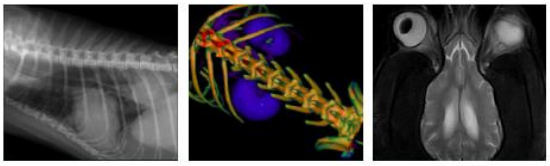


SonoPath.com
1-800-838-4268 info@sonopath.com

**PATIENT**

Bruno Sutherland

**SPECIES**

Canine

**BREED**

Cross Breed

**SEX**

Male

**AGE**

11 Months

**INTERPRETED BY**

Sebastian Schaub, DVM
Dr. med. vet. DipECVDI

**HOSPITAL NAME**

Animal Trust - Ellesmere Port

**REFERRING VET**

Laura Blackwell

**INVOICE**

56943

**DATE**

2-27-23

## PRESENTING CLINICAL SIGNS

Owner got up this morning to find Bruno's neck and thorax very swollen. No known trauma. Was fine yesterday. Sleeps in a crate overnight. Chews sticks/ bones/ everything else. DUDE fine but O has not fed him today in case he needed a GA. No vomiting Has been coughing as if trying to clear his throat. Very bright and bouncy but O says this is still a bit lethargic for him. Marked submandibular swelling and extensive subcutaneous emphysema to thorax Exam limited as the dog is so boisterous! Did react to palpation of thorax. Temp 38.9 C Suspicious of migrating foreign body.

## COMPUTED TOMOGRAPHY OF THE SKULL & THORAX

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

## COMPUTED TOMOGRAPHIC FINDINGS

Skull

The pictured parts of the dentition are complete and unremarkable in all jaw quadrants.

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

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.

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 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.

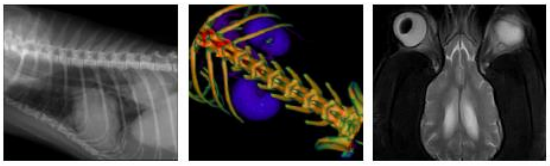
Along the fascial planes of the skull, neck and thoracic wall, a significant amount of free gas is appreciated. The mediastinum is moderately distended by gas, accentuating the margins of the mediastinal anatomical structures. The mediastinal gas is dissecting through the aortic hiatus up into the retroperitoneal space.

Thorax

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.

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.



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The lung parenchyma presents the expected architecture and attenuation behavior.

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

## COMPUTED TOMOGRAPHIC DIAGNOSIS

- Advanced pneumomediastinum & emphysema along the fascial planes of the skull, neck and thoracic wall
- No evidence of pneumothorax

## INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS

The findings are consistent with pneumomediastinum and emphysema along the fascial planes as the mediastinum is continuous with the fascial planes of the neck. A traumatic (iatrogenic versus accident) laceration of the pharynx, trachea esophagus is the most common underlying cause (e.g., stick injury).

A perforating soft tissue trauma of the neck or shoulder region must be ruled out as well. Primary disease of the lung, with extension of air along the peribronchial adventitia, has been described as possible underlying cause and possible differentials include chronic cough, ruptured bulla, vomiting, (paraquat intoxication) with secondary pneumomediastinum – but no overt changes of the lung parenchyma no signs of pneumothorax are appreciated..

The CT study should be complemented by endoscopy to screen for defects of the esophageal & tracheal wall and pharynx – with focus on the cranial esophageal segment. Be aware, that small lacerations of the pharynx, esophagus or trachea cannot be ruled out by CT/endoscopy entirely. Further treatment options depend on history and findings of endoscopy – might be self limiting if not defect is found.

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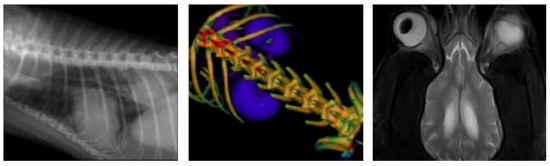

