SAWC Spring | WHS

Innovation Theater Breakfast (non-CME)

EscharEx®, an Innovative Multimodal Enzymatic Debridement Agent for the Treatment of Chronic Wounds

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Robert J. Snyder DPM, MBA, MSc

John C. Lantis II, MD

Cyaandi R. Dove, DPM

MediWound

May 03, 2025; Grapevine, Texas

Agenda

Time	Title	Presenter
07:30-07:40	Welcome	
07:40-07:50	Wound bed preparation and healing	Vickie R. Driver
07:50-08:05	EscharEx - mechanism of action	Robert J. Snyder
08:05-08:15	EscharEx in VLU - case studies	Cyaandi R. Dove
08:15-08:30	VALUE phase III study design and status update	Vickie R. Driver
08:30-08:40	EscharEx in DFU - case studies	Cyaandi R. Dove
08:40-08:50	EscharEx in DFU - planned clinical study and post-hoc analyses from phase II	John C. Lantis
08:50-09:00	Q&A	

Speakers Disclaimers

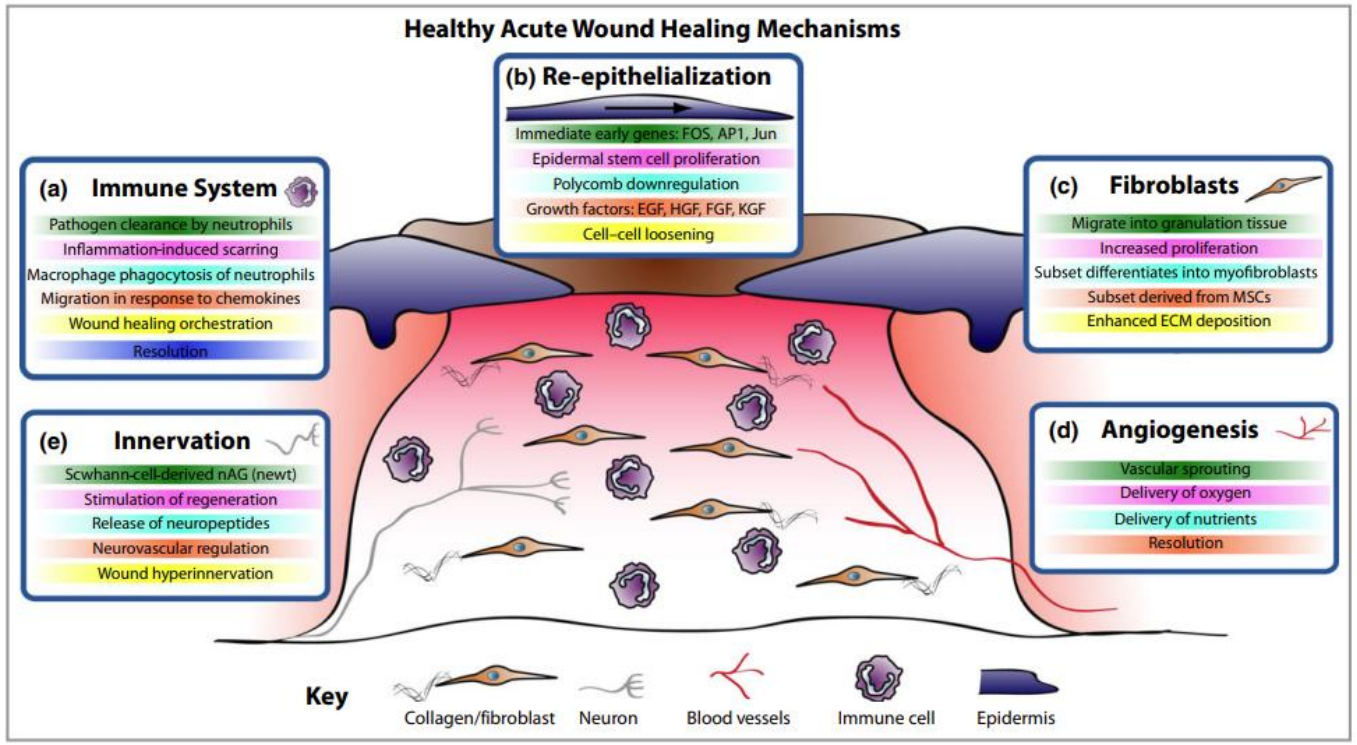
Speaker	Disclaimer
Vickie R. Driver	Chair of R&D committee at MediWound’s Board of Directors
John C. Lantis	Consultant and an investigator in ChronEx study
Cyaandi R. Dove	Consultant and an investigator in ChronEx and PharmEx studies
Robert J. Snyder	MediWound’s Chief Medical Officer

