



## PATIENT

Tucker Hatler

## SPECIES

Canine

## BREED

Australian Cattle  
Dog

## SEX

M N

## AGE

11 yrs

## WEIGHT

40.3 lbs.

## INTERPRETED BY

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

## IMAGING PERFORMED BY

Jessica Miller

## HOSPITAL NAME

Newton VH

## REFERRING VET

Dr. Kim

## INVOICE

15242

## DATE

10/25/22

## PRESENTING CLINICAL SIGNS

Enlarged prostate on rectal + rads. Straining to defecate, painful back/abdomen, urinary incontinence + occasional stranguria, Cardiomegaly & thoracic mass on rads. Current meds: Carprofen, Enrofloxacin, Lactulose  
Abnormal PE/Chem/CBC/UA Results: WNL 7/29/22

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

CANINE	MR	TR	LA/AO	LA/AO	FS	EF	EPSS
<b>CARDIAC PARAMETERS</b>	<b>VMAX</b> (m/s)	<b>VMAX</b> (m/s)	(Boon method)	(Heart Base; Swe)	(%)	(%)	(cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.3	28-40	40-100	<0.6
<b>PATIENT</b>		2.3	1.2	1.1	33	64	0.27
CANINE	HR	AV	PV	BODY WEIGHT	LA	LVIDd	LVIDs
<b>CARDIAC PARAMETERS</b>	(BPM)	<b>VMAX</b> (m/s)	<b>MAX</b> (m/s)	(kg)	2D short axis Base view (cm)	Avg; 2D and m-mode short axis (cm)	Avg; 2D and m-mode short axis (cm)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6				
<b>PATIENT</b>	93	1.3	0.7		2.9	2.8	

### Cardiac Presentation

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. The **left ventricle** presented thicknesses with linear contour and was not dilated nor restricted. The **myocardium** presented normal echogenicity without subjective evidence of significant fibrotic or ischemic disease. **Contractility** of the ventricular walls was adequate and in normal range for this patient evidenced by the fractional shortening measurement and subjective evaluation of the different regions of the myocardium. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. Mild TR was present on Doppler. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** tract assessment revealed normal valve structure, laminar flow, and diameter (approx. 1:1 pa/ao ratio). No visible **pericardial** or free pleura fluid was noted. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.



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**Urinary System**

Tucker Hatler

The urinary bladder, trigone, and cystourethral junction exhibited normal thickness and tone. Primarily anechoic urine was present in the lumen. Mild, non-dependent, particulate sediment which may indicate cellular debris / protein, crystalline debris, or mucus, was present without evidence of calculus formation. The ureteral papillae were normal. The ureters were not visible which is normal. No evidence of inflammatory or neoplastic urinary bladder criteria were noted.

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The residual prostate was enlarged in size exhibiting mild asymmetrical capsule contour and nonhomogeneous discretely nodular residual prostatic parenchyma exhibiting pinpoint hyperechoic foci, suggestive of areas of pinpoint parenchymal mineralization. Minor evidence of regional periprostatic inflammation was noted. No free fluid was present. The residual prostate measured approximately 3.7 cm in diameter. The post prostatic urethra was not definitively visualized.

No evidence of medial Iliac or sublumbar lymphadenopathy/masses.

**WEIGHT**

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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. No evidence of pelvic dilation was present. The left kidney measured 5.9 cm in length. The right kidney measured 5.8 cm in length.

**INTERPRETED BY**

**Adrenal Glands**

R. McKenzie Daniel,  
DVM, DABVP  
(Canine and Feline)

The bilateral adrenal glands were normal in size. Mild parenchyma heterogeneity and mild capsule asymmetry was present without suspicion for overt neoplasia. The left adrenal gland measured 2.0 cm length x 0.84 cm width at the caudal pole. The right adrenal gland measured 2.7 cm length x 0.67 cm width at the caudal pole.

**IMAGING PERFORMED BY**

**Spleen**

Jessica Miller

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.

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**Liver/ Gallbladder**

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The liver was subjectively normal in size, structure, and contour. The liver parenchyma was uniform and hypoechoic to the spleen with a mild coarse echotexture. The hepatic and portal vasculature were normal in appearance without signs of congestion. The gallbladder was non-distended in size with thin walls and primarily anechoic luminal content. The cystic and common bile ducts were normal.

