

# Interim Analysis of Stage 4 Pressure Injuries Treated Following Proposed Pressure Injury Treatment Protocol Using Decellularized Extracellular Matrix Graft

Abigail Chaffin<sup>1</sup>, MD, FACS, CWSP, MAPWCA & Michael N. Desvigne<sup>2</sup>, MD, FACS, CWS, FACCWS

<sup>1</sup>Department of Plastic Surgery, Tulane University, New Orleans, LA, USA; <sup>2</sup>Department of Plastic Surgery, Abrazo Arrowhead Hospital, Glendale, AZ, USA

## INTRODUCTION

The burden of pressure injuries (PI) remains a substantial problem with over 1 in 10 adults patients admitted to hospitals affected with PIs [1]. As of 2011 it was estimated that the cost of treating a stage 4 PI and its related complications was \$129,248. Additionally, the average 6 month post operative healing rates for a stage 4 PI is 31-34% and the post operative complication rate after flap reconstruction is reported to be 58.7. Herein we present the use of an ovine forestomach matrix (OFM) graft in PI reconstruction. OFM is an intact extracellular matrix graft that has demonstrated an ability to modulate tissue proteases [3], promote angiogenesis [4] and is resilient in contaminated wounds [5-7]. The authors hypothesize that the addition of OFM would decrease post operative complications improve outcomes in PI reconstruction.

## METHODS

This is a multicenter retrospective case series analyzing Stage 3 and Stage 4 PI soft tissue reconstructions in which OFM was utilized per the published treatment algorithm [8]. Patients were followed up with after application and until wound closure or a healed surgical incision. This interim report highlights outcomes of twelve patients from the cohort (n=12)

