SURGICAL PERIODONTICS: REGENERATIVE PROCEDURES

Policy Number: DCP014.05

Effective Date: April 1, 2019

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Related Dental Policies

- Full Mouth Debridement
- Implants
- Non-Surgical Periodontal Therapy
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- Surgical Endodontics
- Surgical Periodontics: Mucogingival Procedures
- Surgical Periodontics: Resective Procedures

COVERAGE RATIONALE

Bone Replacement Grafts

Bone Replacement Grafts are indicated for the following:
- Infra/Infrabony vertical defects
- Class II Furcation involvements

Bone Replacement Grafts are not indicated for the following:
- Class I Furcation involvement
- Class III or higher Furcation involvement
- Non-vertical defects
- Individuals with an uncontrolled underlying medical condition
- Individuals who have been non-compliant with previous periodontal therapies
- Individuals with poor oral hygiene
- Teeth with a hopeless prognosis (more than 75% bone loss and Class 3 or higher Mobility)

Biologic Materials to Aid in Soft and Osseous Tissue Regeneration

There is a lack of high quality evidence demonstrating the efficacy of these materials in published peer-reviewed literature and further clinical studies are needed.

Guided Tissue Regeneration – Resorbable and Non-Resorbable Barrier (Includes Membrane Removal)

Guided Tissue Regeneration may be indicated for the following:
- Intrabony/infrabony vertical defects
- Class II Furcation involvements

Guided Tissue Regeneration is not indicated for the following:
- Teeth with a hopeless prognosis (more than 75% bone loss and Class 3 or higher Mobility)
- Class I Furcation involvement
- Class III or higher Furcation involvement
- Horizontal bone loss
- Non-vertical defects
- Individuals with an uncontrolled underlying medical condition
- Individuals who have been non-compliant with previous periodontal therapies
- Individuals with poor oral hygiene
- Crater defects

Surgical Revision Procedure (per Tooth)

A surgical revision procedure may be indicated to correct an abnormal healing response that interferes with the therapeutic goals of the original regenerative surgical procedure.
A surgical revision procedure is not indicated solely for cosmetic/aesthetic purposes.

DEFINITIONS

Anatomical Crown: That portion of tooth normally covered by, and including, enamel. (ADA)

Biologic Materials/Biologic Response Modifiers: Agents that alter wound healing or host-tumor interaction. Such materials can include cytokines, growth factor, or vaccines, but do not include any actual hard or soft tissue graft material. These agents are added to graft material or used alone to effect acceleration of healing or regeneration in hard and soft tissue surgical procedures. (ADA)

Flap: A loosened section of tissue separated from the surrounding tissues except at its base. (ADA)

Furcation: The anatomic area of a multirooted tooth where the roots diverge. A Furcation involvement refers to loss of periodontal support in a Furcation (ADA). The Glickman Classification of Tooth Furcation Grading (Sims, 2015):

- Grade I:
  - Incipient
  - Just barely detectable with examination hand instruments
  - No horizontal component of the Furcation is evident on probing
- Grade II:
  - Early bone loss
  - Examination hand instrument goes partially into the Furcation, but not all the way through
  - Furcation may be grade II on both sides of the tooth, but are not connected
- Grade III:
  - Advanced bone loss
  - Examination hand instrument goes all the way through Furcation, to other side of tooth
  - Furcation is through-and-through
- Grade IV:
  - Through-and-through, plus Furcation is clinically visible due to gingival recession

Gingival Flap: A Flap that does not extend apical to the mucogingival junction. (ADA)

Guided Tissue Regeneration: A surgical procedure with the goal of achieving new bone, cementum, and PDL attachment to a periodontally diseased tooth, using barrier devices or membranes to provide space maintenance, epithelial exclusion, and wound stabilization. (AAP)

McGuire Classification of Tooth Prognosis: (Levi 2016)

