


**PATIENT**

Maggie Perez

**PRESENTING CLINICAL SIGNS**

Maggie presented with a 3 month history of intermittent swelling of the ventral neck. Swelling seems to be more on the right side and has never fully resolved. She had a dental cleaning 1 month before swelling started. FNA samples from the neck are primarily bloody or a serous fluid. 2 months ago the bridge of her nose began swelling. Signs have progressed to stridor in addition to swelling. She open mouth breathes during physical activity. She is sleeping okay. Mild bilateral serous nasal discharge. No coughing or sneezing. Occasional reverse sneezing when excited. She also has a history of skin allergies - scratching axilla. Due for another Cytopoint injection. Previous diagnosis: None Therapies tried and response: Steroid injection and tablets, 2 different antibiotics (amoxicillin and cefpodoxime). The medication helped but never fully resolved the swelling. Swelling worsens after medication is finished. Current medication: None besides due for Cytopoint Appetite and activity level: Both good

**SPECIES**

Canine

**BREED**

Chihuahua Pug Mix

**SEX**

SF

**AGE**

9 Years

**INTERPRETED BY**

 Nele Eley, DVM  
 Dr. med. Vet. DipECVDI

**HOSPITAL NAME**

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**REFERRING VET**

Zachary Dunn

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**DATE**

8-16-22

Abnormal PE/Chem/CBC/UA Results: PE: \*\*General Appearance:\*\* Quiet, alert and responsive; there is pitting edema and tickening over the face and ventral neck; mild stridor Lab: Blood work is dated 8/9/22. CBC - PCV = 43.8%, WBC = 7600, neutrophils = 5145, lymphocytes = 1756, monocytes = 342, reticulocytes = 122. Platelets = 687,000. Chemistry - normal. T4 = 2.0. Free T4 = 1.3. UPC ratio = 0.2. Urinalysis - USG = 1.036, pH = 6.5, trace protein, WBC = 0-2/hpf, RBC = 0-2/hpf, no bacteria, 2+ epithelial cells, 2+ fine granular, 2+ calcium oxalate. Heartworm & Tick - negative. Fecal O&P/Giardia - negative. Endoscopy: The oral cavity, laryngopharynx, larynx, nasopharynx and proximal trachea are imaged. Mucosa lining the laryngopharynx is thickened. The dorsal wall of the laryngopharynx contacts the larynx. The soft palate is elongated and thickened. Mucosal lining the nasopharynx is thickened. The nasopharyngeal lumen is patent but very narrow. Choanae cannot be visualized due to the thickened nasopharyngeal mucosa. Mucosa covering arytenoid cartilages is thickened. Laryngeal saccules are everted. Laryngeal function is normal. The lumen of the larynx is normal diameter. The proximal trachea appears normal. There are multiple small erythematous granular foci over the rostral soft palate and buccal mucosa adjacent to the lower molars. Three full thickness dermal and SQ biopsies are obtained from the ventral neck. Two biopsies are obtained from the rostral soft palate and buccal mucosa. Ultrasonographic Findings: Abdominal Cavity: Free abdominal fluid is not present. Abdominal fat is not inflamed. Adrenal Glands: Adrenal architecture and echogenicity are normal. The left adrenal measures 18.3 x 4.6 mm and the right 18.7 x 5.2 mm (normal < 7.5 mm wide). Gastrointestinal Tract: The stomach and intestines are empty. Gastric walls are normal thickness and the pyloric sphincter appears normal. Intestines are imaged continuously from the stomach to the colon. Intestinal wall layering is intact and architecture is normal. Duodenal walls measure 3.8-4.7 mm, jejunum 3.3-4.4 mm and ileum 2.2-2.6 mm. There is no evidence of intestinal ileus, foreign bodies, masses or wall thickening. The ileocolic junction appears normal and colon walls are not thickened. Liver: The liver is normal in size and has smooth margins. Hepatic parenchyma is homogenous with normal echogenicity. There are no hepatic masses or nodules. Hepatic vasculature is normal. The gallbladder is moderately filled with anechoic bile and has thin walls. Bile ducts are not distended or thickened. Lymph Nodes: Abdominal lymph nodes are not enlarged. Pancreas: The pancreas is normal in size and has smooth margins. Pancreatic parenchyma is homogenous and has normal echogenicity. Peripancreatic fat is not inflamed. Spleen: The spleen is normal in size and has normal appearing parenchyma. Urinary Tract: Both kidneys are normal in size and shape. The left kidney measures 38.4 mm and the right 41.7 mm. Renal corticomedullary differentiation and echogenicity are normal. Renal pelvises are not distended. Urinary bladder walls are smooth and thin. There is no evidence of bladder stones or masses. Ventral Neck: Mandibular and retropharyngeal lymph nodes are not enlarged. Thyroid glands are normal size. All four parathyroid glands are prominent (hypertrophied). Cervical vasculature appears normal. Salivary glands are normal size, homogenous and hyperechoic. There are no masses visualized in the ventral neck. There are no



