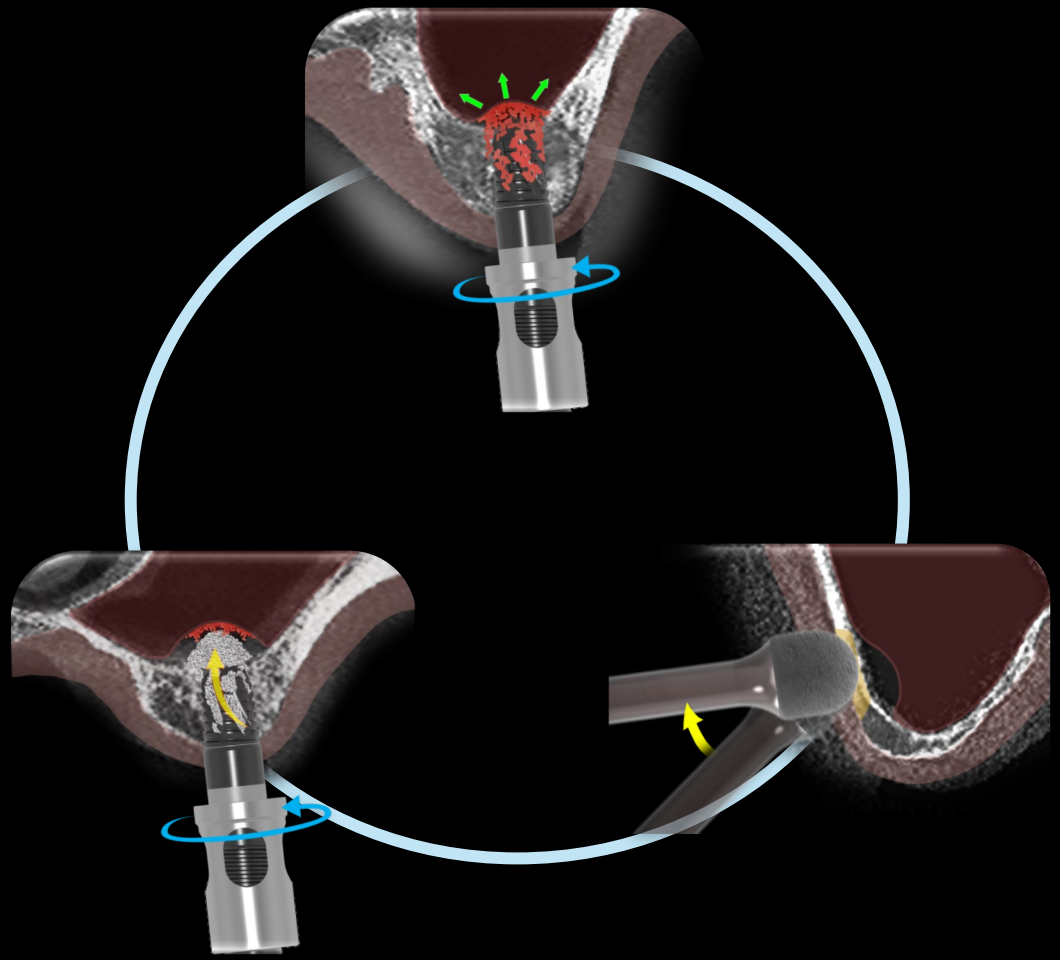
Sinus Simple



What is Sinus elevation and Why ?

Dentium

Sinus elevation is a surgical procedure to increase the amount of bone in the sinus, to provide adequate support for dental implants

The procedure involves lifting the inner lining of the sinus (the Schneiderian membrane) and filling the space with a bone substitute material, which serves as a scaffold for new bone to grow

Why is it performed?

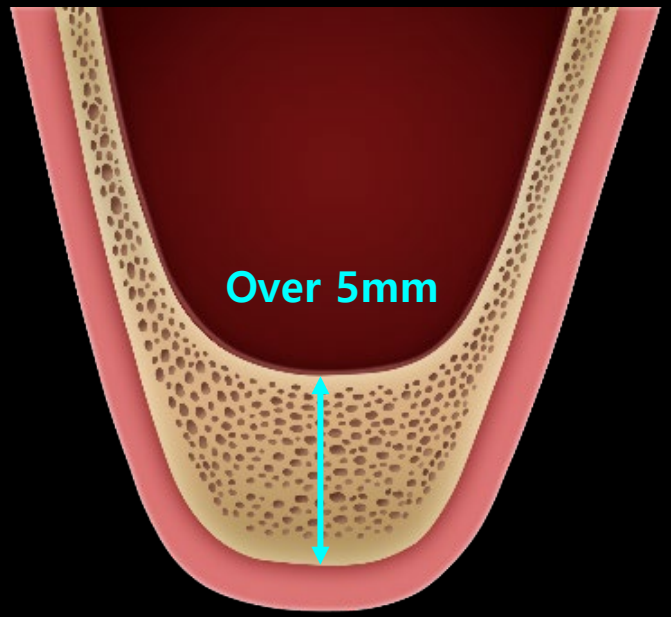
- **Insufficient bone height**
  After tooth loss in the posterior maxilla, the sinus can expand, leaving insufficient bone for dental implant placement
- **Implant stability**
  The procedure creates the necessary bone height and density for dental implants to be securely anchored

Guideline

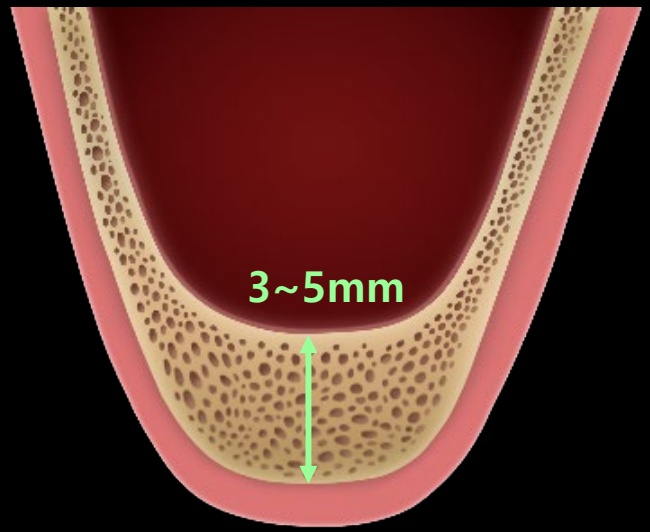
Dentium

Dentium's classification of sinus elevation based on residual bone height

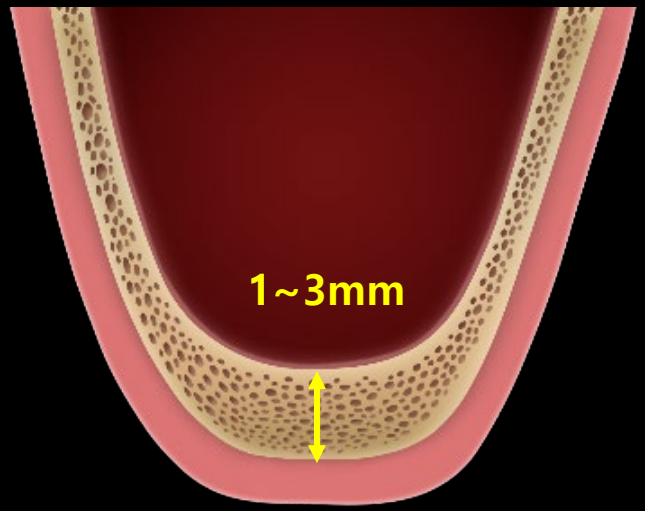
Bicortical Fixation



Crestal Approach

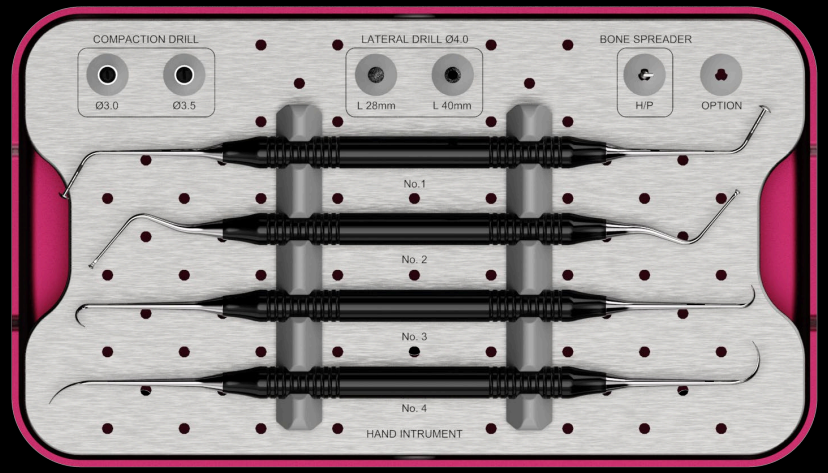


Lateral Approach

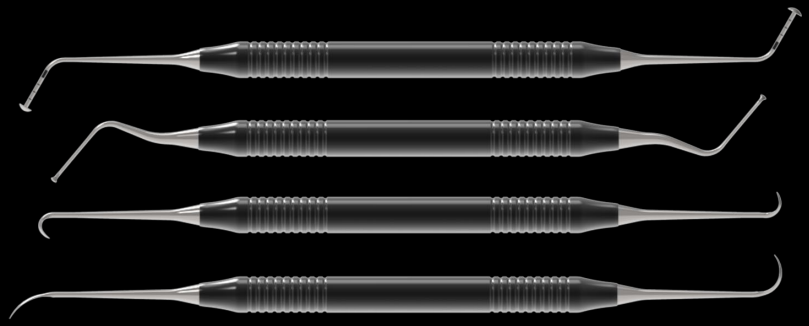


DASK *Simple*

Dentium



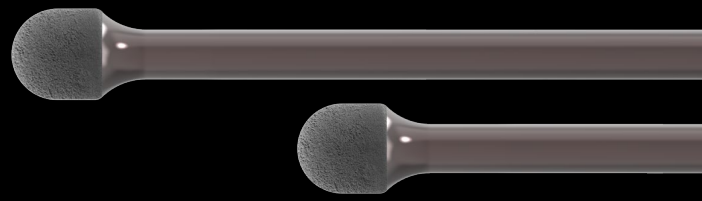
Compaction Drill | Lateral Drill | Bone Spreader



