



ALL-BIOLOGICAL
Bio ModiVasc® STRAIGHT
VASCULAR GRAFT



The only biological graft that compares well with the autogenous vein

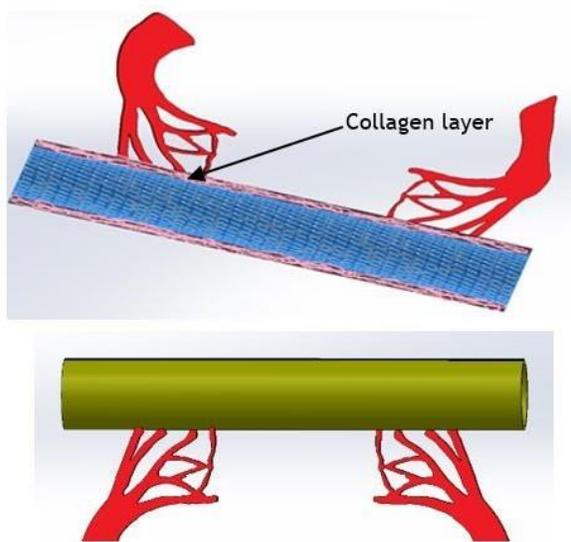
What's the secret? A Monolayer of endothelium on all blood contacting surfaces

A Totally Biological Straight Perima™

- ◆ 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
- ◆ Saves 3 to 4 hours in tailoring the autogenous straight graft (see complete clinical manual)

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



Left: The Perima™ Straight Graft resisting kinking. Several surgeons have found this curvature to be very convenient and easy to puncture.

Right: The implantation of The Perima™ longer artery. The image shows an artery used for femoral-popliteal bypass

Straight Vascular Graft Sizes

Code	Proximal Diameter (mm)	Distal Diameter (mm)	Length (cm)
NVC-P06X06	6	6	30-60
NVC-P07X07	7	7	30-60
NVC-P08X08	8	8	30-60

* All grafts can be made 30cm to 60cm in length

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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.

Made in Canada. Not all products are available in all countries.