



PATIENT

Nelson Hager

SPECIES

Feline

BREED

Domestic Shorthair

SEX

Neutered male

AGE

13 years

WEIGHT

8.8 lbs

INTERPRETED BY

Eric Lindquist, DMV
DABVP, Cert. IVUSS

IMAGING PERFORMED BY

Hesham Akbawy

HOSPITAL NAME

Lincoln Avenue Cat and
Dog Hospital

REFERRING VET

Dr. Akbawy

INVOICE

74201

DATE

4/6/26

PRESENTING CLINICAL SIGNS

- Presented with anemia few weeks ago, treated with Pet tinic, didn't continue.
- Presented today with Cold R. Legs, no pain or mechanics only from the hip.
- Front legs BG: 69, R. Legs BG: 44
- Treated with Olavex, Hydromorphone.
- Checking for Cardiogenic Saddle thrombus.
- On Atenolol as well as of today

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. The **left ventricular outflow** tract demonstrated normal laminar flow and subjective structural integrity. **Right** sided volume overload of the right atrium and right ventricle and pulmonary artery with concurrent pleural effusion was noted. Arrhythmogenic activity was noted.

FELINE 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	8.8 lbs	230	0.55	1.2	0.4	40	NM
FELINE 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	1.6	1.6	1.8		None	0.9	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 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. Hyperechoic medullary rim sign was noted in both kidneys. The left kidney measured 3.7 cm. The right kidney measured 3.6 cm.

The **iliac** trifurcation revealed volume contracted vena cava, normal aorta. There was no overt thrombosis. However, I cannot rule out that potential.

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.

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 was noted.

Liver

The **liver** revealed swollen contour, coarse architecture and hepatic vein dilation. The vena cava was dilated. This is consistent with passive congestion. The gallbladder presented acceptably thin walls with primarily anechoic content. The cystic and common bile ducts were normal. Pleural effusion was noted through the diaphragm.

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

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 ascites was noted.

Enhanced mesentery was noted throughout midabdomen.

ULTRASONOGRAPHIC FINDINGS

Ascites owing to passive congestion with geriatric changes.

Medullary rim kidney, idiopathic finding.

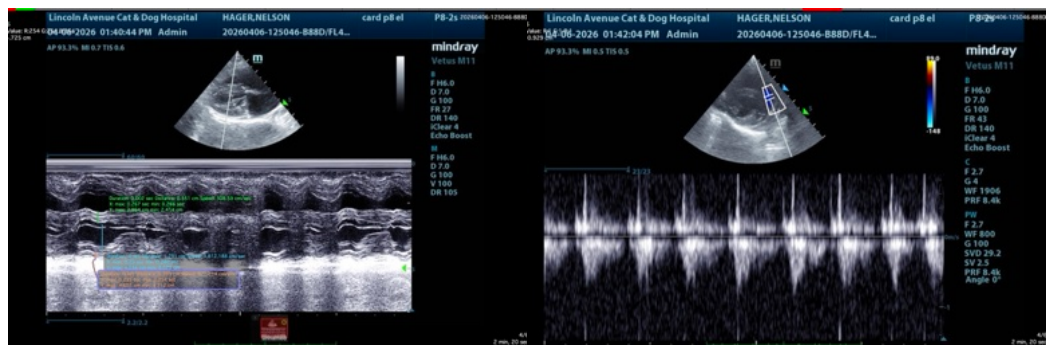
Right-sided heart failure with passive congestion and ascites. Concurrent pleural effusion.

Arrhythmogenic heart.

INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The exact cause of right-sided failure is unclear. There may be multiple issues occurring in this patient. Prognosis is extremely guarded to poor depending upon response to therapy. Deep femoral thrombosis is a potential in this patient. However, no overt thrombosis was noted in the iliac trifurcation.

I recommend management for heart failure in this patient with Pimobendan at 0.3 mg/kg b.i.d. Plavix therapy at 18.25 mg s.i.d., ace inhibitor at 0.5 mg/kg s.i.d. and Lasix at 6.25 mg-12.5 mg s.i.d. to b.i.d. Heat support is indicated as well as arrhythmogenic activity based on EKG results. The prognosis is extremely guarded. Cardiology referral may be the best option in this patient. However, this patient is at high risk for sudden death.





