



## PATIENT

Cammie Trovalli

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Spayed female

## AGE

14 years

## WEIGHT

15.5 lbs

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Dr. Jocelyn Hollway

## HOSPITAL NAME

Seven Valleys VH

## REFERRING VET

Dr. Deihl

## INVOICE

68796

## DATE

11/18/25

## PRESENTING CLINICAL SIGNS

History: Presents for work-up prior to cystotomy and COHAT. hx SINUS ARRHYTHMIA present; hx 1/6 murmur hx breeding dog, is currently spayed but had multiple litters at a puppy mill BAR. ABD = SNP. Grade 1 HM heard today (loudest on LEFT). Lungs auscultate clear bilaterally; trachea clear. Bladder stones noted in February 2025 (no hx of cystotomy). BCS 6/9; 25-50% ext hips today; mild crepitus bilat stifles, MLP stable; HL 50-75% ROM. MASSES NOT FULLY CHARTED TODAY AS NOT MAIN CONCERN; FOCUSED on mass of concern--L ventral abd at end of ribcage is 8-10mm raised cutan and alopectic mass with min debris surrounding. CRT 2sec, pale pink; ddz2-3/4 with FRIABLE (bled when bumped) gingival proliferation RIGHT mandible at mid arcade (biopsy obtained = pending) Abnormal PE/Chem/CBC/UA Results: Temp (°F): 101.90 | H.R.: 128 | R.R.: 36 | C.R.T.: 1-2 sec | M.M.: Pink Diagnostics: Blood pressure - avg 148mmHg ECG - NSF 10/25/25: CBC: Plate 442 H (412)--r/o activation vs other CHEMISTRY: Glob 4.2 H (4.0)--r/o inflamm ALP 1115 H (160); prev 2/20/25--1443--STABLE--r/o GIT vs dental disease vs other Lytes: Cl 107 L (108) T4 = 2.2 normal 4Dx = (-)x4 PT/PTT--7.9/11.8 NSF CXR to IDX: CONCLUSIONS: • The radiographs are unchanged from previous. • No signs of cardiovascular disease and a cause of the heart murmur is not evident. Compensated valvular insufficiency is considered most likely. • Stable mild bronchial/bronchointerstitial lung pattern is consistent with normal age-related changes, chronic bronchitis is a less likely differential. • No evidence of metastasis.

## ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN

### Urinary System

The **urinary bladder** revealed a large calculus that measured 1.7 cm with an apical bladder wall thickening measuring up to 0.45 cm with micropolypoid changes. Smaller sand and polyps were noted at the cystourethral junction.

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. A 0.5 cm anechoic cyst was noted in the cranial pole of the left kidney. The left kidney measured 4.03 cm with non-obstructive mineralization. The right kidney measured 3.6 cm. Blood flow to the kidneys appeared to be adequate on power doppler assessment.

### 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 left adrenal gland measured 0.64 cm. The right adrenal gland measured 0.7 cm at the cranial pole and 0.6 cm at the caudal pole.



## PATIENT

Cammie Trovalli

## SPECIES

Canine

## BREED

Shih Tzu

## SEX

Spayed female

## AGE

14 years

## WEIGHT

15.5 lbs

## INTERPRETED BY

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

## IMAGING PERFORMED BY

Dr. Jocelyn Hollway

## HOSPITAL NAME

Seven Valleys VH

## REFERRING VET

Dr. Deihl

## INVOICE

68796

## DATE

11/18/25

## 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** 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. Vascular and biliary tracts were of normal volume and no evidence of congestion was noted. The gallbladder presented some dependent debris with essentially normal contour. Minor gallbladder polyps were noted. 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

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.

## 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.

## ULTRASONOGRAPHIC EXAMINATION OF THE HEART

The echocardiogram in this patient demonstrated normal **left atrial** size based on 3 separate methods of LA evaluation. Trivial **mitral** valve insufficiency was noted in this patient, not clinically significant. The **left ventricle** presented 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



**PATIENT**

Cammie Trovalli

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. Tachycardia was present.

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

15.5 lbs

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO	LA/AO (Heart Base)	FS (%)	EF (%)	EPSS (cm)
<b>NORMAL PARAMETER</b>	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
<b>PATIENT</b>	-	-	1.1	1.3	50	90	0.1
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)
<b>NORMAL PARAMETER</b>	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
<b>PATIENT</b>	150	1.2	0.6	15.5 lbs	2.1	2.1	

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**ULTRASONOGRAPHIC FINDINGS**

Bladder calculi. Polypoid changes, likely chronic cystitis. Urolithiasis.

Degenerative renal changes. Non-obstructive, nephrolithiasis.

Trivial mitral valve insufficiency, stage B1 valvular disease.

