

# Successful regeneration of large horizontal defect in the posterior mandible using creos™ biomaterials

## Clinical relevance

### Significant bone gain

More than 4 mm bone gain in posterior mandible, 8 months post augmentation with creos™ xenogain covered with creos™ xenoprotect.

### Implant success and stable bone

Adequate insertion torque for all implants, stable marginal bone level from implant loading and 98.9% survival rate at 1-year follow-up.

### High patient satisfaction and healthy soft tissue

Better quality of life, improved papilla index and pink esthetic score, and stable keratinized mucosa.

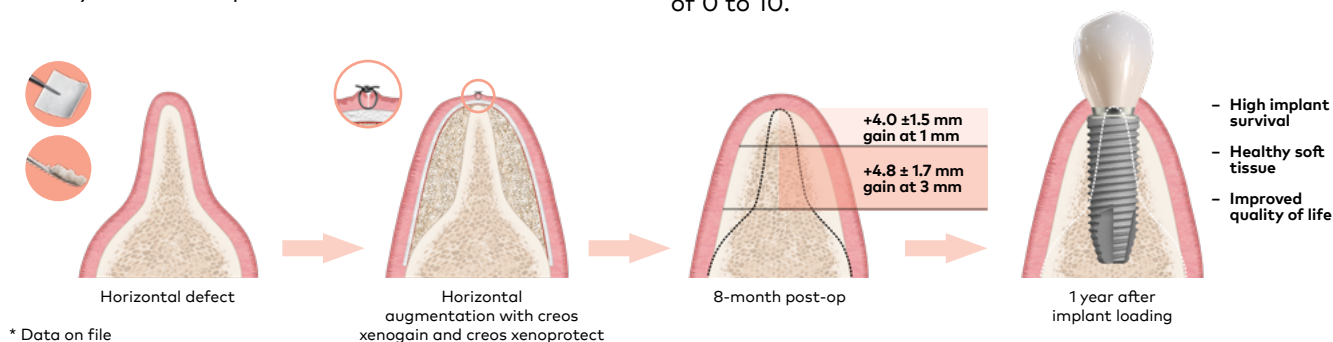


Dr. Jonas Lorenz presented the study results at EAO Congress 2021

Bone regeneration of horizontal defects in the posterior mandible: 1-year prospective study results. Aleksic Z, Milinkovic I, Lazic Z, Magic M, Wessing B, Schleich R, Sader R, Lorenz J, Ghanaati S, Merli M, Mariotti G, Jaciubek M, Bressan E. 2021, Clin Oral Impl Res; 32(S22):147-148.

## The results

- Significant bone width gain 8 months post GBR.
- Successful insertion of 91 implants in 43 patients, with a mean torque of  $37.8 \pm 5.2$  Ncm.
- Marginal bone levels were stable from  $-1.18 \pm 0.64$  mm at implant loading to  $-1.07 \pm 0.74$  at 1-year follow-up.\*
- 98.9% cumulative implant survival rate at 1-year follow-up.\*
- The ratio of sites with a papilla index of 3 (optimal) increased from 29.1% at implant loading to 43.4% after 6 months, and the pink esthetic score improved from  $7.6 \pm 2.4$  to  $8.2 \pm 2.1$ .\*
- Keratinized tissue remained stable from implant loading to 1-year.
- High patient satisfaction with function and esthetics, with all mean scores >9.5 on a scale of 0 to 10.



## Study design

Open, prospective, single-cohort, multicenter clinical study

  
Posterior mandible with large horizontal defect

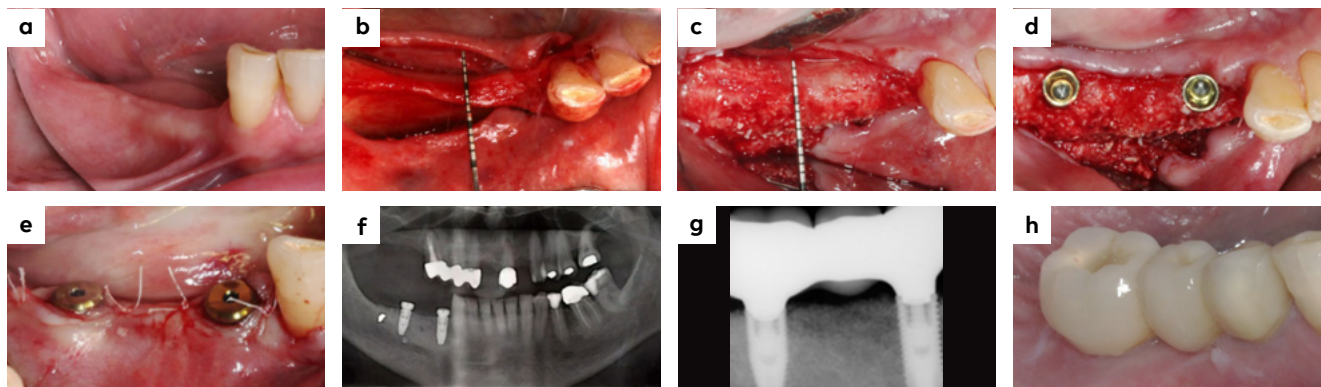
  
46 enrolled patients

  
creos xenogain  
creos xenoprotect

  
91 NobelParallel™ CC implants

  
1-year follow-up

## Sample clinical case from the study



Images courtesy of Drs. Bastian Wessing and Ramona Schleich

A 62-year-old female patient presented with horizontal posterior mandible resorption (a). Ridge measurements prior to and 8 months after guided bone regeneration (b, c), followed by the placement of two NobelParallel CC implants (d). A buccal clinical view (e) and a panoramic radiograph (f) were taken immediately after implant insertion and flap closure. Peri-apical radiographs and clinical views show the stability of marginal bone and soft tissue health 1 year after final prosthesis delivery (g,h).

## Authors' conclusion

**"Augmentation of severe horizontal bone defects with creos xenogain bone graft material and creos xenoprotect collagen membrane led to bone regeneration allowing successful implant placement and demonstrated healthy and stable response of the peri-implant tissues."**

## More to explore



Presented  
Poster at EAO



Live Surgery -  
Regeneration of  
the vertical and  
horizontal defect



[nobelbiocare.com/regeneratives](https://nobelbiocare.com/regeneratives)

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