



## Novel Scrotal Reconstruction after Fournier's Gangrene Using the Integra™ Dermal Regeneration Template

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We report a novel use of the Integra™ dermal regeneration template to facilitate a functional recovery in a young male with Fournier's gangrene. After multiple debridements he had a large soft tissue defect and local flaps were not possible for reconstruction. Integra™ facilitated reconstruction of a neo-scrotum to allow a good cosmetic outcome. *UROLOGY* 128: e3–e4, 2019. Published by Elsevier Inc.

A 37-year-old male had a 13 × 30 cm soft tissue defect involving the entire left hemiscrotum, 70% of the right hemiscrotum, left thigh and flank (Fig. 1) after multiple debridements for Fournier's gangrene. The Integra™ dermal regeneration template was placed 22 days after initial debridement (Fig. 2). After placement of the Integra™ mesh, the wound was covered with a negative pressure dressing. After 4 weeks the dartos fascia had regenerated, the Integra™ was removed, and a split thickness skin graft was then placed for skin coverage. Fig. 3 shows the cosmetic outcome at 1 month.

Local flaps are commonly used for scrotal reconstruction.<sup>1</sup> In our case the donor site for such a flap was in the area of injury preventing its use. Integra™ is a bilaminar composite with an outer silicone layer. The inner layer contains cross-linked bovine cartilage and glycosaminoglycans. This promotes the infiltration of fibroblasts, macrophages, lymphocytes, and capillaries.<sup>2,3</sup> The outer layer controls fluid loss similar to normal epidermis.<sup>3</sup> Our patient had a good functional and cosmetic outcome and was able to return to active duty in the US Coast Guard. Integra™ should be considered a viable option for complex soft tissue reconstruction following Fournier's gangrene.



**Figure 1.** Soft tissue defect after all debridements. The defect measured 13 × 30 cm and involved the entire left hemiscrotum and 70% of the right hemiscrotum. Both testicles were exposed. The site of a left anterolateral thigh flap is involved in the area of injury.

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**Figure 2.** Integra™ Dermal Regeneration Template applied to the defect. Note the bilaminar nature of Integra™. The inner layer is composed of cross-linked bovine cartilage and glycosaminoglycans. Outer silicone layer functions similar to epidermis.

### References

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**Figure 3.** Final cosmetic outcome. Inferior view 1 month after placement of STSG. The scrotum has a fairly symmetric appearance.

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