

Abstract Submitted
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Biophysical Image Processing of the Mandibular and Maxillary Teeth SEUNG HYUN HAN, ALBERT S KWON, EUN KYO JUNG, Choice Research Group — In dentistry, early detections can yield significant outcomes. For instance, early reduction of fractures lead to improved results. Prior to the surgery, CT scanning or MRI inspections can successfully identify the intact tooth or mandibular bone. This research, through the observation of 11 maxillary and mandibular teeth along with 3 molars and 2 premolars, examines the biophysical and diagnostic ability of magnetic resonance imaging for mandibular and maxillary teeth. When working with dental imaging, one must acknowledge the use of imaging passing filter to allow an increased resolution and decreased Ringing Artifact. By using different filters on the full k-space (frequency domain), this paper shows how the efficient filter can be applied to the original frequency matrix to get the better MRI image of the affected dental region. Based on these findings, we establish the practical MRI diagnostic criteria for the treatment and clinical outcome. This research shows the improved biomedical algorithms that not only enhance the quality of the final dental image, but also reduce the time it takes to produce a dental image.

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