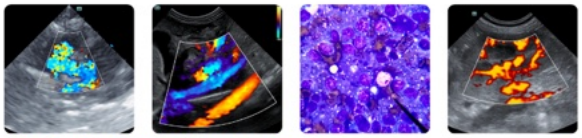

PATIENT

Dakota Hoff

SPECIES

Mustelidae

BREED

Ferret

SEX

Male

AGE

7 years

WEIGHT

2.5 lbs

INTERPRETED BY

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

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

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INVOICE

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PRESENTING CLINICAL SIGNS

Enlarged heart, bronchial pattern , possible mass in abd. (Rads attached for reference) Current meds: Salix inj. 0.04cc bid x 7 days, Enro 22.7 (1/2 bid x 14 days)

ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

Urinary System

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 was noted. Ureteral papillae were normal.

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 this age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 2.93 cm with slight areas of mineralization and minor cortical cyst noted. The left kidney measured 2.7 cm.

Adrenal Glands

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 left adrenal gland measured 0.53 cm. The right adrenal gland measured 0.5 cm.

Spleen

The **spleen** was mildly enlarged and uniform measuring 1.32 cm.

Liver

The **liver** images submitted revealed subjectively normal liver size, contour, and structure. Parenchymal echogenicity was naturally coarse and hypoechoic to the spleen. Vascular and biliary tracts were of normal volume with no evidence of congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. No pathological hepatic lymphadenopathy was evident. No overt structural evidence of inflammatory, infiltrative or regenerative pathology was evident.

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

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demonstrated normal luminal chyme and stool consistency respectively. No obstructive or overt infiltrative disease was noted. Mesenteric lymph node enlargement was noted. The largest lymph node measured 1.6 x 0.7 cm.

Pancreas

The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Pancreatic duct and capsular contour were acceptably normal and parenchyma respected normal curvilinear patterns. No overt evidence of active inflammatory or neoplastic disease was noted.

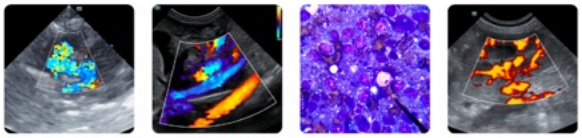
Free Abdomen

A large amount of abdominal fat was noted in this patient.

An occasional hypoechoic nodule noted around the pancreas superimposing the lymph nodes. A mesenteric cyst was noted dorsal to the urinary bladder measuring 0.5 cm.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate LA measurements. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics.. The **left ventricle** presented normal 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 and angles of the myocardium. A trace amount of **aortic insufficiency** was noted. The **right atrium** and auricle revealed normal size, structure and content. No evidence of masses was noted or chamber overload. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinetics. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonic** 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 or extra cardiac pathology in the visible planes. **Cranial mediastinal** fat was noted and corresponds to the fat density noted on radiographs measuring 1.4 cm.



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CARDIAC PARAMETERS	BODY WEIGHT	HR (BPM)	IVSd (cm)	LVIDd (cm)	LVWd (cm)	FS (%)	EF (%)
NORMAL PARAMETER	------	150-240	0.3-0.6	1.0-2.1	0.25-0.6	35-67	80-100
PATIENT	2.5 lbs	200	0.37	0.9	0.4	45	80
CARDIAC PARAMETERS	**LA/AO** (M-mode)	**LA/AO HEART BASE** (Sisson)	**LAD** LA MAX 4 Chamber		**LVOT VEL.** (m/s)	**RVOT VEL.** (m/s)	**IVRT** (m/)
NORMAL PARAMETER	<1.5	1.6	0.7-1.7		<1.6	<1.3	40-60
PATIENT	1.3	1.3	1.0		-	0.78	NM

Adapted from June Boon,Veterinary Echocardiography,1998
Sisson D et al. JVIM 1991; 5: 232, Jacobs et al. Am J Vet Res 1985; 46:1705

ULTRASONOGRAPHIC FINDINGS

Normal echocardiogram with cranial mediastinal fat and minor aortic insufficiency, not clinically significant.

Occasional mesenteric lymph node enlargement.

Mesenteric cyst dorsal to the bladder.

Hypersplenism, likely reactive spleen, potential emerging round cell neoplasia.

Large amount of abdominal fat.

Occasional renal cyst noted.

