# Clinical Case Report

## Limb Salvage

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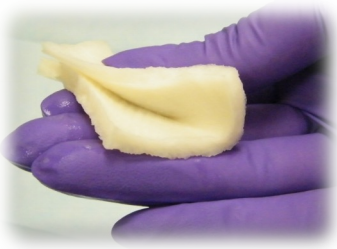

## bio-ConneKt®

Wound Matrix

MLM Biologics Inc.

bio-ConneKt® Wound Matrix

# Limb Salvage
## A Case Report

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## ABSTRACT

A 67 year-old male with a trans-metatarsal amputation (TMA) incision site dehiscence was presented for a second opinion. He was presented earlier to a vascular surgeon with discoloration of his toes. Vascular examination revealed a completely blocked popliteal artery. He underwent a femoral-popliteal bypass grafting subsequent to a TMA. Failure of the surgical site to close, combined with the patient's history of CAD, PVD, insulin-dependent diabetes and infection prompted a below knee amputation (BKA) recommendation, when the patient was initially presented for a second opinion.

In order to facilitate wound closure, the **bio-ConneKt® Wound Matrix**, a FDA–cleared ECM-based advanced wound care dressing, was used as a treatment option. The **bio-ConneKt® Wound Matrix** is engineered to help close chronic wounds in combination with standards of care by meeting the challenges presented in a diabetic wound microenvironment. After aggressive sharp debridement, the product was secured to the wound that measured 2.7 x 2 x 0.3 cm. In 6 weeks, complete wound closure with full epithelialization was achieved. A combination of diabetic and pressure wound poses a even more demanding physiological environment for healing to occur. The mechanical and biochemical attributes of the **bio-ConneKt® Wound Matrix** enabled optimal maintenance of the wound bed in a healing mode.

## HISTORY

**Past Medical History:** Patient medical history was positive for Insulin Dependent Diabetes Mellitus, CAD, PVD, and former smoker. Occluded popliteal artery resulted in gangrenous forefoot. A Fem-Pop bypass grafting and TMA was performed. TMA surgical site dehisced and BKA was recommended.

**PE includes:** Severe ulceration of fore foot with central and lateral wound. Wounds were present to the level of fascia and bone was exposed on the lateral edge of central wound. Pedal pulses were +1 for DP and PT, capillary refill was delayed to 6 secs. Full loss of protective sensation in b/l foot.
Central Wound: 7 x 2 x 0.5 cm
Lateral Wound: 2 x 1 x 0.3 cm


**Initial Wound Presentation**

## TREATMENT

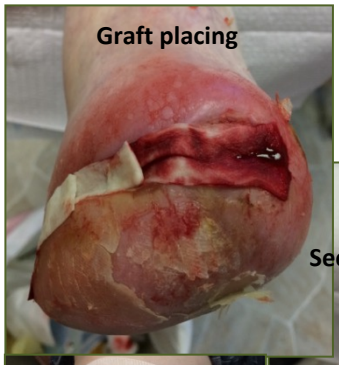
**Surgical procedure:** Initially, patient underwent aggressive debridement, hemostatsis and wound VAC application in OR. VAC was discontinued after 2 weeks due to lack of response. On day of procedure, wound was excisional debrided (including bone end), and bio-ConneKt® Wound Matrix was trimmed to fit wound and secured with Steri-Strips. Soft cast/Unna boot application followed.

Dressing changes were performed weekly, and included replacing Steri-Strips and Unna boot as needed. At 1 week post-procedure, the bio-ConneKt Wound Matrix was adhered and seeding into the wound bed. Peri-wound inflammation considerably subsided.

**8 weeks:** There was 90% resolution of the wound. Local wound care with alginate and dressing performed.

**15 weeks:** Complete wound closure with epithelialization achieved.

**Day 0 – Procedure Day**









## Dr. Bednarz's concluding remarks:

*" This patient was recommended a BKA in light of his wound and vascular status. With aggressive excisional debridement and wound care with immediate application of a collagen dressing, we were able to save the limb. The availability of **bio-ConneKt® Wound Matrix** was key in avoiding amputation, and this patient now (>1 yr) enjoys a normal life. "*

# bio-ConneKt® Wound Matrix

## 5 Differentiating Features

The bio-ConneKt® Wound Matrix is a next generation, all biologic, FDA 510(k) cleared wound dressing. It is comprised of reconstituted Type I collagen that is stabilized, sterilized to SAL $10^{-6}$, and stored at room temperature.

- **Hydrophilic scaffold to facilitate rapid fluid absorption (0.5cc per sq. cm. of surface area)**
- **Stabilized collagen to prevent premature digestion in wound bed**
- **Porous matrix to enable optimal host cell infiltration**
- **Easily conformable to ensure maximum contact with wound bed**
- **Material designed to minimize repeat applications**

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