

Contents

Part I Complications in Refractive Laser Treatment Plan

1 Hyperopic Result After Corneal Wavefront-Guided PRK on an RK Eye	5
Jaime Aramberri Agesta	
2 Refractive Laser Treatment Post Phakic IOLs by LASIK.	11
Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	
3 Refractive Laser Treatment Post ICL in High Myopia by PRK	15
Jorge L. Alió, Alessandro Abbouda, and Angelo Rampone	
4 IOL Calculation in a Previous Refractive Hyperopic Patient	19
Jorge L. Alió and Felipe A. Soria	
5 Refractive Surprise After Cataract Surgery Solved by Surface Ablation of a Patient That Underwent Corneal Refractive Surgery 12 Years Ago.	23
Jorge L. Alió and Felipe A. Soria	
6 Post-refractive Surgery IOL Power Calculation, Intraoperative Aberrometry	27
Michael W. Raciti and Jonathan B. Rubenstein	
7 Refractive Lens Exchange for High Hyperopic Astigmatism Followed by LASIK.	31
Noel Alpíns	
8 Trans-epithelial Phototherapeutic Keratectomy for Irregularly Irregular Astigmatism.	37
Dan Z. Reinstein, Timothy J. Archer, and Marine Gobbe	
9 Sequential Custom Therapeutic Keratectomy for Irregular Astigmatism.	43
Paolo Vinciguerra and Fabrizio I. Camesasca	

10 Combined Post-keratoplasty LASIK/AK to Treat High Astigmatism	51
Joann J. Kang and Dimitri T. Azar	
11 Avoiding Corneal Graft: From Corneal Surgery to Phakic IOL	57
Jorge L. Alió and Alessandro Abbouda	
12 Excimer Laser Treatment of Irregular Astigmatism Following Phaco Wound Burn	61
Scott Kelly and Dimitri T. Azar	
13 Femtosecond Laser-Assisted Superficial Lamellar Keratectomy for the Treatment of Superficial Corneal Leukomas	65
Jorge L. Alió, Alessandro Abbouda, and Felipe Soria	
14 Managing LASIK Hyperopic Shift with a Multifocal Lens	69
Jorge L. Alió and Alessandro Abbouda	
15 LASIK and Severe Anisometropia in a Child	73
Jorge L. Alió and Alessandro Abbouda	
16 Refractive Laser Treatment Plan, Night Vision Disturbance	77
Roberto Pineda and Jnanankar Medhi	
17 Use of Excimer Laser Surgery for Monovision in Cases of Unsatisfactory Outcome Following Cataract Surgery	81
Jaime Javaloy and Alessandro Abbouda	
18 Error in the Excimer Refractive Program: From a Simple Mistake to a Major Clinical Problem	83
Jaime Javaloy, Alessandro Abbouda, and Jorge L. Alió	

Part II LASIK Intraoperative Complications

19 Buttonhole Flaps	89
Rosario Soriano and Fernando Llovet	
20 Incomplete LASIK Flap	97
Michael Andreoli and Dimitri T. Azar	
21 Dislocated Flaps	103
Rosario Soriano and Julio Baviera-Sabater	
22 Perforated Femtosecond Laser-Created Flap	109
David R. Hardten	
23 Thin Flap Complications	113
Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	

24	Vertical Gas Breakthrough During Femtosecond Laser Flap Creation for Laser In Situ Keratomileusis in an Eye with Previous Microkeratome Flap	117
	Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	
25	Intraoperative Complications: Free Cap in Femtosecond LASIK	121
	Samir Melki	
26	Limitations of Reorientation of a LASIK Free Cap	123
	Samuel H. Lee and Dimitri T. Azar	
27	Flap Lost	127
	Jorge L. Alió and Alessandro Abbouda	
28	Decentered Flap in Hyperopic IntraLASIK: Sometimes to Delay Is to Succeed	131
	Jorge L. Alió, Alessandro Abbouda, and Angelo Rampone	
29	Suction Break During Raster Pattern and Before Side Cut	133
	James J. Salz	
30	Suction Break After Complete Raster Pattern and Incomplete Side Cut	137
	James J. Salz	
31	Suction Loss After Complete Raster Pattern and No Side Cut, No Flap Lift, and Rainbow Glare	141
	James J. Salz	

**Part III Lasik Early Postoperative Complications:
Infection Complications and Sterile Complications**

32	Interface Infection Following LASIK	149
	Jorge L. Alió, Angelo Rampone, and Alessandro Abbouda	
33	Infections After Refractive Surgery	153
	Jorge L. Alió and Alessandro Abbouda	
34	Staphylococcal Hypersensitivity Keratitis Following Femtosecond LASIK	157
	Roberto Pineda II, J.P. Frangie, and Jnanankar Medhi	
35	DLK Early	161
	Michael Weisberg	
36	GAPP Syndrome	167
	Michael Weisberg	
37	Pressure-Induced Interlamellar Stromal Keratitis	171
	Alberto Artola	

