

**DATE PRESENTING CLINICAL SIGNS**

12/13/22 Bloated, labored breathing when laying down.

PATIENT Current Medications: Hydrocodone 5mg BID.
Lab Results: See attached.Gunner Sahady Radiographs: Enlarged liver, distended abdomen.
Date of Previous IntraPet Ultrasound: No previous.**SPECIES** Sedation: Not required to complete full diagnostic ultrasound.
Stat Report: Not requested.

Canine

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

Hound The urinary bladder is moderately 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.

SEX

Neutered Male Prostate is symmetrically enlarged with smooth margins that are well differentiated from surrounding tissue. Normal bilobed shape is maintained. Parenchyma is heterogenous with scattered hyperechoic foci present. No mineral or cysts are noted.

AGE

2/5/11 The right kidney is normal in size (5.97 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

45 Pounds The left kidney is normal in size (6.23 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 BYBeth Johnson, DVM
DACVIM**Adrenal Glands**

The right adrenal gland is normal in size (2.22 cm long x 0.63 cm at the cranial pole and 0.62 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

IMAGING PERFORMED BY

Rachel Brillhart RDMS

The left adrenal gland is normal in size (2.24 cm long x 0.65 cm at the cranial pole and 0.78 cm at the caudal pole), shape and contour. Corticomedullary structure is unremarkable. Visible surrounding vasculature appears normal.

HOSPITAL NAME

Madonna Vet Clinic

Spleen

The 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. Cangro

Liver

Liver is subjectively enlarged with mildly irregular margins. Parenchyma is heterogenous characterized by multiple poorly defined hypoechoic nodules within otherwise hyperechoic liver parenchyma. Visible vasculature and biliary tree appear normal without distension or congestion.

INVOICE

43414

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris (mild). The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

Gastrointestinal

Fundic mucosal hypertrophy with hyperechoic mucosa and some mucosal remodeling is noted. There is no loss of mural detail. Layering is normal. There is mild luminal fluid accumulation. No evidence of masses/nodules or foreign material present.

The visible small intestines are normal in wall thickness and layering (canine duodenum < 0.5 cm and feline duodenum < 0.4 cm; other < 0.3 cm). 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 (< 0.2 cm) and layering. Contents are consistent with normal formed feces and gas.

Pancreas

The area of the pancreas contains irregular hyperechoic pancreatic remodeling.

Free Abdomen

There is no evidence of free peritoneal effusion noted in these images.

There is no apparent lymphadenopathy noted in these images.

PRIMARY FINDINGS

- **Heterogenous Liver** – These changes are most consistent with benign processes such as nodular hyperplasia, steroid (vacuolar) hepatopathy, extramedullary hematopoiesis or possibly chronic inflammatory disease and less commonly infiltrative round cell or metastatic neoplasia.
- **Hyperechoic pancreas** – This finding is suggestive of pancreatic fibrosis, possibly secondary to chronic pancreatitis. A TLI is recommended to rule out exocrine pancreatic insufficiency (EPI), especially if clinical signs (weight loss, diarrhea, etc.) are present.
- **Gastritis** – Consistent with irritation secondary to dietary indiscretion or intolerance, infection (bacterial, viral, other), parasitic or protozoal disease, toxin, other metabolic disease such as pancreatitis, other. Microulceration cannot be ruled out.

SECONDARY FINDINGS

- **Mild gallbladder debris** - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.

