



The results of this work have highlighted the importance of CT protocol harmonisation in a modern Radiology department to ensure both consistent image quality and radiation dose. Following this study, the average radiation dose for a range of CT examinations has been reduced without any negative impact on clinical image quality.

## Other

### P192 Non-destructive imaging: evaluation of archaeological dentition specimens

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**Key learning objectives:** To review the role of radiographic imaging techniques used in the non-destructive investigation of archaeological dental bone specimens. To illustrate, with examples, the utility of extra- and intraoral radiographic imaging techniques in the visualisation of the dentition and surrounding bone.

**Description:** Caries and other abnormalities on the exposed surfaces of the teeth in archeological specimens can be detected by visual inspection, but abnormalities concealed on the interproximal surfaces are more difficult to detect. Radiographic analysis can reveal; apical infection, periodontal status, presence and position of unerupted teeth and root morphology, and a detailed evaluation of apical cysts and other lesions within the alveolar bone. Differences in bone preservation state require suitable adjustment of imaging parameters and the capability of digital image capture utilising extra- and intraoral techniques is of great benefit here. Specifically, soil invasion into the medullary cavity can be missed during macroscopic examination, but will appear as an artefact on a digital radiographic image; similarly differences in decay and diagenesis of remains after death can be accurately visualised by radiographic imaging techniques and enhanced during post-imaging manipulation of the digital data.

**Conclusion:** Both extra- and intraoral imaging techniques are deemed more sensitive than conventional methods to evaluate the dentition from archaeological specimens. Both techniques are capable of producing images in a variety of planes and demonstrating anomalies on interproximal surfaces of teeth, which provide archaeologist's and osteologists with accurate information in relation to understandings about the way of life of the individual and cultures studied.

### P193 Multiparametric MRI of anterior prostate cancer with histological correlation

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Multiparametric MRI has emerged as an important tool in the diagnosis of clinically significant prostate cancer. The addition of functional imaging - Diffusion Weighted Imaging and Dynamic Contrast Enhanced Imaging to T1 and T2-weighted imaging has improved prostate cancer detection rates. Targeted biopsy based on prebiopsy MRI-detected lesion improve detection rates, volume and grade of anterior prostate cancer compared to standard systematic biopsy.

We present a pictorial review of patterns of anterior prostate cancer detected on multiparametric MRI with histological confirmation obtained using Trans Rectal Ultrasound Guided targeted biopsy with cognitive registration.

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