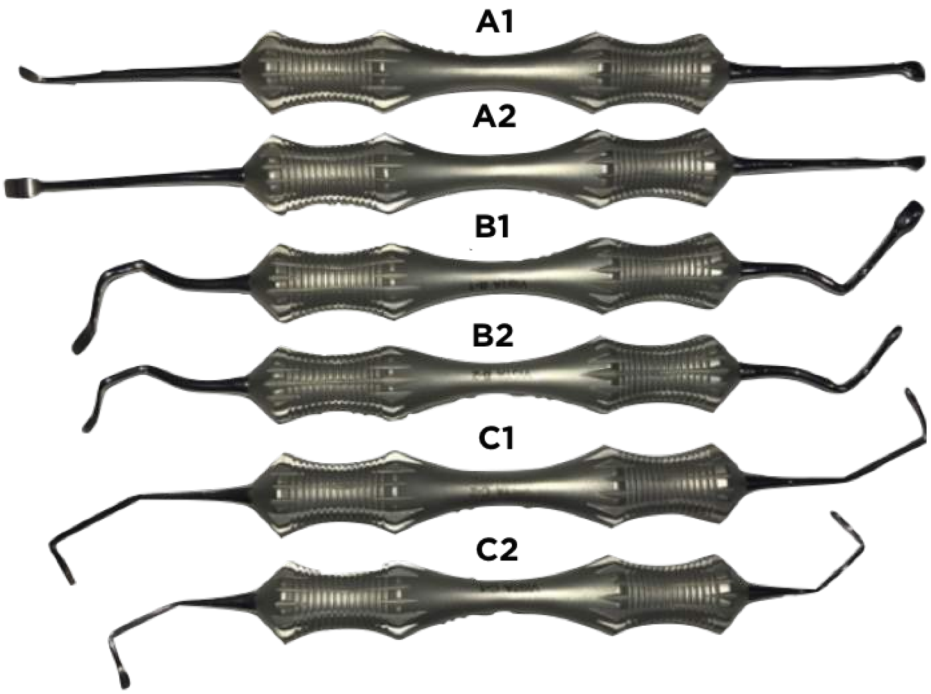
VISTA ABC

Vestibular Incision Subperiosteal Tunnel Access

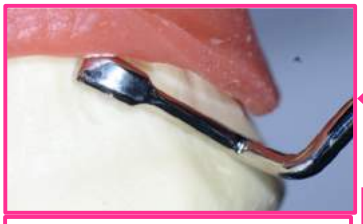
Surgical Manual

REGENimmune

VISTA ABC



A set of 6 elevators are designed to create a subperiosteal tunnel beneath mucosa, using a vestibular access. The elevators allow efficient tunnel elevation in the vestibular region, under gingival margins and under interproximal tissues.

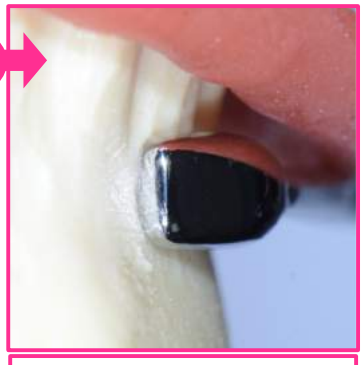


The shank angles allow access to various anatomic locations around curvatures of the jaws. These instruments are uniquely designed to approach gingival margins from vestibular access.

- Heavy instruments reduce micro-tremors, improving operator stability.
- The ergonomic design of the “Control Grip” prevents sliding fingers during application of force in tunnel elevation.

The tips curve toward bone to avoid puncturing tissue inside the tunnel.

The shanks are black and are easily visible through the tunnel.



The tips are square and sharp for efficient detachment of periosteum from bone.

Thorough scaling and root planing is to be performed, being careful not to injure gingival margins.
The choice of application of root conditioning material, such as EDTA, is at the discretion of the clinician.

Perform odontoplasty to flatten parts of the root extending outside of gingival housing, being mindful of the proximity to the pulp.
Cervical restorations existing over portions of roots planned for coverage, have to be completely removed. Root irregularities have to be flattened.

Initial Incision: Maxillary Anterior Area:
The midline frenum is the most convenient location for access to maxillary anterior teeth. The midline incision can also provide access to most of the posterior teeth. Allow 5mm of distance between coronal extent of incision and gingival margin.

