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Clinical Sonography & Telecytology
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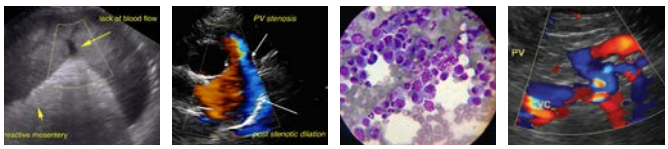

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1-800-838-4268 info@sonopath.com

PATIENT
Willow Bisonti

SPECIES
Feline

BREED
DLH

SEX
Spayed Female

AGE
14 Years

WEIGHT
9.5 Pounds

INTERPRETED BY
Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY
Shari Reffi, CVT

HOSPITAL NAME
ACC

REFERRING VET
Dr. Hallihan

INVOICE
46895

DATE
4/24/23

PRESENTING CLINICAL SIGNS

Episodes of collapse, pleural eff noted on rad. Meds: Lasix inj. , transdermal tapazole

Abnormal PE/Chem/CBC/UA Results: hyperglycemia 237, mild hypercalcemia, mild neutrophilia

ULTRASONOGRAPHIC EXAMINATION OF THE HEART & ABDOMEN

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		230	0.4	1.0	0.4	30	

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	1.0	1.0				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

Thorax/Cardiac

A moderate amount of pleural effusion is noted in this patient with variable areas of lung consolidation and an overt lung mass measuring approximately 2.0 cm x 2.5 cm in what appeared to be the left caudal thorax. Other areas of lung consolidation noted around the heart base. Pericardial effusion also noted. The vena cava was dilated at the level of the diaphragm at 0.68 cm. Tachycardia noted. The left heart was unremarkable with normal volume to volume contraction with adequate contractility and structure. The right atrium presented minor collapse and tamponade effect owing to the pericardial effusion, which measured approximately 1.5 cm in width. No overt cardiac masses noted yet could not be ruled out.

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 were 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 his age patient. Medullary structure differed distinctly from that of the cortex and no evidence of pelvic dilation was present. The right kidney measured 3.62 cm. The left kidney measured 3.42 cm.

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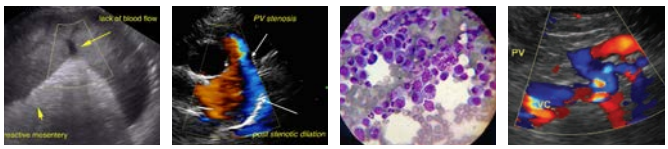

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Adrenal Glands

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 0.35 cm.

Spleen

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

Liver

The **liver** images from right and left intercostal as well as subcostal views revealed subjectively normal liver size, contour, and structure. Some age-related parenchymal remodeling was noted but likely not clinically significant at this time. Passive congestion patter noted. The gallbladder presented some dependent debris with essentially normal contour. The cystic and common bile ducts were normal. No overt evidence of active inflammatory, infiltrative or regenerative pathology was noted but should be paired with current or past LE elevations regarding any clinical significance to this presentation. The hepatic lymph nodes were unremarkable.

Gastrointestinal

The **stomach** was unremarkable. The ileocecal junction revealed a 2.0 cm annular mass with loss of structural detail.

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

Nodular omental changes also noted, suggestive for carcinomatosis type presentation.

ULTRASONOGRAPHIC FINDINGS

- Ascites owing to passive congestion in the chest
- Multifocal lung consolidations and lung masses
- Ileocecal annular mass
- Nodular omental changes
- Age related renal and hepatic changes
- Volume contracted spleen

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Two separate causes of passive congestion such as the lung masses that may be impinging upon or obstructing the vena cava and/or the pericardial effusion are noted. The pericardial effusion revealed only minor collapse of the right auricle. The right auricle appeared to dilate adequately enough for vena cava inflow. Therefore, I feel there is likely a secondary cause of passive congestion.

The multifocal lung consolidations and lung masses would suggest metastatic disease. Suspect carcinomatosis or dual cavity neoplasia with manifestations in the pleural and pericardial space.

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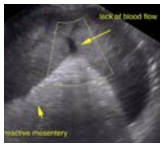
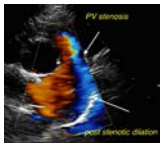
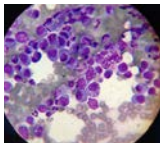
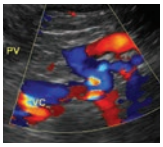