Hand Instruments

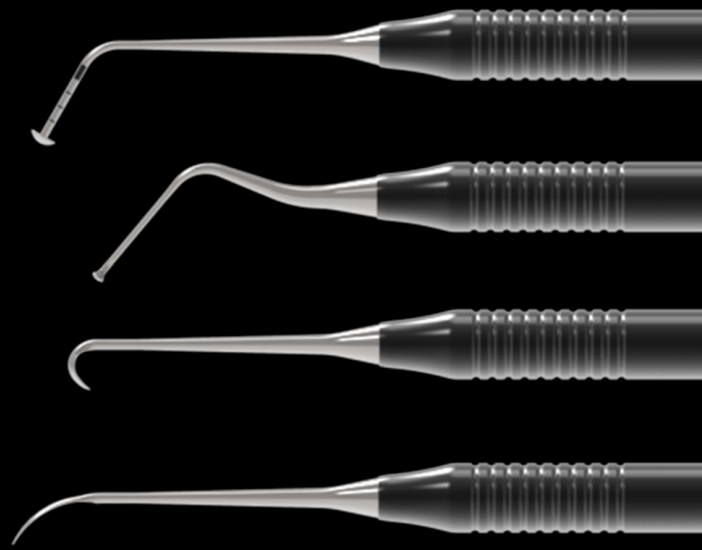
DASK Simple is designed to facilitate safe, efficient and minimally invasive **sinus lift** procedures

- The **lateral drill** is designed to prepare the **lateral wall** of the alveolar bone and is commonly used in **lateral approach** procedures. It facilitates safe access to the sinus



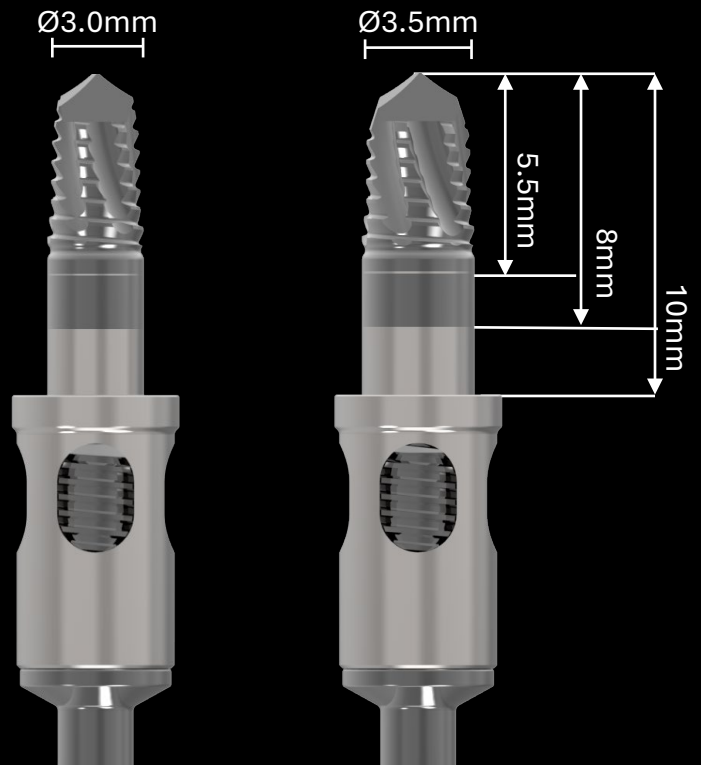
- The **bone spreader** is designed to gently spread the bone graft material within the sinus

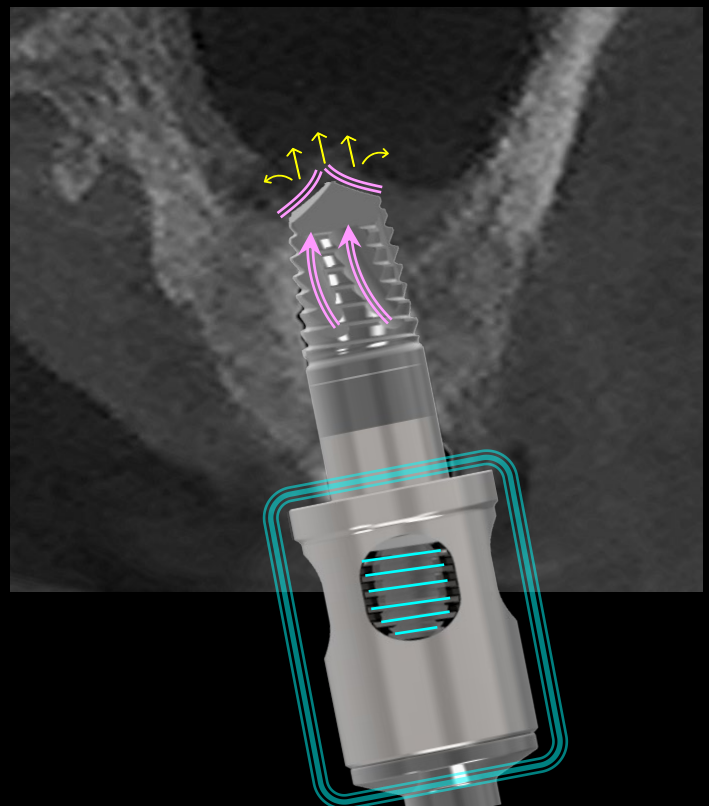
- The **hand instrument's angled neck** and **small tip** are designed to provide precise access to the sinus without a wide surgical opening



- No need to change it for **each millimeter** → Simply rotate it to adjust to the **desired length**
- The **reverse-cutting design** compacts the side bone instead of removing it, pushing bone chip upward into the sinus
- The **blunt, straight tip** spreads the elevated bone upward, enhancing the sinus lift procedure

Two Diameter Options





Regeneration

Dentium

OSTEON™ Xeno Collagen

Bovine Bone (90%)
+
Porcine Collagen (10%)

- ✓ Natural **Bovine Bone** Substitute with **Collagen**
- ✓ Easy Handling & Malleable → (Chair time ↓)
- ✓ Excellent **Osteoconductivity**
- ✓ Useful for **Sinus Lift**

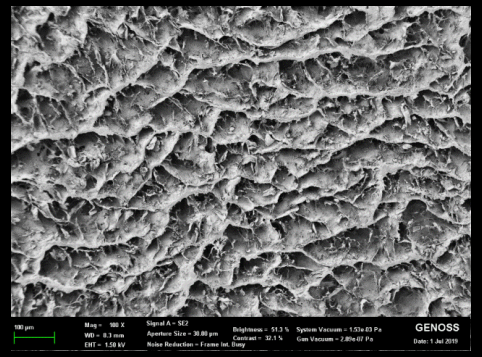
Regeneration

Dentium

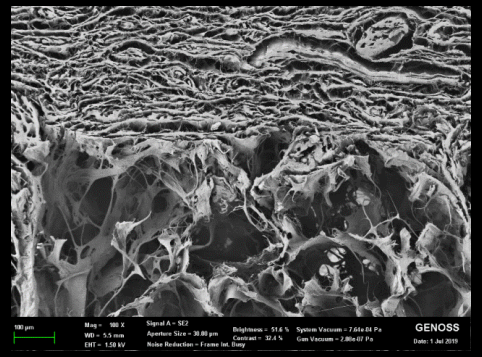
Collagen Graft x1D

- ✓ Highly Pure Collagen Type I
- ✓ For **Soft Tissue Regeneration**
- ✓ **Open Membrane Technique**

