

# Computed Tomography and Magnetic Resonance Imaging of an Epidermoid Cyst in a Foot of a Horse

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## Products

Computed Tomography (CT) and Magnetic Resonance Imaging (MRI)

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## Clinical Background

Epidermoid cysts are rare but should be considered as a differential diagnosis for space-occupying masses in equine feet causing chronic lameness. These benign, keratin-filled masses often lead to bone remodeling and deformation. Imaging plays a vital role in diagnosing and characterizing such lesions to guide treatment planning.

## Aim of Study

To describe the multimodal imaging characteristics of an epidermoid cyst in the foot of a horse and correlate findings with histopathology.

## Cohort Study

An 18-year-old Quarter Horse mare with chronic left forelimb lameness underwent CT, MRI, radiography, and ultrasonography to evaluate a space-occupying mass in the foot.

## Results

- **CT revealed a well-encapsulated mass** (18 × 22 × 16 mm) causing cortical bone remodeling and a concave defect in the middle phalanx.
- **Calcifications and osteolysis** were visualized with high precision, aided by contrast-enhanced CT showing minimal peripheral enhancement.
- **MRI provided complementary data**, highlighting the mass's heterogeneous content with high T1-weighted and low T2-weighted signal intensities.
- Histopathology confirmed the diagnosis as an epidermoid cyst, with stratified squamous epithelium encapsulating keratinized material.

## Summary

- CT provided superior visualization of the cyst, detailing bone changes and anatomical relationships, surpassing MRI and radiography.
- Contrast-enhanced CT added value by delineating vascular supply and the lesion's boundaries.
- MRI offered insights into the cyst's soft tissue characteristics but was less effective for cortical bone assessment.
- CT is essential for diagnosing rare equine foot lesions, guiding clinical decisions and improving outcomes.