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Nota di contenuto	PART I: Lens Epithelial Cell Biology -- Chapter 1. From Zygote to Lens: Emergence of the Lens Epithelium -- Chapter 2. Cell Biology of Lens Epithelial Cells -- Chapter 3. The Lens Capsule – Synthesis, Remodeling and MMPs -- Chapter 4. Lens Epithelial Cell Proliferation -- Chapter 5. Growth Factor Signaling in Lens Fiber Differentiation -- Chapter 6. Lens-Specific Transcription Factors and Their Roles in Diagnosis and Treatment of Human Congenital Cataract -- Chapter 7. Lens Regeneration -- Chapter 8. Fibrotic Modifications of the Lens Epithelium -- Chapter 9. Wound Healing and Epithelial-Mesenchymal Transition in the Lens Epithelium: Roles of Growth Factors and Extracellular Matrix -- Part II: Clinical Science -Pathology -- Chapter 10. Histology of Posterior Capsular Opacification -- Chapter 11. PCO Rates in a Large Series of Human Eyes Obtained Post-Mortem -- Part III: Clinical Outcomes -- Chapter 12. Natural Course of Elschnig Pearl Formation and Disappearance -- Chapter 13. Effect of Posterior Capsule Opacification and Anterior Capsule Contraction on Visual

Function -- PART IV: Surgical Methods for PCO Prevention -- Chapter 14. Size of Continuous Curvilinear Capsulorhexis for Prevention of PCO -- Chapter 15. Effect of Anterior Capsule Polishing on Capsule Opacification and YAG Laser Capsulotomy -- Chapter 16. Laser Photolysis System and PCO Prevention -- PART V: Intraocular Lenses/Devices and PCO -- Chapter 17. PCO Prevention: IOL Material Versus IOL Design -- Chapter 18. Capsular and Uveal Biocompatibility of Different IOLs in Eyes with and Without Associated Conditions -- Chapter 19. Capsule-Bending Ring for the Prevention of Posterior Capsule Opacification -- Chapter 20. PCO Prevention with Endocapsular Equator Rings -- Chapter 21. PCO Prevention with IOLs Maintaining an Open or Expanded Capsular Bag -- Chapter 22. Prevention of PCO with the Bag-in-the-lens (BIL) -- Chapter 23. Posterior capsule Opacification with Micro incision (MICS) IOLs -- PART VI: Special Cases -- Chapter 24. PCO and the Pediatric Eye.

Sommario/riassunto

This book is the first to summarize the current knowledge of the cell biology of lens epithelial cells in relation to and in the development of posterior capsular opacification (PCO). PCO remains the most common long-term complication of modern cataract surgery, occurring months or years after cataract surgery, unlike most other complications that tend to arise during or soon after the procedure. Opacification of the posterior capsule appears to be linked to lens epithelial cells that are left behind in the eye during cataract removal. These cells proliferate, migrate across the posterior lens capsule, and undergo changes that result in fibrous or pearl-type opacities in the capsule. The first section of the text explains the molecular mechanism and biology of lens epithelial cells that lead to the incidence of PCO. In the second part, in addition to a description of the mechanism and pathological condition of PCO, surgical methods and devices for preventing PCO are discussed in detail. Lens Epithelium and Capsular Opacification will benefit not only young clinical residents and junior researchers, but also established faculty in the clinical or basic academic field. .