

# Case Report : Immediate Implant placement (TS III) using OneGuide And Provisionalization in the esthetic zone (#22i)

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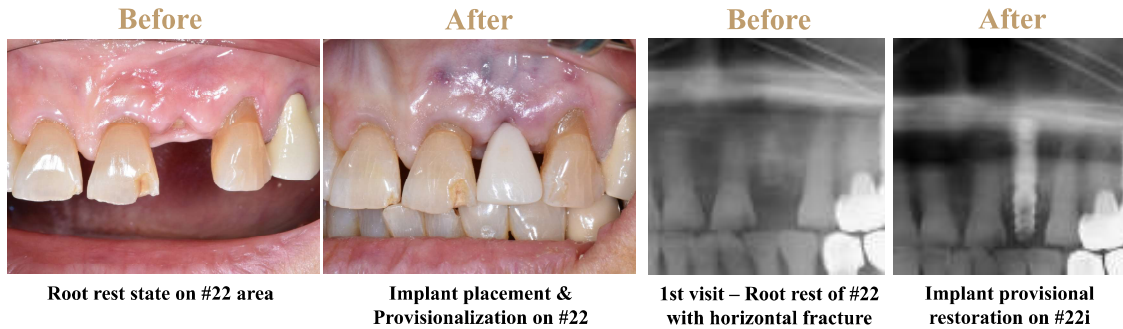


## Patient Informations

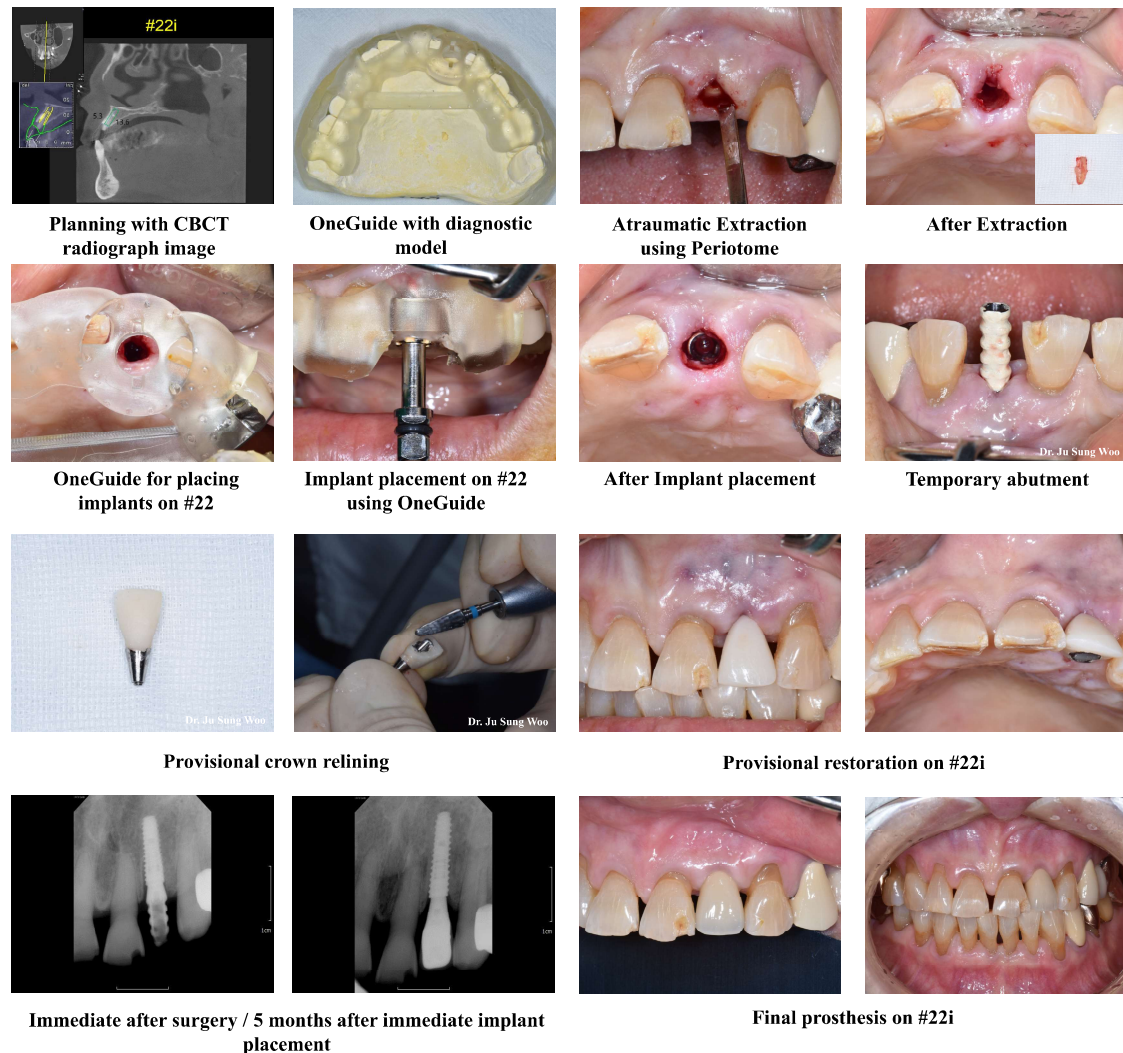
- Age / Sex : 80 / Female
- Tooth Number : #22
- CC : Tooth fractured and root rest state on Lt. maxillary anterior area
- PI : Root rest state
- Dx : Root rest of #22 with horizontal root fracture

## Treatment Plan

- 1) Extraction of #22
- 2) Immediate Implantation on #22 using OneGuide & Immediate provisional restoration



## Clinical Procedures



## Conclusion

- Atraumatic extraction with periotome (#22)
  - : Crown fracture of #22, root rest state with no inflammation
- Implantation (TSIII CA) on #22 using OneGuide – Immediate implant placement and restoration after extraction
- Prosthodontic treatment (cement type) on #22i
  - : 5 months after implant placement & immediate restoration
- Since the maxillary anterior region is a region with high esthetic requirements, immediate implantation and immediate restoration could be considered.

# Case Report : Computer guided implant surgery (TSIII SA) using Osstem OneGuide at narrow edentulous space - 1 year follow up

Dr. Jiwon Jung, DDS, MSD  
Standard Dental Clinic



## Patient Informations

- Age / Sex : 67 / Female
- Tooth Number : #13, 14
- CC : Fracture and prostheses fallen out state on Rt. Anterior and premolar area
- PI : Severe caries and tooth fracture
- Dx : Dental caries of #12, 13 and crown fracture with pulp necrosis premolar area

## Treatment Plan

- 1) Extraction of #12, 13 and socket preservation
- 2) Implantation on #13, 14 using OneGuide
- 3) Implant FDP restoration with #12-14 3-unit (#12 cantilever)

### Before



Caries with prostheses fracture on #12-14 area

### After



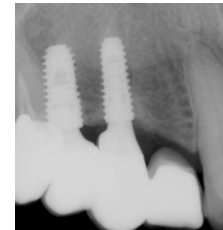
Implant prosthodontics on #12-14 area

### Before



1st visit – Severe caries and tooth fracture of #12, 13

### After



Implant FDP restoration on #12-14 area

## Clinical Procedures



Extraction and curettage of #12, 13



Socket preservation



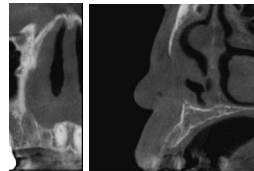
Suture after A-Oss Collagen insertion



After socket preservation (4 months)



After socket preservation (4 months)