The importance of wound bed preparation in chronic wounds healing

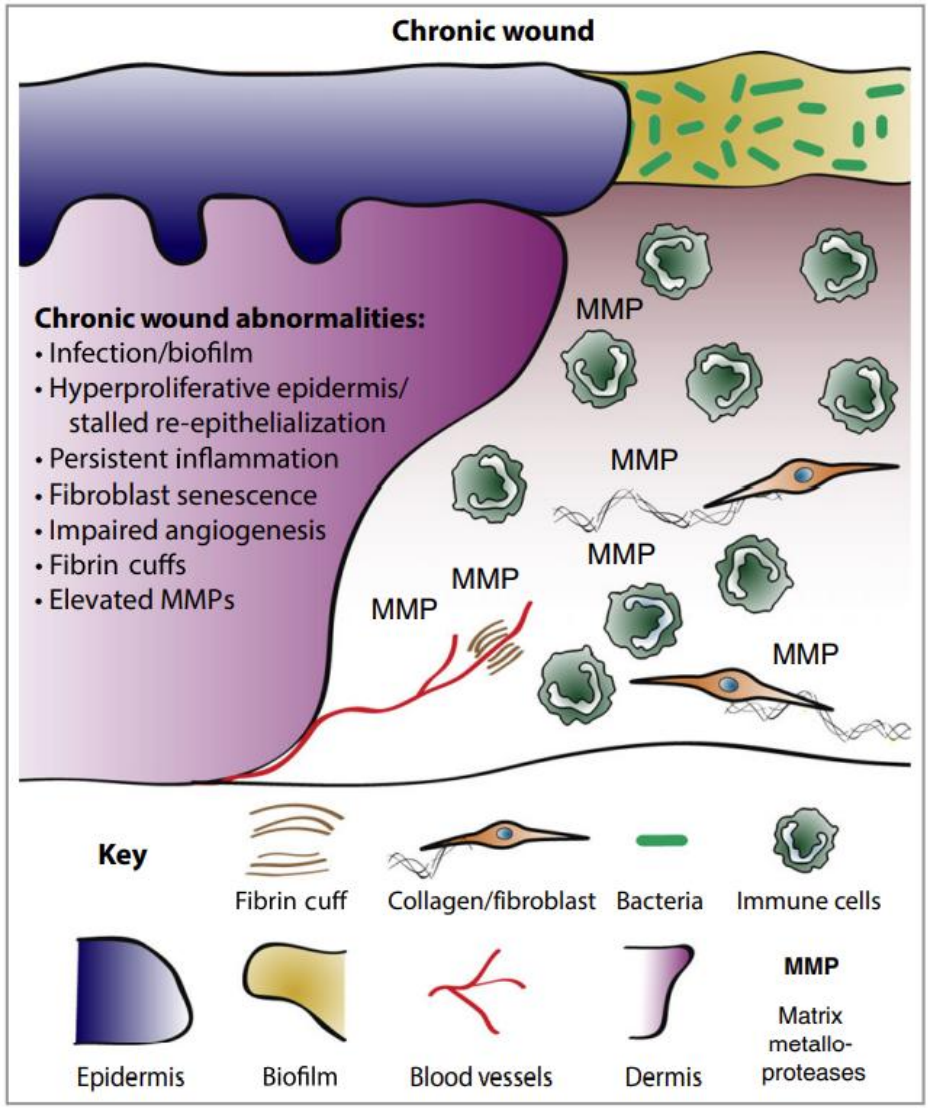
Vickie R. Driver, DPM, MS, FACFAS, FAAWC
Chair Wound Care Collaborative Community
Professor, Washington State School of Medicine
Professor, Barry University, adjunct

