



# Human Keratin Hydrogel Matrices Assist Wound Healing in Non-healing Ulcers



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## Background

Chronic wounds can arise from various sources, exacerbated by age or conditions such as diabetes. Such non-healing wounds do not respond to standard-of-care treatments, which can lead to further complications. Novel biomimetic wound dressings have been



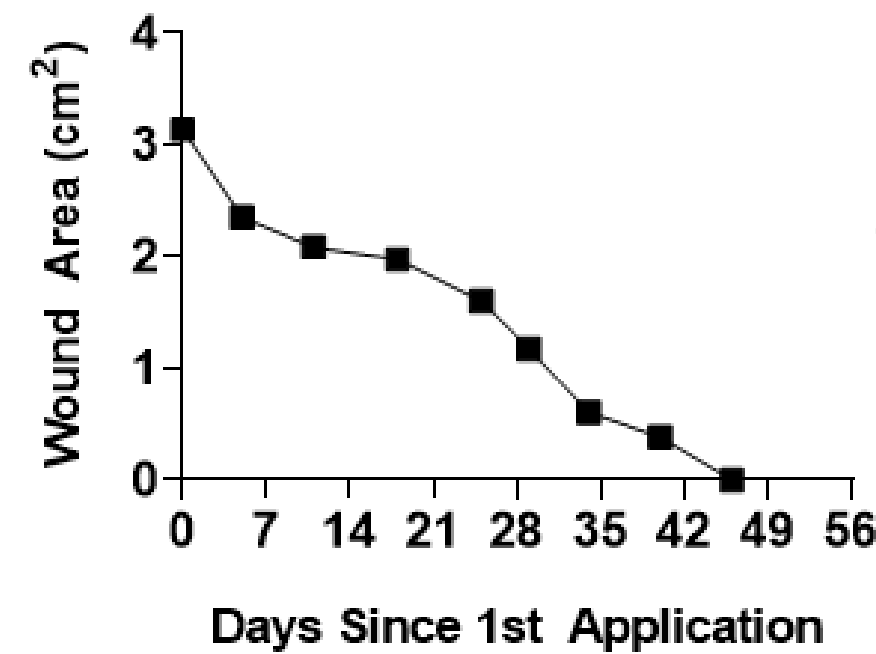
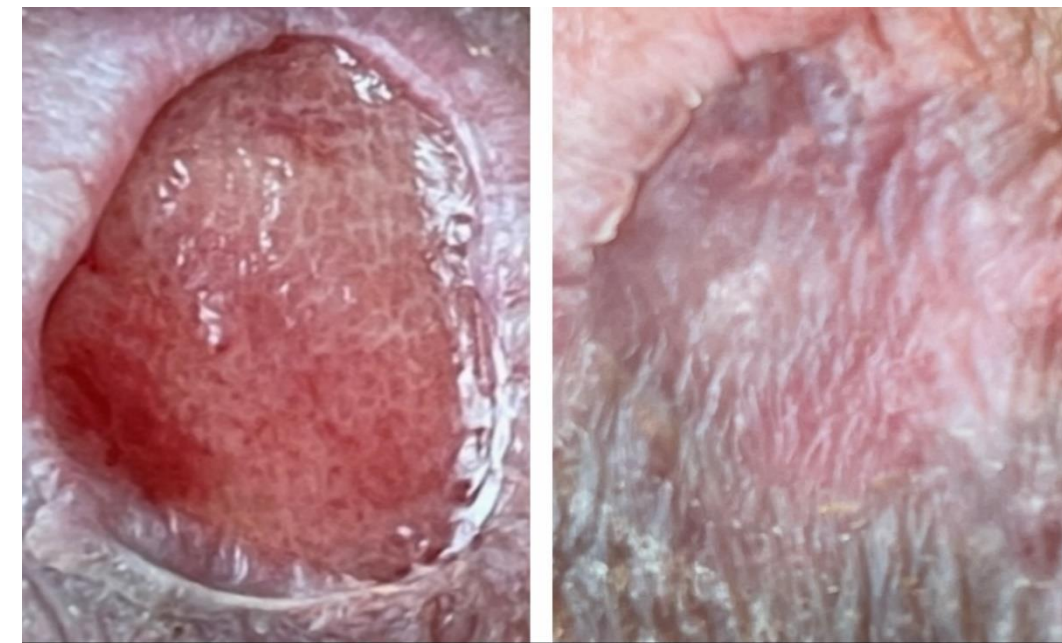
ProgenaMatrix™, the first 510(k) cleared human keratin skin substitute.

developed to protect these wounds and assist in their closure. Recently, ProgenaMatrix™, a human keratin hydrogel matrix has been shown to resolve non-healing extremity wounds in a wound care setting. In this case series, ProgenaMatrix™ was evaluated in diverse non-healing wounds in a dermatology office setting.