38	Early Flap Striae	175
	Roger F. Steinert	
39	Management of Recalcitrant Flap Macrostriae	177
	Scott Kelly and Dimitri T. Azar	
40	Marginal Sterile Corneal Infiltrates	183
	Renato Ambrósio Jr., I. Ramos, and F.F. Correia	
41	Hypersensitivity to Vancomycin	187
	Jorge L. Alió and Alessandro Abbouda	
42	Management of Traumatic LASIK Flap Edge Invagination	191
	Samuel H. Lee, Dimitri T. Azar, and Jose de la Cruz	
 Part IV LASIK Late Postoperative Complications:		
Dry Eye Syndrome, Epithelial Ingrowth, Corneal Ectasia, and Other Complications		
43	Dry Eye Syndrome: Ocular Surface Syndrome After Lasik and Treated with Eye Platelet-Rich Plasma (E-PRP)	201
	Jorge L. Alió and Alessandro Abbouda	
44	Dry Eye Syndrome: Management of Post-LASIK Dry Eye Disease	205
	Sapna Tibrewal and S. Jain	
45	Dry Eye Syndrome: Recurrent Epithelial Erosion After LASIK	209
	Jorge L. Alió, Angelo Rampone, and Alessandro Abbouda	
46	Dry Eye Syndrome: Severe Ocular Surface Inflammatory Syndrome Post LASIK Caused by Blepharitis	213
	Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	
47	Epithelial Ingrowth: Epithelial Ingrowth into Visual Axis After Primary LASIK Surgery Treated by Flap Elevation and Scraping	217
	Florence Cabot and Sonia H. Yoo	
48	Epithelial Ingrowth: Use of Topography in the Management	221
	Jaime Javaloy and Alessandro Abbouda	
49	Epithelial Ingrowth After LASIK	225
	Isaac W. Porter	

50	Corneal Ectasia: Management of Corneal Ectasia After LASIK with Dovetail Femtosecond Penetrating Keratoplasty.	229
	Samuel H. Lee and Dimitri T. Azar	
51	Corneal Ectasia: Ectasia Post LASIK Managed by Femtosecond-Assisted Deep Anterior Lamellar Keratoplasty (DALK)	235
	Jorge L. Alió and Alessandro Abbouda	
52	Corneal Ectasia: Management of Corneal Ectasia After LASIK with Deep Anterior Lamellar Keratoplasty (DALK) and Transepithelial Photorefractive Keratectomy (PRK) with Mitomycin C	241
	Samuel H. Lee and Dimitri T. Azar	
53	Corneal Ectasia: Transepithelial Phototherapeutic Keratectomy and Corneal Collagen Cross-Linking for a Patient Affected by Ectasia Post-LASIK with High Coma Aberration	245
	Jorge L. Alió and Alessandro Abbouda	
54	Other Complications: Late Flap Striae	249
	Roger F. Steinert	
55	Other Complications: Scarring	253
	Jorge L. Alió, Angelo Rampone, and Alessandro Abbouda	
56	Other Complications: Abnormal Healing in Femtosecond LASIK	255
	Jaime Javaloy, Alessandro Abbouda, and Angelo Rampone	
57	Other Complications: Haze-Related Myopic Shift After PRK on a LASIK-Operated Eye Treated by Transepithelial PTK	259
	Jaime Aramberri	
58	Other Complications: Late-Onset Diffuse Lamellar Keratitis After LASIK in a Patient with Epithelial Defect After Microtrauma.	263
	Jorge L. Alió and Alessandro Abbouda	
59	Other Complications: Late-Onset Myopic Regression 12 Years Following Properly Centered Myopic LASIK	267
	Scott Kelly and Dimitri T. Azar	
60	Other Complications: Late-Onset Unilateral Irregular Mixed Astigmatism Following Thick-Flap LASIK.	271
	Daoud Fahd, Joelle Hallak, and Dimitri T. Azar	

61	Other Complications: Flap Lift After 15 Years	279
	Jorge L. Alió and Alessandro Abbouda	
62	Other Complications: Ptosis After LASIK	283
	Marco Sales, Dominika Wróbel, and Alessandro Abbouda	
63	Other Complications: Management of Recalcitrant Late-Onset DLK After Hyperopic LASIK	287
	Joelle Hallak and Dimitri T. Azar	
64	Other Complications: Management of Apparent Corneal Infiltrates After Cataract Surgery in a Patient with Previous LASIK Treatment	293
	Miguel J. Maldonado	