**PATIENT** abscesses or fluid cavities.

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**COMPUTED TOMOGRAPHIC STUDY OF THE HEAD, NECK, & THORAX**

Plain and post contrast studies of the head, neck, and thorax available for review.

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**COMPUTED TOMOGRAPHIC FINDINGS**

Canine

**Head & Neck**

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The brain presents no deviation from normal anatomy and symmetry. The grey and white matter distinction and the neuroparenchymal attenuation are as expected. The distribution of contrast enhancement is within normal limits throughout the parenchyma and meninges. The ventricular system is non-dilated and within the limits of the expected volume and symmetry.

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Thin and smoothly folded conchae and turbinates with even smooth mucosal lining. The osseous lining of the nasal cavities is intact.

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Both temporomandibular joints present congruent joint spaces with even subchondral bone surfaces and are considered within normal limits.

**AGE**

Both tympanic bullae are aerated, the mucosal lining is not seen, the bony wall is smooth and thin. The external auditory meatuses present within normal limits.

9 Years

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The submandibular and medial retropharyngeal lymph nodes are small and elongated with a normal short-to-long-axis-ratio is < 0.5, the attenuation and contrast enhancement pattern is uniform.

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The salivary glands present within normal limits.

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The visible dentition is within normal limits.

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Extensive subcutaneous soft tissue swelling with layered fluid accumulation and heterogeneously increased contrast enhancement is seen in the sublingual area and can be traced further caudally in the ventral neck. The swelling is slightly more prominent on the right side however is bilateral. Total width of the affected area is approximately 10 cm, length 8 cm, and height 1.5 cm. There is no evidence of cavitation or foreign material. Peripheral fat stranding is noted, however.

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Both lobes of the thyroid gland and all four parathyroid glands present within normal limits.

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**Thorax**

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The bony and surrounding soft tissue structures are within normal limits.

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The sternal, cranial mediastinal and tracheobronchial lymph nodes are small elongated with a normal short-to-long-axis-ratio is < 0.5, the attenuation and contrast enhancement pattern are uniform and considered within normal limits.

8-16-22

The cardiovascular structures including the pulmonary vasculature are within normal limits.

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The bronchial tree presents with regular branching and tapers uniformly towards the periphery as expected, the bronchial walls are thin and smooth. The bronchus-to-artery ratio is within normal limits.

The lung parenchyma presents the expected architecture and attenuation behavior.

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Canine

Small incidental gas pockets are seen within the esophageal lumen, there is no evidence of abnormal dilation.

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Chihuahua Pug Mix

**COMPUTED TOMOGRAPHIC DIAGNOSIS**

- Extensive subcutaneous fluid accumulation with fat stranding and heterogeneous enhancement in the sublingual area and ventral neck.

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The CT study reveals subcutaneous fluid accumulation in the sublingual area and ventral neck with fat stranding and heterogeneous enhancement. There is no evidence of cavitation, foreign material, or a soft tissue mass. Differential diagnosis includes edema, cellulitis, and regional inflammation secondary to spillage of saliva from the sublingual salivary glands. Aspiration and analysis of the fluid is recommended for further definition. There is no direct link to the mandibular salivary glands, lymph nodes, thyroid, or parathyroid seen. However, the changes are immediately ventral to the sublingual salivary glands.

