ACHIEVING RELIABLE AND PREDICTABLE GBR OUTCOMES IN THE ESTHETIC ZONE (PART III)

48 MONTHS FOLLOW-UP

CLINICAL CASE

Dr. Lina C. Arenaza Leal

DDS, Periodontist, National University of Colombia

Master in Implantology, ILAPEO's Faculty Brazil

President Sectional Bogotá-ACPO, Colombian Association of Periodontology and Osseointegration

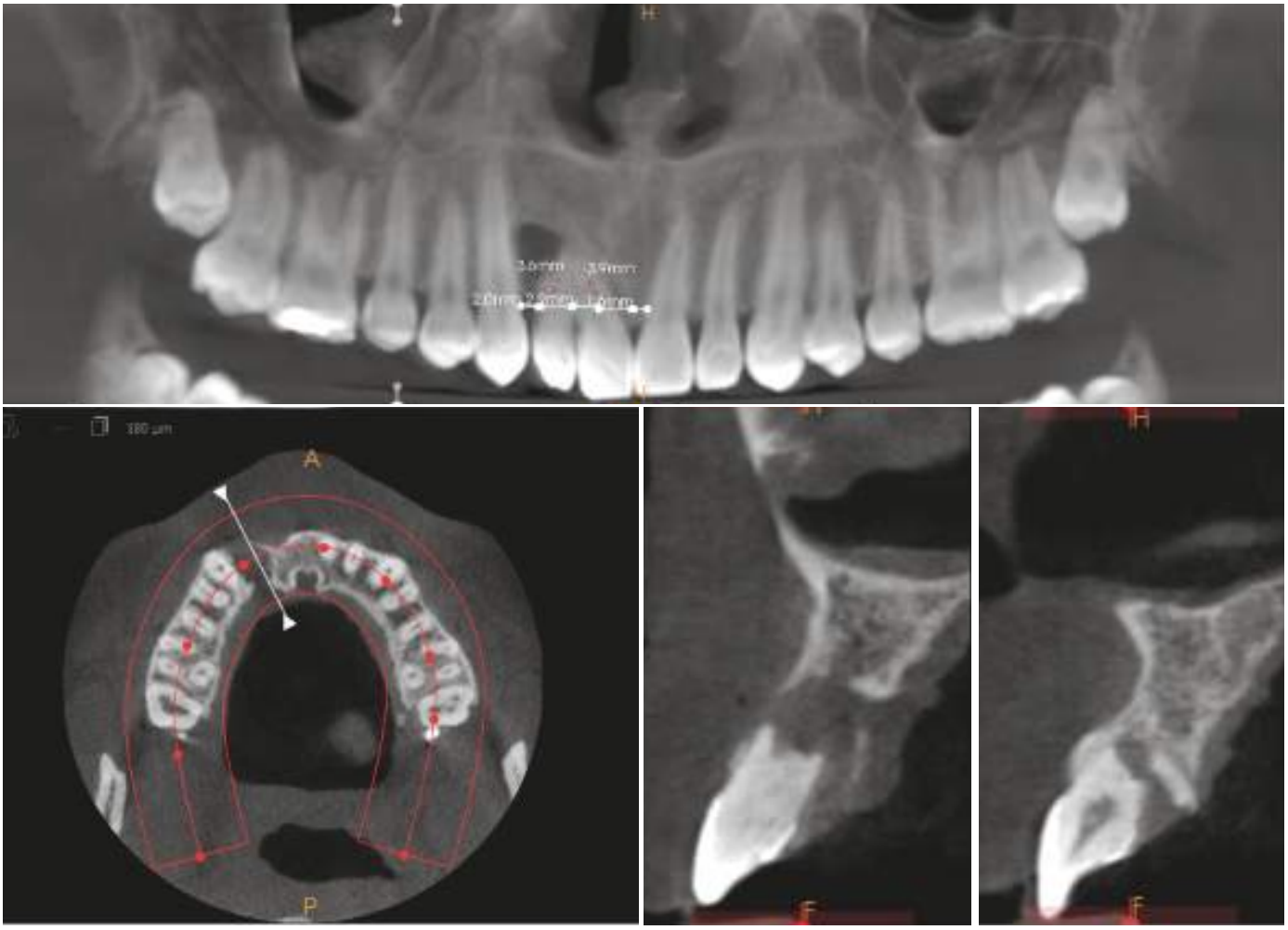

Figure 1. This case involved a staged approach with guided bone regeneration using Ti-oss® xenograft from Chiyewon, performed prior to zirconia implant placement in the anterior maxilla. The augmentation aimed to correct ridge deficiency and create an ideal foundation for long-term esthetic and functional success.

