CLINICAL CASE

Nobel Biocare™

Anterior restoration using advanced tissue grafting for improved esthetics

Juan Zufía
Spain

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Patient
32, male

Surgical solution
NobelReplace CC PMC 3.5 x 13 mm Slim Healing Abutment CC NP 7 mm Temporary Abutment Engaging CC NP

Restorative solution
NobelProcera ASC Abutment with zirconia crown

Surgery date
July 22, 2014

Tooth position
Upper-right central incisor

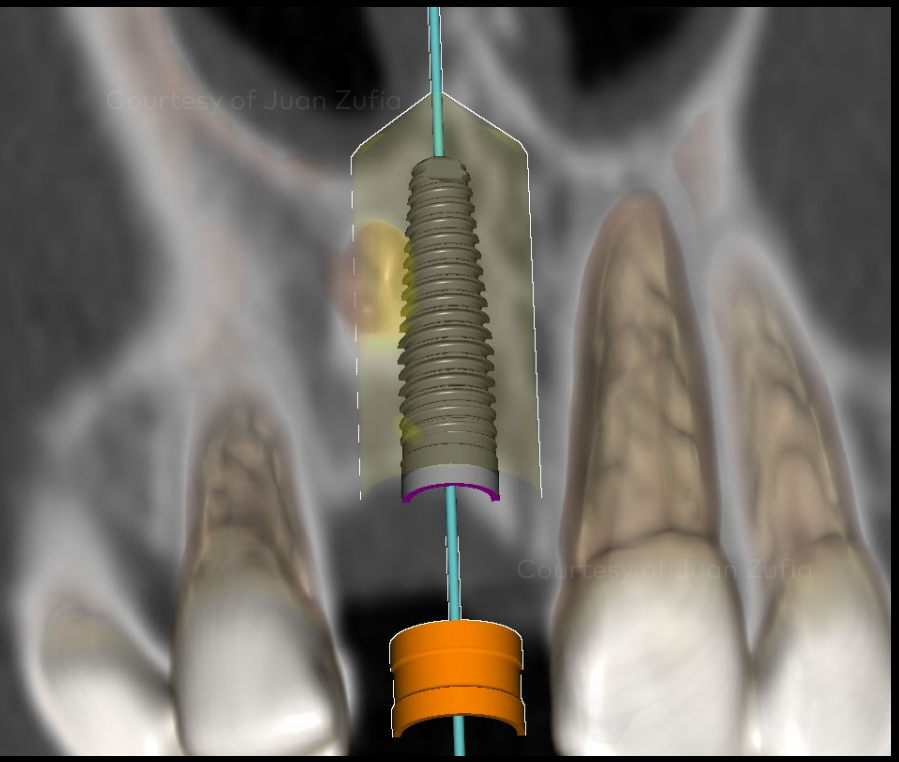
Total treatment time
Six months

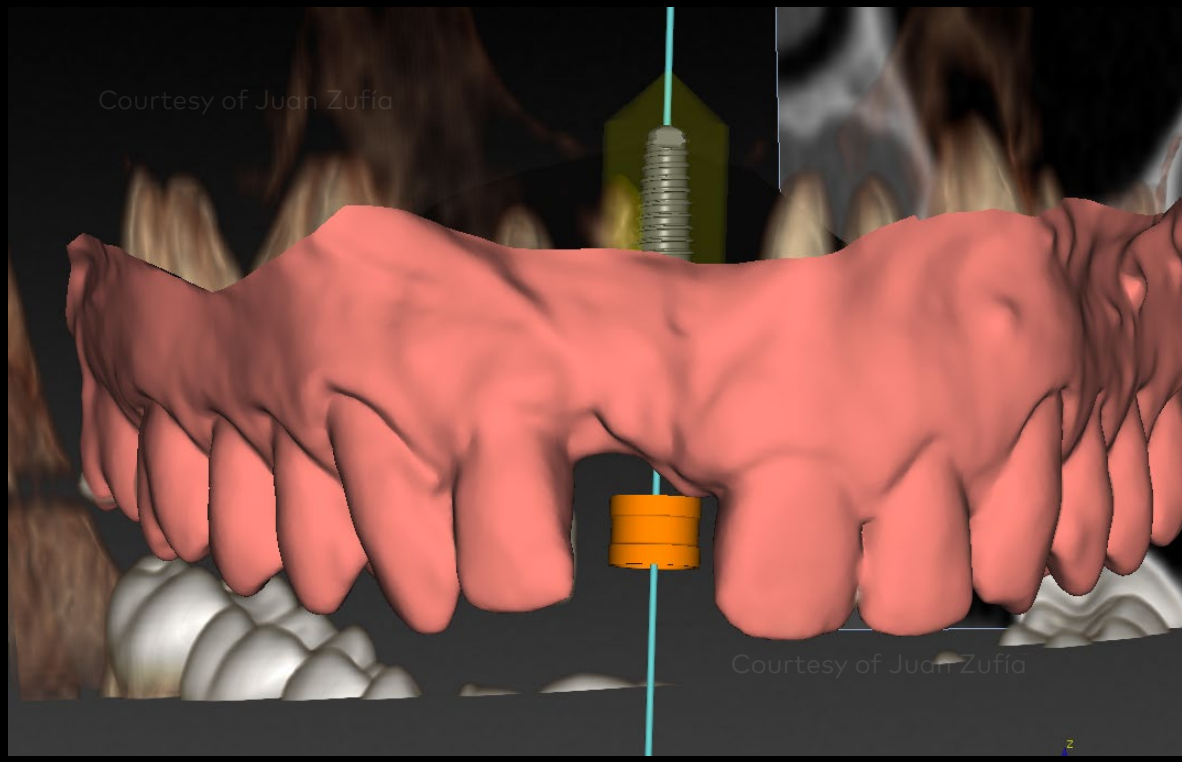
