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Back to Session: Poster session 3

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Title: **Measurement Of The Cortical Bone Thickness At Dental Implant Sites Using Computed Tomography Images**

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Abstract: Background/Purpose: The survival rate of dental implants is markedly influenced by the bone quality and quantity. The purpose of this study was to determine the thickness of the cortical bone on the occlusal side at potential dental implant sites in different regions of the jawbone using computed tomography (CT) images.

Materials and Methods: A total of 140 potential implant sites (8 in anterior mandible, 49 in anterior maxilla, 57 in posterior mandible, and 26 in posterior maxilla) in the jawbone of 60 human was selected. The Kruskal-Wallis test was used to assess the correlation between cortical bone thickness and jawbone region. The p cutoff value for statistical significance was set to 0.05.

Results: The cortical bone thickness in the four regions decreased in the following order: anterior mandible (1.76+0.50 mm, mean+SD) > posterior mandible (1.61+0.52 mm) = anterior maxilla (1.56+0.51 mm) = posterior maxilla (1.56+0.49 mm).