

PREFACE**Soft and hard tissue augmentation procedures for promotion of peri-implant health and aesthetics**

Over the past greater than 2 decades, dental implants have developed into commonly used and highly predictable treatment option for replacing lost teeth due to tooth agenesis, disease or injury. One of the main challenges nowadays, for both aesthetics as functional reasons, is how to maintain healthy soft tissues around implants and to determine how this is influenced by soft and hard tissue augmentation procedures in cases presenting insufficient areas of tooth-supporting structures (Larsson et al., 2016).

With more than 5 million implants inserted each year alone in the USA, with a predicted growth of 12%–15% in the USA and globally

(Misch, 2015), these questions are of tremendous relevance, having direct implications on the daily clinical practice of clinicians worldwide. That is why the Osteology Foundation has chosen the topic “peri-implant soft tissues” for its 2nd Consensus Meeting, which took place on 13 June 2017, in Weggis, Switzerland.

The purpose of the meeting was to advance the understanding of the effect of augmentation procedures on the maintenance and aesthetics of healthy peri-implant tissues, and to identify gaps in knowledge, and future research on this topic. Faithful to the mission of the Osteology

TABLE 1 Osteology Foundation Consensus participants and groups

Name	Country	Osteology Foundation Board	Osteology Foundation Expert Council
Osteology Consensus Group 1			
Maurício Araújo	Brazil	x	
Gustavo Avila-Ortiz	USA		x
Kristina Badalyan	Russia		x
Christer Dahlin	Sweden	x	
Elena Figuero	Spain		
Reinhard Gruber	Austria	x	
William V. Giannobile	USA	x	
Pamela K. McClain	USA	x	
Nadia Naenni	Switzerland		
Ignacio Sanz-Sánchez	Spain		x
Frank Schwarz	Germany	x	
Daniel Thoma	Switzerland		x
Istvan Urban	Hungary	x	
Osteology Consensus Group 2			
Daniel Buser	Switzerland		
Nikolaos Donos	UK	x	
Christoph Hämmerle	Switzerland		
Ronald E. Jung	Switzerland	x	
Franck Renouard	France	x	
Mariano Sanz	Spain	x	
Lisa Heitz-Mayfield (Editor)	Australia		
Hector F. Rios	USA		x
Ausra Ramanauskaite	Germany		
Andrea Rocuzzo	Italy		
João Batista César Neto	Brazil		x
Mario Rocuzzo	Italy		x

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Foundation to “Link science and practice in oral regeneration,” it was very important to provide the highest level of evidence through stringent systematic reviews but also to include the clinical experience of highly reputed experts to formulate recommendations for clinical practice.

Twenty-five international experts in the field of oral tissue regeneration and implant dentistry formed the Osteology Consensus Group (Table 1). The current evidence was formulated into four systematic reviews (Ramanauskaite, Rocuzzo, Linkevicius & Schwarz, 2018; Rocuzzo, Rocuzzo & Ramanauskaite, 2018; Sanz-Sánchez et al., 2018; and Thoma et al., 2018), which were distributed to the participants in advance, followed by full presentation and discussion during the Consensus Meeting. The participants subsequently split up into two groups for discussion and the preparation of the Consensus Reports.

Group 1 addressed the effect of soft and hard tissue augmentation procedures on the maintenance of peri-implant soft tissues and prepared two consensus reports, one on soft tissue augmentation (Giannobile, Jung & Schwarz, 2018) and one on hard tissue augmentation (Schwarz, Giannobile & Jung, 2018).

Group 2 addressed aesthetics of peri-implant soft tissues, in particular factors influencing interimplant mucosa fill and interdental papillary height, and prepared a single consensus report incorporating both of the last two reviews (Jung, Heitz-Mayfield & Schwarz, 2018).

In this special issue of *Clinical Oral Implants Research*, the four systematic reviews as well as the three consensus reports and recommendations are published. The Osteology Foundation leadership hopes that the readers of this special issue will appreciate the efforts of this 2nd Consensus Meeting to advance the science and clinical application of augmentation procedures which will benefit clinicians and patients alike.

ACKNOWLEDGEMENTS

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CONFLICT OF INTEREST

The authors declare that they both belong to the Executive Committee of the Osteology Foundation, organiser of the consensus workshop, but this fact does not lead to any conflict of interest in regards to the content of this article or the content of the workshop.

Keywords

bone augmentation, dental implants, peri-implant health, peri-implantitis, soft tissue augmentation, tissue regeneration

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REFERENCES

- Giannobile, W. V., Jung, R. E., Schwarz, F., & on behalf of the Groups of the 2nd Osteology Foundation Consensus Meeting (2018). Evidence-based knowledge on the aesthetics and maintenance of peri-implant soft tissues: Osteology Foundation Consensus Report Part 1—Effects of soft tissue augmentation procedures on the maintenance of peri-implant soft tissue health. *Clinical Oral Implants Research*, 29(Suppl. 15), 7–10.
- Jung, R. E., Heitz-Mayfield, L., Schwarz, F., & on behalf of the Groups of the 2nd Osteology Foundation Consensus Meeting (2018). Evidence-based knowledge on the aesthetics and maintenance of peri-implant soft tissues: Osteology Foundation Consensus Report Part 3—Aesthetics of peri-implant soft tissues. *Clinical Oral Implants Research*, 29(Suppl. 15), 14–17.
- Larsson, L., Decker, A. M., Nibali, L., Pilipchuk, S. P., Berglundh, T., & Giannobile, W. V. (2016). Regenerative medicine for periodontal and peri-implant diseases. *Journal of Dental Research*, 95, 255–266.
- Misch, C. E. (2015). Rationale for dental implants. In C. E. Misch (Eds.), *Dental implant prosthetics* (p. 1). 2nd edn. St. Louis, MO: Elsevier Mosby.
- Ramanauskaite, A., Rocuzzo, A., Linkevicius, T., & Schwarz, F. (2018). A systematic review on the influence of the horizontal distance between two adjacent implants inserted in the anterior maxilla on the inter-implant mucosa fill. *Clinical Oral Implants Research*, 29(Suppl. 15), 62–70.
- Rocuzzo, M., Rocuzzo, A., & Ramanauskaite, A. (2018). The influence of the vertical distance between the bone crest and the interproximal contact point on the papilla height – A systematic review. *Clinical Oral Implants Research*, 29(Suppl. 15), 50–61.
- Sanz-Sánchez, I., Carillio de Albornoz, A., Figuero, E., Schwarz, F., Jung, R. E., Sanz-Alonso, M., & Thoma, D. S. (2018). Effects of lateral bone augmentation procedures on peri-implant health or disease: A systematic review and meta-analysis. *Clinical Oral Implants Research*, 29(Suppl. 15), 18–31.
- Schwarz, F., Giannobile, W. V., Jung, R. E., & on behalf of the Groups of the 2nd Osteology Foundation Consensus Meeting (2018). Evidence-based knowledge on the aesthetics and maintenance of peri-implant soft tissues: Osteology Foundation Consensus Report Part 2—Effects of hard tissue augmentation procedures on the maintenance of peri-implant tissues. *Clinical Oral Implants Research*, 29(Suppl. 15), 11–13.
- Thoma, D. S., Naenni, N., Figuero, E., Hämmerle, C. F., Schwarz, F., Jung, R. E., & Sanz-Sánchez, I. (2018). Effects of soft tissue augmentation procedures on peri-implant health or disease: A systematic review and meta-analysis. *Clinical Oral Implants Research*, 29(Suppl. 15), 32–49.

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The participants of the 2nd Osteology Consensus Meeting in Weggis, Switzerland