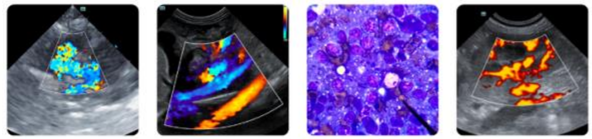
SonoPath
FOSTERING THE ART OF VETERINARY MEDICINE™
SonoPath.com info@sonopath.com 1.800.838.4268



Clinical Sonography & Telecytology
Educational Teleconsultation Services™

PATIENT
Estrella Marie Diaz

SPECIES
Canine

BREED
Lhasa Apso

SEX
Spayed Female

AGE
12 Years

WEIGHT
10.8 Pounds

INTERPRETED BY
Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY
Dr. Gabriel Ferrer

HOSPITAL NAME

REFERRING VET
Dra. Marilyn Davila

INVOICE
36333

DATE
3/23/26

PRESENTING CLINICAL SIGNS

- Px presented as a referral for an abdominal ultrasound due to increased hepatic enzyme values
- Owner reports that they originally took Px to rDVM around 3 months ago due to inappetence, abdominal discomfort, and vomiting
- BW originally showed an elevation in ALKP and so Px started Denamarin
- 3 months later on the follow up appointment the liver values had increased
- Owner reports no more abdominal discomfort, no vomiting, no diarrhea, and Px is eating but is still a bit picky
- Abnormal PE/Chem/CBC/UA Results: Bloodwork attached below for your reference

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

The urinary bladder, trigone, and visible pelvic urethra were of normal thickness. The ureters were not visible which is normal. There was normal wall layering with no masses, uroliths or abnormal thickening visualized. Urine was anechoic. No evidence of inflammatory or neoplastic changes were noted.

The right kidney has a smooth capsule and with mild hazing of corticomedullary definition. No evidence of pelvic dilation was present. The right kidney measured 4.39 cm in length. Spherical anechoic fluid accumulations consistent with right cortical cysts. Hyperechoic, shadowing foci present in right renal parenchyma and calyces consistent with nephrocalcinosis.

The left kidney has a smooth capsule and with mild hazing of corticomedullary definition. No evidence of pelvic dilation was present. The left kidney measured 3.90 cm in length. Hyperechoic, shadowing foci present in left renal parenchyma and calyces consistent with nephrocalcinosis.

Adrenal Glands

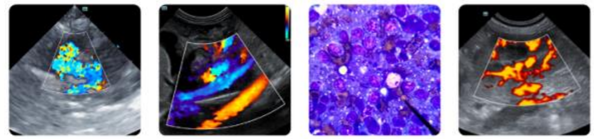
Both adrenal glands were visualized and recognized as having normal shape, size, position and echogenicity for this breed and age. The visible phrenic vasculature was unremarkable. The left adrenal gland measured 1.64 cm in length and 0.43 cm at the caudal pole and 0.40 cm at the cranial pole. The right adrenal gland measured 1.77 cm in length and 0.39 cm at the caudal pole and 0.48 cm at the cranial pole.

Spleen

The spleen had a generally smooth homogeneous parenchyma and a smooth capsule with perivascular hyperechoic nodules visualized most consistent with benign myelolipomas. There was normal splenic vasculature with no signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarct changes were noted.

Liver

The liver is subjectively normal in size with normal contours and structure. There is age-appropriate echogenicity and echotexture. No overt structural evidence of inflammatory, infiltrative or



PATIENT

Estrella Marie Diaz

SPECIES

Canine

BREED

Lhasa Apso

SEX

Spayed Female

AGE

12 Years

WEIGHT

10.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Gabriel Ferrer

HOSPITAL NAME

REFERRING VET

Dra. Marilyn Davila

INVOICE

36333

DATE

3/23/26

regenerative pathology is evident. Vascular and biliary tracts are of normal volume with no evidence of congestion.

The gall bladder is moderately distended with anechoic fluid, with hyperechoic non-shadowing debris present. There is no surrounding free fluid or signs of active inflammation.

Gastrointestinal

The stomach contains minimal luminal contents. It measures at a normal thickness of with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate. No masses or focal lesions were observed.

The visualized areas of duodenum, jejunum and ileum have a relatively uniform diameter with minimal fluid distension. Wall thickness is normal. Bowel loops follow a curvilinear path with distinct wall layering maintaining the typical 1:3 muscularis: mucosa layer ratio. There were no focal lesions consistent with obstruction or a mass effect observed.

