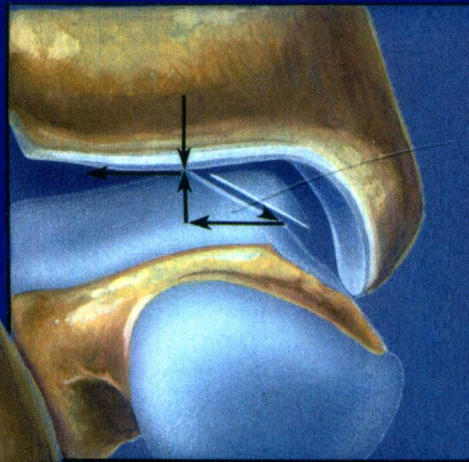
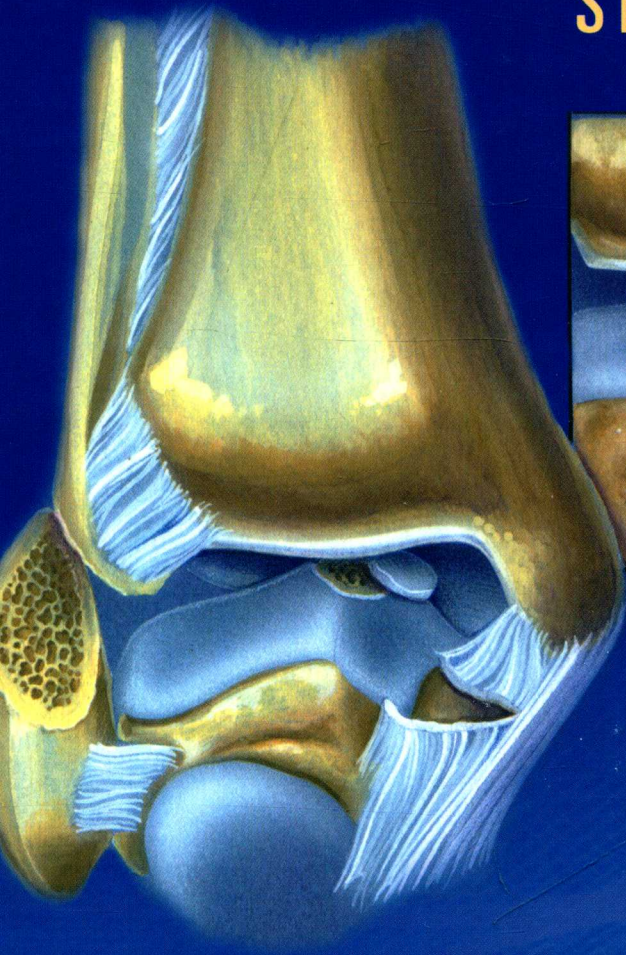




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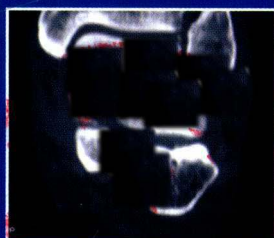
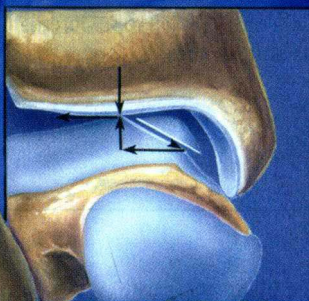
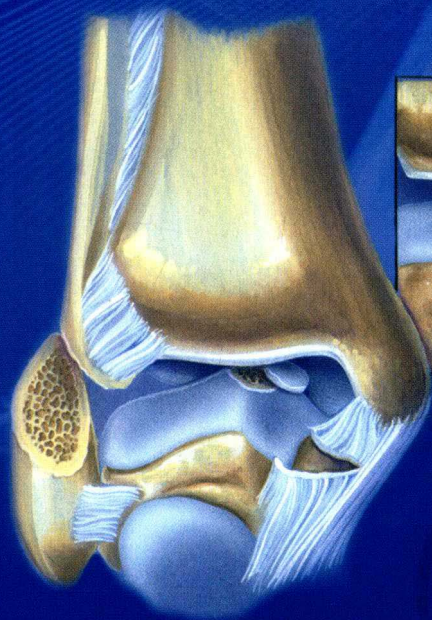
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Foot and Ankle *Arthroscopy*



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Foot and Ankle *Arthroscopy*

