

# A Computed Tomographic (CT) and Pathological Study of Equine Cheek Teeth Infundibulae Extracted From Asymptomatic Horses. Part 1: Prevalence, Type and Location of Infundibular Lesions on CT Imaging

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## Products

Computed Tomography (CT) for equine cheek teeth infundibulae assessment.

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## Clinical Background

Equine maxillary cheek teeth infundibulae frequently develop developmental and acquired lesions, but their CT imaging characteristics remain incompletely understood. Cemental hypoplasia and infundibular caries are common and may lead to severe dental complications.

## Aim of Study

To assess the prevalence, type, and location of subocclusal infundibular lesions using CT imaging in extracted equine cheek teeth.

## Cohort Study

CT imaging was performed on 100 extracted maxillary cheek teeth, including 82 with and 18 without occlusal infundibular caries. Eight teeth were also examined via MicroCT. The images were analyzed using Osirix® to classify and measure infundibular lesions.

## Results

- **72% of infundibulae without occlusal caries had subocclusal lesions**, mainly cemental hypoplasia.
- **Shorter infundibulae** (older teeth, Triadan 09 position) had more occlusal caries, especially in rostral infundibulae.
- **Two primary hypoplasia types: apical (full-width loss at apex) and central linear (elongated defects).**
- **Lesions often progressed to caries** when exposed by wear, leading to degradation.
- **MicroCT confirmed CT findings**, showing finer details of cemental defects.

## Summary

- **CT imaging effectively detects infundibular lesions**, providing crucial insights into subocclusal defects before clinical signs develop.
- **Cemental hypoplasia is highly prevalent**, even in clinically normal teeth, emphasizing its role in the development of infundibular caries.
- **Shorter infundibulae and rostral infundibulae** are more susceptible to caries, supporting the need for early detection.
- **MicroCT enhances lesion visualization**, reinforcing the value of CT for equine dental pathology research.