"Currently, one of the most important advances in implant dentistry is the improvement in treatment of gingival tissue around the implant.

The grafting of connective tissue in the cervical area of the implant improves esthetics and long-term marginal sealing. In this sense, the slim abutment increases the chances of success, allowing the simultaneous placement and stabilization of the gingival graft.

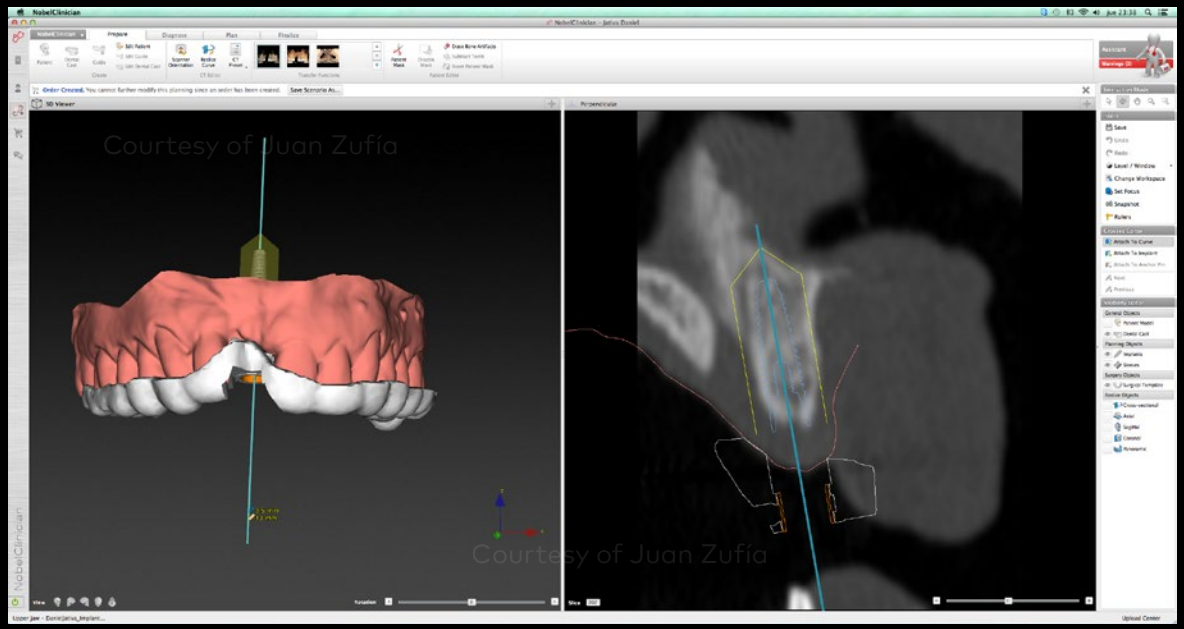
Slim abutments maximize space for grafting, reduce treatment time and improve the final result."