Initial Incision: Maxillary Posterior Area:
The vestibular area anterior to maxillary canine is a convenient location for access to maxillary posterior teeth.

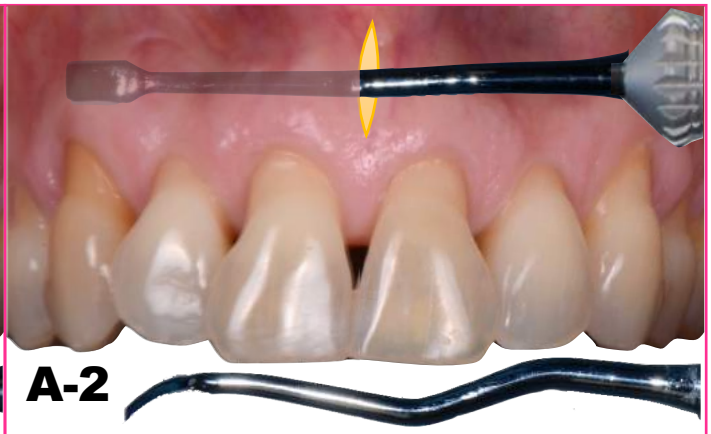
Initial Incision: Mandibular Anterior and Posterior Areas:
The vestibular area anterior to the mandibular canines is a convenient location for access to both mandibular anterior and posterior teeth.
It is often necessary to make the vestibular incisions anterior of both canines to effectively reach the mandibular anterior teeth or in cases where the whole mandibular arch is treated.

Additional Incisions:
In order to gain access to posterior regions, it may be helpful to place additional incisions closer to the sites being treated. Additional incisions can facilitate tunnel elevation and introduction of graft material.

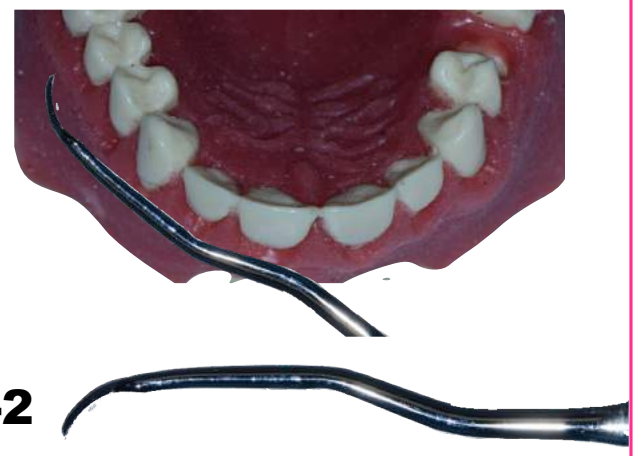
Caution:

In every location, the incision should begin at least 5 mm away from the closest margin in order to minimize the risk of the tissue between the incision point and gingival margin tearing during tunnel elevation.

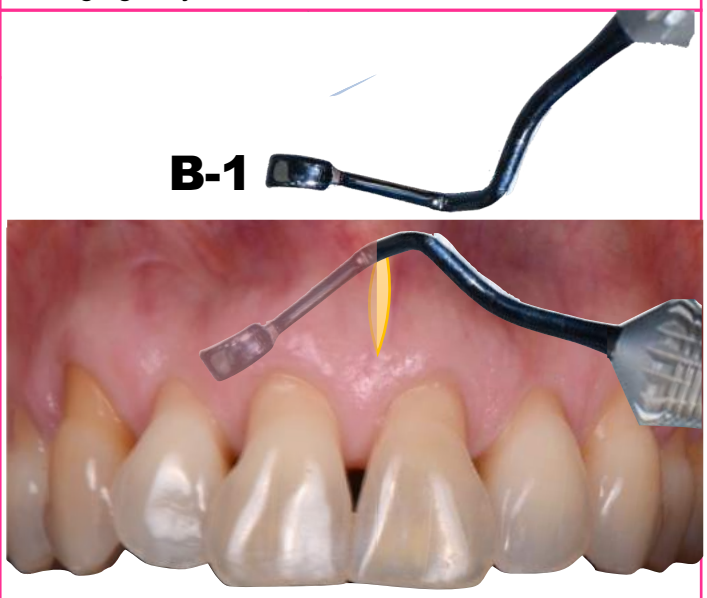
Begin elevation of a subperiosteal tunnel using VISTA-A1 elevator. Orient each elevator with the concave side and sharp tip facing bone. The leading edge of each elevator has to remain in contact with bone throughout tunnel elevation.



