

Implant placement in the atrophied maxilla

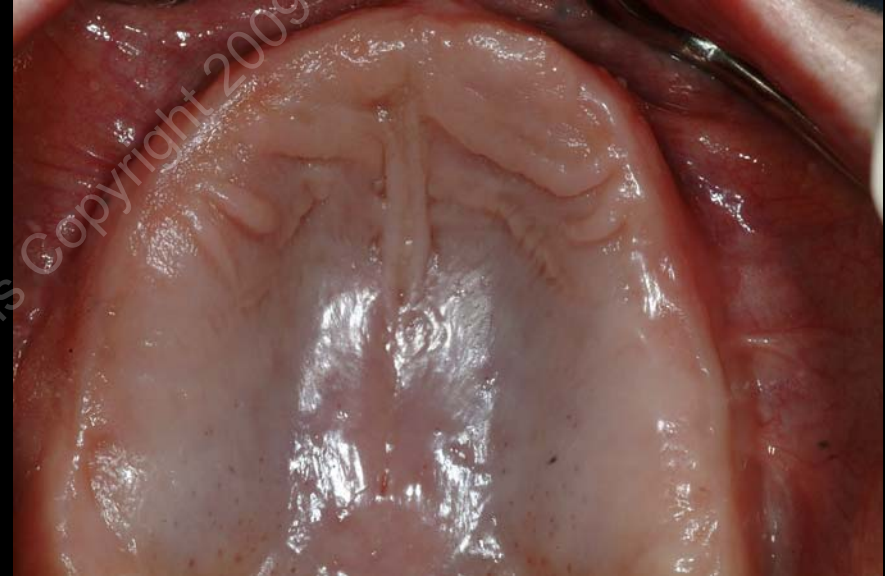
The removable implant supported prosthesis for the upper jaw

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The removable implant supported prosthesis for the upper jaw



Initial Exam: Patient with ill fitting, old dentures that are not retentive



Initial clinical photo

Treatment = remake dentures and place 5 implants in the upper jaw & 2 in the lower jaw to help retain removable protheses.

Edentulous maxilla (upper) arch shown here with advanced bone resorption.

The Diagnostic Phase



- The new dentures are then converted into scanning appliances which will show up on the CT scan.



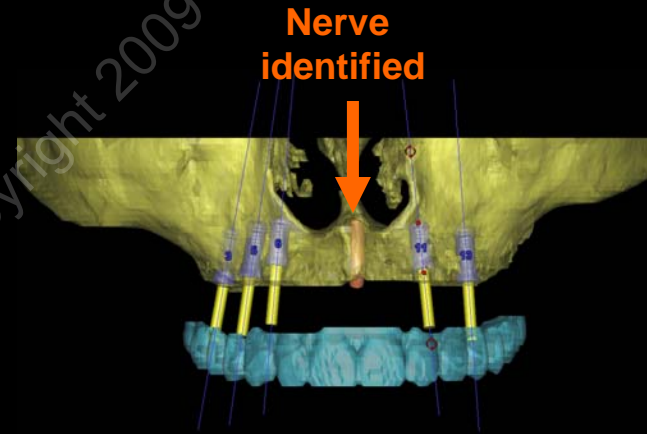
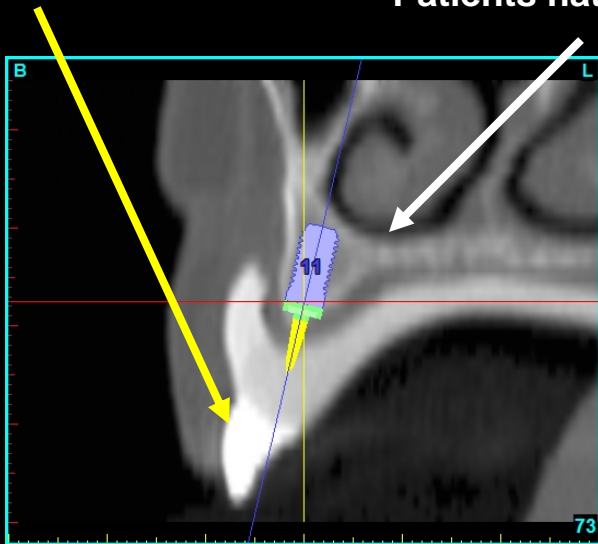
- The patient's upper and lower dentures are remade first to establish proper lip support, speech and anatomic orientation of the teeth so that implant planning can occur with the knowing where teeth and the prosthesis should be ideally end up.

This represents prosthetically directed implant planning. Planning with the end in mind before the surgery occurs so a road map can be set as to how that end point gets achieved.

CT scan analysis for presurgical planning

Planned tooth position

Patients native bone



Virtual (3D) CT scan implant planning

- Cross section view of one the 5 implant positions. Note the adequate bone width to accommodate the planned dental implant at this position.
- Three dimensional reconstruction demonstrating planned implant positioning for this patient. 5 Implants will be placed. A CT based computer generated surgical guide will be used for precise implant placement.
- 5 implants will be used to support a upper denture thereby securing in place during eating, talking and smiling activities. The implants will also help to maintain the remaining bone for this patient LONG-TERM.
- Position of incisive nerve is highlighted in orange for safety in planning surgery.

