

Formats

Glyaderm is distributed by Euro Skin Bank and is available from October 2011.

Depending on the dimension of the patient's wound, donor skin is available from 40 cm² to 150 cm². Glyaderm can be supplied plain or meshed 1:1.

If you need more information or would like to order Glyaderm, please contact the Euro Skin Bank.

Clinical information on the use of Glyaderm is available on www.glyaderm.org.

References

1. Pirayesh A, Monstrey S, Blondeel P, Hoekstra H, Vanoorbeek J, Hoeksema H, Richters CD. Development of a novel dermal substitute based on glycerinized allograft: Clinical (Phase I) and experimental evaluation. *Burns* (2007); 33: S134
2. Richters CD, Pirayesh A, Hoeksema H, Kamperdijk EWA, Kreis RW, Dutrieux RP, Monstrey S, Hoekstra MJ. Development of a dermal matrix from glycerol preserved allogeneic skin. *Cell and Tissue Banking* (2008) 9: 309-315.
3. Brusselaers N, Pirayesh A, Hoeksema H, Richters CD, Verbelen J, Beele H, Blot SI, Monstrey S. *J Trauma* (2010); 68: 490-501.
4. Pirayesh A, Dur AFM, Paauw NJ, Monstrey S, Kreis RW, Hoekstra MJ, Richters CD. Evaluation of acellular dermis for closure of abdominal wall defects in a rat model. *Eur Surg Res* (2008) 41: 345-352.
5. Pirayesh A, Richters CD, Paauw NJ, Hoeksema H, Hoekstra MJ, Kreis RW, Monstrey S. Evaluation of different dermal substitute matrices in a porcine model; advantage of a two stage procedure. Submitted to *Wound Repair Regeneration*.
6. Pirayesh A, Richters CD, Hoeksema H, Verbelen J, Heyneman A, Monstrey S. Clinical evaluation of glyaderm, a dermal substitute based on glycerinized donor skin. In: *Skin grafts*, book chapter, InTech, Editor Dr. Marcia Spear. ISBN 978-953-308-958 (2011).

Euro Skin Bank

The Euro Skin Bank processes and preserves human donor skin which is used for treating patients with burns and other chronic or complex wounds.

In addition the Euro Skin Bank also supports research into the treatment of burns and other chronic or complex wounds and develops new products based on donor skin. For these reasons, the Euro Skin Bank invests in various research projects.

When treating severe burns donor skin is of great importance. This was the motivating force to start a centralised Skin Bank by the Dutch Burns Foundation in 1976. Due to the international nature of this discipline, the name was changed in 1991 to the Euro Skin Bank. Since 2009, the Euro Skin Bank has been a division of the Euro Tissue Bank.



A Division of Euro Tissue Bank

The Euro Tissue Bank is an effective and innovative tissue bank that operates (inter)nationally in order to meet the (potential) need for human donor tissue and its related products. The Euro Tissue Bank consists of three divisions:



Euro Skin Bank

The Euro Skin Bank processes and preserves human donor skin which is used for treating patients with burns and other chronic or complex wounds.



Euro Cornea Bank

The Euro Cornea Bank processes, selects and preserves human optical tissue which is used for transplant purposes.