Figure 2. Tooth extraction in area 11 and 12. Flap elevation was performed.

Figure 3. Corticotomy was performed for site preparation to facilitate guided bone regeneration (GBR).

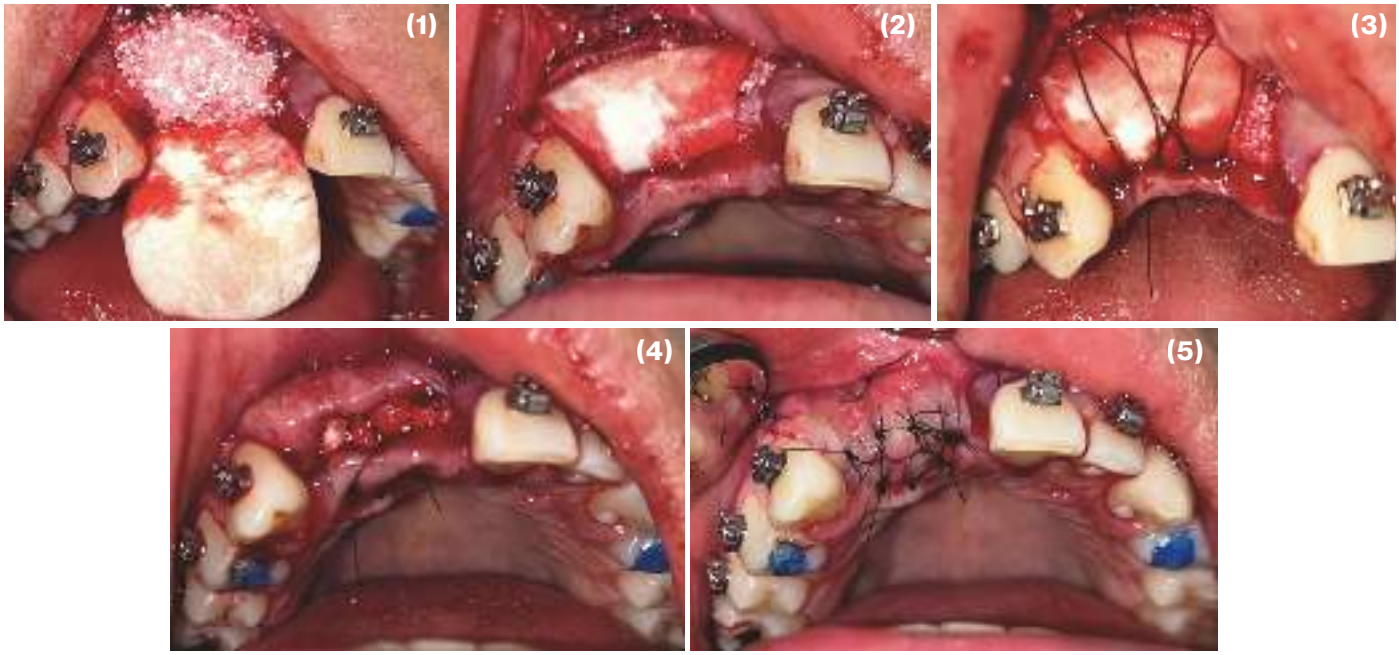

Figure 4. (1) Application of bone graft using Ti-oss® xenograft from Chiyewon. (2) Positioning of the membrane. (3) fixation of the membrane. (4) Fixed membrane. (5) Final flap closure after guided bone regeneration (GBR).

