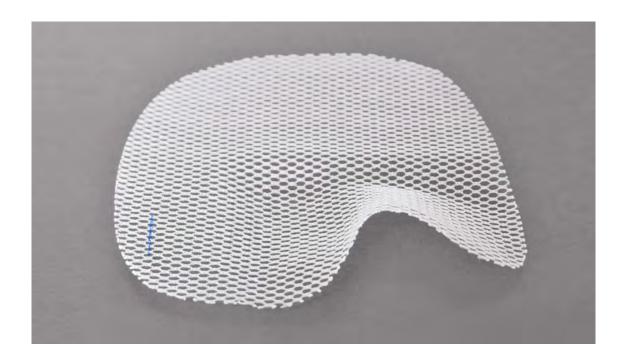


# COUSIN SURGERY

# 4DMESH

# TISSUE HEALING MAKES THE DIFFERENCE



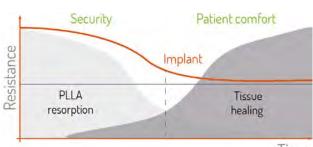
Early strength

Long-term safety and comfort

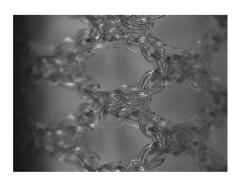
Optimised fibrosis

**4DMESH** is a hydrophilic partially resorbable implant, designed for the treatment of inguinal hernias by open and laparoscopic approach.

### PRODUCT'S KEY POINTS



Time



75% PLLA

## Early strength and long-term comfort

The 4DMesh concept lies in the 75% PLLA resorption which initially provides maximal strength to prevent early recurrences and in the long-term, leaves small amount of material thus persistant tensile strength for patient comfort<sup>(2)</sup>.

## **Optimised** fibrosis<sup>(1)</sup>

PLLA combined to polypropylene leads to an absence of mesh shrinkage and lower inflamation, leading to better tolerance compared to 100% polypropylene meshes.

The in-vivo animal study also shows earlier and higher amount of collagen fibers, thus an earlier support for abdominal wall repair.

## Easy to place<sup>(2)</sup>

Specifically in laparoscopy, thanks to the hydrophilic attribute of PLLA that holds the mesh in place against the abdominal wall.

Monofilament polypropylene + resorbable PLLA



Monofilament polypropylene

### > A FULL PRODUCT RANGE

#### LICHTENSTEIN



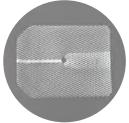
TAPP / TEP



Pre-shaped



Pre-cut



Flap

#### > MATERIAL

75% PLLA - resorbable / 25% polypropylene - non resorbable

(1) 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.

(2) Preliminary results from ongoing multicenter 4DMesh® clinical study - Club Hernie registry.





# 4DMesh®

Semi-resorbable parietal reinforcement implant



#### 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 parietal treatment and reinforcement of inguinal and femoral hernias.

#### References and sizes:

	Shape	Reference	Description and size (cm)		
n Flap	A	FBIO SR F128*	Pre-cut mesh with flap 12 x 8		
s te i		4DMESH M613*	Pre-cut mesh with slit 6 x 13,5		
ichtenstein Precut		4DMESH F812*	Pre-cut mesh 8,5 x 12,5		
ich Pre		4DMESH MBES*	Pre-cut mesh with slit 12 x 5		
		4DMESH MBEL	Pre-cut mesh with slit 7 x 13		
	Shape	Reference	Description and size (cm)		
Flap		4DMESH RABA*	Pre-cut mesh with flap 11 x 14		
		4DMESH 1215*	Oval mesh 12 x 15		
Precut		4DMESH 1317*	Oval mesh 13 x 17		
Pre		4DMESH 1216	Pre-cut mesh 12 x 16,5		
ПР		4DMESH 1717	Mesh 17 x 17		
H					
APP/	4DMESH PRSR*		Right pre-shaped mesh 10,5 x 14		
	$\sim$	4DMESH PRSL*	Left pre-shaped mesh 10,5 x 14		
mig.	$\bigcap$	4DMESH PRLR*	Right pre-shaped mesh 12 x 15		
Anatomical	$\bigcirc$	4DMESH PRLL*	Left pre-shaped mesh 12 x 15		
	$\Box$	4DMESH PRXR*	Extra large right pre-shaped 12 x 17		
	$\sim$	4DMESH PRXL*	Extra large left pre-shaped 12 x 17		

