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Clinical Sonography & Telecytology
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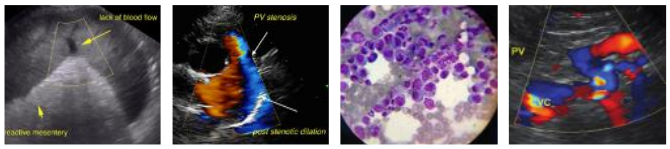

SonoPath.com
1-800-838-4268 info@sonopath.com

PATIENT

Roxy Chippure

SPECIES

Feline

BREED

DSH

SEX

Spayed Female

AGE

7 Years

WEIGHT

4.4 kg

INTERPRETED BY

Eric Lindquist, DMV DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Nigel Gumley

HOSPITAL NAME

Cedarview AH

REFERRING VET

Christie Limbrick

INVOICE

13434

DATE

10-1-21

PRESENTING CLINICAL SIGNS

History: Vaccinated Sept 22nd, slightly lethargic the next day. Over the weekend was placed in boarding facility where she progressively became anorexic, increasingly lethargic and dull. On arrival to our clinic she had not eaten in 5 days and was quite dull.

Abnormal PE/Chem/CBC/UA Results: On exam she had what initially sounded like wheezes on the right side and muffled heart and lung sounds on the left. She was slightly dehydrated and had some pain in her cranial abdomen Bloodwork nsf On xray she had severe pleural effusion in her chest - 200ml of straw coloured fluid was removed from her chest and this ultrasound/echo was performed afterwards. The structure in her chest appears to be mass like although we wondered if there was a structure that resembled an intestinal loop. We were able to follow the structure in the thorax to her cranial abdomen

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	--	NM	0.5	1.2	0.5	55	--
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	1.1	0.93	1.0		--	1.20	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

Cardiac Presentation

The **left atrium** appeared subjectively volume contracted. 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. 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). Non-cardiogenic pleural effusion noted in this patient. The patient was tachycardic at the time of the sonogram.

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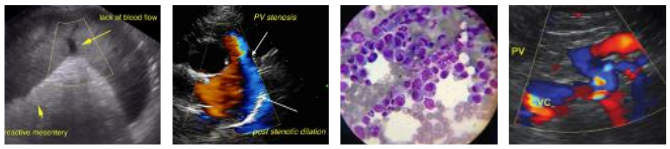

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Urinary System

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 left kidney measured 3.0 cm.

Adrenal Glands

The regions of the **adrenal glands** revealed no evident pathology.

Spleen

The **spleen** presented a smooth homogeneous parenchyma hyperechoic to liver and renal cortical parenchyma. The capsule was smooth without noticeable expansion or deviation from within the spleen or adjacent pathology. The splenic vasculature demonstrated normal volume without signs of congestion or thrombosis. No sonographic evidence of acute or chronic inflammatory, neoplastic, or infarctual changes were noted.

Liver

Heterogenous **hepatic** changes noted. The gallbladder and common bile duct were unremarkable.

Gastrointestinal

The **stomach** in this patient revealed a concentric mass entering into the gastroesophageal inlet. Concentric loss of mural detail noted throughout the stomach. Regional inflammation noted. Herniation of part of the tissue appeared to be present as well.

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.

Other

The caudal **thorax** in this patient revealed a large parenchymal mass (4.0 cm x 3.0 cm) deviating the diaphragm caudally, appears to be deriving from the lung.

ULTRASONOGRAPHIC FINDINGS

- Left atrium subjectively volume contracted
- Tachycardia noted at the time of the sonogram
- Non-cardiogenic pleural effusion
- Undifferentiated gastric and regional mass infiltrating into the chest with esophageal and regional lung involvement- round cell neoplasia or carcinoma and secondary pleural effusion
- Heterogeneous hepatic changes

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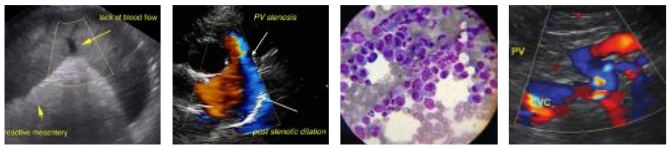

