The clinical challenge

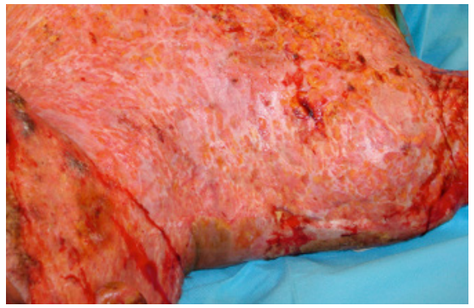
Clinical situations may be challenging. The patients you see on a daily basis require fast, effective treatment for a range of full-thickness wounds. Your goal is to help the patient to get back to normal life while managing the overall treatment costs.

Challenges of full-thickness wound injuries and grafting:

- Fast revascularization of grafts
- Exposed tendon and bones
- Patient functionality and scarring
- Multiple operating-room requirements and procedures

* Courtesy of E. Dantzer, Toulon, France
** Courtesy of U. Hug, MD, Luzern, Switzerland
*** Courtesy of D. Luedi, Langenthal, Switzerland
**** Courtesy of N. Lilgenau, MD, Vienna, Austria

Burns



A 42-year-old male presented with a flame burn, 42% TBSA on chest and neck. Early excision was performed on day four.*

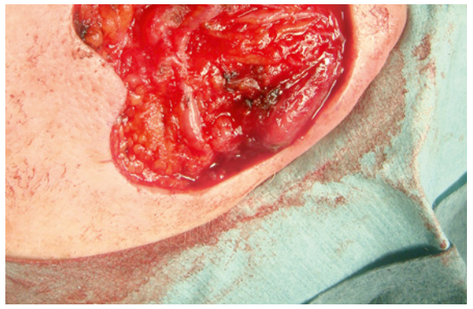
Trauma

A 64-year-old female presented with an infected dog bite on the dorsum of the hand. After one month of pre-treatment in a general hospital, the wound bed was still necrotic.**

Chronic Wound

A 60-year-old male with diabetic foot syndrome and a history of obesity and coronary heart disease, presented with a gangrenous right foot.***

Cancer Excision



A 42-year old female presented with a basal cell carcinoma in the face. The cancer was excised widely, resulting in a deep dermal wound.****

The solution

MatriDerm® is a unique collagen elastin matrix, which serves as a dermal replacement scaffold.

Native collagen fibers

- Guided healing to avoid unstructured scar tissue[8,10,11]
- Improved cell migration and reconstruction of new dermis[10,11] scaffold.

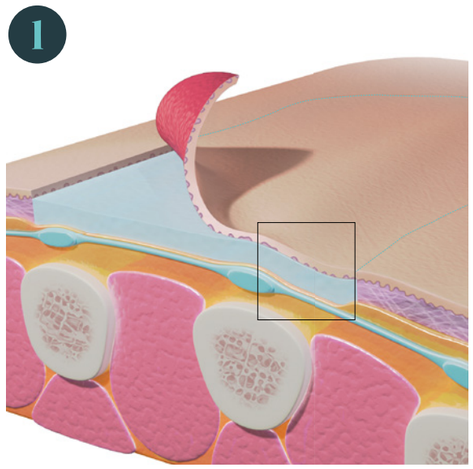
Elastin

- Triggers early vascularization[3,4,5,19] and may reduce risk of infection (revascularization allows for white blood cells to migrate to the site)[18,19]
- Significantly improves skin elasticity (compared to split-thickness skin graft alone)[1,5,6,7,9]
- Enables early physical therapy and rehabilitation[20]

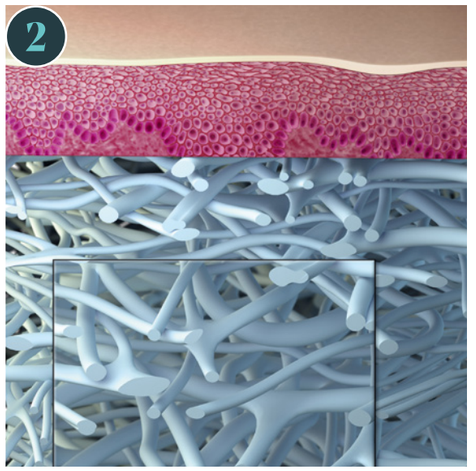
No chemical cross-linking

- Non-release of cell-toxic substances
- Improved cellular growth[12,13]

