

PATIENT

Hannah Fox

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Spayed Female

AGE

12 ½ years

WEIGHT

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Shari Reffi, CVT

HOSPITAL NAME

Newton VH

REFERRING VET

Dr. Colyer

INVOICE

91266

DATE

8/17/21

PRESENTING CLINICAL SIGNS

History: Anorexia, hypothermia, azotemia, electrolyte derangements. Current meds: Unasyn
Abnormal PE/Chem/CBC/UA Results: Bun 107.6 (32 H), Crea 2.6 (1.8 H), Phos 13.3 (6.0 H), Ca 7.8 (8.8 L), Glu 175 (130 H), Na 130 (147 L), K 5.3 (5.3 H), Cl 90 (107 L), USG 1.048

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** were mildly swollen and slightly irregular. This is a non-specific presentation. The left kidney measured 3.61 cm. The right kidney measured 4.3 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 right adrenal gland measured 0.48 cm. The left adrenal gland measured 0.62 cm.

Spleen

The **spleen** in this patient was uniform, yet volume contracted. Hydration status should be assessed.

Liver

The **liver** was mildly swollen. The hepatic parenchyma was hypoechoic to the falciform fat. The portal vein to vena cava ratio was 1:1. The vena cava measured 0.4 cm. The gallbladder and common bile duct were unremarkable.

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.



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Pancreas

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Free Abdomen

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The base and limbs of the **pancreas** were observed to be largely isoechoic to surrounding omental fat. Some parenchymal remodeling, however, with mild deviation from curvilinear normalcy was observed. Pancreatic duct and capsular irregularities were present consistent with age related changes. If pain upon imaging (+ Murphy sign) was present or if the patient is focally painful in subxiphoid palpation then low-grade smoldering chronic pancreatitis should be suspected.

A mild to moderate amount of free fluid was noted in the abdomen. Minor heterogenous omental changes were noted.

ULTRASONOGRAPHIC EXAMINATION OF THE HEART

Contractility was adequate, yet severe hypovolemia was noted with a volume contracted left ventricle and left atrium. The cranial and caudal **mitral** valve leaflets presented normal linear structure and kinetics. 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 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). A large amount of non-cardiogenic pleural effusion was noted with mild, echogenic debris. A 1.5 cm parenchymal mass was noted in the thorax as well and was floating amongst the pleural effusion. Minor thoracic lymphadenopathy was noted.

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FELINE CARDIAC PARAMETERS	BODY WEIGHT (kg)	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		NM	0.4	1.0	0.45	40	
FELINE CARDIAC PARAMETERS	LA/AO (Boon)	LA/AO HEART BASE (Sisson)	LA 2D 4-chamber long axis AS to FW (Sisson) (cm)	LVOT VEL. (m/s)	RVOT VEL. (m/s)	IVRT (m/)	
NORMAL PARAMETER	<1.5	0.88-1.79	0.7-1.7	<1.6	<1.3	40-60	
PATIENT	0.8			1.0	0.7	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							



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ULTRASONOGRAPHIC FINDINGS

Dual cavity ascites, non-cardiogenic.

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Minor thoracic lymphadenopathy with irregular lung tissue.

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Domestic Shorthair

Swollen, slightly irregular kidneys.

Swollen liver.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

SEX

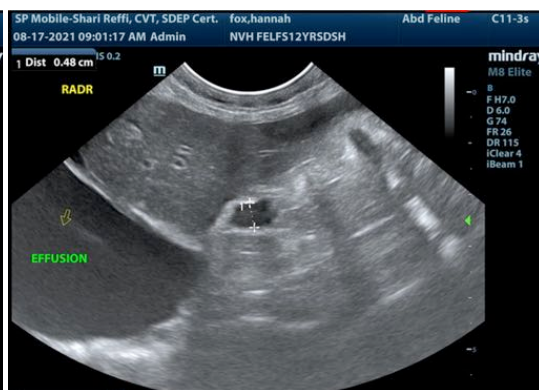
Spayed Female

I recommend cytospin of the pleural effusion +/- cytospin of the ascites to assess for exfoliating neoplasia. Minor thoracic lymphadenopathy was noted with irregular lung tissue. I suspect carcinomatosis, lymphomatosis or similar. Supportive care with IV fluid support is recommended until cytospin results can be realized. The patient has third spacing fluid to the thorax and abdomen, yet presents intravascular volume contraction. The prognosis is guarded to poor.