- Good: Teeth with adequate periodontal support where the etiologic factors can be controlled, including systemic factors
- Fair: No more than 25% attachment loss with Grade 1 Furcation invasion which can be maintained. Plaque control and systemic factors can be maintained
- Poor: As much as 50% bone loss with Grade II Furcation invasions, poor crown: root ratio; Mobility greater than Miller Class I; systemic factors; poor patient participation in treatment
- Questionable: Teeth with greater than 50% attachment loss; Grade II or III Furcation involvements; the tooth is not easily maintained either with professional hygiene or by the patient
- Hopeless: Inadequate attachment to support the tooth; Class III or IV Furcation involvement; Miller Class III Mobility; the tooth cannot be maintained with adequate plaque control by the clinician or by the patient

Mobility: The movement of a tooth in its socket resulting from an applied force. (AAP) Miller Index of Tooth Mobility (Harpenau 2013):

- Class 0: Normal physiologic tooth movement
- Class I: First distinguishable signs of movement beyond normal
- Class II: Tooth movement up to 1mm in any direction
- Class III: Tooth can be moved more than 1mm in any direction and/or the tooth can be depressed into the socket

Osseous Surgery: Procedures to modify bone support altered by periodontal disease, either by reshaping the alveolar process to achieve physiologic form without the removal of alveolar supporting bone, or by the removal of some alveolar bone, thus changing the position of the crestal bone relative to the tooth root. (See: Ostectomy; Osteoplasty)

Quadrant: One of the four equal sections into which the dental arches can be divided; begins at the midline of the arch and extends distally to the last tooth. (ADA)
**Tooth Bounded Space:** A space created by one or more missing teeth that has a tooth on each side. (ADA)

### APPLICABLE CODES

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by the member specific benefit plan document and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Clinical Policies and Coverage Guidelines may apply.

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<th>CDT Code</th>
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<tr>
<td>D4263</td>
<td>Bone replacement graft – retained natural tooth – first site in quadrant</td>
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<tr>
<td>D4999</td>
<td>Unspecified periodontal procedure, by report</td>
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### DESCRIPTION OF SERVICES

The American Academy of Periodontology (AAP) guidelines stress that periodontal health should be achieved in the least invasive and most cost effective manner for each individual. Regenerative procedures involve bone grafting, Guided Tissue Regeneration as well as the use of Biological Materials (enamel matrix derivative, platelet rich plasma and fibrin, plasma rich growth factor) to aid in surgical periodontal procedures. These regenerative procedures also have indications for lesions that are endodontic in origin and have their own coverage rationale. Please see the procedure specific policy for details.

### CLINICAL EVIDENCE

Zhou et al. (2018) conducted a systematic review and meta-analysis to evaluate and compare the clinical outcomes of enamel matrix derivative (EMD), platelet-rich plasma (PRP), platelet rich fibrin (PRF), and amnion membrane (AM) in conjunction with DFDBA in patients with periodontal infrabony defects. This may also provide some guidance on clinical management strategy for the option of additional bioactive materials. Included were RCTs that compared the performances of DFDBA with or without one of the four bioactive materials (EMD, PRP, PRF, and AM) in patients with periodontal infrabony defects, with follow-up periods of >=6 months. The exclusion criteria included retrospective cohort studies, animal studies, in vitro studies, case reports, case series, and reviews. Nine RCTs (four with a parallel design and five with a split-mouth design) published between 2008 and 2017 were selected, and included a total of 259 patients. The follow-up period ranged from 6 to 12 months. The results showed PRF exerts the most significant adjunctive effect on soft tissue healing, while PRP exhibits an impact on hard tissue reconstruction in the treatment of periodontal infrabony defects. EMD and AM demonstrated little additional benefit. PRF/PRP could be a preferred adjunct to promote periodontal regeneration due to proven biological effects, low costs, and ease of preparation. The authors recommend standardization of the protocol for the preparation and application of PRF/PRP is needed to obtain an optimal effect in regenerative procedures.

