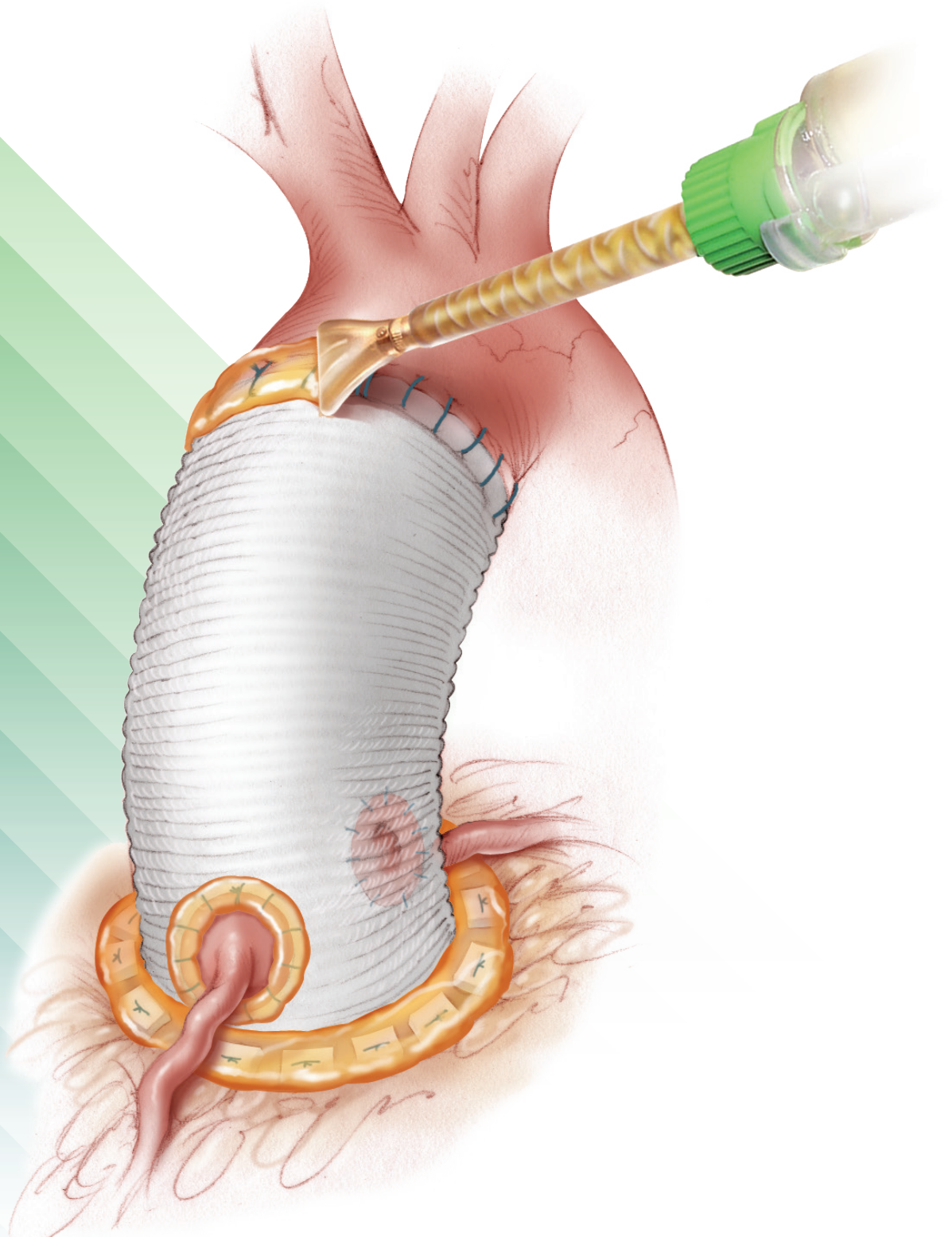


Techniques In Cardiac Surgery



ARTIVION™

BioGlue®
Surgical Adhesive

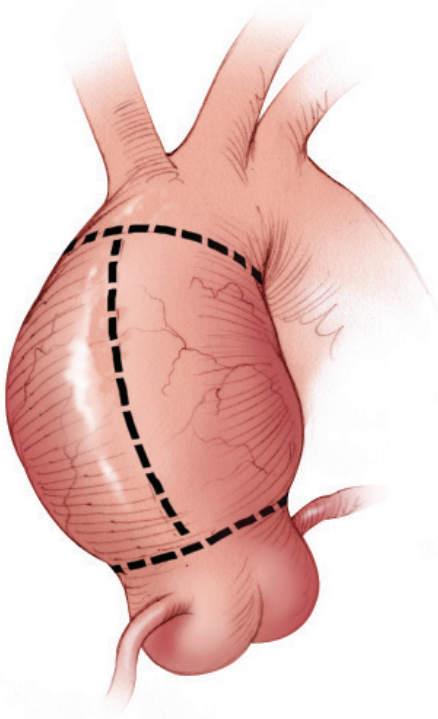
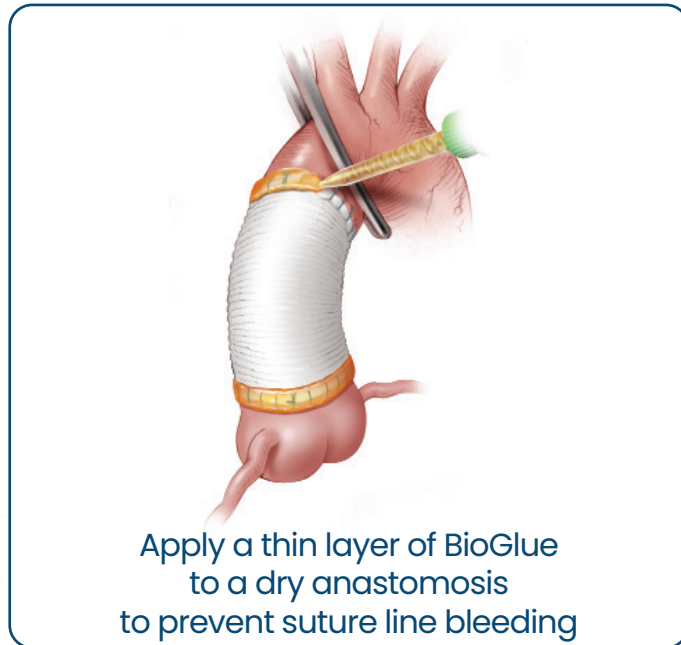


Key Application Techniques³

1. **De-Air** remove all air from the syringe.
2. **Dry** the target site (by suction and/or gauze).
3. **Prime** the syringe.
4. **Apply** a thin layer in a slow and steady manner.
5. **Wait** 2 minutes for full strength.

