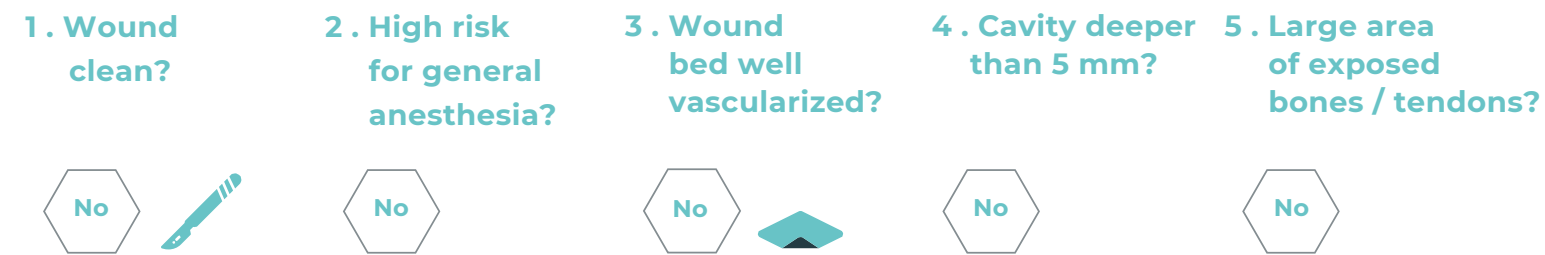


# Necrotizing Fasciitis of the Lower Leg

Trauma

Type of Wound	Almost complete circumferential loss of skin and soft tissue of lower leg with exposed gastrocnemius tendons without vascularity*
Etiology	Life and limb saving debridement for necrotizing fasciitis in a type 1 diabetic
Patient	45-year-old male

## Decision Tree

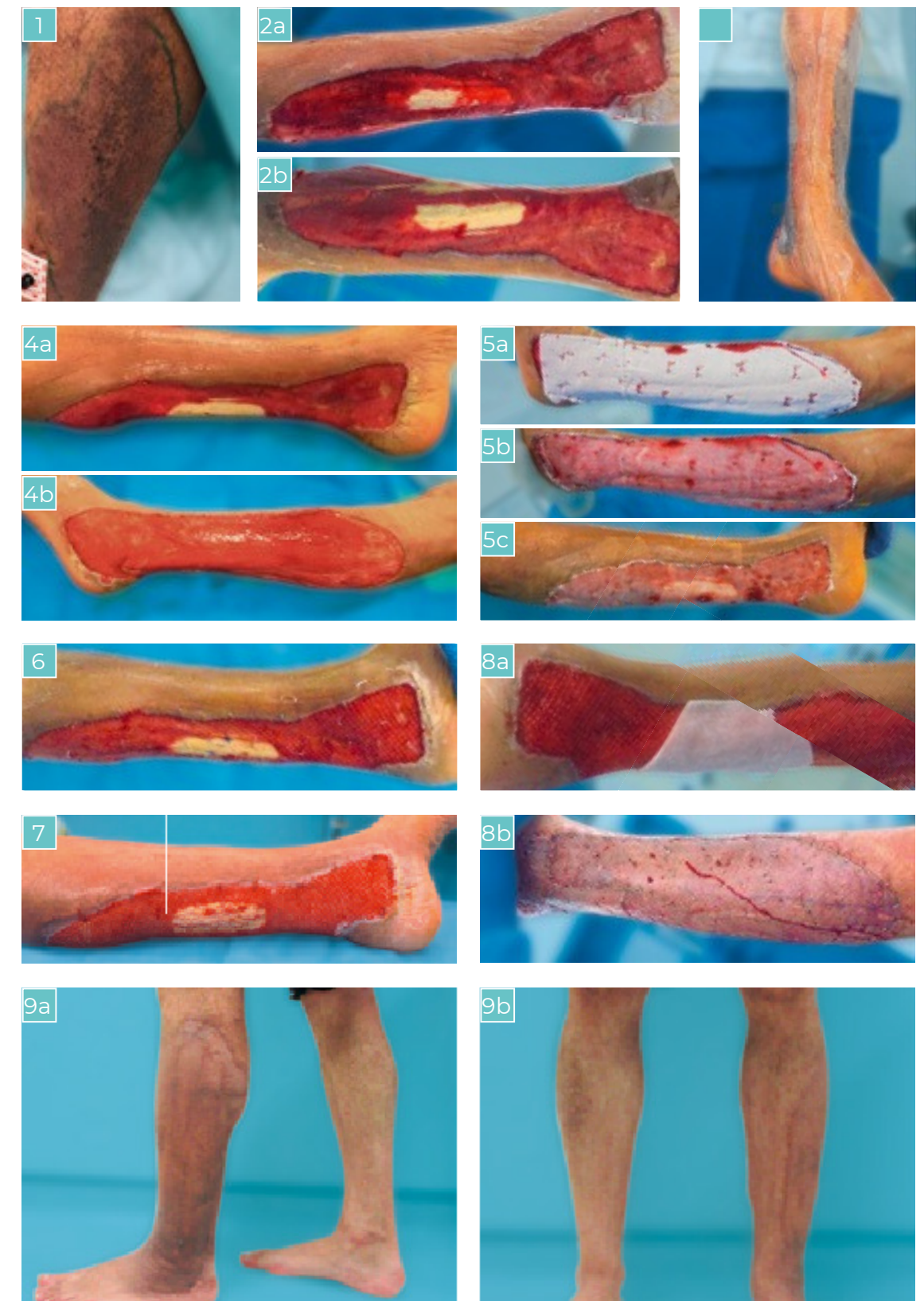


This patient who is an Orthopedic Surgeon underwent emergency debridement for necrotizing fasciitis of the lower leg (Fig. 1). In order to save his leg and life almost all the skin, soft tissue and fascia of his lower leg were debrided including the vascular (paratenon layer) of the medial and lateral gastrocnemius tendons (Fig. 2a-b).

NPWT with instillation and dwell time (NPWTi-d) (Fig. 3) was applied following debridement for further cleansing of the wound and to form a layer of granulation tissue over the musculature producing a smoother and more even wound bed surface prior to the application of the dermal template (Fig. 4a-b).

Following this a Two-Step Procedure was used by bolstering two A4 size 2 mm MatriDerm® templates with NPWT and a non-adherent silicon interface layer with the aim of obliterating the soft tissue cavity which was greater than 5 mm. The MatriDerm® template was also used to bridge the exposed gastrocnemius tendons (Fig. 5a-c). The first NPWT dressing change showed good integration of MatriDerm® (Fig. 6). After several changes of NPWT filling of the soft tissue defect was achieved with reduced area of exposed tendons lacking paratenon (Fig. 7). To bridge the remaining area of tendons which lacked vascularity a smaller size 1 mm MatriDerm® was applied with a Split-Thickness Skin Graft at the same time that was bolstered with NPWT (Fig. 8a-b).

Two years postoperatively, the reconstruction of this lower leg with Two-Step Procedure 2 mm and One-Step Procedure 1 mm MatriDerm® shows no soft tissue indentation with intact and stable skin over the tendons with full return to function (Fig. 9a-b). The patient has returned to work as a full-time Orthopedic Surgeon.



\* Courtesy of I. Younis, MBBCh, MRCS (Eng), MSc, FRCS (Plast), London, UK