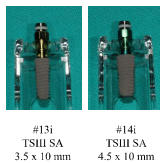
4 months after socket preservation - CBCT view



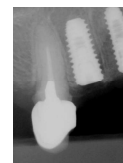
OneGuide design for placing implants on #13, 14



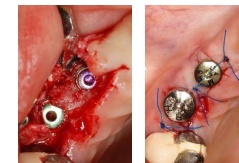
Implantation on #13, 14 using OneGuide



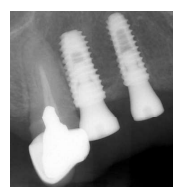
Implantation(TSIII SA) on #13, 14 and bone graft on #13i using A-Oss



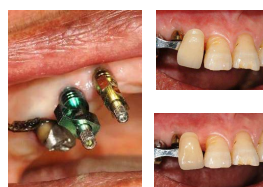
Xray view after 1<sup>st</sup> surgery



2<sup>nd</sup> surgery - 3 months after 1<sup>st</sup> surgery



Xray view after 2<sup>nd</sup> surgery



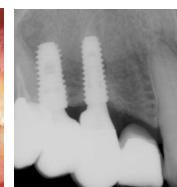
Pick-up coping impression taking and Shade taking



Placing a customized abutment (Osstem OneFit custom abutment)



Delivery of prosthodontics



## Conclusion

- Socket Preservation with A-Oss Collagen after extraction of teeth (#12 & #13 teeth)
- Severe caries with tooth fracture and prostheses fallen out state on Rt. Anterior and premolar area
- Implantation (TSIII SA) on #13 & #14 using OneGuide – 4 months after Socket Preservation
- Bone graft with A-Oss on buccal side of implants (#13i)
- Fixed Dental Prosthodontic treatment with 3-unit prostheses on #12-14
- Uneventful findings on #12-14 area – 6 months after delivery



# Case Report :

## Implant placement on #16, 17, 46, 47

### with using OneGuide system

### - 4 months follow up

Dr. Moon Hee, Jeong, DDS, MSD, Ph.D  
Seoul Gran Dental Clinic



## Patient Informations

- Age / Sex : 51 / Female
- Tooth Number : #16, 17, 46, 47
- CC : Gingival swelling and tooth mobility
- PI : Retained root with alveolar bone destruction
- Dx : Retained root (#16, 47), Loss of tooth (#17, 46)

## Treatment Plan

- 1) Extraction of #16, 47 with curettage
- 2) Implantation on #16, 17, 46, 47 using OneGuide with GBR

### Before



Retained root of #16, 47  
Loss of tooth on #17, 46

### After



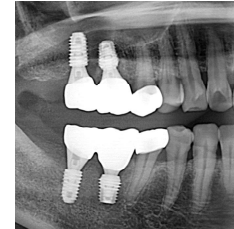
Implant prosthodontics on #16, 17, 46, 47

### Before



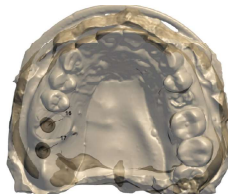
Retained root of #16, 47 with  
alveolar bone destruction

### After

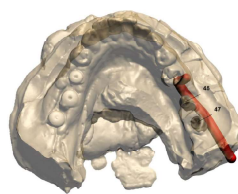


Implant prosthodontics  
on #16, 17, 46, 47

## Clinical Procedures



OneGuide plan  
for implantation on #16, 17



OneGuide plan  
for implantation on #46, 47



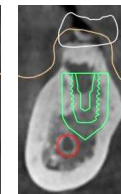
Plan for #16



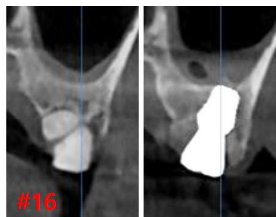
Plan for #17



Plan for #46



Plan for #47



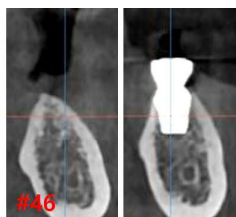
CBCT view of #16  
Implant placement with crestal  
approach and bone graft



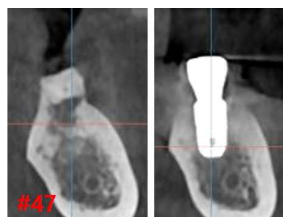
CBCT view of #17  
Implant placement with crestal  
approach and bone graft



Extraction of #16, 47



CBCT view of #46  
Implant placement with bone graft

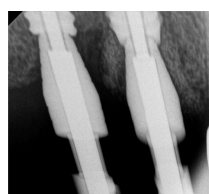


CBCT view of #47  
Implant placement with bone graft

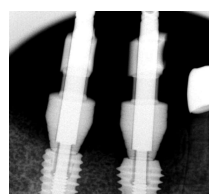


After 1-stage surgery  
Panoramic view

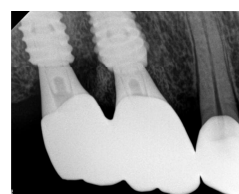
- #16: TSIII CA Ø6.0 × 7.0, H 6 × 7
- #17: TSIII BA Ø5.0 × 8.5, H 6 × 7
- #46: TSIII CA Ø6.0 × 7.0, H 6 × 5
- #47: TSIII BA Ø5.0 × 8.5, H 6 × 7



#16, 17 Fixture level impression taking  
3 months after implant placement  
ISQ value: #16(80/77), #17(81/81)



#46, 47 Fixture level impression taking  
3 months after implant placement  
ISQ value: #46(90/85), #47(91/90)



Delivery of prosthodontics with customized abutment



## Conclusion

- Extraction of retained root on #16, 47  
: retained root of #16, 47 with alveolar bone resorption. Loss of tooth on #17, 46.
- Implant placement (TSIII CA or BA) on #16, 17 using OneGuide system with crestal approach and bone graft
- Implant placement (TSIII CA or BA) on #46, 47 using OneGuide system with bone graft
- Prosthodontic delivery (SCR type) on #16i, 17i, 46i, 47i  
: 3 months after implant placement

# Case Report :

## Full mouth Rehabilitation using OneGuide system

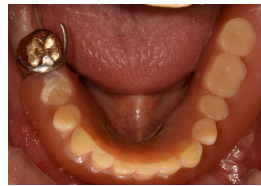
- Immediate extraction and implant placement
- Immediate loading using pre-designed custom abutment and PMMA temporary crown

Lee wooyoung , DDS, MS  
Seoulgran dental clinic



### Patient Information

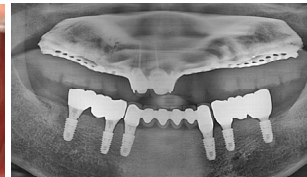
- Age / Sex : 66 / M
- CC : ill-fitting denture
- Tooth Number : #33,34,36,43,44,46
- PI : full mouth rehabilitation
- Dx : loss of tooth



### Treatment Plan

- 1) Immediate extraction of #47
- 2) Implantation on #46,44,43,33,34,36 using OneGuide
- 3) Immediate implant loading with custom abutment and PMMA temporary crown
- 4) Conventional RPD (economic reason)

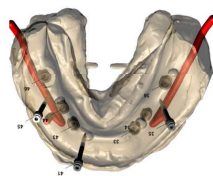
#### Before



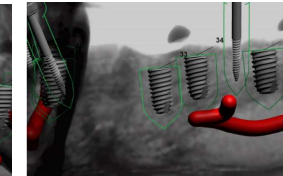
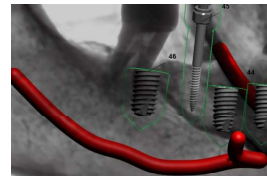
#### After