The ileocecal junction was visualized and exhibited normal intact wall layering and is subjectively of normal thickness. Sections of colon are visualized with gas shadowing distally. The colon is largely empty in the descending colon. Colonic wall is normal in appearance and thickness for an empty colon.

Pancreas

The visible pancreas was observed to be largely isoechoic to surrounding omental fat.

Lymph Nodes

No clinically significant lymphadenopathy or abnormalities noted.

Free Abdomen

No masses or free fluid were noted.

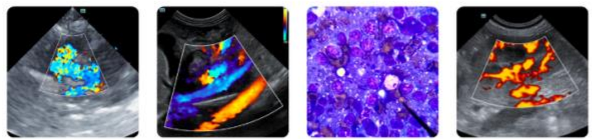
ULTRASONOGRAPHIC FINDINGS

- Mild gallbladder debris
- Aging renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Gall bladder debris may be an incidental finding given lack of surrounding inflammation. In the face of elevated ALKP ursodiol could be given as a choleretic and empiric treatments (SAM-E, milk thistle, Vitamin E) could be tried. If liver supportive medications do not improve liver enzymes, a course of empiric antibiotics (Clavamox, enrofloxacin) could be considered to cover for infectious cholangiohepatitis, though the lack of surrounding inflammation makes this less likely. Imaging should be rechecked on a routine basis for monitoring (q3-6mo) or if further significant increase in liver enzymes and/or new clinical signs are noted. If otherwise clinically indicated, investigation for endocrinopathy such as hyperadrenocorticism or hypothyroidism could be considered as an underlying cause predisposing to gall bladder debris accumulation.

Induction phenomena are the most common cause for an elevation in ALP. These are systemic illnesses that 'turn on' the liver enzyme. Causes of this include Cushing's disease, dental disease, arthritis, and numerous others. In many cases the exact cause is unclear but as long as ultrasound and