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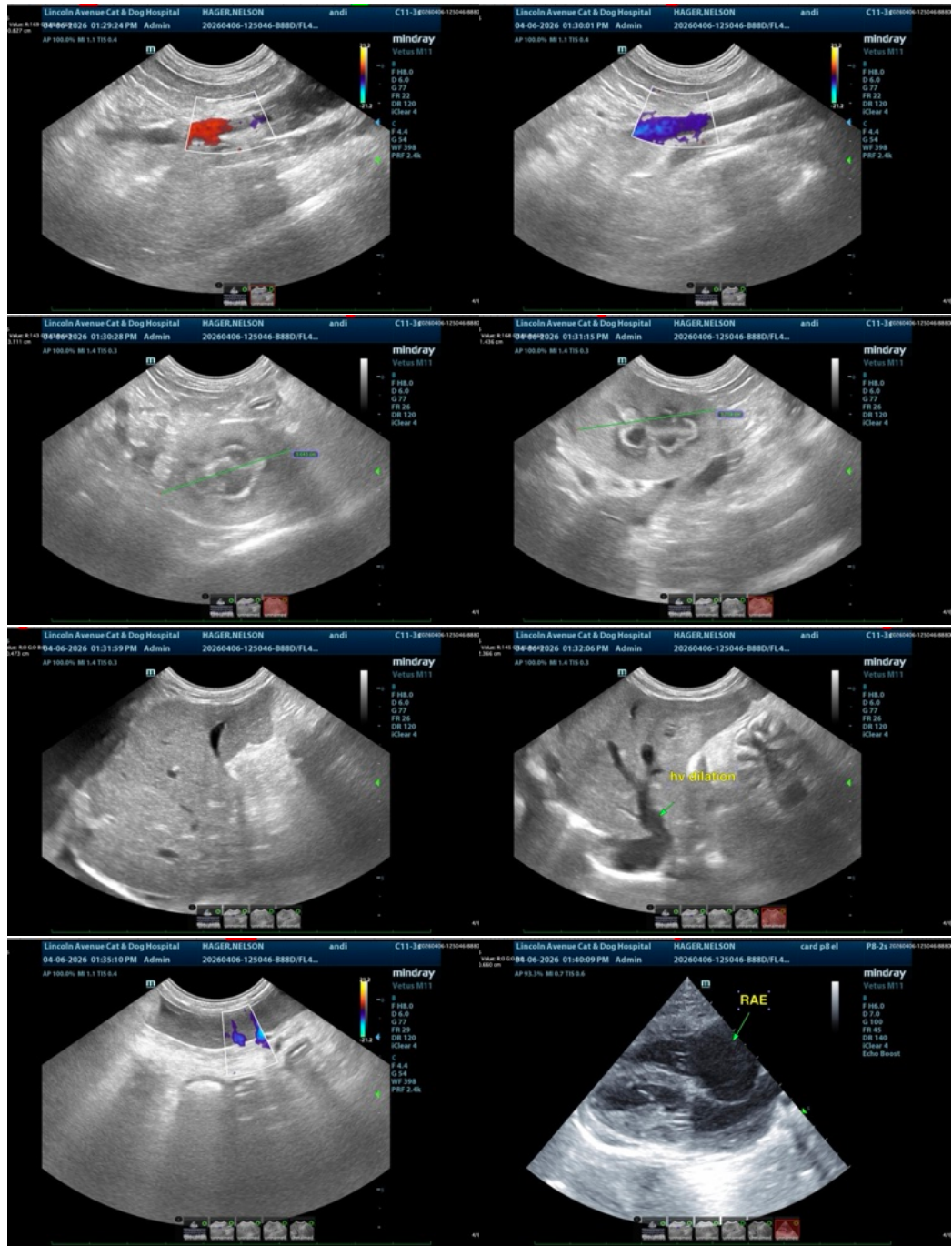
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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 (CFM), Cert. IVUSS, CEO of SonoPath.com

info@SonoPath.com