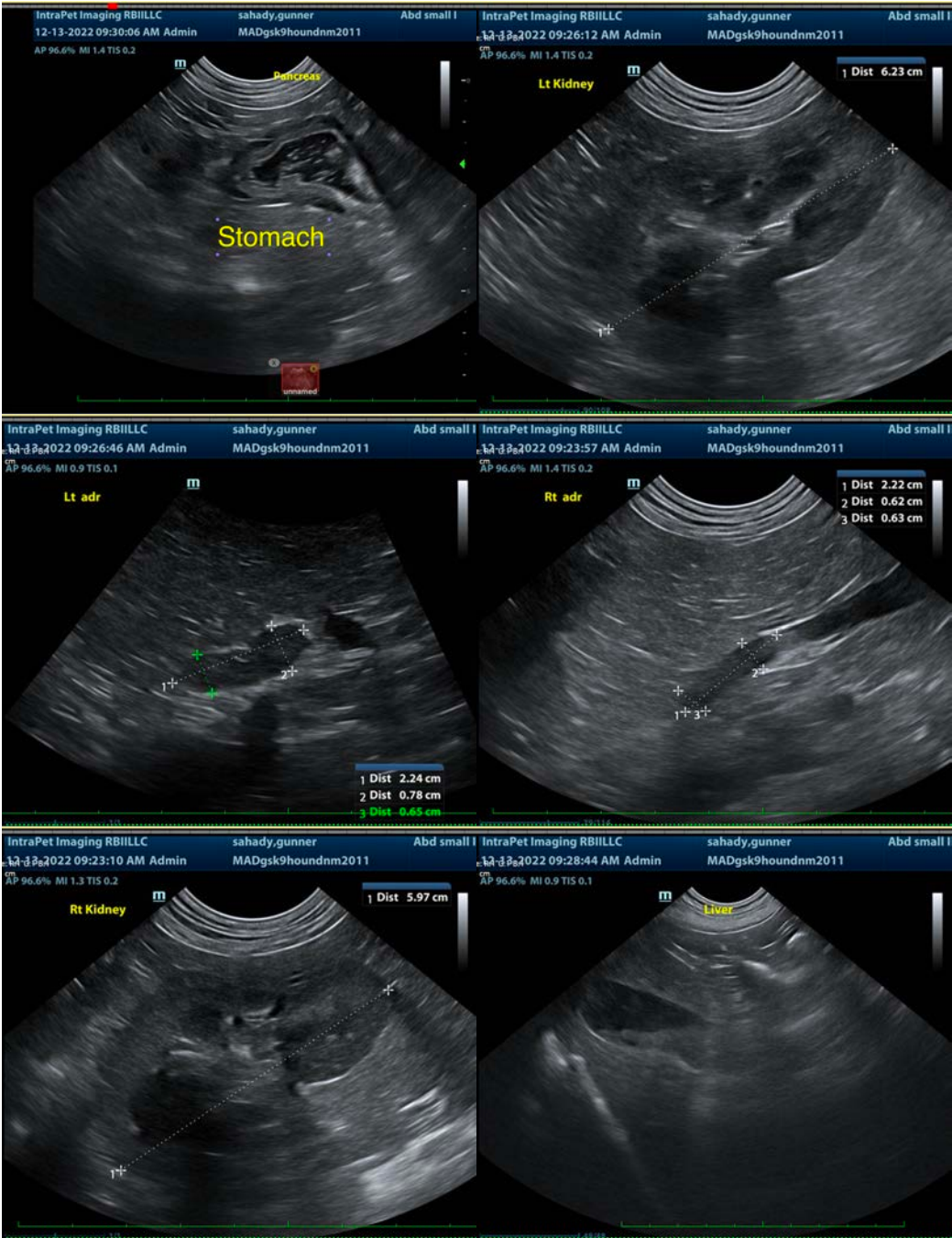
INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