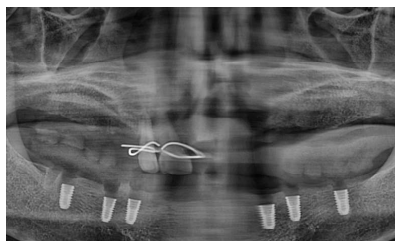
### Clinical Procedures



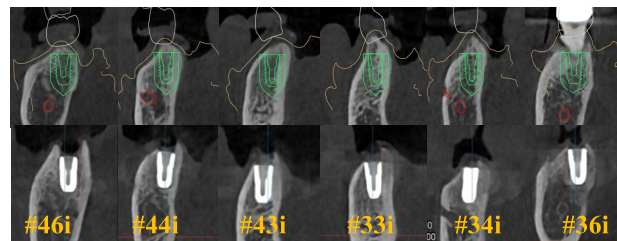
OneGuide design using 3shape implant studio (CBCT view)



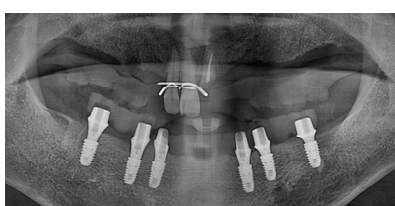
OneGuide template



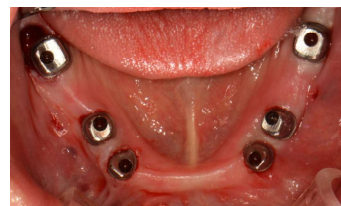
Implant placement(TSIII SA) – panoramic view



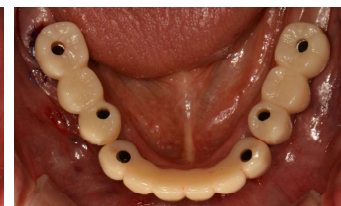
Compare the accuracy of implant placement using OneGuide system – CT view



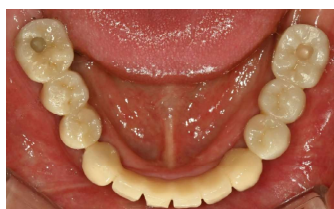
Custom abutment – panoramic view



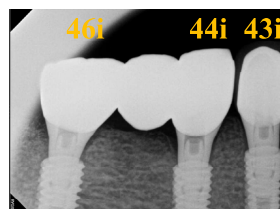
Pre-designed custom abutment



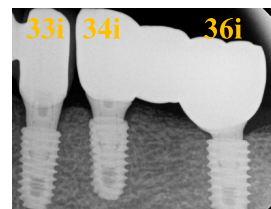
Immediate loading PMMA temporary crown



Implant prosthodontics (zirconia crown)



Final restoration



### Conclusion

- Immediate extraction of #47 and implant placement (TSIII SA) on #33, 34, 36, 43, 44 and 46 using OneGuide system
- additional bone graft on the top of implants
- Immediate loading with pre-designed custom abutment and PMMA temporary crown
- Conventional maxillary removable partial denture
- Prosthodontic treatment (SCR type, Cement type) : 3 months after immediate loading
- One-guide system demonstrate great accuracy in implant placement without flap elevation



# Case Report : Implantation (TS III BA) in anterior area using OneGuide simultaneous Bone graft (bovine bone) - 8 months follow up

Dr. Yongsun Lee . DDS, MSD  
Homaesil Smart Dental Clinic



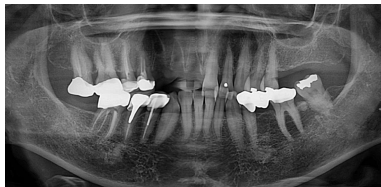
## Patient Informations

- Age / Sex : 55Y / Female
- Tooth Number : #11, #12, #13
- CC : Reconstruction of anterior area
- PI : loss of #11, 12, 13
- Dx : loss of #11, 12, 13

## Treatment Plan

- 1) Implantation on #11, #13 site using Oneguide simultaneous Bone graft
- 2) Prosthetics ( #11i = #13i Implant Bridge )

### Before



Pt. visited clinic after extraction



Implantation on #11, 13 site

### After



Final Implant Prosthetics (Cement type)  
On #11i=#13i

## Clinical Procedures



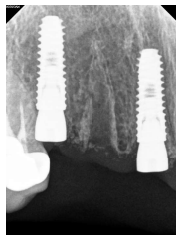
1W after extraction of #11  
CBCT view

1W after extraction of #13  
CBCT view



Implantation on #11 site using Oneguide  
Post-OP CBCT view

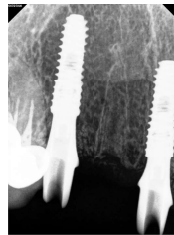
Implantation on #13 site using Oneguide  
Post-OP CBCT view



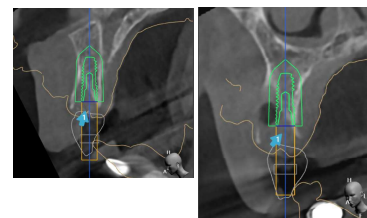
1M periapical view



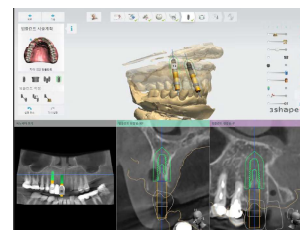
2M periapical view



Custom abutment (3M after OP)  
periapical view



OneGuide design  
for #11, 13 implant placement



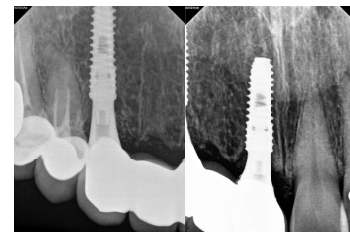
OneGuide design & post-OP panorama



Placing Custom abutment



Provisional prosthetics (PMMA)



1M after final prosthetics  
Periapical view

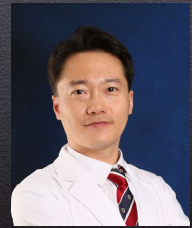
## Conclusion

- Implantation in anterior area using Oneguide surgical guide after extraction of teeth (#11, #13)  
: root caries of old restoration (#11=13 PFM Br.). Pt. visited clinic after extraction.  
: Bone graft (bovine bone) on buccal gap of socket (#11i & #13i) and extraction socket of #12.
- Provisional Prosthetics on #11i=#13i  
: 3 months after Implant placement
- Final Prosthetics (Cement type) on #11i=#13i  
: 1 month after provisional prosthetics.

# Case Report :

Ext. & immediate implantation(TS III SA) using OneGuide  
GBR with A-Oss, SureOss & OssGuide  
- Immediate provisional restoration with OneFit

Dr. Chang Ho Choi , DDS  
The Best Dental Clinic



## Patient Informations

- Age / Sex : 44 / Female
- Tooth Number : #12=#22 4-unit br.
- CC : tooth fx.
- Dx : cr.-root fx. #12, #22

## Treatment Plan

- 1) Extraction of #12, 22 & immediate implantation on #12, 21 using OneGuide
- 2) GBR with A-Oss, SureOss and OssGuide
- 3) Immediate provisional restoration with ready made OneFit & PMMA br.