In a 2018 Cochrane database systematic review, Del Fabbro et al. sought to assess the effects of autologous platelet concentrates (APC) used as an adjunct to periodontal surgical therapies (open flap debridement (OFD), OFD combined with bone grafting (BG), guided tissue regeneration (GTR), OFD combined with enamel matrix derivative (EMD) for the treatment of infrabony defects. The primary outcomes assessed were: change in probing pocket depth (PD), change in clinical attachment level (CAL), and change in radiographic bone defect filling (RBF). The authors included randomised controlled trials (RCTs) of both parallel and split-mouth design, involving patients with infrabony defects requiring surgical treatment. Studies had to compare treatment outcomes of a specific surgical technique combined with APC, with the same technique when used alone. Data was organized into four groups, each comparing a specific surgical technique when applied with the adjunct of APC or alone: 1. APC + OFD versus OFD, 2. APC + OFD + BG versus OFD + BG, 3. APC + GTR versus GTR, and 4. APC + EMD versus EMD. Based on very low quality evidence, the results showed:

- APC + OFD versus OFD alone: Twelve studies were included in this comparison, with a total of 510 infrabony defects. There is evidence of an advantage in using APC globally from split-mouth and parallel studies for all three primary outcomes.
• **APC + OFD + BG versus OFD + BG:** Seventeen studies were included in this comparison, with a total of 569 infrabony defects. Considering all follow-ups, as well as 3 to 6 months and 9 to 12 months, there is evidence of an advantage in using APC from both split-mouth and parallel studies for all three primary outcomes.

• **APC + GTR versus GTR alone:** Seven studies were included in this comparison, with a total of 248 infrabony defects. Considering all follow-ups, there is probably a benefit for APC for both PD and CAL. However, given the wide confidence intervals, there might be a possibility of a slight benefit for the control. When considering a 3 to 6 months and a 9 to 12 months follow-up there were no benefits evidenced, except for CAL at 3 to 6 months. No RBF data were available.

• **APC + EMD versus EMD:** Two studies were included in this comparison, with a total of 75 infrabony defects. There is insufficient evidence of an overall advantage of using APC for all three primary outcomes.

• **All studies in all groups reported a survival rate of 100% for the treated teeth. No complete pocket closure was reported.**

The authors concluded that there is very low-quality evidence that the adjunct of APC to OFD or OFD + BG when treating infrabony defects may improve probing pocket depth, clinical attachment level, and radiographic bone defect filling. For GTR or EMD, insufficient evidence of an advantage in using APC was observed.

Patel et al. (2017) conducted a randomized controlled trial to assess the adjunctive use of platelet-rich fibrin (PRF) in regenerative management of intrabony defects in comparison with open flap debridement (OFD). Twenty-six bilateral defects (13 per group) in 13 patients were randomized as either PRF (test group) or OFD alone (control group) sites. Primary outcomes assessed were changes in PD, CAL, and percentages of bone fill at 6, 9, and 12 months. Secondary outcome was assessment of wound healing using a wound healing index (WHI). The PRF group showed significant improvement in clinical parameters compared with the control group at 6, 9, and 12 months. The PRF group showed a bone fill of 45.18% ± 7.57%, which was statistically significant compared with 21.6% ± 9.3% seen in the control group at the end of the study period. The PRF group also showed significant soft tissue healing and reduction in PD. WHI also showed significant advantages for the PRF group. The authors concluded that the adjunctive use of PRF to conventional OFD may be potentially used in the treatment of intrabony defects.

In a 2016 systematic review, Kaur et al. reviewed the clinical data currently available on the use of bone morphogenetic proteins (BMPs) in various periodontal applications. BMPs have been shown in preclinical and clinical studies to enhance periodontal regeneration. BMPs have demonstrated beyond doubt their role as a superior alternative of autogenous bone graft. However, much of the data in BMP research has been derived from animal studies which are important as far as providing base line data for further clinical studies. The available data on use of rhBMP-2 and 7 in humans are promising in showing an osteoinductive potential in periodontal regeneration, but not conclusive in the predictability and consistency results to allow clinical use at this stage, other than in well-designed clinical trials. Since many other factors including smoking, age, steroid use, malnutrition, and disease severity play a role in determining the physiology of periodontal regeneration in humans, the true efficacy and safety of these agents for different scenarios must be established in carefully designed prospective randomized clinical trials before they are approved for use. Research should continue to focus on improving the use of BMPs in the current clinical applications.

