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OF OPHTHALMOLOGY

11

Lens and Cataract

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BCSC
Basic and Clinical
Science Course™

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Basic and Clinical Science Course

Louis B. Cantor, MD, Indianapolis, Indiana, *Senior Secretary for Clinical Education*

Christopher J. Rapuano, MD, Philadelphia, Pennsylvania, *Secretary for Lifelong Learning and Assessment*

George A. Cioffi, MD, New York, New York, *BCSC Course Chair*

Section 11

Faculty

Sharon L. Jick, MD, *Chair*, St Louis, Missouri

Thomas L. Beardsley, MD, Asheville, North Carolina

Chadwick R. Brasington, MD, Burlington, North Carolina

Carlos Buznego, MD, Miami, Florida

Richard J. Grostern, MD, Chicago, Illinois

Lisa Park, MD, New York, New York

Timothy V. Roberts, MD, *Consultant*, Sydney, Australia

The Academy wishes to acknowledge the *American Society of Cataract and Refractive Surgery* and the *Contact Lens Association of Ophthalmologists* for recommending faculty members to the BCSC Section 11 committee.

The Academy also wishes to acknowledge the following committees for review of this edition:

Committee on Aging: Tim Johnson, MD, Iowa City, Iowa

Vision Rehabilitation Committee: John D. Shepherd, MD, Omaha, Nebraska

Practicing Ophthalmologists Advisory Committee for Education: Edward K. Isbey III, MD, *Primary Reviewer and Chair*, Asheville, North Carolina; Alice Bashinsky, MD, Asheville, North Carolina; David Browning, MD, PhD, Charlotte, North Carolina; Bradley Fouraker, MD, Tampa, Florida; Dasa Gangadhar, MD, Wichita, Kansas; Steven J. Grosser, MD, Golden Valley, Minnesota; Stephen R. Klapper, MD, Carmel, Indiana; James A. Savage, MD, Memphis, Tennessee



European Board of Ophthalmology: Béatrice Cochener-Lamard, MD, PhD, *Chair*, Brest, France; Marie-José Tassignon, MD, PhD, *Liaison*, Edegem, Belgium; Roberto Bellucci, MD, Salò, Italy; Simonetta Morselli, MD, Verona, Italy; Zoltan Nagy, MD, Budapest, Hungary

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Dr Buznego: Alcon Laboratories (C, L), Allergan (C, L), Bausch + Lomb (C, L), Calhoun Vision (O), CXL Ophthalmics (O), CXLUSA (O), Glaukos Corporation (C, L, O, S), LENSAR (C, L), Omeros (C, L), Rapid Pathogen Screening (O)

Dr Cochener-Lamard: Abbott Medical Optics (C, L), Alcon Laboratories (C, L), Bausch + Lomb (S), Horus (C, L), Physiol (C, L), ReVision Optics (C, L), Santen (C, L), Théa (C, L)

Dr Fouraker: Addition Technology (C, L), Alcon Laboratories (C, L), KeraVision (C, L), OASIS Medical (C, L)

Dr Grosser: Ivantis (O)

Dr Isbey: Alcon Laboratories (S), Bausch + Lomb (S)

Dr Nagy: Alcon Laboratories (C, L)

Dr Roberts: Abbott Medical Optics (C), Alcon Laboratories (C, L), Allergan (C), Device Technologies (C), Pfizer (C, L)

Dr Savage: Allergan (L)

Dr Tassignon: Morcher GmbH (P)

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Recent Past Faculty

James C. Bobrow, MD
Joseph A. Reich, MBBS
Lisa F. Rosenberg, MD
Michael N. Wiggins, MD

In addition, the Academy gratefully acknowledges the contributions of numerous past faculty and advisory committee members who have played an important role in the development of previous editions of the Basic and Clinical Science Course.

American Academy of Ophthalmology Staff

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American Academy of Ophthalmology
655 Beach Street
Box 7424
San Francisco, CA 94120-7424

Contents

General Introduction	xv
Objectives	1
Introduction	3
1 Epidemiology of Cataract	5
Introduction	5
Rate of Cataract Surgery	5
Distribution of Cataract Subtypes	6
Risk Factors for the Development of Cataract	6
2 Anatomy	9
Normal Crystalline Lens	9
Capsule	11
Zonular Fibers	12
Lens Epithelium	12
Nucleus and Cortex	13
3 Biochemistry and Physiology	15
Molecular Biology	15
Crystallin Proteins	15
Membrane Structural Proteins and Cytoskeletal Proteins	16
Increase of Water-Insoluble Proteins With Age	17
Carbohydrate Metabolism	17
Oxidative Damage and Protective Mechanisms	19
Lens Physiology	20
Maintenance of Lens Water and Cation Balance	21
Accommodation and Presbyopia	22
4 Embryology and Developmental Defects	25
Normal Development of the Lens	25
Lens Placode	25
Lens Pit	25
Lens Vesicle	25
Primary Lens Fibers and the Embryonic Nucleus	26
Secondary Lens Fibers	27
Lens Sutures and the Fetal Nucleus	28
Tunica Vasculosa Lentis	29
The Zonule of Zinn	29
Congenital Anomalies and Abnormalities	30
Congenital Aphakia	30
Lenticonus and Lentiginobus	30

