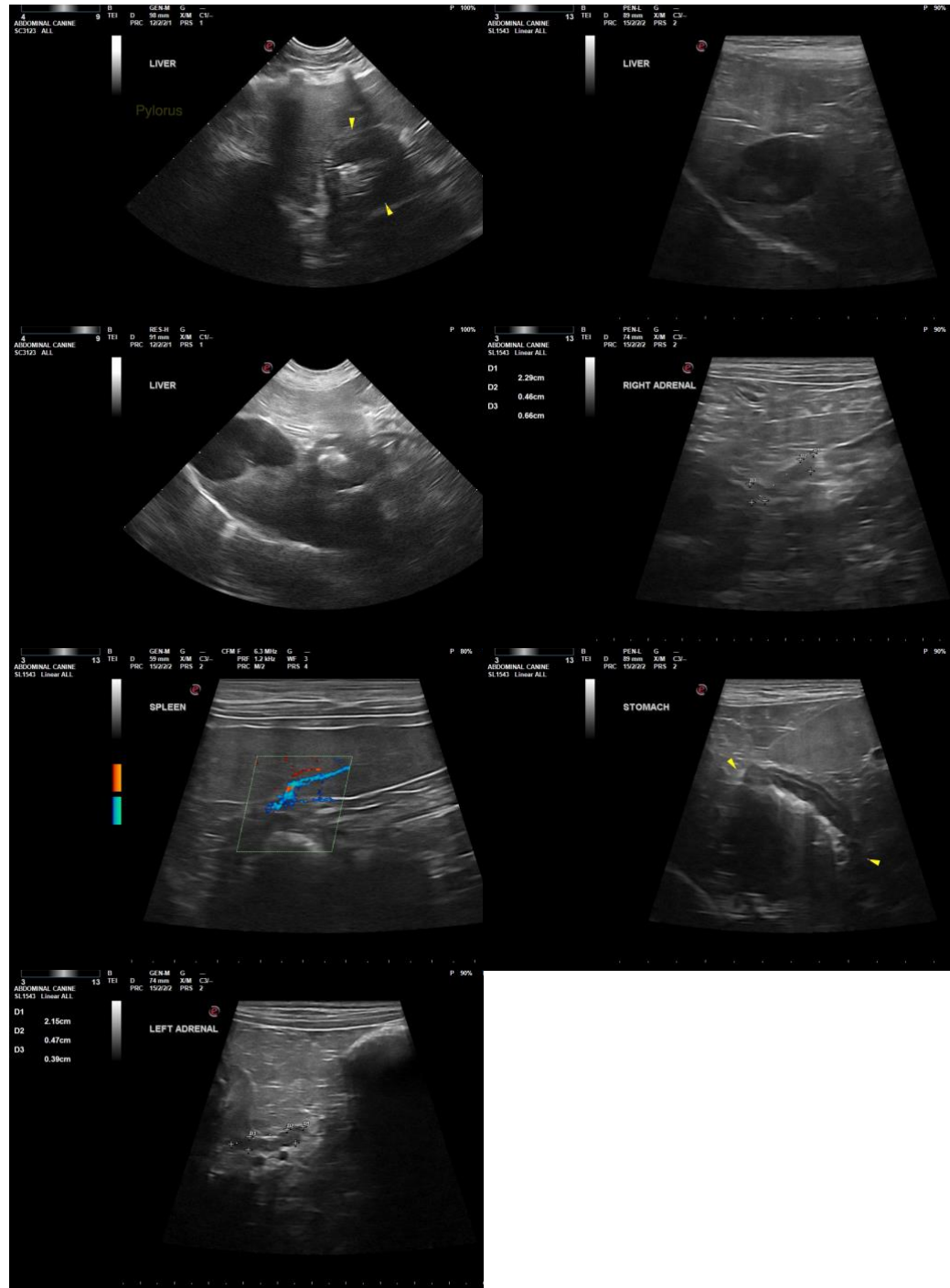
Dr. Dengler

**INVOICE**

13974

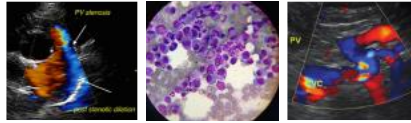
**DATE**

2/17/22



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.



**PATIENT**

Chelsea Olsen  
Andrea Nicastro, DVM, Diplomate ACVIM (*Small Animal Internal Medicine*)  
andrea\_nicastro2@hotmail.com

**SPECIES**

Canine

**BREED**

X

**SEX**

Spayed Female

**AGE**

2016

**WEIGHT**

35 Pounds

**INTERPRETED BY**

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

**IMAGING  
PERFORMED BY**

Rebekah Jakum, CVT  
ARDMS/RVT

**HOSPITAL NAME**

White Haven VH

**REFERRING VET**

Dr. Dengler

**INVOICE**

13974

**DATE**

2/17/22