*To my wife, Michelle, and our children, Eric, Rachel, Megan, and
Greg, for their unconditional understanding, support, and love.*

*To my parents, Eve and Lou, and my sister, Donna, for providing the
foundation and opportunities to me.*

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FOREWORD

I first met Dr. Ferkel in Chicago at "The Comprehensive Foot and Ankle Course" in 1987. I was told they had brought in this young, sports-trained individual to teach arthroscopy of the foot and ankle. At the time, very few foot and ankle fellowships taught arthroscopy, and he introduced a whole new method to explore the foot and ankle with minimal incisions. We soon became good friends, and I appreciated his arthroscopic teachings to "think outside the box" and approach problems through direct visualization. Over the years, he has pioneered the critical marriage between the foot and ankle and sports medicine/arthroscopy.

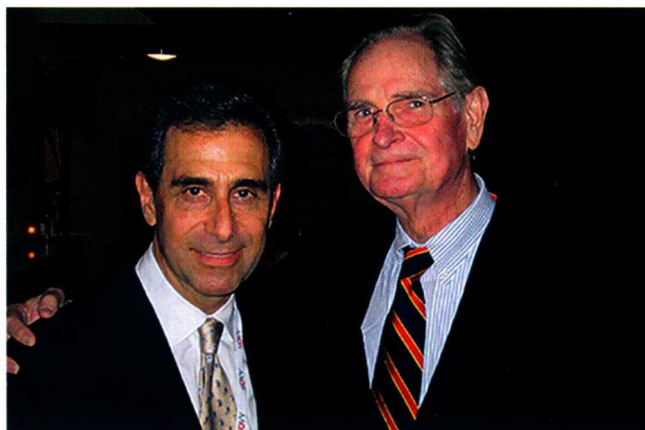
A lot has changed in foot and ankle surgery since Dr. Ferkel published the first edition of his book, *Arthroscopic Surgery: The Foot and Ankle*, 20 years ago. One of the major innovations has been the expanded use of the arthroscope/endoscope in diagnostic and operative procedures. Dr. Ferkel has long been a recognized leader in this field, and this new second edition, *Foot and Ankle Arthroscopy*, shares with us the vast number of advances that have taken place since the first edition. To the resident, fellow, and practicing orthopedic surgeon, this book provides invaluable information to arthroscopically treat foot and ankle disorders. In addition, Susan Brust has illustrated both editions of the book and her drawings bring life to the anatomy and techniques of foot and ankle arthroscopy. Dr. Ferkel emphasizes the importance of understanding the anatomy as it is reinforced in each chapter. This book teaches us the pearls of the preoperative evaluation, imaging, and regional anesthesia.

The "21-point" exam of the ankle, the "13-point" exam of the subtalar joint, and the "18-point" exam of the great toe highlight the importance of thoroughly checking each area of the joint. Dr. Ferkel not only describes in great detail time-tested treatments for osteochondral lesions of the talus, instability, and arthritis but also introduces newer methods of treatment that are available, including the arthroscopic treatment of ankle fractures. The subtalar, great toe, and rehabilitation chapters have been greatly expanded. In addition, the techniques of endoscopic and prone arthroscopy are presented, and the indications and techniques are described clearly. Finally, numerous futuristic procedures are shown and demonstrated how the arthroscope is utilized to "push the envelope" further ahead.

Louis Pasteur has taught us that "chance favors the prepared mind" and Dr. Ferkel's book takes this to another level. We are indebted to him for his numerous contributions to arthroscopy of the foot and ankle.

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FOREWORD FROM FIRST EDITION

You cannot tell this book by its cover. When I say the title *Arthroscopic Surgery: The Ankle and Foot* is misleading, it is meant to be complimentary. The potential reader might think this text is solely about arthroscopic technique; to the contrary, it is directed toward care of the patient with foot and ankle problems.

It is no easy feat to successfully write a text for all levels of students, from medical school to practicing surgeon. In my view, Dr. Ferkel has done just that. This book should be especially helpful for the experienced foot and ankle surgeon with developing arthroscopic skills, reminiscent of the introduction of arthroscopy to knee and shoulder surgeons.

