

# Experience with a Negative Pressure Wound Therapy Peel and Place Dressing in Lower Extremity Wounds

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## Introduction

- The application of negative pressure wound therapy to support healing of lower extremity wounds is well-documented.<sup>1</sup>
- A recently available multilayer peel and place dressing (MPPD) incorporates a perforated non-adherent layer, reticulated open cell foam dressing, and a hybrid acrylic and silicone drape, which enable it to be placed over the wound and surrounding intact skin.

## Purpose

- In this case series, we report the outcomes of application of NPWT with MPPD\* in 4 patients with lower extremity wounds.

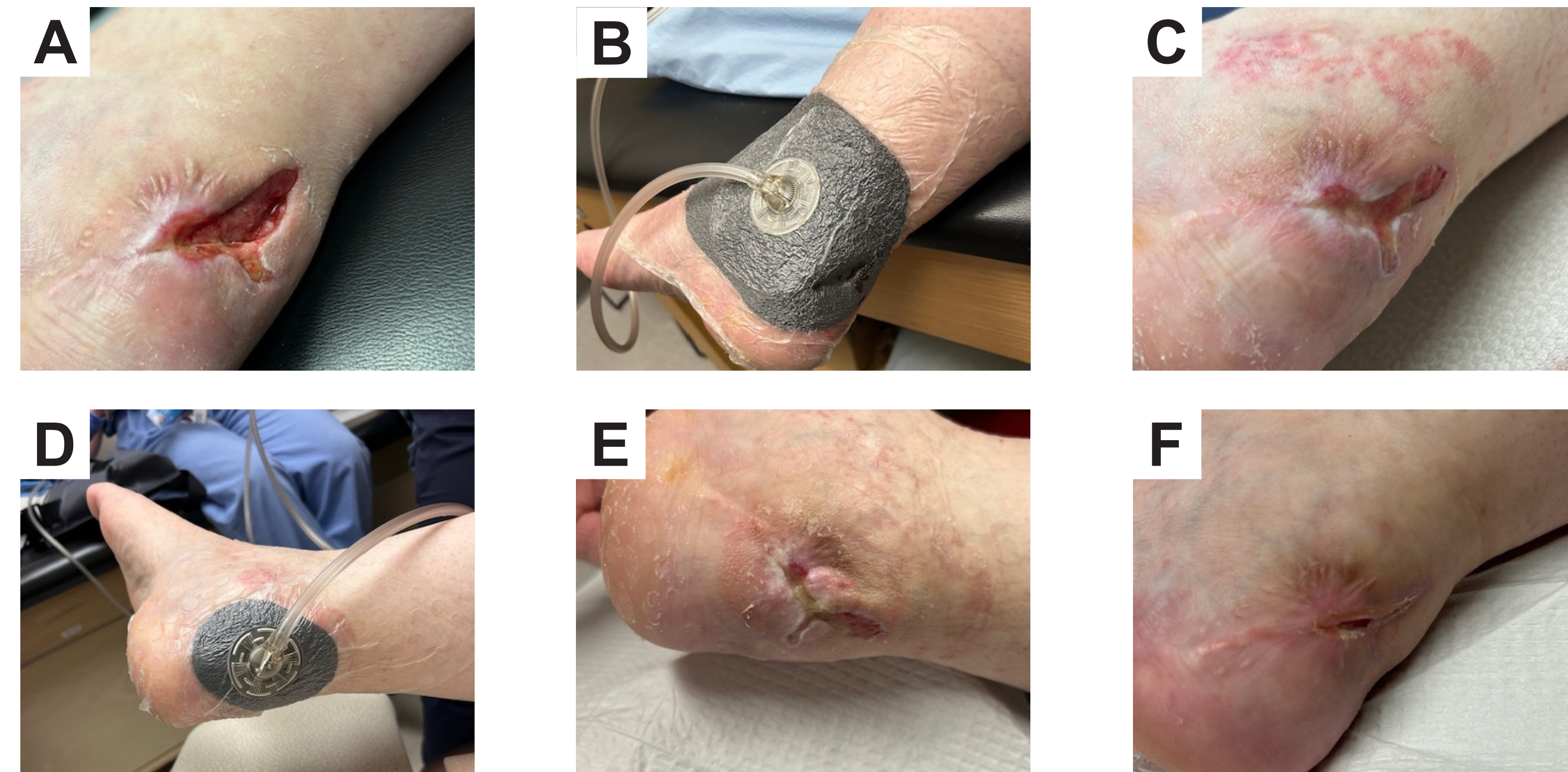
## Methods

- Deidentified data was collected after obtaining informed patient consent and stored in accordance with federal regulations.
- Patients had injuries to the foot or lower leg and received NPWT with MPPD at -125 mmHg for 10-21 days.
- Dressings were changed every 5-7 days.

## Results

- Three male and one female patient, ages 28 to 77 years old, were included in the study.
- Wound etiologies included surgical wounds, a traumatic injury, and a decubitus ulcer.
- After 10-21 days of therapy, the wounds showed notable improvement and there was a significant reduction of periwound edema.
- Patient outcomes are shown in **Figures 1-4**.

