

# Treating Diabetic Foot Ulcer Patients with an Ovine Collagen Extra Cellular Matrix Prior to Cellular Tissue Products.

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## Introduction:

Diabetic foot ulcers are the most expensive type of chronic ulcer to heal; almost twice the cost of other ulcers.<sup>1</sup> Wound healing requires a balance of matrix metalloproteinases (MMPs) and tissue inhibitors of metalloproteinases (TIMPs). Diabetic foot ulcers were found to have excess MMPs and decreased TIMPs which may contribute to diabetic ulcers not healing.<sup>2</sup>

## Purpose:

Utilizing an ovine collagen that has an intact extra cellular matrix (CECM)<sup>3</sup> and broad spectrum MMP reducing ability<sup>4</sup> before turning to cellular tissue products (CTP), may reduce the cost of diabetic foot ulcer treatment and in some cases may eliminate the need to use CTP.

## Materials and Methods:

An elderly patient with multiple comorbidities and a previous diabetic foot ulcer, presented to the podiatrist office with a reopened right plantar ulcer. Ulcer was debrided and CECM treatment initiated while waiting for insurance approval of a cellular tissue product. CECM was applied according to instructions for use and was covered with a bordered foam dressing and changed every three days.

## Results:

Wound was debrided at the first visit. Post debridement wound measured 0.7cm x 0.4cm x 0.1cm, CECM dressing was initiated. Wound size progressively decreased and achieved 100% epithelization in eight weeks, before CTP was approved.

## Conclusions:

Ovine collagen is a wound dressing that has a native intact ECM and broad spectrum MMP reduction. Clinicians can use on day one usually without insurance approval to treat diabetic foot ulcers. CECM is classified with an "A" code under the surgical dressing policy and not a Q code, therefore prescribing clinicians can order product for patients in all care settings. Initial treatment with CECM prepares the wound bed by decreasing MMPs while providing an ECM. Utilizing a CECM dressing before turning to more expensive options offers clinicians a cost effective alternative to treat diabetic foot ulcers.

- REFERENCES
1. Fife, et al., (2012). Wound Care Outcomes and Associated Cost Among Patients Treated in US Outpatient Wound Centers: Data From the US Wound Registry. WOUNDS, Volume 24(1), 10-17-10-17.
  2. Lohmann, R., et al., (2002). Expression of matrix-metalloproteinases and their inhibitors in the wounds of diabetic and non-diabetic patients. Diabetologia, (45), 1011-1016-1011-1016. doi:10.1007/s00125-002-0868-8
  3. Endoform brochures, Hollister, Inc.
  4. Negroni L, Lun S, May BC. Ovine forestomach matrix biomaterial is a broad spectrum inhibitor of matrix metalloproteinases and neutrophil elastase. Int Wound J. 2012 Nov 1.



Day 1: Post debridement



Day 31



Day 9



Day 43



Day 16



Day 57