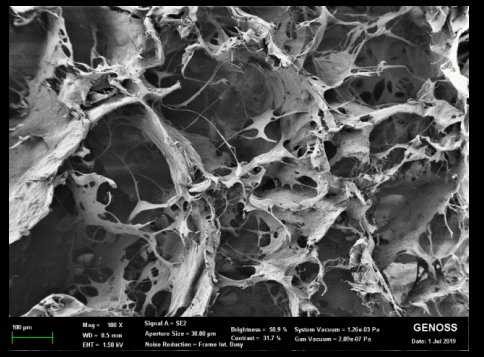
Porcine Tendon



Top



Cross-section



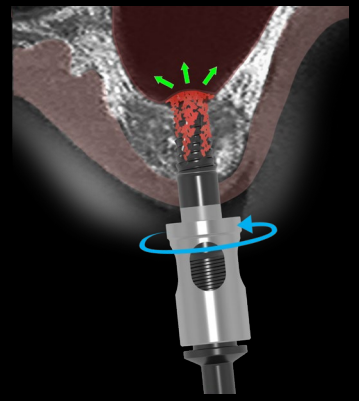
Bottom

Bicortical Fixation

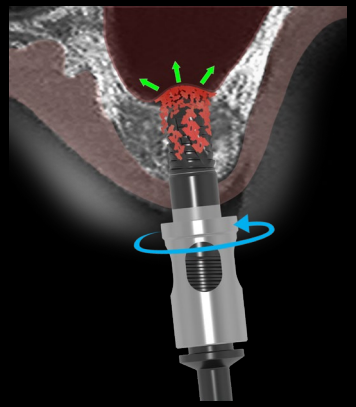
Residual bone height > 5 mm

Dentium

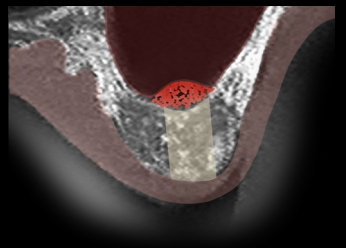
Initial drilling



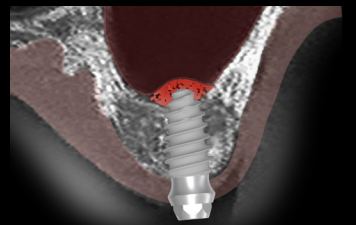
Compaction drill Ø3.0



Compaction drill Ø3.5



Auto bone chip lifting



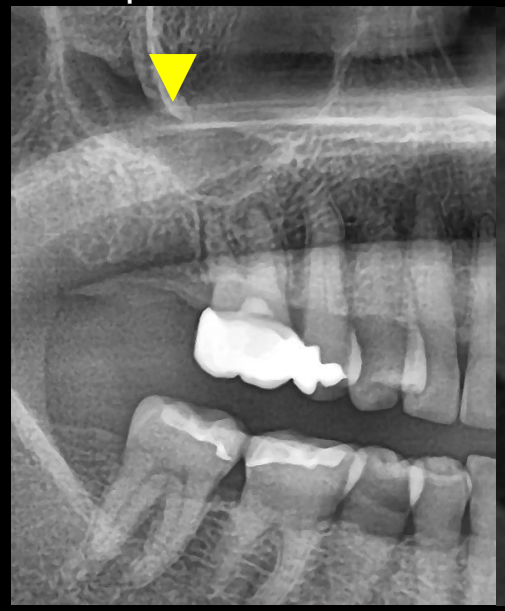
Implantation

- The **compaction drill** is elevated the sinus membrane with bone chip. 1~2mm can be lifted by the **autogenous bone chip** without any **bone graft material**
- The initial drilling **depth** is adjusted according to the **length** of the implant fixture

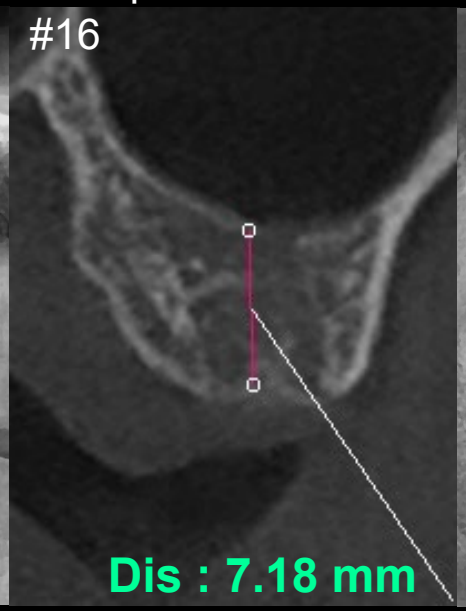
Clinical Effects

Dentium

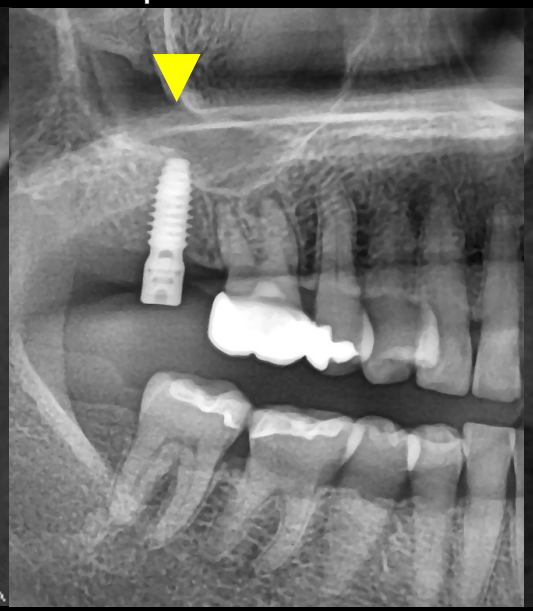
Pre-op



Pre-op CT
#16

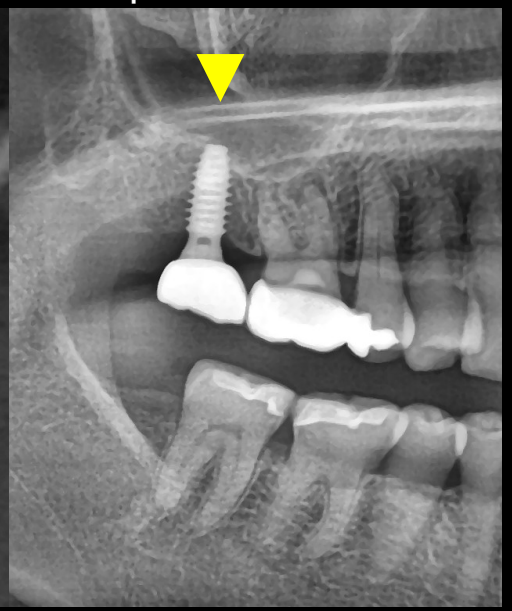


Post-op



Post-op CT
#16

Final prosthesis



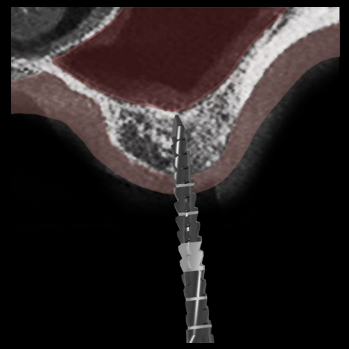
bright TL (Ø4.0 X 9.0)

The Compaction Drill lifts the Sinus Membrane with Auto Bone Chip

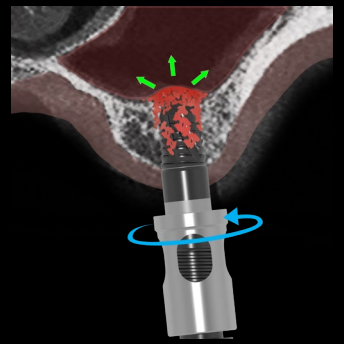
Crestal Approach

Residual bone height 3~5 mm

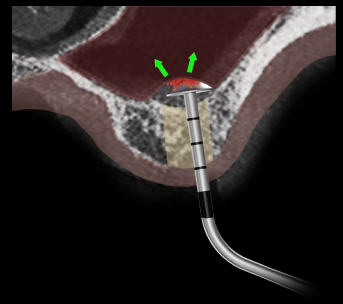
Dentium



Initial drilling

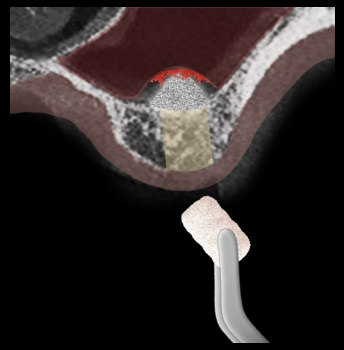


Auto bone lifting

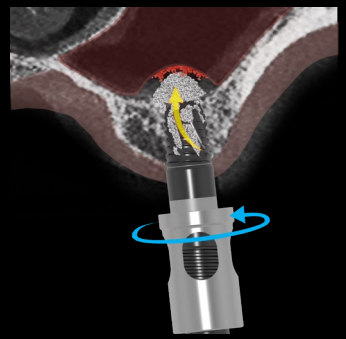


Initial detaching

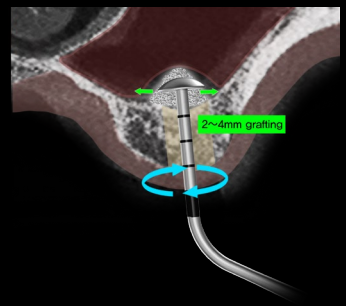
Membrane detaching



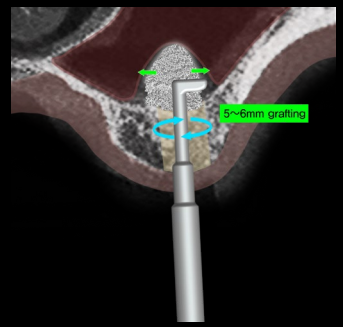
Bone graft material application

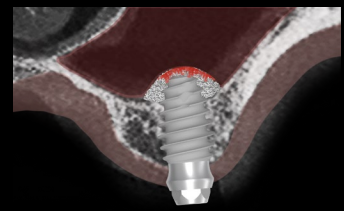


Bone graft material lifting



Bone graft material spreading





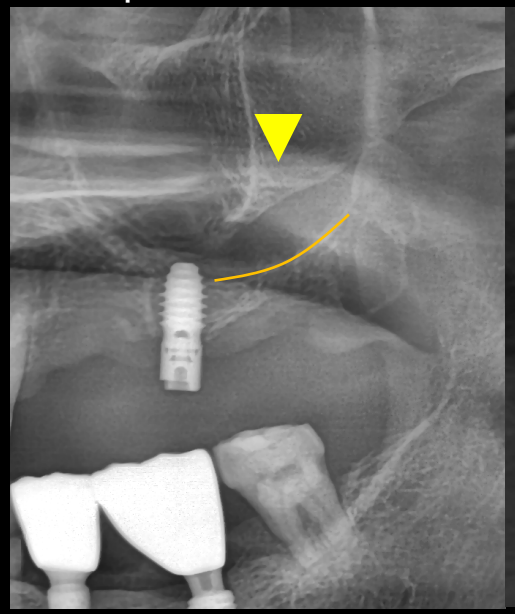
Implantation

- The **compaction drill** elevates the sinus membrane with bone chip. The membrane is then detached with **DASK Simple** instruments, and the **bone graft material** is lifted and spread with the **compaction drill** and **bone spreader**