Euro Tissue Procurement

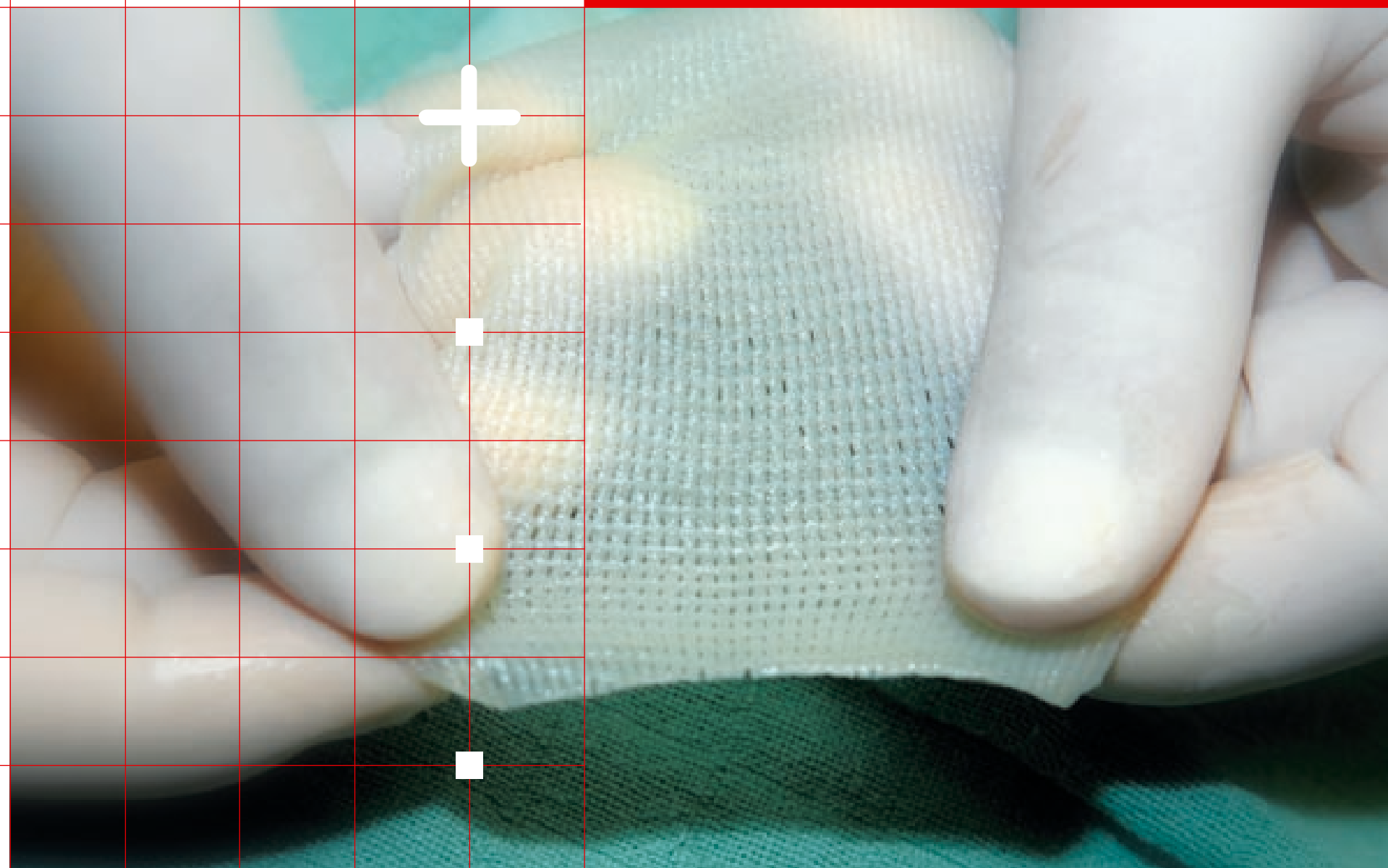
Euro Tissue Procurement takes care of the recovery of human donor tissue and delivers these to the tissue banks.

