



PATIENT	PRESENTING CLINICAL SIGNS
Teddy Greenwell	Nothing seemed out of the ordinary, started gagging & hacking- started Feb 4, 2022.
SPECIES	Abnormal PE/Chem/CBC/UA Results -x-rays- significant pleural effusion, mineralization of lining of part of the small intestine and large intestine
Canine	
BREED	CBC: mild hemoconcentration (suspect dehydration), CHEM: increase SDMA 19 (0-14), hypocalcemia 1.77 (1.98-3) - likely 2e to hypoalbuminemia, tp low 30 (52-82), hypoalbuminemia 12 (22-39), hypoglobulinemia 18 (25-45), low alp 10 (23-212), cholesterol 2.33 (2.8-8.2)
Australian Terrier	
SEX	UA
	cysto- dk yellow, cloudy, usg 1.036, ph 6.5, tr protein
MN	neg glucose, 15mg/dl ketones, 10ery/ul blood
	bili 3, urobili 4
AGE	neg leuk esterase
10 years	<1wbc/hpf, 1/hpf rbc
	no bacteria, normal epi cells, no casts
WEIGHT	Pleural cavity : Tapped chest and removed 300 +ml
5.85	BA Panel , Fluid cytology, BNP Pending
	ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN
INTERPRETED BY	Cardiac Presentation
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Sonographic assessment of the heart revealed overtly normal cardiac structure and function without evidence of pericardial or overt pleural free fluid. Normal size and structure of the left and right heart chambers with normal left ventricle systolic function were noted.
IMAGING PERFORMED BY	Urinary System
Dr. Brian Barnes	The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Anechoic urine was present in the lumen with no uroliths or sediment. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic changes was noted.
HOSPITAL NAME	The area of the residual prostate was free of pathology.
Westview VH	The area of the aortic trifurcation was free of pathology.
REFERRING VET	Normal size and margination were present in the kidneys. A normal 1:3 cortex / medulla ratio was maintained. The medulla and cortices were uniform in texture with some increased echogenicity and mild loss of corticomedullary symmetry and definition expected for the age of the patient. Pinpoint to focal areas of minor medullary mineral were present. No evidence of pelvic dilation was present. The left kidney measured 3.9 cm in length. The right kidney measured 4.1 cm in length.
Dr. Brian Barnes	
INVOICE	Adrenal Glands
13292	The left adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The left adrenal gland measured 0.52 cm width at the caudal pole and 0.38 cm width at the cranial pole. The
DATE	
2/9/22	



PATIENT	right adrenal gland was uniform in size and contour with a uniformly hypoechoic parenchyma. The right adrenal gland measured 0.55 cm width at the caudal pole and 0.42 cm width at the cranial pole.
Teddy Greenwell	
SPECIES	Spleen
Canine	The spleen exhibited a finely textured and homogenous parenchyma which was hyperechoic to the liver and renal cortical parenchyma. The capsule was smooth and regular without apparent expansion. The splenic vasculature at the hilus was normal in volume with no evidence of congestion or thrombosis. Acute to chronic inflammatory, neoplastic, or benign parenchyma changes were not noted.
BREED	Liver/ Gallbladder
Australian Terrier	The liver presented enlarged in size. The parenchyma of the liver was subjectively normal in echogenicity compared to the spleen and renal cortices. The liver parenchyma was uniform with a mildly coarse echotexture. The capsule of the liver was symmetrically rounded to mildly swollen in margination. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with mild gallbladder debris. The cystic and common bile ducts were normal.
SEX	Gastrointestinal
MN	The stomach presented intact wall layering with a normal wall layer ratio. Very minor retained anechoic fluid was present in the pylorus lumen.
AGE	The small intestine presented intact wall layering and primarily maintained a 1:3 muscularis/mucosa ratio with intermittent subtle areas of increased mucosa echogenicity to mucosal speckling. No evidence of mechanical / metabolic small intestinal ileus was noted. The duodenum wall width measured 0.34 cm. The jejunum wall width measured 0.39 cm.
10 years	The colon exhibited mild to moderate generalized distention with semi-formed to soft feces.
WEIGHT	Pancreas
5.85	The parenchyma of the left limb, body, and right limb of the pancreas presented isoechoic to the adjacent omental fat. A normal curvilinear capsule contour of the pancreas was present. The visible pancreatic duct was normal. No signs of active inflammation or neoplastic disease were evident.
INTERPRETED BY	Free Abdomen
R. McKenzie Daniel, DVM, DABVP (Canine and Feline)	Generalized subjective reactive mesentery, along with very scant pockets of peritoneal free fluid were present. No overt lymphadenopathy or omental masses were noted.
IMAGING PERFORMED BY	ULTRASONOGRAPHIC FINDINGS
Dr. Brian Barnes	<ul style="list-style-type: none"> • Overtly normal cardiac structure and function - consistent with noncardiogenic effusion • Mild chronic renal changes with minor pinpoint to focal medullary mineral • Vacuolar hepatopathy pattern • Mild gallbladder debris - non-mucocele
HOSPITAL NAME	
Westview VH	
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- Intermittent subtle small bowel mucosa speckling to increased mucosa echogenicity, semi-formed to soft feces in colon