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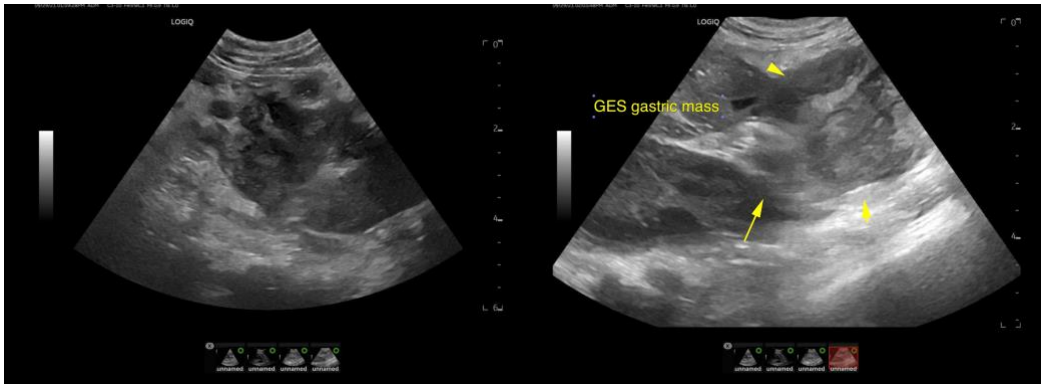
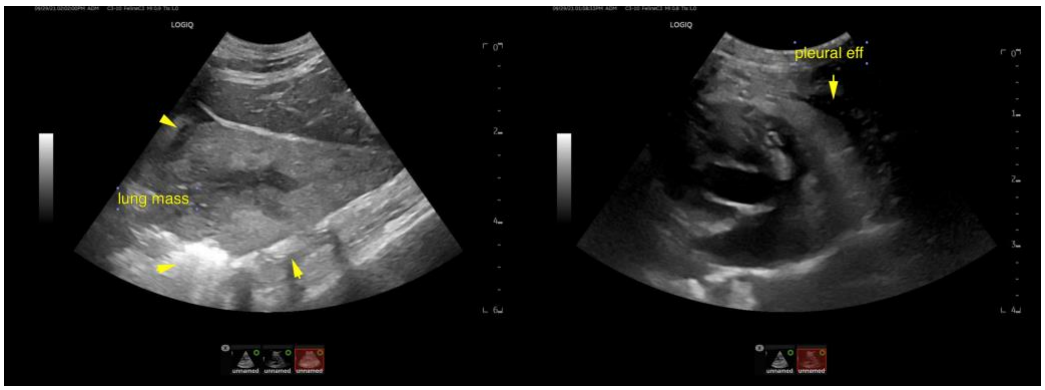
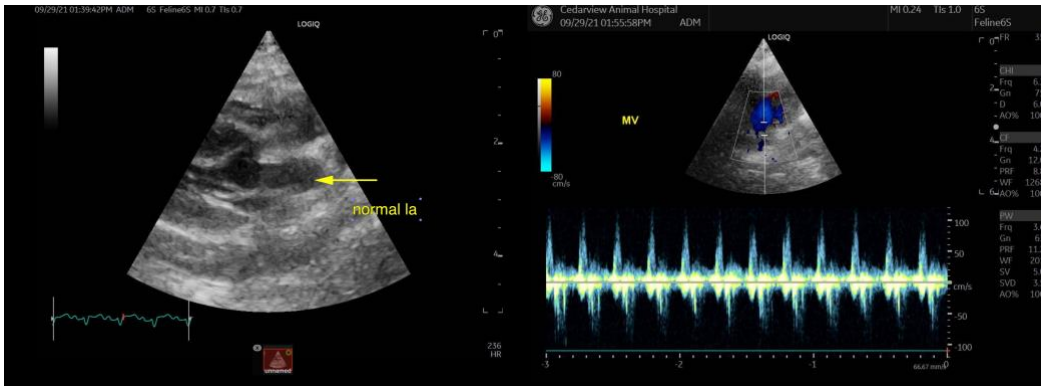
- Age-related renal changes

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

Prognosis is poor long term in this patient. FNA of the accessible pathology in the cranial abdomen would be recommended for further definition.







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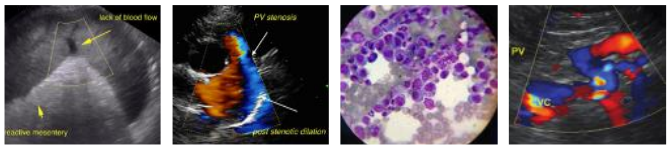

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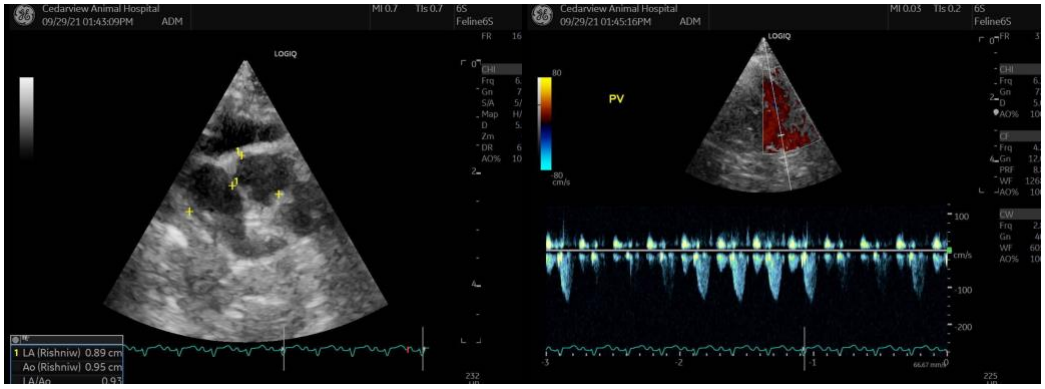

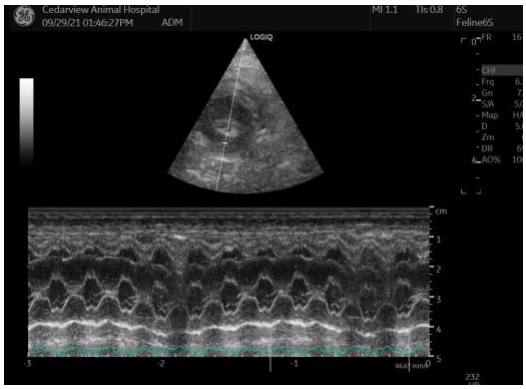

The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

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