

Retrospective Real World Comparative Effectiveness of Ovine Forestomach Matrix and Collagen/Oxidized Regenerated Cellulose in the Management of Diabetic Foot Ulcers

¹Brandon A. Bosque, DPM; ²Christopher Frampton, PhD; ³Abigail E. Chaffin, MD; ⁴Gregory A. Bohn, MD; ⁵Kevin Woo, PhD; ⁶Candace DeLeonardis, MBA; ⁷Brian D. Lepow, DPM; ⁸M. Mark Melin, MD; ⁹Tobe Madu, PhD; ¹Shane G. Dowling, MSPAS; ¹Barnaby C. H. May, PhD

INTRODUCTION

Deciphering the relative efficacy of various treatment modalities for diabetic foot ulcers (DFUs) has proven to be challenging. Retrospective real-world evidence (RWE) studies have emerged as an innovative method to evaluate treatment efficacy in challenging cohorts that otherwise might be excluded in strictly designed randomized controlled trial. This retrospective pragmatic RWE study compared the healing outcomes of diabetic foot ulcers treated with either ovine forestomach matrix (OFM)* or collagen/oxidized regenerated cellulose (ORC)^

METHODS

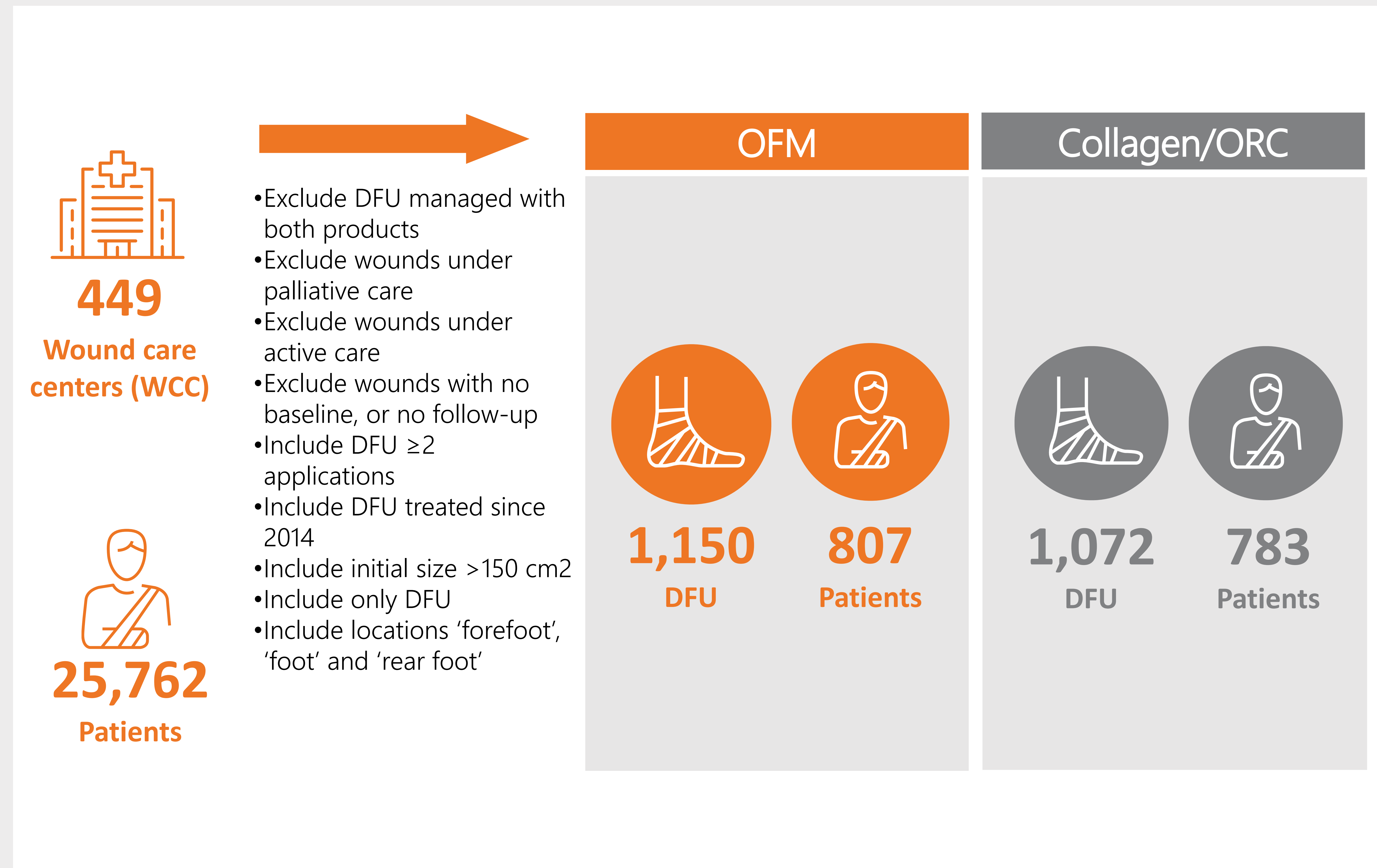
Data was extracted from a wound database from 2014 to 2020, representing 449 wound care centers (WCC) across the United States. Data was extracted from a pool of 31,883 wounds and filtered based on the inclusion and exclusion criteria. The median time to wound closure and the percentage of wounds closed at standard time intervals were estimated using the Kaplan-Meier method, and probability of closure by Cox proportional hazards analysis. Sub-group analysis was conducted based on the number of WCC applications.