SPECIES

Canine

BREED

Australian Terrier

SEX

MN

AGE

10 years

WEIGHT

5.85

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

If a murmur is present, potential for possible mild mitral valve insufficiency would be suspected, yet the normal left atrium size indicates that the risk of current complication is low. Likewise, no overt evidence of clinical pulmonary hypertension, given the subjective normal pulmonary artery size, as well as a lack of right atrium or right ventricle enlargement.

Given the lack of proteinuria, normal subjective hepatic presentation and functionality, as well as noncardiogenic effusion, and in the face of panhyperproteinemia, intestinal protein loss such as protein-losing enteropathy, lymphangiectasia, or less likely infiltrative gastrointestinal disease may be considered a primary differential diagnosis. This may also correspond to positive response to steroid administration. Correlation with pending diagnostic including fluid analysis is recommended. A GI panel to include PLI/TLI/Cobalamin/Folate may be considered. If clinically indicated, some or all of the following protocol may be considered.

OBJECTIVE: keep albumin levels > 2 g/dl, avoid thromboembolism and cavitory effusions, monitor concurrent PLN (Wheaton Terrier PLE/PLN) and liver disease:

Plasma 10 mL / kilogram IV over 4 hours

Or **Human albumin** 2 ml/kg/h over 10 hours. Total daily volume 20.l/kg/day

And Colloids/Hetastarch

10 to 20 mL per kilogram per day and dogs

10 to 15 mL per kilogram per day cats

(Can bolus first 1/3 of dose over 15 minutes)

& maintain on LRS maintenance otherwise.

Metronidazole (10-20 mg/kg po bid)

Famotidine 1 mg/kg lv 1m po dc Sid /bid

Sucralfate 0.5-1 g po tid dogs, 0.5 g bid cats in slurry **Or Misoprostol** 1-5 ug/kg po tid

Diet: Highly digestible high quality protein, low fiber, low fat diet (< 15% of dry matter). Hydrolyzed protein or novel protein. Purina HA or Royal Canine HP or similar.

Prednisone or prednisolone 2 mg/kg bid x 3-5 days then 2 mg/kg sid. **Chlorambucil** in refractive severe IBD/alimentary lymphoma cases (monitor cbc for rare bone marrow suppression) 4 mg/m² Q 24-48 hours.

Cobalamine (B12) 250-1500 ug/dog weekly x 6 weeks.

Calcium supplementation if necessary.

Aspirin 0.5-1 mg/kg/day **or Clopidrel** (Plavix) 1-5 mg/kg/day.