**IMAGING PERFORMED BY**

Dr. Jocelyn Hollway

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

**HOSPITAL NAME**

Seven Valleys VH

BRAF testing is warranted in case of potential concurrent carcinoma in this patient. This is not suspected, yet should be tested and biopsies of the bladder wall are warranted at the time of cystotomy. Stone culture is indicated.

**REFERRING VET**

Dr. Deihl

There is no contraindication to anesthetic procedure.

**INVOICE**

68796

**DATE**

11/18/25



**PATIENT**

Cammie Trovalli

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

15.5 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Jocelyn Hollway

**HOSPITAL NAME**

Seven Valleys VH

**REFERRING VET**

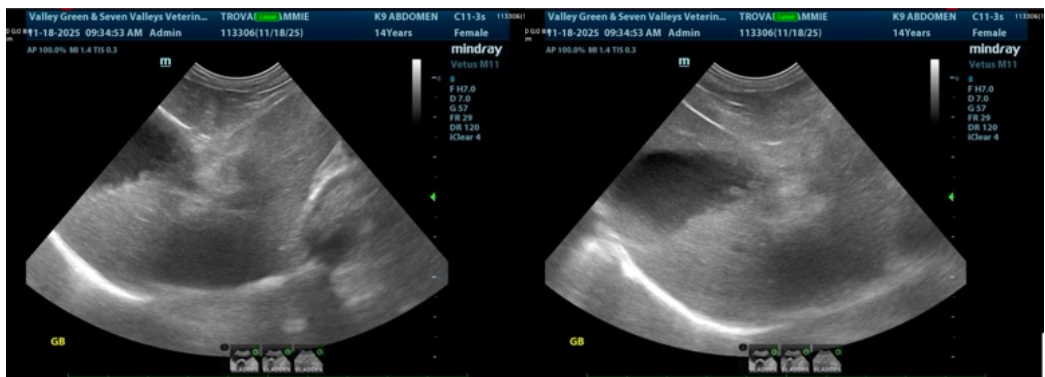
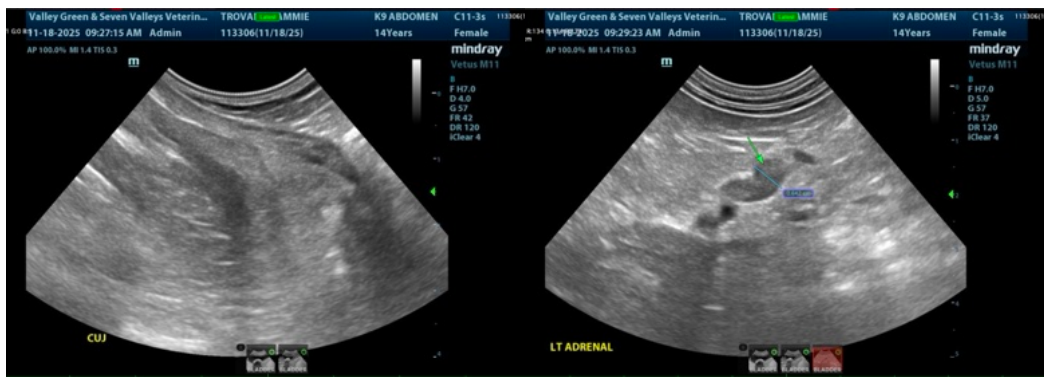
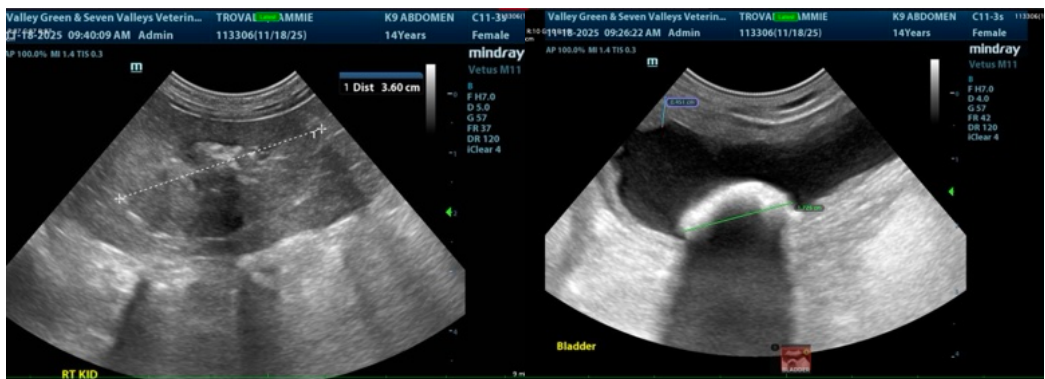
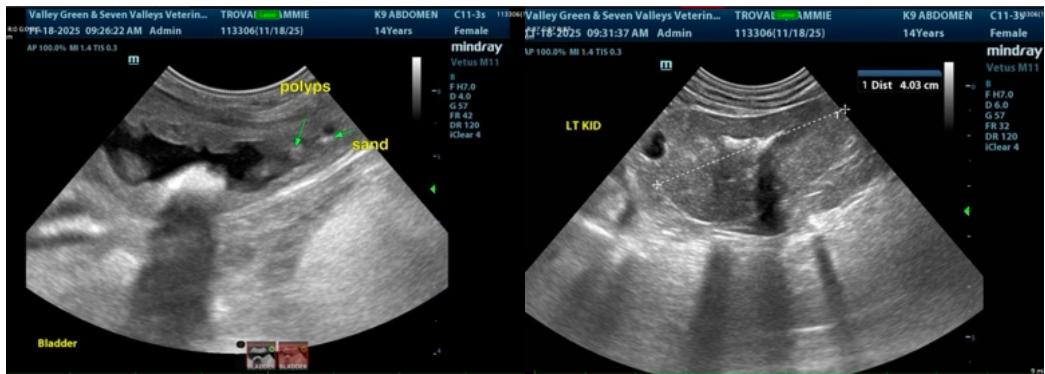
Dr. Deihl