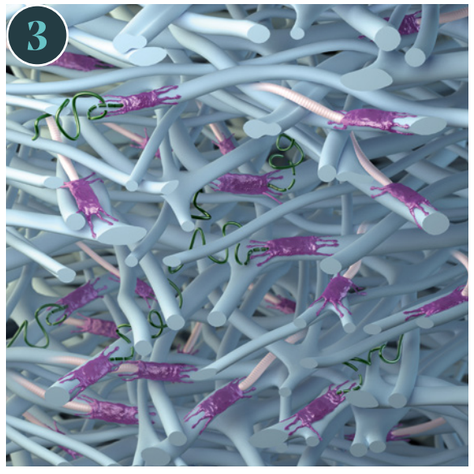
The mode of action



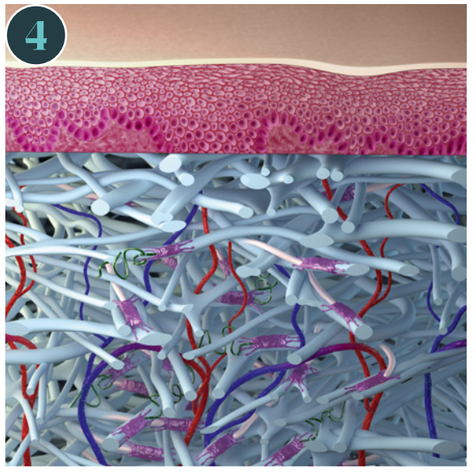
In a One- or Multi-Step Procedure, MatriDerm® is placed on the wound bed and covered with a split-thickness skin graft or a non-adherent layer plus secondary dressing of choice.



MatriDerm® provides a native three-dimensional collagen elastin matrix to facilitate cell migration and guided healing.[8, 10, 11]



Fibroblasts are guided by the native collagen elastin scaffold ensuring structured healing and formation of a neo-dermis.[8, 10, 11]



Enhanced neo-angiogenesis and formation of microvessels ensuring supply and optimal split-thickness skin graft take.[1, 5, 6, 7, 9, 14]

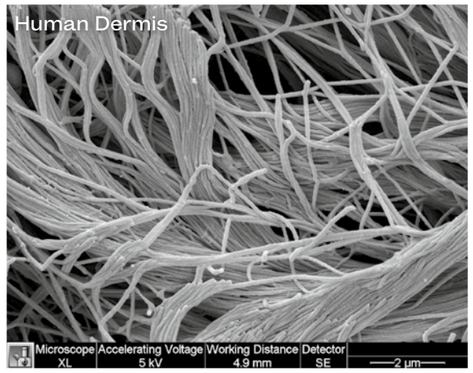
The scientific difference

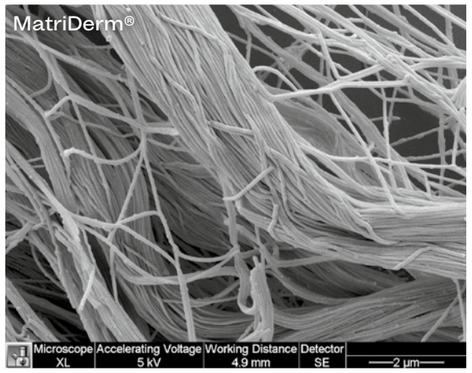
MatriDerm® is able to preserve closeness to human dermis, accelerate cell invasion, cell elongation and proliferation and limit myofibroblast formation which is associated with less wound contraction.[2,4,10,11,12,21,22,23] This scientific performance is as a result of our Advanced CryoSafe® Method which gently preserves the native structure with no chemical crosslinking.[2]

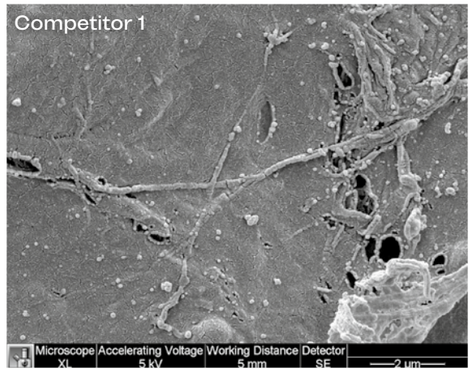
Preserves

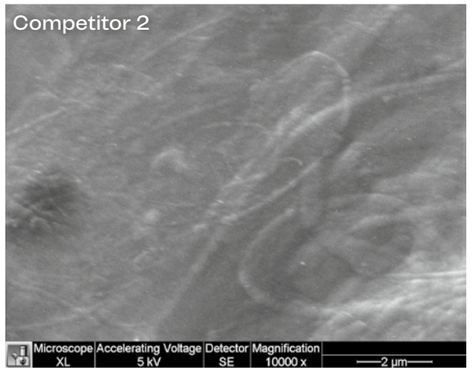
MatriDerm® preserves closeness to human dermis.[8,21]

MatriDerm® has similar ultrastructural features as native collagen fibre bundles in human dermis. The other processed dermal matrices show large fields with amorphous structures.