## Methods

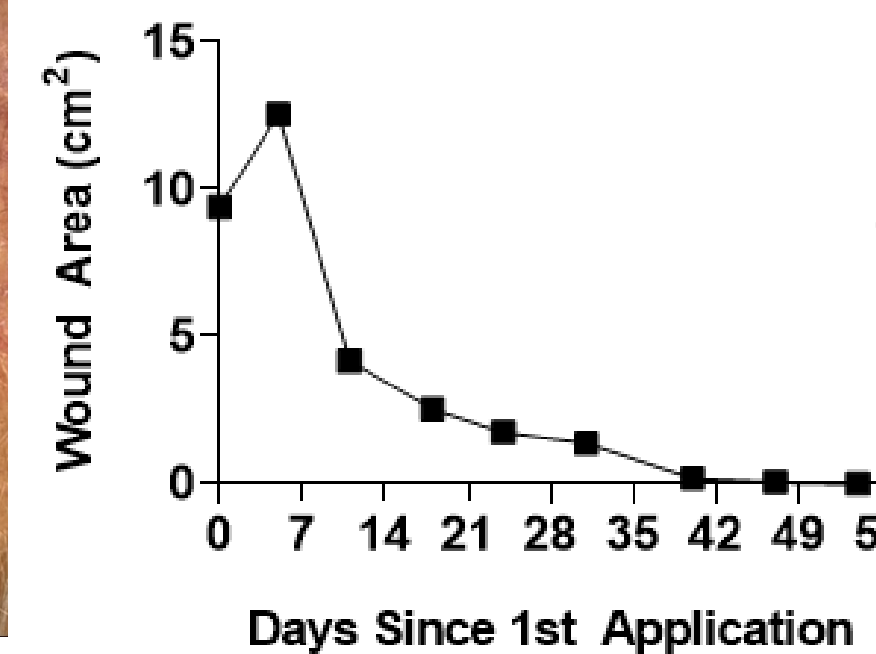
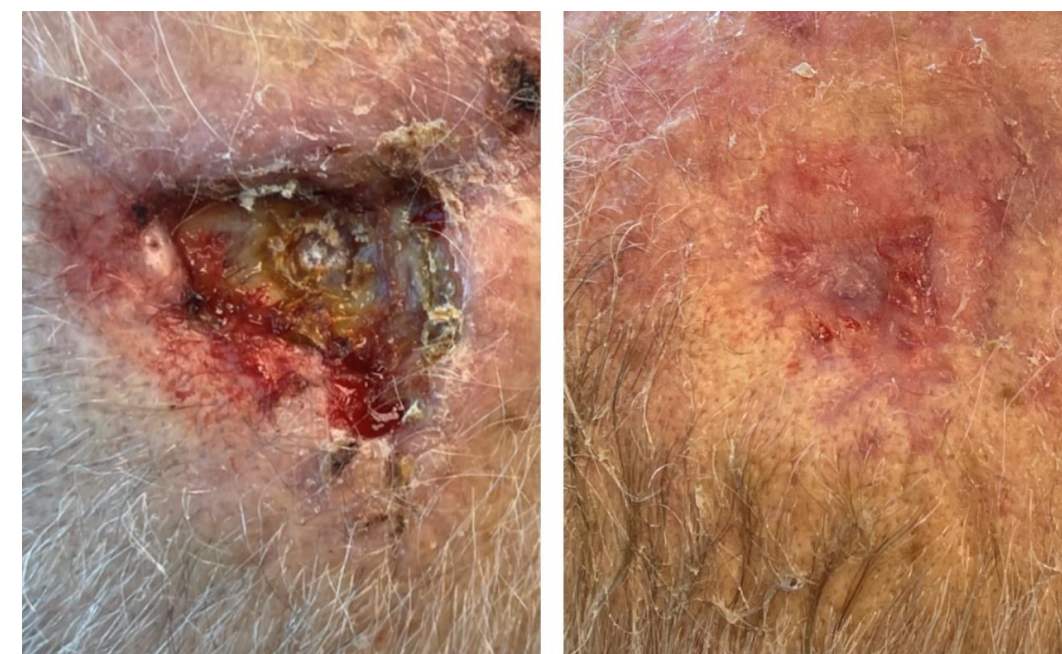
One female and four male patients >65 years old were enrolled with wounds that had not healed following a month of standard of care treatment. Wounds were cleaned, debrided, and dressed with ProgenaMatrix™ weekly until closure. Wounds area was approximated as an ellipse from weekly wound measurements. Aggregate data is reported as mean ± standard deviation.