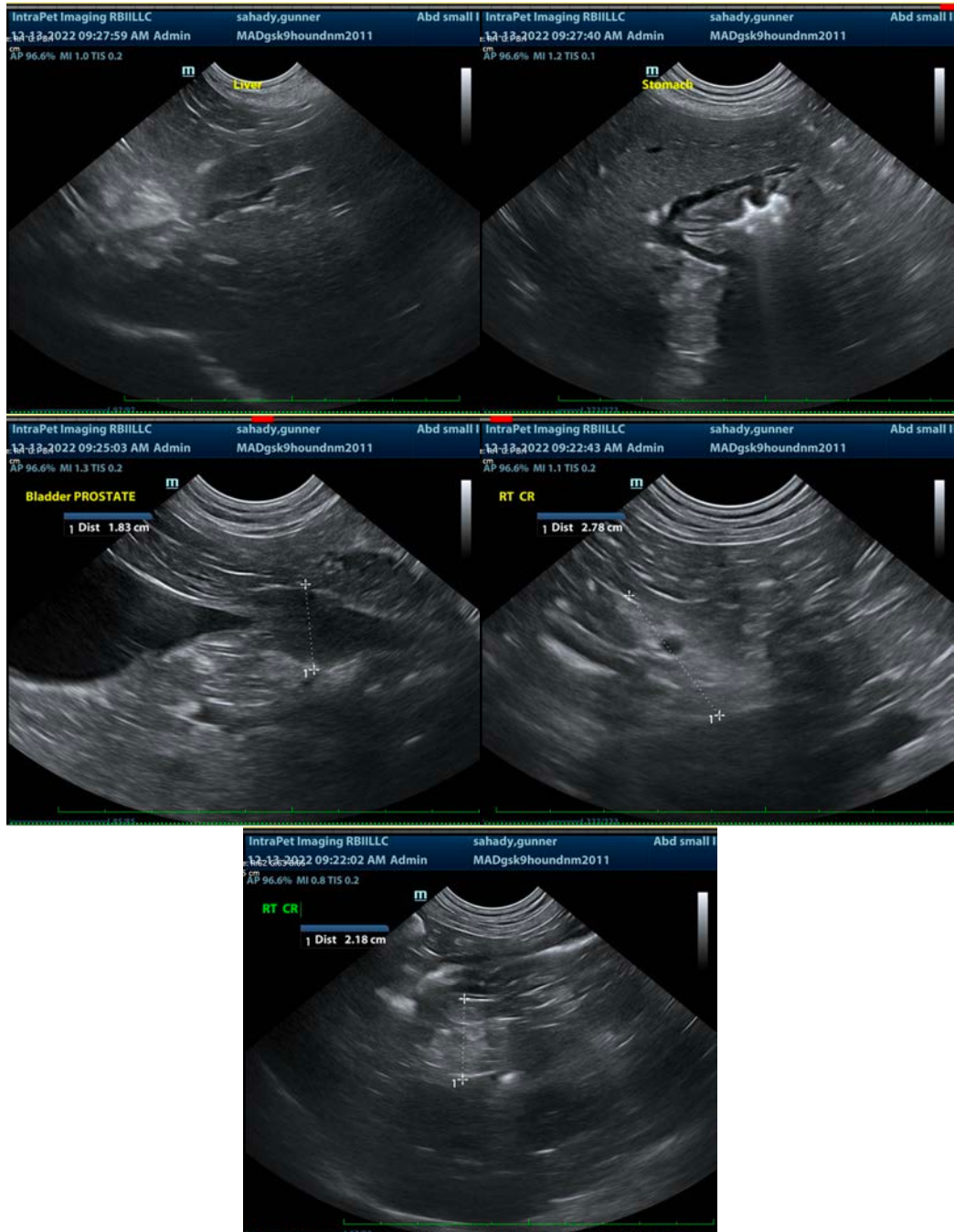
Given this patient's reported labored breathing, three view thoracic radiographs are recommended for further assessment of cardio-pulmonary status as well as to further evaluate for any evidence of metastatic disease, if not recently evaluated. Further evaluation for laryngeal paralysis may also be warranted.

Given the bloated abdomen combined with the pathology described above, further evaluation of the GI tract and pancreas is recommended in the form of a gastrointestinal malabsorption panel (including cobalamin, folate, TLI and PLI) to Texas A&M GI Laboratory.

In the meantime, supportive/symptomatic medical management of possible mild gastritis/pancreatitis, etc. is recommended with antiemetics, gastroprotectants (i.e., twice daily Omeprazole) to address potential concurrent GERD, as well as a diet transition based on trial and error basis, potentially beginning with a bland, easy to digest or low-fat diet.

If bloating/gas is believed clinically to be the primary problem, and empirical trial course of Simethicone could be considered as well.





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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