



**PATIENT**

Abbie Moloney

**SPECIES**

Canine

**BREED**

Golden Retriever

**SEX**

Spayed female

**AGE**

9 years

**WEIGHT**

115 lbs

**PRESENTING CLINICAL SIGNS**

History: Newly dx hypothyroid 10/3/22, started Thyro-tabs SID. Pet seen on 11/14/22 for acute soft ball sized mass, firm and hot swelling, involving R mammary glands 3 and 4. Improved with NSAID and Cephalixin, but still present. Anemic, but improving today. Sedated with Torbugesic and Propofol. FNA of Mammary gland.

Abnormal PE/Chem/CBC/UA Results: 10/3/22 HCT 40%, ALT 251, Chol 640, Trig 472, TT4 < 0.4, TSH 0.57. 11/16/22 HCT 35%. 11/22/22 Hct 34% Today: HCT 38%, Retics 178k H.

**ULTRASONOGRAPHIC EXAMINATION OF THE HEART**

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. The cranial and caudal **mitral** valve leaflets presented normal linear structure, extension in systole, and union in diastole with normal kinesis. 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 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. **Tricuspid** valvular assessment demonstrated adequate linear morphology and kinesis. The **right ventricle** was of normal size (1/3 diameter of LV), chordae structure, myocardial echogenicity and thickness. **Pulmonary outflow** 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. The cranial **mediastinum and pericardial and extra-cardiac regions** were free of masses in the visible window.

**INTERPRETED BY**

Eric Lindquist, DMV DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Ebersole

**HOSPITAL NAME**

Scanvet

**REFERRING VET**

Dr. Walsh-Meiczinger

**INVOICE**

42796

**DATE**

11/29/22

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT			1.0	1.12	35	80	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT	LA (2D short axis Base view) (cm)	LVIDd (Avg; 2D and m-mode short axis) (cm)	LVIDs (Avg; 2D and m-mode short axis) (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT		2.01	1.43	115 lbs	3.5	3.8	



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**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN**

**Urinary System**

The **bladder** in this patient was mildly thickened with slight echogenic mural changes. No calculi or masses were noted. Slight micropolypoid changes were noted. This is a frequent finding in older animals and may be linked to a history of chronic urinary tract infection or active urinary tract infection. Urinalysis would be recommended with culture if any evidence of inflammatory sediment is present. The region of the trigone and visible pelvic urethra were normal.

Residual uterine stump was noted and measured 1.0 cm in width. The uterine stump extended 2-3 cm beyond the apex of the urinary bladder.

The **kidneys** revealed normal size and structure, corticomedullary definition and ratio for this age. The cortices presented largely uniform texture with normal echogenic relationship to liver and spleen. Medullary structure differed distinctly from the cortex and no evidence of pelvic dilation was present. The capsules were acceptably uniform without significant irregularities. The right kidney measured 7.74 cm. The left kidney 7.2 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 3.27 x 1.99 cm at the cranial pole and 0.7 cm at the caudal pole. The left adrenal gland measured 3.13 x 0.46 cm at the caudal pole and 0.41 cm at the cranial pole.

**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 multi-focal, hypoechoic nodule noted. The largest of which measured 3.0 cm in the left cranial liver. Minor, heterogenous parenchymal changes were noted elsewhere. Minor, dependent gallbladder debris and polyps were noted.

**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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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.

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**Free Abdomen**

**BREED**

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The mammary glands in this patient were nodular, irregular and hypoechoic.

**SEX**

Spayed female

Largely age related hepatic changes with concerning nodules. Likely benign liver nodule hyperplasia versus carcinoma.

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Normal echocardiogram, no evidence of pathology.

**WEIGHT**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Hepatic FNA is indicated. There was no evidence of the cause of anemia. CBC path review +/- bone marrow aspirates is indicated. There was no evidence of metastatic disease unless the liver nodule presents metastatic movement. Nodular hyperplasia is more likely and should be monitored for any progression over the next 2-4weeks.