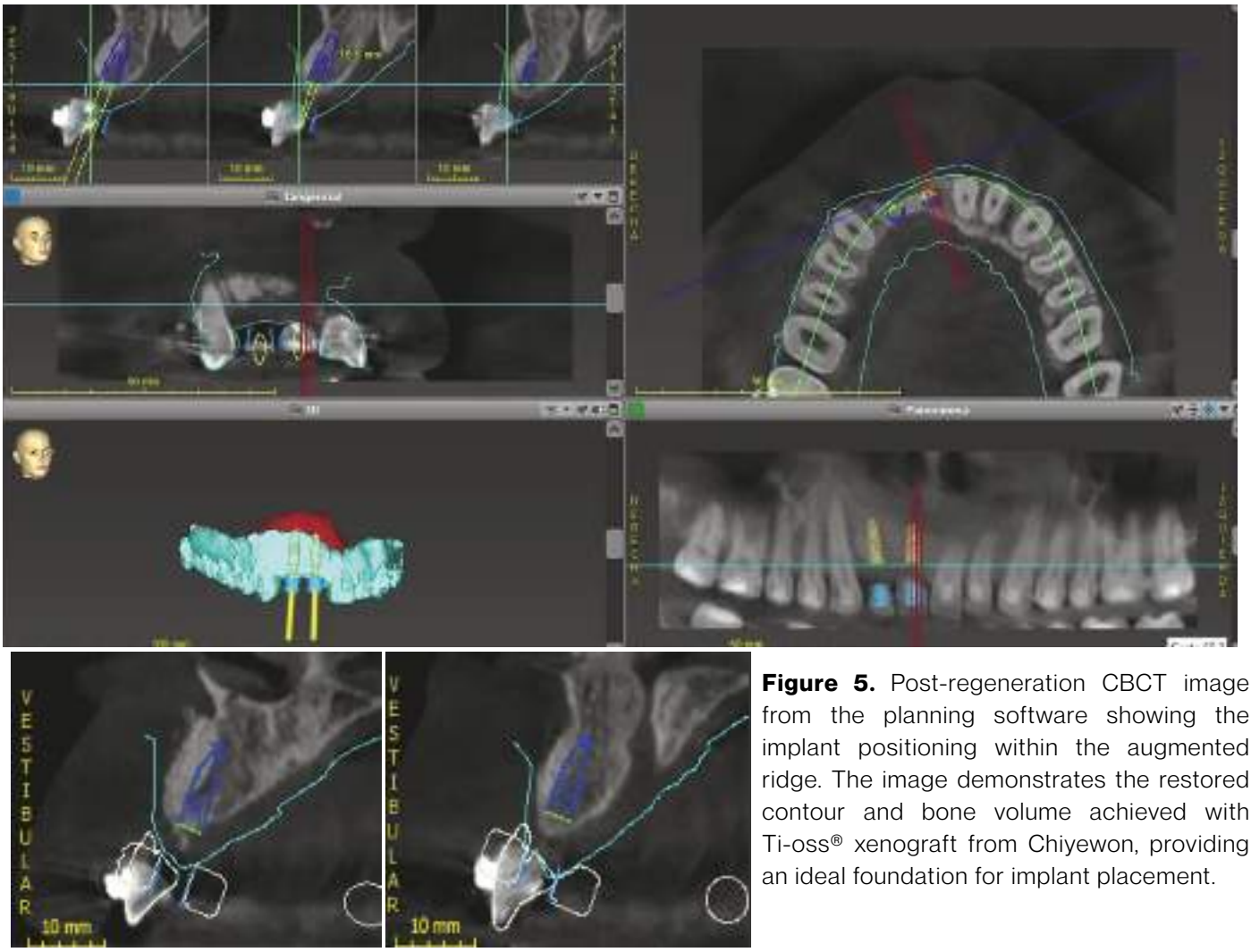

Figure 5. Post-regeneration CBCT image from the planning software showing the implant positioning within the augmented ridge. The image demonstrates the restored contour and bone volume achieved with Ti-oss® xenograft from Chiyewon, providing an ideal foundation for implant placement.

Figure 6. Zirconia implant placement, 18 months after the guided bone regeneration (GBR).

Figure 7. Final closure following implant placement.

Figure 8. Suture removing after 7 days post-operative. Soft tissues are healing well.

Figure 9. 4 months after implant placement: Implant´s second stage, chairside provisionalization, dental scan for PMMA temporary teeth.