Lens Coloboma	30
Mittendorf Dot	31
Epicapsular Star	31
Peters Anomaly	31
Microspherophakia	32
Aniridia	33
Congenital Cataract	34
Developmental Defects	39
Ectopia Lentis	39
Genetic Contributions to Age-Related Cataracts	41
Ectopia Lentis et Pupillae	42
Persistent Fetal Vasculature	42

5 Pathology. 43

Age-Related Lens Changes	43
Nuclear Cataracts	43
Cortical Cataracts	45
Posterior Subcapsular Cataracts	46
Drug-Induced Lens Changes	51
Corticosteroids	51
Phenothiazines	52
Miotics	52
Amiodarone	53
Statins	53
Tamoxifen	53
Trauma	53
Contusion	53
Perforating or Penetrating Injury	55
Intraocular Procedures	55
Intralenticular Foreign Bodies	57
Radiation	57
Metallosis	58
Electrical Injury	59
Chemical Injuries	59
Metabolic Cataract	60
Diabetes Mellitus	60
Galactosemia	61
Hypocalcemia	61
Wilson Disease	62
Myotonic Dystrophy	62
Effects of Nutrition, Alcohol, and Smoking	63
Cataract Associated With Uveitis	64
Lens Changes With Hyperbaric Oxygen Therapy	65
Pseudoexfoliation Syndrome	65
Cataract and Atopic Dermatitis	66
Phacoantigenic Uveitis	66

Lens-Induced Glaucoma 67
 Phacolytic Glaucoma 67
 Lens Particle Glaucoma 67
 Phacomorphic Glaucoma 67
 Glaukomflecken 68
 Ischemia 68
 Cataracts Associated With Degenerative Ocular Disorders 68

6 Evaluation and Management of Cataracts in Adults . . . 69

Clinical History: Signs and Symptoms 69
 Decreased Visual Acuity 69
 Glare and Altered Contrast Sensitivity 70
 Myopic Shift 70
 Monocular Diplopia or Polyopia 70
 Decreased Visual Function 71
 Nonsurgical Management 71
 Indications for Surgery 72
 Preoperative Evaluation 74
 General Health of the Patient 74
 Pertinent Ocular History 75
 Social History 76
 Measurements of Visual Function. 76
 Visual Acuity Testing 76
 Refraction 76
 Glare Testing 77
 Contrast Sensitivity Testing. 77
 External Examination 77
 Motility 77
 Pupils 78
 Slit-Lamp Examination 78
 Conjunctiva 78
 Cornea 78
 Anterior Chamber and Iris 79
 Crystalline Lens. 79
 Limitations of Slit-Lamp Examination 80
 Fundus Evaluation 80
 Ophthalmoscopy 80
 Optic Nerve 81
 Fundus Evaluation With Opaque Media 81
 Special Tests 81
 Potential Acuity Estimation. 81
 Visual Field Testing 82
 Objective Tests of Macular Function 82
 Preoperative Measurements 82
 Biometry. 82
 Corneal Topography. 84
 Additional Evaluation of the Cornea 84

IOL Power Determination 84
 IOL Calculation. 85
 Preventing Errors in IOL Calculation, Selection, and Insertion 87
 Improving Outcomes 87
 Patient Preparation and Informed Consent. 87

7 Surgery for Cataract 89

Historical Overview of Cataract Surgery 89
 Anesthesia for Cataract Surgery. 91
 Antimicrobial Prophylaxis 93
 Before Surgery 93
 In Surgery 94
 After Surgery 95
 Ophthalmic Viscosurgical Devices 95
 Physical Properties 96
 Uses of Ophthalmic Viscosurgical Devices 97
 Phacoemulsification: Instrumentation, Terminology,
 and Key Concepts 98
 Instrumentation 98
 Ultrasonic Technology Terminology 99
 Key Concepts and Advances in Phaco Power Delivery 100
 Irrigation 101
 Fluidics and Phacodynamics Terminology 102
 Aspiration Pumps 103
 Outline of the Phacoemulsification Procedure 104
 Eye Marking and Time-Out 104
 Exposure of the Globe 105
 Paracentesis 105
 Clear Corneal Incision 106
 Scleral Tunnel Incision. 107
 Continuous Curvilinear Capsulorrhexis 108
 Hydrodissection 110
 Hydrodelineation 110
 Nucleus Rotation 111
 Nucleus Disassembly and Removal 111
 Location of Emulsification 111
 Techniques of Nucleus Disassembly 112
 Irrigation and Aspiration. 115
 Insertion of the IOL 115
 After IOL Insertion 117
 IOLs: Historical Perspectives and Lens Modifications 118
 Historical Perspectives 118
 Posterior Chamber IOLs and Other Lens Modifications 119
 Modification of Preexisting Astigmatism. 123
 Astigmatic Keratotomy. 123
 Limbal Relaxing Incisions 123
 Toric IOLs 124

