

**DATE PRESENTING CLINICAL SIGNS**

7/15/22

7/9/22: P presents for possible anal gland issues, and health concerns in regard to weight loss (81.8lbs-67.2lbs) o noticed p licking at hind end 2-3wks ago (also groomed and then went swimming around the same time) o noticed a hard lump on hind end (every morning woke w/ discharge (brown and red), no scooting p had diarrhea in the room during today's visit (was not fed this morning) PE: Grade 1 dental disease. Rectal exam: Liquid brown stool present. Right anal gland area contains a 3cm nodular soft tissue mass. Left anal gland normal and empty.

**PATIENT**

Delgado Cordaro

**SPECIES**

Canine

**BREED**

Labrador X

**SEX**

Neutered Male

**AGE**

12/16/12

**WEIGHT**

67.2 Pounds

**INTERPRETED BY**

Kathleen Sennello DVM,  
MS, Diplomate ACVIM  
(Small Animal Internal  
Medicine)

**IMAGING PERFORMED BY**

Andi Parkinson RDMS

**HOSPITAL NAME**

Timonium AH

**REFERRING VET**

Dr. Falkowski

**INVOICE**

39590

Current Medications: Metronidazole 250mg tablets: Give 1 tab PO BID x 7 days since 7/9/22, Provable-DC capsules: Give 1 tab PO SID x 10 days since 7/9/22, Panacur granules: Mix 1 packet with food SID x 3 days. Repeat in 2 weeks. Since 7/14/22.

Lab Results: (7/9/22): CBC: wnl. Chemistry: Moderate hypercalcemia 14.4mg/dL, Mildly elevated ALT 137U/L, Moderately elevated ALP 318U/L. UA (free catch): USG 1.045, pH 5.5, 2+ protein, 4+ calcium oxalate crystals, T4: 2.6ug/dL, fT4: 1.9ng/dL, 4Dx Snap Test: neg x 4, Fecal: Hookworm positive.

Radiographs: 3 view radiograph interpretation; no radiographic evidence of thoracic metastasis is identified. However, very small

thoracic metastasis cannot be totally excluded based on survey radiographs due to limited sensitivity.

Date of Previous IntraPet Ultrasound: No previous.

Sedation: Not required to complete full diagnostic ultrasound.

Stat Report: Not requested.

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

The urinary bladder is moderately distended with anechoic urine. The Bladder wall, trigone, ureteral papillae and visible urethra (to a depth of 2cm) appear normal with no evidence of wall thickening, mucosal irregularities, or masses. There is a small string of small hyperechoic shadowing mineralizations in the dependent portion of the urinary bladder, the largest of these measuring approximately 0.32 cm. Findings are most consistent with numerous small calculi/sandy debris.

The prostate is normal in size (1.1 cm) and shape for this neutered male dog. The parenchyma is homogenous and the external margins are smooth. The prostatic urethra appears normal with no evidence of irregularity, invasion, mass effect or calculi.

The left kidney has a normal shape and size (7.06 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

The right kidney has a normal shape and size (7.17 cm). Overall echogenicity is normal with adequate corticomedullary distinction and a typical 1:3 cortex:medulla ratio. There is no evidence of perinephric inflammation or effusion. There is no evidence of pyelectasia, nephroliths, infarcts or hydroureter. Renal vasculature is normal.

**Adrenal Glands**

The left adrenal gland is normal in size measuring 0.68 cm at the caudal pole. It is observed in its normal position cranial to the left renal artery. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

The right adrenal gland is normal in size measuring 0.79 cm at the caudal pole. It is observed in its normal position between the cranial aspect of the right kidney and the caudal vena cava. It is normal in appearance (uniformly hypoechoic) and shape with no evidence of a mass effect.

### ***Spleen***

The spleen is subjectively normal in size. The spleen echotexture is heterogenous and mottled, the splenic capsule is smooth with no irregularities. The blood flow through the hilus and splenic parenchyma appears normal. There are numerous ill-defined, hyperechoic nodules visualized. Two were measured at 1.95 cm and 1.45 cm.

### ***Liver***

The liver is subjectively normal in size, and echogenicity with smooth peripheral margins. The parenchyma is heterogenous in echotexture with subtle, indistinct focal mottling. The visible portions of the vasculature and biliary tract appear normal. There is a large, somewhat subtle hyperechoic mass effect visualized on the right side of the liver, measuring 9.34 cm x 6.26 cm. Additionally, there are hyperechoic foci within the parenchyma, most consistent with small intrahepatic mineralizations.

The gall bladder lumen is moderately distended. The wall of the gall bladder is not thickened and has a smooth mucosal surface. There is a moderate amount of non-organized echogenic debris. The cystic and common bile ducts are normal/not visible.

