## Symposium 4

# Soft Tissue Management according to Submerged versus Non-submerged Implant System



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#### (Traditional Brånemark Protocol)

- 1. Use of a biocompatible material (titanium)
- 2. Use of a threaded design
- 3. Use of a 2-stage procedure
- 4. Use of a stress-free healing period of 3-6 months before loading
- 5. Use of an atraumatic surgery involving low-speed drilling
- 6. Use a mucobuccal incision and avoid a crestal one
- 7. Use of sterile conditions as in a fully equipped operatory
- 8. Use of titanium ancillary
- 9. Avoid X-radiographs before the end of the healing period
- 10. Use of acrylic occlusion contact surfaces

#### (Submerge or Not )

- 1. Should not be based on the surgeon 's preference
- 2. Individual patient general factors
  - 1) Plaque control
  - 2) Smoking
  - 3) Periodontal condition
  - 4) Presence of provisional removable dentures
- 3. Individual patient local factors
  - 1) Inadequate bone width and/or height
  - 2) Extraction socket
  - 3) Degree of primary stability

#### (Considering Factors of Flap Design )

- 1. Width and thickness of keratinized gingiva
- 2. Submerge or Not
- 3. Height of transmucosal portion

#### (Width of Attached Gingiva )

- 1. Lang and Löe, 1972: Only 1mm of attached gingiva
- 2. Miyasato et al., 1977; Lindhe and Nyman, 1980; Wennstrom et al., 1981; Wennstrom and Lindhe, 1982: Possible to maintain periodontal health despite the absence of attached gingiva
- 3. Salkin et al., 1978; Tenebaum, 1982: No correlation between the width of attached gingiva and the amount of recession

Maynard and Wilson, 1979: 5mm keratinized gingiva composed of 2mm of free gingiva and 3mm of attached gingiva in the restorative teeth

#### (Keratinized Gingiva?)

- No influence on bone level (Behneke et al., 1997)
- ♦ No influence on degree of gingival inflammation (Brägger et al., 1997)
- Not necessary (Wennström and Lindhe, 1983; Apse et al., 1991)
- ♦ Necessary (Zarb and Symington, 1983; Newmann and Hemming, 1988)

### (Optimal Timing for an Aesthetic Result )

- 1. Prior to placement
- 2. At implant placement or during the healing phase of the implant
- 3. At second-stage surgery
- 4. In the maintenance phase

#### 약력

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