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**Gastrointestinal**

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The stomach presented intact wall layering with a normal wall layer ratio. The lumen of the stomach was empty with no signs of ileus, obstruction, or foreign material.

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The small intestine presented intact wall layering with 1:3 muscularis/mucosa ratio. The lumen of the small intestine was empty with no signs of ileus, obstruction, or foreign material.



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Normal visible colon wall layers were present with apparent formed feces in lumen. Potential impingement on the ventral colon secondary to residual prostatomegaly is possible.

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**Pancreas**

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.

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Australian Cattle Dog

**Free Abdomen**

No omental masses, evidence of omental lymphadenopathy, or peritoneal free fluid were noted.

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**ULTRASONOGRAPHIC FINDINGS**

**AGE**

11 yrs

- Normal echocardiogram
- Mild TR - no evidence of clinical pulmonary hypertension
- Residual prostatomegaly exhibiting nonhomogeneous parenchyma including probable pinpoint parenchymal mineralization
- Sonographically normal urinary bladder with mild urinary bladder sediment
- Mild age-related renal changes

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**INTERPRETED BY**

R. McKenzie Daniel,  
DVM, DABVP  
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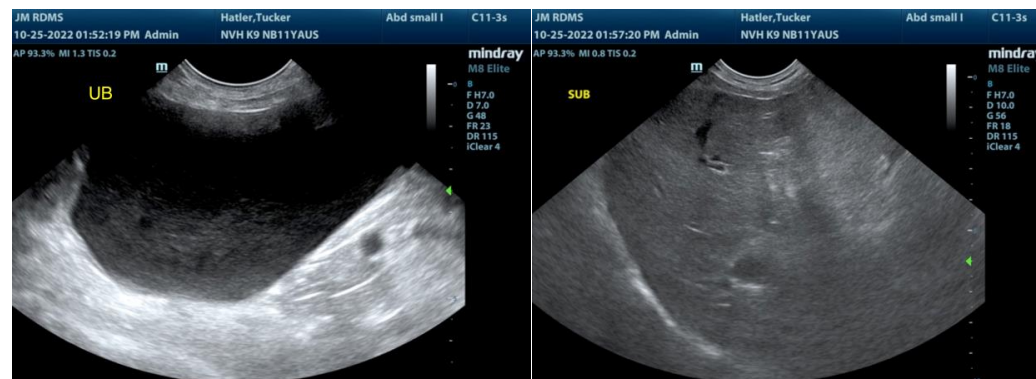
Although sampling is required for a definitive diagnosis, the residual prostatomegaly is suggestive of neoplastic criteria, which may include prostatic or urothelial carcinoma or other. Non-neoplastic etiology for the residual prostatomegaly i.e., prostatitis, is considered a less likely differential diagnosis. Ultrasound guided residual prostate FNA and/or prostatic wash for cytology is recommended. No overt evidence of regional metastasis was noted.