SAWC Spring
Grapevine, TX, May 2025

Acute vs. Chronic Wound Healing Processes

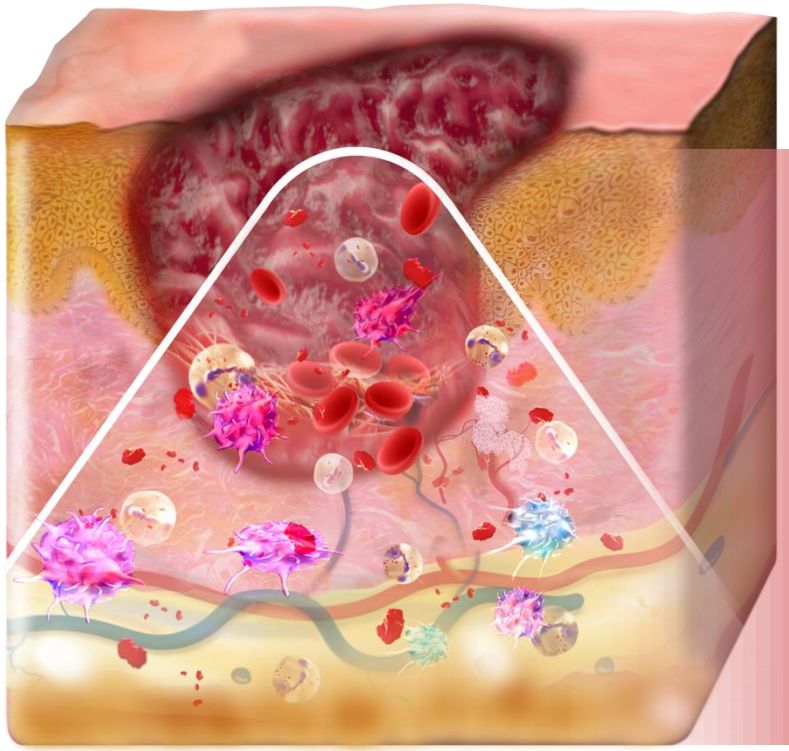


P. Martin and R. Nunan (British Journal of Dermatology, 2015)



Chronic Wounds Often Stall in Inflammatory Phase

Characterized by a hyper-proteolytic environment



Excessive bacterial bioburden and biofilm[1]	Increased neutrophil accumulation[2]	Proinflammatory cytokines[3,4]
Pro-inflammatory (M1) macrophages[3]	Elevated MMP levels[2,3]	Decreased TIMP levels[2,3]

