



PATIENT PRESENTING CLINICAL SIGNS

Cinnamon Gramm

S: Cinnamon, 10yo FS Yorkshire Terrier mix, presented as a direct transfer from Whatcom Vet for supportive care and further investigation into severe liver enzyme elevations, icterus. She has been inappetent, vomiting after eating, coughing, burping, and severe lethargy for the last couple of days. She has history of a heart murmur and cardiomegaly, recent echocardiogram interp as B1 DMVD; primary care was concerned about precipitating CHF so started her on Furosemide, Enalapril and Pimo prior to a recent dental. pt has not had those meds in a few days Seen by Whatcom Vet today. They noted icterus and tense abdomen. Diagnostics performed there: chest rads - enlarged heart silhouette stable from previous, lungs reportedly clear.

SPECIES

Canine

BREED

Yorkie X

Abnormal PE/Chem/CBC/UA Results: CBC normal. Chem17: - elevated SDMA 16, -ALKP 3961, -ALT 2672, -TBIL 8.4, Chol 367 - low CI 106. rest wnl. - cPL abnormal. UA: -USG 1.009, pH 7, Leu 25/uL, Pro 30mg/dL, UBG 8 mg/dL, BIL 6 mg/dL, 25 Ery/uL. no bacteria or crystals detected.

SEX

Spayed Female

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

AGE

10 Years

The **urinary bladder**, trigone, and pelvic urethra presented normal thicknesses and normal tone. The ureters were not visible which is normal. No uroliths or sediment were visualized and anechoic urine was present. No evidence of inflammatory or neoplastic changes were noted. Ureteral papillae were normal.

WEIGHT

4.12 kg

The **kidneys** revealed largely normal size and structure, corticomedullary definition and ratio (cortex 1/3 of medulla) were essentially maintained with some age-related loss of curvilinear patterns regarding the capsule and C/M junction. The cortices presented largely uniform texture with some increased echogenicity expected for his age patient. Medullary structure differed distinctly from that of the cortex. Slight mineralization noted in both kidneys. The right kidney measured 4.21 cm with slight pyelectasia of 0.26 cm. The left kidney measured 4.02 cm.

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

Adrenal Glands

IMAGING PERFORMED BY

Dr. Callihan

Both **adrenal glands** were visualized and recognized as having normal shape, size, position and echogenicity for this breed. The phrenic vasculature, glandular echogenicity and detail were unremarkable. Capsule, cortex, and medullary definition were normal for this age patient. The right adrenal gland measured 0.53 cm at the caudal pole and 0.80 cm at the cranial pole. The left adrenal gland measured 0.33 cm at the caudal pole and 0.40 cm at the cranial pole.

HOSPITAL NAME

Animal Emergency Hospital

Spleen

REFERRING VET

Dr. Loeffler

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

INVOICE

43526

Liver

DATE

12/17/22

The **liver** revealed multiple iso- to hyperechoic and hypoechoic nodular changes. Swollen irregular contour. Gallbladder revealed multiple calculi, inspissated debris, and striating bile. Overdistention present. Consistent with polypoid hyperplasia and mucocele formation. However, no active inflammation present. The distal common bile duct was slightly thickened.



PATIENT

Cinnamon Gramm

SPECIES

Canine

BREED

Yorkie X

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.12 kg

Gastrointestinal

Examination of the **gastrointestinal tract** revealed a stomach and intestine free of stasis, of normal wall thickness, acceptable curvilinear mural detail, and peristaltic activity. Small and large intestine demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. No associated abnormal lymphatic activity was noted.

Pancreas

The right **pancreatic** limb revealed mixed hypoechoic parenchymal changes, irregular contour, and enhanced mesentery, suggestive for inflammation.