Part V PRK Complications

65	PRK and Epidemic Keratoconjunctivitis	299
	Jaime Javaloy, Dominika Wróbel, and Alessandro Abbouda	
66	Monolateral <i>Streptococcus pneumoniae</i> Keratitis After Photorefractive Keratotomy (PRK)	303
	Jorge L. Alió, Alessandro Abbouda, and Angelo Rampone	
67	Abnormal Healing	307
	Jaime Javaloy, Alessandro Abbouda, and Angelo Rampone	
68	Dry Eye and PRK	311
	Massimo Camellin, Diego Ponzin, and Samuel Arba Mosquera	
69	Treatment of Post-PRK or Post-RK Haze by Two-Stage Transepithelial PRK with Mitomycin C	317
	Daniel S. Durrie and Theodore A. Pasquali	
70	A Case of Severe Haze After PRK in a Patient Treated by a 6th-Generation Excimer Laser	323
	Jorge L. Alió, Alessandro Abbouda, and Rana Eskndafi	
71	Ectasia Post PRK at Delayed Onset	327
	Maria Jose Ayala, Alessandro Abbouda, and Jaime Javaloy	
72	Late-Onset Consecutive Hyperopia Following Decentered Myopic PRK	331
	Scott Kelly and Dimitri T. Azar	
73	Twelve Years of Follow-Up of PRK in a Patient with -22 Diopter Myopia	335
	Alessandro Abbouda and Jorge L. Alió	

Part VI Corneal Inlays Complications

74	Complications of Corneal Inlays (Inlay Displacement)	341
	Florence Cabot and Damien Gatinel	
75	AcuFocus® Inlay Implant Reversibility	345
	Emilia M. Mulet, Jorge L. Alió, and Alessandro Abbouda	
76	Corneal Melting and Neovascularization Associated with Ring Segment Extrusion 6 Months After the Surgery	349
	Jorge L. Alió, Alessandro Abbouda, and Angelo Rampone	
77	Management of Poor Vision Following INTACS Implantation for Keratoconus	353
	Jorge L. Alió and Alessandro Abbouda	
78	Refractive Surprise After PRK in Patient with INTACS. Reversibility of Intrastromal Corneal Ring Segments. Refractive and Topographic Changes	359
	Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	

Part VII Phakic Intraocular Lens Complications

79	Artisan Lens Dislocation	367
	Jorge L. Alió and Alessandro Abbouda	
80	Iris and Crystalline Lens Damage During Phakic IOL Surgery	369
	Jorge L. Alió and Alessandro Abbouda	
81	Angle-Supported Phakic IOL	371
	Alessandro Abbouda and Jorge L. Alió	
82	Phakic IOL Optic Luxation in a Two-Pieces (Kelman Duet) Lens Separation	375
	Jorge L. Alió and Alessandro Abbouda	
83	Angle-Supported Phakic IOL Migration Following Trauma	377
	Jorge L. Alió, Jaime Javaloy, and Alessandro Abbouda	
84	Misaligned STAAR Toric Implantable Collamer Lens (ICL)	381
	Jaime Javaloy and Alessandro Abbouda	
85	ICL and Sequential Bilateral Pupillary Block	385
	Jaime Javaloy and Alessandro Abbouda	
86	Complications of Phakic Intraocular Lenses: Refractive Lens Exchange and Piggyback.	389
	Jorge L. Alió, Dominika Wróbel, and Alessandro Abbouda	

Part VIII Corneal Cross-Linking Complications

87	Haze	395
	Roberto Pinelli	
88	Microbial Keratitis After Corneal Collagen Cross-Linking	401
	Alberto Artola	
89	Limitations of PRK After ICRS and Corneal Collagen Cross-Linking for Keratoconus	405
	Kaitlyn Wallace and Dimitri Azar	
90	PACK-CXL Treatment of Acanthamoeba Keratitis Following PRK	411
	Alessandro Abbouda and Jorge L. Alió	
91	CXL and Delayed Wound Healing	415
	Alfredo Vega Estrada	
92	CXL in Pediatric Age	419
	Alessandro Abbouda and Alfredo Vega Estrada	

Part IX Refractive Keratotomy Complications

93	Solving Refractive Complications after RK Correction of Hyperopic Shift	425
	Massimo Camellin, Diego Ponzin, and Samuel Arba-Mosquera	
94	Variability of Astigmatic Keratotomy	433
	Massimo Camellin, Diego Ponzin, and Samuel Arba-Mosquera	
95	Cataract Surgery Complications of Radial Keratotomy	439
	Massimo Camellin, Diego Ponzin, and Samuel Arba-Mosquera	
96	Lasik Surgery After Arcuate Lamellar Keratotomy	445
	Jorge L. Alió and Alessandro Abbouda	

Part X Optical Neuropathy and Retinal Complications After Refractive Surgery

97	CNV After LASIK	451
	J. Fernando Arevalo	
98	LASIK Flap Displacement During Vitrectomy	455
	J. Fernando Arevalo	

99	NIAON After LASIK	457
	J. Fernando Arevalo	
100	Macular Hole After LASIK	461
	J. Fernando Arevalo	
101	Retinal Detachment After LASIK	465
	J. Fernando Arevalo	
 Appendix: Step-By-Step Approach for Planning Refractive Correction of Highly Aberrated Eyes in Excimer Laser Refractive Corneal Surgery		
	Samuel Arba Mosquera, Tobias Ewering, Jerry Tan, and Por Yong Ming	469