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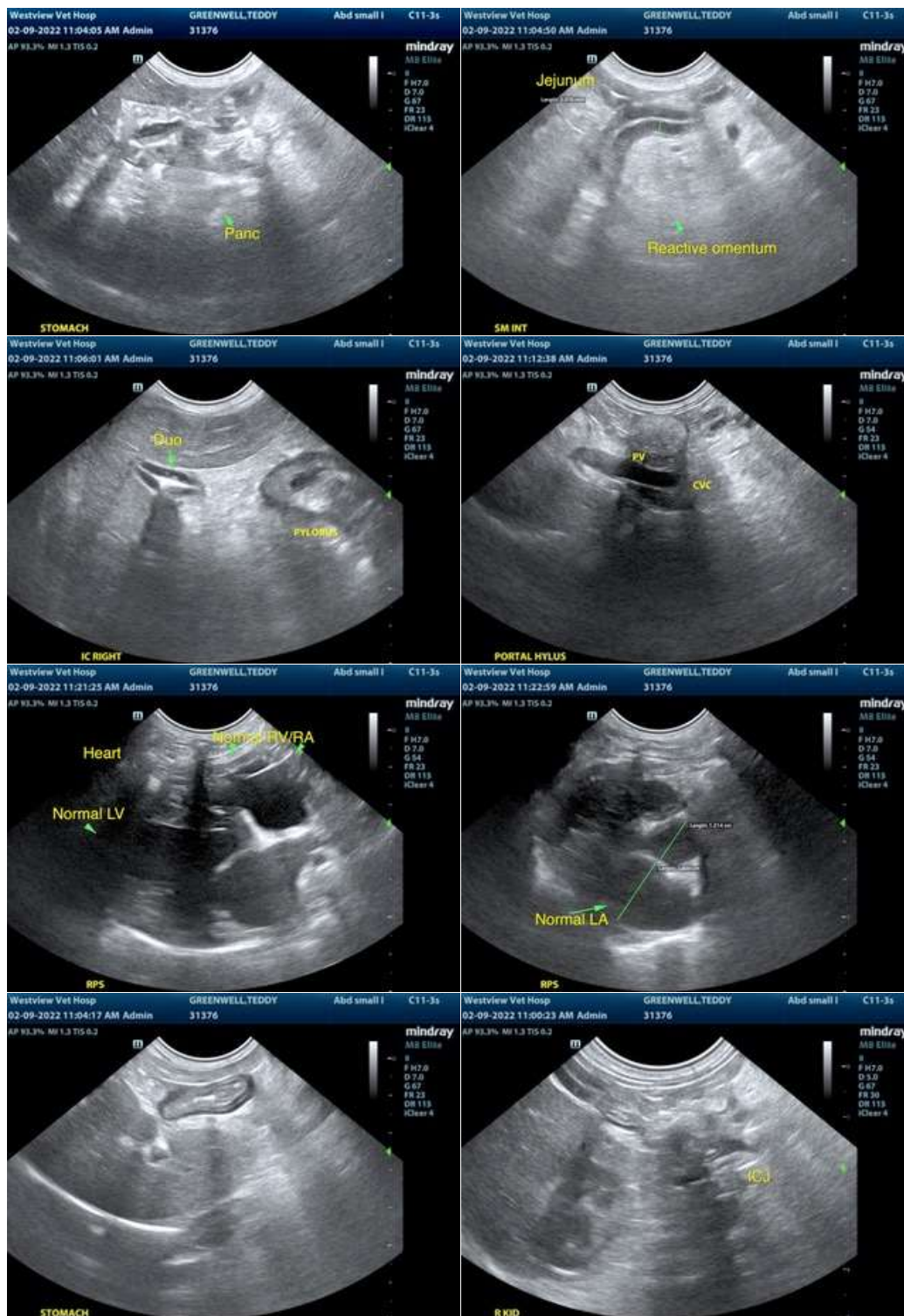
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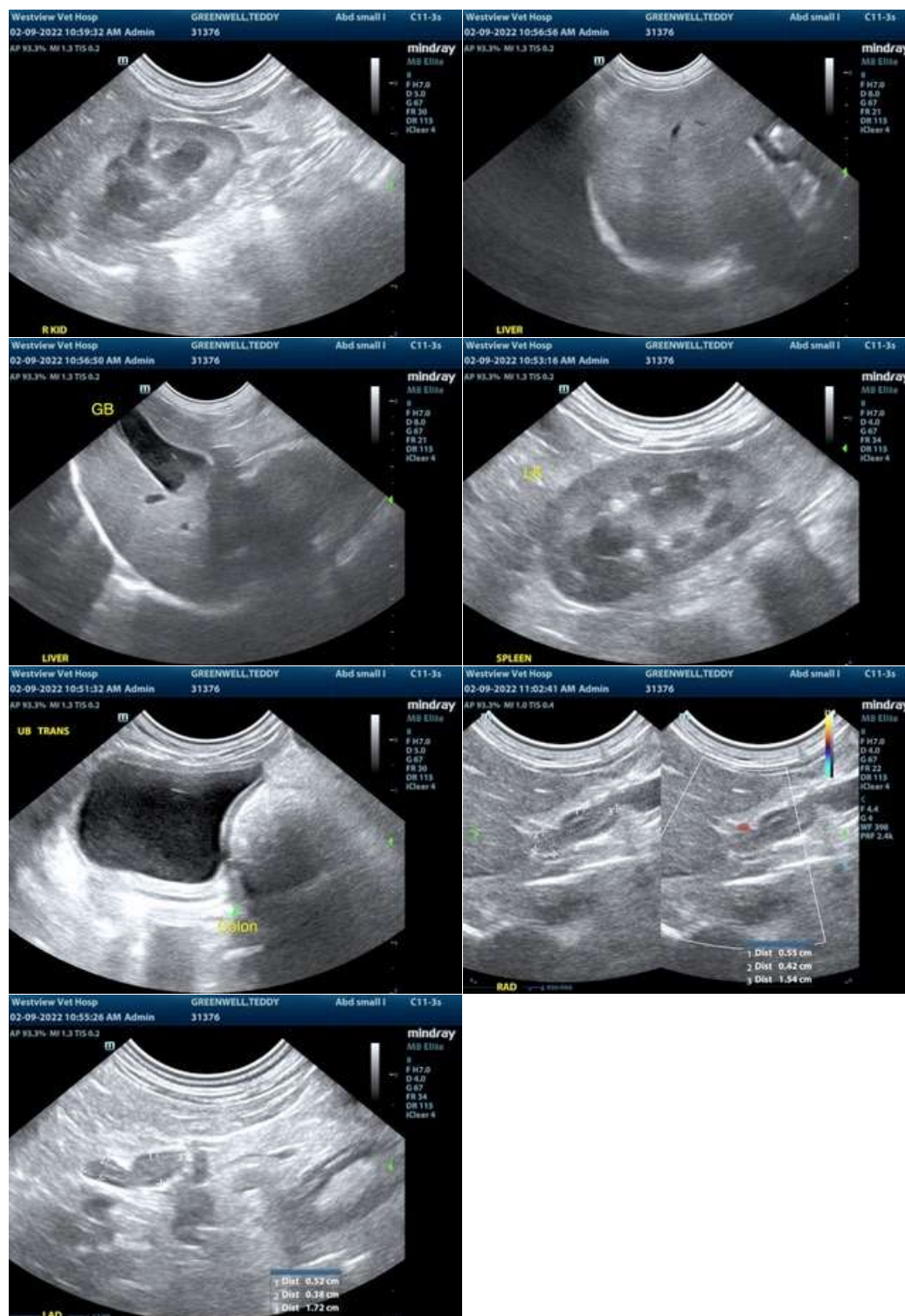
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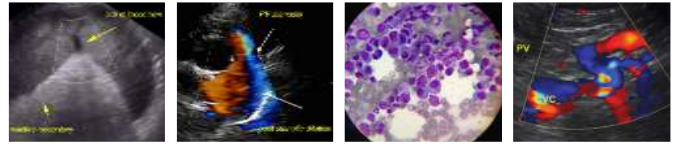
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology



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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.

R. McKenzie Daniel, DVM, DABVP (Canine / Feline Practice)
info@SonoPath.com