

AlloDerm® RTM

surgical technique guide



*treating multiple tooth recession
defects using the alternate papilla
tunnel technique with AlloDerm® RTM*

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Since its introduction to dentistry in 1994, AlloDerm® Regenerative Tissue Matrix (RTM) has been a widely accepted acellular dermal matrix (ADM) for soft tissue applications. AlloDerm® RTM supports tissue regeneration by allowing rapid revascularization, white cell migration and cell population – ultimately being transformed into host tissue for a strong, natural repair. (Thickness ranges from 0.9-1.6mm)

Applications include¹

- Root coverage
- Gingival augmentation
- Soft tissue ridge augmentation
- Soft tissue augmentation around implants

Ordering information

ALLODERM 1x1	AlloDerm® 1cm x 1cm
ALLODERM 1x2	AlloDerm® 1cm x 2cm
ALLODERM 1x4	AlloDerm® 1cm x 4cm
ALLODERM 2x4	AlloDerm® 2cm x 4cm

Alternate Papilla Tunnel Technique

as described by Edward P. Allen, DDS, PhD² and Lewis C. Cummings, DDS, MS³

Treating multiple tooth recession defects traditionally requires a significant palatal tissue harvest to adequately supply enough donor material to successfully treat the defect. This often can lead to undesired surgical and post-surgical sequelae for both the surgeon and the patient. AlloDerm® RTM can be used as an effective alternative to palatal tissue in a wide variety of intraoral applications.⁴ The following is an example of a suggested surgical technique for treating recession defects around teeth and dental implants. This technique can be modified to be applicable to the specific scenario being presented.

This guide is only intended as a reference, proper surgical procedures and techniques are the sole responsibility of the dental professional. Each surgeon must evaluate the appropriateness of the techniques based on his or her own dental training and expertise.



AlloDerm® RTM before and after case images, courtesy of Dr. Edward P. Allen, Dallas, Texas

Dr. Allen and Dr. Cummings are consultants for BioHorizons.

1) pre-op

This technique will demonstrate the Alternate Papilla Tunnel Technique using interrupted sling sutures to secure the AlloDerm® RTM within the pouch. This will utilize papillary incisions alternating with tunneled papillae.

Patient presents with gingival recession from #10-13. Sufficient interdental papillae and minimal interproximal bone loss radiographically are observed. A typical Miller Class I or II defect is noted.

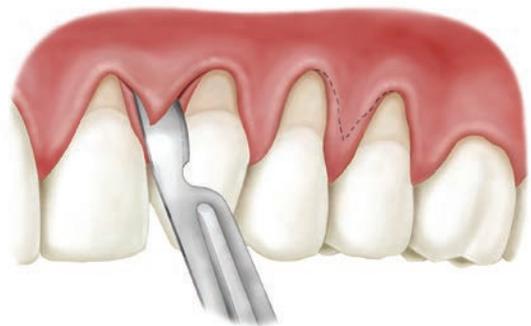
Rehydrate the AlloDerm® RTM according to the Instructions for Use (IFU) provided with the product.



2) incision

Begin with thorough root planing and root surface biomodification as determined by the surgeon and based on prior training and experience.

The pouch preparation begins with making papillary incisions approximately 3mm apical to the tip of the papilla between the lateral and canine and between the two premolars, leaving the papilla between #11 and #12 intact. Leaving every other papilla intact helps prevent flap retraction and will improve the blood supply to the underlying graft.



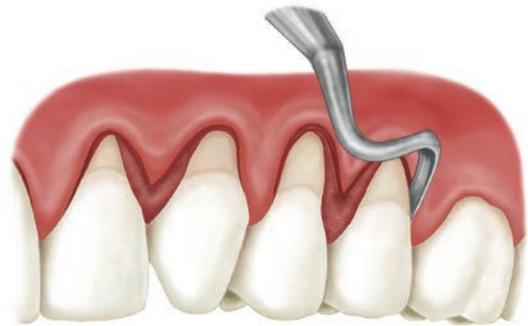
3) denude papillae

Denude the remaining facial papillary tissue coronal to the incised papillae to serve as a recipient site for flap advancement.



