

BREAST

# TIGR<sup>®</sup> matrix

Improving Patient Care

 NOVUS SCIENTIFIC<sup>®</sup>

**TIGR® Matrix IS DEVELOPED  
AND PRODUCED IN  
SWEDEN**



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# **STRONG WHEN YOU NEED IT GONE WHEN YOU DON'T**

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The ideal matrix for breast reconstruction with implant

**TIGR**<sup>®</sup>matrix



**OUR PRODUCT**  
World class quality

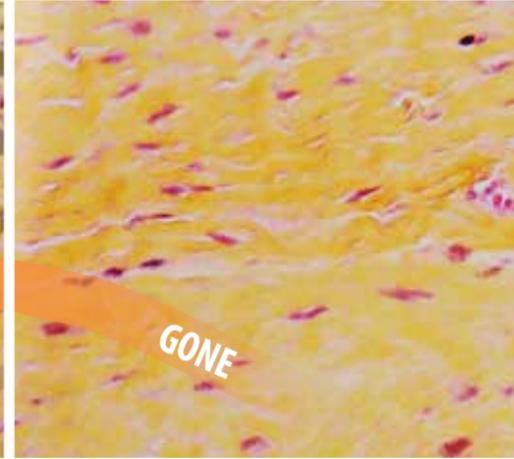
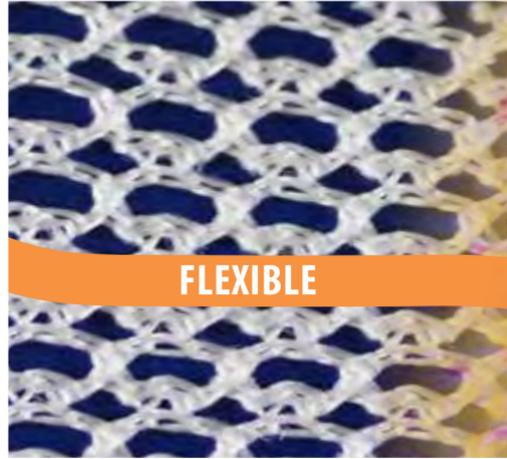
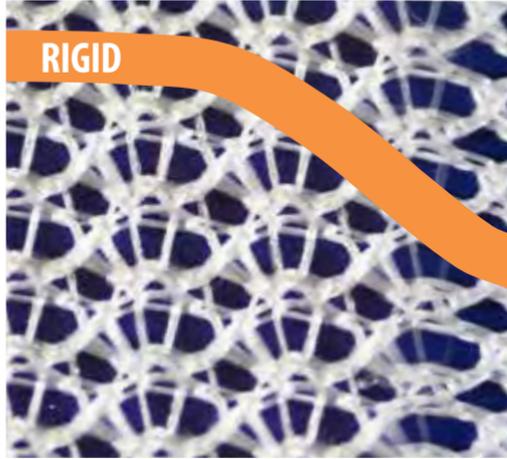
## Used by surgeons around the world

Over time TIGR® Matrix degrades and load is gradually transferred to the newly regenerated tissue during the remodeling phase resulting in new functional tissue.

## What is TIGR® Matrix?

TIGR® Matrix is the world's first long-term resorbable, 100% synthetic mesh, made from materials that have been in clinical use since the 1970s (lactide, glycolide, trimethylene carbonate). It's unique technology consists of dual-stage degradation and full resorption.





## INITIAL WOUND HEALING

*Material rigidity ensures stability during initial wound healing.<sup>2</sup>*

## REMODELING

*TIGR® Matrix develops more flexible mechanics that allow for movement during remodeling.<sup>1</sup>*

## RESORPTION

*After 36 months, the material is completely resorbed and replaced by well-structured collagen.<sup>1</sup>*

1. Three-year results from a preclinical implantation study of a long-term resorbable surgical mesh with time-dependent mechanical characteristics  
H. Hjort, T. Mathisen, A. Alves, G. Clermont, J. P. Boutrand, *Hernia*, 16(2):191–197, 2012
2. Data on file, *in vitro* resorption.