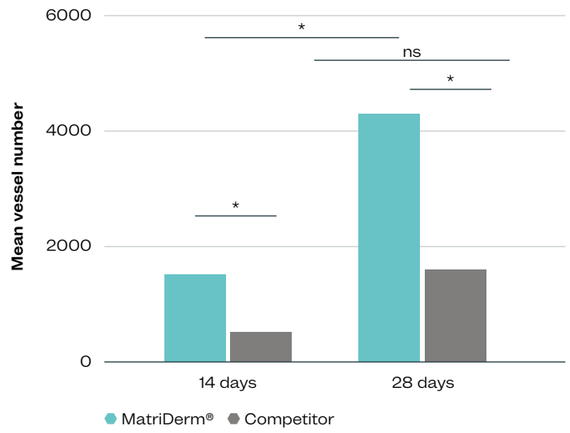






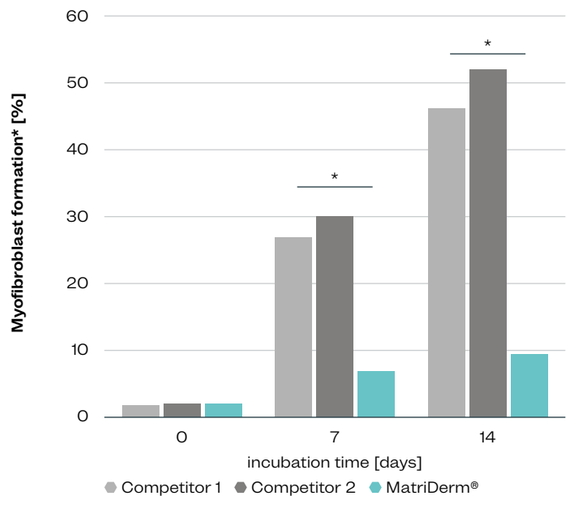
Accelerates

In an animal AV-Loop model number of new formed blood vessels were analyzed in wounds treated with either with MatriDerm® or competitor product. MatriDerm® accelerates revascularization.[23]



Limits

In vitro analysis of the formation of myofribroblast phenotype by α-SMA staining. MatriDerm® limits myofibroblast formation compared to competitor products[21]. Myofibroblast formation is associated with wound contraction[22]. By limiting myofibroblast formation wound contraction is limited.[10,11,24]



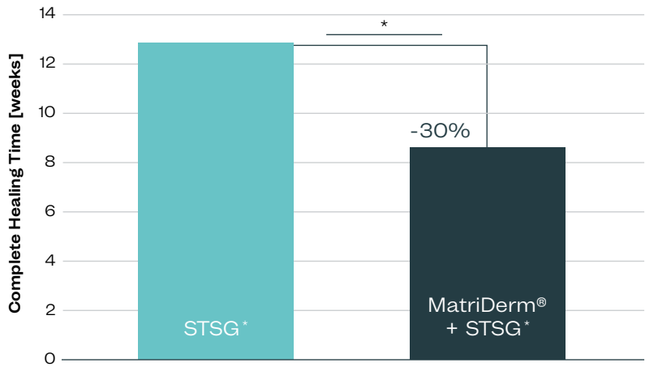
*By measurement of α-SMA positive fibroblasts

The clinical evidence

Under clinical evaluation MatriDerm® has shown to be fast and effective in the management of a range of full-thickness wounds, helping patients back to normal life and reducing the overall cost of care.

