

# Foreword

Since its introduction in France in the 1970s and in the United States in the 1980s, liposuction has rapidly evolved into the most frequently performed plastic surgery procedure. This highly successful technique attained even greater stature with the introduction of ultrasound-assisted liposuction (UAL) in the 1990s. This was rapidly accompanied by new developments and technological refinements that included improved instrumentation and products, the use of the superwet environment, and improved compression garments. Although UAL is not a magic bullet, its advantages are considerable and it enhances the results that can be expected from standard liposuction techniques.

The introduction of new technology is commonplace in today's high-tech world. What is unique in this situation is how this technology has been thoroughly monitored and channeled. The UAL Task Force was implemented through the initiative of five leading professional societies in plastic surgery. These groups were charged with the common goal of investigating UAL, developing guidelines for its use, and organizing teaching symposia to responsibly educate plastic surgeons seeking to incorporate UAL into their practices. Through their efforts they hoped to provide their colleagues with the information they needed to perform UAL in a safe and consistent manner and to help them recognize its benefits as a sculptor's tool to extend the results expected from traditional liposuction.

The goals of the UAL Task Force have been accomplished with a rare solidarity and sharing of expertise. I was privileged to work with Dr. Rohrich on this task force. I quickly developed an appreciation for the high educational standards that he set. Drs. Beran and Kenkel have also made prominent contributions to these educational efforts with their participation in numerous UAL regional courses. They have all been vocal advocates of the safe and effective use of ultrasound technology. Their wealth of information about this new technology and their desire to share their considerable experience have culminated in this landmark publication entitled, *Ultrasound-Assisted Liposuction*.

This volume succeeds in compiling in an organized fashion the currently available knowledge about UAL technology and its clinical uses. Both the student and master surgeon will benefit from the early chapters that explain the technology behind ultrasound and the reasons why this information is critical to its safe and effective use. The chapters dealing with the clinical applications offer a step-by-step guide to body contouring for specific indications and body regions. This elegant volume will prove invaluable for any surgeon seeking to optimize the use of UAL technology and to offer patients the latest improvements in aesthetic surgery.

**Franklin L. DiSpaltro, M.D.**

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Liposuction is the single most frequently performed aesthetic surgery operation in the United States today. Since its revolutionary introduction in the late 1970s, it has evolved into a safe and effective procedure routinely performed by thousands of plastic surgeons each year. The tumescent technique, innovative fat contouring procedures, and new instruments and technology have improved results considerably as the underlying philosophy of body contouring has progressed from spot reduction to focus on circumferential treatment.

Ultrasound-assisted liposuction (UAL) represents the latest advance in a continually exciting field. Utilization of energy generated from sound waves provides a powerful new modality for fat removal and has proven particularly useful for large-volume fat removals and treatment of fibrotic and scarred areas. The technique also reduces the surgeon's work effort and permits the surgeon to concentrate more on sculpting and less on the sometimes onerous and strenuous efforts of manual fat extraction.

This new book by Drs. Rohrich, Beran, and Kenkel, *Ultrasound-Assisted Liposuction*, represents the first work on this topic and is a welcome addition to the plastic surgery literature. It combines a balanced presentation with impressive thoroughness. The authors' attention to basics, safety, and terminology should be of help to anyone considering UAL. This book is an excellent primer for the novice interested in learning about ultrasonic liposuction as well as the experienced aesthetic surgeon seeking to add this new technology to his or her practice.

Aided by a number of expert contributors, the authors cover a wide range of topics, from getting started to special applications, large-volume liposuction, hollow versus solid probe cannulas, and external UAL.

The book provides basic guidelines for safety and proper use of UAL and step-by-step operative details for body contouring in each body region. I particularly liked the templates used for the case descriptions, which provide feedback on the amount of infiltration, volumes removed, and areas treated.

Drs. Rohrich, Beran, and Kenkel are to be commended for their skills as surgeons and as teachers. This is a timely book that will enlighten and challenge all who have the pleasure to read and learn from it.

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In the late 1970s, while completing my training in plastic surgery in France, I was fortunate to participate in the early development and introduction of traditional liposuction. I was impressed by this new technique for body contouring and quickly became a disciple, recognizing its potential while conceding its limitations, particularly for treating fibrous areas and for large-volume aspirations. To find a solution to these limitations, I began experimenting with ultrasound in the 1980s. My experiments with ultrasound to selectively destroy fat cells convinced me of the benefits of this technology as an adjunct to traditional liposuction in order to perform body contouring in a more efficient and precise manner. In conjunction with researchers in Europe, I developed an ultrasonic generator with special surgical probes made of titanium that could liquefy fat percutaneously while sparing the denser surrounding structures. This emulsion could then be removed by low-vacuum aspiration followed by manual remodeling to obtain a superior result.

With further refinements in technology and technique, I became even more convinced that ultrasound-assisted liposuction (UAL) could revolutionize the current concept of body contouring. My personal experience in treating sever-

al thousand patients demonstrates that UAL can result in skin contraction and neurovascular and fibrous preservation, unlike that seen with traditional suction-assisted liposuction. In the early 1990s I introduced this technology and methodology to a number of plastic surgeons worldwide, including Michael Scheflan, Hazan Tazi, and João Carlos Sampaio Góes, who in turn have helped to popularize this procedure and to further refine results.

In 1993 I introduced this technique in the United States, working with outstanding plastic surgeons such as G. Patrick Maxwell, Franklin DiSpaltro, and Rod Rohrich, who became advocates of UAL, and together with the UAL Task Force, we developed the teaching module that trained several thousand plastic surgeons in a relatively short period of time.

The initial success of UAL has created a tremendous demand for reliable information on this topic. *Ultrasound-Assisted Liposuction* fills that need. Drs. Rohrich, Beran, and Kenkel (with whom I had the pleasure of working with at The University of Texas Southwestern Medical Center) have produced an exciting new book. It has succeeded in collecting, organizing, and formalizing available knowledge and state-of-the-art technique. It provides a complete understanding of the physical principles and technical details so critical to safe and successful performance of UAL. It is the first book published on this topic and will serve as an excellent reference for both the experienced body contouring surgeon as well as the novice just learning to perform UAL. The authors are to be congratulated on this fine contribution to the literature.

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