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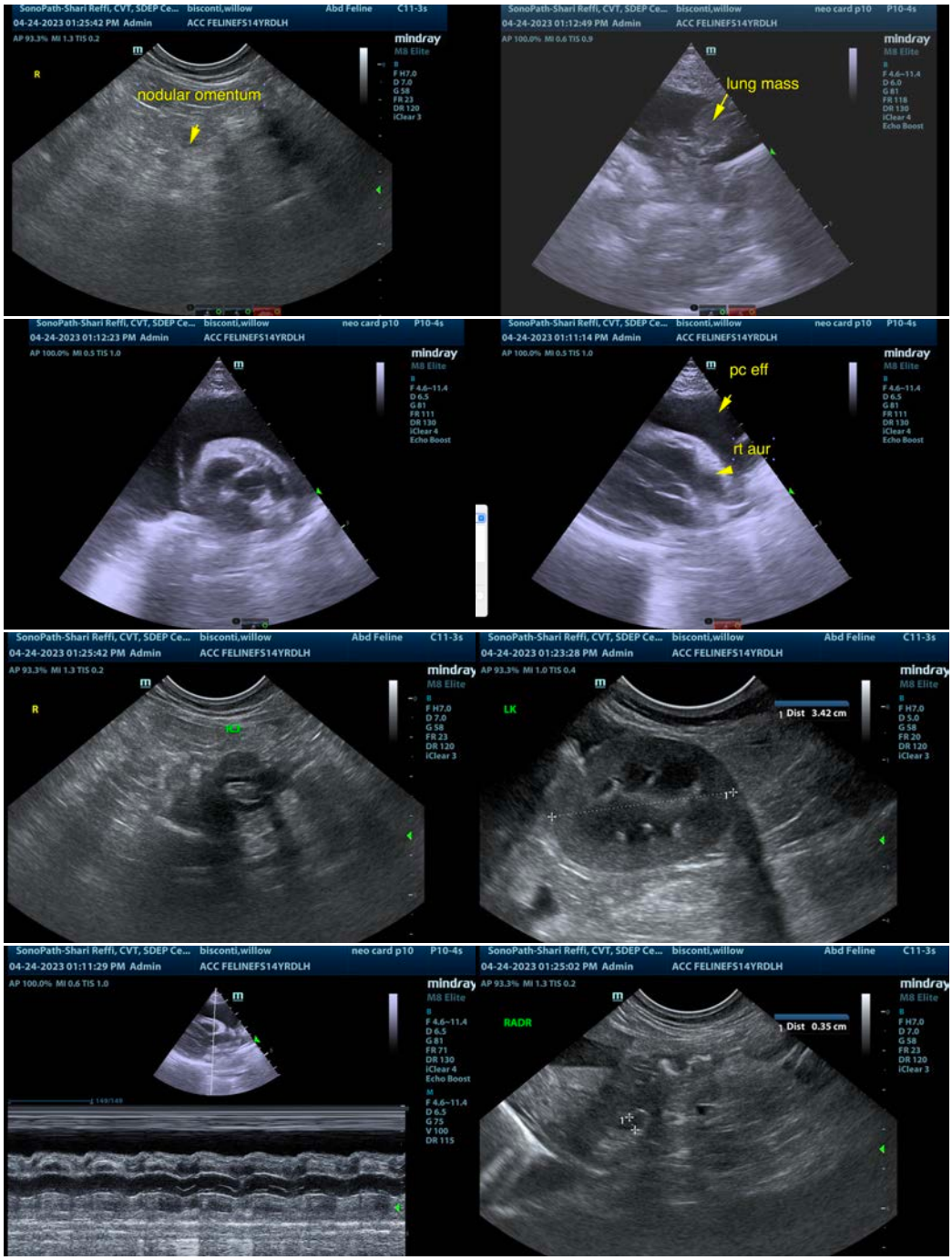
Pericardiocentesis and cytospin as well as culture would be warranted, as well as pleurocentesis and cytospin, as well as FNA of the ileocecal mass for further staging. However, this patient has a highly precarious metabolic presentation, given the volume contracted heart and pericardial effusion. This patient is at risk for sudden death. Underlying FIP is a remote potential as well as pericarditis. The effusions in the thorax are not related to left-sided heart failure, as the left heart is volume contracted. Prognosis is extremely guarded to poor.



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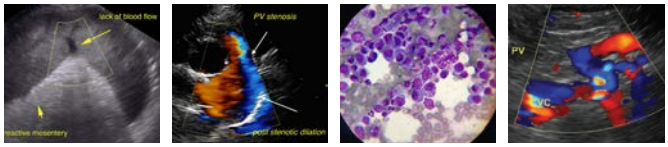

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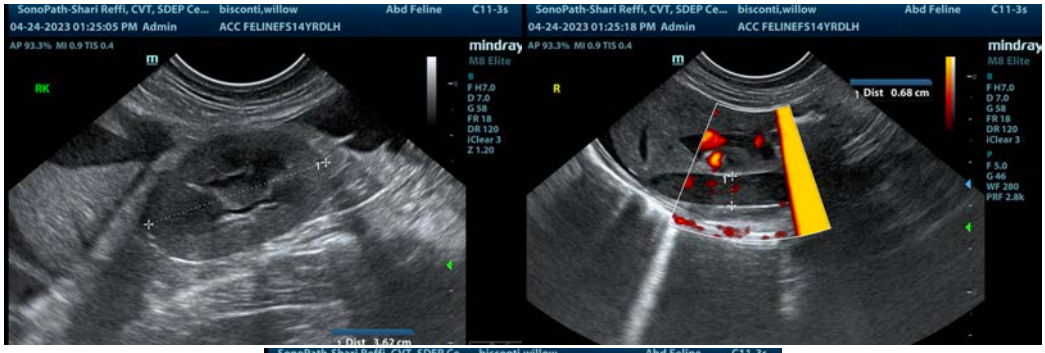

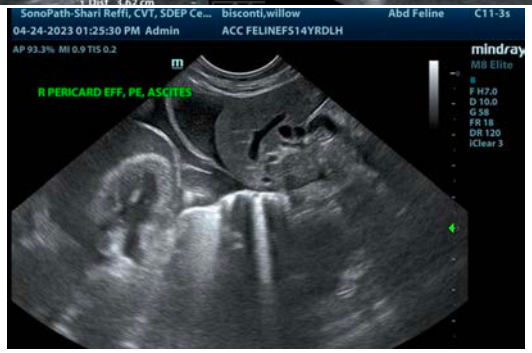

The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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