ULTRASONOGRAPHIC FINDINGS

- Diffuse hepatic disease – nodular hyperplasia/hepatitis versus neoplasia.
- Structurally fairly stable gallbladder mucocele
- Concurrent pancreatitis likely
- Age related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Recommend medical stabilization in this patient of the pancreas and liver with FNA of the liver to assess parenchymal disease to ensure no occult neoplasia is present, followed by eventual cholecystectomy. However, I'm not convinced that the bilirubin elevation is all gallbladder related. Parenchymal disease is likely. Leptospirosis titers, if not already performed, would be indicated, as well as assessment for any acute insult. Recheck sonogram in 48-72 hours could be considered prior to cholecystectomy.

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Callihan

HOSPITAL NAME

Animal Emergency Hospital

REFERRING VET

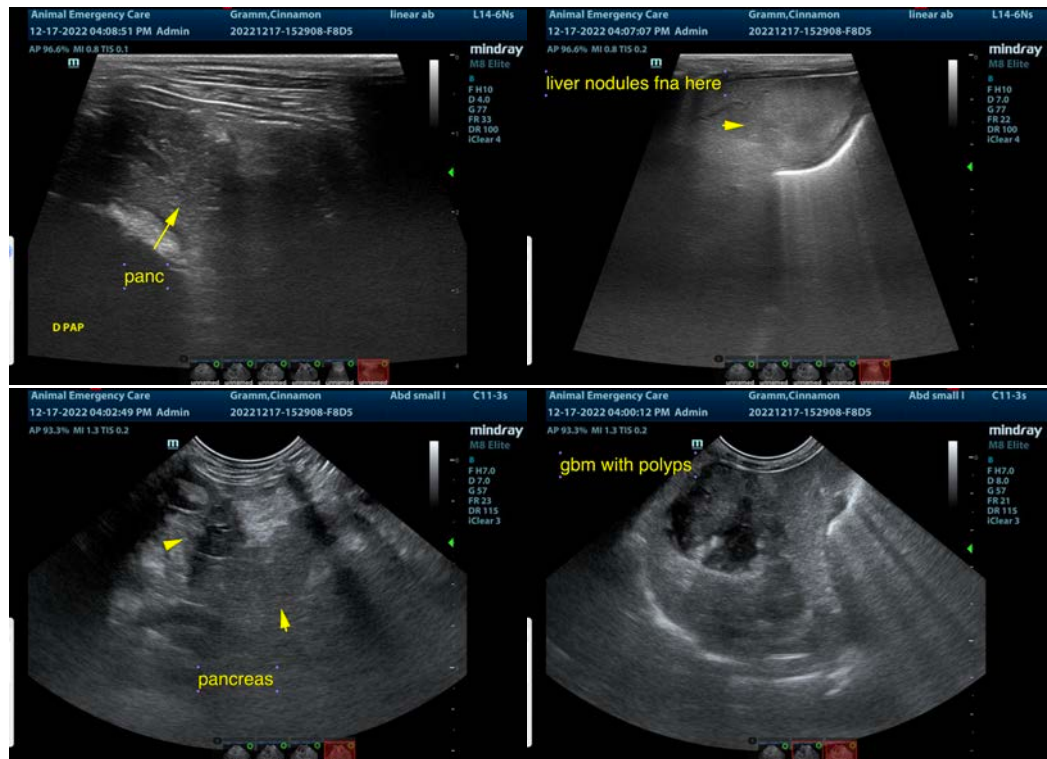