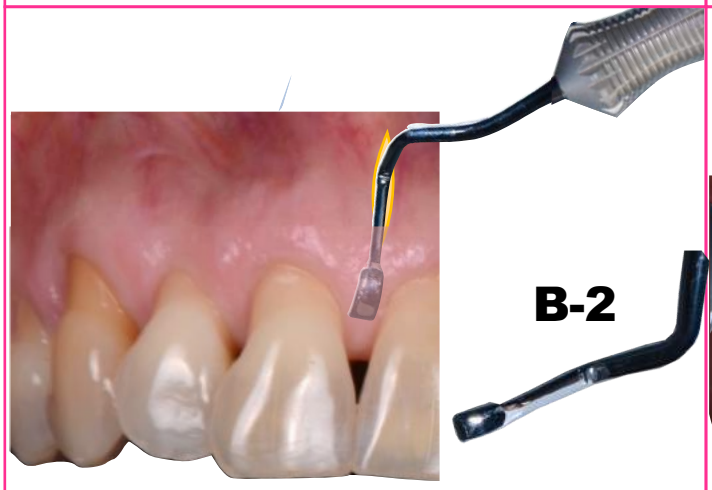
The S-shaped end of VISTA-A2 elevator can be used for tunnel elevation in areas apical to the mucogingival junction.



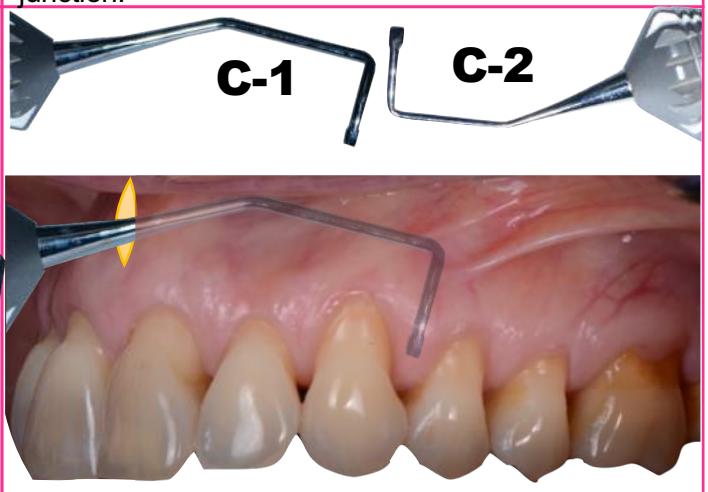
The C-shaped end of VISTA-A2 elevator can be used when the tunnel is extended beyond the distal aspects of canines.



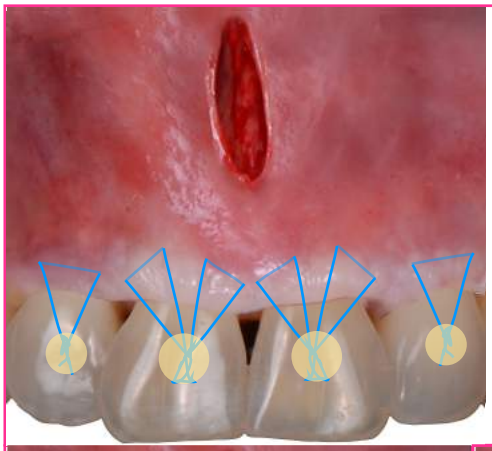
VISTA-B1 elevator can be used to extend the tunnel from the vestibular side coronal to the mucogingival junction.



VISTA-B2 elevator can be used to extend the tunnel to interproximal embrasures in the vicinity of the initial incision (up to 2-3 teeth away).



