Wound healing is fundamental to all medical and surgical specialties that treat acute and chronic wounds, whether traumatic, metabolic, infectious, oncologic, or iatrogenic. The history of wound healing dates back to the Egyptians, with the earliest known medical document known as the Smith Papyrus from 1400 BC.

Since that time, there has been an ever-increasing understanding of the physiology and pathophysiology of wound healing. We have come to better understand the multiple intrinsic and extrinsic factors and their interplay that help give insight into diagnosis of wounds, their etiologies, and their treatments.

Despite the advances in understanding, technique, and technology, however, there is still much to learn. This is best exemplified by the millions of acute and chronic wounds reported every year and the fact that no less than $19 billion dollars are spent annually on therapies to treat these vexing problems. And despite recent advances in basic science, therapies and surgery, the proportion of wounds that heal is still very low.

To consolidate high-level information on wound healing in the context of a rapidly expanding, constantly evolving, increasingly confusing world surrounding the comprehensive care of these wounds, we offered the first wound healing supplement to the Journal in June 2006. Five years later, we reprised the topic in the second edition of the wound healing supplement, published in January 2011. Now, yet another 5 years later, it is time to review the current landscape of wound healing yet again to be sure all practitioners have a “one-stop shop” reference guide to current concepts on associated topics on the subject.

In the following 300+ pages of critically peer-reviewed content, we have invited experts from around the world to address topics, such as the basic science of wound healing, the role of biomarkers, current understanding around stem cells and their role in wound repair and regeneration, and the role of nutrition, infection, and biofilms that can impact outcomes. Internationally renowned experts from the fields of nutrition, infectious disease, podiatry, nursing, physical therapy, vascular surgery, general surgery, and plastic surgery share their evidence and knowledge on high-impact subjects. Overviews, current thoughts and evidence, and expertise are shared on topics like debridement, use of adjunctive modalities, such as ultrasound and hydrosurgery, negative pressure, and the vast array of products on the market designed to impact wound healing, bringing clarity to the reader and practitioner on what has evidence behind it and what does not. Other adjunctive technologies are also reviewed, including hyperbaric oxygen, dermal matrices, bioengineered tissue, pressure offloading, and laser therapy. We have tapped experts to comment on the role of amputation and its place in the reconstructive algorithm—when it is indicated, when it should be used as the most functional option, and when it should be used as a last resort. Furthermore,
we have selected vexing problems that confront us all from hidradenitis suppurativa to pressure sores to lymphedema to venous ulcers and review and discuss the evidence we currently have to address them. Finally, we conclude the supplement with an eye toward outlining best practices in multidisci-
plinary care, communication across the globe, and future directions that we are sure will ultimately find their places in the pages of the next wound healing supplement in 5 years hence.

Our hope is that you find this compendium of current concepts and evidence a worthwhile read, convenient yet thorough, comprehensive yet digestible. Most of all, we attempted to make everything clinically practical, so that each and every one of your practices can benefit from the time spent creating it and, most importantly, from reading it.

Jeffrey E. Janis, MD, FACS
Department of Plastic Surgery
University Hospitals
Ohio State University Wexner Medical Center
Suite 2100, Room 2114
915 Olentangy River Road
Columbus, OH 43212
E-mail: jeffrey.janis@osumc.edu

REFERENCES