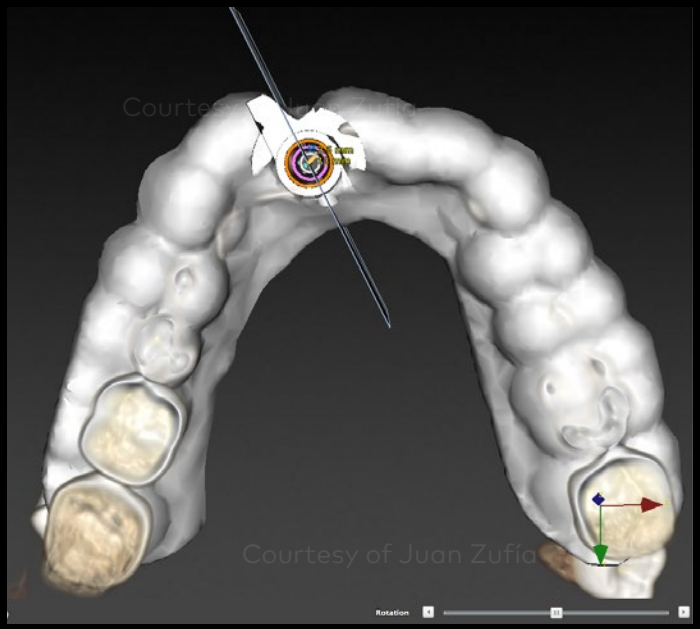
Initial Situation: 32-year-old patient. Central incisor was lost through trauma two years prior.
Soft tissue is lacking both horizontally and vertically.
Overall Health: Very good. No medication. Non-smoker.



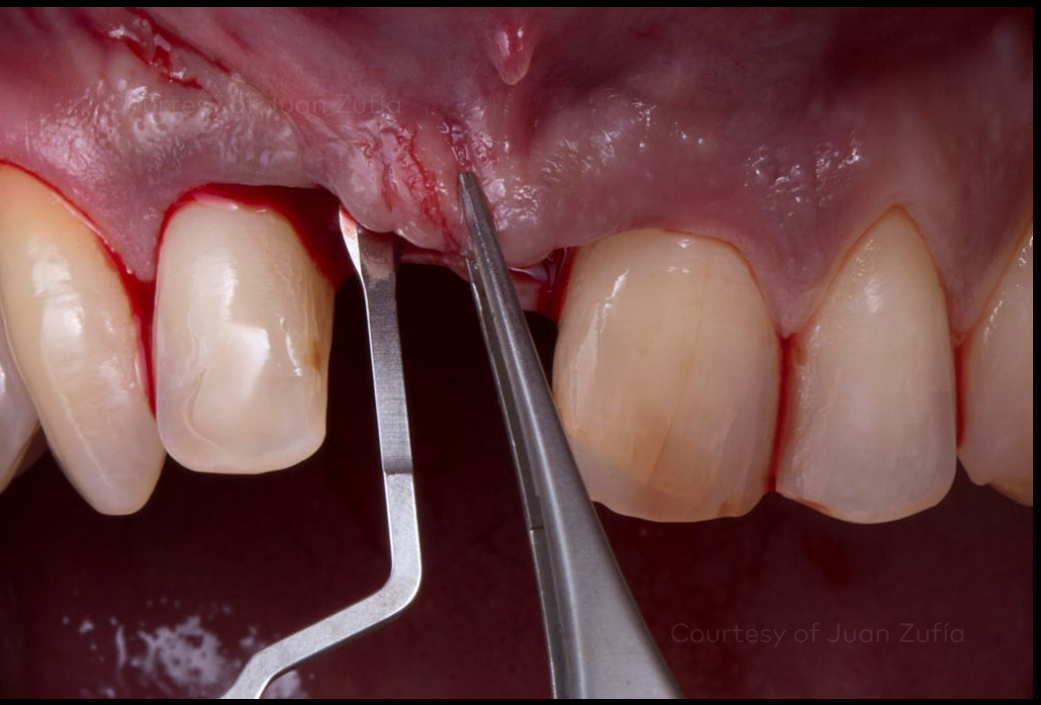


The NobelClinician Software is used for accurate implant treatment planning. Because of the narrow width of the ridge and presence of the nasopalatine nerve, placement of a NobelReplace CC PMC 3.5 x 13 mm is the most appropriate solution for rehabilitation of this region.