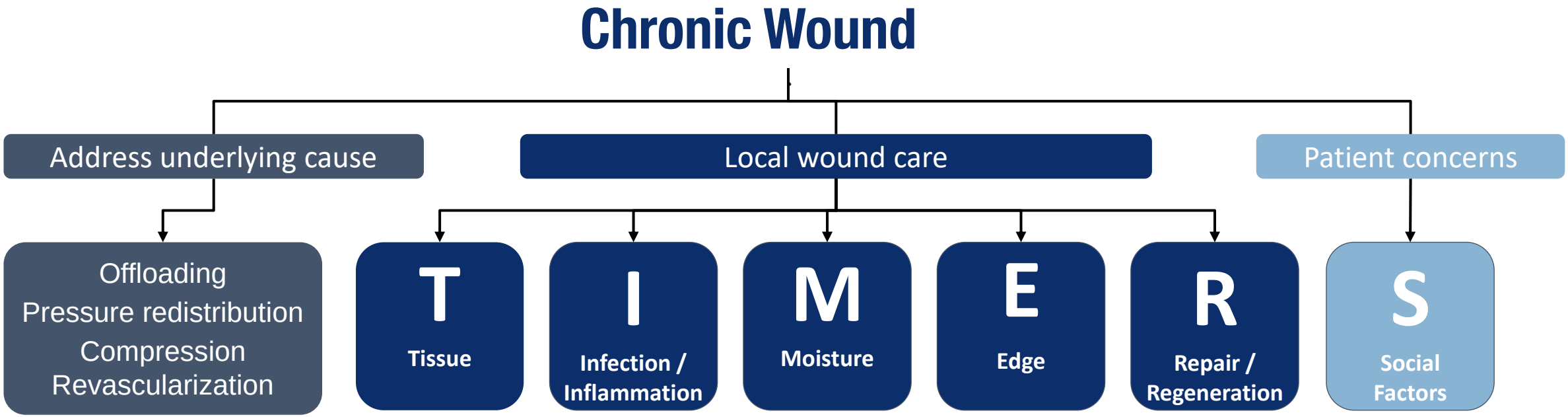
STALLED INFLAMMATORY PHASE →

MMPs=matrix metalloproteinases; TIMP=tissue inhibitor of metalloproteinases.

1. Trøstrup H, et al. *Ulcers.* 2013:625934. doi.org/10.1155/2013/625934. **2. Medina A, et al.** *J Burn Care Rehab*. 2005;26(4):306-319. **3. Hesketh M, et al.** *Int J Molec Sci.* 2017;18(7):1545. **4. Frykberg RG, et al**. *Adv Wound Care*. 2015;4(9):560-582.

Successful Treatment of Chronic Wounds

The required comprehensive approach, using TIMERS framework



1. Schultz GS, et al. *Wound Repair Regen* 2003;11:1-28 **2. Sibbald RG, et al**. *Ostomy Wound Manag* 2003; 49(11):24-51 **3. Robson MC, et al.** *Wound Repair Regen* 2006;14:649-662 **4. Steed DL, et al.** *Wound Repair Regen* 2006;14:680-692 **5. Atkin L, et al.** *J Wound Care* 2019; 28(3 Suppl 3):S1–S49

Adequate Debridement and Healthy Granulation Tissue

The key components of wound bed preparation

Wound bed preparation: a systematic approach to wound management

GREGORY S. SCHULTZ, PhD[1,*]; R. GARY SIBBALD, MD[2,*]; VINCENT FALANGA, MD[3,*]; ELIZABETH A. AYELLO, PhD[4]; CAROLINE DOWSETT[5]; KEITH HARDING, MB, ChB[6]; MARCO ROMANELLI, MD, PhD[7]; MICHAEL C. STACEY, DS[8]; LUC TEOT, MD, PhD[9]; WOLFGANG VANSCHEIDT, MD[10]

(WOUND REP REG 2003;11:1–28)

"Wound bed preparation focuses on all of the critical components, including ***debridement****,* ***bacterial balance****, and management of* ***exudate*** *….*

