

TISSUE HEALING MAKES THE DIFFERENCE



Partially **resorbable** yet **permanently** strong

Extraperitoneal
Optimised fibrosis



4DVentral® is a **midweight** hydrophilic partially resorbable implant designed for the **extraperitoneal** treatment of **ventral** and **incisional** hernias.

PRODUCT'S KEYPOINTS

Partially **resorbable** yet **permanently** strong

4DVentral® is a different concept aiming to combine best of both:

- patient's comfort by using partially resorbable material
- high permanent resistance to prevent any long term recurrence

After PLLA resorption, 4DVentral® becomes and remains a **midweight** mesh (65g/m²) with the following benefits for the patient:

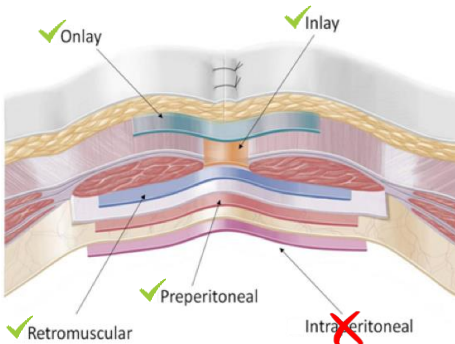
- soft and flexible to conform to patients' daily abdominal mobilisation for a good quality of life
- 32N/cm **after** PLLA resorption for a permanent **mesh strength**

The recent study conducted at the Carolinas Medical Center⁽¹⁾, states that a midweight mesh is the mesh of choice for open ventral hernia repair for all patients, as they lead to **less recurrence**.⁽¹⁾

Best placement, **Extraperitoneal**

4DVentral® matches latest KOL's recommendations which encourage extraperitoneal mesh placement to avoid challenging adhesions. The message is now «keep out of the peritoneum as much as possible!» Why taking the risk of serious complications?

Ideal extraperitoneal mesh placement is agreed to be retromuscular or preperitoneal when possible and 4DVentral® has been designed to fit these surgical approaches.



Optimised fibrosis⁽²⁾

PLLA combined to polypropylene leads to an **absence of mesh shrinkage** and lower inflammation: **better tolerance** compared to 100% polypropylene meshes.

Prof. Leroy's in-vivo animal study also shows **earlier** and higher amount of **collagen fibers**, thus an **earlier support** for abdominal wall repair.

> A FULL PRODUCT RANGE



Round



Square



Rectangular

> MATERIAL

60% monofilament PLLA - resorbable / 40% monofilament polypropylene - non resorbable

(1) Lightweight vs Midweight Polypropylene Mesh in 948 Open Ventral Hernia Repairs (OVHR)

Laurel J Blair, MD, Ciara Huntington, MD, Tiffany C Cox, MD, Tanushree Prasad, Amy E Lincourt, PhD, MBA, Vedra A Augenstein, MD, FACS, B Todd Heniford, MD, FACS Carolinas Medical Center, Charlotte, NC J Am Coll Surg 2015;221:S73

(2) Tanaka K., Mutter D., Inoue H., Lindner V., Bouras G., Forgione A., Leroy J., Aprahamian M., Marescaux J. In Vivo evaluation of a new composite mesh 10% Polypropylene/90% Poly-L-Lactic Acid for Hernia Repair. J Mater Sci: Mater Med 2007 ; 18 : 991-999. Animal study.

4DVentral® is a class III medical device manufactured by COUSIN BIOTECH S.A.S. The management system of COUSIN BIOTECH S.A.S. has been certified as meeting the requirements of ISO 13485. Please read instructions for use carefully. Reference: FPV4DVGB01 - 17/02/16 contractual pictures and texts. Specifications likely to be modified without notice.

Cousin Biotech S.A.S capital : 340 656 € - 398 460 261 RCS Lille - N° TVA FR 34 398 460 261

Semi-resorbable parietal reinforcement implant

EXTRAPERITONEAL

> PRODUCT DESCRIPTION

Monofilament polypropylene and poly-L-lactic acid (PLLA) knit.

Products are sold in a double pouch and packaged in a box. They are ethyl oxyde sterilised, CE marked, class III, semi-resorbable. No animal nor human origin.

> INDICATIONS

For the extraperitoneal treatment and reinforcement of ventral and incisional hernias.



> REFERENCES AND SIZES

Extraperitoneal	Shape	Reference	Description and size (cm)
		4DVENT12R0*	Round mesh Ø 12
		4DVENT1515*	Mesh 15x15
		4DVENT1530	Mesh 15x30
		4DVENT2025*	Mesh 20x25
		4DVENT3030*	Mesh 30X30
		4DVENT3050	Mesh 30X50

*References available in our stock at REY Médical SA

Other references available on demand

> TECHNICAL CHARACTERISTICS

MATERIAL

- 60% monofilament PLLA
- 40 % monofilament polypropylene

WEIGHT BEFORE RESORPTION

- $155 \pm 6 \text{ g/m}^2$

WEIGHT AFTER RESORPTION

- $65 \pm 5 \text{ g/m}^2$

POROSITY

- $85\% \pm 2\%$

PORE SIZE

- 4 x 2mm

MEAN BURST STRENGTH AFTER PLLA RESORPTION

- 37N/cm

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