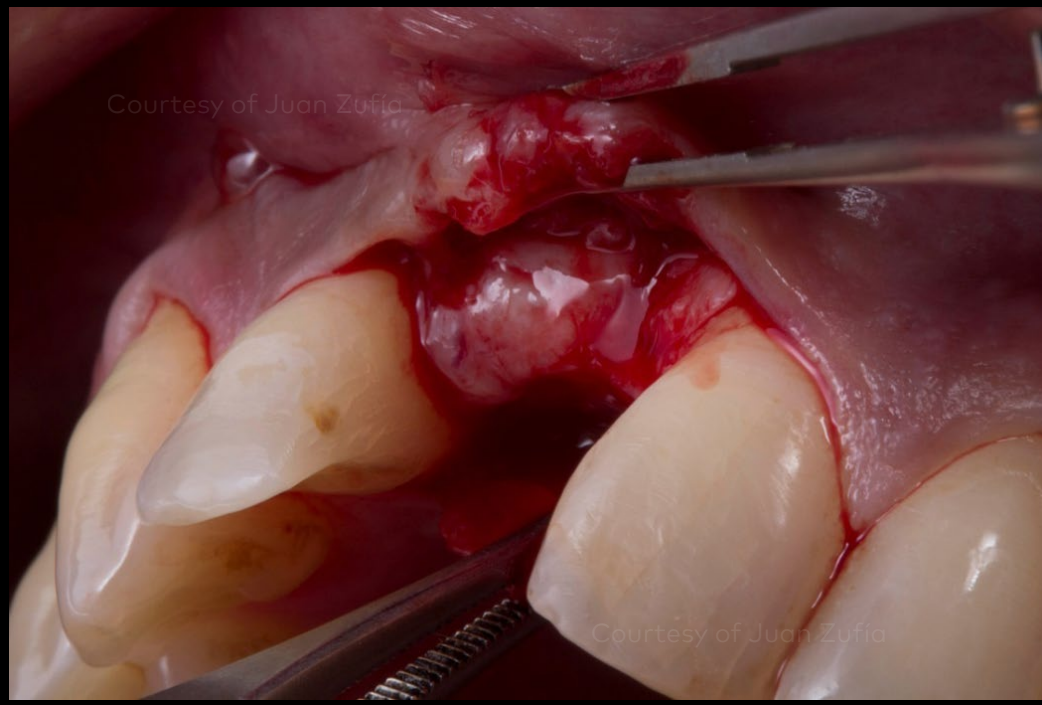




Preview of surgical template in the NobelClinician Software allows for the template to be visualized before sending order for production.

