



**PATIENT**

Snickers DeShields

**PRESENTING CLINICAL SIGNS**

Looking for source of high Calcium and high liver enzymes. Owner said she has recently gained a lot of weight. She also has polyphagia and polyuria.

**SPECIES**

Canine

Abnormal PE/Chem/CBC/UA Results: Elevated Values: SDMA-16ug/dL, Plateletcrit-0.57%, Calcium-13.9 mg/dL, Total Protein- 8.5g/dL, Globulin-4.9g/dL, ALT-230 U/L, ALP-760 U/L, Cholesterol- 328mg/dL

**BREED**

Dachshund / Miniature

**COMPUTED TOMOGRAPHY OF THE SKULL, THORAX AND ABDOMEN**

A high resolution pre- and post-contrast CT study of the skull, thorax and abdomen are provided for review.

**COMPUTED TOMOGRAPHIC FINDINGS**

The body condition score is 8/9.

**SEX**

Spayed Female

Skull

Multiple teeth are absent. There is evidence of generalized moderate periodontal disease. The periodontal space of the distal root of triadan 309 is moderately widened.

**AGE**

11 Years, 6 Months

The nasal cavity presents the expected aerated spaces between thin & even conchae and turbinates with smooth mucosal lining.

**INTERPRETED BY**

Sebastian Schaub, DVM  
Dr. med. vet. DipECVDI

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

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

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Neel Veterinary Hospital

The brain presents no deviation from normal anatomy and symmetry. The brain parenchyma is homogeneous and within normal limits for attenuation and distribution of contrast enhancement. The ventricular system is non-dilated and symmetric.

The pituitary gland is prominent and bulging beyond the dorsal osseous margins of the pituitary fossa; measuring 5 x 5 x 5 mm in size.

**REFERRING VET**

Dr. Deepan Kishore

Both mandibular salivary glands present mild stippled mineralization.

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 intervertebral disc space C5/C6 is moderately narrowed. Multiple vertebral endplates of the cervical spine present irregular endplates with smoothly marginated crescent shaped defects.

**DATE**

9-9-21

The thyroid glands are within normal limits for size, shaped and organ architecture. The caudal parathyroid glands bilaterally are measuring up to 2.5 mm in size and are considered within normal limits.

Thorax



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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 is uniform and considered within normal limits.

**SPECIES**

Canine

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

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.

**BREED**

Dachshund /  
Miniature

The lung parenchyma presents the expected architecture and attenuation behavior, but regions of compression atelectasis of the caudodorsal dependent aspects of the lung.

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

**SEX**

Spayed Female

Abdomen

The serosal fat presents normal attenuation behavior. There is no evidence of peritoneal effusion or peritonitis.

**AGE**

11 Years, 6 Months

Both kidneys present within normal limits for size, shape and organ architecture. After contrast administration a bilaterally symmetric and uniform nephro- and pyelogram is noted.

**INTERPRETED BY**

Sebastian Schaub, DVM  
Dr. med. vet. DipECVDI

The adrenal glands are within normal limits for shape and organ architecture. Both adrenal glands present an increased cross-sectional diameter, measuring up to 8.8 mm in diameter.

The spleen presents with normal shape, even surface, uniformly attenuating parenchyma and homogeneous contrast enhancement, unremarkable.

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Hospital

The hepatic volume is moderately increased and the caudoventral margins are rounded. The hepatic parenchyma is uniform soft tissue attenuating and contrast enhancing.

The pancreas is evenly contoured, the pancreatic parenchyma is homogeneous and presents uniform contrast enhancement.

**REFERRING VET**

Dr. Deepan Kishore

The position, delineation, wall and content of the gastrointestinal tract are considered within normal limits throughout. The anal sac bilaterally is within normal limits.

Moderate mineralization of multiple intervertebral discs of cervical, thoracic and lumbar spine is seen. There is evidence of preceding left sided hemilaminectomy T12/T13 to L1/L2.

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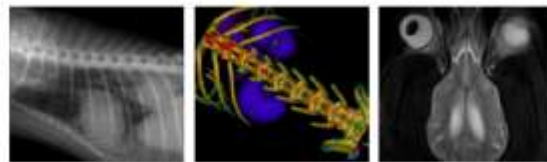
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**COMPUTED TOMOGRAPHIC DIAGNOSIS**

- Obesity
- Pituitary enlargement
- Bilateral adrenomegaly
- Hepatomegaly
- History of left sided hemilaminectomy thoracolumbar junction
- Generalized moderate periodontal disease



**PATIENT**

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- Multiple absent teeth
- Mild dystrophic mineralization mandibular salivary glands bilaterally
- Chronic discopathy along cervical spine
- Multifocal chondroid disc degeneration

**SPECIES**

Canine

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**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

The current CT study presents no specific abnormality explaining the hypercalcemia, the parathyroid glands bilaterally are mildly prominent but are equivocal for hyperplasia versus normal variant. If not done so yet, complementing blood work by PTH and PTHrp is recommended. Consider FNA sampling of the peripheral lymph nodes and parenchymal organs to rule diffuse neoplastic infiltration. If PTH is elevated ultrasound guided diagnostic alcohol ablation of the prominent parathyroid glands might be considered.