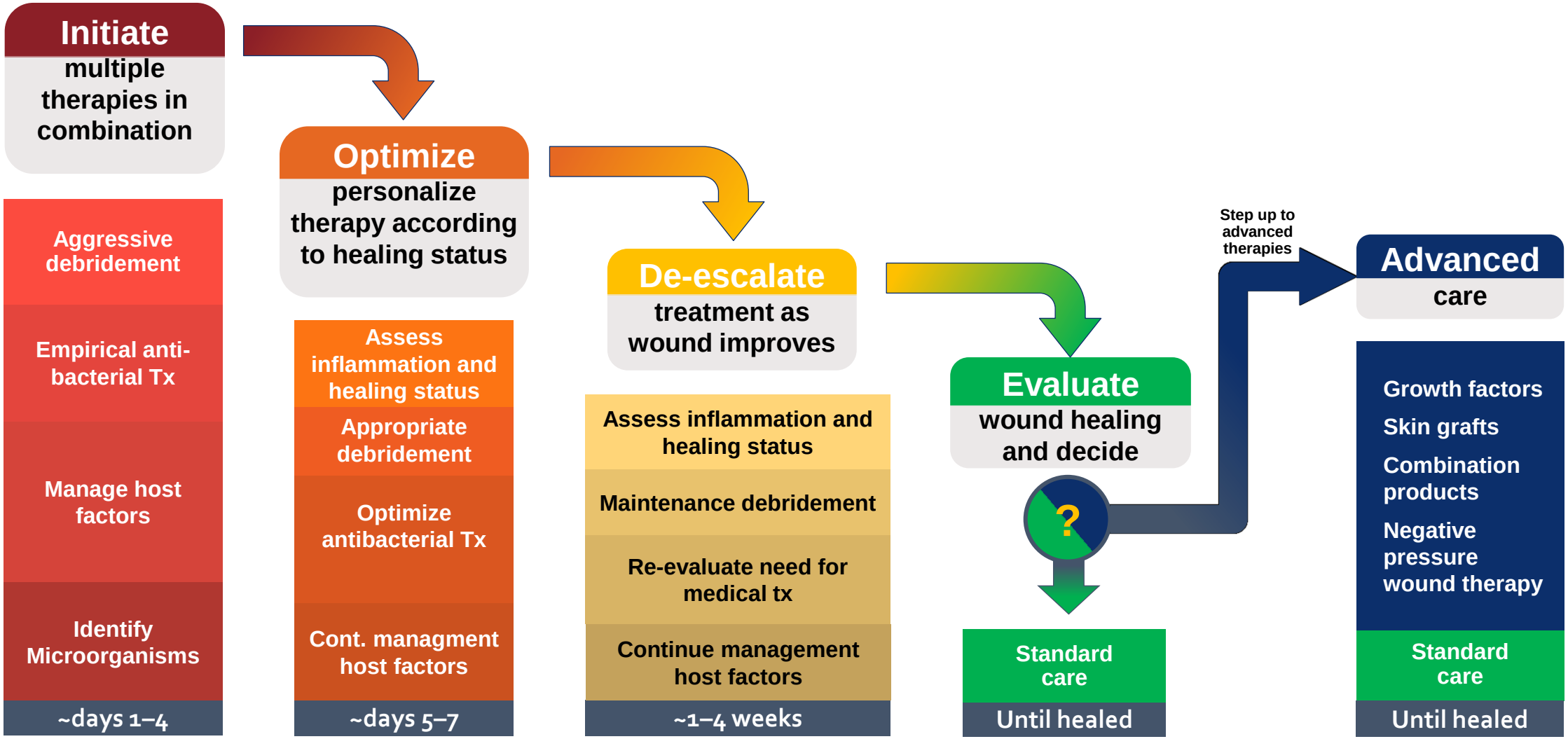
The ultimate aim is to ensure formation of ***good-quality granulation tissue*** *leading to complete wound closure."*

The Importance of Debridement

- Remove necrotic and non-vital tissue that impairs repair process
- Remove senescent cells from wound bed
- Remove non-migratory cells from ulcer edge
- Control excessive or abnormal bacterial load
- Allow improved availability of growth factors
- Allow wound assessment (e.g., depth, tunnels)
- Manage and control the pathology

Mulder GD, Vande Berg JS. "Cellular senescence and matrix metalloproteinase activity in chronic wounds" *JAPMA* 2002;92(1):3407.
Sibbald R, Williamson D, Orsted H, et al. "Preparing the wound bed-debridement, bacterial balance, and moisture balance" *Ost/Wound Manag* 2000;46(11):14-22, 24-8, 30-5.