### Before



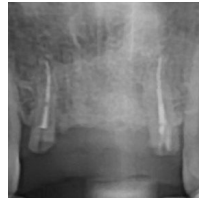
Cr.-root fx. #12, #22

### After



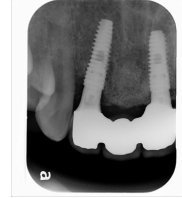
Implant prosthodontics on #12, 22

### Before



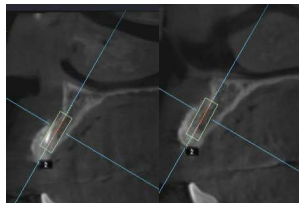
Cr.-root fx. #12, #22

### After



Implant prosthodontics on #12, 22

## Clinical Procedures



Operation planning on #12, 21



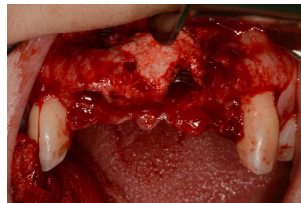
Before surgery



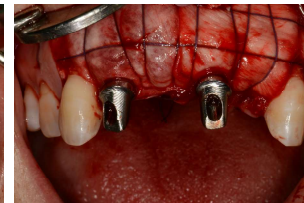
#12, 21 ext. & OneGuide try on



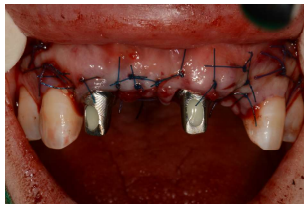
Flap open(labial bone defect)



Implantation(TS III SA) #12, #21  
using OneGuide(exposed fixtures :  
apex of #12, platform of #21)



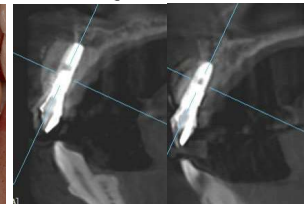
- GBR with A-Oss, SureOss, OssGuide,  
Vicryl  
- Connecting OneFit



Suture



Provisional restoration



After implantation & GBR on #12, 21



Placing customized abutments(labial)



Placing customized abutments(incisal)



Delivery of prosthodontics(PFZ br.)

## Conclusion

The implant surgery using OneGuide is

- very simple, easy and precise.
- possible to make ready made OneFit & provisional br. for immediate provisional restoration.

The TS III SA fixture is

- easy to acquire initial stability for immediate implantation.
- possible to acquire excellent osseointegration.

The GBR using A-Oss, SureOss and OssGuide is good to make bone which has clinically enough quantity and quality.



## Case Report :

### *Immediate implant placement on the posterior area with computer-guided surgery(Oneguide®)*

Hee-Jin Kim , DDS, MSD  
Idaon Dental Clinic



#### Patient Informations

- Age / Sex : 82/Male
- Tooth Number : #24,26
- CC : Broken tooth while eating hard food(crab)
- PI : #24 Crown-root fracture, #26 missing state
- Dx : Crown-root fracture of #24

#### Treatment Plan

- 1) Extraction of #24 with curettage and immediate implant installation using Oneguide®
- 2) Implantation on #26, simultaneously

##### Before



Crown-root fracture of #24

##### After



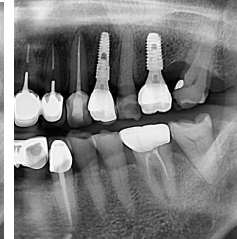
Prosthetic rehabilitation with PFM crowns on #24 & 26

##### Before



1st visit – Crown-root fracture of #24

##### After

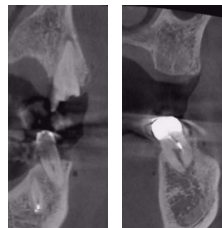


Prosthetic rehabilitation with PFM crowns on #24 & #26

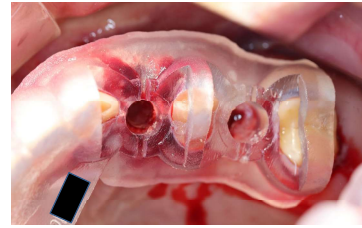
#### Clinical Procedures



Oneguide® templete



Pre-op CBCT  
(a) #24 area (b) #26 area



Extraction of #24 and  
Implant installation on #24 & 26 with oneguide®



Suture after implant installation



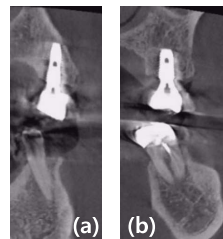
Post operative panoramic view



2 months after implantation



Prosthetic rehabilitation with SCR type PFM crowns



Panoramic & CBCT views : 2 years follow-up  
(a) #24 area (b) #26 area

#### Conclusion

- Immediate implant installation on #24 (TSIII SA 4.0\*13mm) & flapless guided surgery on #26 (TSIII SA 5.0\*10mm)
- After 3months from implant installation, Implant stability quotient (ISQ) values were 82/84
- Prosthetic rehabilitation with porcelain-fused-to-metal(PFM) using ready-made abutment crowns were fabricated.
- During 2 years follow-up, implant prosthetics were well-maintained without any complication.
- Computer-guided implant surgery can be easier and simple than conventional technique. Especially, the elderly and patients with systemic diseases are advantages in that this technique is likely to reduce pain and discomfort in the immediate postoperative period.

# Case Report : Use of OneGuide system to place implants avoiding anatomical structures in complete edentulous mandible with severe atrophy

Dr. Su-Bin Hong<sup>1</sup>, Dr. Young-Taek Kim<sup>1</sup>

<sup>1</sup>Department of Periodontology, National Health Insurance Service Ilsan Hospital, Goyang, Republic of Korea



## Patient Informations

- Age / Sex : 66 / Female
- Tooth Number : #43,45,33,35
- CC : Rehabilitation of complete edentulous mandible
- PI : Severe alveolar bone loss in mandible
- Dx : Root rest on #42,31,32

## Treatment Plan

- 1) Ext. on #42,31,32 and Implantation on i43,45,33,35 using OneGuide for All on 4 concept

### Before



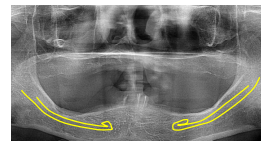
Pre-operative intraoral clinical photograph

### After



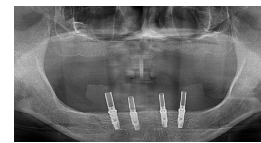
Post-operative intraoral clinical photograph

### Before



Pre-operative panoramic radiograph  
Insufficient residual bone height was observed.  
Yellow line indicates Intra-alveolar nerve.

### After



Panoramic radiograph after temporary Mandibular hybrid denture delivery  
- 2 months after implantation

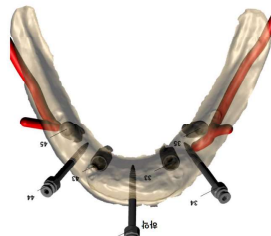
## Clinical Procedures



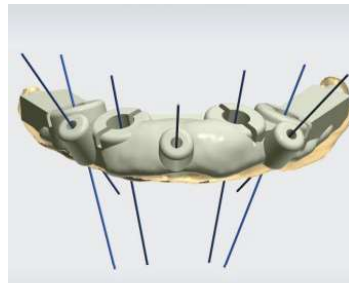
Adaptation radiographic stent fabricated by 3D printer using the digitally scanned image of the used mandible denture .  
(A) Right view (B) Left view



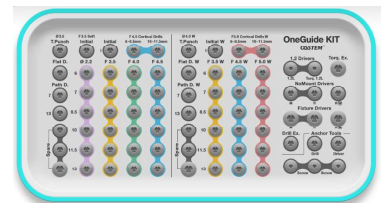
Panoramic view of CBCT with a radiographic stent in place



Pre-operative implant and digital guide planning using software (3Shape Implant Studio, 3Shape)



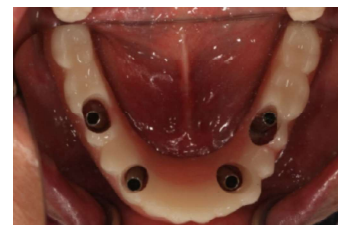
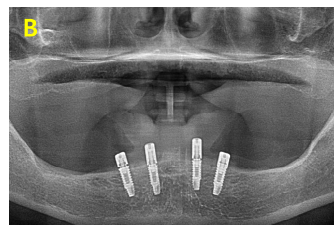
Design of digital guide for implant placement (OneGuide, Osstem, Seoul, Korea)



Osstem One Guide kit for guided surgery



Postoperative (A) clinical photo and (B) panoramic radiograph.  
4 Osstem TSII Fixture (4.0x10mm) were placed in both mandibular canines and premolars.