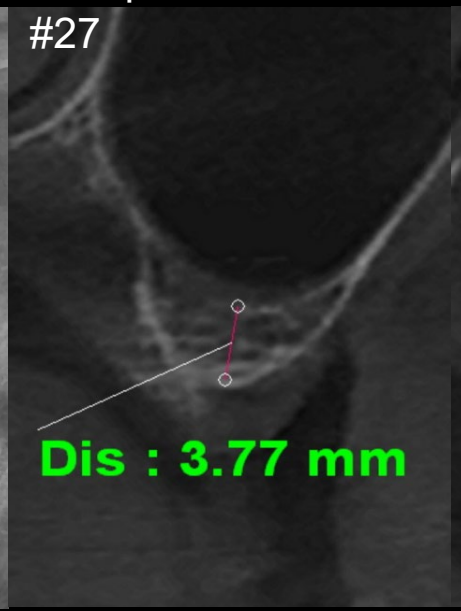
Clinical Effects

Dentium

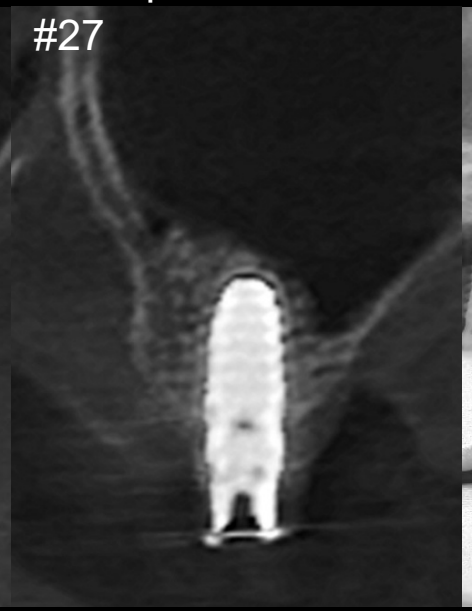
Pre-op



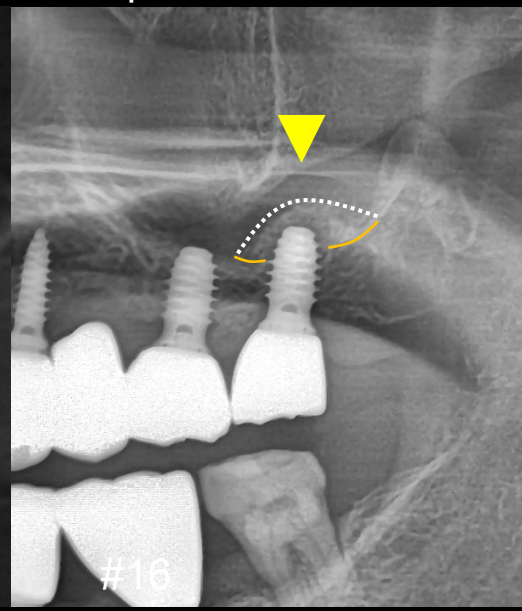
Pre-op CT



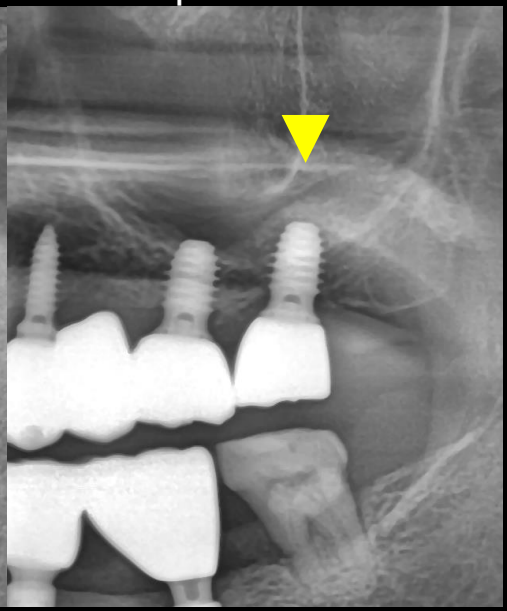
Post-op CT



Final prosthesis



Follow up : 6 months



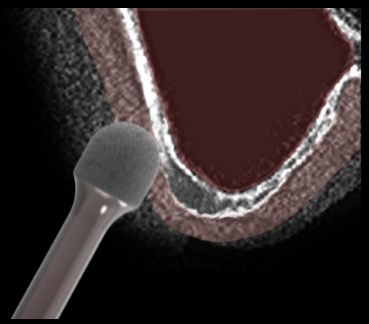
bright TL (Ø4.5 X 7.0)

The Sinus Membrane Elevated with Compaction Drill & Regeneration Material

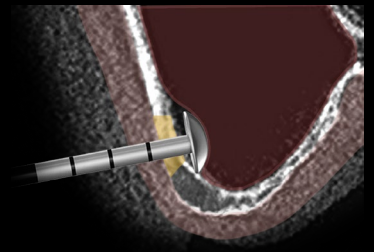
Lateral Approach

Residual bone height 1~3 mm

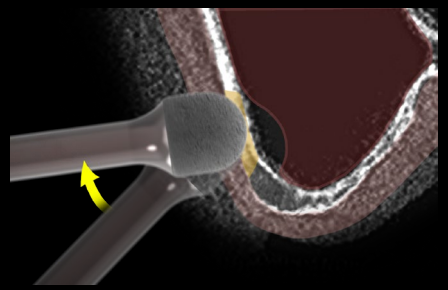
Dentium



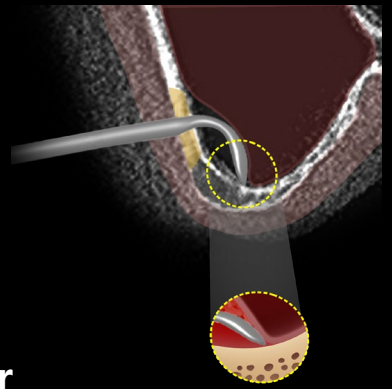
Lateral wall grinding

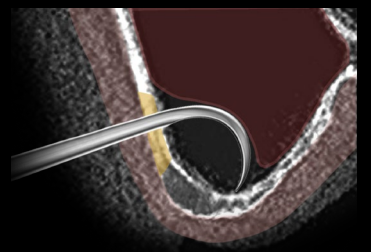


Initial detaching

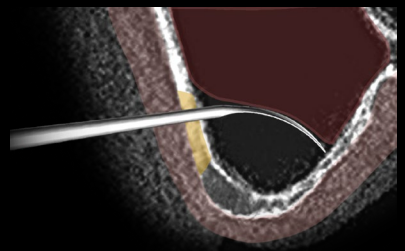


Lateral wall grinding wider

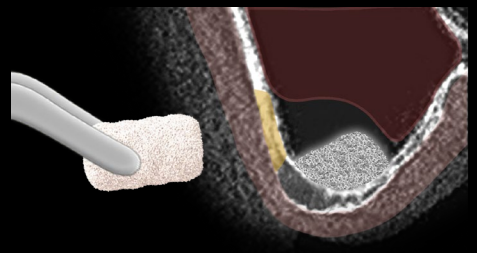




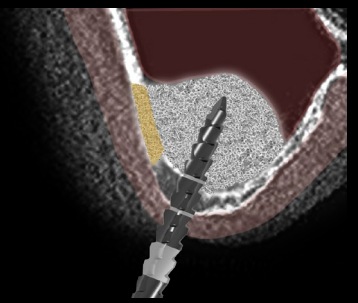
Membrane detaching



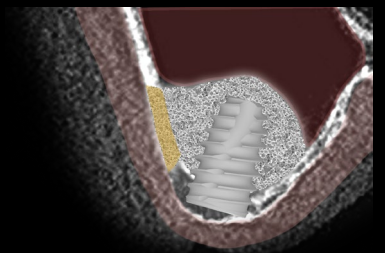
Membrane detaching



Bone graft material filling



Drilling



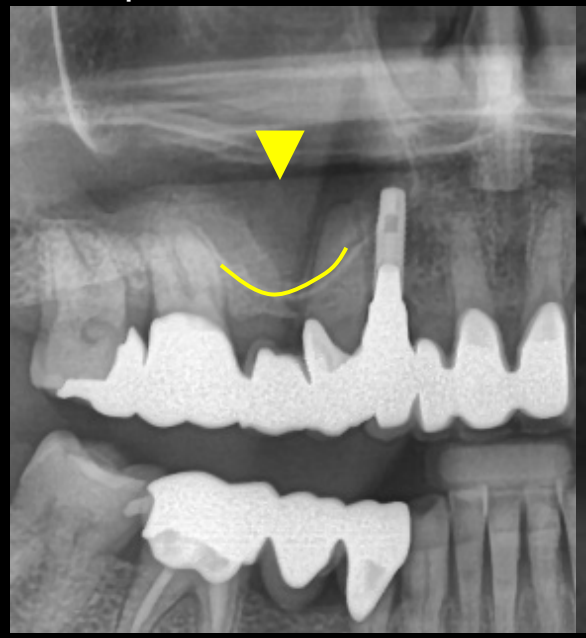
Implantation

- The **lateral drill** is used to grind the lateral wall. The sinus membrane is then detached with **DASK Simple** instruments, and the **lateral window** is widened as needed. The sinus membrane is elevated and fully detached from the sinus floor, after which the **bone graft material** is filled in

