

Prevalence and Morphology of Persistent Thymic Tissue on Computed Tomographic Images in Adult Dogs

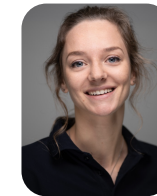
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I am happy to answer any questions!

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Introduction

Presence of thymic tissue is a common incidental finding in human adults on Computed Tomographic (CT) examination of the thorax. No reports describing the normal CT features of persistent thymic tissue in adult dogs are available in the veterinary literature.

Purpose

To assess the prevalence and describe the CT appearance of presumed persistent thymic tissue in adult dogs.

Methods

• Patients

Imaging records of adult dogs (>1 year old) that underwent thoracic CT between January and August 2020 were retrospectively reviewed. Cases with cranial mediastinal pathology were excluded.

• Technique

Age, gender, breed, presence of thymic tissue, location, homogeneity and width were recorded.

• Analysis

Mann-Whitney U test: to investigate differences in age between dogs with and without CT-detectable thymic tissue.

Pearson Chi-Square test: to investigate any association with gender.

Results

Animals included	Male/female	Median age (y)	Thymus identified	Homogeneous/heterogeneous	Median width (mm)	Mean attenuation pre-contrast (HU)	Mean attenuation post-contrast (HU)
88	50/38 (62.5%/47.5%)	9.4 (range 1.1-14.7)	79 (90%)	8.0 (range 1.9-37.8)	8.0 (range 1.9-37.8)	4.6 (±40.0)	29.8 (±22.9)

- Detectability of thymic tissue was not significantly associated with age ($P = 0.11$) or gender ($P = 0.17$).
- Thymic tissue was located in the area between the thoracic inlet and the left cranial aspect of the heart. The shape was variable.

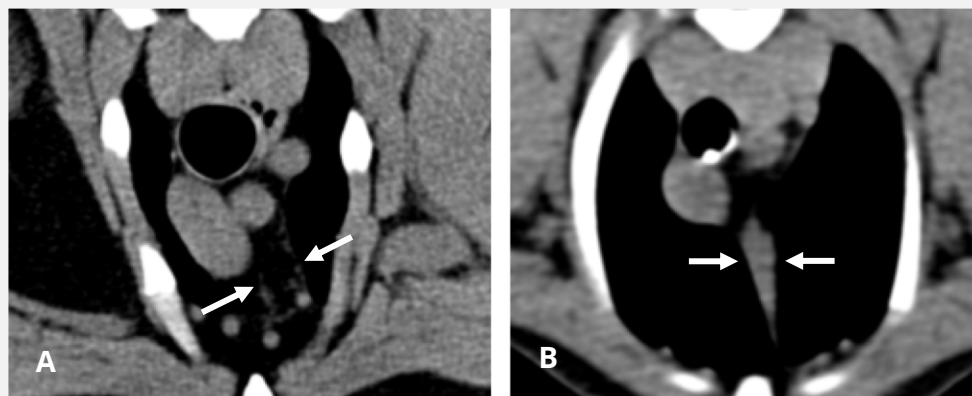


Figure 1

Transverse CT images of the cranial thorax, showing heterogeneous (A) and homogeneous (B) soft tissue attenuating tissue in the cranial mediastinum (arrows), presumed to be persistent thymic tissue. A: large crossbreed dog, MN, 9y. B: Boston Terrier, F, 3y.

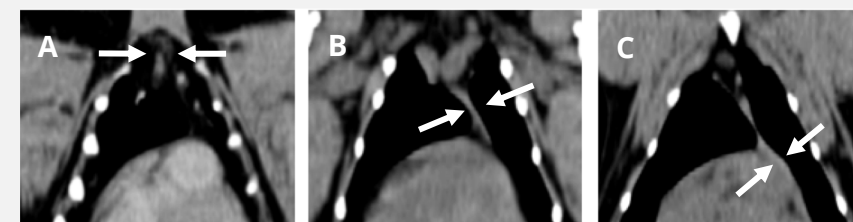


Figure 2

Dorsal CT images of the cranial thorax, illustrating different locations where thymic tissue could be seen (arrows). A: Shih Tzu, M, 8y old. B: Crossbreed dog, V, 5y. C: Jack Russel Terrier, MN, 14y.

Discussion/conclusion

- Normal finding in adult dogs, be aware of possible misinterpretation as pathology.
- No association with age or gender.
- Histopathologic confirmation is necessary.