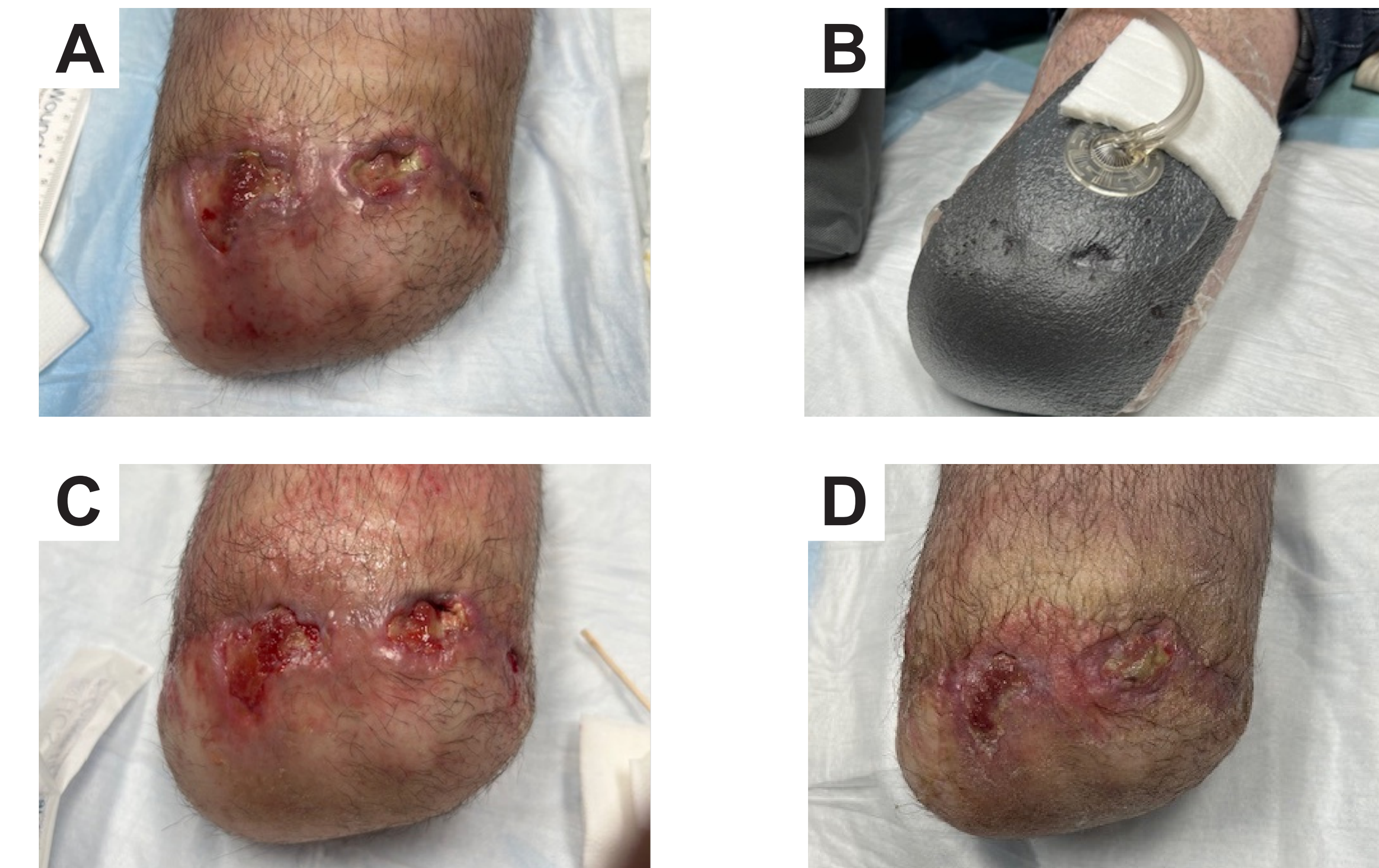
## Representative Cases



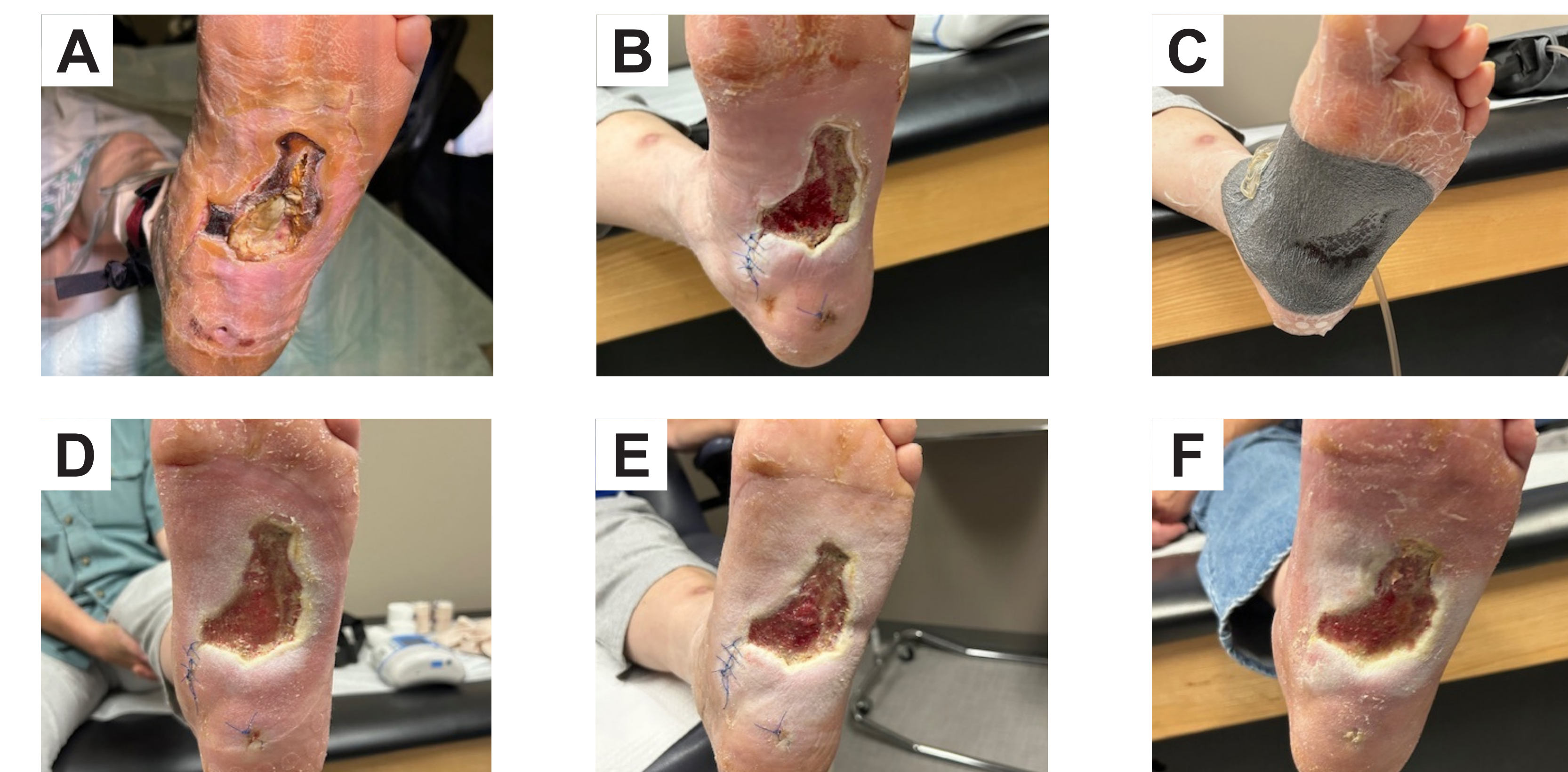
**Figure 1.** A 40-year-old female with a history of chronic Achilles tendinopathy of the right foot underwent staged repair including adjunct anchor hardware removal. Primary closure was not possible. A) Initial presentation. B) Application of NPWT with MPPD. C) Appearance at first dressing change. D) Application of NPWT with smaller MPPD. E) Appearance at second dressing change. F) Resolution of wound after discontinuation of NPWT.