REFERENCES AND DISCLOSURES

Bosque, B. A., C. Frampton, A. E. Chaffin, G. A. Bohn, K. Woo, C. DeLeonardis, B. D. Lepow, M. M. Melin, T. Madu, S. G. Dowling and B. C. H. May (2021). "Retrospective real-world comparative effectiveness of ovine forestomach matrix and collagen/ORC in the treatment of diabetic foot ulcers." *Int Wound J* 2021 Aug 6; doi/10.1111/iwj.13670. Funding for the study was provided by Aroa Biosurgery Limited. * =Endoform™ Natural. ^ =Promogran (KCI/3M).

AFFILIATIONS

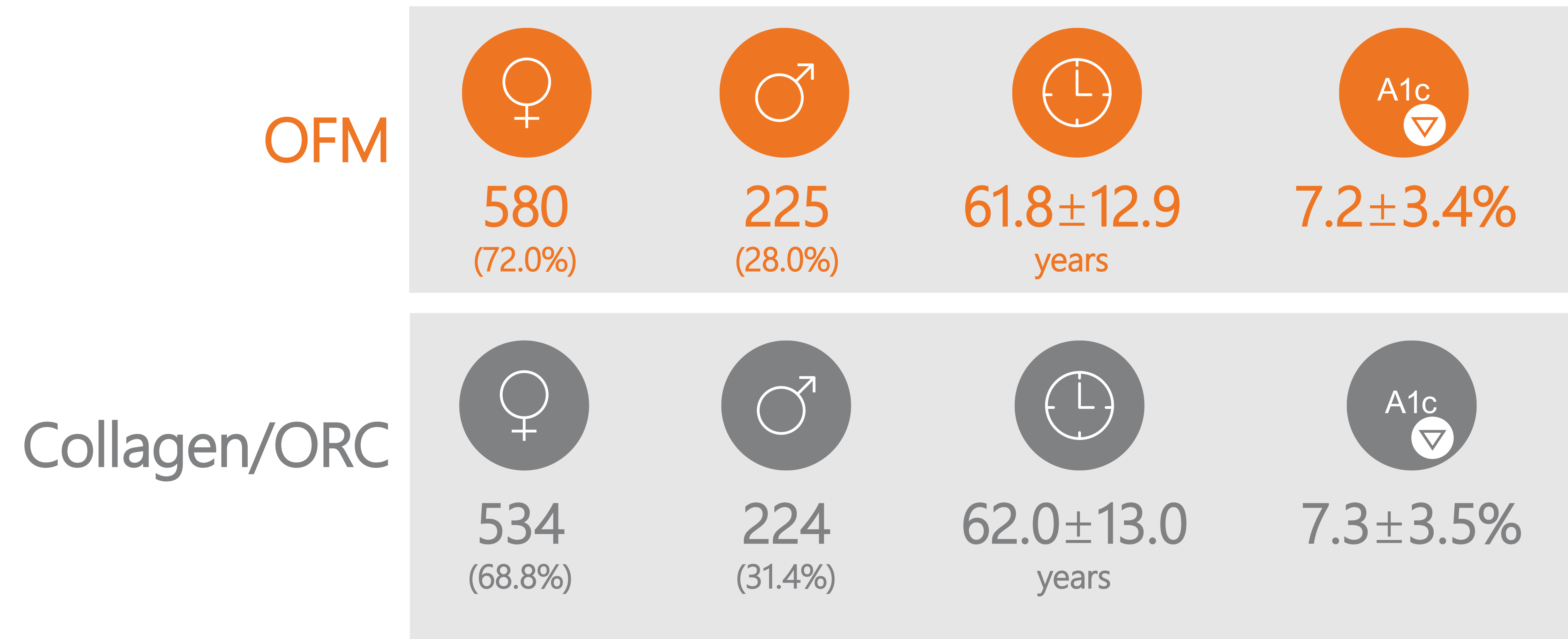
¹Aroa Biosurgery Limited, Airport Oaks, Auckland, New Zealand; ²Department of Psychological Medicine (Christchurch), Otago University, Christchurch, New Zealand; ³Division of Plastic and Reconstructive Surgery, Department of Surgery, Tulane University School of Medicine, New Orleans, Louisiana, USA; ⁴Department of Surgery, Central Michigan University, Tawas City, Michigan, USA; ⁵Queen's School of Nursing, Queen's University, Toronto, Canada; ⁶DSA Health, Tampa, Florida, USA; ⁷Division of Vascular Surgery and Endovascular Therapy, Baylor College of Medicine, Houston, Texas, USA; ⁸M Health Fairview Wound Healing Institute, South Campus, Department of Vascular Surgery, University of Minnesota, Edina, Minnesota, USA; ⁹Tissue Analytics, a Net Health Company, Pittsburgh, Pennsylvania, USA.



