



## PATIENT

Tripod Holbrook

## SPECIES

Canine

## BREED

Jack Russell Terrier

## SEX

Neutered Male

## AGE

14 Years

## WEIGHT

24 lbs

## INTERPRETED BY

Greg Kuhlman, DVM,  
DACVIM (SAIM)

## IMAGING PERFORMED BY

Julia Bakker, DVM

## HOSPITAL NAME

Orange Blossom  
Veterinary Imaging

## REFERRING VET

Kristina Ramer, DVM

## INVOICE

75173

## DATE

5/14/26

## PRESENTING CLINICAL SIGNS

1 month of reduced appetite and weight loss. Labwork shows generalized liver enzyme elevations. Radiographs show some loss of serosal detail in craniodorsal abdomen.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### *Urinary System*

The bladder contains almost no urine at this time. Bladder wall appears subjectively mildly thickened, although exact determination if it is thickened cannot be made given that there is no urine present within the bladder.

Kidneys are overall normal in size and shape with smooth peripheral margination. A normal 1:3 cortex to medulla ratio is maintained. The medulla and cortices are uniform in texture with some mild increased cortical echogenicity and mild loss of corticomedullary distinction, expected in this age patient. There is no evidence of pyelectasia, mineral or infarcts observed. A cystic lesion is noted in the left kidney measuring 6.4 cm in diameter, appears benign. Left kidney measures 4.7 cm. Right kidney measures 3.0 cm.

### *Adrenal Glands*

The right adrenal gland is at the upper end of normal limits for size at 6.6 mm in width at the caudal pole and 11.6 mm at the cranial pole.

The left adrenal gland measures at the upper end of normal limits for size at 6.8 mm in width at the cranial pole and 6.4 mm in width at the caudal pole.

### *Spleen*

The spleen is normal in size, shape, margination and echogenicity. No masses are seen.

### *Liver*

Liver is subjectively enlarged (swollen contour) without disruption of architecture. There is a hypoechoic lesion measuring 10.3 mm in diameter, mildly capsule displacing. A 2<sup>nd</sup> similar lesion measured 5.5 mm in diameter. A 3<sup>rd</sup> lesion measures 1.6 cm in diameter. A 4<sup>th</sup> lesion measures 29.3 mm in diameter. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as suspended and gravity dependent echogenic debris. 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*

The stomach and intestines have normal wall layering and thickness. Mild retained fluid noted within the stomach. Colon contains normal contents with normal wall thickness.

### *Pancreas*

The area of the left and right pancreas is seen, no pathology noted.



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## Free Abdomen

There are no enlarged abdominal lymph nodes seen on this exam. No free abdominal fluid is seen.

## ULTRASONOGRAPHIC FINDINGS

- Mildly thickened urinary bladder wall.
- Age related renal changes.
- Adrenals at upper end of normal limits for size.
- Liver lesions.
- Gallbladder debris, appears incidental.
- Mild retained gastric fluid.

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The liver lesions are most likely benign regenerative nodules, less likely primary hepatobiliary neoplasia such as hepatocellular carcinoma, less likely metastatic neoplasia. The 4<sup>th</sup> lesion could possibly be more likely hepatobiliary neoplasia such as hepatocellular carcinoma. Recommend fine needle aspirate of the larger lesion that measures 29.3 mm in width with submission for cytology. If inconclusive, recommend recheck ultrasound of this lesion in 6-8 weeks to determine if it is increasing in size. If the lesion appears to be progressively enlarging, then at that time consider CT scan for pre-surgical planning to surgically resect the larger lesion and submit for histopathology. It is important to note that regenerative lesions have been known to measure up to 8.0 cm in diameter, so I still suspect this is most likely a benign regenerative nodule.

The hyperechoic hepatomegaly is possibly due to hyperadrenocorticism or other metabolic diseases. The patient appears to have benign vacuolar hepatopathy. If hyperadrenocorticism is ruled out, recommend screening for other diseases such as hypertriglyceridemia, hypothyroidism, occult pancreatic or occult GI disease.

Given the appearance of the adrenal glands, recommend screening for hyperadrenocorticism either via urine cortisol to creatinine ratio and if elevated recommend low-dose Dexamethasone suppression test, or if there is clinical suspicion for hyperadrenocorticism, you could consider a low-dose Dexamethasone suppression test as first testing modality.

Given that both patient's kidneys show age related signs, recommend full screening, monitoring, and if warranted managing per IRIS guidelines.