**INTERPRETED BY**

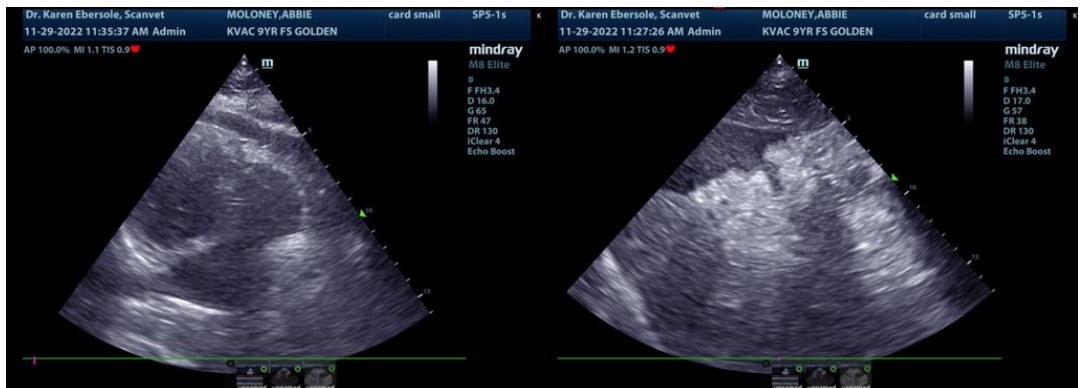
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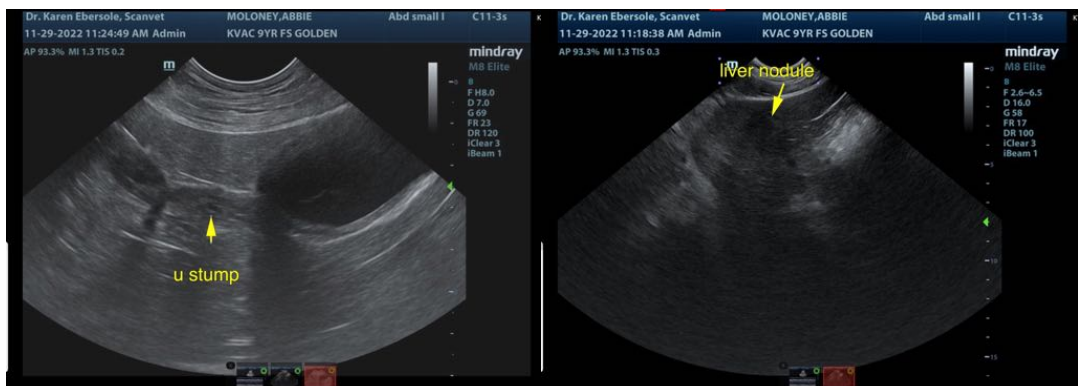
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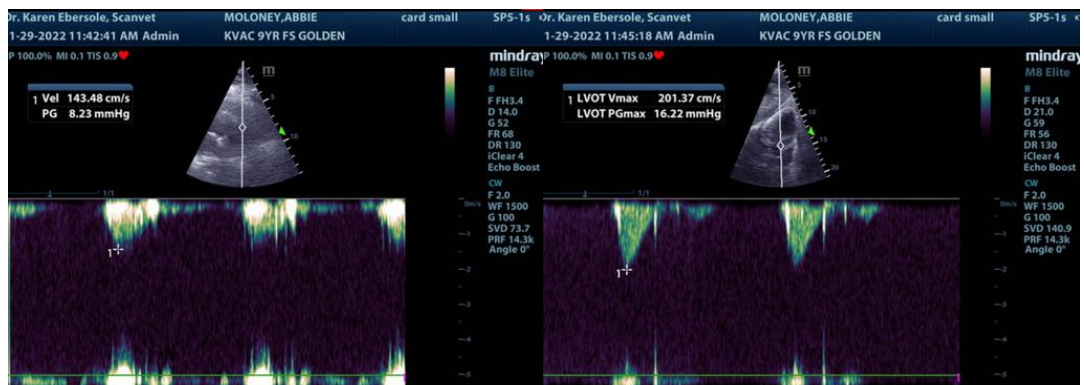
