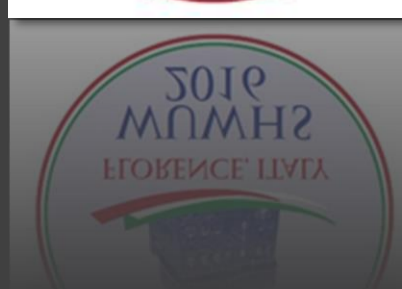


# USE OF A NEW DERMAL SUBSTITUTE IN DIFFICULT ULCERS



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## Background and Aims

The use of dermal substitutes in reconstructive plastic surgery has now become a gold standard for tissue regeneration. In particular, in wound healing they are versatile and usable in different pathologies. The characteristics and application methods differ according to the particular structure of the scaffold. The aim of the study is to verify the out-like report of a dermal substitute of new generation .

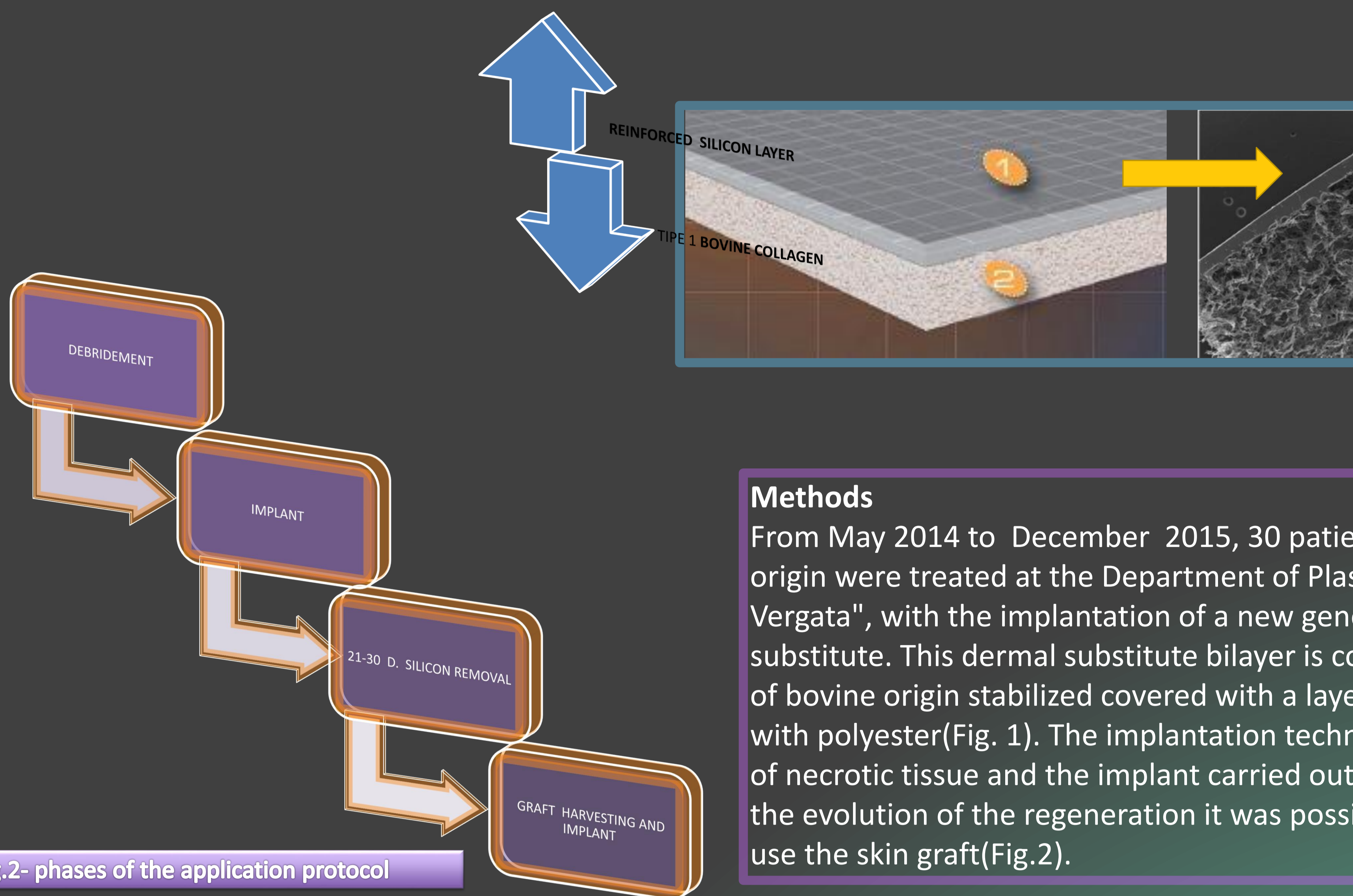


Fig.1-STRUCTURE OF DERMAL – EPIDERMAL TEMPLATE and HISTOLOGICAL VIEW.

## Methods

From May 2014 to December 2015, 30 patients with ulcers of different origin were treated at the Department of Plastic Surgery of "Tor Vergata", with the implantation of a new generation of dermal substitute. This dermal substitute bilayer is composed of type I collagen of bovine origin stabilized covered with a layer of silicone reinforced with polyester(Fig. 1). The implantation technique involves the removal of necrotic tissue and the implant carried out on vital tissue. Based on the evolution of the regeneration it was possible to decide whether to use the skin graft(Fig.2).

## Results

The follow-up was 12 months. In all patients there was a good elasticity of the new tissue formed in the area of the lesion, no sign of infection and rejection of the system, no formation of hypertrophic scar at 1 year of follow up(Fig. 3). We also observed recellularization and vascularization of dermal substitute(Fig.4) this happens evenly (histological finding).



Fig.3- Preoperative and Postoperative image in POST-TRAUMATIC INJURY and HEALING



Fig.4-The color change indicates recellularization and angiogenesis

## Conclusions

The reinforced layer of silicone makes the dermal substitute very resistant and can be left in place for a longest time . These characteristics may explain the rapid repopulation of the matrix. The surgical technique is easy, fast and executable with local anesthesia.