In this text, basic arthroscopic surgical principles have been transported to the anatomical requirements of the smaller ankle and foot joints. Although arthroscopy is extensively discussed, the procedure itself is relegated to its proper role in patient care. The attention to detail necessary for technical success is outlined: instrumentation, room setup, the role of the assistant, surgical approaches, and various procedures. There is repeated emphasis in each chapter on the value of the medical history, differential diagnosis, disease classifications, and nonoperative treatment modalities. The topics that do not need repeating or are beyond the scope of this text are handled by the extensive references. Therefore, the reader's curiosity does not remain unsatisfied or undirected.

This text could be compiled only by an experience practitioner and clinical researcher. Dr. Ferkel has been able to assemble this information through years of clinical practice, careful study of the literature and his own results, scientific presentations, and publications. His knowledge of arthroscopy is demonstrated by systematic documentation, 21-point anatomical examination, and the regular use of videotape as a permanent record. His clinical expertise surfaces in the discussion of surgical indications, procedural limitations, and today's requirement for cost-effectiveness. His conservative approach to arthroscopy is reflected by the 3% incidence of arthroscopic procedures in the 4,000 cases seen at his institution.

The clinical reports are extensive. Dr. Ferkel presents information from the literature and his own original series reports, which he made the effort to update for this publication. In addition, he makes available to the reader the extensive case experience from his practice group, the Southern California Orthopedic Institute. He is open in his discussion of surgical complications, their avoidance, and management. I especially appreciate that after any comprehensive listing of options, he always states his preference and rationale. This method of presentation brings the reader into a dialogue with the author.

The illustrative drawings with correlation between lesions and physical exam are particularly helpful. It is not meant to be demeaning to say that one can read some sections just by looking at pictures. The detailed illustrations of the various portals and diagnostic zones are so good; they should be ready references in surgical suites everywhere.

Arthroscopic Surgery: The Foot and Ankle deals with contemporary issues and controversy in arthroscopy: the adjunct use in acute fractures, ankle arthrodesis, subtalar and great toe surgery, rehabilitation, and potential for the laser. An algorithm is presented on the treatment of chronic ankle pain. His arthroscopic experience has resulted in some changes in terminology: from chronic post ankle sprain pain to anterolateral impingement of the ankle.

The quality of this textbook is a reflection of the high level of the practice of orthopedic surgery at the Southern California Orthopedic Institute. We are indebted to Dr. Ferkel for presenting a prudent and judicious use of arthroscopy in the management of patients with foot and ankle problems. He has done us the service of placing all this information in one place, a ready reference on foot and ankle surgery.

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PREFACE

It does not seem possible that the first edition of this book was published 20 years ago. I started this second edition almost 6 years ago, and it has taken much longer than I had hoped to bring it to fruition. So much has changed since the first edition was published, and the field of sports medicine/arthroscopy of the foot and ankle has matured into a very important area of orthopedic care. Through teaching at courses, the Orthopedic Learning Center and web-based medicine, more surgeons than ever have been taught the principles of foot and ankle arthroscopy. Today, the subject is a critical part of all foot and ankle fellowships, but 20 years ago, few fellowships, if any, gave instruction on the topic.

Procedures we thought were not possible to do arthroscopically are now being done and our imagination provides the only limit to ways of doing noninvasive surgery.

Every chapter in this book has been rewritten, and there are a number of new chapters as well. The book is written so that a medical student and an experienced arthroscopist can both glean important information about the field. Pre-operative imaging, including ultrasound, has become a crucial modality to assist the arthroscopist in pre- and post-operative planning, and a large section is devoted to this.

Today, more than ever, regional anesthesia is used in almost all foot and ankle surgeries, and an in-depth discussion is included on the subject. We are still searching for the magic bullet to heal all articular cartilage lesions, but a number of newer technologies are presented to solve this dilemma.

Subtalar, great toe and endoscopic techniques are now being used frequently, and these sections have been greatly expanded. In addition, experts such as Ned Amendola, C. Niek van Dijk, and Jim Tasto have written wonderful, detailed chapters on their areas of expertise. Dr. Tun Hing Lui has shared his cutting edge futuristic treatment of foot and ankle disorders done endoscopically, and his contributions to this field are unique and amazing. State-of-the-art rehabilitation techniques are presented to help our patients, especially athletes, return back to their activities and sports as soon as possible.

As I stated 20 years ago, as newer equipment and techniques are developed, we must continue to “push the envelope” and not be afraid of failure. The future of foot and ankle arthroscopy is very exciting as we continue to provide the best possible care to all our foot and ankle patients.

R.D.F.