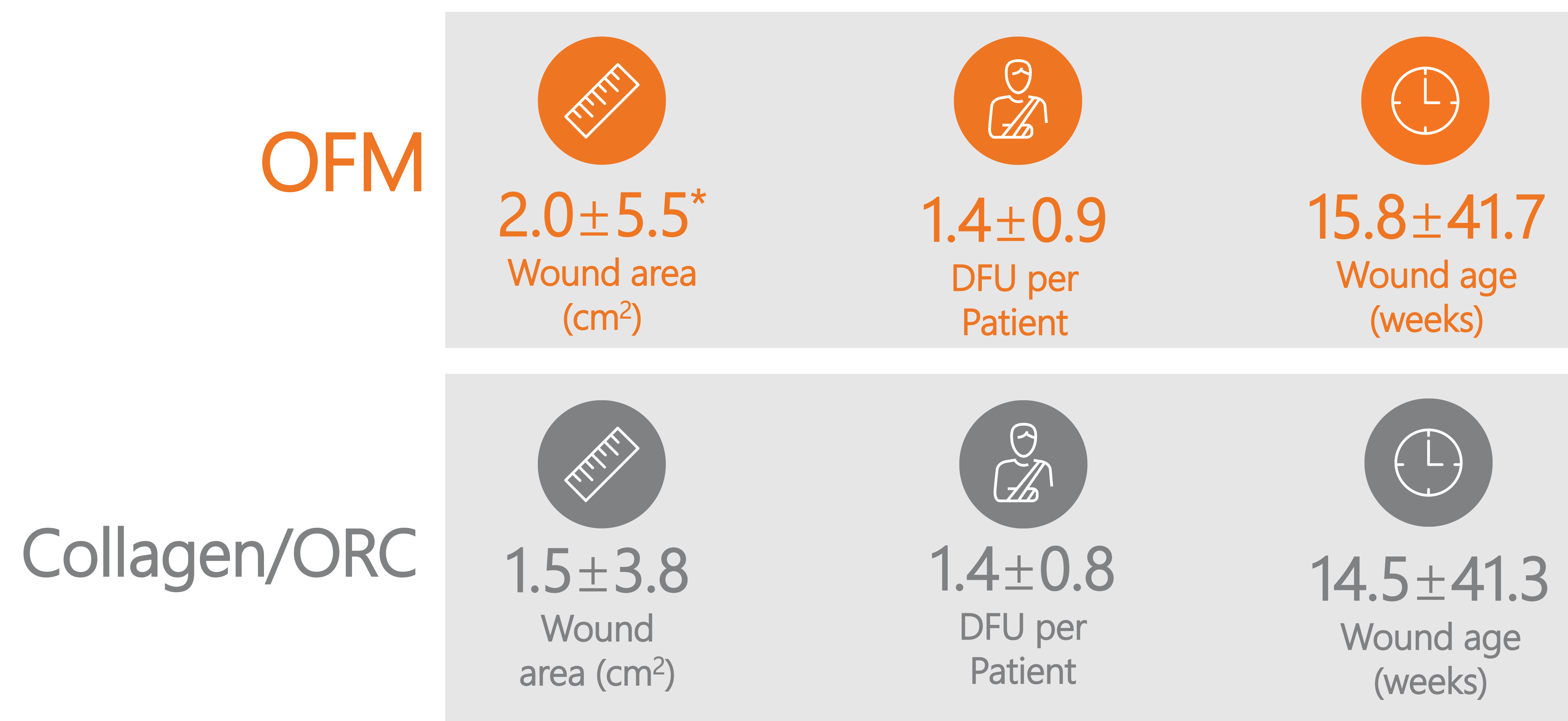
Retrospective Real World Comparative Effectiveness of Ovine Forestomach Matrix and Collagen/Oxidized Regenerated Cellulose in the Management of Diabetic Foot Ulcers

¹Brandon A. Bosque, DPM; ²Christopher Frampton, PhD; ³Abigail E. Chaffin, MD; ⁴Gregory A. Bohn, MD; ⁵Kevin Woo, PhD; ⁶Candace DeLeonardis, MBA; ⁷Brian D. Lepow, DPM; ⁸M. Mark Melin, MD; ⁹Tobe Madu, PhD; ¹Shane G. Dowling, MSPAS; ¹Barnaby C. H. May, PhD