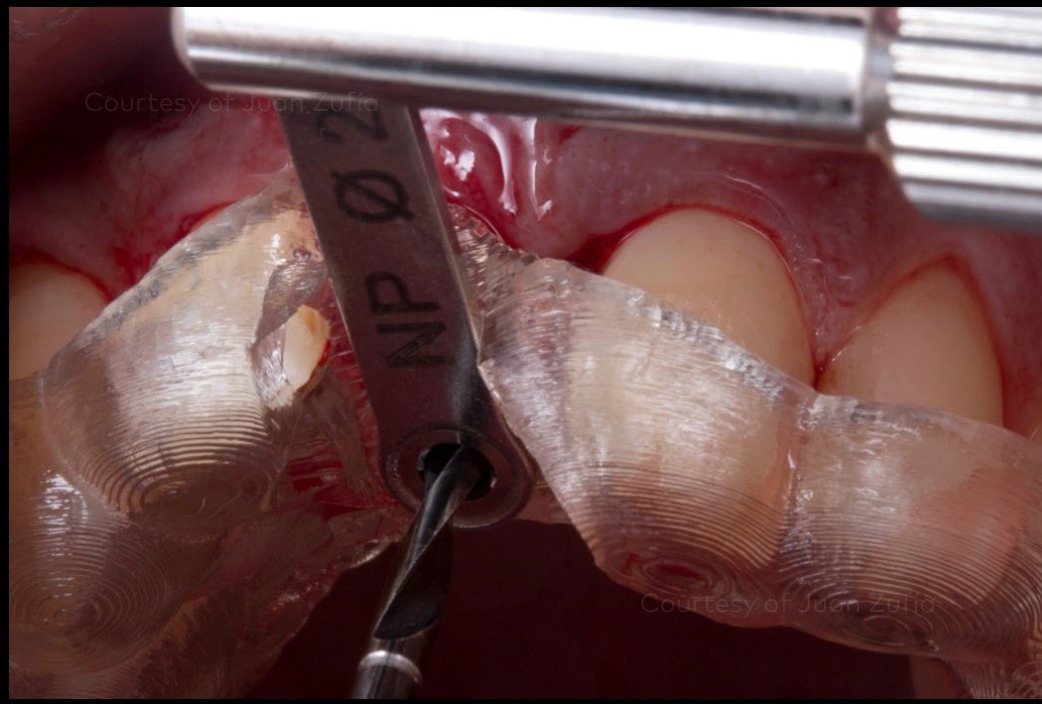


The flap is raised using a microblade.

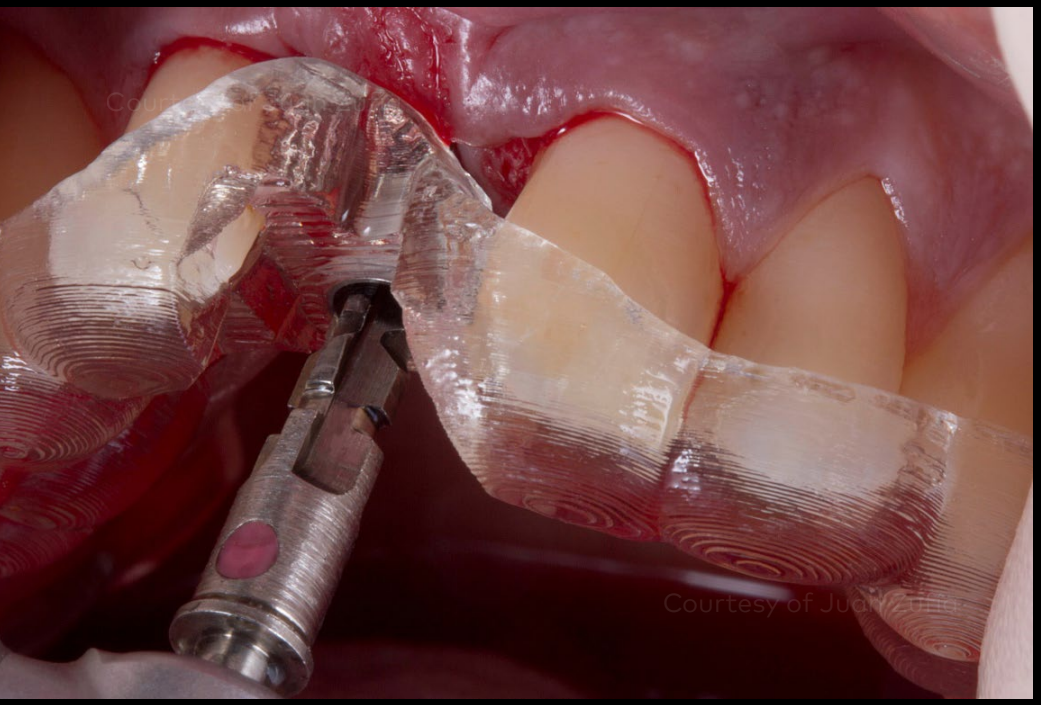


Partial thickness flap procedure is performed and the bone is not exposed.

Surgical template is placed in the correct position after raising the flap. It fits perfectly in the patient's mouth. No instability of the surgical template could be detected.

