

Residency Core

Curriculum General and Ophthalmologic

Diseases

1. Infectious Diseases
2. Hypertension
3. Cerebrovascular Disease
4. Acquired Heart Disease
5. Hypercholesterolemia
6. Pulmonary Diseases
7. Hematologic Disorders
8. Rheumatic Disorders
9. Endocrine Disorders
10. Geriatric
11. Cancer
12. Behavioral and Neurologic Disorders
13. Preventive Medicine
14. Medical Emergencies
15. Perioperative Management in Ocular Surgery
16. Using Statistics in Practice and Work

Glaucoma

1. Introduction to Glaucoma: Terminology
2. Intraocular Pressure and Aqueous Humor
3. Clinical Evaluation
4. Open-Angle Glaucoma
5. Angle-Closure Glaucoma
6. Childhood Glaucoma
7. Medical Management of Glaucoma
8. Surgical Therapy for Glaucoma

Lens and Cataract

1. Anatomy
2. Biochemistry
3. Physiology
4. Embryology
5. Pathology
6. Epidemiology of Cataracts

7. Evaluation and Management of Cataracts in Adults
8. Surgery for Cataract
9. Complications of Cataract Surgery
10. Cataract Surgery in Special Situations

Retina and Vitreous

PART I. Fundamentals and Diagnostic

1. Basic Anatomy
2. Diagnostic Approach to Retinal Disease
3. Retinal Physiology and Psychophysics

PART II. Disorders of the Retina and Vitreous

4. Acquired Diseases Affecting the Macula
5. Retinal Vascular Disease
6. Choroidal Disease
7. Focal and Diffuse Choroidal and Retinal
8. Congenital and Stationary Retinal Disease
9. Hereditary Retinal and Choroidal Dystrophies
10. Retinal Degenerations Associated With
11. Peripheral Retinal Abnormalities
12. Diseases of the Vitreous
13. Posterior Segment Manifestations of Trauma

PART III. Selected Therapeutic Topics

14. Laser Therapy for Posterior Segment Diseases
15. Vitreoretinal Surgery

Refractive Surgery

PART I. Underlying Concepts of Refractive Surgery

1. The Science of Refractive Surgery
2. The Role of the FDA in Refractive Surgery
3. Patient Evaluation

PART II. Specific Procedures in Refractive Surgery

4. Incisional Corneal Surgery
5. Onlays and Inlays
6. Photo ablation
7. Collagen Shrinkage Procedures
8. Intraocular Surgery
9. Accommodative and Nonaccommodative

PART III Refractive Surgery in the Setting of Other Conditions

10. Refractive Surgery in Ocular and Systemic Disease
11. Considerations after Refractive Surgery
12. International Perspectives in Refractive Surgery

Fundamentals and Principles of Ophthalmology

PART I. Anatomy

1. Orbit and Ocular Adnexa
2. The Eye
3. Cranial Nerves: Central and Peripheral Connections

PART II

Embryology

4. Ocular Development

PART III Genetics

5. Molecular Genetics
6. Clinical Genetics

PART IV Biochemistry and Metabolism

7. Tear Film
8. Cornea
9. Iris and Ciliary Body
10. Aqueous Humor
11. Lens
12. Vitreous
13. Retina
14. Retinal Pigment Epithelium
15. Free Radicals and Antioxidants

Part V Ocular Pharmacology

16. Pharmacologic Principles
17. Ocular Pharmacotherapeutics

Clinical Optics

1. Physical Optics
2. Geometrical Optics
3. Optics of the Human Eye

4. Clinical Refraction
5. Contact Lenses
6. Intraocular Lenses
7. Optical Considerations in Refractive Surgery
8. Vision Rehabilitation
9. Telescopes and Optical Instruments

Ophthalmic Pathology and Intraocular Tumors

1. Disease Process
2. Wound Repair
3. Specimen Handling
4. Special Procedures
5. Conjunctiva
6. Cornea
7. Anterior Chamber and Trabecular Meshwork
8. Sclera
9. Lens
10. Vitreous
11. Retina and Retinal Pigment Epithelium
12. Uveal Tract
13. Eyelids
14. Orbit
15. Optic Nerve
16. Introduction to Part II
17. Melanocytic Tumors
18. Angiomatous Tumors
19. Retinoblastoma
20. Secondary Tumors of the Eye
21. Lymphomatous Tumors