Application Techniques in Cardiac S

Aortic Aneurysm^{1,2}



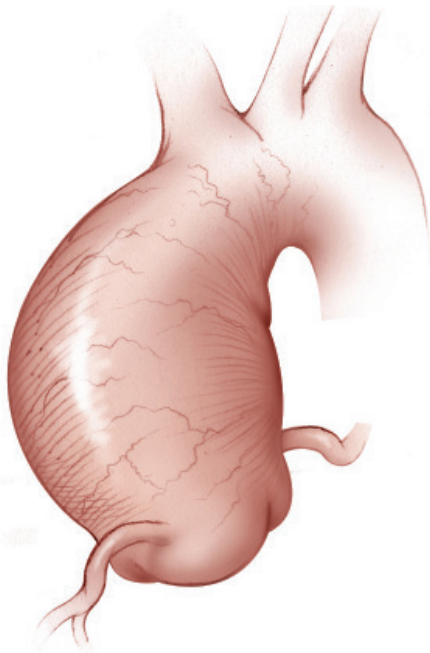
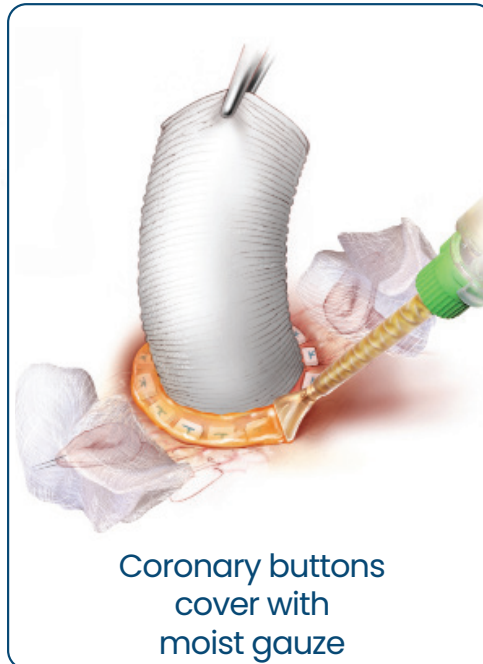
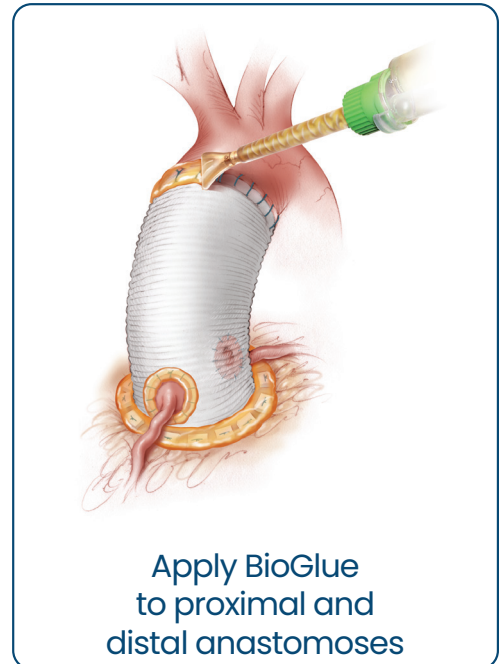
- Clamp and depressurize vessel prior to BioGlue application
- Dry the target site to ensure optimal adherence of BioGlue to the target tissue
- Prime the applicator tip and apply thin layer of BioGlue that extends 1 cm in either direction of the suture line
- Wait 2 minutes for BioGlue to completely polymerize before pressurizing the anastomosis
- Complete the final anastomosis, and again apply a thin layer of BioGlue to prevent suture line bleeding
- Wait 2 minutes before re-establishing systemic blood flow

Surgical technique is at the discretion of the surgeon. Variations in technique and practices will inevitably and appropriately occur when clinicians take into account the needs of the individual patient.

Since launch, BioG

Surgery

Aortic Valve Replacement^{1,2}

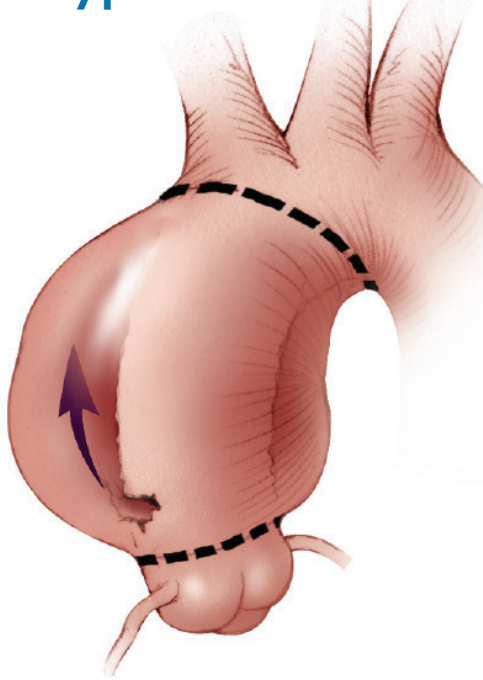


- Cover the coronary buttons with moist gauze prior to the application of BioGlue
- Prime the applicator tip and apply a thin layer of BioGlue to a dry, depressurized vessel
- Apply slight tension to the graft during BioGlue application to mimic the position of the graft once systemic flow has been re-established
- Do not allow excess BioGlue to pool around the base of the valve
- Always allow 2 minutes for the full polymerization of BioGlue before manipulating the anastomosis

