AROA ECM™

Endoform™

Real-world Data Analysis

Endoform™ vs collagen/ORC for Diabetic Foot Ulcers (DFUs)

Overall, what did the analysis show[1]?

2,222
Total DFUs evaluated

Up to **5.6 weeks**
Faster closure
with Endoform Natural*

Up to **38%**
Increased probability of healing,
with Endoform Natural*

* vs collagen/ORC (oxidized regenerated cellulose)

Why a real-world data (RWD) analysis looking at DFUs?

- Randomised control trials (RCT's) create essential scientific evidence through carefully controlled study populations. However, their strict inclusion and exclusion criteria may not represent typical patient populations.[2]
- RWD analysis uses data from much larger study populations that can be more representative of routine clinical practice.[3]

DFUs are a growing global health crisis:

166M
Global diabetics at risk
of developing a DFU
over their lifetime[4]

1 in 6
Patients with a DFU
estimated to require a
lower limb amputation[5]

$9-13B
Estimated annual cost
and burden to the
US health care system[6,7]

Endoform™

Real-world Data Analysis

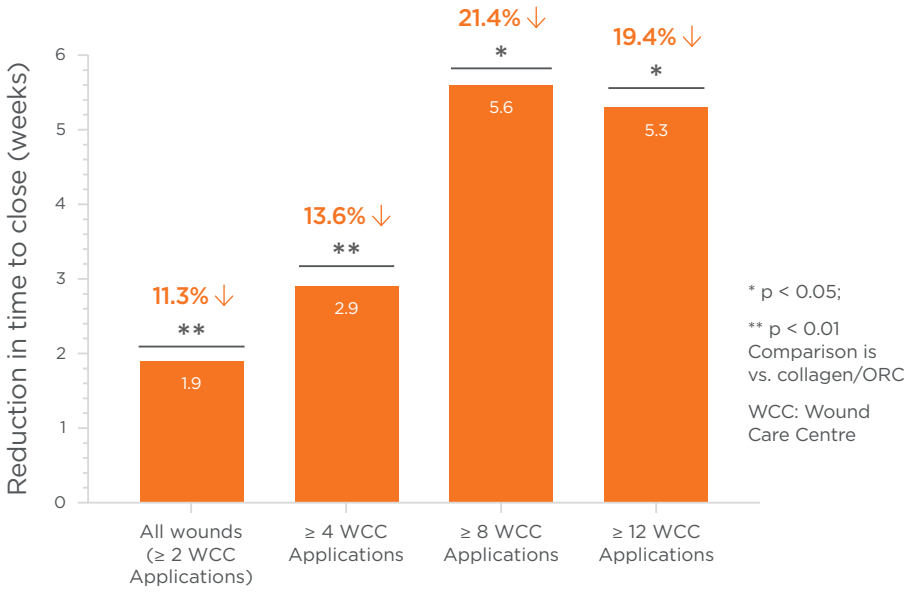
What was the RWD focused on?

- This RWD study compared the healing outcomes of DFUs managed with either **Endoform™ Natural** or collagen/ORC.
- Data was filtered to ensure two balanced and comparable cohorts. See right hand page for more information on the study design
- A subgroup analysis was conducted to understand outcome differences in DFUs that required more visits to the wound care centre (WCC), potentially indicating more challenging wounds to close.

Results:

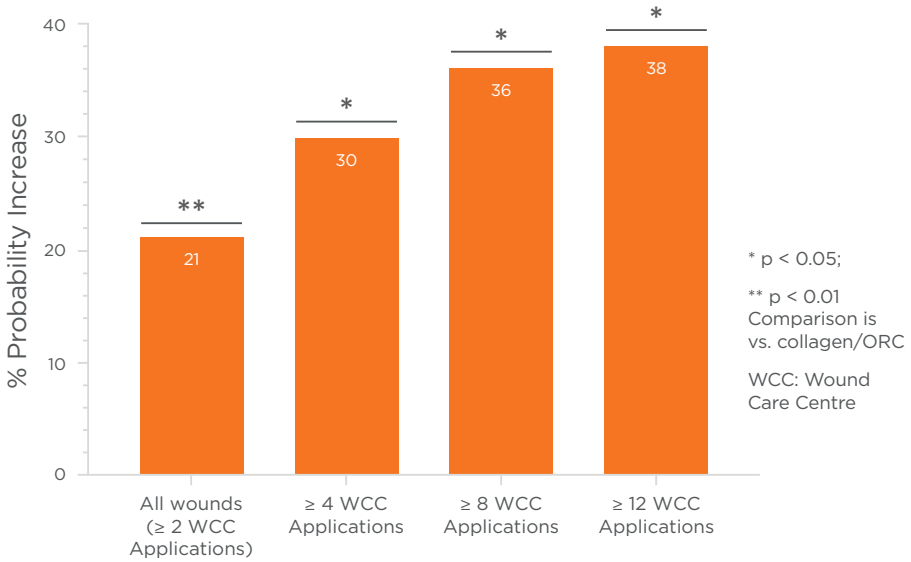
Time to DFU Closure:

Endoform-treated DFUs were shown to close faster than those treated with collagen/ORC, irrespective of the number of applications required in the wound care centre (WCC). In fact, DFUs closed up to 5.6 weeks (21.4%) faster with **Endoform**.



