



Dental Clinical Policy

Subject: Biological Materials to Aid in Soft Tissue and Osseous Tissue Regeneration (Endodontic)

Guidelines #: 03-401
Status: Revised

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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. Regenerative therapy utilizing biological materials can be used for the treatment of periodontal disease defects of natural teeth and dental implants.

Criteria

1. Current, dated (within 12 months), pretreatment periapical radiographic images that are of diagnostic quality.
2. Current, dated 6-point periodontal charting as described by American Academy of Periodontology (AAP) and American Dental Association (ADA) indicating a minimum of 5mm pocket depths.
3. A letter of rationale explaining the necessity 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, placed within extraction sites, or when utilized with other regenerative materials regardless of specific group plan coverage.

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:*

- D3431 Biologic materials to aid in soft and osseous tissue regeneration in conjunction with periradicular surgery
- D4265 Biological material to aid in soft and osseous tissue regeneration, per site
- D7921 collection and application of autologous blood concentrate product

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

References

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8. 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.
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10. 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.
11. 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.
12. 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.

| History | | | | |
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| Revision History | Version | Date | Nature of Change | SME |
| | initial | 02/08/2017 | creation | L Rosen |
| | Revision | 02/06/2018 | Related policies, Appropriateness/Medical Necessity, criteria | M Kahn |
| | Revision | 10/07/2020 | Annual Review | Committee |
| | Revised | 12/04/2020 | Annual Review | Committee |
| | Revised | 10/30/2021 | Annual Review | Committee |
| | Revised | 10/21/2022 | Annual Review | Committee |
| | Revised | 09/13/2023 | Annual Review | Committee |
| | Revised | 10/25/2024 | Minor editorial refinements to description, clinical indications, criteria, and coding; intent unchanged. | |

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