



## TECHNICAL REPORT

### Platform Switched Dental implants

Karthikeyan<sup>1</sup>,

The platform switching (PS) concept was introduced in the literature by Gardner (2005) and Lazzara & Porter (2006).

The concept of platform switching suggests an abutment or a suprastructure with a diameter at

the implant-platform level that is smaller than the implant diameter.

Marginal crestal bone loss at implants is often attributed to a microbial impact 1. It appears that with two-piece implants, an abutment-associated inflammatory cell infiltrate (ICT) forms around the bacterially contaminated micro-gap between the implant and the abutment and extends from the micro-gap coronally, apically, and laterally for 0.5–0.6mm 2,3. Bone remodeling following implant placement in the first year commonly leads to a reduction in bone height. An attempt to hinder this process has resulted in the originally called platform-switching which is consisted in the horizontal positioning of the outer edge of the implant–abutment interface toward the center of the implant. 4

PS appears to be a viable method for preserving crestal bone around the top of wide diameter implants and seems to alter the starting point from which crestal bone remodeling occurs. 5, 6

In non-platform-switched (NPS) implants, peri-implant bone resorption is usually 1.5–2 mm on the vertical axis and 1.5 mm on the horizontal axis. In platform switched (PS) implants, early peri-implant bone resorption is usually 0.6 mm on both axes.7

The minimal bone resorption that take place around the PS implants in comparison with the NPS implants could indicate that the use of narrow abutment may reestablish the soft tissue barrier and therefore decrease the bone resorption.

MMP-8, a sensitive biomarker of the inflammatory response related to periodontal and peri-implant health or disease the presence of a horizontal implant/abutment mismatching is compatible with periimplant health even 3 years after implant loading.8

Straumann and Nobel Biocare market successful Platform switched implants.

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