RESULTS – PATIENT DEMOGRAPHICS



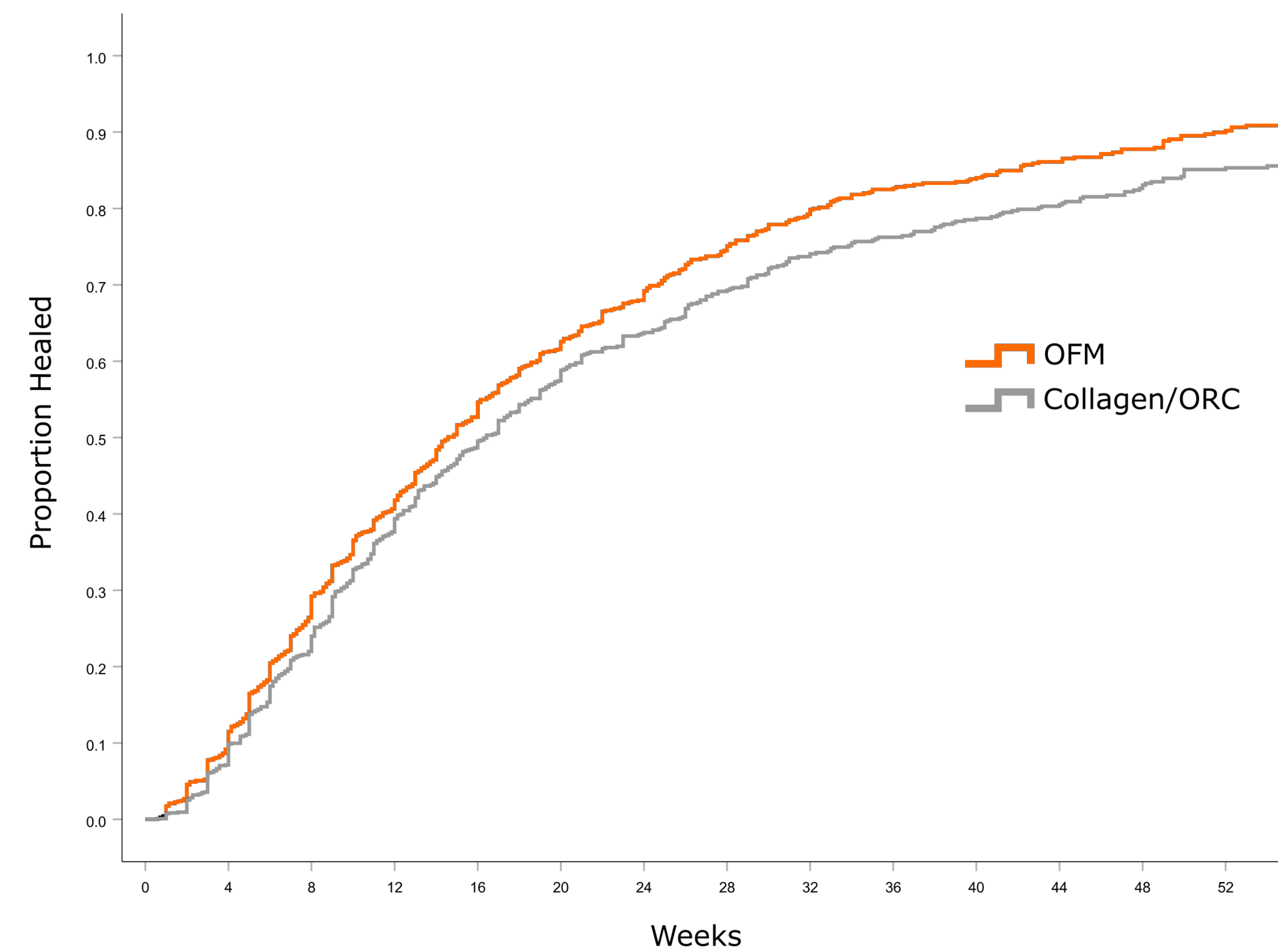
RESULTS - BASELINE WOUND CHARACTERISTICS



