

## Relazione tra le complicanze postoperatorie dell'estrazione dei terzi molari e l'età del paziente: revisione della letteratura

### 1° Incontro Nazionale delle Scuole di Specializzazione in Chirurgia Orale

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### NobelGuide™ pilot surgical template: retrospective study on 15 consecutive cases

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**Aim:** Technological and computer development for guided implantology has enabled the introduction of programs that allow clinicians to plan implant insertion with beneficial prosthetic emergence and produce surgical templates to guide inserting the pilot drill only. Pilot Drill Template implantology is a turning point between flapless surgery and traditional surgery while maintaining the computer guidance in using the first pilot drill and having a direct view of bone tissue. The aim of this study was to evaluate patients who are candidates for the pilot template, thus partially edentulous.

**Methods:** For each patient a dental impression and a diagnostic wax-up of the areas to be rehabilitated were performed. They were then scanned via Nobel Procera® scanner, and the images were imported into the NobelClinician® software. The SmartFusion algorithm allows the automatic matching of the data deriving from the scan of the stone model with the DICOM files of the patient's CT scan. A pilot drill template was virtually created; it includes the housing of 2 mm diameter bushings for each implant position. After local anesthesia, the surgical template was fitted on the present teeth, and the Guided Twist Drill

Ø 2.0 × (10+) 7-18 mm was used, with a fixed stop at the predetermined length. Once the guided milling was performed, the template was removed, a crestal incision was made, a mucoperiosteal flap was raised and the implant site was prepared according to Nobel Biocare® protocols. A total of 32 implants were placed using 14 surgical templates in 14 partially edentulous patients. Only one patient was excluded from surgery for the inadequate vestibulo-lingual bone thickness.

**Results:** Patients' average age is 49 years (21-64 years). 9 patients are females (60%) 6 males (40%); they were rehabilitated respectively with 22 (68.75%) and 10 implants (31.25%). 7 rehabilitations were performed on the maxilla (21 implants), and 8 on the jaw (11 implants). The average number of implants placed per patient is 2.286. In 12.5% of cases implants were placed at the incisive level, in 3.12% at the canine level, in 25% at the premolars level and in 59.38% at the molars level. The average length of the 32 implants inserted is 11.19 to 1.10 mm. The average diameter of the 32 implants inserted is 3.82 to 0.29 mm. Of the 32 implants inserted, 6 are Nobel Active® (19%), 7 are Speedy Groovy (22%) and 19 are the Brånemark System® MK III (59%). Of the 32 holes performed with the Guided Twist Drill, 12 were reprepared with the first

Ø 2.0 drill to have a better anatomical and prosthetic position. In 2 cases the therapeutical pathway was modified in the vestibulo-palatal sense, 6 in the mesio-distal sense and 4 in both vestibulo-palatal and mesio-distal senses. In 4 the implant length was changed, in 3 the diameter, in 3 the type, in 6 diameter-length, in 1 type-diameter, in 5 type-length-diameter and in 10 no changes were made.

**Conclusions:** The advantages of this technique are: a lower loss of keratinized mucosa, the direct vision of bone tissue, a reduction of the degree of bone overheating and a less bulky bushing than the Fully Guided protocols, the possibility of reviewing the planning during surgery with implant parameter changing. Pilot Drill Implant Template implantology is a compromise between flapless and traditional surgery, with the aims of maintaining the advantages of both techniques, overcoming their different limits.