The removable implant supported prosthesis for the upper jaw

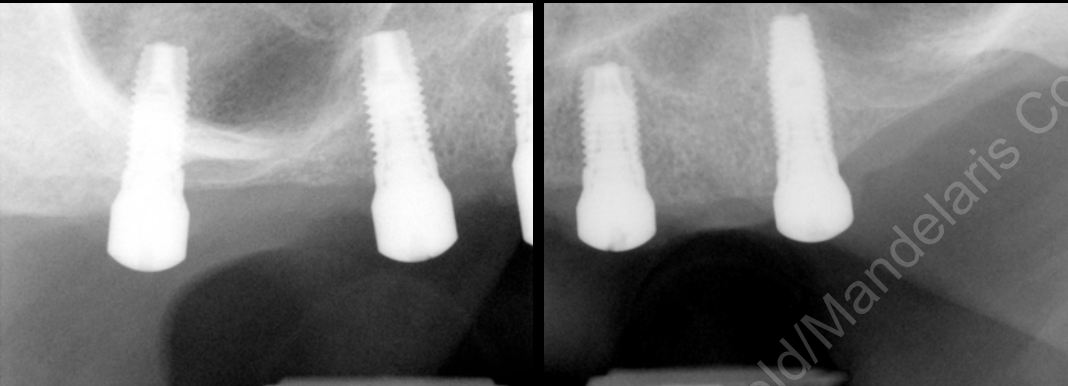
CT Scan plan and 3D implant planning

CT guided surgery will be utilized to ensure precise implant placement

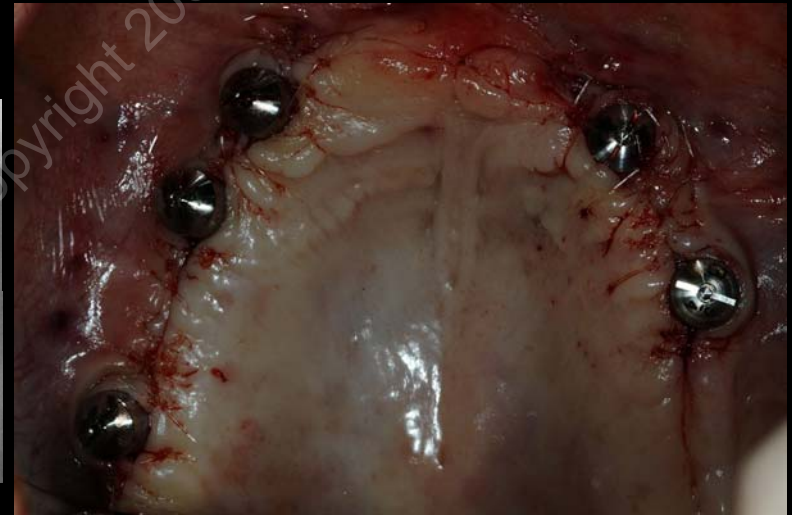


CT scan technology utilized to create virtual duplicate of the patients jawbone (**red arrows**) and a surgical guides developed (**yellow arrows**) from patients CT scan plan to ensure precise, accurate & safety in implant placement. The larger tubes represent where the implants will be placed while the smaller tubes are for stabilizing the guide.

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X-rays showing implants placed into upper jawbone. 3 implants have been placed on the right side and two on the left.



Implant surgery completed and healing abutments placed

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New Maxillary Implant Supported Removable Denture Complete Denture



Maxillary denture is removable for the patient, but highly retentive due to the implants

This picture represents the undersurface of the Implant retained denture. The 3 implants on the right and the 2 implants on the left have been splinted together by a metal bars which will fit into the upper denture (right picture)



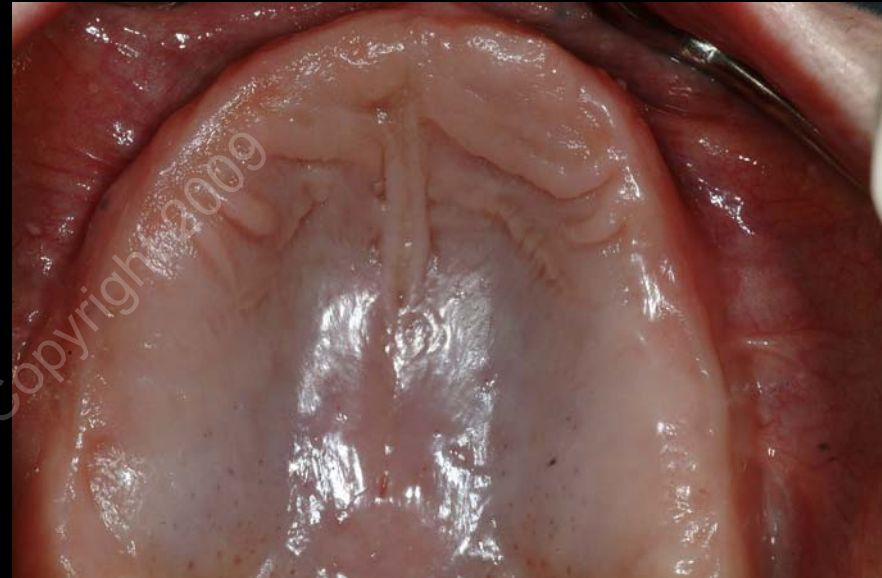
Maxillary implant retained removable denture prosthesis with attachments embedded within denture that the implants fit into.

This picture represents the undersurface of the implant retained denture. There attachments shown here in blue fit into the bar shown in the picture to left. In many instances, the palatal portion can be removed for the patient. This can was an exception.

The removable implant supported prosthesis for the upper jaw



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