Ravi et al. (2017) completed a split-mouth randomized controlled clinical trial to assess the effect of plasma rich growth factor (PRGF) associated with guided tissue regeneration (GTR) versus GTR only in the treatment of intrabony defects (IBDs) in patients with chronic periodontitis (CP). Patients with CP with 42 contralateral 2- and 3-walled defects were randomly assigned to test (PRGF+GTR) and control (GTR alone) treatment groups. Clinical and radiographic assessments performed at baseline and after 6 months were: gingival index (GI), probing depth (PD), clinical attachment level (CAL), radiologic defect depth, and bone fill. The results demonstrated that the parameters measured at baseline and after 6 months showed mean PD reduction of 3.37 ± 1.62 mm in the control group and 4.13 ± 1.59 mm in the test group. There was a significant difference in PD reduction in CAL in the control group (5.42 ± 1.99) and the test group (5.99 ± 1.77). Mean change in GI was 1.89 ± 0.32 and 1.68 ± 0.58 in the control group and test group, respectively, and the difference was statistically significant. When compared between groups, clinical parameters did not show any statistically significant variations. Mean radiographic bone fill was 1.06 ± 0.01 and 1.0 ± 0.07 in the control group and test group, respectively. However, the difference was not statistically significant. The authors concluded that PRGF with GTR, as well as GTR alone, was effective in improving clinical and radiographic parameters of patients with CP at the 6-month follow-up. There was no additive effect of PRGF when used along with GTR in the treatment of IBDs in patients with CP in terms of both clinical and radiologic outcomes.

Cieplik et al. (2017) completed a 13-year follow-up of a randomized controlled clinical split-mouth study on the influence of autogenous platelet concentrate (APC) on combined guided tissue regeneration (GTR)/graft therapy in infrabony defects. In 25 patients, two deep contra-lateral infrabony defects were treated according to GTR using β-TCP and bio-resorbable membranes. In test defects, APC was applied additionally. After 13 years, clinical healing results were assessed and compared to results at baseline and after 1 year, and a tooth survival analysis completed. After 13 years, 22 patients were available for tooth survival analysis showing 81.8% of test and 86.4% of control teeth still in situ. Based on the 15 patients still available for split-mouth analysis, median CAL was 10.0 mm in test.
and 12.0 mm in control sites at baseline. After 1 year, both groups revealed significant CAL gains of 5.0 mm, followed by a new CAL loss of 1.0 mm in the following 12 years. There were no significant differences between test and control sites. The authors concluded that within the limits of this study, the data shows that most of the CAL gain following GTR can be maintained over 13 years. The additional use of APC had no positive influence on the long-term stability.

Miron et al. (2017) conducted a systematic review with the goal of gathering the extensive number of articles published to date on platelet rich fibrin (PRF) in the dental field to better understand the clinical procedures where PRF may be utilized to enhance tissue/bone formation. Randomized clinical trials were searched systematically until May 2016 and separated into the following categories: intrabony and furcation defect regeneration, extraction socket management, sinus lifting procedures, gingival recession treatment, and guided bone regeneration (GBR) including horizontal/vertical bone augmentation procedures. In total, 35 articles were selected and divided accordingly. Overall, the use of PRF has been most investigated in periodontology for the treatment of periodontal intrabony defects and gingival recessions where the majority of studies have demonstrated favorable results in soft tissue management and repair. Little to no randomized clinical trials were found for extraction socket management, although PRF has been shown to significantly decrease dry socket complications in third molar sites. Little to no data was available directly investigating the effects of PRF on new bone formation in GBR, horizontal/vertical bone augmentation procedures, treatment of peri-implantitis, and sinus lifting procedures. The authors concluded that investigation supports the use of PRF for periodontal and soft tissue repair. There remains a lack of well-conducted studies demonstrating convincingly the role of PRF during hard tissue bone regeneration. Future human randomized clinical studies evaluating the use of PRF on bone formation are necessary.