4) intrasulcular incisions

Using an End-Cutting Intrasulcular Knife or similar microsurgical instrument, make sulcular incisions around each tooth with recession defects, as well as one additional tooth mesially and distally to facilitate flap mobilization.



5) blunt dissection

A microsurgical elevator is used to lift the tunneled papillae and elevate a mucoperiosteal pouch just past the mucogingival junction at each tooth with recession as well as an additional tooth mesially and distally.



6) sharp dissection

Using a Modified Orban Knife, sharp dissect immediately supraperiosteally to mobilize and extend the pouch 12-15mm apical to the gingival margin at each tooth with recession as well as an additional tooth mesially and distally.



7) elevate papillae interdentally

Separate the tunneled papillae from the interdental bone crest using a Younger-Good curette or similar instrument. Extend this blunt (supraperiosteal) elevation to the palatal/lingual line angles.



8) AlloDerm® RTM insertion

Trim the graft to extend from the distal of the central incisor to the mesial of the molar, with a vertical dimension of 8 mm. The graft is inserted into the pouch preparation under the tunneled papilla using a Younger-Good curette or similar instrument. Orient the graft with the reticular (connective tissue) side facing bone.



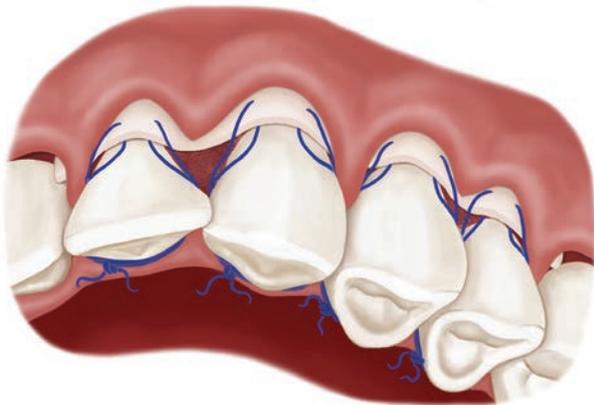
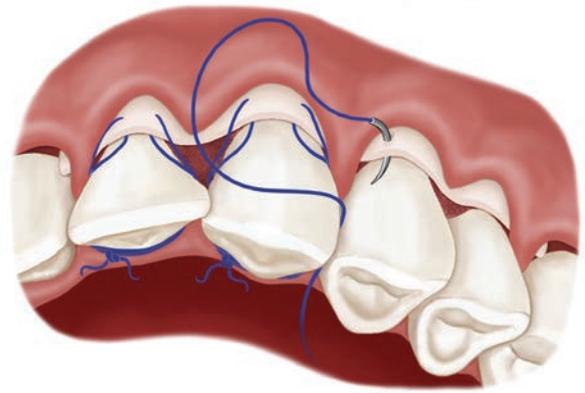
9) AlloDerm® RTM placement

The graft should be positioned to extend from the distal of the central incisor to the mesial of the molar so that it lies completely under the papillae mesial and distal to the teeth with recession.



10) graft sutures

Place individual sling sutures around each tooth engaging the graft at the root line angles. The suture should be tied with the knot positioned palatally. The recommended suture is a 6-0 monofilament polypropylene.

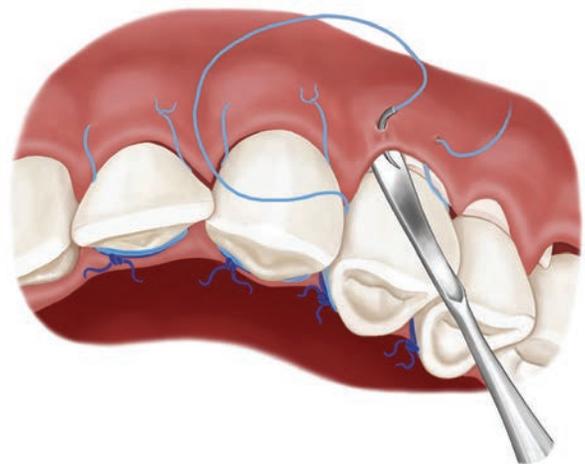


11) graft sutures completed

The graft should not extend coronal to the cementoenamel junctions (CEJs) nor over the papillary vascular beds.

