

## IADR Abstract Archives

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### Two-Piece Zirconia Implants With Two Various Platforms: RCCT's Preliminary Results

**Objectives:** This study aimed to evaluate two different types of two-piece zirconia implants with a platform at the tissue level and bone level implants 6 months following restorations as part of an ongoing randomized clinical investigation.

**Methods:** A 10 mm long and 4 mm wide zirconia implants with a platform at the soft tissue level (Z5-TL, Z-Systems) (n = 5) or bone level (Z5-BL, Z-systems) (n = 5) were inserted in healthy adults with missing maxillary premolars according to the type 4 protocol using a surgical guide as a partially guided procedure. Using the Osstell© device, the stability of the implants immediately after implantation and 3-4 months later was measured. Lithium-disilicate ceramic crowns were cemented to ceramic abutments. After six months patients underwent a clinical control and X-ray examination.

**Results:** Initial measured ISQ values were between 73 and 79 and after 3 to 4 months between 76 and 84. In one Z5-BL case, the marginal bone resorbed before loading necessitating using the abutment designed for the Z5-TL platform. In one case of Z5-BL, the abutment fixation screw fractured, and an ultrasonic device was used to successfully remove the broken fragment. In nine cases, the mucosa adjacent to the implants remained stable after six months, whereas one Z5-TL implant displayed gingival recession. After 6 months, resorption of the marginal ridge of approximately 1 mm was observed in 3/5 Z5-BL implants, whereas expected mild saucerization of the marginal ridge was observed in 3/5 Z5-TL implants. Six months after implantation, all implants (10/10) were functional and successfully integrated.

**Conclusions:** Zirconia implants placed with type 4 protocol in the maxillary premolar region integrated successfully and could be restored with all-ceramic crowns. Mild but clinically acceptable resorption of the marginal bone was observed with both implant types, while the soft tissues were stable six months after loading.

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## SESSION INFORMATION

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