Fast

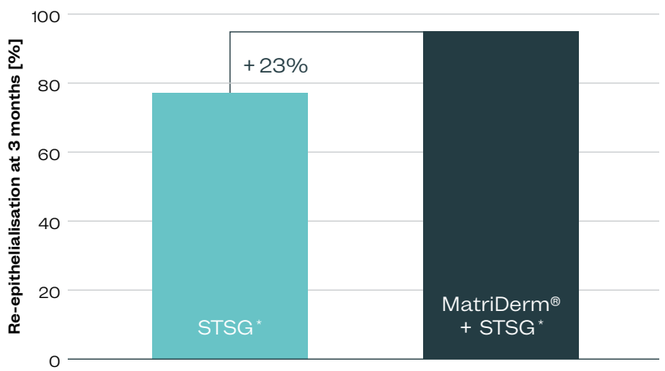
Shorter healing period with MatriDerm®



Modified according to Jeon et al. 2013, n = 60

Effective

Improved efficacy with MatriDerm®

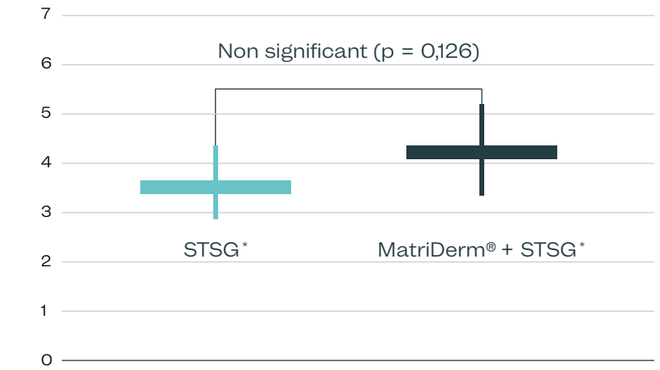


Post-traumatic injuries – epithelialization at 3 months
Modified according to Cervelli et al. 2011, n = 60

* Split-thickness skin graft

Cost effective

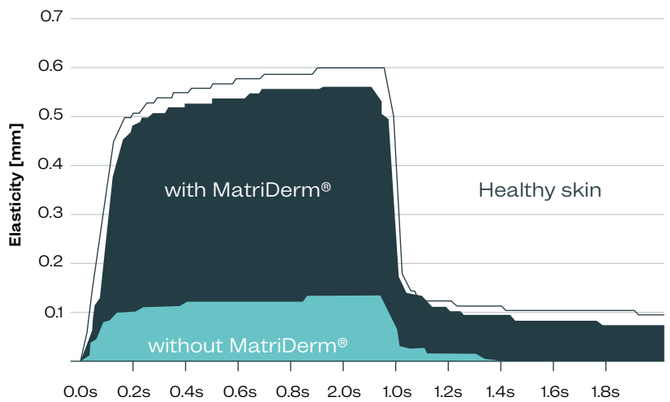
Total surgical treatment costs don't differ significantly from STSG*



Surgical treatment of burns
Modified according to Hop et al. 2013, n = 43

Skin elasticity

Improved skin elasticity (close to healthy skin) – determination via Cutometer® measurement



MatriDerm® 12 months post-op., III° burn wounds, n = 10
L.P. Kamolz, presentation ISBI Meeting Montreal 2008

The clinical outcomes

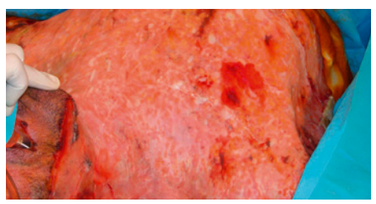
The long-lasting effect on scar quality by the use of MatriDerm®, even after 12 years, has been shown by Bloemen et. al[1]:

- Improved scar parameter and scar appearance (cosmetic) (compared to split-thickness skin graft alone)

Burns

Courtesy of E. Dantzer, Toulon, France

Intraoperative



Intraoperative after the application of MatriDerm®

3 years postoperative

3 years postoperative

Trauma

Courtesy of U. Hug, MD, Luzern, Switzerland

Intraoperative afterdebridement

Intraoperative after the application of MatriDerm® and mesh graft

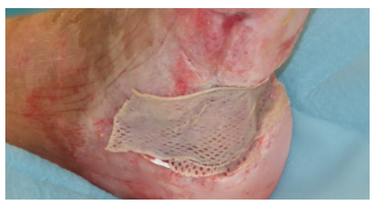
Stable wound closure
3 months postoperative