**AGE**

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS****INTERPRETED BY**Nele Eley, DVM  
Dr. med. Vet. DipECVDI**HOSPITAL NAME**

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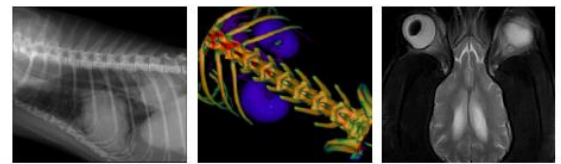
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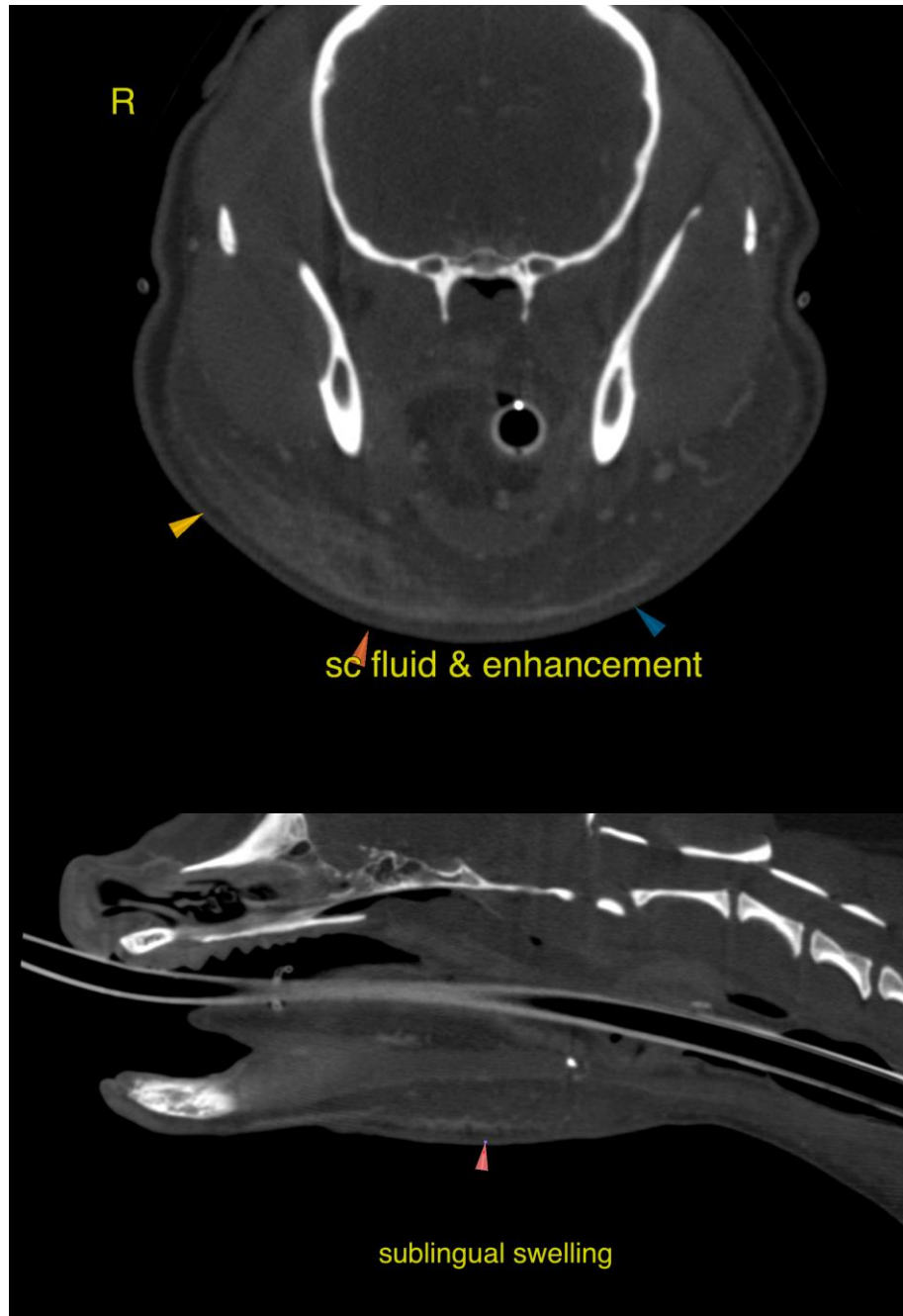
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The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

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.

**SPECIES**

Canine

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European Specialist in Veterinary Diagnostic Imaging, Cert. Radiology,  
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