If the patient is having lower urinary tract signs, recommend rechecking appearance of the bladder via ultrasound once it is at least moderately full of urine. If bladder wall still appears thickened, then consider urinalysis and urine culture if warranted.

Possible mild gastritis present. No obstructive lesions seen. Recommend treating supportively with antiemetics and antinausea if necessary.



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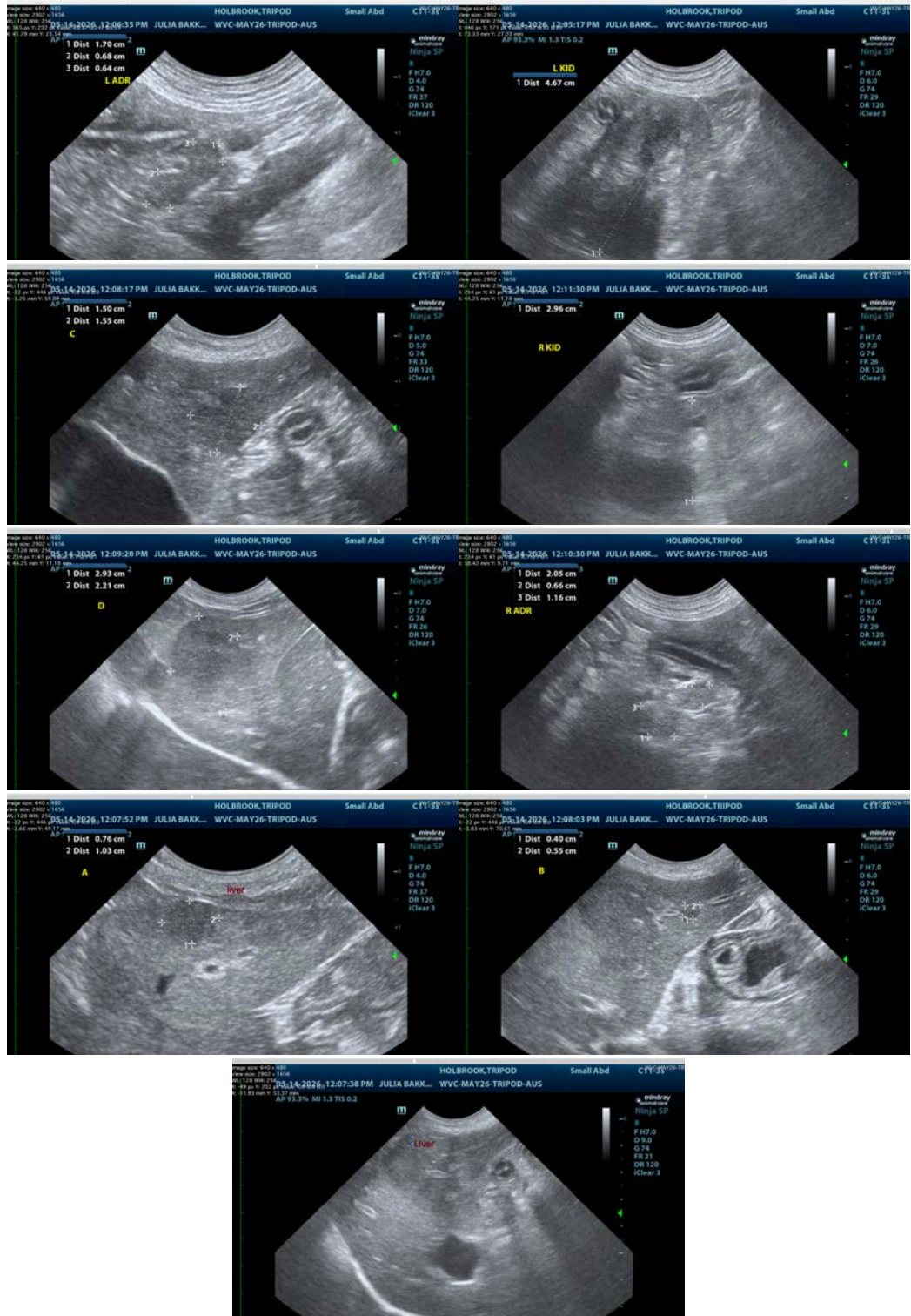
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

Greg Kuhlman, DVM, DACVIM (SAIM)

Veterinary Internal Medicine Specialist

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