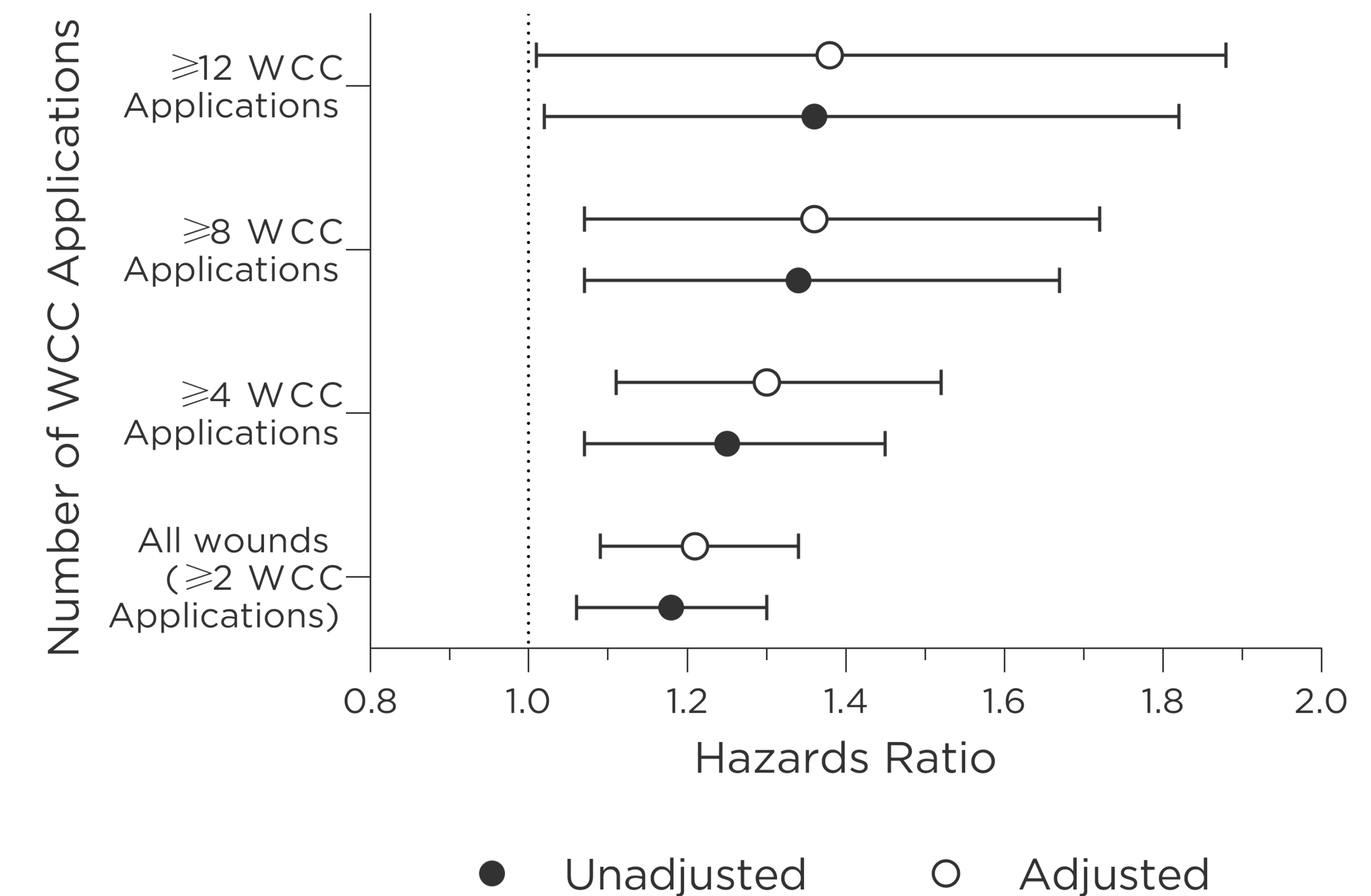
Retrospective Real World Comparative Effectiveness of Ovine Forestomach Matrix and Collagen/Oxidized Regenerated Cellulose in the Management of Diabetic Foot Ulcers

¹Brandon A. Bosque, DPM; ²Christopher Frampton, PhD; ³Abigail E. Chaffin, MD; ⁴Gregory A. Bohn, MD; ⁵Kevin Woo, PhD; ⁶Candace DeLeonardis, MBA; ⁷Brian D. Lepow, DPM; ⁸M. Mark Melin, MD; ⁹Tobe Madu, PhD; ¹Shane G. Dowling, MSPAS; ¹Barnaby C. H. May, PhD