**GONE IN 3 YEARS**

100% Synthetic

## **Tissue integration and collagen deposition – revascularization**

TIGR® Matrix is rapidly integrated into the surrounding tissue by deposition of new collagen and formation of new blood vessels.

## **Macro-porosity designed to allow tissue integration for tissue repair**

Specifically designed for soft tissue repair and used by surgeons in reconstruction surgery.

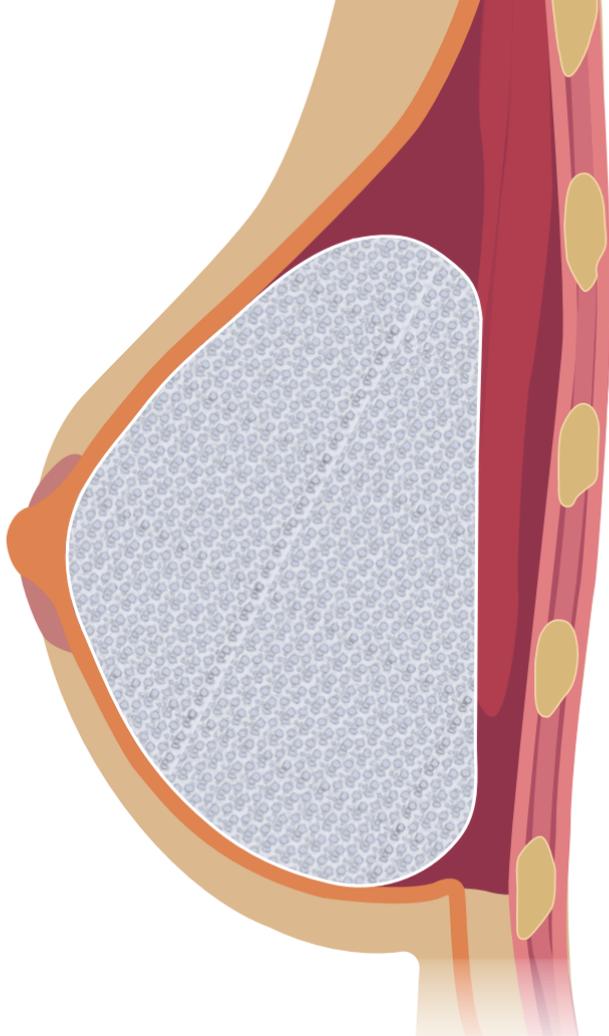
TIGR® Matrix is a soft and pliable alternative when performing implant based breast reconstructions. Vital when performing both the pre-pectoral and sub-pectoral technique.

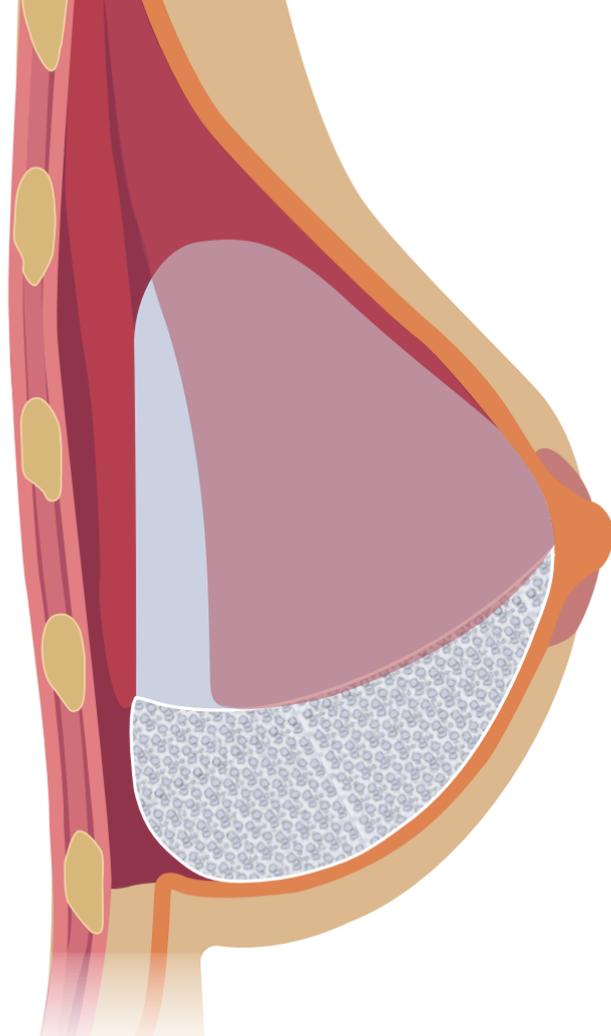
The untwisted multifilament fibers allow new tissue to integrate fully through the porous structure as well as inbetween each fiber.