## Sacral Decubitus Ulcer



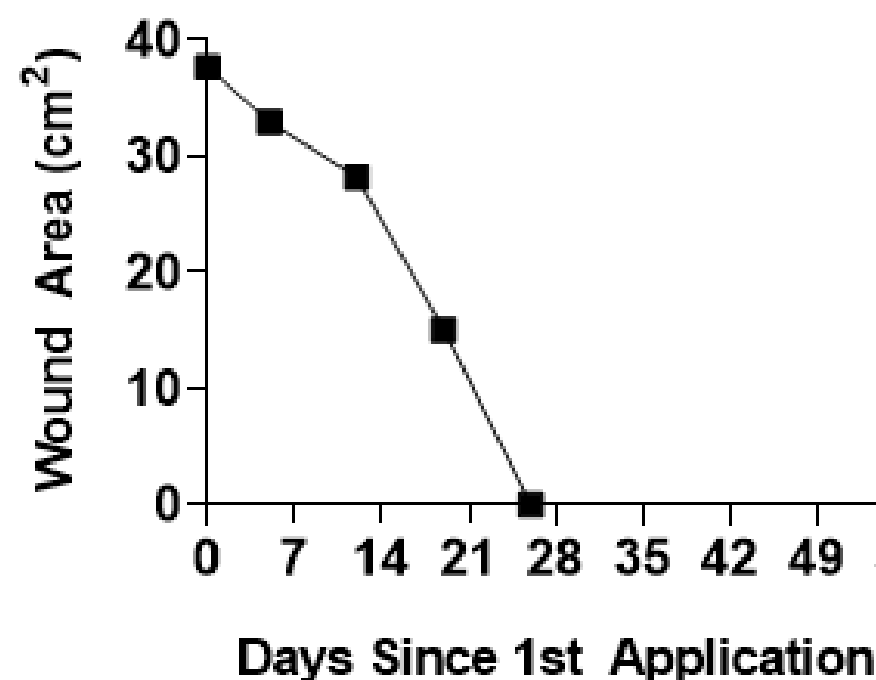
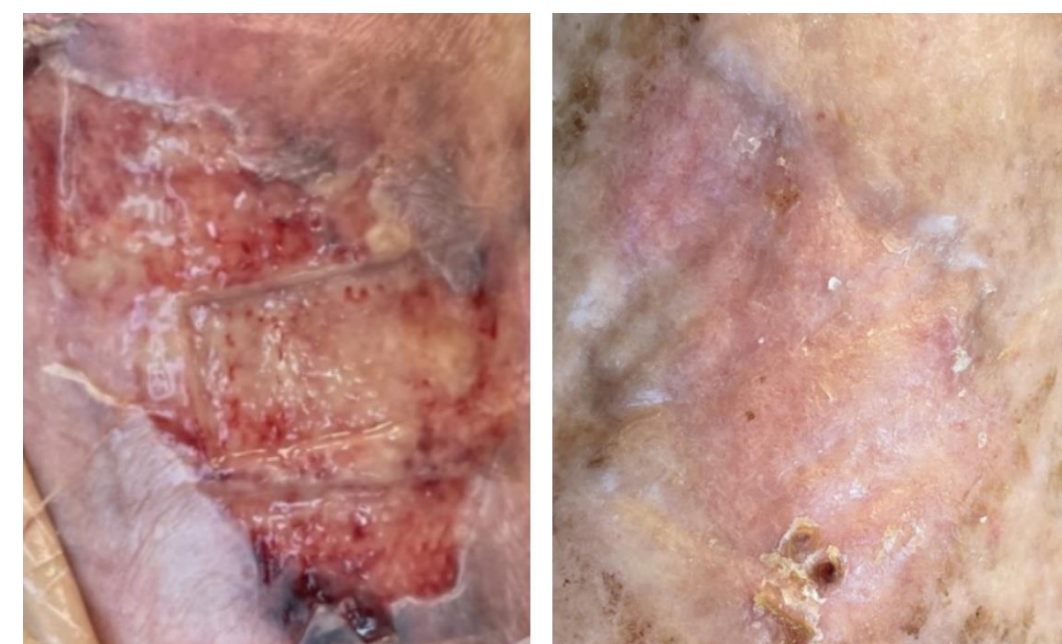
**75 y/o Male**  
Initial Wound Size  
2x2 cm  
Time to Heal  
46 Days

