**DATE**

12/5/22

**PRESENTING CLINICAL SIGNS**

History: Pt presents for preop dental bloodwork. Elevated liver elevations found.

**PATIENT**

Cece Tomar

Current Medications: None.

Lab Results: ALP 414, ALT 718, GGT 13, plt 500.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

**SPECIES**

Canine

Stat Report: Not requested.

Imaging Performed By: Andi Parkinson, BS, RDMS.

**BREED**

Chihuahua Mix

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****SEX**

Spayed Female

**Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

**AGE**

10/18/08

Left kidney is normal is size (4.31 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**WEIGHT**

11.08 Pounds

Right kidney is normal is size (4.45 cm), shape and echogenicity. It has smooth peripheral margination. There is a normal 1:3 cortex to medulla ratio with appropriate corticomedullary distinction. There is no evidence of pyelectasia, mineral or infarcts observed.

**INTERPRETED BY**Beth Johnson, DVM  
DACVIM**Adrenal Glands**

Adrenal glands are plump/swollen in size. Normal shape and contour are maintained without evidence of capsular invasion. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal. The left adrenal gland measures 1.87 cm long x 0.61 cm at cranial pole and 0.69 cm at caudal pole. The right adrenal gland measures 1.67 cm long x 0.83 cm at cranial pole and 0.61 cm at caudal pole.

**HOSPITAL NAME**

Everhart VH

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**REFERRING VET**

Dr. Rubinstein

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

**INVOICE**

19009

Gallbladder is moderately overdistended with organized, aggregated and centralized non-gravity dependent sludge. Striations of sludge separated by anechoic areas are noted extending from the lumen to the luminal wall. The wall is mildly thick, irregular and hyperechoic. There is no evidence of CBD dilation.

**Gastrointestinal**

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is mildly distended with very echogenic reverberation artifact from intraluminal gas. There is no evidence of obstruction,

foreign material or infiltrative disease; however, complete visualization of far wall is partially inhibited by gas. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

The mesenteric lymph nodes are prominent in size with swollen capsular contour. Normal elongated shape (length to width ratio) is maintained. There is no loss of parenchymal detail.

## **ULTRASONOGRAPHIC FINDINGS Secondary Findings**

- Gallbladder mucocele
- Reactive mesenteric lymph nodes – infiltrative neoplastic disease cannot be ruled out but is considered less likely.
- Mild bilateral adrenomegaly – consistent with adrenal hyperplasia secondary to pituitary dependent hyperadrenocorticism vs stress or normal variant. Interpret in combination with clinical signs of hyperadrenocorticism.

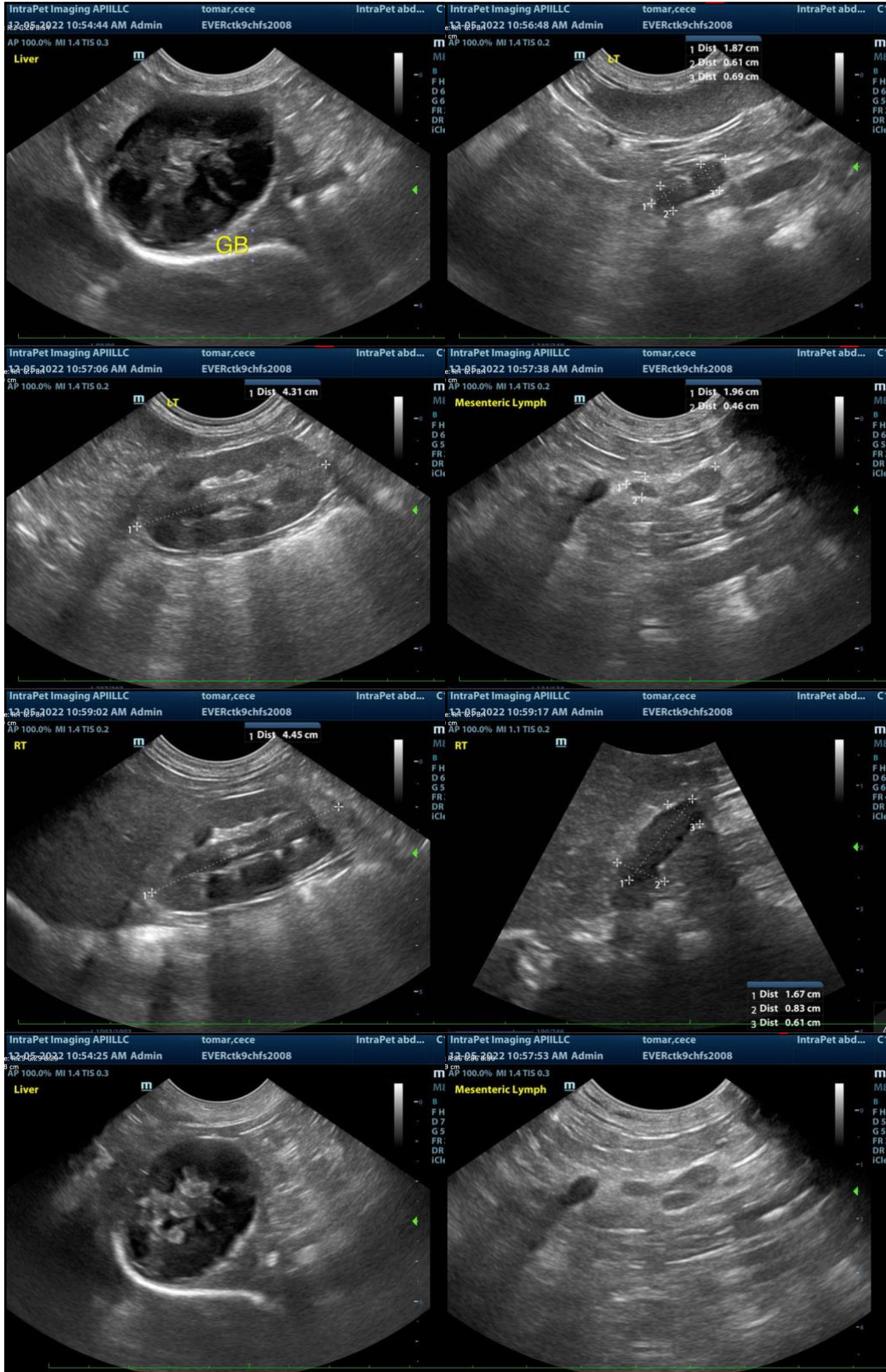
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

This patient appears to have a gallbladder mucocele, which the treatment of choice for this is a surgical cholecystectomy. However, given the incidental discovery of the mucocele and lack of reported clinical signs, empirical medical management with hepatic nutraceuticals, including Ursodiol, broad spectrum antibiotics and monitoring for improvement could be considered, however, a discussion is recommended regarding the possible risk of medical management for mucocele, including gallbladder rupture, etc.

If a conservative medical approach is elected, close monitoring for the development of clinical signs, including decreased appetite, nausea, cranial abdominal pain, etc., is recommended to help determine when and if surgery becomes necessary.

In the meantime, given that this patients liver enzyme increases are more consistent with hepatocellular injury versus cholestasis, etc., other testing, including testing for leptospirosis +/- liver sampling in the form of a fine needle aspirate could be considered if patients coagulation status is appropriate.

If a cholecystectomy is elected, a liver biopsy is recommended at the same time.



**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.

**Beth Johnson, DVM DACVIM**

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