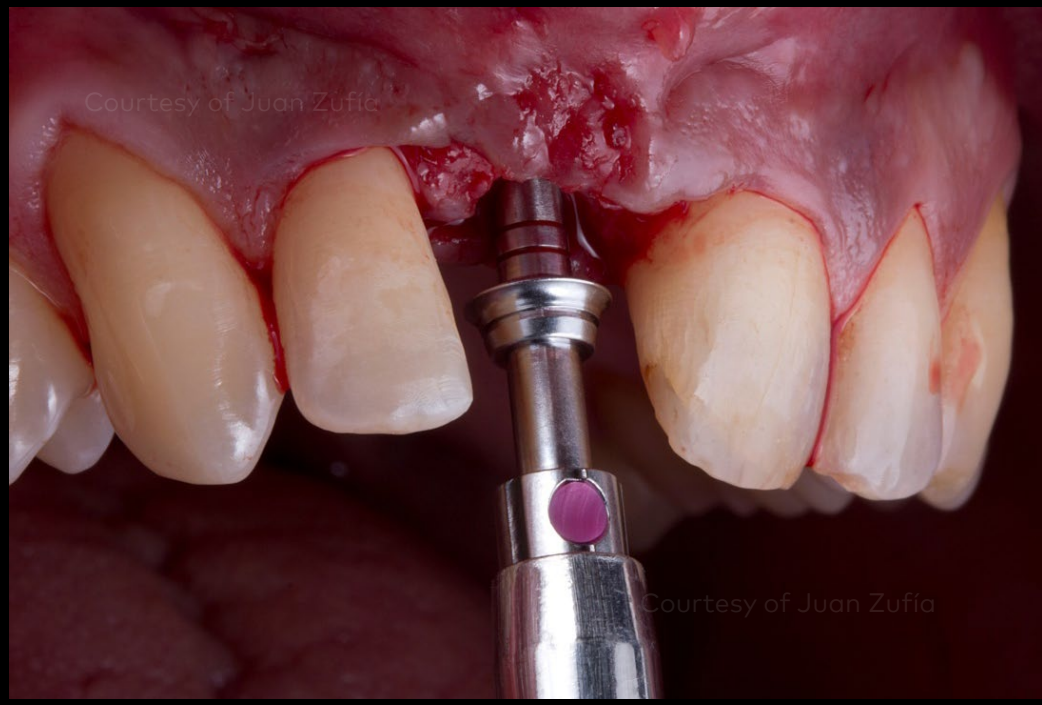


The Guided Twist Drill Ø 2.0 mm is used to prepare the site for the final depth.



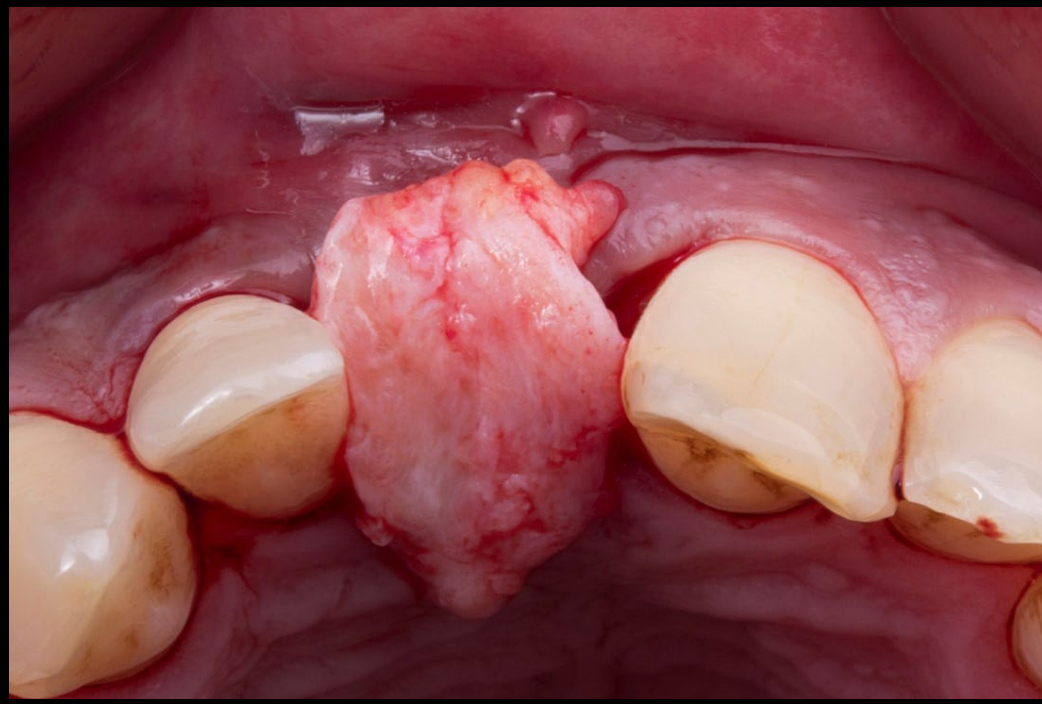
Preparation of the osteotomy is carried out with Ø 3.5 mm guided drill.