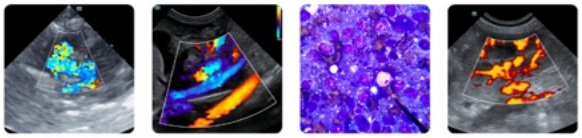
Otherwise, age related abdominal changes.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

25-gauge FNA oft eh spleen is indicated if any weight loss is an issue.

The heart is structurally normal with no evidence of volume overload or pressure overload. There is no cardiac necessity for a diuretic in this patient. The appearance of enlarged heart on radiographs is superimposition of fat density with a focal accumulation in the cranial mediastinum.

New Jersey Mobile
FUELED BY SONOPATH VETERINARY ULTRASOUND



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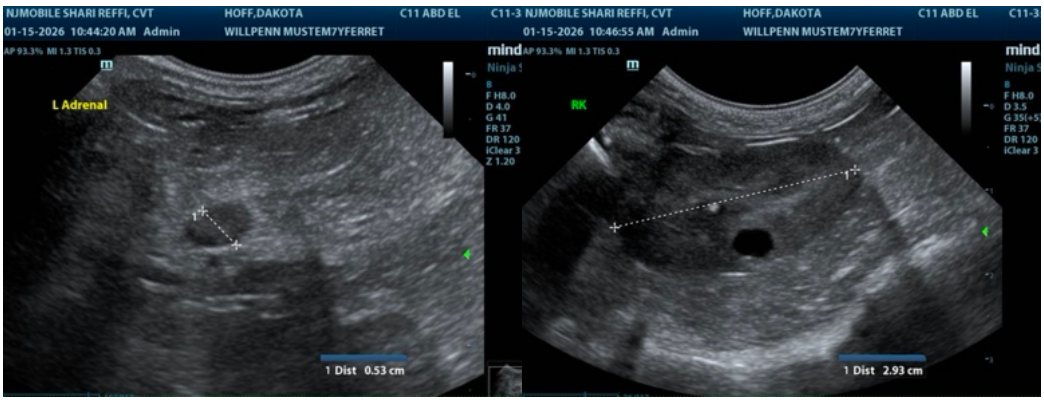