Alternative Technologies for Cataract Extraction	125
Laser Photolysis.	125
Fluid-Based Phacolysis.	125
Femtosecond Laser Cataract Extraction	125
Outcomes of Cataract Surgery	126

8 Complications of Cataract Surgery 127

Corneal Complications	128
Corneal Edema	128
Incision and Wound Complications	130
Descemet Membrane Detachment.	131
Induced Astigmatism	131
Corneal Melting	132
Other Anterior Segment Complications	132
Epithelial or Fibrous Ingrowth	132
Toxic Anterior Segment Syndrome	133
Shallow or Flat Anterior Chamber.	134
Elevated Intraocular Pressure	136
Intraoperative Floppy Iris Syndrome.	136
Lens–Iris Diaphragm Retropulsion Syndrome.	138
Iridodialysis and Iris Trauma	138
Cyclodialysis	139
Ciliary Block Glaucoma	139
Postoperative Uveitis	139
Retained Lens Material	140
Capsular Rupture	142
Vitreous Prolapse in the Anterior Chamber	143
Complications of IOL Implantation	144
Decentration and Dislocation.	144
Pupillary Capture	148
Capsular Block Syndrome	148
Uveitis-Glaucoma-Hyphema Syndrome	149
Pseudophakic Bullous Keratopathy	149
Unexpected Refractive Results	149
IOL Glare, Dysphotopsia, and Opacification	150
Capsular Opacification and Contraction	152
Posterior Capsule Opacification	152
Anterior Capsule Fibrosis and Phimosis	153
Nd:YAG Laser Capsulotomy	154
Hemorrhage	157
Systemic Anticoagulation	157
Retrobulbar Hemorrhage	158
Hyphema	158
Suprachoroidal Effusion or Hemorrhage	159
Expulsive Suprachoroidal Hemorrhage	159
Delayed Suprachoroidal Hemorrhage	160

Endophthalmitis 160
 Diagnosis 162
 Treatment 162
Retinal Complications 163
 Cystoid Macular Edema 163
 Retinal Light Toxicity 166
 Retinal Detachment 166

9 Preparing for Cataract Surgery in

Special Situations 169
Psychosocial Considerations 169
 Claustrophobia 169
 Neurocognitive and Neurodevelopmental Disorders 169
 Patient Communication During Eye Surgery 170
Systemic Considerations 170
 Medical Status 170
 Anticoagulation Therapy or Bleeding Disorders 171
External Ocular Abnormalities 172
 Blepharitis and Acne Rosacea 172
 Keratoconjunctivitis Sicca 173
 Mucous Membrane Pemphigoid 173
 Exposure Keratitis and Seventh Nerve Palsy 174
Corneal Conditions 174
 Corneal Disease 174
 Cataract and Keratoplasty 175
 Cataract Following Keratoplasty 176
 Cataract Following Refractive Surgery 176
Compromised Visualization of the Lens 177
 Small Pupil 177
 Poor Red Reflex 178
Altered Lens and Zonular Anatomy 179
 Intumescent Cataract 179
 Advanced Cataract 180
 Iris Coloboma and Corectopia 180
 Posterior Polar Cataract 180
 Zonular Dehiscence With Lens Subluxation or Dislocation 181
 Pseudoexfoliation Syndrome 184
 Cataract in Aniridia 184
Conditions Associated With Extremes in Axial Length 184
 High Myopia 184
 High Hyperopia and Nanophthalmos 185
 Hypotony 185
Glaucoma and Cataract 186
 Assessment 186
 Cataract Surgery in an Eye With a Functioning Filter 187
Uveitis 188