### ***Gastrointestinal***

The stomach contains minimal luminal contents. It measures at a normal thickness of <0.7cm with some variability due to the presence of rugal folds. The distinction of the gastric wall layers is adequate and there is no impression of reduced peristaltic activity. 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. The duodenum measured as normal (between 0.3-0.5cm in wall thickness) and the jejunum measured as normal (between 0.2-0.47cm.) Visualized peristalsis appears appropriate. 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 formed fecal material and gas shadowing distally. There is no observed focal or generalized colon wall thickening or loss of layering.

### ***Pancreas***

The pancreas is normal and isoechoic to surrounding mesentery. There is no evidence of nodules or cystic lesions. There is no evidence of regional mesenteric inflammation or fluid.

### ***Free Abdomen***

Evaluation of the peritoneal cavity did not reveal any evidence of effusion. There is a prominent sublumbar lymph node visualized measuring 1.26 cm x 2.89 cm. This lymph node is isoechoic to slightly hypoechoic, and has a large cystic portion measuring 1.44 cm x 1.1 cm. The omentum is of normal echogenicity.

## **ULTRASONOGRAPHIC FINDINGS**

- Numerous small, hyperechoic shadowing foci in the dependent portion of the urinary bladder – most consistent with small calculi/sandy debris. Correlate with abdominal radiographs, urinalysis and culture.
- Mottled spleen with ill-defined, hyperechoic nodules – The diffuse splenic changes are non-specific and could be consistent with lymphoid hyperplasia, extramedullary hematopoiesis, infiltrative neoplasia, inflammation, other. Cytology or histopathology would be necessary to get a definitive diagnosis. Hyperechoic nodules trend towards a more benign differential, but consider a fine needle aspirate as evaluation for possible metastasis.

- Heterogeneous liver with moderate sized hyperechoic mass effect – The diffuse hepatic changes are non-specific and could be consistent with vacuolar hepatopathy, nodular hyperplasia, inflammatory/immune-mediated disease, fibrosis, extramedullary hematopoiesis, toxic hepatopathy (e.g., copper), infiltrative neoplasia (less likely) or other hepatopathy. This mass lesion has the characteristics most consistent with a primary hepatic mass lesion rather than a metastatic lesion (due to size, etc.). Consider a fine needle aspirate.
- Small punctate mineralizations within the hepatic parenchyma – most consistent with intrahepatic biliary mineralizations.
- Moderate gallbladder debris – The significance of the aggregated gallbladder sludge is unclear. This could represent an early mucocele, cholestasis, or may be secondary to fasting.
- Mildly prominent cystic sublumbar lymph node – Given the localized anal gland mass, this is more concerning, but the lymph node is relatively small and is not hypoechoic, etc. This could reflect reactivity or possible very early metastatic disease. I suspect fine needle aspirate would be difficult at this portion, because it is largely cystic. Recommend continued monitoring.

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

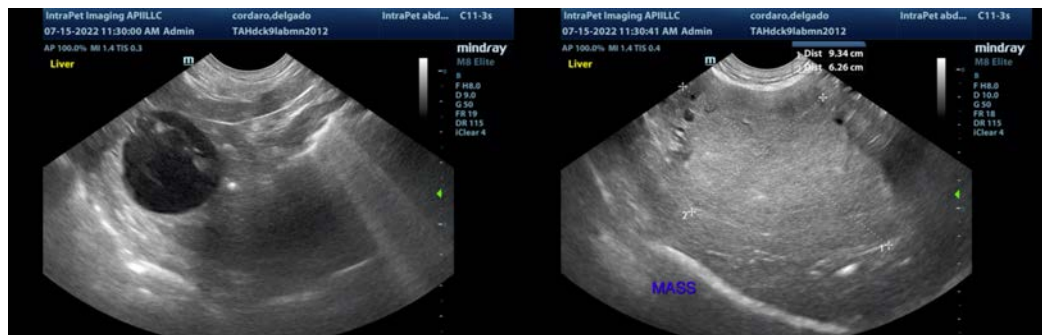
There are numerous small calculi visualized in the dependent portion of the urinary bladder. This is likely associated with the reported hypercalcemia. Recommend urinalysis, culture and radiographs to try and decide if cystotomy is necessary.

The spleen is somewhat mottled with ill-defined, hyperechoic nodules. These are not discrete nodules, and trend towards a more benign appearance, but given the concern for possible metastatic disease, a fine needle aspirate could be considered.

Additionally, there is a large mass effect in the liver, which is most consistent with a primary hepatic mass lesion. Recommend fine needle aspirate. If surgical resection is desired, consider a contrast CT scan for surgical planning. Additionally, a CT scan could provide greater sensitivity and evaluation for small abdominal metastasis.

The sublumbar lymph node is abnormal in that it is prominent and cystic, but it does not appear overtly large, rounded, or hyperechoic, so there is hope that this could represent reactivity.

Recommend a hypercalcemia of malignancy panel to obtain and follow ionized calcium levels, which will be more accurate. Recommend consultation with a veterinary oncologist regarding treatment options (surgery versus radiation, versus chemo, etc.). Recommend close monitoring of the sublumbar lymph node.







**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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