Intra-oral photograph after temporary Mandibular hybrid denture delivery.

## Conclusion

- Implants were placed with the planned angle in the planned location without the damage of inferior alveolar nerve and mental foramen. (#45i, #43i, #33i, #35i : 4.0 X 10mm, Osstem Implant System, TSII, seoul Korea)
- No hypoesthesia or abnormal sensation was reported after surgery. As a result of flapless surgery, complications such as swelling and pain were minimized.
- This case report showed that a digitally fabricated surgical guide was useful in implant placement with all on 4 concept and helped to reduce surgical invasiveness.



# Case Report :

## Full mouth rehabilitation with maxillary multiple implant (TSIII SA) full-guided placement using OneGuide system

- For a patients with a skeletal class III malocclusion

Dr. Minji Sun, DDS

Department of Prosthodontics, Yonsei University College of Dentistry



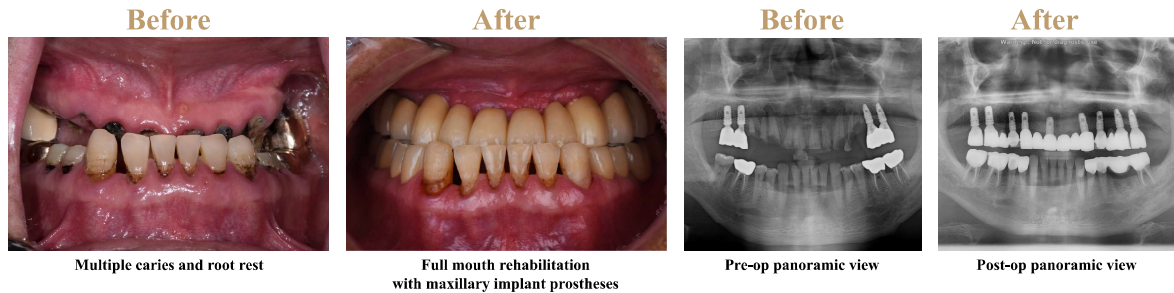
### Patient Information

- Age / Sex : 65 / Male
- Tooth Number : #14, 13, 11, 23, 24
- C.C. :  
“I have a lot of broken teeth due to cavities, but the local clinic said it is difficult to treat due to my severe skeletal malocclusion”
- PMHx. : Diabetes mellitus, no med

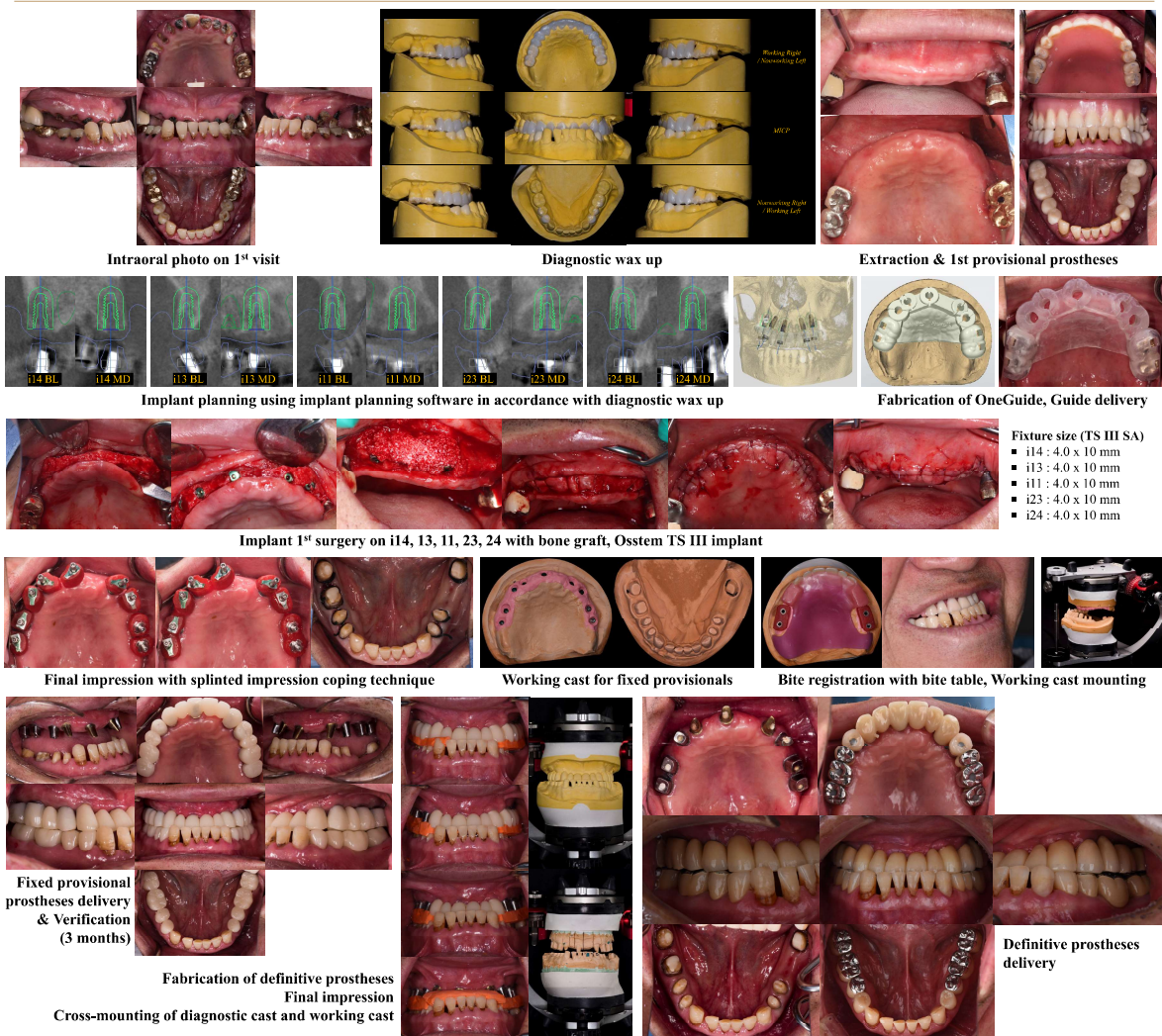
- Dx
- 1) Skeletal class III malocclusion
- 2) Anterior crossbite
- 3) Root rest on #15, 14, 13, 12, 21, 22, 23, 24, 25
- 4) Advanced dental caries on #11
- 5) Moderate dental caries on #47, 45, 44, 33, 34, 35
- 6) Secondary dental caries on #36

### Treatment Plan

- 1) Extraction of #15, 14, 13, 12, 11, 21, 22, 23, 24, 25, 36
- 2) Implant on i14, 13, 11, 23, 24
- 3) Implant prostheses on i17, i16=14, i13=11=23, i24=26, i27
- 4) Crown restoration on #47, 46, 45, 44, 34, #35=37
- 5) Resin filling on #33



### Clinical Procedures



### Conclusion

- Appropriate implant positioning is important to establish the proper occlusal relationships in edentulous patients with severe skeletal malocclusion.
- Based on the correct diagnosis procedure, the implant could be placed in the desired position by superimposing the oral data and CBCT data to perform full guided surgery using the OneGuide system.
- With OneGuide system and TSIII SA implant placement on maxillary edentulous area, an excellent function and esthetics could be predictably re-established in the patient with a skeletal class III malocclusion.