Retinal Conditions	189
Retinal Disease	189
Cataract Following Pars Plana Vitrectomy	190
Cataract With Intraocular Silicone Oil	190
Ocular Trauma	190
Ocular Assessment	190
Visualization During Surgery	191
Inflammation.	191
Retained Foreign Matter	191
Cataract in an Eye With Damage to Other Ocular Tissues	191
Removal of Traumatic Cataract	192
Vision Rehabilitation	193
IOL Selection After Trauma	193
Appendix: Surgical Procedures for Extracapsular and Intracapsular Cataract Extraction.	195
Basic Texts.	203
Related Academy Materials	205
Requesting Continuing Medical Education Credit.	207
Study Questions	209
Answer Sheet for Section 11 Study Questions.	215
Answers.	217
Index	223

General Introduction

The Basic and Clinical Science Course (BCSC) is designed to meet the needs of residents and practitioners for a comprehensive yet concise curriculum of the field of ophthalmology. The BCSC has developed from its original brief outline format, which relied heavily on outside readings, to a more convenient and educationally useful self-contained text. The Academy updates and revises the course annually, with the goals of integrating the basic science and clinical practice of ophthalmology and of keeping ophthalmologists current with new developments in the various subspecialties.

The BCSC incorporates the effort and expertise of more than 90 ophthalmologists, organized into 13 Section faculties, working with Academy editorial staff. In addition, the course continues to benefit from many lasting contributions made by the faculties of previous editions. Members of the Academy Practicing Ophthalmologists Advisory Committee for Education, Committee on Aging, and Vision Rehabilitation Committee review every volume before major revisions. Members of the European Board of Ophthalmology, organized into Section faculties, also review each volume before major revisions, focusing primarily on differences between American and European ophthalmology practice.

Organization of the Course

The Basic and Clinical Science Course comprises 13 volumes, incorporating fundamental ophthalmic knowledge, subspecialty areas, and special topics:

- 1 Update on General Medicine
- 2 Fundamentals and Principles of Ophthalmology
- 3 Clinical Optics
- 4 Ophthalmic Pathology and Intraocular Tumors
- 5 Neuro-Ophthalmology
- 6 Pediatric Ophthalmology and Strabismus
- 7 Orbit, Eyelids, and Lacrimal System
- 8 External Disease and Cornea
- 9 Intraocular Inflammation and Uveitis
- 10 Glaucoma
- 11 Lens and Cataract
- 12 Retina and Vitreous
- 13 Refractive Surgery

In addition, a comprehensive Master Index allows the reader to easily locate subjects throughout the entire series.

References

Readers who wish to explore specific topics in greater detail may consult the references cited within each chapter and listed in the Basic Texts section at the back of the book.

These references are intended to be selective rather than exhaustive, chosen by the BCSC faculty as being important, current, and readily available to residents and practitioners.

Videos

This edition of Section 11, *Lens and Cataract*, includes videos related to topics covered in the book. The videos were selected by members of the BCSC faculty and are available to readers of the print and electronic versions of Section 11. Mobile-device users can scan the QR code below (a QR-code reader must already be installed on the device) to access the video content.

Study Questions and CME Credit

Each volume of the BCSC is designed as an independent study activity for ophthalmology residents and practitioners. The learning objectives for this volume are given on page 1. The text, illustrations, and references provide the information necessary to achieve the objectives; the study questions allow readers to test their understanding of the material and their mastery of the objectives. Physicians who wish to claim CME credit for this educational activity may do so by following the instructions given at the end of the book.

Conclusion

The Basic and Clinical Science Course has expanded greatly over the years, with the addition of much new text, numerous illustrations, and video content. Recent editions have sought to place greater emphasis on clinical applicability while maintaining a solid foundation in basic science. As with any educational program, it reflects the experience of its authors. As its faculties change and medicine progresses, new viewpoints emerge on controversial subjects and techniques. Not all alternate approaches can be included in this series; as with any educational endeavor, the learner should seek additional sources, including Academy Preferred Practice Pattern Guidelines.

The BCSC faculty and staff continually strive to improve the educational usefulness of the course; you, the reader, can contribute to this ongoing process. If you have any suggestions or questions about the series, please do not hesitate to contact the faculty or the editors.

The authors, editors, and reviewers hope that your study of the BCSC will be of lasting value and that each Section will serve as a practical resource for quality patient care.

Objectives

Upon completion of BCSC Section 11, *Lens and Cataract*, the reader should be able to

- describe the normal anatomy, embryologic development, physiology, and biochemistry of the crystalline lens
 - identify congenital anomalies of the lens
 - list types of congenital and acquired cataracts
 - describe the association of cataracts with aging, trauma, medications, and systemic and ocular diseases
 - describe the evaluation and management of patients with cataract and other lens abnormalities
 - state the principles of cataract surgery techniques and associated surgical technology
 - describe an appropriate differential diagnosis and management plan for intraoperative and postoperative complications of cataract surgery
 - identify special circumstances in which cataract surgery techniques should be modified, and describe appropriate treatment plans
-