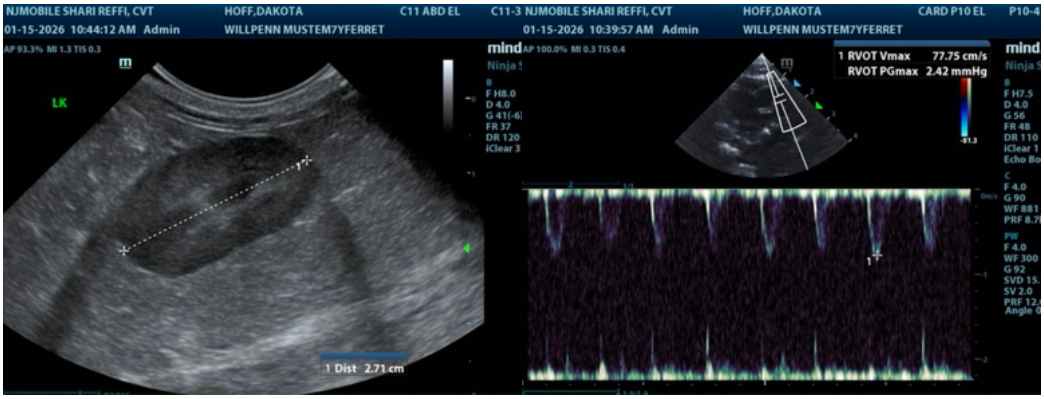

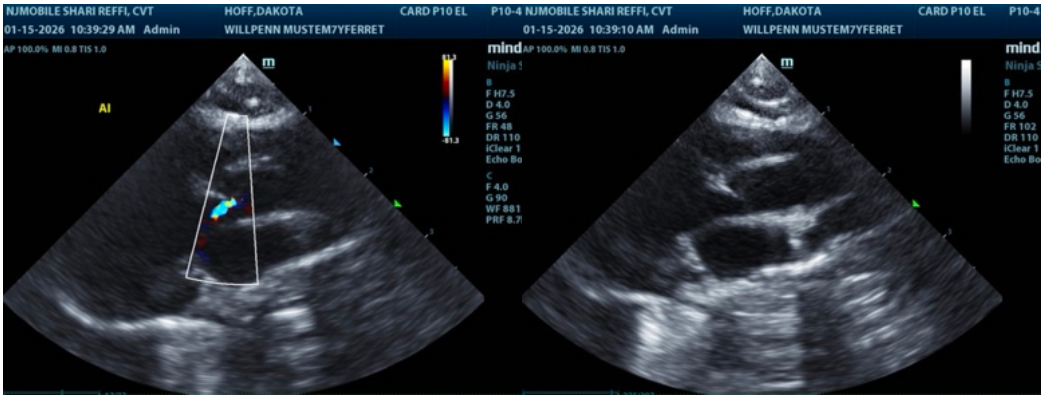

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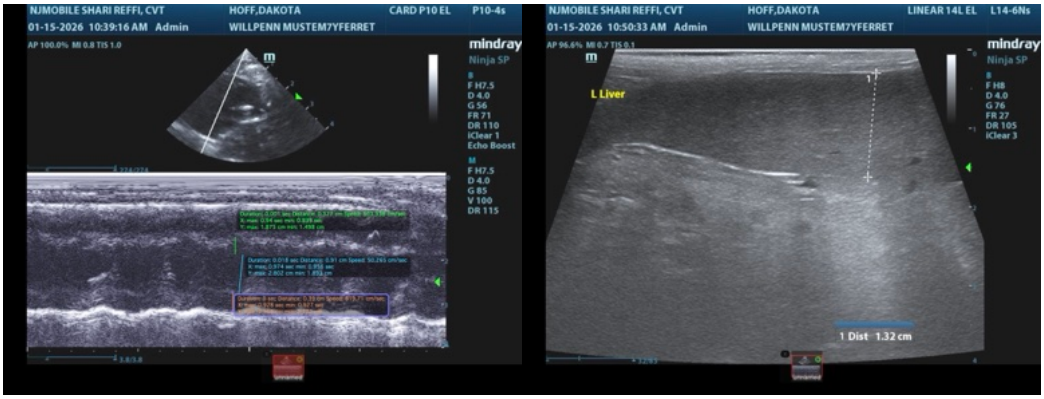

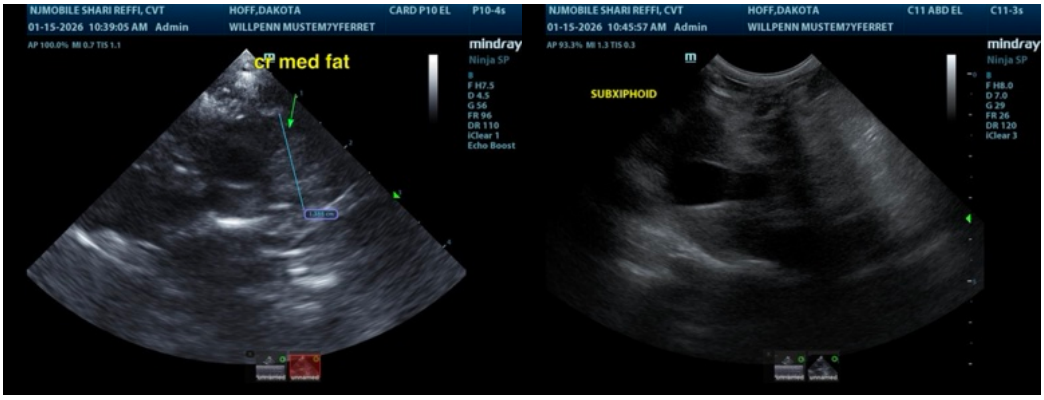

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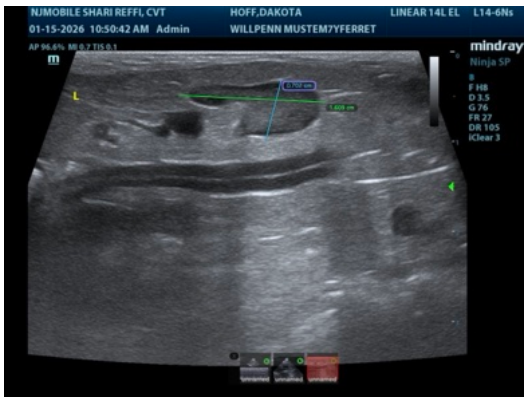

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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

Info@SonoPath.com