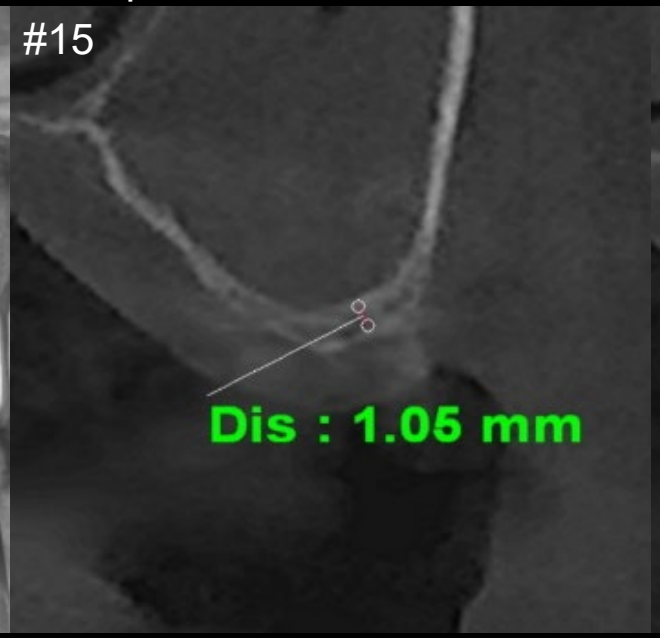
Clinical Effects

Dentium

Pre-op

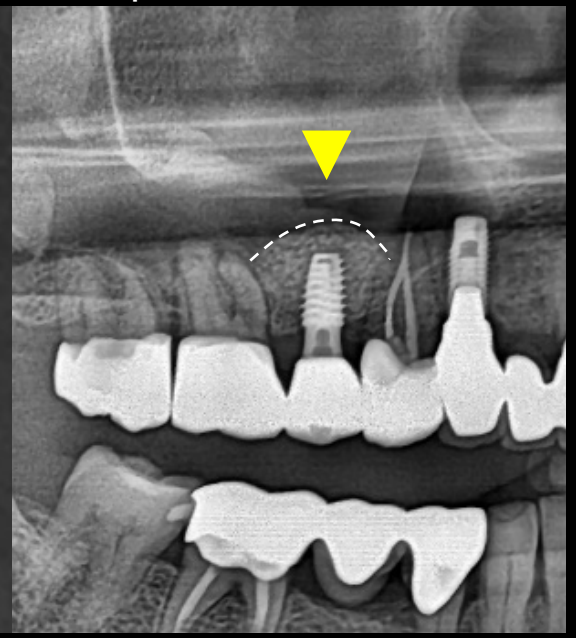


Pre-op CT



Post-op CT

Final prosthesis



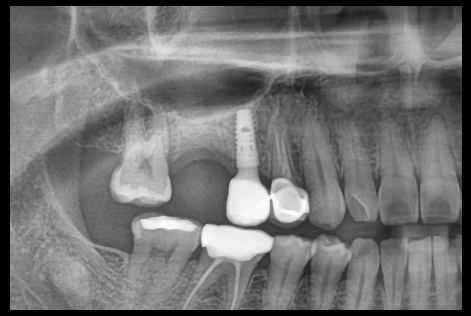
bright BL (Ø4.0 X 7.0)

The Sinus Membrane is fully detached and elevated with DASK Simple
The Sinus Cavity is filled with Bone Graft Material

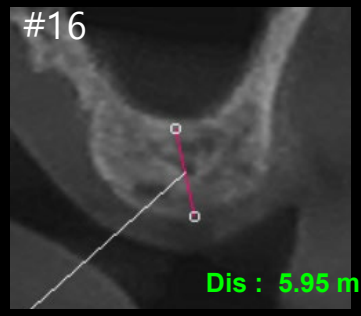
Bicortical Fixation

Bicortical Fixation CASE 1

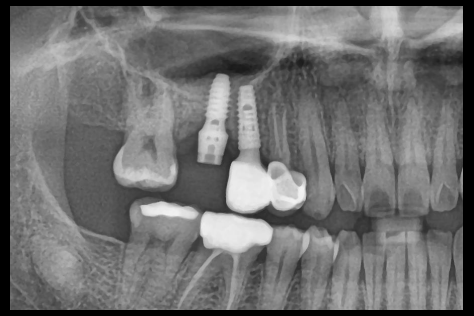
Dentium



Panorama before implant placement

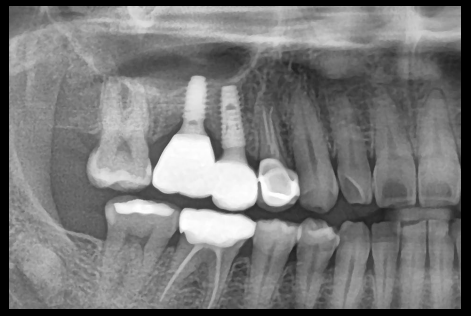


CT image indicates a residual bone height of over 5 mm



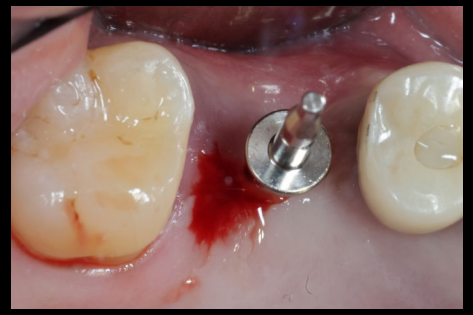
Panorama after implant placement

Postoperative CT image after sinus membrane elevation with auto bone chip

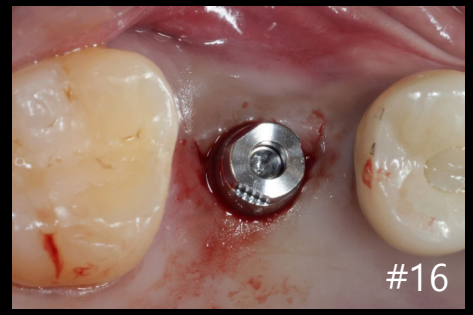


Panorama after final prosthesis delivery

Photo before implant placement



Parallel pin ensures accurate alignment and angulation



bright TL (Ø4.0 X 7.0) fixture installation

Provisional restoration based on Intra Oral Scan data

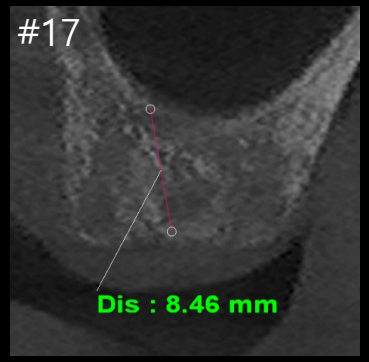
Final impression ensures a perfect prosthesis fit

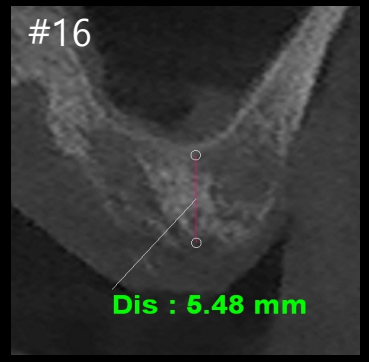
Final prosthesis designed on Bite Tray Scan and Intra Oral Scan data

Hole resin filling

Bicortical Fixation CASE 2

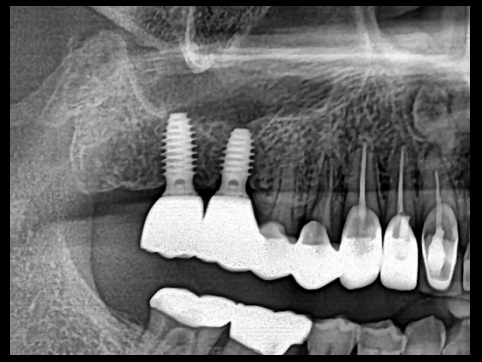
Dentium



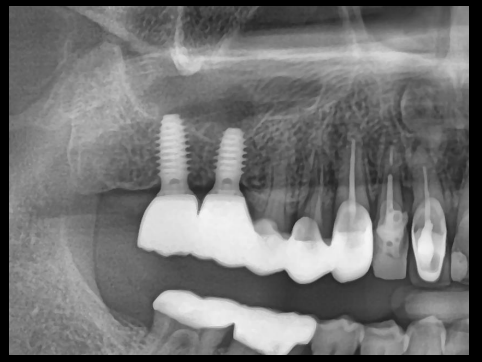


CT image indicates a residual bone height of over 5 mm

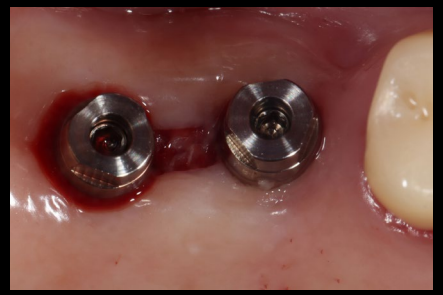
Postoperative CT image after sinus membrane elevation with auto bone chip



