**A comparison of cone beam computed tomography and ridge**

**mapping in treatment planning of dental implants**

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**ABSTRACT**

**Objectives:** To compare cone beam computed tomography and ridge mapping in measuring alveolar ridge bone width prior to dental implant placement.

**Study Design:** Anobservational comparative study.

**Place and Duration:** Prosthodontics Department, Armed Forces Institute of Dentistry, Rawalpindi from 1st Aug 2016 to 31st July 2017.

**Methodology:** For this study, partially dentate patients that required dental implant supported prosthesis for the replacement of their missing teeth were selected. Vacuum formed radiographic templates with reference points were used for the evaluation of alveolar ridge bone width measurements at specific points (Crestal, Buccal and Lingual side) with Ridge mapping and Cone Beam Computed Tomography. Alveolar ridge bone width’s measurement acquired from both the methods was then compared.

**Results:** Out of the total 100 participants, 51% were females and 49% were males with mean age 33.86+7.857. No statistically significant differences were found in measurements of the alveolar ridge width obtained with Ridge mapping and Cone Beam Computed Tomography; p value of 0.924 and 0.967 respectively were found to be non-significant.

**Conclusion:** Both techniques showed convincing and similar measurements so either of the technique can be used to measure pre surgical alveolar ridge dimension.

## Keywords: Alveolar ridge width, Cone beam computed Tomography, Ridge mapping, Dental Implants, Treatment

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