Figure 10. PMMA temporary teeth

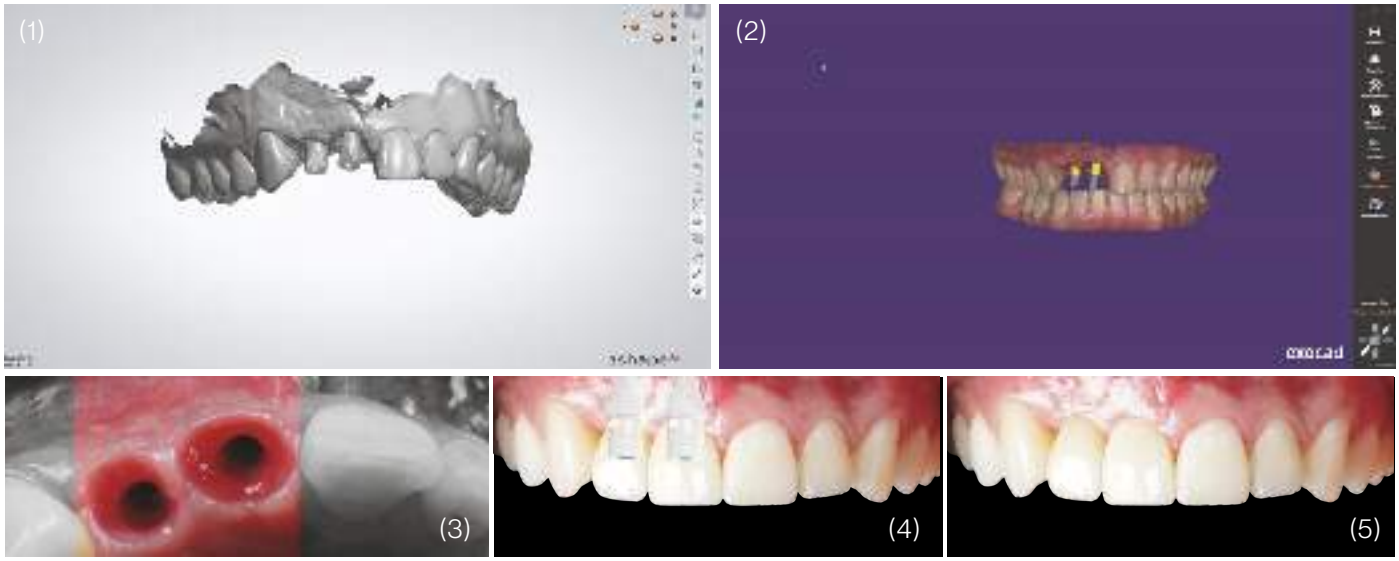

Figure 11. (1) and (2) 3D digital planning for final rehabilitation. (3), (4) and (5) Final rehabilitation, **5 and a half months after implant placement.**

Figure 14. 18 months after zirconia implant placement: Ti-oss® demonstrates excellent biocompatibility and osteoconductivity (periapical radiographic). The bone is mature, stable, and well integrated around the implants.

Figure 1. 30 months after zirconia implant placement: periapical radiographic show bone levels remained consistent, confirming long-term regenerative success.