PATIENT

Estrella Marie Diaz

SPECIES

Canine

BREED

Lhasa Apso

SEX

Spayed Female

AGE

12 Years

WEIGHT

10.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Gabriel Ferrer

HOSPITAL NAME

REFERRING VET

Dra. Marilyn Davila

INVOICE

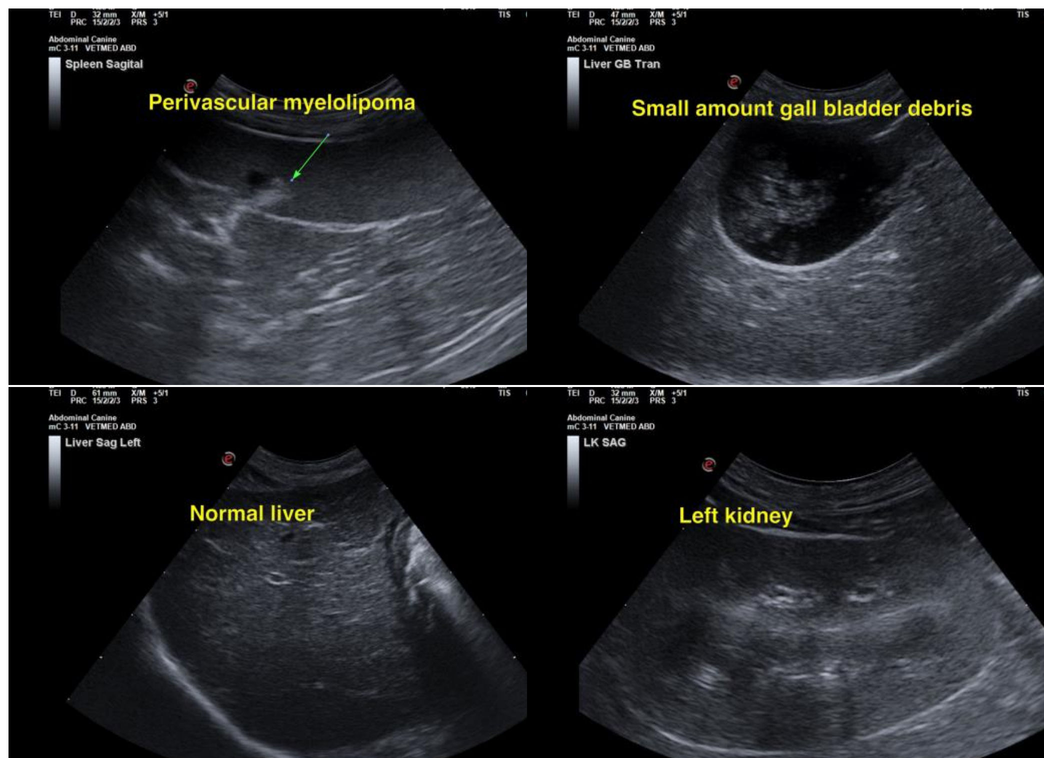
36333

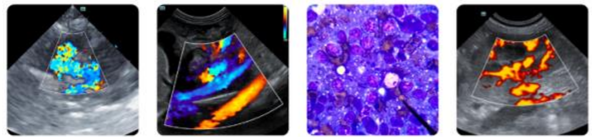
DATE

3/23/26

bile acids tests are normal most patients do not have progressive changes in their liver. While liver biopsy is not routinely performed, vacuolar hepatopathy is noted on most biopsies. This is often non-progressive but in rare cases can be more severe and lead to liver failure.

- If signs of Cushing's disease are present, recommend endocrine function testing to evaluate for Cushing's disease.
- Consider fine needle aspirate to rule out round cell neoplasia.
- If a cause for the ALP elevation is not identified: I recommend recheck general blood work every 6 months, ultrasound once per year, and bile acids test every 1-2 years based on other results. If the ALP continues to climb a biopsy should be considered.
- Consider long term use of Denamarin, and monitoring for the signs of Cushing's developing.





PATIENT

Estrella Marie Diaz

SPECIES

Canine

BREED

Lhasa Apso

SEX

Spayed Female

AGE

12 Years

WEIGHT

10.8 Pounds

INTERPRETED BY

Dr Brittany Sinclair, BVSc(hons), DACVECC

IMAGING PERFORMED BY

Dr. Gabriel Ferrer

HOSPITAL NAME

REFERRING VET

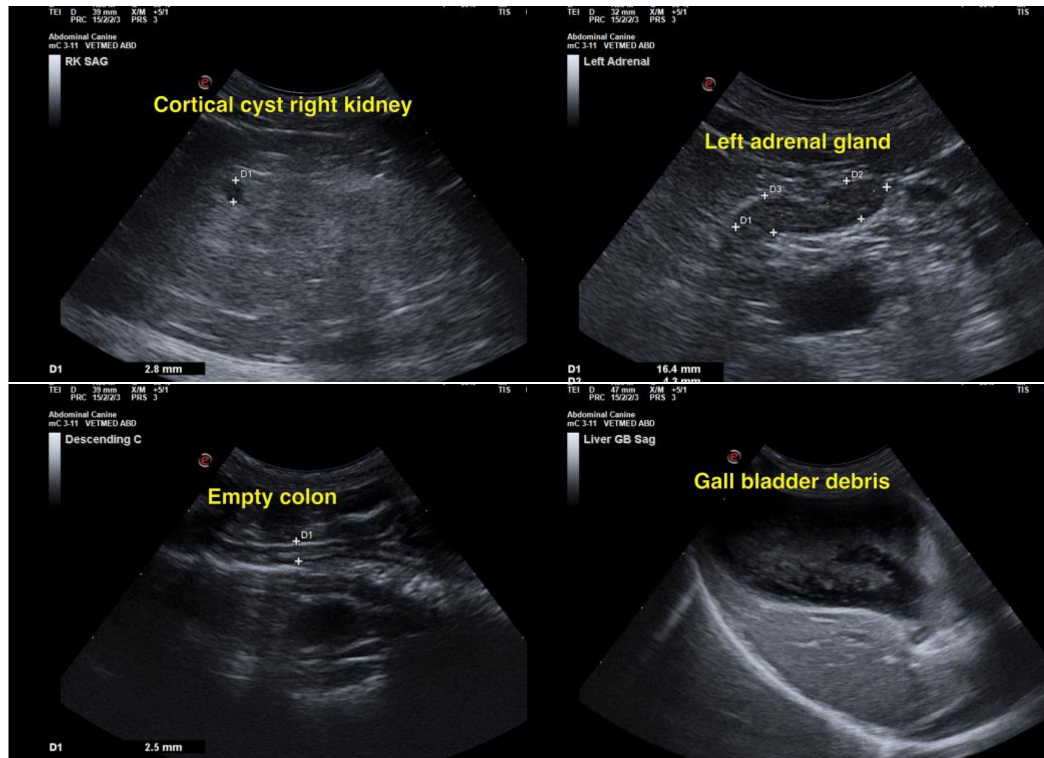
Dra. Marilyn Davila

INVOICE

36333

DATE

3/23/26



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.

Dr Brittany Sinclair, BVSc(hons), DACVECC

info@SonoPath.com