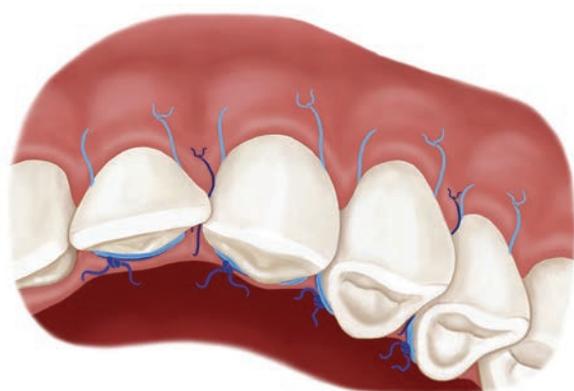
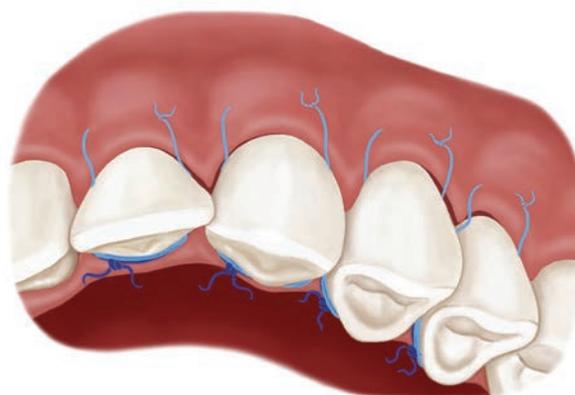
12) surface sutures

Place individual sling sutures around each tooth engaging the overlying tissue at the root line angles, 3 mm from the tissue margin without engaging the graft. You may place the micro elevator between the overlying tissue and the graft to prevent inadvertent engagement of the graft. The knot is positioned facially. Use the same 6-0 monofilament polypropylene suture.



13) surface sutures completed

Ideally, the graft should be completely covered. Exposure of 1 mm or less should not impact the outcome.



14) papilla sutures

Each incised papilla should be secured by placing a suture through the papilla, passing through the embrasure, engaging palatal/lingual tissue, passing back through the embrasure and tying facially.

15) post-op

Surface sutures are removed at 4 weeks post-op and the graft sutures are removed at 2 months post-op. Complete root coverage in Miller Class I and II recession with an increase in marginal tissue thickness and stability should be achieved.



references

1. Reference manufacturer's Instructions for Use (IFU) package insert.
2. Dr. Allen, recipient of the Master Clinician Award from the American Academy of Periodontology and the President's Award from the American Academy of Esthetic Dentistry for Excellence in Dental Education, is past president of the American Academy of Esthetic Dentistry, the American Academy of Restorative Dentistry and the American Academy of Periodontology Foundation. He currently serves as the Periodontal Section Editor for the *Journal of Esthetic Dentistry* and serves on the Editorial Boards of the *Journal of Periodontology* and the *International Journal of Periodontics and Restorative Dentistry*.
3. Dr. Lewis C. Cummings received his dental degree from the University of Texas Health Science Center at San Antonio and a Masters in Oral Biology with a certificate in Periodontics from the University of Nebraska Medical Center. Dr. Cummings has a periodontal practice focused on dental implants in Kingwood, Texas and holds clinical associate professor positions with both the University of Texas Dental School at Houston and the University of Nebraska Medical Center in Lincoln, teaching soft tissue grafting and dental implants in the post-graduate programs.
4. Histologic evaluation of autogenous connective tissue and acellular dermal matrix grafts in humans. LC Cummings, WB Kaldahl, EP Allen. *J Periodontol.* 2005;76(2):178-186.

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