## Pre-pectoral

- The reconstruction is offered as a one or two stage procedure depending on clinical criteria, the need for adjuvant radio- and/or chemotherapy or other risk factors.
- Complete coverage or anterior coverage of the implant with TIGR® Matrix is possible.
- The pre-pectoral reduces pain as the pectoralis major muscle remains undisturbed and thus eliminates animation (e.g. jumping breast phenomenon) due to muscle contraction.
- An implant is placed above the pectoralis major muscle and TIGR® Matrix supports and stabilizes the implant in place while promoting tissue repair and long-term soft tissue support.
- The pre-pectoral procedure is a less invasive technique becoming more popular due to reduced post-operative pain and better quality of life for the patient.
- A one-step reconstruction after a mastectomy is possible, allowing the patient to recover faster, have a better body image as well as satisfying aesthetic outcome.





## Sub-pectoral

- The reconstruction is offered as a one or two stage procedure depending on clinical criteria, the need for adjuvant radio- and/or chemotherapy or other risk factors.
- Cutting the pectoralis major muscle at the low insertion and placing the breast implant under the muscle flap is the standard approach.
- Placing the implant behind the pectoralis major muscle may increase rates of acute and chronic post-operative pain due to muscle trauma and discomfort with any physical activity, a longer duration with drains, a higher rate of capsular contraction and implant displacement.
- Implant malposition and lack of tissue in the lower pole increases risks of implant exposure.
- To achieve coverage of the lower pole of the breast, TIGR® Matrix is sutured to the submammary fold and to the lower part of the pectoral muscle and laterally to the chest wall. Partial muscle coverage together with TIGR® Matrix allows for better predictability.
- The introduction of TIGR® Matrix long-term resorbable synthetic mesh offers a solution to many of the shortcomings associated with muscle coverage.

CLINICAL DATA USING TIGR® Matrix	Hallberg 49 patients	Pompei 49 patients	Sharma 105 patients	Becker 62 patients	Quinn* 121 patients	Marthan** 195 patients	
						144 subpec	78 prepec
Average follow-up	17 Months	12 Months	18 Months	16 Months	23,6 Months	32 Months	32 Months
Seroma	3.1%	3.3%	0%	1.8%	N/A	0.4%	3%
Hematoma	1.5%	6.7%	0%	N/A	1%	5%	4%
Infection	1.5%	1.7%	10.8%	3.6%	11%	7.6%	4%
Flap necrosis	1.5%	5.0%	0%	1.8%	2%	1.4%	2.6%
Implant loss	3.1%	N/A	6.7%	N/A	6%	10%	5%

CAPSULAR CONTRACTURE	Hallberg 49 patients	Quinn* 121 patients	Marthan** 195 patients
No adjuvant radiotherapy	4.9%	6%	9% (154 breasts)
Adjuvant radiotherapy	N/A	N/A	51% (69 breasts)

### TOTAL NUMBER OF PATIENTS 581

\*In the skin-sparing mastectomy group

\*\* No exclusion criteria, high risk cancer

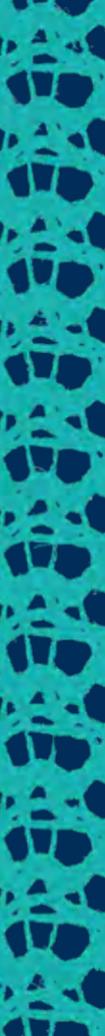
Please check [www.novusscientific.com](http://www.novusscientific.com) for the latest publications on TIGR® Matrix