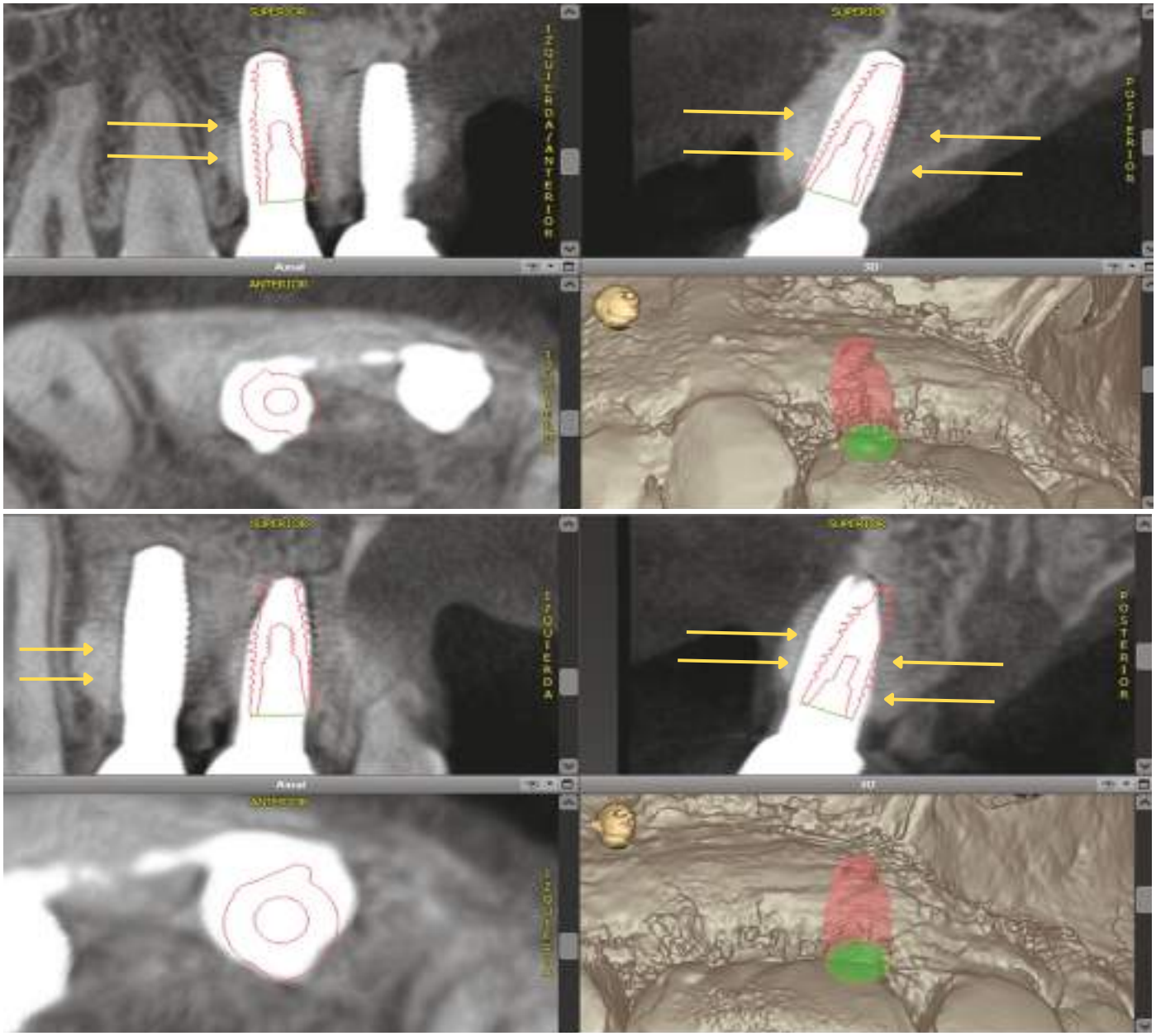

Figure 12. 3 years after zirconia implant placement: Post-operative CBCT evaluation of implant positioning shows stable bone levels around the implants, indicating long-term stability of Ti-oss® xenograft from Chiyewon.

Figure 13. 4 years after zirconia implant placement: After functional loading, the implant showed stable peri-implant soft tissues, natural pink esthetics, and full papilla fill, accompanied by preservation of marginal bone height.

DISCUSSION:

The staged regeneration with **Ti-oss® xenograft from Chiyewon** resulted in excellent hard and soft-tissue volume, providing a stable and esthetic foundation for zirconia implant placement. The case highlights the **predictable regenerative capacity** of **Ti-oss®** and its role in achieving **marvelous tissue integration** and **esthetic outcomes** in staged anterior implant therapy.

To further evaluate the **clinical performance of Ti-oss®**, Dr. Lina shared her experience regarding the biomaterial and the **long-term outcomes** observed in this case.

1. What made you choose Ti-oss® for this complex case?

Dr. Lina: I needed a **reliable graft** due the defect severity and **volume stability** because of the timeline of treatment.

2. What advantages have you observed with Ti-oss® in vertical and horizontal defects?

Dr. Lina: The **stability in volume** and the **reliable bone replacement** that takes me to **good implant stability** and **reliable osseointegration**.

3. After 2 to 3 years of follow-up, how would you evaluate the bone maintenance achieved with Ti-oss®?

Dr. Lina: Excellent, and in combination with ceramic implants it's not just the **hard tissue stability** but the **soft tissue behavior** and **aesthetics**.

