Permacol™ Biologic Implant
Sound Decision Making in Tissue Repair
Some synthetic implants may lead to severe foreign body reactions which have been shown to increase inflammation, encapsulation and adhesions.4 Some biologics have anatomical limitations, which may affect the opportunity for a stable 3D structure with large sizes.

Harsh, non-specific chemical processing may alter the matrix, impacting normal tissue healing.5

Non-crosslinked biologic materials may be absorbed before adequate collagen deposition has occurred, affecting the quality and strength of the newly formed tissue.6,7 Improper crosslinking can lead to severe foreign body reactions and neovascularization.8

Product choice should be based on developing the correct expectations from valid clinical proof and continuing positive outcomes.

The Algorithm

For Sound Decision Making in Tissue Repair

Is your material porcine dermis?

NO

YES

Biocompatible porcine dermis offers dense, thick collagen bundles, consistent quality and large implant sizes, and carries no risk of human disease transmission.

Does the material processing maintain the natural collagen matrix for normal tissue healing?

NO

YES

A gentle, specific enzymatic process achieves decellularization without damaging the 3D matrix.

Is the implant properly crosslinked?

NO

YES

Crosslinking balances cellular integration and neovascularization versus uncontrolled tissue degradation, digestion and resorption.9

Does the product provide a long-lasting clinical repair?

NO

YES

With years of research and clinical success, Permacol™ Biologic Implant collagen implant proves that the right choices in material, process and crosslinking lead to a better biologic.

Basic Science


Above are selected references. To see the complete Body of Evidence for sound decision-making visit www.covidien.com/autosuture or call 1 800 722 8772.

Abdominal Wall


Colorectal


Other Applications


Long-Term Studies

Material Choice

Sound Decision-Making in Tissue Repair

Studies have demonstrated that collagen fibers (and their associated bundles, it provides strong, well integrated repairs to the surrounding soft tissue.

There is no risk of human disease transmission with Permacol™ Biologic Implant, combined with the proprietary manufacturing process means consistent and safe application.

Porcine dermis used in Permacol™ Biologic Implant is one of the most well established as a viable implant product and minimal risk of animal disease transmission. The material is abundant and well recognized as a robust scaffold for tissue healing.

Does your material porcine dermis?

Permacol™ Biologic Implant is manufactured using porcine, specific enzymatic processes that conforms to a high standard of tissue repair and provides the dimensional stability and biocompatibility needed for abdominal wall repairs.2,17,18,21

Permacol™ Biologic Implant is proven to provide the normal, non-denatured collagen. Rat in vivo model.

Does the material processing maintain the natural collagen matrix for normal tissue healing?

Permacol™ Biologic Implant mimics the normal natural tissue structure, provides signals to cells.17,21

Permacol™ Biologic Implant provides a natural, non-denatured collagen. Rat in vivo model.

Does the implant properly degrade?

Crosslinking Process

Permacol™ Biologic Implant is crosslinked to be durable, stable and support new extracellular matrix formation, while supporting tissue ingrowth, provides an optimal environment for the laying down of new collagen.4 Proper crosslinking provides signals to cells.17,21

Permacol™ Biologic Implant has been proven to provide long lasting biomechanical strength while supporting tissue ingrowth, minimal adhesion properties and neovascularization.

Clinical Proof

Permacol™ Biologic Implant is designed to provide long lasting biomechanical strength while supporting tissue ingrowth, minimal adhesion properties and neovascularization.

Permacol™ Biologic Implant is crosslinked with hexamethylene di-isocyanate (HMDI) to provide resistance to collagenase enzyme action, while avoiding the problem typically seen with crosslinking agents that use prolonged heat treatments.

The specific processing and degree of crosslinking in a clinical implant must conform the correct degree of crosslinking for best tissue reaction and ease of matrix removal. Over-crosslinked implants will resist enzymatic breakdown but may not be incorporated into the host tissue and can lead to excessive fibrosis. Under-crosslinked implants will resist enzymatic breakdown, but may not be incorporated into the host tissue and can lead to excessive fibrosis.

Porcine dermis has been shown to provide the dimensional stability and biocompatibility needed for abdominal wall repairs.2,17,18,21

Permacol™ Biologic Implant is sterilized using Gamma Irradiation in order to avoid the potentially damaging effects of sterilizing collagen with Ethylene Oxide (EtO) which requires elevated temperatures and can have associated damaging effects.

Permacol™ Biologic Implant is manufactured using a gentle, specific defatting and enzyme treatment process.

With its non-damaged, 3D collagen structure, along with its scaffold and controlled porosity, Permacol™ Biologic Implant provides a natural environment for the laying down of new collagen.

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**Permacol™ Biologic Implant**

**Surgical Techniques**
- Open
- Multiple Placement Techniques
- Laparoscopic
- With or Without Component Separation

**Permacol™ Biologic Implant**

**Surgical Applications**
- General Surgery
- Colorectal Surgery
- Trauma
- TRAM Flap Reconstruction
- Hernia Repair
- Plastic & Reconstructive Surgery
- Laparoscopic Repair of Parastomal Hernia
- Incisional Hernia Repair
- Complex Abdominal Wall Repair

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**Product Ordering Information**

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**IMPORTANT:** Before use, physicians should always refer to the Instructions for Use provided in the packaging of each piece of Permacol Biologic Implant for complete instructions, indications, contraindications, warnings and precautions.