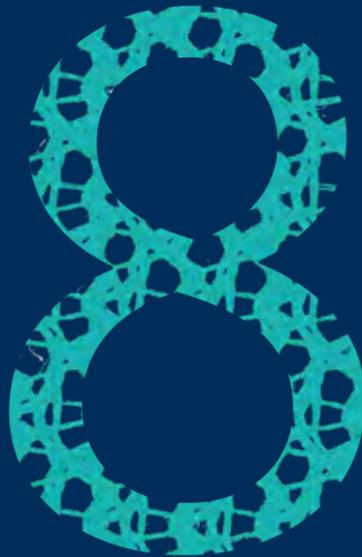
## Clinical data using TIGR® Matrix:

- Hallberg, H., Lewin, R., Elander, A., Hansson, E. (2018). J Plast Surg Hand Surg 52(4), 253-258
- Pompei, S., Evangildou, D., Arelli, F., Ferrante, G. (2018). Clin Plast Surg 45(1):65-73
- Sharma, S., Van Barsel, S., Barry, M., Kell, R.M. (2017). Eur J Plast Surg 49(21), 17-22
- Becker, H., Lind, J.G. (2013). Aesth Plast Surg 37, 914-921
- Quinn, E., Barry, M., Kell, M. Dec (2019). Eur J Plast Surg.
- Marthan, J. (2019). Reconstruction mammaire prothétique immédiate avec matrice synthétique résorbable. Université Paris Diderot. Dr Jessica Marthan, Institut Gustave Roussy.

## Capsular contracture references:

- Hallberg, H. (2019). Mesh-based Immediate Breast Reconstruction. Sahlgrenska Academy, University of Gothenburg.
- Quinn, E. (2019). et.al; Eur. J. Plast. Surg.
- Marthan, J. (2019). Reconstruction mammaire prothétique immédiate avec matrice synthétique résorbable. Université Paris Diderot, Dr Jessica Marthan, Institut Gustave Roussy.





## **REASONS TO USE TIGR<sup>®</sup> Matrix**

- **Resorbable**
- **Strong**
- **Pliable and easy to cut**
- **100% Synthetic**
- **Cost effective**
- **Multifilament for superior tissue integration**
- **No rinsing**
- **CE marked**

**TIGR**<sup>®</sup>matrix



## **Today TIGR® Matrix is a clinically proven medical device used by surgeons around the world with long-term outcomes and experience demonstrating long-term durability**

### **Three-year results from a preclinical implantation study of a long-term resorbable surgical mesh with time dependent mechanical characteristics**

Hjort, H. (2012). Mathisen, T., Alves, A., Clermont, G., Boutrand, JP. Hernia. 16(2) 191-197.

### **The use of synthetic mesh in reconstruction, revision, and cosmetic breast surgery**

Becker, H., Lind, JG. (2013). Aesthet Plast Surg. 37:914.

### **Immediate implant based breast reconstruction using the TIGR® Matrix**

Schrenk, P. (2016). Breast Cancer Manag. 5(2), 53-59.

### **De novo experience of resorbable woven mesh in immediate breast reconstruction post-mastectomy**

Sharma, S., Van Barsel, S., Barry, M., Kell, R.M. (2016). Eur J. Plast Surg. 40(1):17-22.

### **Bi-pedicle nipple-sparing mastectomy (modified Letterman technique) and TIGR mesh assisted immediate implant reconstruction in a patient with Cowden syndrome**

Todd, J. (2016). Gland Surg. 5(3):306-311.

### **The use of TIGR® Matrix in Breast Aesthetic and Reconstructive Surgery: Is a resorbable synthetic mesh a viable alternative to acellular dermal matrices?**

Pompei, S., Evangelidou, D., Arelli, F., Ferrante, G. (2018). Clin Plast Surg. 45(1):65.

### **TIGR® Matrix surgical mesh – a two-year follow-up study and complications analysis in 65 immediate breast reconstructions.**

Hallberg, H., Lewin, R., Elander, A., Hansson, E. (2018). J Plast Surg Hand Surg. 52(4):253.



**TIGR**<sup>®</sup>matrix

## TO ORDER

SIZE	REF. NO.
10 x 15 cm	NSTM1015E
15 x 20 cm	NSTM1520E
20 x 30 cm	NSTM2030E

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