# Case Report : Computer-guided Implantation (OneGuide™) after Ridge Augmentation Using Titanium-mesh and Bilateral Sinus Augmentation for Full-arch Rehabilitation

Dr. Sang-Hyun Son and Prof. Won-Pyo Lee  
Department of Periodontology, School of Dentistry,  
Chosun University



## Patient Informations

- Age / Sex : 70 / Female
- Tooth Number : #17,16,14,13,21,23,24,26,27,37,36,34,33,43,44,46,47
- CC : Implantation for maxilla and mandible
- PI : Atrophic alveolar ridge and pneumatized maxillary sinus because of periodontitis
- Dx : Edentulous alveolar bone on maxilla and mandible

## Treatment Plan

- 1) Extraction of #15
- 2) Bilateral sinus augmentation and alveolar ridge augmentation on maxillary area using titanium-mesh (Ti-mesh)
- 3) Computer-guided implantation on #17,16,14,13,21,23,24,26,27,47,46,44/43,33/34,36,37

### Before



Severely atrophic edentulous maxillary alveolar ridge

### After



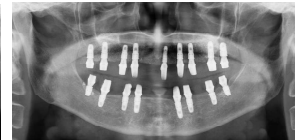
Implant prosthodontics on #17,16,14,13,21,23,24,26,27,37,36,34,33,43,44,46,47

### Before



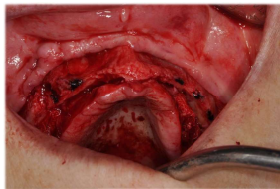
1st visit – Edentulous alveolar bone on maxilla and mandible

### After

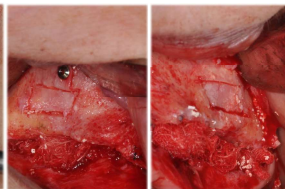


Implant prosthodontics on #17,16,14,13,21,23,24,26,27,37,36,34,33,43,44,46,47

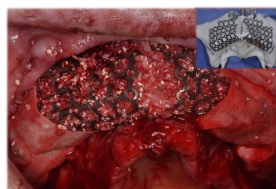
## Clinical Procedures



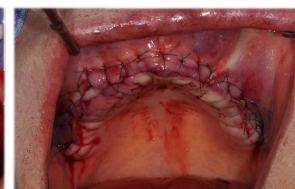
Extraction of #15 and flap elevation on maxilla



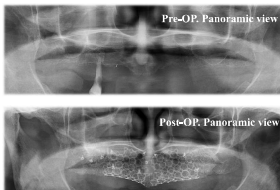
Bilateral sinus augmentation with allograft through lateral approach



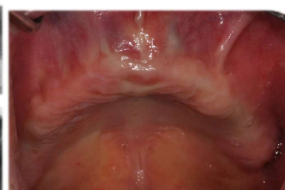
Full-arch ridge augmentation using Ti-mesh



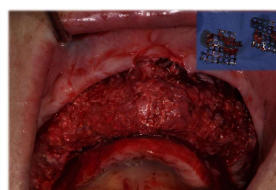
Suture on maxillary flap



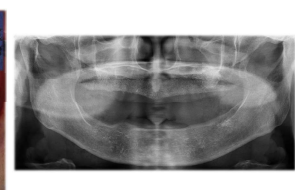
Pre-OP. and post-OP panoramic view



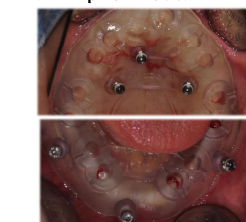
6 months after ridge and sinus augmentation on maxilla



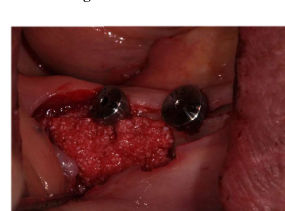
Flap elevation on maxilla and removal of Ti-mesh



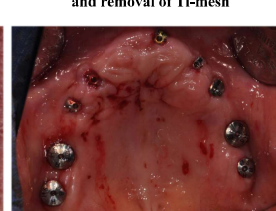
Post-removal of Ti-mesh Panoramic view



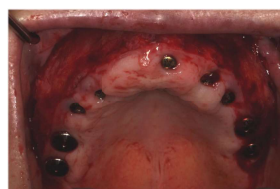
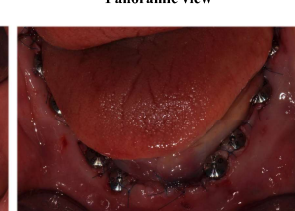
OneGuide appliance for computer-guided implant surgery



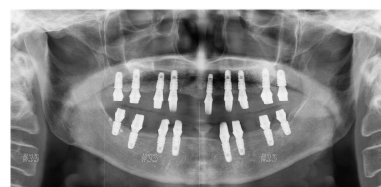
Non-submerged GBR using xenograft, collagen membrane, and fixation bone tacks on #47 buccal area



Computer-guided implantation on #17,16,14,13,21,23,24,26,27,37,36,34,33,43,44,46,47



Vestibuloplasty using modified periosteal fenestration (mPF) technique on maxillary vestibular area



Delivery of prosthodontics Panoramic view



Prosthodontics treatment

## Conclusion

- Bilateral sinus elevation and ridge augmentation using allograft and Ti-mesh after #15 extraction
- Computer-guided implantation (OneGuide) of #17,16,14,13,21,23,24,26,27,37,36,34,33,43,44,46,47 with mandibular non-submerged GBR on #47 buccal area using xenograft 6 months after sinus and ridge augmentation
- Modified periosteal fenestration(mPF) technique on #17-27 area for vestibuloplasty
- Final prosthodontic treatment after 15 months of implantation



## Case Report :

# Full mouth fixed implant (TS III) rehabilitation using 2-piece surgical guide (OneGuide) and Scan Healing Abutment - 8 months follow up

Dr. Eunhan Cho, DMD, MSD,  
Department of Prosthodontics, Kyung Hee University College of  
Dentistry, Kyung Hee University Medical Center



## Patient Informations

- Age / Sex : 59 / Female
- Tooth Number : Edentulous state
- CC : Need full mouth rehabilitation
- PI : Loss of tooth due to chronic periodontitis and caries
- Dx : Bone resorption of posterior area on mandible.