Probability of DFU Closure:

The probability of DFU closure increased by up to 38% higher in **Endoform** treated wounds.



Adjusted: adjusted to allow head-to-head comparisons for age, gender, initial wound size, and wound age.

This RWD study adds to the growing body of evidence to support the use of Endoform as a first-line intervention to help reduce the time to wound closure.

More information on the study background:

Objective:	• Retrospective comparative analysis of healing outcomes in DFUs using real-world data to compare Endoform and collagen/ORC • Primary study outcome was median time to DFU closure
Study Design:	Data filtering to derive **two comparable cohorts:**

449
Wound care centers (WCC)

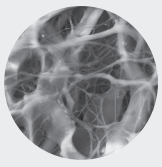
25,762
Patients

- Exclude DFU managed with both products
- Exclude wounds under palliative care
- Exclude wounds under active care
- Exclude wounds with no baseline, or no follow-up
- Include DFU ≥2 applications
- Include DFU treated since 2014
- Include initial size >150 cm^2
- Include only DFU
- Include locations "forefoot", "foot" and "rear foot"

Endoform Natural		Collagen/ORC	
1,150 DFU	**807** Patients	**1,072** DFU	**783** Patients

Baseline Characteristics:

- Comparable patient demographics with no statistical difference between study cohorts sex, age or HbA1c levels.
- Number of DFUs per patient and wound age were comparable, however **Endoform** treated wounds were statistically larger.



Endoform Natural

2.0 ± 5.5%* Wounded area (cm^2)	**1.4** ± .9% DFU/Patient	**15.8** ± 41.7% Wounded age (weeks)

Collagen/ ORC

1.5 ± 3.8%* Wounded area (cm2)	**1.4** ± 0.8% DFU/Patient	**14.5** ± 41.3% Wounded age (weeks)

* $p < 0.05$

Endoform™

Real-world Data Analysis

What is Endoform?

Endoform is an advanced extracellular matrix (ECM) indicated for the management of a wide range of acute and chronic wounds from Day 1. It delivers a scaffold for rapid cell infiltration as well as more than 150 ECM proteins that are important for healing.[8,9]

In the real-world analysis, DFU's managed with **Endoform** (ovine forestomach matrix) are compared to those managed with collagen/ORC. Below we see a comparative table of the compositional differences between the two products, and how they compare to human tissue ECM:

Product	Type of Technology	Collagen I	Collagen III	Collagen IV	Fibronectin	Elastin	Hyaluronic acid	Heparin sulphate	GAGs	Growth factors and cytokines	Basement Membrane	Residual Vascular Channels	Other Components	Source Tissue
Human tissue ECM	–	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	–	–
Endoform™ (8,9)	**ECM**	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	**None**	**Ovine forestomach**
Promogran™ (10,11,12)	Reconstituted collagen	✓											45% cellulose	Bovine hide

Promogram™ is a trademark of KCI USA, INC.

References

1. Bosque, B. A., et al (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 (Epub ahead of print).
2. Fife CE, Eckert KA, Carter MJ. Publicly reported wound healing rates: the fantasy and the reality. Adv Wound Care (New Rochelle). 2018;7 (3):77-94.
3. Monti, S et al. Randomized controlled trials and real-world data: differences and similarities to untangle literature data, Rheumatology, Volume 57, Issue Supplement_7, October 2018, Pages vii54–vii58
4. Armstrong, D.G., et al., Five year mortality and direct costs of care for people with diabetic foot complications are comparable to cancer. J Foot Ankle Res, 2020. 13(1): p. 16.
5. Boulton, A.J.M., et al., Diagnosis and Management of Diabetic Foot Complications, in Diagnosis and Management of Diabetic Foot Complications. 2018: Arlington (VA).
6. Rice, J.B., et al., Burden of diabetic foot ulcers for medicare and private insurers. Diabetes Care, 2014. 37(3): p. 651-8.
7. Barshes, N.R., et al., The system of care for the diabetic foot: objectives, outcomes, and opportunities. Diabet Foot Ankle, 2013. 4.
8. Lun, S. et al (2010). "A functional extracellular matrix biomaterial derived from ovine forestomach." Biomaterials 31(16): 4517-4529.
9. Dempsey SG et al. Functional Insights from the Proteomic Inventory of Ovine Forestomach Matrix. J Proteome Res. 2019 Apr 5;18(4):1657-1668.
10. Brett D. et al. A review of collagen and collagen-based wounds dressings. Wounds 2008;20:347-56.
11. Cullen et al. Mechanism of action of PROMOGRAN, a protease modulating matrix, for the treatment of diabetic foot. Wound Rep Reg 2002;10:16-25.
12. Wiegand C et al. A novel native collagen dressing with advantageous properties to promote physiological wound healing. J Wound Care. 2016;25(12):713-720.

RX Only. Prior to use, be sure to read the entire Instructions For Use package insert supplied with the product. Product information contained herein is for US customers. Consult your local sales representative for country specific information.

For product questions, sampling needs, or detailed clinical questions concerning our products in the US, please call 1-877-627-6224 or email customerservice@aroabio.com.

AROA™

Manufactured for:
AROA BIOSURGERY INC

7220 Trade Street, Suite 306, San Diego, CA 92121
1-877-627-6224
www.aroabio.com

MKT.1772.00 | January 2022