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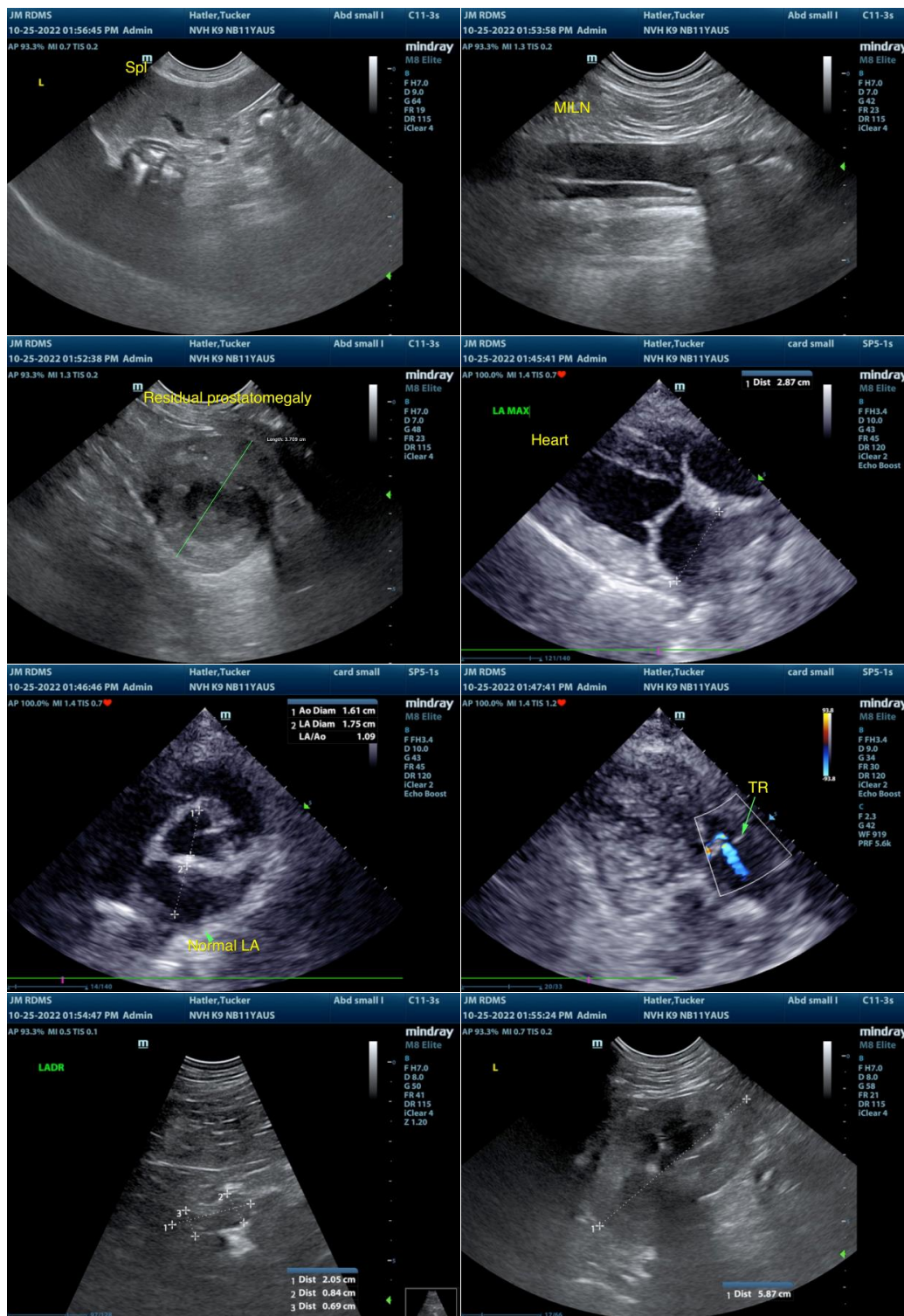
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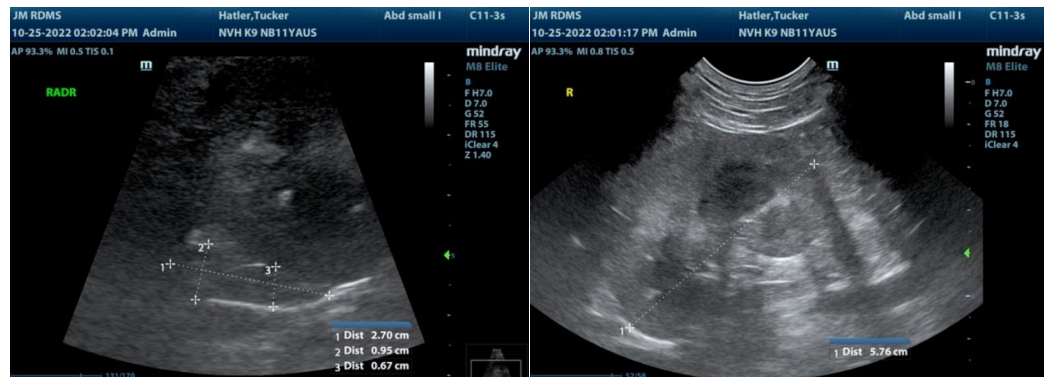
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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)**  
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