Effective Strategy for Managing Infection and Inflammation



Schultz G, et al. *Wound Repair Regen* 2017;25(5):744-757

The Importance of Healthy Granulation Tissue

Angiogenesis

Cellular migration and proliferation
(fibroblasts, endothelial cells, macrophages, keratinocytes)

Reducing risk of infection

Wound contraction and closure

Gurtner G.C. *Nature* 2008; **Martin, P.** *British Journal of Dermatology* 2015; **Darby, I.A.** *Clinical, Cosmetic and Investigational Dermatology* 2014; **Diegelmann, R.F.** *Frontiers in Bioscience* 2004

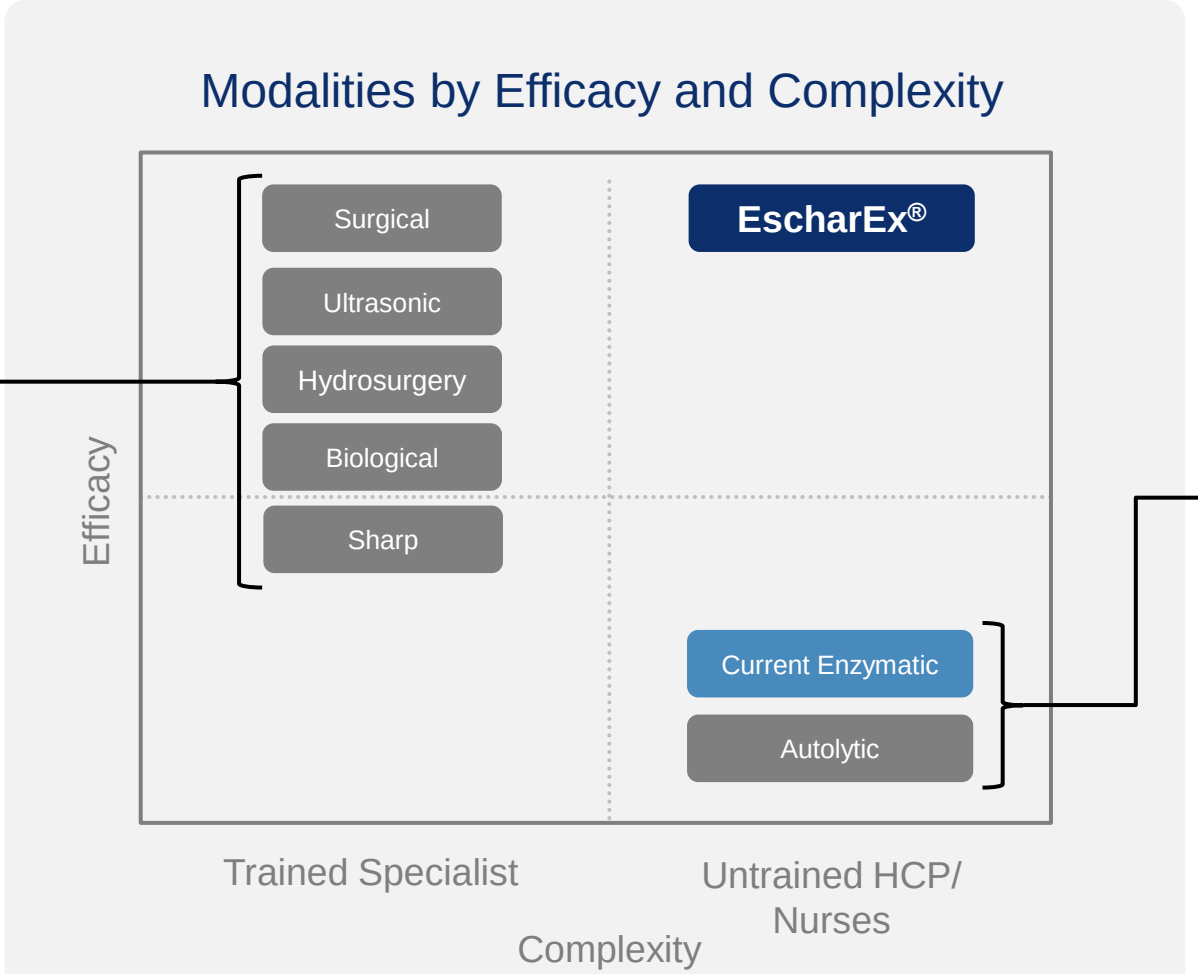
MediWound

EscharEx Innovative Treatment: Simple, Fast AND Effective

Significant unmet medical need for rapid and effective WBP agent

PROS
Fast and effective

CONS
Specialist time
Pain / anesthesia
Bleeding risk
Infection risk
Aerosol dissemination



PROS
Use in conjunction with sharp
Most can apply
Use on wounds with PAD
Use in painful wounds
Move on to advanced treatment sooner

CONS
Not all wounds appropriate