Contact

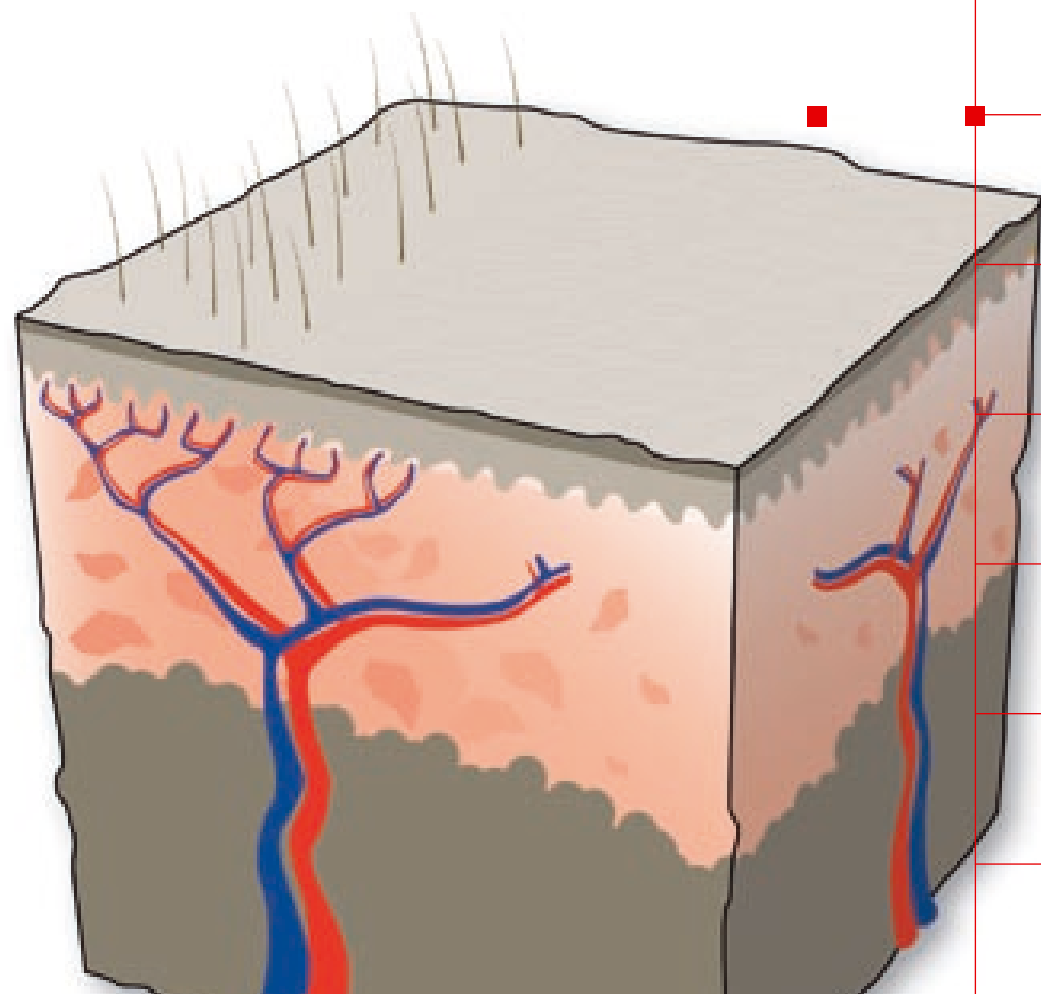
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Glyaderm

Acellular dermis



Division of the
Euro Tissue Bank



Characteristics of Glyaderm

Glyaderm® is an acellular dermal collagen-elastin matrix obtained from human donorskin. The unique natural structure of the collagen-elastin fibres remains present in the matrix while antigenic structures are removed using a method with low concentration of NaOH (ref 1, 2). The collagen-elastin fibres provide a scaffold to host fibroblasts.

Glyaderm can be used for dermal restoration in burn surgery and plastic and reconstructive surgery (ref 3). Application of Glyaderm as a dermal replacement layer underneath a split thickness skin graft will lead to enhanced functional and aesthetic outcome with improved scar quality.

Easy handling and storage as Glyaderm is preserved in 85% glycerol which inactivates micro-organisms and viruses (scientifically proven). Glyaderm is produced and distributed by Euro Skin Bank, a non-profit tissue bank; therefore cost effectiveness is greatly improved.