Galav et al (2016) conducted a randomized controlled trial to compare the clinical efficacy of platelet-rich fibrin (PRF) with autogenous bone grafting (ABG) for the treatment of intra bony defects (IBD’s) in chronic periodontitis. Twenty chronic periodontitis patients with IBDs were randomly treated by PRF or ABG. Probing pocket depth (PPD), relative attachment level (RAL), surgical reentry bone fills, and radiographic bone fill (RBF) were recorded at baseline, 3, 6, and 9 months postsurgery, respectively. Both PRF and ABG sites produced a significant improvement from baseline to 9 months for all the parameters. However, there was no significant difference between the two treatment modalities in the reduction of PPD and RAL gain at 9 months. In addition, ABG showed significantly greater RBF (30.34%) as compared to PRF (20.22%). Similar findings were supported by surgical reentry, where a surgical reentry of 65.31% at ABG sites and 43.64% at PRF sites was seen. The authors concluded that both ABG and PRF can be used predictably to reconstruct lost periodontal structures as indicated by PPD reduction and RAL gain. However, in terms of osseous defect fill, ABG yields more definitive outcome than PRF.

Nevins et al. (2013) provided results from a 36-month extension study of a multicenter, randomized, controlled clinical trial evaluating the effect and long-term stability of homodimer platelet derived growth factor (PDGF-BB) treatment in patients with localized severe periodontal osseous defects. A total of 135 participants were enrolled from six clinical centers for this trial, and eighty-three individuals completed the study at 36 months and were included in the analysis. The study investigated the local application of β-tricalcium phosphate scaffold matrix with or without two different dose levels of PDGF (0.3 or 1.0 mg/mL PDGF-BB) in patients possessing one localized periodontal osseous defect. Clinical and radiographic evidence of treatment success was defined as percentage of cases with clinical attachment level (CAL) ≥2.7 mm and linear bone growth (LGB) ≥1.1 mm. Although there were no significant increases in CAL and LGB at 36 months among all groups, there were continued increases in CAL gain, LGB, and percentage bone fill over time, suggesting overall stability of the regenerative response. The authors concluded that PDGF-BB in a synthetic scaffold matrix promotes long-term stable clinical and radiographic improvements in patients with localized severe periodontal osseous defects.

Pradeep et al. (2012) completed a randomized controlled clinical trial to explore the clinical and radiographic effectiveness of autologous platelet rich fibrin (PRF) and platelet rich plasma (PRP) in the treatment of 3 walled intrabony periodontal defects. Ninety intrabony defects were selected and treated with open flap debridement and PRF, open flap debridement and PRP and open flap debridement alone as the control group. Clinical and radiologic parameters, of probing depth (PD), clinical attachment level (CAL), intrabony defect depth, and percentage of defect fill were all recorded at baseline and 9 months postoperatively. This study showed improvements in all parameters with the most significant being the decreased depth of the defect. The authors concluded that both PRF and PRP in conjunction with open flap debridement show improvements in all clinical and radiographic parameters measured and that PRF is less time consuming and less technique sensitive, and may be a better treatment option than PRP. However, long-term, multicenter randomized, controlled clinical trials will be required to know their clinical and radiographic effects on bone regeneration.

Shah et al. (2014) conducted a systematic review and meta-analysis to determine the clinical and radiographic outcomes of using platelet-rich fibrin (PRF) for the treatment of periodontal intra-bony defect (IBD) compared with open flap debridement (OFD). Studies investigating the effect of platelet concentrate in surgical procedure for the treatment of periodontal intra osseous defects compared with the control group in which platelet concentrate was not used were included. A total of 298 sites were treated using PRF either in combination with graft or as a monotherapy.