More frequent application
Many still need sharp debridement

EscharEx® : BBD – Bromelain Based Debridement

- Investigational biological product in **late-stage clinical development**
- Mixture of proteolytic enzymes enriched with **bromelain**, derived from the stem of **pineapple plant**
- Same **active ingredient** as **NexoBrid®**, FDA/EMA approved for eschar removal in burns
- **Phase 2 trials** (VLU, DFU, traumatic ulcers) showed superiority over placebo hydrogel & non-surgical standard of care[1,2] in **debridement** of non-viable tissue, and promotion of **granulation** tissue in patients with **chronic wounds**
- Ongoing global phase 3 study (VALUE) for VLU and planned clinical trial for DFU

BBD = Bromelain Based enzymatic Debridement; DFU=diabetic foot ulcers; VLU=venous leg ulcers

1. Snyder et al. *Wounds* 2023; **2. Shoham et al.** *Wound Rep Reg* 2021

Thank You!!

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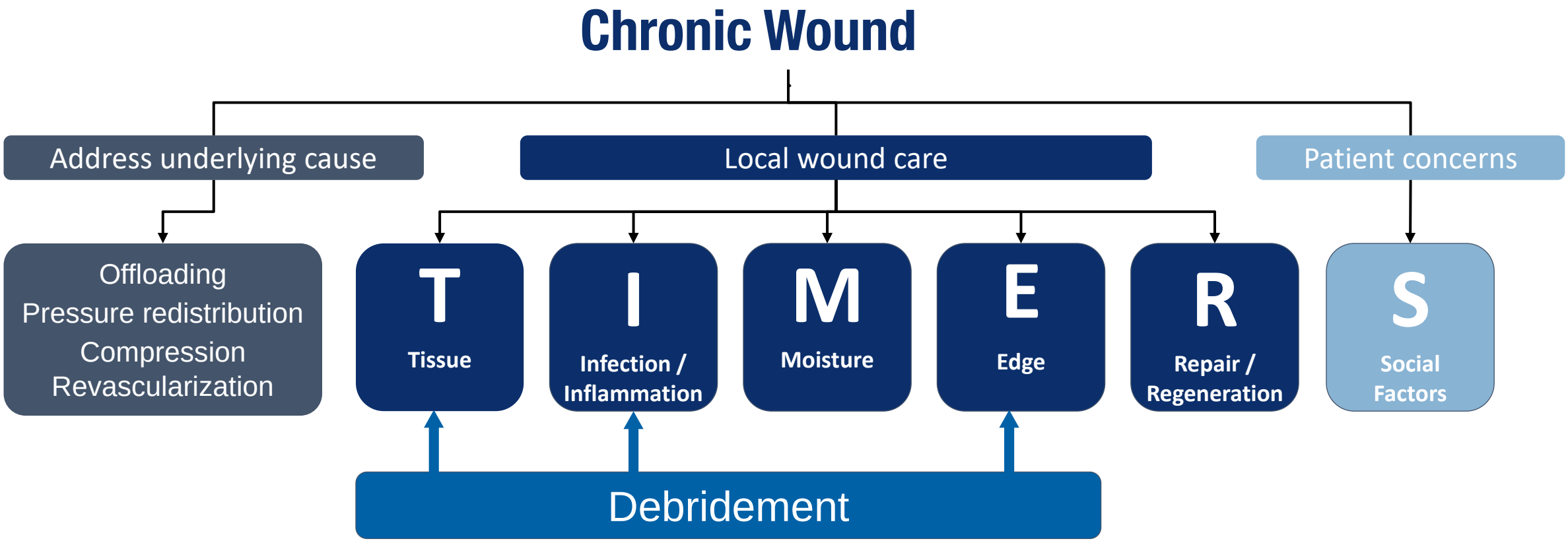
Role of Debridement in Wound Bed Preparation