The enlarged pituitary gland in combination with the enlarged adrenal glands is concerning for functional adenoma/macroadenoma. This finding can explain the polyphagia and polyuria.

Potentials for the hepatomegaly include metabolic hepatic disease, hepatitis or diffuse neoplastic infiltration. In case of doubt, ultrasound guided FNA sampling and/or Tru-cut biopsy can be used as minimally invasive methods for further workup.





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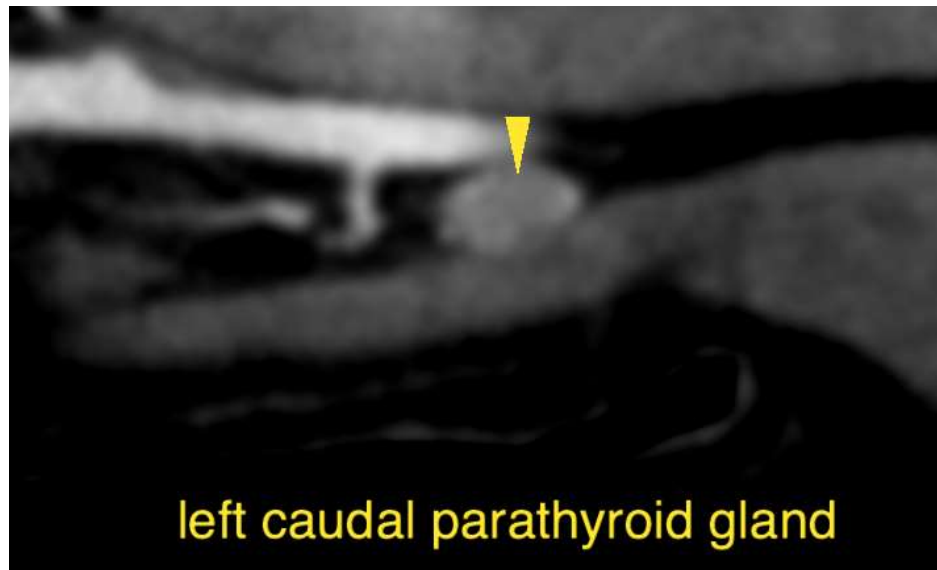
Dr. Deepan Kishore

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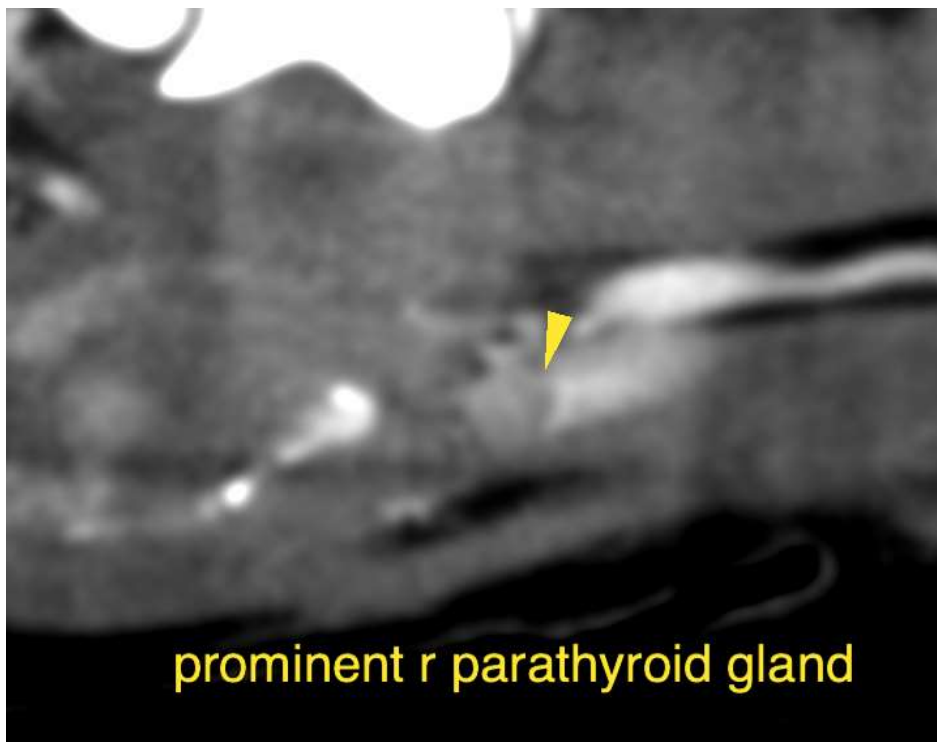
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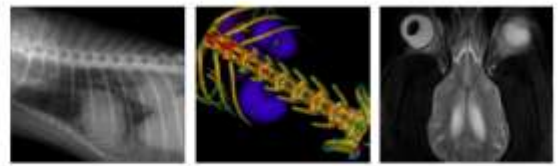
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left caudal parathyroid gland



prominent r parathyroid gland



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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.

**SPECIES**

Canine

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.

**Sebastian Schaub**, Sebastian Schaub, DVM, Dr. med. vet. DipECVDI  
sebast.schaub@gmail.com

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