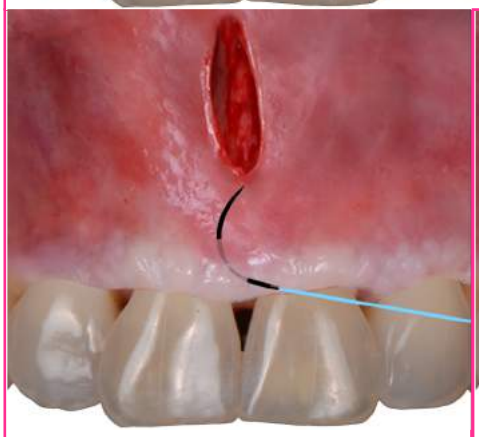
VISTA-C1 and C2 elevators are well-suited to reach interproximal embrasures of teeth that are further away from initial access incision.



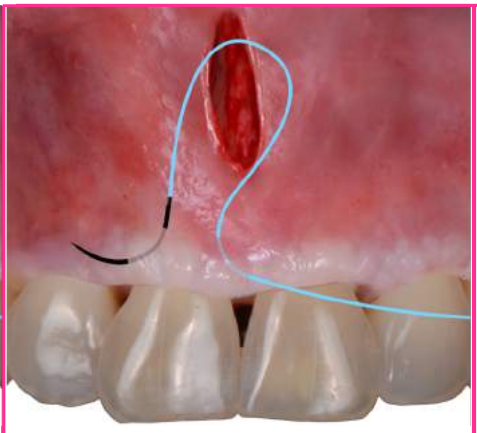
In areas with relatively low tension during coronal advancement of gingival margin (lateral incisor), a single loop suture can be used. Place suture, preferably in keratinized gingiva, approximately 3mm apical to the gingival margin with the knots positioned so that when the gingival margins are coronally positioned, the knot will be 3mm coronal to the new gingival margin.

In areas with relatively high tension or for wider teeth (central incisor), use double-mattress suture. This helps to distribute the tension of the coronal advancement to four suture threads.

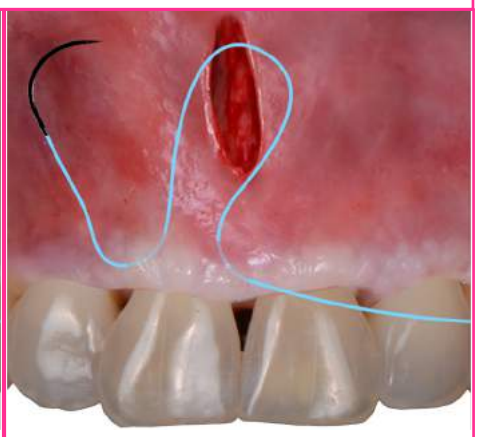
6.0 polypropylene (or other monofilament) suture with 13mm 3/8 needle is ideal for this suture technique.



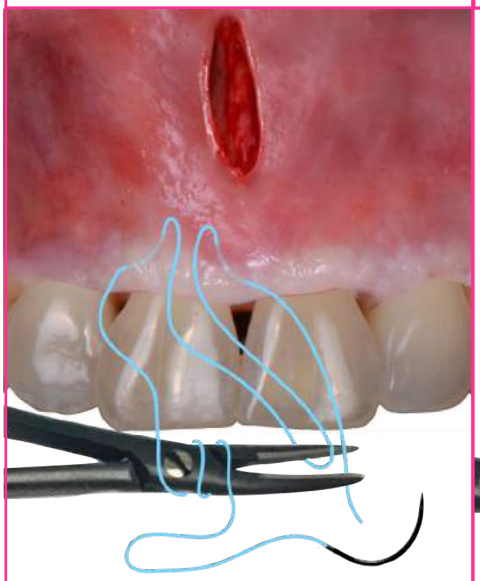
Begin with entering in the center of mesial papilla and exit 3-5 mm apical to the mesial line-angle.



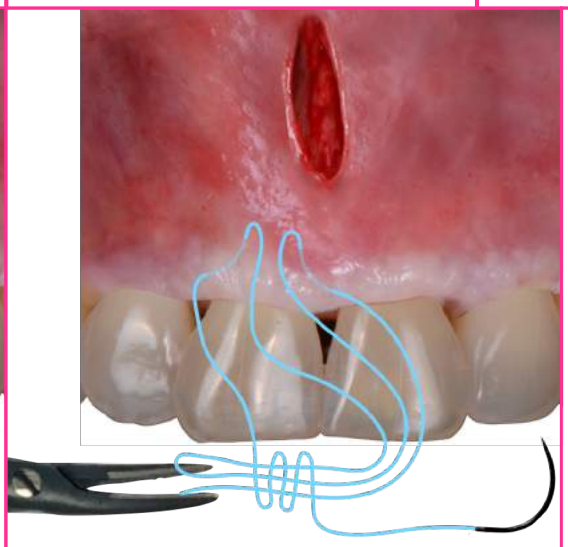
Repeat with similar oblique suture on distal aspect of the tooth.



