



# Foreword

The concept of minimal access spine surgery is no longer an intimidating prospect for the mainstream spine surgeon. The mention of the word minimally invasive 5 years ago conjured up thoughts of a select few spine surgeons performing procedures that no other technically competent surgeon could master in one's normal practice. As surgical approaches have been refined, anesthesia techniques modified, and surgical implants developed for narrow-corridor access procedures, the once challenging prospect of performing minimally invasive spinal procedures is rapidly gaining popularity throughout most of North America and Europe. Surgeons who have cradled the importance of minimal access surgery have worked hard to modify open surgical techniques to accommodate smaller incisions, and they have developed new procedures to exploit the advancements in fiberoptics, the versatility of spinal implants, and advances in computer image—guided assistance to improve safety and outcomes in the management of common spinal disorders.

Since the original publication of the *Atlas of Endoscopic Spine Surgery*, outcome studies have clarified the role of minimal access surgery in certain spinal pathologies. Thoracoscopy is now becoming a mainstream procedure for common procedures such as sympathectomy, anterior release in surgery to correct coronal and sagittal plane deformities, debridement in cases of tumor and infection, and in stabilization procedures following specific traumatic fractures. The spine surgeon is still challenged with adequate visualization and a sense of unease in more complex procedures such as symptomatic thoracic degenerative disc disease in

the setting of an extruded disc fragment or spondylosis resulting in thoracic myelopathy. Improvements in electrophysiologic monitoring, visual optics, and computer image guidance may make thoracoscopy even easier and safer in the future.

Additionally, outcome analysis has shown us that certain minimally invasive procedures, such as laparoscopy to access the lower lumbar segments, may not be as efficient or as safe as mini-open procedures in the management of anterior vertebral disc removal for degenerative disc disease.

Minimally invasive procedures have eloquently been renamed minimal access surgery as industry and surgeons have found that smaller incisions, less soft tissue manipulation, and accessing the spine through more lateral posterior ports all may decrease operative times and significantly improve patient outcomes. These discoveries have dearly shortened hospital stays and lessened the learning curve, which was considered excessive with minimally invasive surgical procedures in the past.

Minimally invasive surgery has also allowed us to expand our armamentarium in the management of painful spinal disorders such as symptomatic compression fractures through cement augmentation as well as modify disc biology through various percutaneous techniques such as intradiscal electrothermal treatment or nucleoplasty. These traditional minimally invasive procedures are still challenging the spinal community to demonstrate efficacy over more traditional methods of spinal care, most importantly nonoperative treatment strategies.

Minimal access spine surgery is evolving on a yearly ba-

sis thanks to the pioneering efforts of John Regan, a noted leader in the field of minimally invasive spine surgery. Once again he has organized a timely, contemporary collection of pertinent chapters that specifically details the advancements in minimal access procedures achieved by internationally acclaimed leaders in the field of surgery. His wisdom, hard work, and dedication to the science of minimal access spine surgery will hopefully make this philosophy of spinal care as commonplace as open surgical procedures in the near future.

Minimal access surgery is here to stay. It is the responsibility of spine surgeons throughout the world to learn from the pioneers in this textbook and to ensure that they, and the students they mentor, receive basic training in these techniques at a cost that is acceptable to society and with outcomes that are supported by well-designed, controlled, prospective studies. The most exciting notion regarding this book is that hopefully there will be a third edition at a time when minimally invasive procedures are performed more frequently than open procedures as routine practice in spine surgery.

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At the outset it should be made clear that I am not a minimally invasive spine surgeon. My choice of vocational pursuits is, in part, related to the fact that I am a naysayer of sorts regarding “new approaches.” My “posture” is largely based on my somewhat refractory surgical conservatism and the difficulties that my generation has with change. It is emphasized that reluctance to change is, in part, related to wisdom—the wisdom associated with experience and maturity. I, nevertheless, particularly through my affiliations with Drs. Regan, Lieberman, and a host of others, have begun to reassess and restructure my posture in this arena. Regan and Lieberman’s book, *Atlas of Minimal Access Spine Surgery*, has clearly put these factors into a much clearer perspective for me.

Regan and Lieberman have assembled a star-studded cast of contributing authors who, with significant organizational structure provided by the editors (Regan and Lieberman), have provided for us a comprehensive thesis on the

subject of minimally invasive spine surgery. They have covered the gamut of thoracic and lumbar strategies. These include discussions regarding the fundamentals, decision-making, regional nuances, specific pathologies, and new technologies. The book has been divided into sections reflecting these points of emphasis. In so doing, the editors have provided information regarding the unique training politics, and strategies required to address surgical problems via a minimally invasive approach. They have created a “how to” manual that should serve as a reference and a textbook for both the novice and experienced spine surgeons alike.

This book will fill an undeniable void in the marketplace. It is the only treatise that comprehensively addresses the subject. This book, edited by Regan and Lieberman, however, is not only comprehensive, it is an incredibly well organized text and reference source.

I would be remiss if I did not, at least to some extent, address the accomplishments of the editors of this work. Regan and Lieberman are icons in the field of spine surgery. They have crafted their careers around innovation. As innovators, both as individuals and as a team, they have been pioneers in the spine surgery arena and have relentlessly contributed to this field, exhibiting no evidence that their contributions will diminish with time.

I have the utmost respect for them as individuals and as contributors to the field. This work (*Atlas of Minimal Access Spine Surgery, 2nd edition*) has only strengthened the aforementioned respect that I harbor.

I am sure that Drs. Regan and Lieberman will look back on this text in a decade or so and chuckle, like the leaders of space flight in decades past must look back at their initial efforts in their field. Both, however, should be proud of their pioneering efforts and of their contributions toward forging the future. Without the information provided by this text, we cannot move to the next level, the level after that, and so on and so forth. I am sure that this edition of *Atlas of Minimal Access Spine Surgery* will not be the last. It will, however, much, much more than suffice for the present, while opening the door for the future; not unlike what was accomplished by the pioneers of space flight decades ago. I commend the editors and the contributors for this work of art.

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