A NobelReplace CC PMC 3.5 x 13 mm implant is placed into the osteotomy with using Implant Driver CC NP for Slim Abutment.



The marker on the driver indicates the correct depth of the implant.

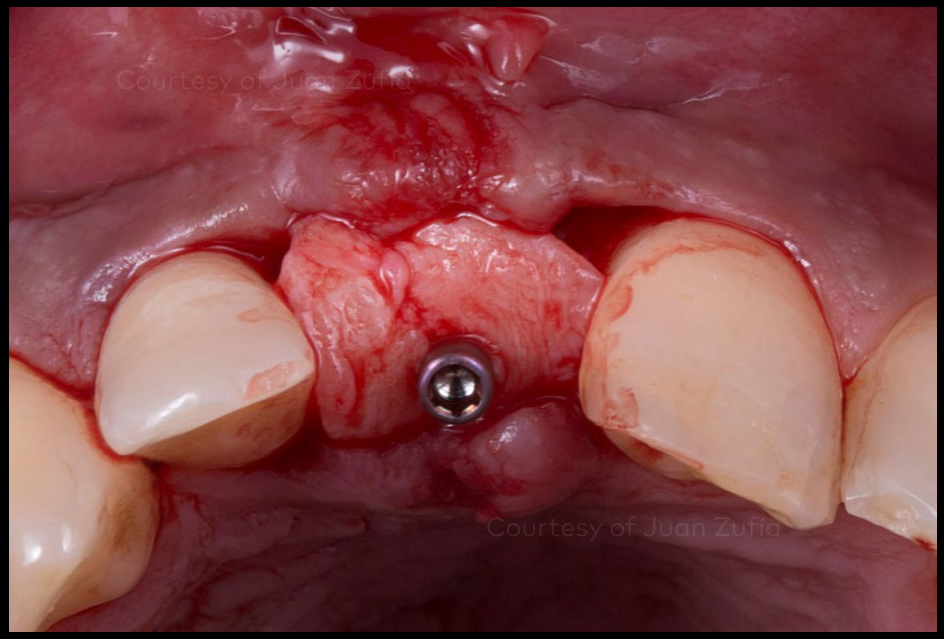
A connective tissue graft from the palate is used to improve the soft tissue enviroment around the implant. The patient had no tuberosity at all.



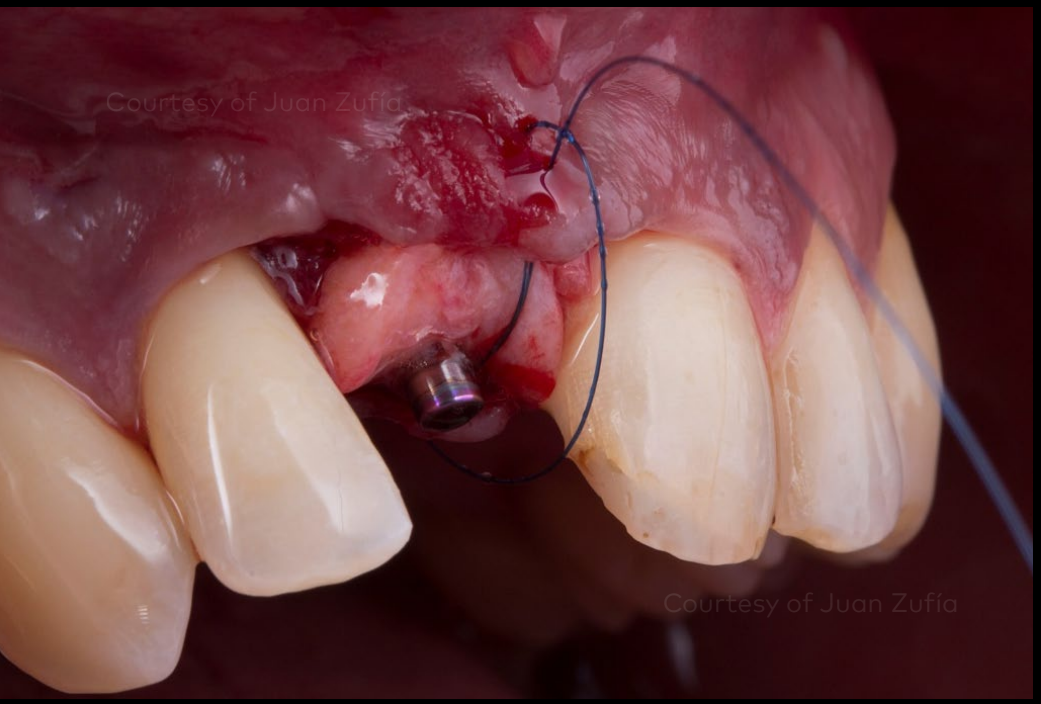
The connective tissue graft is prepared so that it covers the implant from the buccal side to the palatal side.

