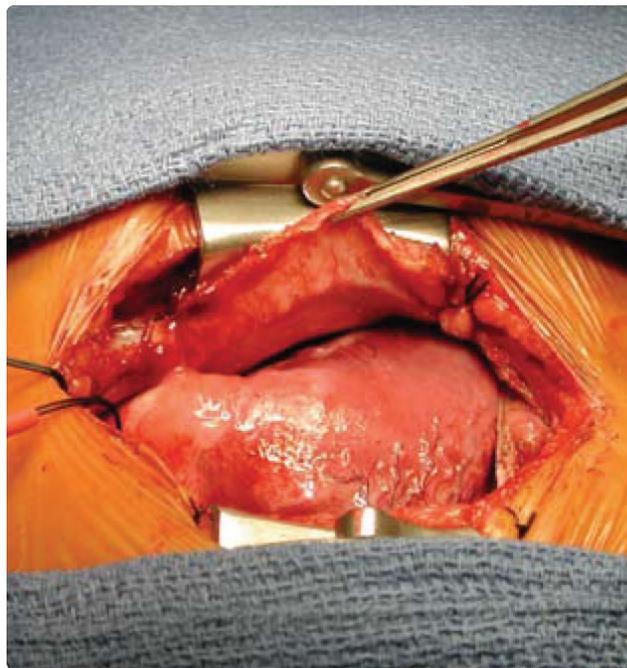


CorMatrix® ECM® for Pericardial Closure

Pericardial Reconstruction

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A pediatric patient with complex interrupted aortic arch and multiple ventricular septal defects (VSD) underwent hybrid palliation with stenting of the arterial duct and bilateral pulmonary artery bands in the newborn period to encourage left ventricular growth and allow her to gain weight. CorMatrix ECM for Pericardial Closure was used for pericardial reconstruction at the time of the first surgery. She was brought back at the age of three and a half months and underwent redo sternotomy and complete correction including reconstruction of her aortic arch, closure of her perimembranous VSD with CorMatrix ECM and ventricular device closure of her distal muscular VSD. The intraoperative photo shows that the pericardial space after redo sternotomy is relatively free from adhesions and that the CorMatrix has been remodeled into native tissue. The junction with native pericardium can be seen with vascular ingrowth into the area of the implanted device. Sternal reentry and dissection of the heart and great vessels was facilitated. The patient had an uneventful postoperative recovery and was doing well at four months postoperatively.



An intraoperative photo three and a half months after ECM pericardial reconstruction showing that the pericardial space after redo sternotomy is relatively free from adhesions. The junction with native pericardium can be seen with vascular ingrowth into the area of the remodeled tissue. Sternal re-entry was greatly facilitated.



CorMatrix® ECM® for Pericardial Closure

What is CorMatrix?

CorMatrix develops and delivers innovative biomaterial devices that harness the body's innate ability to repair damaged cardiac and vascular tissues.

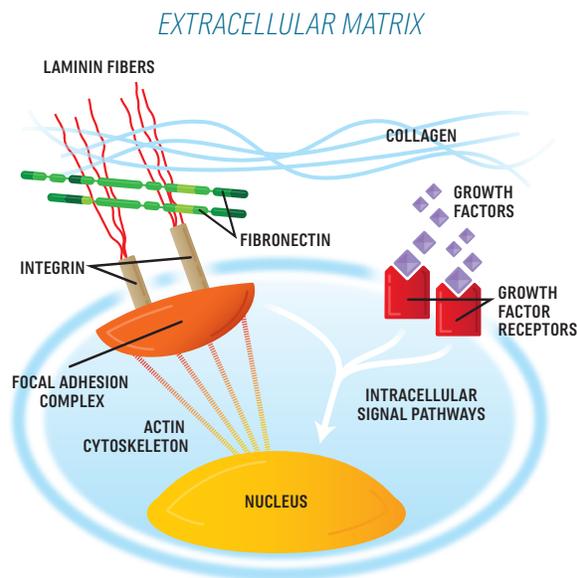
Extracellular matrix (ECM®) is the naturally occurring bioscaffold that surrounds cells in almost all tissues. ECM functions to regulate cell adhesion, differentiation, division, and migration.

CorMatrix acts as a scaffold into which the patient's own cells migrate and integrate — stimulating natural wound healing mechanisms which mature to form a strong, permanent tissue repair.

CorMatrix products are de-cellularized biologic scaffolds primarily composed of:

- » Structural proteins
- » Adhesion glycoproteins
- » Glycosaminoglycans (GAGs)
- » Proteoglycans
- » Matricellular proteins

CorMatrix is produced in a manner that retains these natural ECM molecules including growth factors, proteins, and cytokines which are known to play important roles in host tissue repair and remodeling. CorMatrix devices enable surgeons to restore the native anatomy of cardiac and vascular tissues in need of repair, serving as a superior alternative to synthetic or cross-linked materials.



Proliferation, Differentiation, Attachment, Migration

The cell is in constant communication with ECM through transmembrane receptors contained within the cell membrane. Through the specific cell attachments, ECM guides the gene expression and enables cell migration, proliferation, and differentiation.