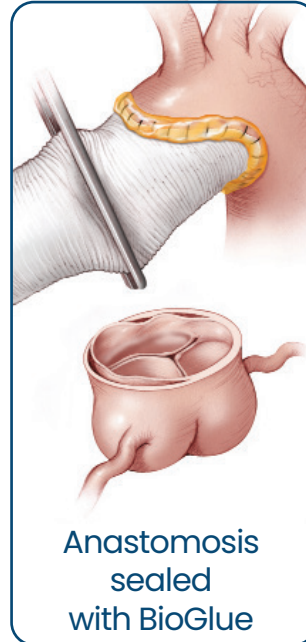
patients, available resources, and limitations unique to an institution or type of practice.

BioGlue has been used in over 2.5 million procedures

Type A Aortic Dissection^{1,2}



Gauze used to re-approximate the layers of the aorta



Anastomosis sealed with BioGlue



Apply BioGlue in a "spiraling-out" motion

Distal Repair

- Insert gauze into the true lumen to re-approximate layers of the aorta
- Obliterate false lumen by applying 2 mm thick and 2 cm deep layer of BioGlue
- Use caution to avoid over-filling the false lumen
- After 2 minutes inspect lumen and carefully remove any excess BioGlue

Proximal Repair

- Cover aortic valve leaflets with moist gauze prior to BioGlue application
- Obliterate false lumen by applying 2 mm thick and 2 cm deep layer of BioGlue
- Use caution to avoid overfilling the false lumen
- After 2 minutes inspect lumen and carefully remove any excess BioGlue
- Repaired aorta can be further reinforced with felt strips if preferred

BioGlue Syringe Delivery System

Catalogue #	Product	Contains
BG3510-5-US	Syringe 10mL 5 Pack Kit	Five single packs – Each contains one 10mL syringe and syringe plunger, and four standard syringe tips
BG3515-5-US	Syringe 5mL 5-Pack Kit	Five single packs – Each contains one 5mL syringe and syringe plunger, and four standard syringe tips
BG3502-5-US	Syringe 2mL 5 Pack Kit	Five single packs – Each contains one 2mL syringe and syringe plunger, and four standard syringe tips
BGAT-SY	Syringe Applicator Tip	Ten single packs – Each contains four standard syringe tips
BGAT-10-SY	Syringe 10cm Applicator Tip	Ten single packs – Each contains four 10cm syringe tips
BGAT-27-SY	Syringe 27cm Applicator Tip	Ten single packs – Each contains four 27cm syringe tips
BGST-12	Syringe 12mm Spreader Tip	Ten single packs – Each contains three 12mm spreader tips
BGST-16	Syringe 16mm Spreader Tip	Ten single packs – Each contains three 16mm spreader tips
BGDTE-27	27cm Delivery Tip Extension 20 Pack Kit	Ten single packs – Each pack contains two 27cm Delivery Tip Extensions
BGDTE-10	10cm Delivery Tip Extension 20 Pack Kit	Ten single packs – Each pack contains two 10cm Delivery Tip Extensions

ARTIVION™

Learn more at [artivion.com](https://www.artivion.com)

*Internal data on file.

1. Fehrenbacher JW, Siderys H. Use of BioGlue in Aortic Surgery: Proper Application Techniques and Results in 92 Patients. Heart Surg Forum 2006; 9(5):E794-9. 2. Zehr KJ. Use of Bovine Albumin-Glutaraldehyde Glue in Cardiovascular Surgery. Ann Thorac Surg 2007;84:1048-52. 3. BioGlue Surgical Adhesive Instructions for Use.

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