The required comprehensive approach, using TIMERS framework



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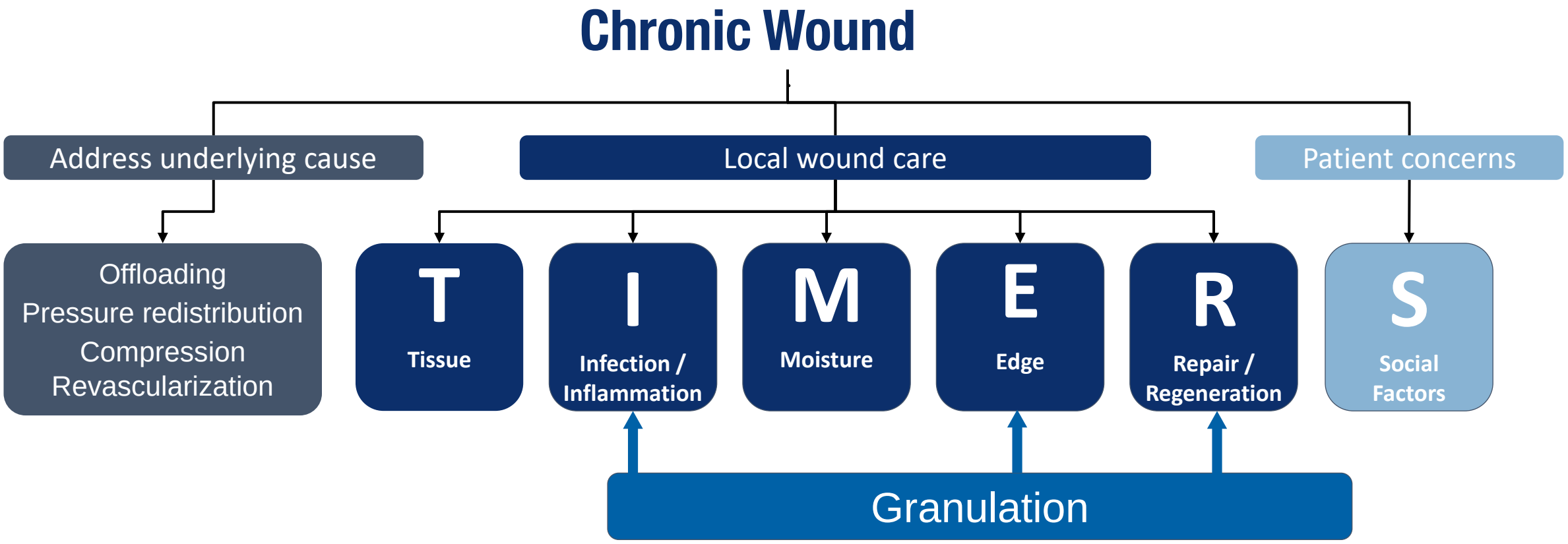
Role of Healthy Granulation in Wound Bed Preparation

The required comprehensive approach, using TIMERS framework



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