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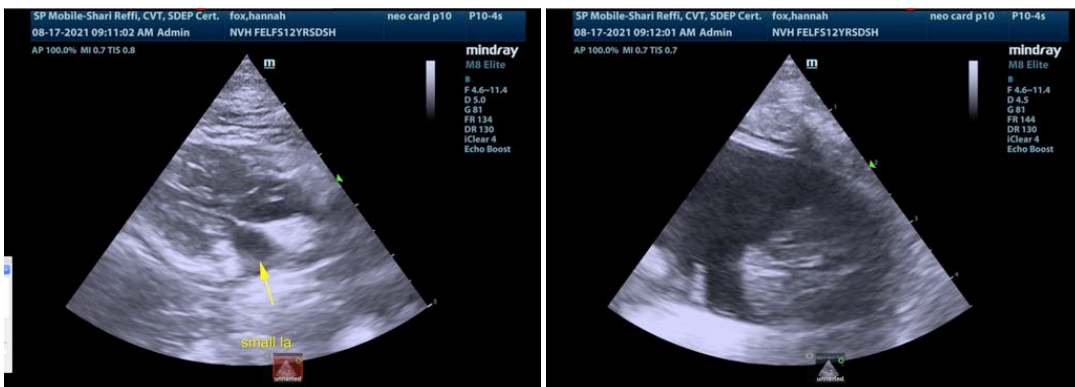
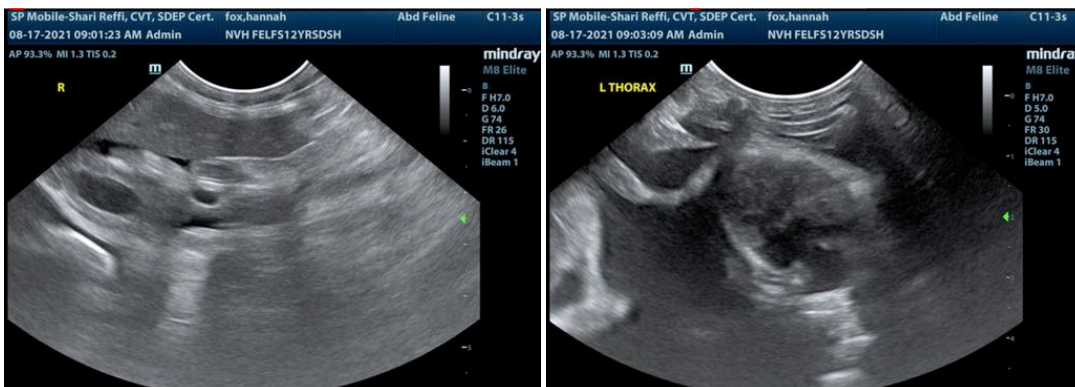
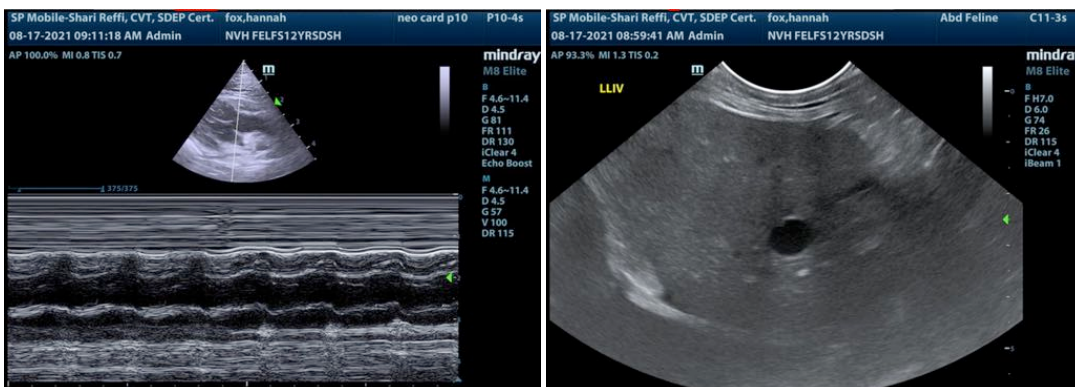
Dr. Colyer

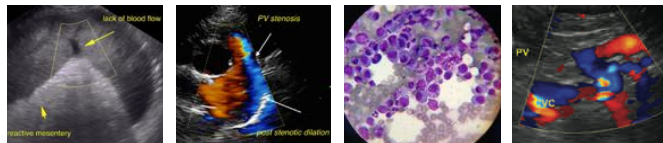
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veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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Info@SonoPath.com

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