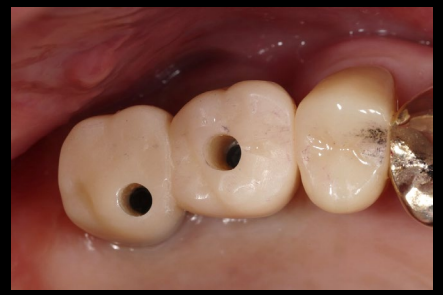
Panorama after final prosthesis delivery



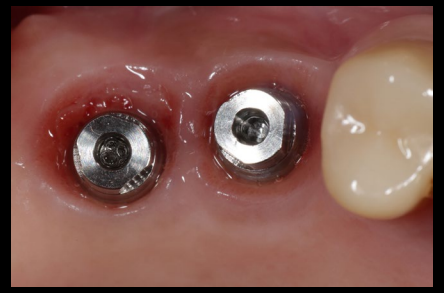
Follow up panorama taken 1 year after final prosthesis delivery



#16 bright TL (Ø4.5 X 7.0)
#17 bright TL (Ø4.5 X 9.0)
fixture installation



Provisional restoration based on Intra Oral Scan data



Final impression ensures a perfect prosthesis fit

Final prosthesis designed on Bite Tray Scan and Intra Oral Scan data

Hole resin filling

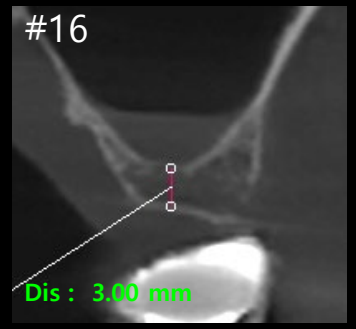
Follow up photo taken 8 months after final prosthesis delivery

Follow up photo taken 2 years after final prosthesis delivery

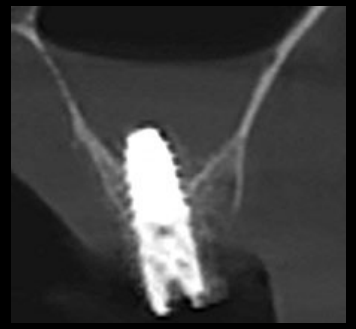
Crestal Approach

Crestal Approach CASE 1

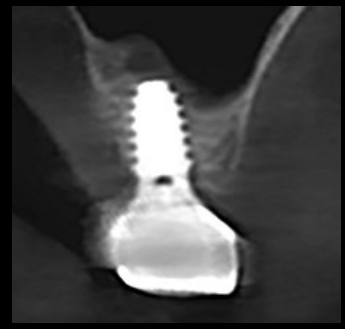
Dentium



CT image indicates a residual bone height of less than 5 mm



Postoperative CT image after sinus membrane elevation and bone grafting



Follow up CT image taken 6 months after final prosthesis delivery

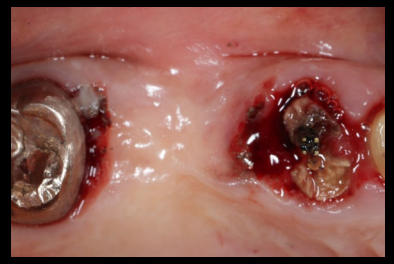
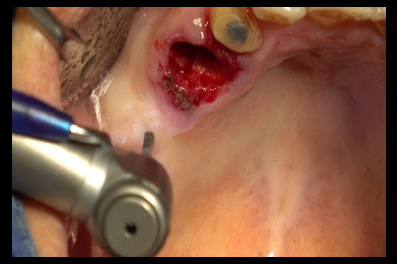
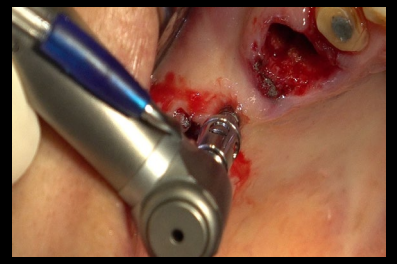


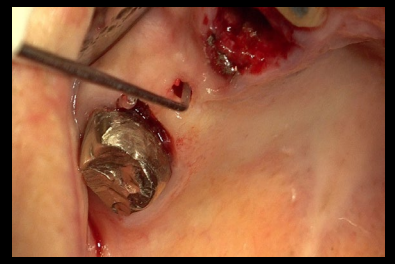
Photo before implant placement



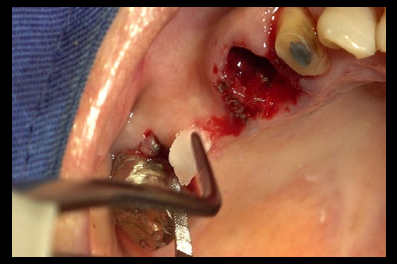
Guide drilling for accurate implant placement



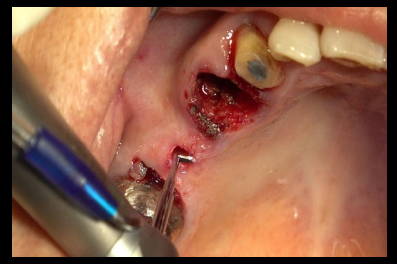
Compaction drill elevates the sinus membrane with auto bone chip



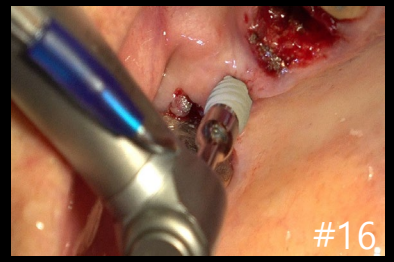
Sinus membrane detachment with DASK Simple instruments



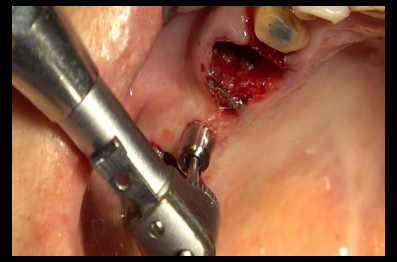
Application of Collagen Graft x1D



Bone spreader spreads the bone graft material



bright TL (Ø4.0 X 9.0) fixture installation



Scan Comfort Cap is available for both B.T.S and I.O.S

Photo after implant placement

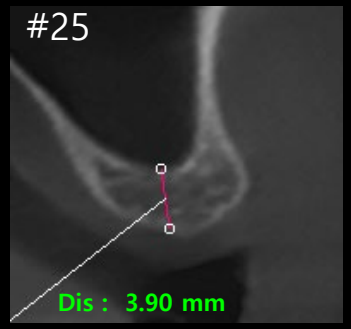
Provisional restoration based on Intra Oral Scan data

Final prosthesis designed on Bite Tray Scan and Intra Oral Scan data

Follow up photo taken 6 months after final prosthesis delivery

Crestal Approach CASE 2

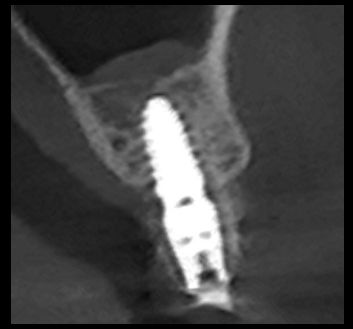
Dentium



CT image indicates a residual bone height of less than 5 mm

Postoperative CT image after sinus membrane elevation and bone grafting

CT image taken 3 months after implant placement

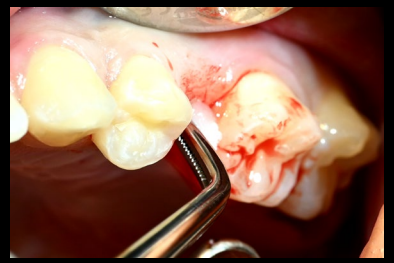


CT image taken 6 months after implant placement shows bone formation

Photo before implant placement

Guide drilling for accurate implant placement

Compaction drill elevates the sinus membrane with auto bone chip



Application of Collagen Graft x1D

Compaction drill lifts the bone graft material

bright TL (Ø3.5 X 7.0) fixture installation

Scan Comfort Cap is available for both B.T.S and I.O.S

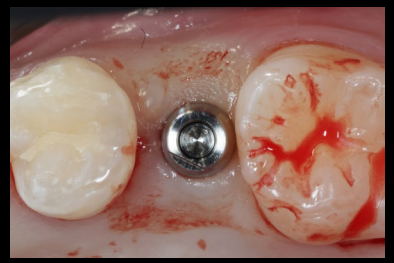


Photo after implant placement

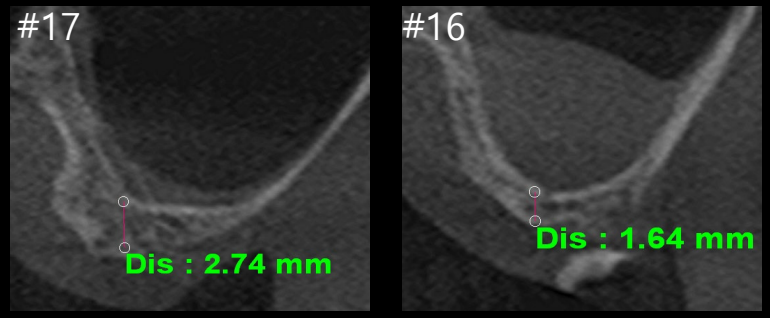
Provisional restoration based on Intra Oral Scan data