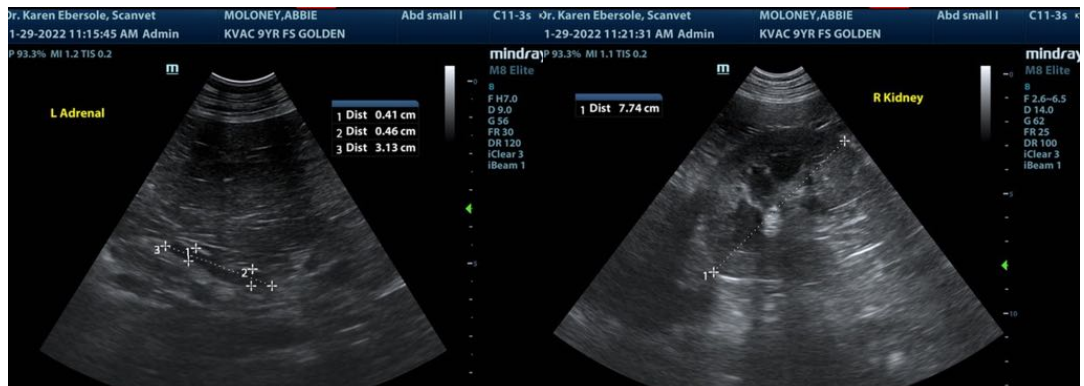
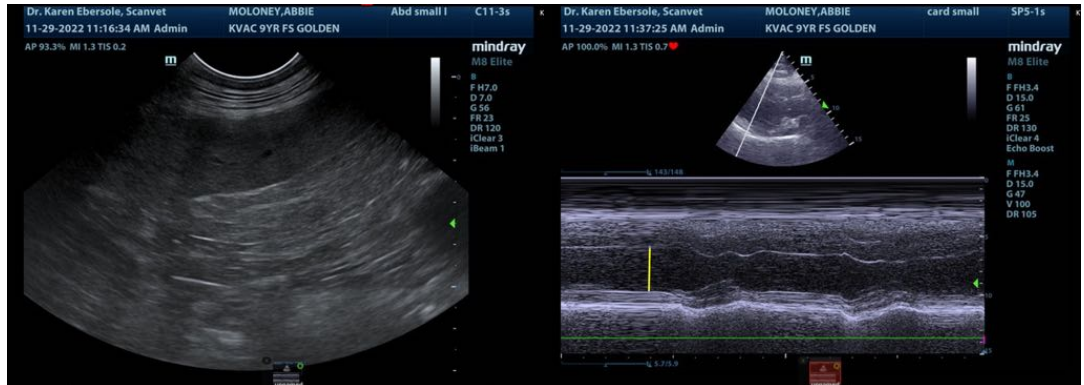
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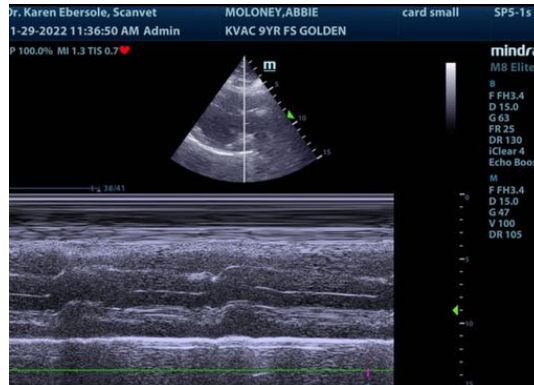
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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