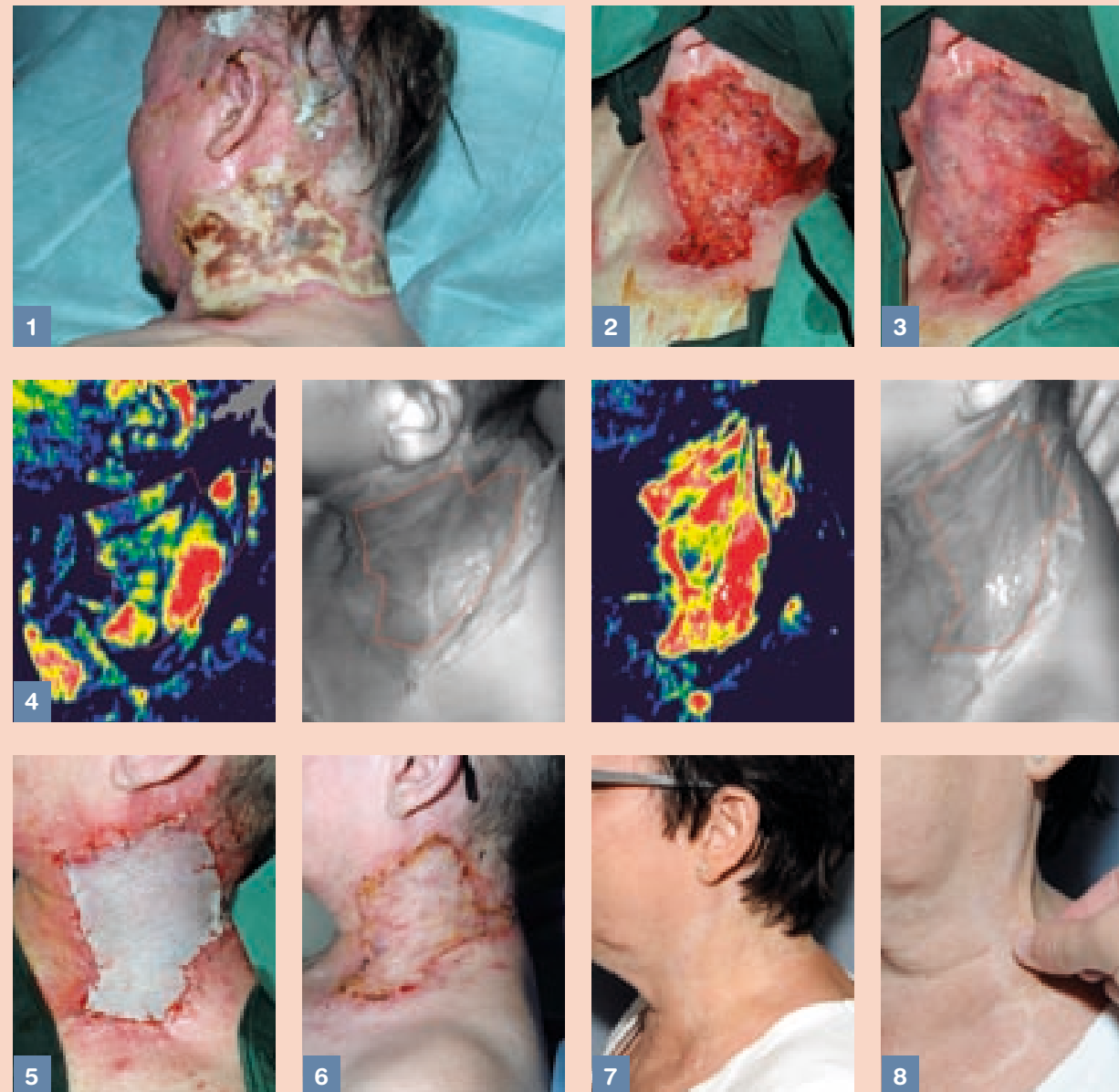
Clinical results

An initial pilot study of 20 patients treated in the Burn Centre in Ghent showed promising clinical results with take rates above 90% and improved scarring (ref 4, 5, 6) as shown for the patient below:

- 1 = Full thickness burn in the neck
- 2 = Wound after removal of burned tissue and wound bed preparation with donor skin
- 3 = Glyaderm applied to the wound
- 4 = Progressive ingrowth of blood vessels as measured by Laser Doppler Imaging
- 5 = Transplantation of a thin autologous, perforated split thickness skin graft
- 6 = Full Take of the split skin after 1 week
- 7 = Good cosmetic results after six years
- 8 = Pliable, soft scar after six years

A prospective, randomized, controlled, intra individual comparative study of Glyaderm with split thickness skin graft versus split thickness skin graft alone has been conducted at the Ghent Burn Centre in 25 patients. Objective measurement with the Dermalab (objective skin elasticity measurement device) showed significant improved elasticity of the scars treated with Glyaderm and split skin at one year after healing (ref 6).

A European multicentre prospective, randomized, controlled clinical trial has started in 2010. Early results show good take of the Glyaderm (> 90%) and the autologous skin (>90%).



