



ALL-BIOLOGICAL
Bio ModiVasc[®] AORTIC
NON-VALVED CONDUIT



Made of uniquely stable tissue that does not dilate and degenerate

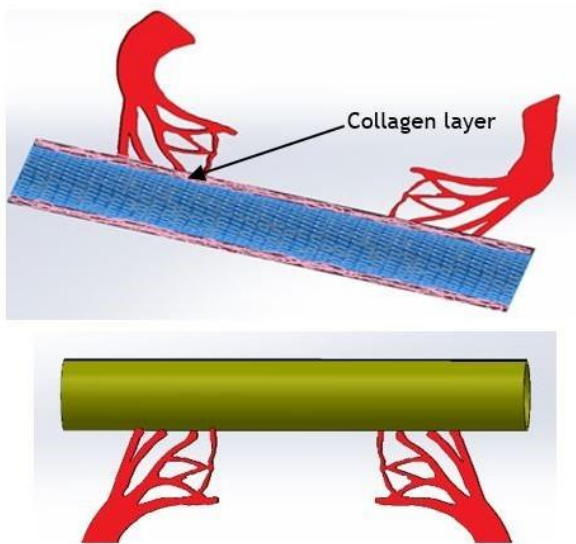
What's the secret? A Monolayer of endothelium on all blood contacting surfaces

A Totally Biological Non-Valved Conduit

- ◆ Clinical experience with over 400 patients and 9000 BioConduit implants, prove resistance to infection at least as good as the autogenous vein ^{1,2,3}
- ◆ Overwhelming results show resistance to stenosis, calcification, dilatation, and thrombosis
- ◆ Made from bovine pericardium for superior strength
- ◆ Substitute for replacing vascular grafts or tissue in patients with infection or at high risk of infection
- ◆ Constant physical strength that resists degeneration and calcification, with no change in hemodynamics
- ◆ Used for replacement of aortic aneurysm or when there is need to extend the ascending aorta

The Bio ModiVasc[®] Technology

The Bio ModiVasc[®] biomodified technology functions to allow growth of the endothelium on all blood contacting surfaces.



- ◆ Reduced toxicity
- ◆ Enhanced biocompatibility
- ◆ Lower rates of infections, adhesions and calcifications⁴
- ◆ Allows for endothelialization, thus enhances patency better than any other vascular graft^{3,5,8}

The Only Graft that Resists Biofilms

What is a biofilm?

- Biofilms are bacterial colonies covered by a layer of Mucopolysaccharides, preventing antibiotic penetration^{6,7}
- Bacterial colonies may resist 900 times the normal dose of antibiotics, a dose lethal to the patient

How does our graft resist biofilms?

- Naturally occurring, blood-borne antibiotics can penetrate biological tissue, making it resistant to biofilms
- After six weeks, the graft is covered by the patient's own endothelium (which prevents the formation of biofilm), becoming practically native tissue
- Reason for resisting infection is formation of endothelium and capillary revascularization - an excellent means for resisting infection



Left: The Aortic Non-Valve Conduit (flat)



Right: The Aortic Non-Valve Conduit over mandrel

Aortic Non-Valved Conduit Sizes

Code	Proximal Diameter (mm)	Distal Diameter (mm)	Length (cm)
NVC-A19X19	19	19	15
NVC-A21X21	21	21	15
NVC-A23X23	23	23	15
NVC-A25x25	25	25	15

**There was a mistake was made in approval. Size 27 and 29 will be corrected and added soon.

REFERENCES

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3. Michele Musci, et al. “Further Experience with the “No-React” Bioprosthesis in Patients with Active Infective Endocarditis: 11-Year Single Center Results in 402 Patients” *Eur. J. Card. Surg.* 61 (2013) 398-408.
4. Yerebakan, C., et al., “Long-term results of biventricular repair after initial Giessen hybrid approach for hypoplastic left heart variants,” *J. Thor. Card. Surg.* 149 (2015).
5. Meduoye, A., Sosnowski, A. and Manuel Galiñanes, “No-React Composite Stentless Aortic Valved Conduit: A Decade of Experience,” Presented at Ten Years Follow-Up with No-React Heart Valves, Toronto, Canada. (May 2nd, 2010).
6. Proal, A. “Understanding Biofilms,” *Bacteriality* (2008).
7. Leid, J.G., “Bacterial Biofilms Resist Key Host Defenses,” *Am. Soc. Microbio.*, (2009).
8. Victor O. Morell and Peter A Wearden, Experience With Bovine Pericardium for the Reconstruction of the Aortic Arch in Patients Undergoing the Norwood Procedure, “ *Ann. Thor. Surg.* 84 (2007) 1312-1315. (Article of Interest)
9. Takkenberg J.J.M., et al., “Prognosis After Aortic Root Replacement with Cryopreserved Allografts in Adults,” *Ann. Thor. Surg.* 75 (2003) 1482-1489. (Article of Interest)

CAUTION: Refer to Instructions For Use provided with each device for complete information regarding indications for use, contraindications, warnings and precautions and potential complications.

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