MicroGen DX
Next-Gen DNA Sequencing
FOR ACCURATE MICROBIAL IDENTIFICATION

MicroGenDX Next-Gen DNA Sequencing (NGS) meets & exceeds GWBE recommendations

Expert panel consensus guidelines determine DNA sequencing plays an essential role in the identification and treatment of chronic nonhealing wounds

A Global Wound Biofilm Expert Panel* (composed of 10 global, multi-disciplinary clinicians and researchers expert in chronic wound characterization and treatment) strongly agreed that biofilms should be considered as underlying all chronic wounds (regardless of location), and that DNA identification of the biofilm infecting agents is essential for the effective treatment of chronic wound patients.

The panel built their recommendations around growing evidence that biofilms cause persistent delay of chronic wound healing, and that current standard treatments fail to provide clear identification and related treatment pathways.

The GWBE Panel recommendations center on DNA identification of infectious organisms and treatments that specifically target those organisms throughout the patient care process.

Initiate multiple therapies in combination including **DNA identification of micro-organisms**	Early intervention and DNA micro-organism identification within the first four days are key components of biofilm-based wound care*		
	Optimize/personalize therapies according to healing status	De-escalate treatment as wound improves	Standard care OR Step up to advanced therapies
Days 1-4	Days 5-7	1-4 Weeks	Continue until healed

Identification optimally achieved through MicroGenDX Next-Gen DNA Sequencing

Consensus guideline reference:

*Schultz G, Bjarnsholt T, James GA, Leaper DJ, McBain AJ, Malone M, Stoodley P, Swanson Y, Tachi M, Wolcott RD, for the Global Wound Biofilm Expert Panel. Consensus guidelines for the identification and treatment of biofilms in chronic nonhealing wounds. *Wound Rep Reg.* 2017;25, 744–757. VC 2017 by the Wound Healing Society.

References supporting panel recommendations for DNA sequence analysis:

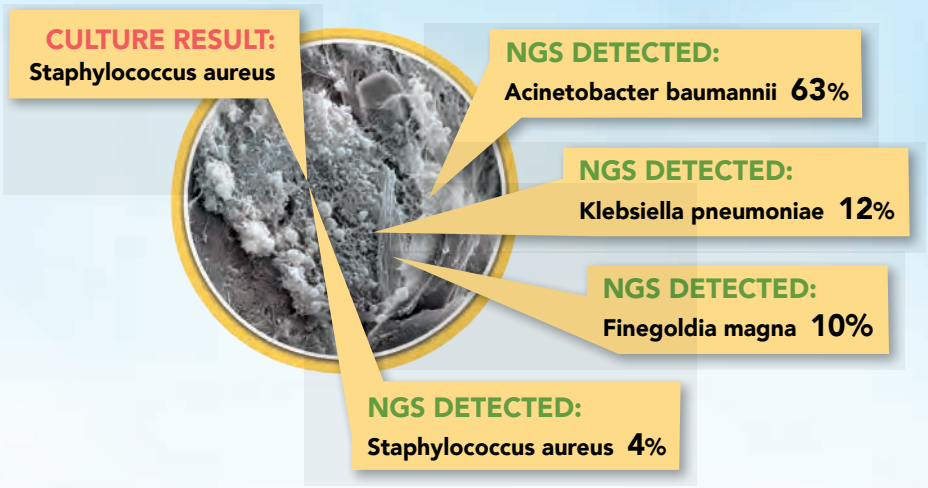
Folsom JP, Richards L, Pitts B, Roe F, Ehrlich GD, Parker A, et al. Physiology of Pseudomonas aeruginosa in biofilms as revealed by transcriptome analysis. *BMC Microbiol.* 2010;10,294.

Mani R, Margolis DJ, Shukla V, Akita S, Lazarides M, Piaggesi A, et al. Optimizing technology use for chronic lower-extremity wound healing: a consensus document. *Int J Low Extrem Wounds.* 2016;15,102–119.

Price LB, Liu CM, Melendez JH, Frankel YM, Engelthaler D, Aziz M, et al. Community analysis of chronic wound bacteria using 16S rRNA gene-based pyrosequencing: impact of diabetes and antibiotics on chronic wound microbiota. *PLoS One.* 2009;4,e6462.

Rhoads DD, Wolcott RD, Sun Y, Dowd SE. Comparison of culture and molecular identification of bacteria in chronic wounds. *Int J Mol Sci.* 2012;13,2535–2550.

Thomsen TR, Aasholm MS, Rudkjøbing VB, Saunders AM, Bjarnsholt T, Givskov M, et al. The bacteriology of chronic venous leg ulcer examined by culture-independent molecular methods. *Wound Repair Regen.* 2010;18,38–49.



MicroGenDX is the ONLY molecular laboratory offering:

- Detection of 30,000 species of bacteria, including anaerobic bacteria in biofilms
- Detection of antibiotic resistance for eight antibiotic classes
- A turnaround of 3.5 days (consistent with GWBE Panel recommendations)
- The least expensive lab in the world for PCR + NGS
- The only NGS lab with published data showing 96.1% concordance with culture
- The most published clinical trials

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Superior Diagnostics. Targeted Treatments. Better Outcomes.

Get more answers.

ONLY MicroGenDX has published studies

Journal of Wound Care (2011)

Molecular diagnostics and personalised medicine in wound care: assessment of outcomes

S.E. Dowd, PhD; R.D. Wolcott, MD; J. Kennedy,PhD, R.Ph.; C. Jones, PhD, R.Ph.; S.B. Cox, PhD

BMC Infectious Diseases (2012)

Clinical identification of bacteria in human chronic wound infections: culturing vs. 16S ribosomal DNA sequencing

Daniel D Rhoads, Stephen B Cox, Eric J Rees, Yan Sun and Randall D Wolcott

Wound Repair and Regeneration (2015)

Analysis of the chronic wound microbiota of 2,963 patients by 16S rDNA pyrosequencing

Randall D. Wolcott, MD; John D. Hanson, PhD; Eric J. Rees, PhD; Lawrence D. Koenig, PhD; Caleb D. Phillips, PhD; Richard A. Wolcott, PhD,; Stephen B. Cox, PhD; Jennifer S. White, MS

Journal of Wound Care (2015)

Economic aspects of biofilm-based wound care in diabetic foot ulcers

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