4. Would you consider Ti-oss® a predictable option for complex GBR cases?

Dr. Lina: For sure, no doubt about it!

5. Would you use Ti-oss® again in similar augmentation cases?

Dr. Lina: Definitely, **Ti-oss® is my choice of graft in almost every case**.

Thank You

Ti-OSS®
CANCELLOUS SUBSTITUTE

Octabone®

Premium Brand

Standard Brand

Ti-oss® Bone Substitute - Vial Type

Re	Code	Product/Weight		Size
1	25-0512	Ti-oss®	0.25g/0.6CC	0.5-1.2mm
2	05-0512	Ti-oss®	0.5g/1.2CC	0.5-1.2mm
3	10-0512	Ti-oss®	1.0g/2.3CC	0.5-1.2mm
4	20-0512	Ti-oss®	2.0g/4.5CC	0.5-1.2mm
5	25-1217	Ti-oss®	0.25g/0.75CC	1.2-1.7mm
6	05-1217	Ti-oss®	0.5g/1.5CC	1.2-1.7mm
7	10-1217	Ti-oss®	1.0g/3.0CC	1.2-1.7mm
8	20-1217	Ti-oss®	2.0g/6.0CC	1.2-1.7mm
9	25-0210	Ti-oss®	0.25g/0.45CC	0.2-1.0mm
10	05-0210	Ti-oss®	0.5g/0.8CC	0.2-1.0mm
11	10-0210	Ti-oss®	1.0g/1.5CC	0.2-1.0mm
12	20-0210	Ti-oss®	2.0g/3.0CC	0.2-1.0mm

Octabone ® Bone Substitute - Vial Type

Re	Code	Product/Weight		Size
1	25-0512	Octabone®	0.25g/0.6CC	0.5-1.2mm
2	05-0512	Octabone®	0.5g/1.2CC	0.5-1.2mm
3	10-0512	Octabone®	1.0g/2.3CC	0.5-1.2mm
4	20-0512	Octabone®	2.0g/4.5CC	0.5-1.2mm
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6	05-1217	Octabone®	0.5g/1.5CC	1.2-1.7mm
7	10-1217	Octabone®	1.0g/3.0CC	1.2-1.7mm
8	20-1217	Octabone®	2.0g/6.0CC	1.2-1.7mm
9	25-0210	Octabone®	0.25g/0.45CC	0.2-1.0mm
10	05-0210	Octabone®	0.5g/0.8CC	0.2-1.0mm
11	10-0210	Octabone®	1.0g/1.5CC	0.2-1.0mm
12	20-0210	Octabone®	2.0g/3.0CC	0.2-1.0mm

Ti-oss® Bone Substitute - Syringe Type

13	S25-0512	Ti-oss®	0.25g/0.6CC	0.5-1.2mm
14	S05-0512	Ti-oss®	0.5g/1.2CC	0.5-1.2mm
15	S25-1217	Ti-oss®	0.25g/0.75CC	1.2-1.7mm
16	S05-1217	Ti-oss®	0.5g/1.5CC	1.2-1.7mm
17	S25-0210	Ti-oss®	0.25g/0.45CC	0.2-1.0mm
19	S05-0210	Ti-oss®	0.5g/0.8CC	0.2-1.0mm

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18	S05-0210	Octabone®	0.5g/0.8CC	0.2-1.0mm

Ti-oss® Bone Substitute - Block Type

18	BLK8812	Ti-oss® Block	8 x 8 x 12mm
20	BLK8825	Ti-oss® Block	8 x 8 x 25mm

Octabone® Bone Substitute - Block Type

19	BLK8812	Octabone® Block	8 x 8 x 12mm
20	BLK8825	Octabone® Block	8 x 8 x 25mm

Ti-OSS Guide®

Ti-oss® Guide - Biodegradable Collagen Membrane

21	DTG-10002	Ti-oss® Guide	15 x 30mm
22	DTG-10006	Ti-oss® Guide	30 x 40mm

196, Donggureung-ro, Guri-si, Gyeonggi-do, 11909, Republic of Korea

Phone: +82-31-568-1809 **Fax:**+82-31-553-3612 **Email:** manager@chiyewon.com **www.chiyewon.com**