Ocular Surface Disease
Medical and Surgical Management
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Illustrations by Nelva B. Richardson

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To our fellows
Whose hard work, long hours, and dedication to patient care
have allowed us the opportunity to help
the most challenging of ophthalmic patients.
Preface

The evolution in our understanding of the anatomy and physiology of the ocular surface and the accompanying revolution in the management of ocular surface disease has been a process spanning at least three decades. Despite enormous advances in corneal transplantation, the advent of immunosuppressive therapy, and advances in contact lens physiology, ocular surface disease has remained a constant and often a confounding problem. Diseases of the ocular surface range from mild dry eye—one of the most common diagnoses in clinical practice—to the less common, but devastating and blinding, abnormalities that result from chemical and thermal injuries. Clinical advances notwithstanding, this broad range of diseases has remained a medical and surgical challenge.

Clarification of the role of the cellular components of the ocular surface and of the relation of these components to tear function, cell adhesion, and surface renewal has renewed interest in more effective and successful intervention in this group of problems. At this writing, even as we appreciate the demonstrated role of new classes of cells that renew the ocular surface, we are just beginning to learn about the chemical signals that drive the process of physiologic surface restoration. We stand at the verge of a wealth of new scientific and clinically useful information that will serve patients who, until now, had limited resources.

In this text, we have endeavored to provide a succinct but thorough overview of this emerging field. The anatomy and physiology of the ocular surface is detailed. Diseases of the ocular surface are described with special attention given to the disorders affecting ocular surface stem cells. A significant portion of the book is devoted to the medical and surgical management of these disorders.

Our goal was to produce a textbook that organizes what we currently know about the emerging field of ocular surface disease and transplantation, and to stimulate new ideas for the future. Recent advances have improved outcomes for patients with blinding corneal surface diseases. Many of these patients have regained useful vision, which was thought to be impossible as recently as 10 to 20 years ago. Other patients, however, remain refractory to current therapies. It is for these patients that we continue to strive for future breakthroughs, and it is our sincere hope that this textbook will assist clinicians, and ultimately our patients, in accomplishing better therapeutic outcomes.

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Many individuals have contributed to this effort. First, we wish to thank our contributing authors, many of whom are the pioneers in the field of ocular surface disease. We asked the authors for a very rapid turnaround of their work. Despite busy schedules, all responded with timely and outstanding work.

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Finally, a very special thanks to Gary Schwartz, MD, who made significant scientific and editorial contributions to this project.

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