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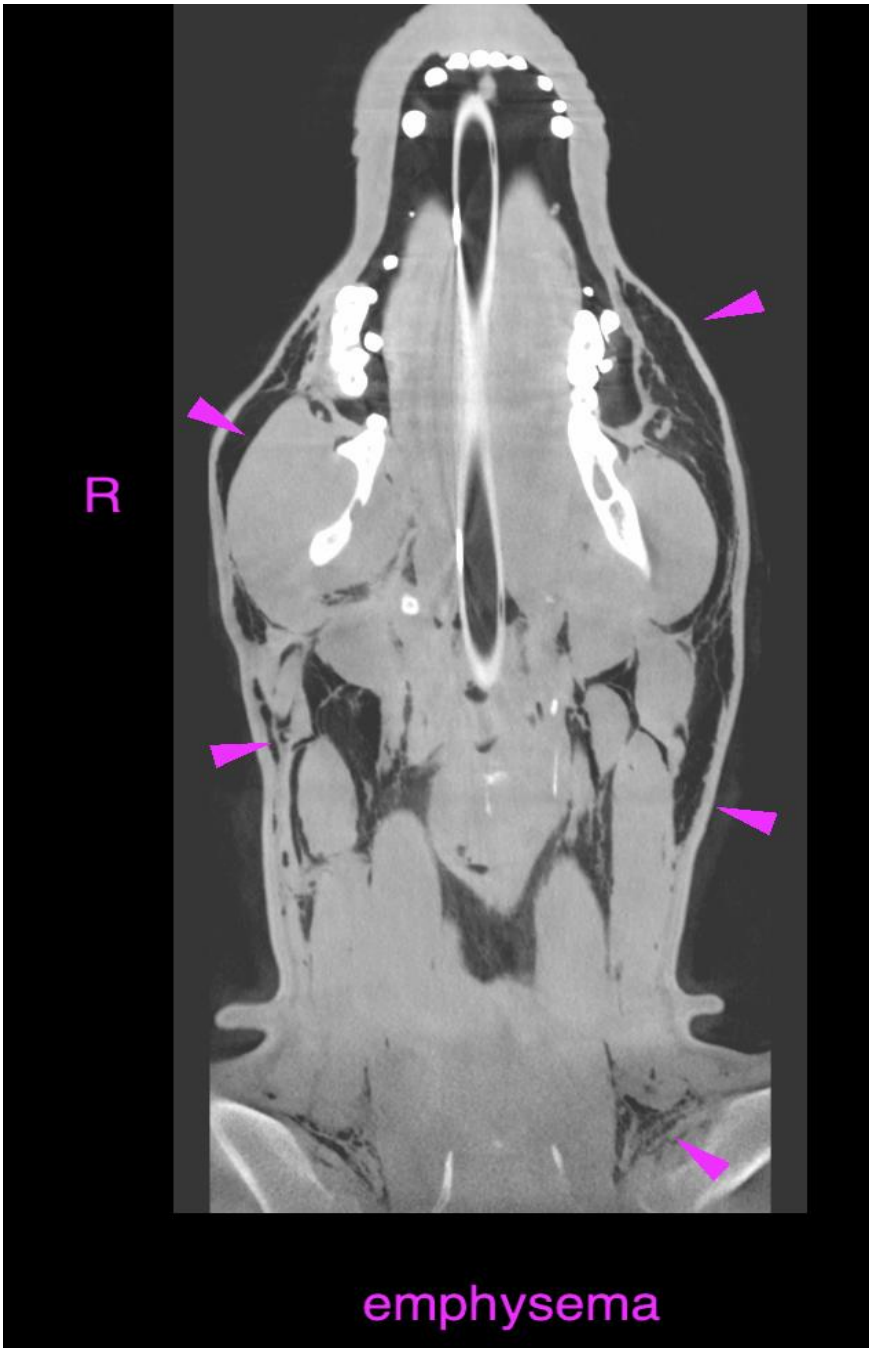

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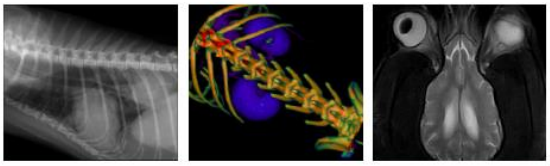

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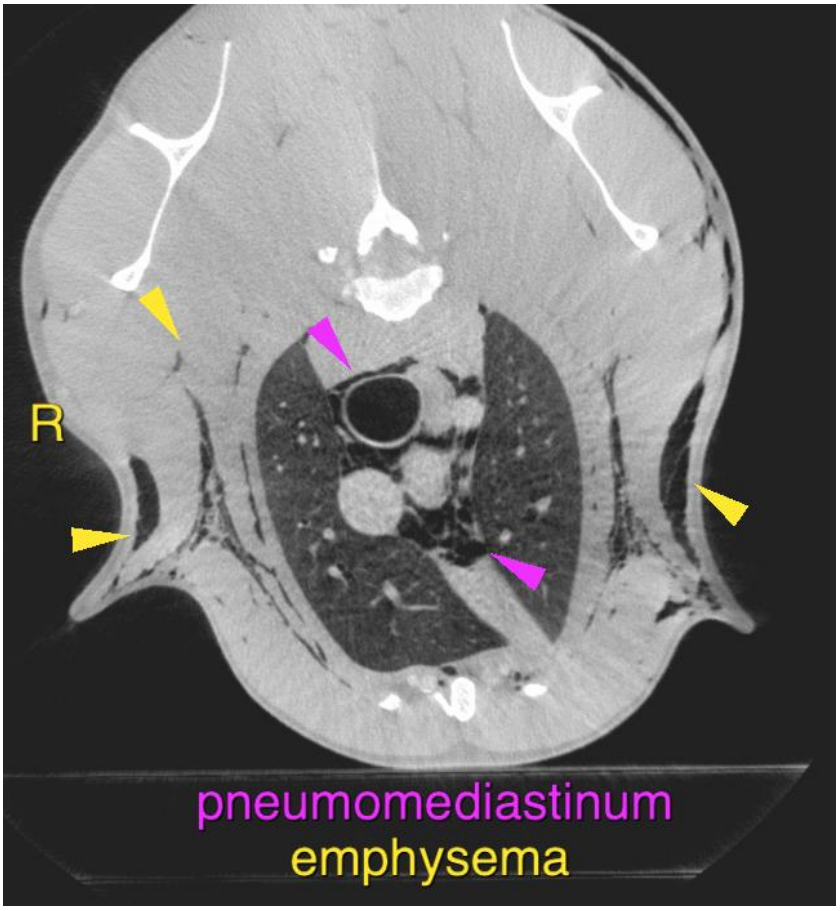


**The information and recommendations provided are based on the images presented by the referring veterinarian/sonographer. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.**

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.

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