Surgical Periodontics: Regenerative Procedures
UnitedHealthcare Dental Clinical Policy

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in comparison to traditional OFD procedure. The meta-analysis showed a standard mean difference of 0.95 mm in clinical attachment level (CAL) and 2.33 mm in IBD after treatment of IBD with PRF compared with OFD. The authors concluded that clinically significant improvements in periodontal parameters such as CAL, IBD, and reduction in probing depth were achieved when IBDs were treated with PRF alone when compared to OFD.

Slotte et al. (2012) conducted a randomized study to evaluate healing after open-flap debridement (OF) of intrabony periodontal defects alone or with adjunct treatment with bovine bone material grafts (BBM). There were 32 patients with 32 intrabony periodontal defects selected. After initial periodontal scaling and root planing, full-thickness flaps were raised and root surfaces and defects were debrided. Patients were then randomly assigned to treatment groups, either OF alone or combined with defect fill with BBM, and followed in a strict postoperative maintenance care program for 12 months. Upon assessment of results at 12 month point, none of the following parameters showed significant intergroup differences: gingival recession, probing depth, gain in clinical attachment level and probing bone level. However, radiographically, there were significant changes in the intrabony defect. The authors concluded that both procedures had similar outcomes of improved periodontal conditions, and that the addition of BBM provided the greatest improvement in the radiographic appearance of intrabony defects.

Sasikumar et al. (2012) conducted a literature review regarding the application of bone morphogenetic proteins to periodontal and peri-implant tissue regeneration. Several studies showed significant regeneration of the periodontal tissues and it is important to understand the biologic processes of periodontal wound healing and the effects of these biologic processes on BMP activity. Further studies are needed for the development of delivery systems that have mechanical and surgical properties appropriate for controlled release of bone morphogenetic proteins and identifying optimal condition for the use of BMPs for periodontal regeneration.

Sohrabi et al. (2012) conducted a meta-analysis of randomized controlled clinical trials to evaluate bioactive glass in the treatment of intrabony and furcation defects. Criteria included publication in English, follow-up duration of ≥6 months, baseline and follow-up measures of probing depth (PD) and clinical attachment levels (CAL) with 95% confidence intervals (CIs), and an appropriate control arm. Twenty-five citations were identified, 15 of which were included in the final analysis. Pooled analyses showed that BG was superior to control for both measures. CAL heterogeneity appeared secondary to active controls versus open flap debridement (OFD) alone and to defect-type modifying BG treatment success. Per subgroup analyses, the benefit of BG over control treatment was highly significant only in studies comparing BG to OFD. The authors concluded that treatment of intrabony defects with BG imparts a significant improvement in both PD and CAL compared to both active controls and OFD.

Stavropoulos and Karrig (2010) published the 6-year results of a randomized-controlled clinical trial evaluating guided tissue regeneration (GTR) combined with or without deproteinized bovine bone mineral (DBBM) in intrabony defects. In 45 patients, one defect was treated with GTR combined with DBBM hydrated in saline (DBBM+) or with GTR alone. Thirty-six patients (33 teeth) were available for the entire 6-year control. Clinical parameters of clinical attachment level (CAL) and probing depths (PDs) were recorded pre-surgery, and at 1 and 6 years postsurgery. These results showed statistically significant clinical improvements for all treatments, and periodontal conditions obtained after GTR treatment with or without the adjunct use of DBBM can be preserved on a long-term basis.

**U.S. FOOD AND DRUG ADMINISTRATION (FDA)**

Products used for bone grafting, bone growth and resorbable and non-resorbable membranes for guided tissue regeneration use in periodontal applications are extensive. See the following websites for more information and search by product name in device name section: [http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm](http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm). (Accessed December 2018)

Connective tissue grafting products from donated human skin are regulated by the (FDA) as human tissue for transplantation. They are processed and marketed in accordance with the FDA’s requirements for banked human tissue (21 CFR, Part 1270 and Part 1271) and Standards for Tissue Banking of the American Association of Tissue Banks (AATB). Information is available at: [http://www.fda.gov/BiologicsBloodVaccines/TissueTissueProducts/default.htm](http://www.fda.gov/BiologicsBloodVaccines/TissueTissueProducts/default.htm). (Accessed December 2018)