**Figure 3.** A 77-year-old male presented with a lawnmower blade laceration in the left medial calf, and was referred for advanced wound care. The wound underwent initial debridement before NPWT. A) Initial presentation. B) Application of NPWT with large MPPD. C) Appearance at first dressing change. D) Application of NPWT with MPPD. E) Appearance at second dressing change. F) Appearance at third dressing change; therapy goals met and NPWT discontinued.



**Figure 2.** A 28-year-old male presented with a long history of posttraumatic arthritic deformity of the lower leg and foot. A below knee amputation was elected after unsuccessful reconstruction. Delayed surgical healing occurred. A) Initial presentation. B) Application of NPWT with large MPPD. C) Appearance at first dressing change. Pressure increased to -150 mmHg. D) Appearance after second dressing change.



**Figure 4.** A 65-year-old male presented with a severe foot infection resulting from a puncture wound and retained foreign body. He was found to be diabetic previously undiagnosed with vasculopathy. A) Initial presentation B) Appearance after emergent debridement and foreign body removal, followed by 1 week of NPWT with intillation and dwelling.<sup>†</sup> C) Application of NPWT with MPPD. Appearances shown at first (D), second (E), and third (F) dressing changes.

## Results (cont'd)

- We observed no periwound maceration in 3 patients.
- In the fourth, maceration was noted at the first dressing change and resolved after negative pressure was increased to -150 mmHg.

## Discussion

- We have found it beneficial to consider this dressing for every patient as their wound(s) move through the healing continuum based on trajectory and disposition.
- We have also found it occasionally beneficial to step down in dressing size incrementally, or less commonly, step up in size based on trajectory and disposition.
- Trimming and shaping of drape was helpful with challenging anatomy and in avoiding circumferential drape application.
- Pay attention to the minimum and maximum wound sizes and depths for each dressing.

## Conclusions

- The new NPWT dressing performed as expected, removing exudate and creating an environment conducive to wound healing.
- Application of the MPPD dressing was quick and easy, requiring only minimal trimming or shaping of the drape.

## References

1. Capobianco CM, Zgonis T. An overview of negative pressure wound therapy for the lower extremity. *Clin Podiatr Med Surg*. 2009;26(4):619-631.