

# InnovaMatrix™ AC

*Case Study*



## *Surgical Wound Secondary to Osteomyelitis*

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**Triad Life Sciences®** is a biotech company dedicated to increasing patient access to innovative, reliable and affordable technologies that address acute, traumatic, and chronic wounds, surgical applications, soft tissue injuries, and other regenerative applications.



**Products Used:**  
**InnovaMatrix™ AC**

**Wound Type:**  
Surgical Wound Secondary to  
Osteomyelitis

**Applications:** Five  
**Time to Close:** Nine weeks

**Patient and Diagnosis:**

A 63-year-old female initially presented as an inpatient consult for a right ankle wound with infection. The patient was treated 20+ years ago for an ankle fracture with ORIF. Approximately eight months prior to presenting with the ankle wound, she underwent a total shoulder replacement. Initial presentation was a large lateral ankle abscess with multiple wounds, and an MRI revealed osteomyelitis of the fibula and infected hardware. The patient was diagnosed with a Wagner 3B wound with depth to bone and osteomyelitis.

**Comorbidities:**

Peripheral Artery Disease, Peripheral Vein Disease, Venous Stasis, Neuropathy, Smoking

**Prior Treatment History:**

Patient had prior treatment at a wound care clinic and a long-term care facility. The treatment consisted of basic saline and betadine cleaning and IV antibiotics. The wound continued to deteriorate, and she was admitted for the inpatient consult.

Initial procedure was performed for irrigation and debridement (I&D) of the ankle. All infected hardware was removed, a biopsy of the fibula was collected, which confirmed osteomyelitis, and antibiotic beads were placed. Additional I&D was required to remove all necrotic tissue and osteomyelitis. The debridement left a large void secondary to the excised tissue and roughly 8-10cm of the distal fibula was excised, leaving the lateral malleolus intact. Antibiotic cement was placed in the void, followed by placement of a full-thickness dermal graft over the wound with a wound vac. External fixation was also applied to help stabilize the ankle and to prevent either an equinus or valgus deformity, and the patient continued IV antibiotic treatments.

Once successful osteomyelitis treatment was completed approximately eight weeks later, the patient underwent the surgical removal of the external fixator device and a successful TTC fusion, during which time InnovaMatrix AC was applied to the wound in the OR. Wound vac therapy and collagen dressings were continued until the wound was amenable for grafting in the office.

**Wound Treatment and Outcome:**

During the first post-operative office visit, the wound was cleaned and measured 6.5cm in length and 3.5cm in width (*Image 1*). InnovaMatrix AC was placed on the wound, followed by the placement of a non-adhering bandage and a secondary dressing. Two weeks later, the same steps were followed for the next application of InnovaMatrix AC on the wound, which now measured 5cm in length and 3cm in width (*Image 2*). The fourth application of InnovaMatrix AC was placed in similar fashion two weeks later with the wound having decreased in size to 2.5cm in length by 2.5cm in width (*Image 3*). Another two weeks later, a fifth application of InnovaMatrix AC was placed on the wound, which had decreased in size to 0.8cm in length by 0.6cm in width (*Image 4*). During the patient's fifth follow-up visit two weeks later, the wound was completely healed (*Image 5*).



Image 1:  
Measurements during the first post-operative treatment were 6.5cm x 3.5cm



Image 2:  
Measurements at the second post-operative treatment were 5cm x 3cm



Image 3:  
Measurements at the third post-operative treatment were 2.5cm x 2.5cm



Image 4:  
Measurements at the fourth post-operative treatment were 0.8cm x 0.6cm



Image 5:  
Wound closure achieved by the fifth post-operative visit



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