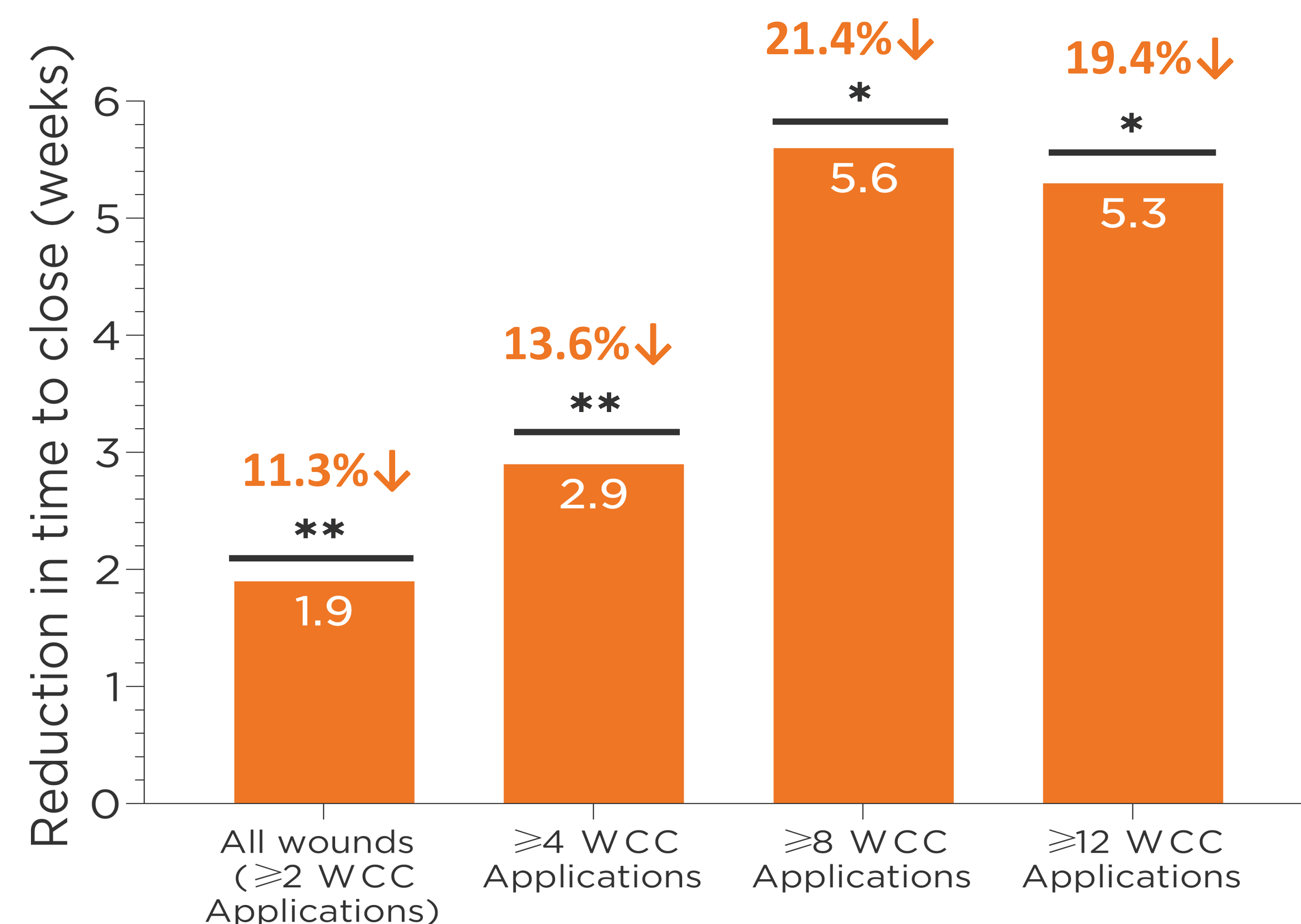
RESULTS – KAPLAN-MEIR SURVIVAL ANALYSIS



RESULTS – PROBABILITY OF CLOSURE



RESULTS - AVERAGE REDUCTION IN TIME TO CLOSE (WEEKS)



CONCLUSION

- First large-scale real-world evidence analysis demonstrates that the use of OFM reduced the median time to closure and increased the probability of closure of DFUs relative to wounds managed with collagen/ORC.
- This study further substantiates the growing body of evidence to support the use of Endoform as a first line intervention to improve wound closure rates.