Dr. Loeffler

INVOICE

43526

DATE

12/17/22





PATIENT

Cinnamon Gramm

SPECIES

Canine

BREED

Yorkie X

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.12 kg

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Callihan

HOSPITAL NAME

Animal Emergency
Hospital

REFERRING VET

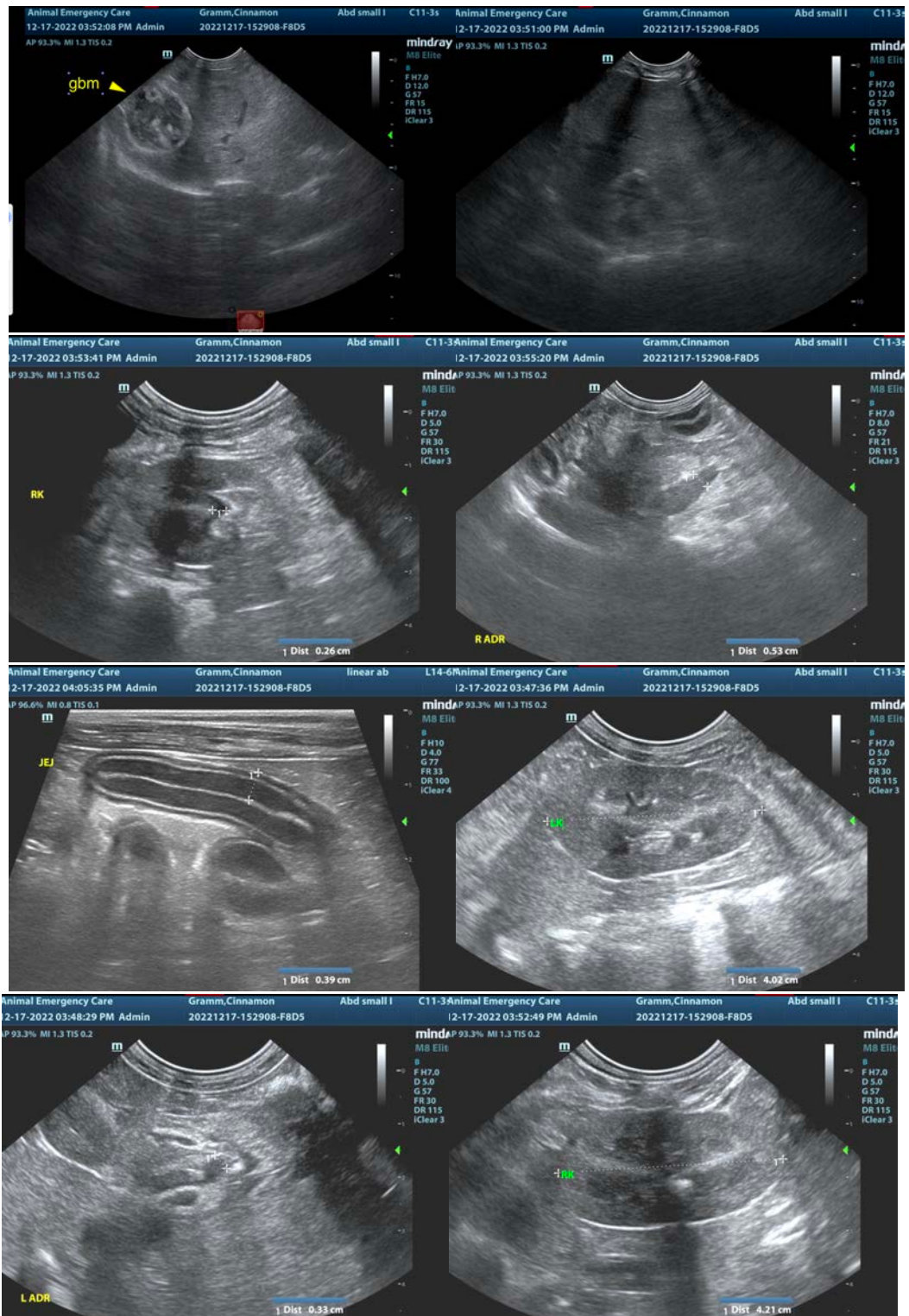
Dr. Loeffler

INVOICE

43526

DATE

12/17/22





PATIENT

Cinnamon Gramm

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.

SPECIES

Canine

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.

Eric Lindquist, DMV, DABVP, Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com

BREED

Yorkie X

SEX

Spayed Female

AGE

10 Years

WEIGHT

4.12 kg

INTERPRETED BY

Eric Lindquist, DMV

DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Dr. Callihan

HOSPITAL NAME

Animal Emergency
Hospital

REFERRING VET

Dr. Loeffler

INVOICE

43526

DATE

12/17/22