



Dental Clinical Policy

Subject: Biological Materials to Aid in Soft and Osseous Tissue Regeneration	
Guidelines #: 04-203	Publish Date: 01/01/2026
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Description

This document addresses the biological materials to aid in soft and osseous tissue regeneration whether used alone or in conjunction with other procedures. The field of tissue engineering or regenerative medicine is a process by which damaged tissues are regenerated rather than using grafts (autografts, allografts) by developing biological substitutes that restore, maintain, or improve tissue function. In dentistry, adjunctive regenerative therapy utilizing biological materials can be used for the treatment of periodontal disease defects of natural teeth and dental implants.

Criteria

When covered by specific group contract, indications for the use of biologic materials must be documented by:

1. Current (within 12 months), diagnostic quality, pretreatment periapical radiographic images.
2. Current (within 12 months), dated, post initial therapy 6-point periodontal charting indicating a minimum of 5mm pocket depths.
3. Rationale in support of the regeneration procedure and the type of material being used may be requested. For example, platelet rich plasma (PRP), Emdogain®, recombinant human bone morphogenic protein (rhBMP), GEM 21S®, etc.
4. The use of biological materials may not be considered when used in conjunction with soft tissue grafting, bone grafts, guided tissue regeneration, ridge augmentation, periradicular surgery; when placed within extraction sites; or when utilized with other regenerative materials.

Coding

The following codes for treatments and procedures applicable to this document are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CDT

Including, but not limited to, the following:

D3431

Biological materials to aid in soft and osseous tissue regeneration in conjunction with periradicular surgery

D4265	Biologic materials to aid in soft and osseous tissue regeneration, per site
D4266	Guided tissue regeneration – resorbable barrier per site

ICD-10 CM Diagnoses for Dental Diseases and Conditions: See the current CDT code book for details

References

1. Parodi R, Liuzzo G, et al. Use of Emdogain in the treatment of deep intrabony defects: 12-month clinical results. Histologic and radiographic evaluation. *Int J Perio Rest Dent* 2000;19:93.
2. Giannobile W, Somerman M. Growth and amelogenin-like factors in periodontal wound healing. A systematic review. *Ann Periodontol* 2003;8:193-204.
3. CDT 2026 Current Dental Terminology, American Dental Association.
4. McGuire MK and Scheyer ET. Xenogenic collagen matrix with coronally advanced flap compared to connective tissue with coronally advanced flap for the treatment of dehiscence-type defects. *J Perio* 2010; 81:1108-1117.
5. Materials Today, Volume 14, Issue 3, March 2011, pages 88-95: Biomaterials and Scaffolds for Tissue Engineering; Fergal J. O'Brien
6. Yassibag-Berkman Z, Tuncer O, et al. Combined use of platelet-rich plasma and bone grafting with or without guided tissue regeneration in the treatment of anterior interproximal defects. *J Perio* 2007; 78:801-809.
7. American Academy of Periodontology. AAP Commissioned Review. Bone augmentation techniques. *J Perio* 2007; 78:377-396.
8. American Academy of Periodontology. AAP Position Paper. Periodontal regeneration. *J Perio* 2005; 76:1621-1622.
9. Meyle J, Hoffman T, et al. A multi-center randomized controlled clinical trial on the treatment of intra-bony defects with enamel matrix derivatives/synthetic bone graft or enamel matrix derivatives alone. *J Clin Periodontol* 2011;38:652-660.
10. Sculean A, Windisch P and Chiantella GC. Human Histologic evaluation of an intrabony defect treated with enamel matrix derivative, xenografts, and GTR. *Int J Perio Rest Dent* 2004;24:326-333
11. Yukna RA and Mellonig JT. Histologic evaluation of periodontal healing in humans following regenerative therapy with enamel matrix derivative. A 10- case series. *J Perio* 2000; 71:752-759.
12. Yan X, Shao-Hua G, et al. A pilot study evaluating the effect of recombinant human bone morphogenic protein-2 and recombinant human beta-nerve growth factor on the healing of class III furcation defects in dogs. *J Perio* 2010; 81: 1289-1298.
13. Markous N, Pepelassi E, et al. The use of platelet--rich plasma combined with demineralized freeze-dried bone allograft in the treatment of periodontal endosseous defects. *J Amer Dent Assoc* 2010; 141:967-978.
14. CDT 2026 Current Dental Terminology, American Dental Association

History				
Revision History	Version	Date	Nature of Change	SME
	initial	02/08/2017	creation	Dr. Rosen
	Revision	02/06/2018	Related dental policies, appropriateness and medical necessity	Dr. Kahn
	Revision	10/01/2020	Annual Review	Committee
	Revised	12/04/2020	Annual Review	Committee
	Revised	10/06/2021	Annual Review	Committee
	Revised	10/26/2022	Annual Review	Committee
	Revised	10/04/2023	Annual Review	Committee
	Revised	09/13/2024	Minor editorial refinements to description, clinical indications, and criteria; intent unchanged.	Committee
	Reviewed	10/16/2025	No changes	Dr. Stewart Balikov

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