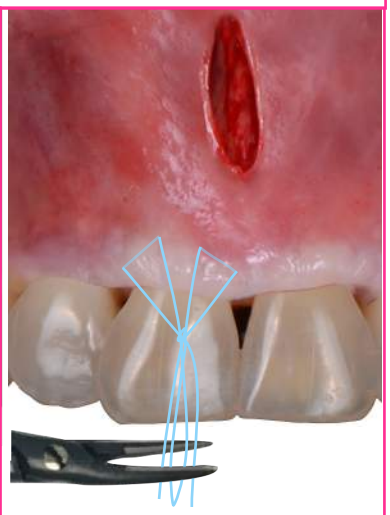
Pull the suture through, leaving a loop with approximately 2-3cm of suture on each side of the loop.



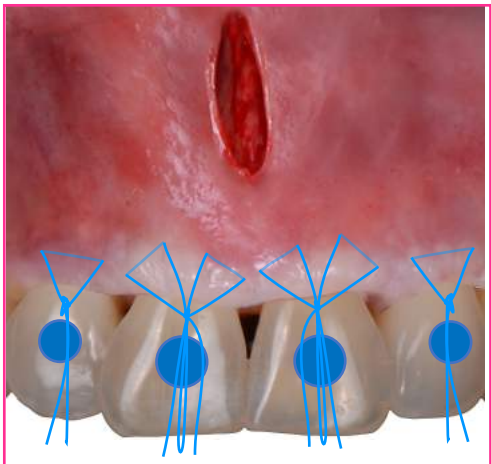
Wrap the suture 3 turns around the needle holder in clockwise direction to create a coil. Insert the needle holder with open jaws through the loop and pull slightly on the loop to position the needle holder in center of the loop and grab the free end of the suture.



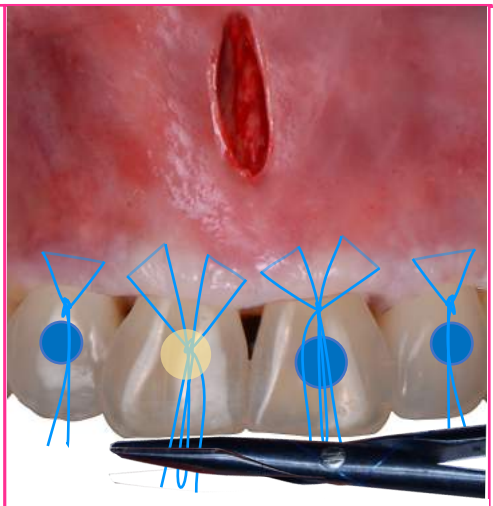
While the needle holder jaws are clamped on the loop and the free end, withdraw the needle holder through the coiled suture. This will create the first knot. Place a second knot in opposite, i.e. counterclockwise direction, to lock the suture.



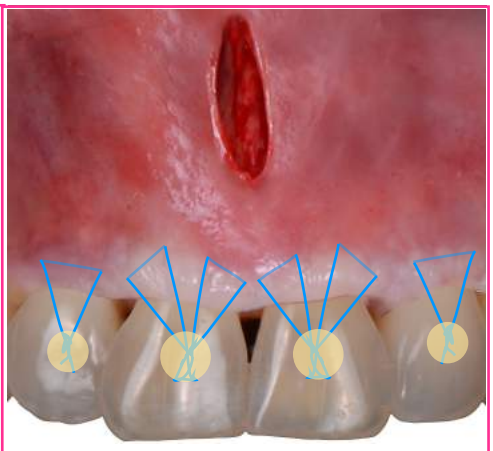
Be sure to equalize the suture lengths from mucosa to knot. Position the knot approximately 2 to 3 mm coronal to the coronally-advanced gingival margin.