Full extension 2 years postoperative

Chronic wound

Courtesy of D. Luedi, Langenthal, Switzerland

Preoperative



Intraoperative after the application of MatriDerm® and mesh graft

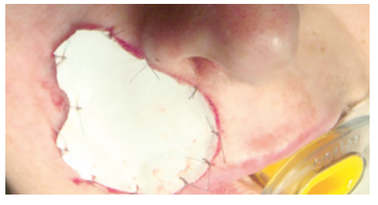
3 months postoperative

6 months postoperative

Cancer excision

Courtesy of N. Lilgenau, MD, Vienna, Austria

After excision



Intraoperative after the dry application of MatriDerm®

7 months postoperative

7 months postoperative

MatriDerm® Flex Dermal Matrix

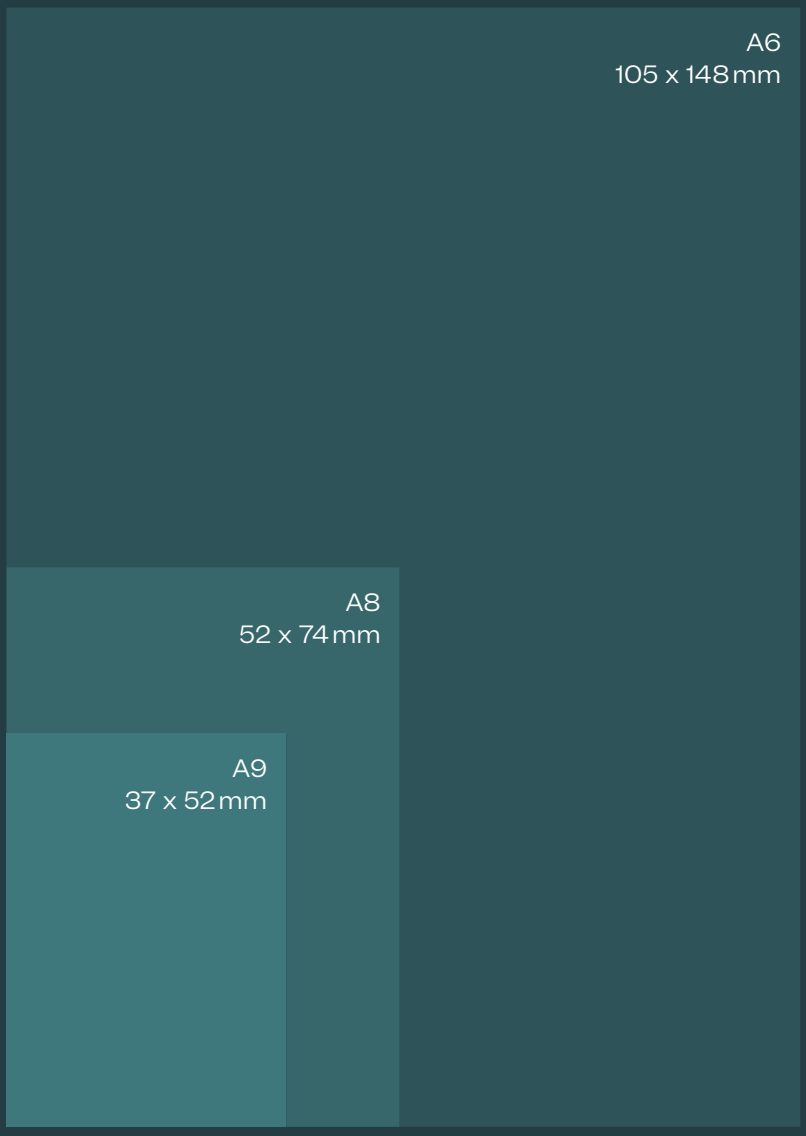
	Ref. No.	Size
A4	83440 - 200	210 x 297 x 1 mm
	83460 - 200	210 x 297 x 2 mm
	83470 - 200	210 x 297 x 3 mm
A6	83441 - 200	105 x 148 x 1 mm
	83461 - 200	105 x 148 x 2 mm
	83471 - 200	105 x 148 x 3 mm
A8	83442 - 200	52 x 74 x 1 mm
	83462 - 200	52 x 74 x 2 mm
	83472 - 200	52 x 74 x 3 mm
A9	83443 - 200	37 x 52 x 1 mm
	83463 - 200	37 x 52 x 2 mm
	83473 - 200	37 x 52 x 3 mm

MatriDerm® Fenestrated Dermal Matrix

	Ref. No.	Size
A4	83410 - 200	210 x 297 x 1 mm
	83420 - 200	210 x 297 x 2 mm
	83430 - 200	210 x 297 x 3 mm
A6	83411 - 200	105 x 148 x 1 mm
	83421 - 200	105 x 148 x 2 mm
	83431 - 200	105 x 148 x 3 mm
A8	83412 - 200	52 x 74 x 1 mm
	83422 - 200	52 x 74 x 2 mm
	83432 - 200	52 x 74 x 3 mm
A9	83413 - 200	37 x 52 x 1 mm
	83423 - 200	37 x 52 x 2 mm
	83433 - 200	37 x 52 x 3 mm

MatriDerm® Dermal Matrix

	Ref. No.	Size
A4	83500 - 200	210 x 297 x 1 mm
	83400 - 200	210 x 297 x 2 mm
A6	83403 - 200	105 x 148 x 1 mm
	83401 - 200	105 x 148 x 2 mm
A8	83404 - 200	52 x 74 x 1 mm
A9	83405 - 200	37 x 52 x 1 mm



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Please check complete indications and recommended application in your local Instructions for Use (IFU) before using MatriDerm®.

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