## Posterior Scalp Ulcer



**89 y/o Male**  
Initial Wound Size  
4x3 cm  
Time to Heal  
54 Days

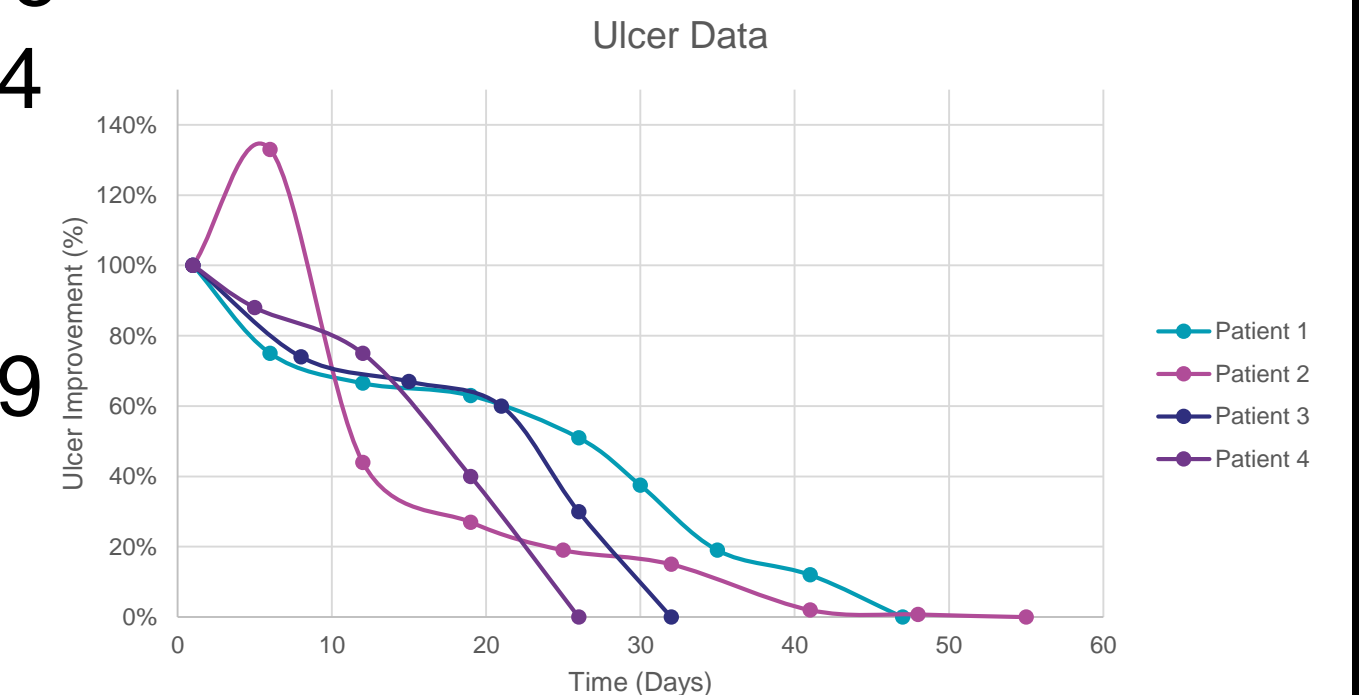
## Left Pretibial Traumatic Ulcer



**92 y/o Female**  
Initial Wound Size  
8x6 cm  
Time to Heal  
26 Days

## Results

Ulcers in this case series were healed between 26 days to 54 days with the application of ProgenaMatrix™. Complete closure was observed after 39 ± 13 days and an average of six product applications six days apart. The sacral decubitus ulcer measured at 2.0 x 2.0 cm and healed after eight applications, as did the ulcer on the posterior scalp with an initial size of 4.0 x 3.0 cm. The 3.0 x 2.0 cm traumatic ulcer located on the left pretibial (not pictured) cleared after five applications, and another post-trauma ulcer located on the left shin (6.0 x 8.0 cm), cleared after only 4 applications.



## Conclusions

In this series of four patients, all ulcers healed completely and quickly. Patients were subjectively very satisfied with these results. The most rapid healing occurred in the largest and the longest healing time occurred in the scalp wound that was the deepest. These results suggest keratin wound dressings, such as ProgenaMatrix™, can assist wound healing in the dermatology clinic.