

# Computed Tomographic Tenography of the Equine Carpal Flexor Tendon Sheath

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## Products

Computed Tomographic (CT) Tenography for anatomical evaluation of the equine carpal flexor tendon sheath (CFTS).

## Hospital / Authors

Thomas David Chisholm Woods, Jonathon Dixon, Barny Simon  
Lovat Fraser, Chris Melvaine  
Murdoch University, Western Australia; Rainbow Equine Hospital,  
UK

## Clinical Background

Diagnosing pathology of the equine carpal flexor tendon sheath (CFTS) is challenging due to complex regional anatomy. Exploratory tenoscopy remains the gold standard, but carries surgical risk. CT imaging offers enhanced anatomical detail for accurate preoperative planning and potentially improved outcomes.

## Aim of Study

To describe the detailed anatomy of the equine CFTS using both noncontrast and contrast-enhanced CT in cadaver limbs, and to assess the frequency of anatomical structure identification compared to tenoscopy and dissection.

## Cohort Study

Ten pairs of grossly normal equine forelimbs were examined post-mortem using noncontrast CT, contrast CT (with iohexol injection), tenoscopy, and gross anatomical dissection. Structures were evaluated for visibility and compared across all modalities.

[Link to paper](#)

## Results

- Contrast-enhanced CT enabled 100% identification of major **structures**, outperforming noncontrast CT and tenoscopy.
- Previously undescribed **mesotenons** were clearly visualised on contrast CT.
- The CFTS terminated more **distally** than previously reported, reaching beyond the mid-metacarpus in most specimens.
- Contrast CT improved detection of subtle **variants** and enhanced visualisation of **vinculae**.

## Summary

- **Contrast-enhanced CT** is a powerful tool for visualising complex CFTS anatomy, outperforming tenoscopy in structure identification.
- The discovery of **new mesotenon structures** and a more **distal sheath termination** than previously recognized has critical implications for anesthesia and surgery.
- CT aids in **safer surgical planning**, especially in avoiding inadvertent sheath penetration or overlooking pathology.
- This imaging modality enhances anatomical understanding and sets a foundation for **future clinical applications and research** into CFTS pathology.