Currently, there are two biologic products approved by the FDA for regenerative periodontal therapy:

- **GEM 21S™** (Osteohealth Company, Division of Luitpold Pharmaceuticals, Inc.); see the following website for more information: [http://www.accessdata.fda.gov/cdrh_docs/pdf4/P040013b.pdf](http://www.accessdata.fda.gov/cdrh_docs/pdf4/P040013b.pdf). (Accessed December 2018)
- **Emdogain™** (Straumann); see the following website for more information: [https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmr/pma.cfm?id=P930021](https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmr/pma.cfm?id=P930021). (Accessed December 2018)

There are several devices cleared for marketing by FDA for point-of-care preparation of platelet-rich plasma (PRP) from a sample of a patient’s blood (see listings under product code JQC for additional devices). See the following
In April 2003, the FDA approved the use of the GPS™ Platelet Separation Kit. The GPS™ separation kit aids separation of the patient’s own blood components by density through the use of the GPS™-Thermo International Equipment Company (IEC) centrifuge. The GPS separation kit permits platelet rich plasma to be rapidly prepared from a small volume of the patient’s blood that is drawn at the time of treatment. The GPS Platelet Separation Kit is designed for use in the clinical laboratory or intraoperatively at point of care, for the safe and effective preparation of platelet poor plasma and platelet concentrate from a small sample (50-60 ml) of whole blood. See the following website for more information: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm?ID=K030555. (Accessed December 21, 2018)

**REFERENCES**

American Academy of Periodontology Glossary of Periodontal Terms.


American Dental Association CDT Codebook 2017.

American Dental Association Glossary of Clinical and Administrative Terms.


POLICY HISTORY/REVISION INFORMATION

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<th>Date</th>
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<tr>
<td>04/01/2019</td>
<td>Revised coverage rationale:</td>
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<tr>
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<td>Biologic Materials to Aid in Soft and Osseous Tissue Regeneration</td>
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<td></td>
<td>o Updated coverage statement to indicate there is a lack of high quality evidence demonstrating the efficacy of these materials in published peer-reviewed literature and further clinical studies are needed</td>
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<td></td>
<td>o Removed description of service and list of conditions for which Biologic Materials to aid in soft and osseous tissue regeneration are not indicated</td>
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<tr>
<td></td>
<td>Guided Tissue Regeneration – Resorbable and Non-Resorbable Barrier</td>
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<td>(Includes Membrane Removal)</td>
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<td></td>
<td>o Replaced language indicating “guided tissue regeneration is indicated for the [listed conditions]” with “guided tissue regeneration may be indicated for the [listed conditions]”</td>
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<tr>
<td></td>
<td>Surgical Revision Procedure (per Tooth)</td>
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<td></td>
<td>o Replaced language indicating “a surgical revision procedure is indicated to correct an abnormal healing response that interferes with the therapeutic goals of the original regenerative surgical procedure” with “a surgical revision procedure may be indicated to correct an abnormal healing response that interferes with the therapeutic goals of the original regenerative surgical procedure”</td>
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<td>Updated definitions:</td>
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<td></td>
<td>o Modified definition of “Biologic Materials/Biologic Response Modifiers”</td>
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<td></td>
<td>o Removed definition of “Site”</td>
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<td></td>
<td>Updated supporting information to reflect the most current description of services, clinical evidence, FDA information, and references</td>
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<td>Archived previous policy version DCP014.04</td>
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INSTRUCTIONS FOR USE

This Dental Clinical Policy provides assistance in interpreting UnitedHealthcare standard dental benefit plans. When deciding coverage, the member specific benefit plan document must be referenced as the terms of the member specific benefit plan may differ from the standard dental plan. In the event of a conflict, the member specific benefit plan document governs. Before using this policy, please check the member specific benefit plan document and any applicable federal or state mandates. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Dental Clinical Policy is provided for informational purposes. It does not constitute medical advice.