Indications

Glyaderm is intended for use in the reconstruction of the dermis in full thickness skin defects in combination with autologous split-skin grafts to achieve a bi-layered skin restoration. Glyaderm is especially suitable for treatment of deep dermal and full thickness burns and scar reconstructions.

Other indications in plastic and reconstructive surgery include: reconstruction after oncological resection, giant melanocytic nevi, reconstruction after necrotising fasciitis and reconstruction after free flap harvest and trauma.

Key surgical points

Adequate wound bed preparation is necessary with surgical debridement of all non viable tissue followed by the use of donor allograft or topical negative pressure wound therapy. A healthy granulating wound bed ensures integration of the glyaderm dermal matrix.

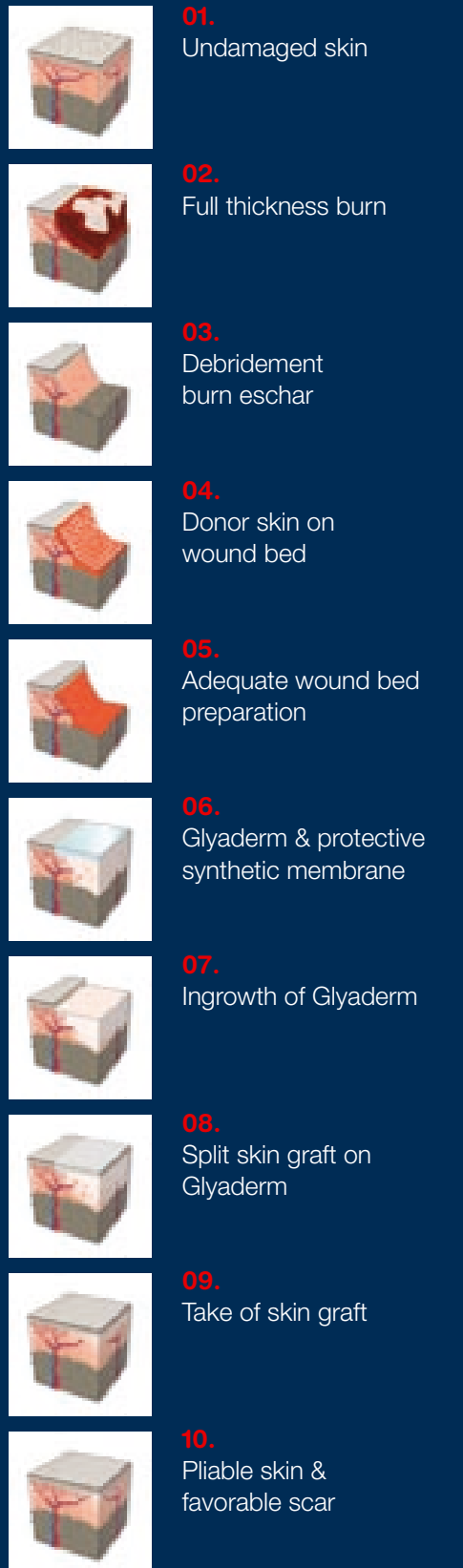
Glyaderm should be rinsed and immersed in sterile water of for at least 10 minutes to wash out residual glycerol immediately prior to application.

Glyaderm can be meshed 1:1 (without enlargement) for wound drainage.

Fixation of Glyaderm to the wound bed can be done using sutures, surgical staples or fibrin glue.

Iodine antiseptic gels can be used in conjunction with a non adherent dressing (silicone or nylon) and fatty gauze to ensure moist wound healing and protect the glyaderm against micro-organisms.

The dense and durable collagen-elastin matrix of Glyaderm is well integrated after 5 to 7 days. The Glyaderm should be prepared by careful removal of eventual non-viable parts and gentle scrubbing, before coverage with a thin split thickness skin graft to ensure a stable bi-layered skin restoration.



01. Undamaged skin

02. Full thickness burn

03. Debridement burn eschar

04. Donor skin on wound bed

05. Adequate wound bed preparation

06. Glyaderm & protective synthetic membrane

07. Ingrowth of Glyaderm

08. Split skin graft on Glyaderm

09. Take of skin graft

10. Pliable skin & favorable scar