The prepared palatal connective tissue graft is then placed on the Slim Healing Abutment.

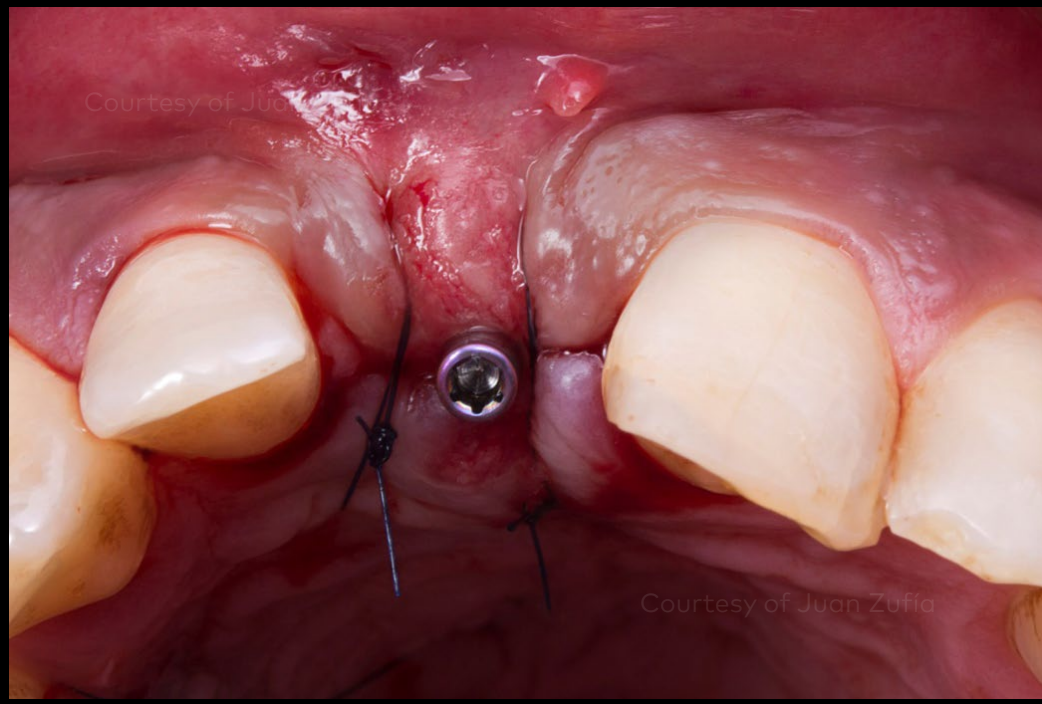
The Slim Healing Abutment is connected to the implant.



The graft covers the edentulous space completely.



A monofilament suture is used to displace the tissue coronally.



The suture must generate as little tension as possible on the surrounding soft tissue to avoid ischemia of the flap and to allow the revascularization of the graft.

Situation two weeks after the surgery.

After three months of healing the tissue has grown vertically and horizontally.

Occlusal view three months after the surgery, the soft tissue contour developed correctly.

The Slim Healing Abutment is removed to be replaced by a larger-diameter healing cap.

The healing cap will work as a transition between the use of Slim Healing Abutment and the provisional restoration.

Provisional restoration is placed after three months. Screw retained Temporary Abutment Engaging CC NP is used. A screw-retained final restoration is to be placed at a later date.

Six months after surgery, a NobelProcera ASC Abutment and a zirconia crown are placed as the final restoration .

To ensure symmentry, a composite restoration is performed on the left central incisor.

Final clinical picture six months after the surgery.

Case courtesy of Juan Zufía

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