## Treatment Plan

- 1) Provisional denture fabrication
- 2) Guided implant surgery planning
- 3) Fixed dental prosthesis fabrication

### Before



1<sup>st</sup> visit- intra-oral photograph

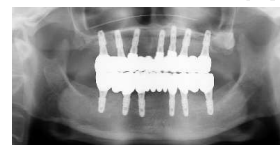


1<sup>st</sup> visit - Panoramic view radiograph

### After

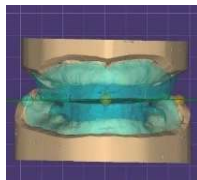


After final prosthesis delivery – intra-oral photograph

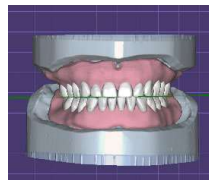


After final prosthesis delivery - Panoramic view radiograph

## Clinical Procedures



Scanned Digital model



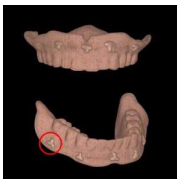
Digital denture design



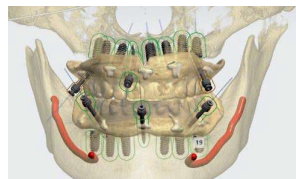
Printed provisional denture



Extra-oral photograph with denture



CBCT data of denture with radiographic marker



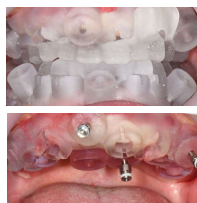
Guided surgery planning with Implant Studio (3shape) program



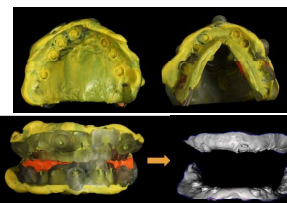
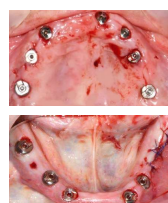
Planned position of each implant (7 on Mx., 6 on Mn.)



2-piece surgical guide



Guided surgery (OneGuide) & Scan Healing Abutment (Osstem)



Impression with 2-piece surgical guide & conversion to STL file



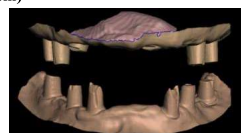
Fixed provisional prosthesis for immediate loading



Extra-oral photograph with fixed provisional prosthesis



Bite registration for IOS



STL data from IOS



Monolithic zirconia prosthesis (SCR type)



Delivery of definitive prosthesis

### Extra-oral photograph



Pre-operative



Post-operative (rest)



Post-operative (smile)

## Conclusion

- Edentulous state - Recently extracted all tooth due to chronic periodontitis on #36, 46 area and severe caries.
- Provisional denture fabrication and surgical guide planning (Implant Studio)
- Implantation (TSIII) – 7 on Mx. And 6 on Mn. using OneGuide
- Impression taking for immediate loading – Angled Multi Abutment and scanbody on #13, 21, 23, Healing Scan Abutment and 2-piece surgical guide used an individual tray.
- Definitive prosthesis – 3 units on each arch, monolithic zirconia, SCR type. (4 months after placement of implants)

# Case Report : Ridge splitting technique with simultaneous implant placement using OneGuide

Daeun Seo, DMD, MSD  
Department of Periodontology, Periodontal-Implant Clinical Research Institute,  
Kyung Hee University College of Dentistry, Kyung Hee University Medical Center, Seoul, Republic of Korea



## Patient Informations

- Age / Sex : 66 / Female
- Tooth Number : #43,45
- CC : Referred for #43 extraction and #43i,45i implantation
- PI : Gingival inflammation with alveolar bone loss
- Dx : Chronic periodontitis  
Loss of teeth

## Treatment Plan

- 1) Extraction of #43
- 2) Implantation of #43i,45i using OneGuide

### Before



3 months after #43 extraction

### After



Healing abutments connected on #43i,45i

### Before



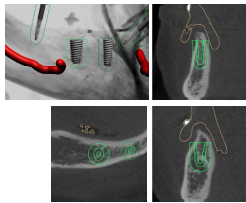
1<sup>st</sup> visit – Alveolar bone loss on #43

### After



Healing abutments connected on #43i,45i

## Clinical Procedures



Preoperative cone-beam computed tomography view



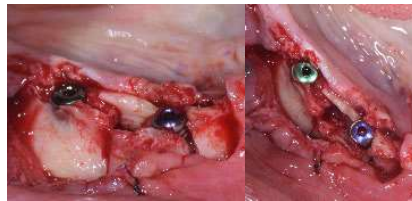
Flap elevation and osteotomy using mini saw



Ridge expansion using #15 blade, bone chisel and mallet



OneGuide for placing implants on #43i,45i



Implantation of #43i,45i using OneGuide



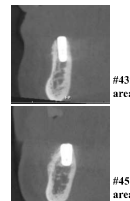
Bone graft and collagen membrane adaptation on #43i,45i



Suture



4 months after ridge splitting and implants placement



#43i area

#45i area



Partial-thickness flap reflection



Crestal full-thickness flap reflection: regenerated bone was observed.



Healing abutments connection and xenogeneic collagen matrix adaptation



Post-operation

## Conclusion

- Extraction of #43  
: Hopeless state due to severe alveolar bone loss
- Ridge splitting and implantation (TS III) of #43i,45i using OneGuide  
: Preoperative narrow mandibular ridge  
: Bone graft material in the gap between the separated plates and on the cortical plates was covered by a collagen membrane.
- Healing abutments connection on #43i,45i and keratinized tissue augmentation using xenogeneic collagen matrix  
: Insufficient keratinized gingiva width and vestibular depth  
: 4 months after ridge splitting and simultaneous implant placement



# Case Report :

## One stage Computer Guided Implantation (OneGuide™) after Guided Bone Regeneration with Titanium-mesh for the Mandibular Full-Arch Rehabilitation

Dr. Hyun-Seung Noh and Prof. Won-Pyo Lee  
Department of Periodontology, School of Dentistry,  
Chosun University



### Patient Informations

- Age / Sex : 58 / Female
- Tooth Number : #33,34,36,37,43,44,46,47
- CC : Implantation for mandible area
- PI : Atrophied alveolar bone because of peri-implantitis
- Dx : Edentulous alveolar bone on mandible

### Treatment Plan

- 1) Extraction of #32,42 Implants
- 2) Vertical ridge augmentation on the mandibular full-arch area with Ti-mesh
- 3) Computer guided implantation on #33,34,36,37,43,44,46,47 sites

#### Before



Severely atrophied edentulous alveolar bone on mandible

#### After



Implant prosthodontics on #33,34,36,37,43,44,46,47

#### Before



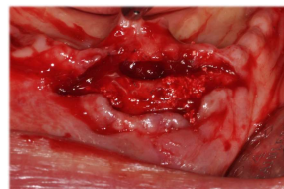
1st visit – Edentulous alveolar bone on mandible

#### After



Implant prosthodontics on #33,34,36,37,43,44,46,47

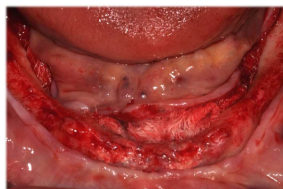
### Clinical Procedures



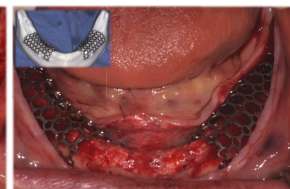
Extraction of #32,42 and ridge preservation with allografts



2-weeks after mandibular anterior ridge re-preservation



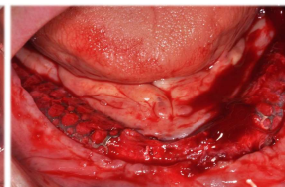
Flap Elevation on the entire mandibular area for vertical GBR



Titanium-mesh (Ti-mesh) appliance on mandibular atrophied alveolar ridge



Bone grafts using allografts



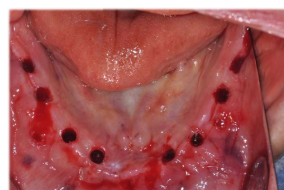
Flap Elevation for Ti-mesh removal 6-months after vertical GBR