Lateral Approach

Lateral Approach CASE 1

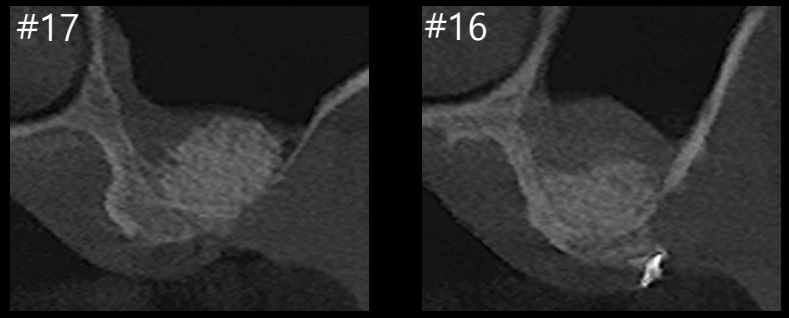
Dentium

Pre-op CT



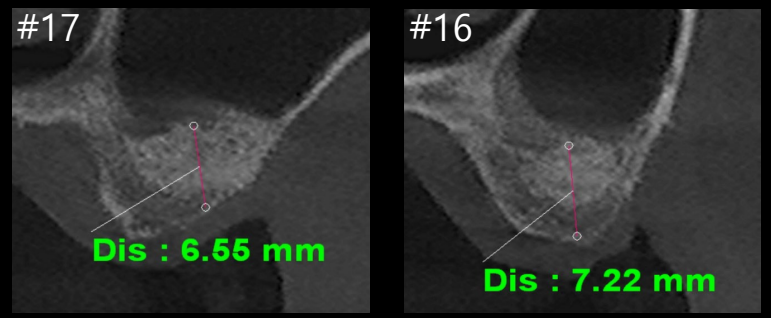
CT image indicates a residual bone height of less than 3 mm

Post-op CT



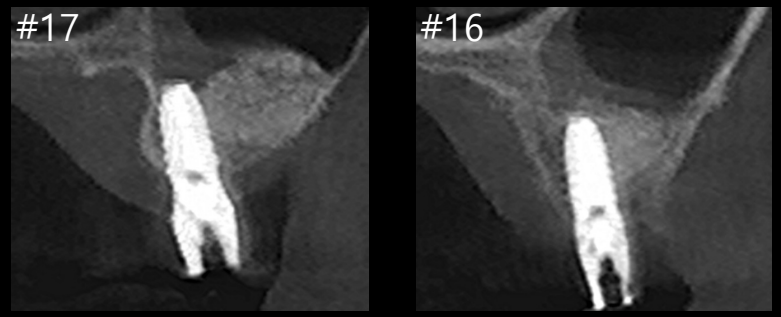
Postoperative CT image after sinus membrane elevation and bone grafting

I.S Pre-op CT



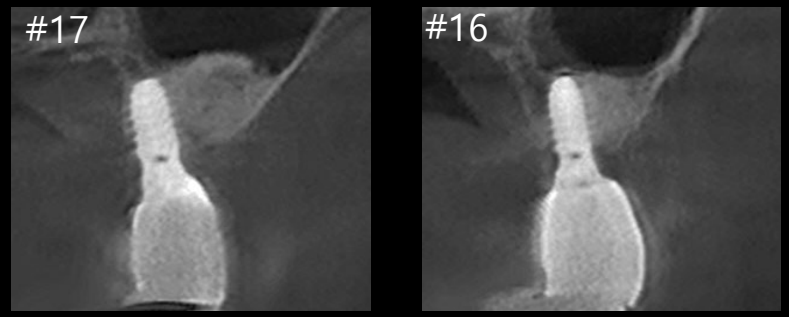
Preoperative CT image taken 11 months after initial treatment, before implant placement

I.S Post-op CT



Postoperative CT image after implant placement

Follow up CT : 7 months



Follow up CT image taken 7 months after final prosthesis delivery

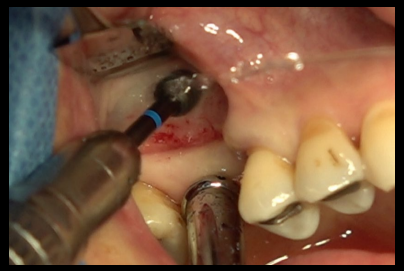
Lateral Approach CASE 1

Dentium

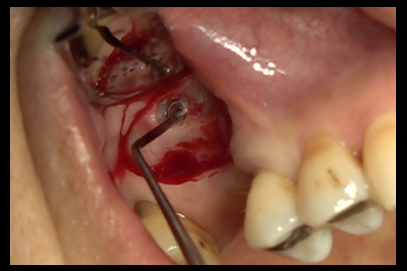
1st Surgery

Preoperative photo showing a narrow alveolar ridge

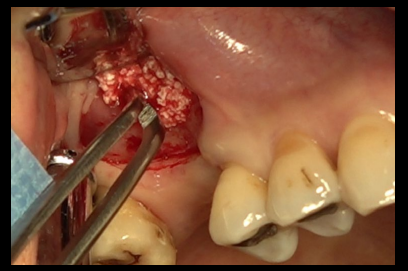
Incision to access the surgical site



Lateral wall grinding with lateral drill



Sinus membrane detachment with DASK Simple instruments

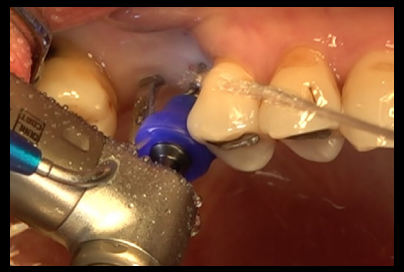


Bone graft site filled with OSTEON 3 Collagen

Flap closure with membrane pin

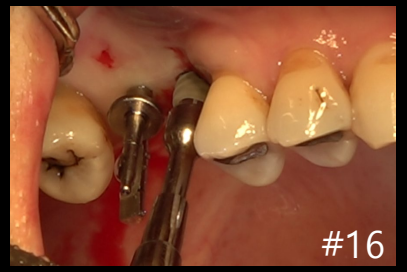
2nd Surgery

Guide pin insertion for alveolar bone mapping

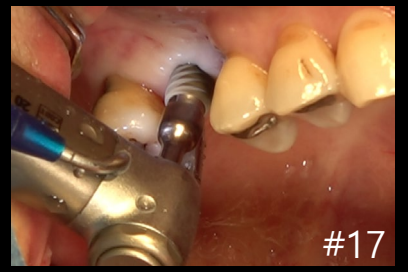


Guide drilling for accurate implant placement

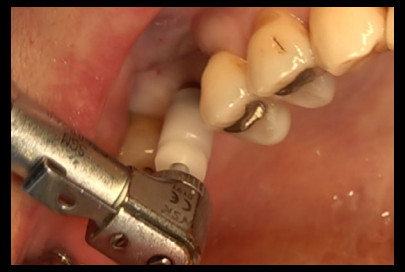
Final drilling ensures the correct size and depth for implant placement



bright TL (Ø4.0 X 7.0) fixture installation



bright TL (Ø4.5 X 7.0) fixture installation



Digital Abutment is available for both B.T.S and I.O.S

Restoration

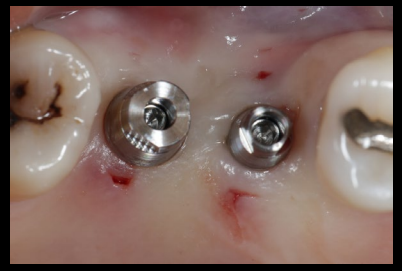


Photo after implant placement

Provisional restoration based on Intra Oral Scan data

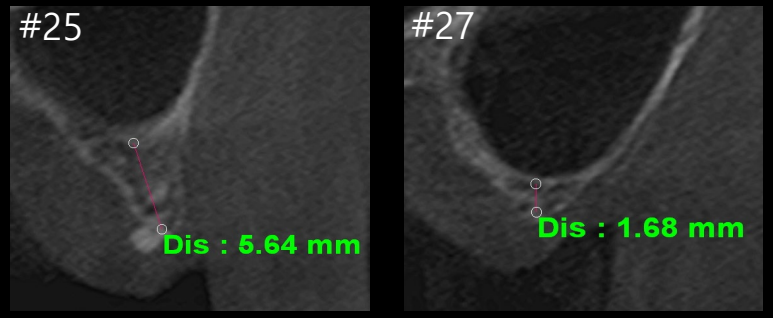
Final prosthesis designed on Bite Tray Scan and Intra Oral Scan data