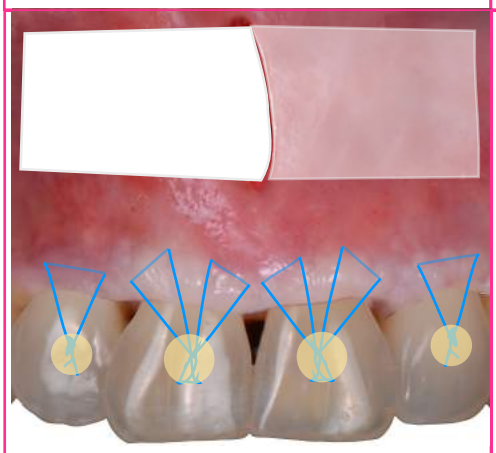
Etch the teeth for 5 to10 seconds. For porcelain crowns, use porcelain etchant (9% HF acid) for 1 min.



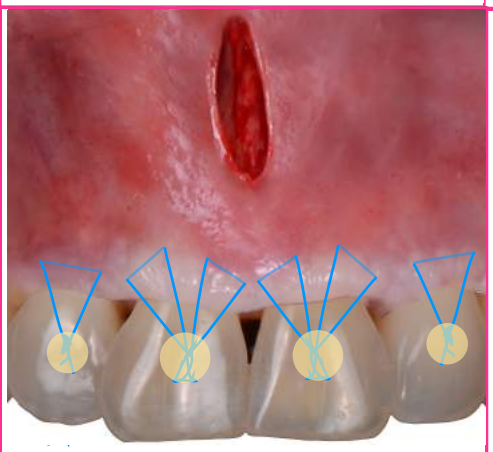
Coronally position each gingival margin >2mm coronal to CEJ with relatively low tension. Bond in position using flowable composite.



Cut suture ends with blade to avoid exposed sharp ends. If necessary add more composite to submerge suture edges.



Insert graft inside tunnel and stabilize with suture inside the tunnel, if necessary. Autogenous CTG, allograft, xenograft, PRF, Enamel Matrix Derivative may be used, based on clinician's discretion.



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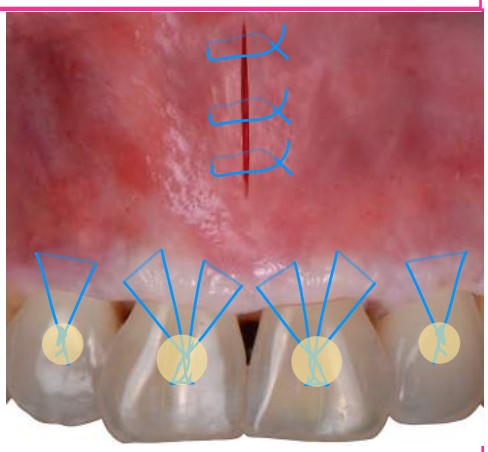

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Pre-operative care:

- Active disease (caries, periodontal inflammation, endodontic infection) should be eliminated prior to surgery
- OH has to be optimized
- Pre-medication with antibiotic can be considered (at clinician's discretion)
- Anticoagulant therapy: the decision to discontinue such treatment requires physician consultation
- Helpful supplements:
    - Arnica Montana (to be started 5 days pre-operatively) and continued one week post-operatively
    - Turmeric

Post-operative care:

- Application of ice pack extra-orally for first 48 hours
- Chlorhexidine mouth wash twice daily
- Gentle brushing with ultra-soft toothbrush
- Post-op antibiotic (at clinician's discretion)

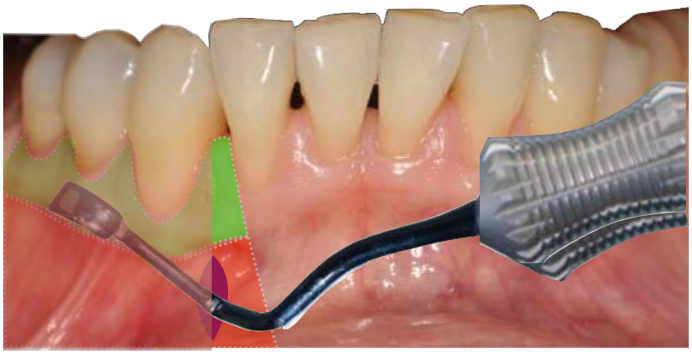
Removal of composite bondings and sutures:

- The suspensory sutures and associated composites are to be left for a minimum of 3 weeks
- The sutures are cut first near the gingival margins with sharp fine-tip scissors
- A sharp sickle scaler may be used to pop the bondings off. If not possible, finishing bur can be to grind away the bondings, being careful not to remove enamel or restoration. Composite polishing wheel or prophy paste can be used to establish a smooth surface.