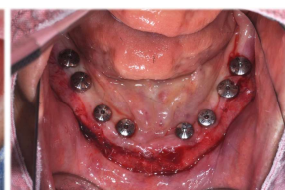
Removal of Ti-mesh



Guide appliance for implantation 6 weeks after Ti-mesh removal



Computer-guided implantation of #47,46,44,43,33,34,36,37



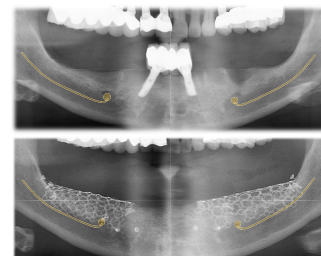
Healing abutment engaged and apically positioned flap



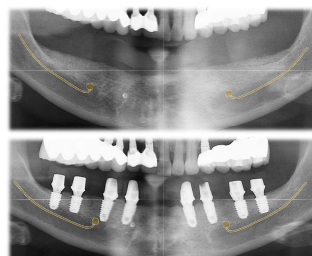
Vestibuloplasty on Lt. mandibular posterior area



2-weeks after visit for dressing on Lt. mandibular posterior area



Summary



Prosthodontics treatment

### Conclusion

- Vertical guided bone regeneration on the mandibular full-arch area using Ti-mesh and allograft
- Computer-guided implantation of #33,34,36,37,43,44,46,47 after 6 months of guided bone regeneration
- Vestibuloplasty on #34-37 area
- Final prosthodontic treatment : 10 months after #33,34,36,37,43,44,46,47 implantation
- Through vertical GBR, ridge augmentation of the mandibular full-arch area was achieved.
- By using OneGuide™ computer guided implant system, the multiple implant fixtures were placed promptly and successfully.



# Case Report : When Guided Surgery Meets Customized Guided Bone Regeneration



Won-Woo Lee, DDS  
Division of Oral and Maxillofacial Surgery, Department of Dentistry, College of Medicine, Hanyang University  
Seoul 04763, Republic of Korea

## Patient Informations

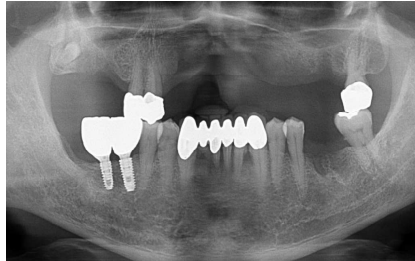
- Age / Sex : 66 / Male
- Tooth Number : #11,13,22,23,25,26
- CC : Severe alveolar bone loss(horizontal & vertical) for implant placement

## Treatment Plan

- 1) Guided bone regeneration by bio-printed custom membrane and rhBMP-2
- 2) Staged implant placement by OneGuide system



Pre-OP Clinical view



Pre-OP Panoramic view  
Missing on #11, 13, 22, 23, 25, 26, 36 area

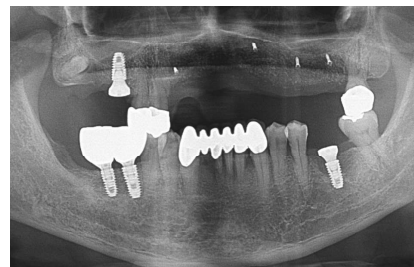


Pre-OP CBCT view

## Clinical Procedures



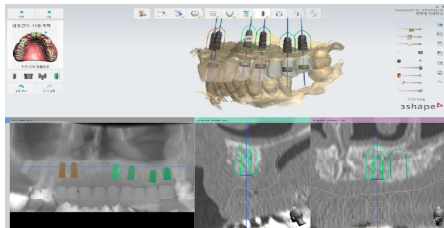
Bio-printed PCL membrane (T&R BioFab), rhBMP-2(Novosis)



Post-OP (GBR) Panoramic view



Post-OP(GBR) CBCT view



Designing OneGuide template



Use of OneGuide template for  
implant(TS III SOI) installation



After Implant 1st surgery



After Implant 1st surgery, Panoramic view



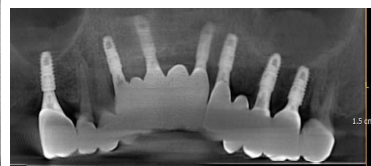
After Implant 1st surgery, CBCT view



Implant 1st surgery After 6 month,  
Titanium custom abutment delivery



GBR after 12 months, Panoramic view



GBR after 12 months, CBCT view



Zirconia restoration final setting  
(combination type)

## Conclusion

- Vertical and horizontal bone augmentation in the anterior maxilla alveolar bone were performed by polycaprolactone (PCL) bio-printed custom membrane and rhBMP-2.
- Implants (TS III SOI) were placed on #11, 13, 22, 23, 25, 26 using OneGuide system 6 months after GBR
- This clinical report demonstrates the use of bio-printed custom membrane for GBR technique and surgical templates by 3D printing technology provide successful alveolar bone augmentation and implants placement.



# Case Report : Implantation (TSIII SA) using OneGuide after Socket Preservation with A-Oss Collagen

Dr. Suh Dawon , DDS, MSD  
Seoulgran dental clinic.



## Patient Informations

- Age / Sex : 66/F
- Tooth Number : #36, 37
- CC : Gingival swelling and teeth mobility on Lt. lower molar area
- PI : Periodontal disease with alveolar bone destruction
- Dx : Apical involvement of #36, 37

## Treatment Plan

- 1) Extraction of #36, 37 with curettage and Socket preservation with A-Oss Collagen
- 2) Implantation on #36, 37 with GBR using OneGuide

### Before



Extraction of #36, 37 due to apical involvement

### After



Implantation on #36, 37

### Before



Periodontal disease with alveolar bone destruction on #36, 37

### After



Healing abutment on #36i, 37i

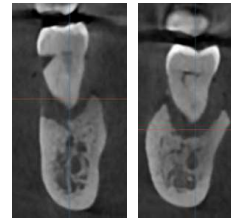
## Clinical Procedures



Tooth mobility of #36, 37 due to periodontitis



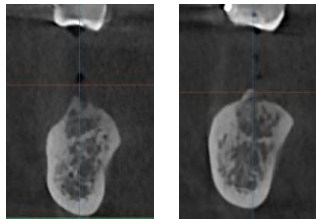
CT view of #36, 37



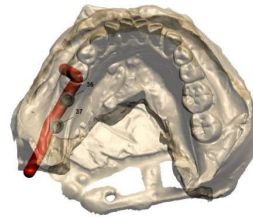
CT view of #36, 37



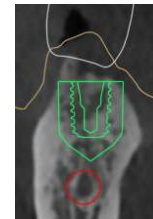
Extraction of #36, 37 with socket preservation



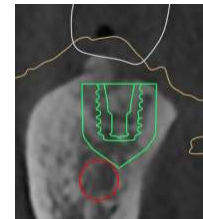
9 months after extraction



OneGuide plan for implantation on #36, 37



Plan for #36



Plan for #37



OneGuide for placing implants on #36, 37



Using tissue punch



Drilling for implant



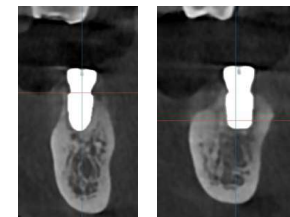
Implantation using OneGuide



Bone graft on #36i, 37i



Panoramic view after 1-stage surgery



CT view of #36i, 37i

## Conclusion

- Socket Preservation with A-Oss Collagen after extraction of teeth (#36, 37)
- Severe alveolar bone destruction on #36, 37 due to periodontitis
- Implantation (TSIII SA) on #36, 37 using OneGuide – 9 months after Socket Preservation
- Bone graft with A-Oss on #36i, 37i due to poor socket healing
- Healing abutment on #45i & #46i