Follow up photo taken 7 months after final prosthesis delivery

Lateral Approach CASE 2

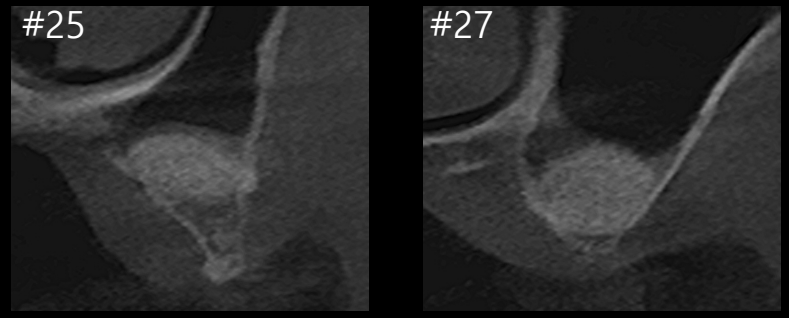
Dentium

Pre-op CT



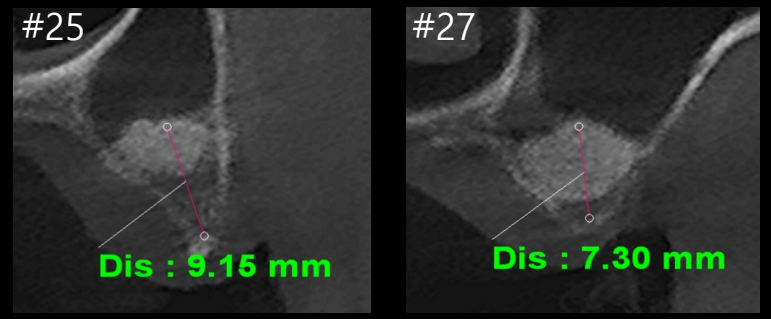
CT image indicates a residual bone height of less than 3 mm

Post-op CT



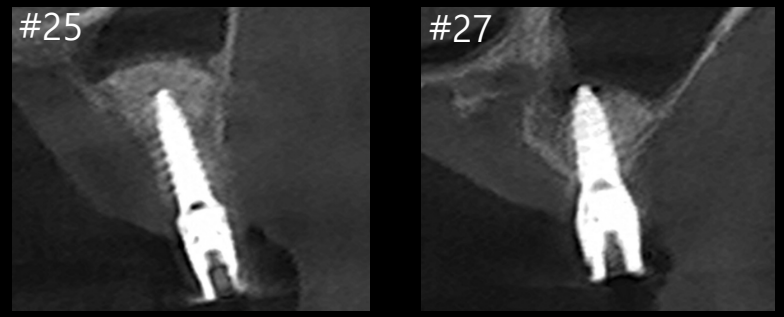
Postoperative CT image after sinus membrane elevation and bone grafting

I.S Pre-op CT



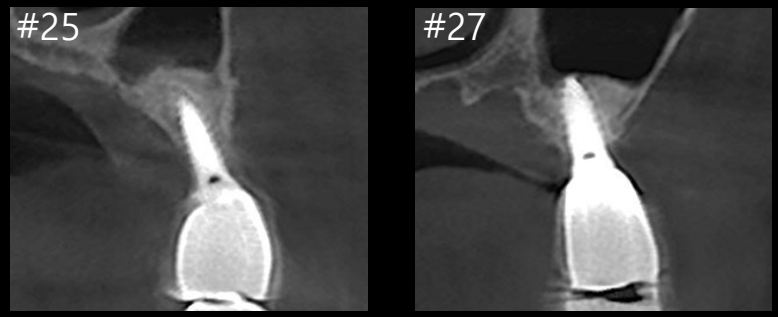
Preoperative CT image taken 11 months after initial treatment, before implant placement

I.S Post-op CT



Postoperative CT image after implant placement

Follow up CT : 7 months



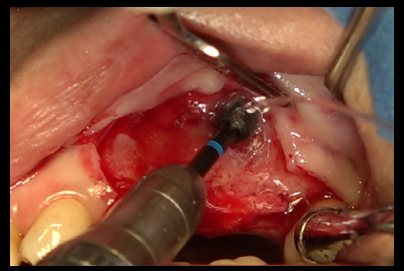
Follow up CT image taken 7 months after final prosthesis delivery

Lateral Approach CASE 2

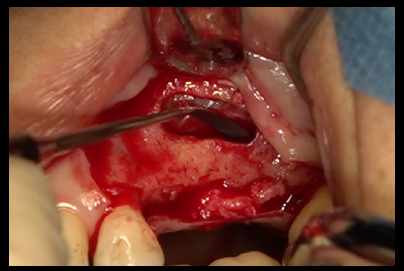
Dentium

1st Surgery

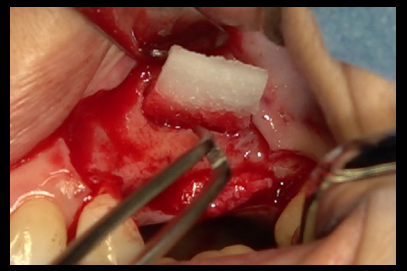
Preoperative photo showing a narrow alveolar ridge



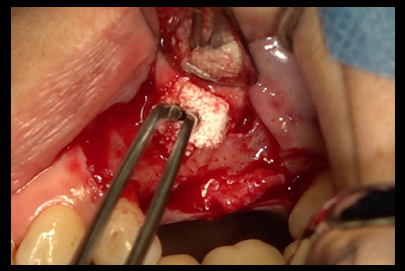
Lateral wall grinding with lateral drill



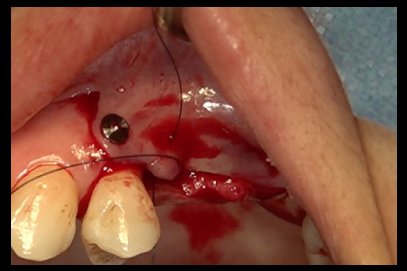
Sinus membrane detachment with DASK Simple instruments



Application of Collagen Graft x1D to support sinus membrane elevation

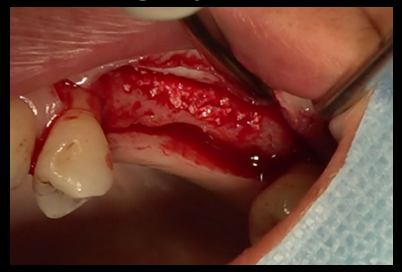


Bone graft site filled with OSTEON 3 Collagen

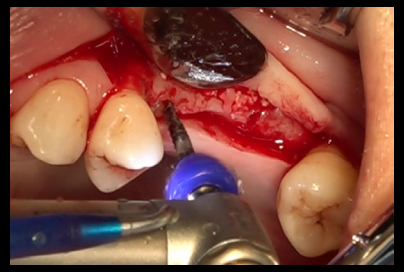


Flap closure with membrane pin and sutures

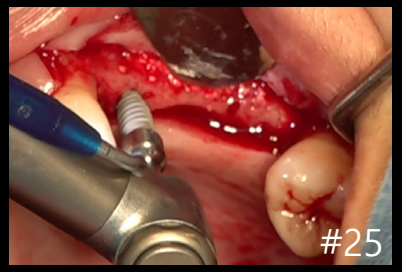
2nd Surgery



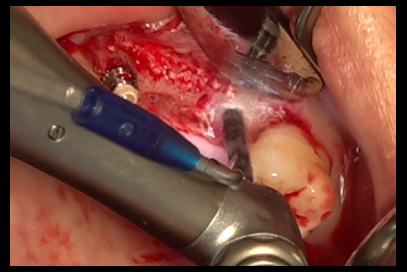
Flap reflection for implant placement



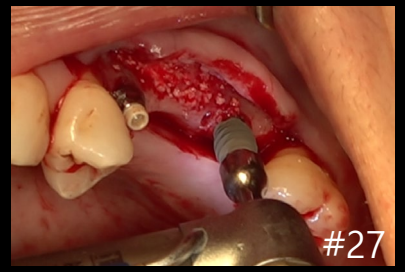
Guide drilling for accurate implant placement



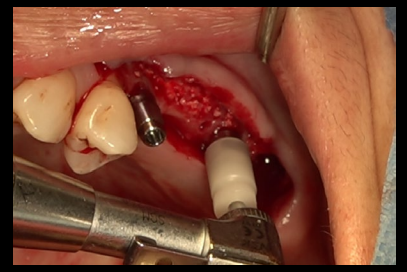
bright TL (Ø3.0 X 9.0) fixture installation



Final drilling ensures the correct size and depth for implant placement



bright TL (Ø3.5 X 7.0) fixture installation



Digital Abutment is available for both B.T.S and I.O.S

Restoration

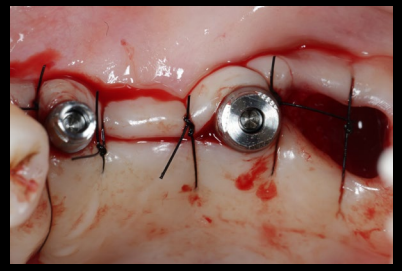


Photo after implant placement

Provisional restoration based on Intra Oral Scan data

Final prosthesis designed on Bite Tray Scan and Intra Oral Scan data

Follow up photo taken 7 months after final prosthesis delivery

Thank you