PREFACE TO THE FIRST EDITION

In June 1983, I completed a sports medicine fellowship at the Southern California Orthopedic Institute (SCOI) and was asked to join the group. At that point, the five orthopedic surgeons in the group were primarily knee surgeons and were starting to develop a bigger interest in the shoulder. Because they felt uncomfortable with the treatment of foot and ankle problems, I was asked to travel around the country and learn more about these disorders. It was thought that, as my sports medicine practice grew, I could fill the extra time seeing patients with foot and ankle problems.

Concurrent to this, operative knee arthroscopy was becoming more popular, and numerous courses were being held around the country to teach these skills. After one of these seminars, my partner, Jim Fox, speculated, "Someday ankle arthroscopy will be big, and you better get busy learning how to do it." Since that time, arthroscopy of the foot and ankle has become an integral part of orthopedic care.

In 1989, Terry Whipple invited me to write a monograph on arthroscopy of the foot and ankle. Although I had hoped to complete this project in 2 years, it has taken much longer. This book is not intended as just a technical manual on how to do procedures. Instead, I tried to incorporate what I have learned as both a sports medicine and foot and

ankle surgeon to give the reader an integrated approach to these problems. To perform foot and ankle arthroscopy successfully, a surgeon must understand anatomy, biomechanics, and physiology, as well as the technical aspects of these procedures. Section I of *Arthroscopic Surgery: The Foot and Ankle* considers preoperative evaluation, instrumentation, surgical environment, and correlative surgical anatomy. Once the surgeon synthesizes this information, the diagnostic arthroscopic examination can be undertaken. Section II discusses the various pathologic conditions that are amenable to arthroscopic surgery; newer techniques, such as subtalar and great toe arthroscopy; and rehabilitation, complications, and future developments.

It is fortunate that this book was not completed in 1991. Foot and ankle arthroscopy has changed dramatically during the past 5 years. In the future, we must continue to "push the envelope," to be bold in developing newer, better arthroscopic methods of treating foot and ankle problems. We must not be afraid of failure but rather must be excited by the challenge to continue improving the quality of care to our patients.

R.D.F.

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Many people have contributed to the successful completion of this book. I would like to thank everyone at Wolters Kluwer, especially Bob Hurley, Brian Brown, and David Murphy, for all their help, support and dedication. My partners, especially the sports medicine division at Southern California Orthopedic Institute (SCOI), have always supported my desires and programs to develop and grow the field of sports medicine/arthroscopy of the foot and ankle.

To date, we have trained 144 sports medicine fellows at SCOI, and each one has helped me along my journey. In addition, a number of them have coauthored chapters with me in this text. Susan Brust has done almost all of the illustrations in both the first and second editions. Her brilliance has brought clarity and life to the book. Moreover, her desire for excellence and accuracy has enhanced the book immensely.

The second edition of *Foot and Ankle Arthroscopy* could never have been written without the incredible dedication, persistence, and patience of Eleanor O'Brien, my manuscript typist and Director of Research & Education at Southern California Orthopedic Research

& Education (SCORE). Her unqualified support has produced the highest quality volume of work. Lois Haeussler has worked very hard in both editions to provide high-quality radiographic and photo images and is always there when I need her. Our musculoskeletal radiologist, Greg Applegate, has helped select the best images for the book, and his contributions are seen in various chapters, particularly Chapter 2.

Many people at Center for Orthopedic Surgery (COSI) and Valley Presbyterian Hospital (VPH) have helped support the book over the years. My Practice Coordinator, Annie Bello, and Medical Assistant, Natalie Ray, have helped me finish the project and still continue to practice orthopedic surgery.

I wish to acknowledge again Drs. Ron Smith, Roger Mann, Michael Coughlin, John Kennedy, and William Hamilton for believing in the importance of sports medicine and arthroscopy in the treatment of foot and ankle disorders. Finally, I wish to thank Terry Whipple for asking me in 1989 to write the first edition of this book. His vision has continued to help me see the future of arthroscopic surgery of the foot and ankle.

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Foot and Ankle *Arthroscopy*

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The background of the top half of the cover is a blue-tinted photograph of an ankle undergoing arthroscopy. The image shows the joint's internal structures, with some areas appearing slightly blurred or out of focus, emphasizing the surgical nature of the procedure. The blue color scheme is consistent with medical and professional themes.

SECTION

I

Basics of Ankle Arthroscopy