\*References available in our stock at REY Médical SA Other references available on demand

#### Technical characteristics:

Characteristics	4DMesh	
Material	75% Monofilament PLLA 25% Monofilament polypropylene	
Weight before resorption	$120 \pm 10 \text{ g/m}^2$	
Weight after resorption	30 ± 10 g/m <sup>2</sup>	

Photos and texts non-contractual. Specifications can be modified without notice. Fiche Technique 4DMesh.GB Cousin Blotech S.A.S. with a capital of 340 656 € - 398 460 261 RCS Lille - N°TVA FR 34 398 460 261 - 20/01/15



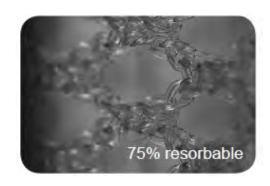


To hit the target of effectiveness, healthcare facilities must provide their surgeons with safe, fast and easy-to-place implants. 4DLap is the perfect answer in this sense

▶ A differentiated technology for minimally invasive inguinal surgery

4DLap is composed of 75% PLLA, a resorbable and hydrophilic Lactic acid. It gives the implant an atraumatic adhesive effect that avoids fixation (except in cases of large direct hernia) - in accordance with EHS Guidelines\*

4DLap is also the only 4D anatomical implant, i.e. in 3D with a time dimension corresponding to the resorption of the PLLA knit. Unlike a conventional, nonresorbable implant, the residual 4DLap knit becomes lightweight and conformable in the long term while remaining very resistant: it ensures the effectiveness of the surgical procedure



▶ An innovation dedicated to Patient's Quality of Life

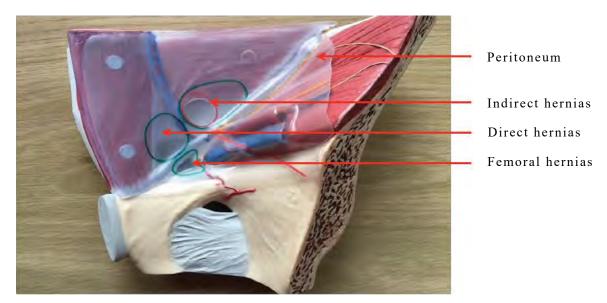
4DLap is therefore a unique and patented technology, which has the ultimate goal of patient comfort. It combines the advantage of a partially resorbable implant that becomes lightweight to limit post-operative pain (in accordance with international Guidelines\*), with a residual knit strong enough to avoid recurrence in the short and long term

UNIQUE FEATURES	ADVANTAGES	BENEFITS FOR THE PATIENT
Partially resorbable technology (120 ± 10 g/m² then 30 ± 10 g/m² after resorption) – Lightweight		COMFORT and SECURITY
PLLA (Poly-L-Lactic-Acid)	Hydrophilic mesh with gentle gripping effect	Esay to deploy, no need to fix TIME SAVING
3D shape not dependent on a complementary structure (ring type, contour)	Cuttable	ADAPTABLE during surgery for optimal fit

4DLap is a class III medical device manufactured by COUSIN BIOTECH S.A.S. The CE conformity has been carried out by the notified body SGS Belgium NV (CE1639). The management system of COUSIN BIOTECH S.A.S is certified for compliance with ISO 13485 standard. Please read carefully the instructions for use before using the device. Référence: FLV4DLGB01 - 09/06/20 Non 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

<sup>\*</sup> International guidelines for groin hernia management 2019
\*\* In Vivo evaluation of a new composite mesh 10% Polypropylene/90% Poly-L-Lactic Acid for Hernia Repair.

#### Laparoscopic vue of the inguinal anatomy of a patient's right side





**4DLapXL's** anatomical shape perfectly covers the 3D inguinal floor and largely covers all sites for inguinal and femoral hernias.

<sup>40</sup> Tanaka K., Mutter D., Irioue H., Lindner V. Bauras 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 2807: 18: 991-999.

The semi-resorbable parietal reinforcement implants brand named 4DMesh®, are dedicated to healthcare professionals having the ability to use this type of product for the therapeutic treatment of inguinal and femoral hernias. 4DMesh is a class III medical device manufactured by COUSIN BIOTECH. Their evaluation and conformity have been carried out by SGS0120.

The management system of COUSIN BIOTECH has been certified as meeting the requirements of ISO 13485

Please read instructions for use carefully.

Reference: FY4DXLGB01 - 04/05/17

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