Caution: It is important to be aware of the mental foramen position to avoid injury to the neurovascular bundle to help in maximizing the safety of tunnel elevation in the posterior mandible. The region is divided into two zones:

A) Green zone: coronal to the mucogingival junction
B) Red zone: apical to the mucogingival junction

Full-thickness dissection to elevate the tunnel is carried out in the green zone by continually maintaining contact between the instrument tip and bone, while advancing the elevator.
In the red zone, the instruments shall not be pressed against bone, as that may risk injury to the neurovascular bundle. Full thickness elevation is accomplished by keeping the instruments in the green zone and lifting them away from bone in order to separate the mucoperiosteal complex away from bone. If it is necessary to enter the red zone, the instruments have to lifted away from bone and the convex side used to gently pull the periosteum away from bone.
The VISTA elevators are to enter the tunnel, beginning from the vestibular access and oriented in superior direction to enter the green zone. VISTA B-1 and B-2 are well-suited for this maneuver.



Instructions for handling, care, cleaning and sterilization

The VISTA-ABC surgical instruments are provided **NON-STERILE** and need to be sterilized before use. The surgical instruments may be used repeatedly, but need to be cleaned and sterilized before each use. The following steps are recommended:

1. Remove any visible debris from the instruments, using a soft non-metallic bristle brush and an appropriate detergent. Rinse thoroughly.
2. Once cleaned and inspected, the instruments should be placed in the custom cassette and fit inside appropriately-sized validated sterilization pouch.
3. The instruments should be sterilized with moist heat using the following validated steam sterilization guidelines.

Method	Cycle	Temperature	Exposure Time
Steam	**Pre- Vacuum**	**132°C**	**4 Minutes Steam Time**
		270°F	**20 Minutes Dry Time**

Note About Stainless Steel Instruments

Stainless steel instruments should not be exposed to the following chemicals: Sodium Hypochlorite (household bleach), Tartaric Acid (stain and tartar remover), Aluminum Chloride, Barium Chloride, Bichloride of Mercury, Calcium Chloride, Carbolic Acid, Chlorinated Lime, Citric Acid, Dakin's Solution, Ferrous Chloride, Lysol, Mercuric Chloride, Mercury Salts, Phenol, Potassium Permanganate, Potassium Thiocyanate or Stannous Chloride, Aqua Regia, Ferric Chloride, Sulfuric Acid, Hydrochloric Acid or iodine.

REGENimmune Ref #	Product
6612300001	VISTA-ABC Elevator Kit
9626113381 **Ideal for VISTA**	6.0 Polypropylene Suture (10-inch thread length) Onyx Black C3 (13mm) Needle
9626113382	6.0 Polypropylene Suture (18-inch thread length) Onyx Black P3 (13mm) Premium Needle
9627113381	7.0 Polypropylene Suture (18-inch thread length) Onyx Black C1 (11mm) Needle
9606113381	6.0 PTFE Suture (24-inch thread length) Onyx Black P3 (13mm) Premium Needle
9605113381	5.0 PTFE Suture (24-inch thread length) Onyx Black P3 (13mm) Premium Needle
9604116381	4.0 PTFE Suture (24-inch thread length) FS3 (C22) Onyx Black(16mm) Needle
9603116381	3.0 PTFE Suture (24-inch thread length) FS2 (C6) Onyx Black(19mm) Needle

Onyx Black Needles provide clear contrast

Additional Materials
Flowable Composite
Acid Etch Gel (35% phosphoric acid): for etching teeth
Porcelain Etch Gel (9% hydrofluoric acid): for etching porcelain crowns
#15c Scalpel
Finishing Burs (flame-shaped) for Odontoplasty
Gracey Curettes Mini 5 1/2, 7/8, 11/12, 13/14
Ultrasonic Scaler
Graft Material: Acellular dermis allograft, xenograft collagen matrix, Platelet rich fibrin (PRF), Enamel Matrix Derivative

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