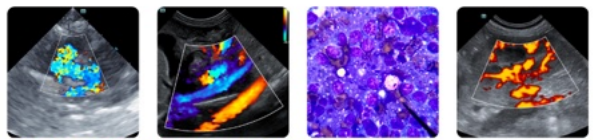
**INVOICE**

68796

**DATE**

11/18/25





**PATIENT**

Cammie Trovalli

**SPECIES**

Canine

**BREED**

Shih Tzu

**SEX**

Spayed female

**AGE**

14 years

**WEIGHT**

15.5 lbs

**INTERPRETED BY**

Eric Lindquist, DMV  
DABVP, Cert. IVUSS

**IMAGING PERFORMED BY**

Dr. Jocelyn Hollway

**HOSPITAL NAME**

Seven Valleys VH

**REFERRING VET**

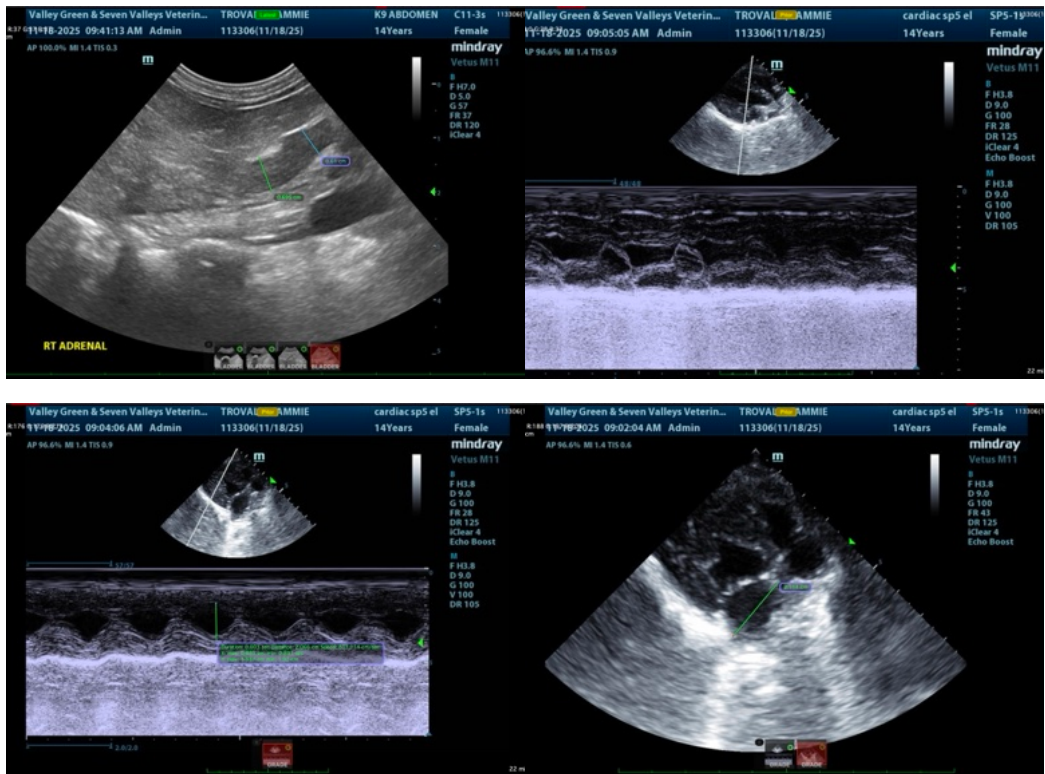
Dr. Deihl

**INVOICE**

68796

**DATE**

11/18/25



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](mailto:info@SonoPath.com)