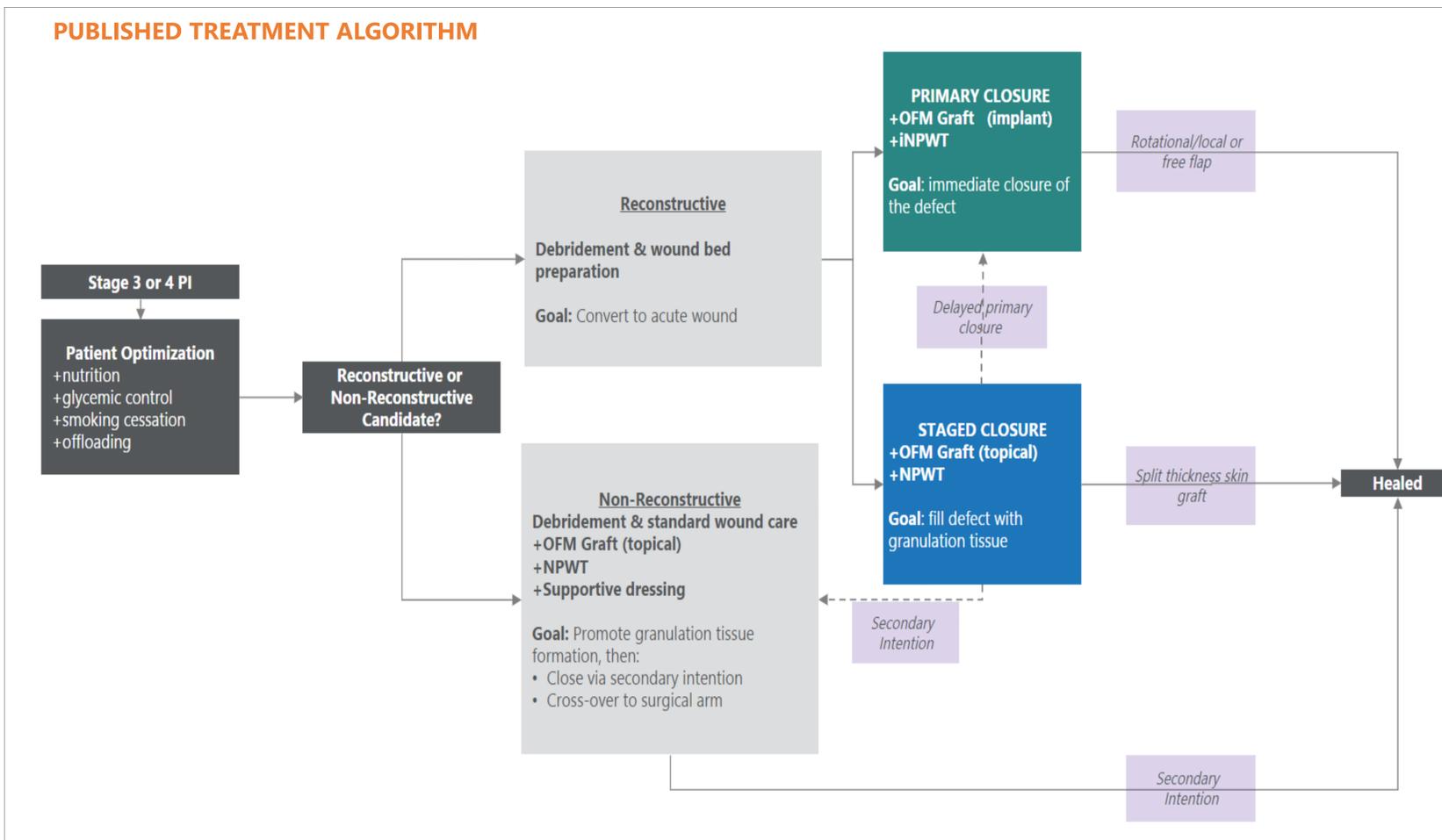
## INTERIM RESULTS

Eleven patients presented with a Stage IV PI and one was a Stage III. There were 8 males and 4 females. Nine patients underwent a flap surgical reconstruction with the use of OFM as an implant and three underwent placement of OFM onto the wound with a goal of healing by secondary intention or split thickness skin graft (STSG). All nine flap reconstruction patients had healed surgical incisions with no significant post operative complications. One patient had a STSG applied by week six and fully epithelialized by week nine. One patient had a STSG applied by day 9 and fully epithelialized by week 3, salvaging her limb.

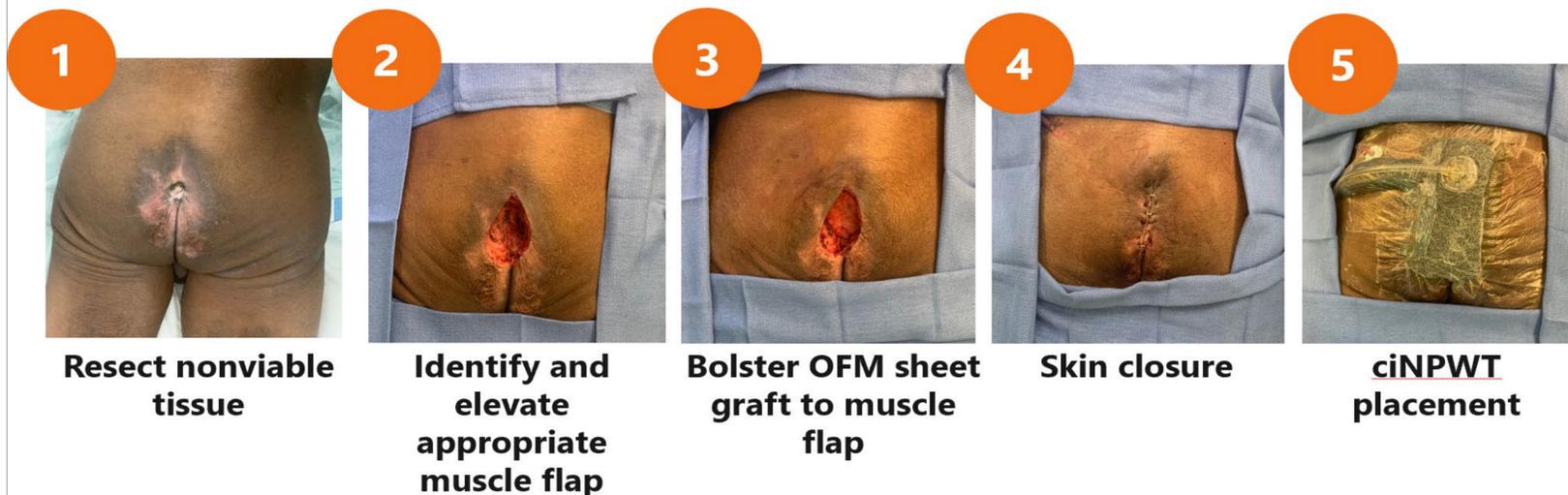
## REFERENCES AND DISCLOSURES

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## PUBLISHED TREATMENT ALGORITHM



## RECONSTRUCTIVE IMPLANT TECHNIQUE



## CONCLUSION

A reproducible surgical algorithm utilizing advanced biologic technology, such as OFM, may assist in accelerated healing and lower complication rates of late-stage pressure injuries.

The impending full analysis of the full retrospective cohort among other studies will further validate these promising results.

## Case Example : 25-year-old male with recurrent Stage IV PI and concurrent osteomyelitis. Had previous flaps