Neuro-Ophthalmology

1. Neuro-Ophthalmic Anatomy
2. Neuroimaging in Neuro-Ophthalmology
3. Patients with Decreased Vision: Evaluation
4. Patient with Decreased Vision: Classification and Management
5. Patient with Transient Visual Loss
6. Patient with Illusions, Hallucinations, and Disorders of Higher Cortical Function
7. Patient with Supranuclear Disorders of Ocular Motility
8. Patients with Diplopia
9. Patients with Nystagmus or Spontaneous Eye Movement Disorders
10. Patients with Papillary Abnormalities
11. Patients with Eyelid or Facial Abnormalities
12. Patients with Head, Ocular, or Facial Pain
13. Patients with Nonorganic Ophthalmic Disorders
14. Selected Systemic Conditions with Neuro-Ophthalmic Signs

Pediatric Ophthalmology and Strabismus

PART I. Strabismus

1. Anatomy of the Extraocular Muscles
2. Motor Physiology
3. Sensory Physiology and Pathology
4. Amblyopia
5. Diagnostic Techniques for Strabismus and
6. Esodeviations
7. Exodeviations
8. A-and V-Pattern Horizontal Strabismus
9. Vertical Deviations
10. Special Forms of Strabismus
11. Childhood Nystagmus
12. Surgery of the Extraocular Muscles
13. Chemodenervation Treatment of Strabismus and Blepharospasm Using Botulinum Toxin

PART II. Pediatric Ophthalmology

Introduction to Part II: Growth and Development of the Eye

14. Congenital Anomalies
15. Orbital Dysmorphology and Eyelid Disorders
16. Infectious and Allergic Ocular Diseases
17. The Lacrimal Drainage System
18. Diseases of the Cornea and Anterior Segment
19. Iris Abnormalities
20. Pediatric Glaucoma
21. Childhood Cataracts and Other Pediatric Lens Disorders
22. Uveitis in the Pediatric Age Group Classification
23. Vitreous and Retinal Diseases and Disorders
24. Optic Disc Abnormalities
25. Ocular and Periocular Tumors in Childhood
26. Phakomatoses
27. Craniofacial Malformations
28. Ocular Findings in Inborn Errors of Metabolism Treatment
29. Ocular Trauma in Childhood
30. Decreased Vision in Infants and Children

Orbit, Eyelids, and lacrimal System

PART I. Orbit

1. Orbital Anatomy
2. Evaluation of Orbital Disorders
3. Congenital Orbital Anomalies
4. Infectious and Inflammatory Disorders
5. Orbital Neoplasms
6. Orbital Trauma

7. Orbital Surgery
8. The Anophthalmic Socket Enucleation

PART II. Periocular Soft Tissues

9. Anatomy
10. Principles of Facial and Eyelid Surgery
11. Classification and Management of Eyelid Disorders
12. Periocular Malpositions and Involutional Changes

PART III. Lacrimal System

13. Development, Anatomy, and Physiology of the Lacrimal Secretory and Drainage Systems
14. Abnormalities of the Lacrimal Secretory and Drainage Systems

External Disease and Cornea

PART I. Basic and Clinical Concepts of Corneal and External Eye Disease

1. Structure and Function of the External Eye and Cornea
2. Examination Techniques of the External Eye and Cornea

PART II. Ocular Surface Disorders

3. Normal Physiology of the Ocular Surface
4. Diagnostic Approach to Ocular Surface Disease
5. Dry Eye Syndrome

PART III. Infectious Diseases of the External Eye and Cornea

6. Infectious Diseases of the External Eye: Basic Concepts
7. Infectious Diseases of the External Eye: Clinical Aspects

PART IV. Immune-mediated Disorders of the External Eye and Cornea

8. Ocular Immunology
9. Clinical Approach to Immune-Related Disorders of the External Eye

PART V. Neoplastic Disorders of the Eyelids, Conjunctiva, and Cornea

10. Tumor Cell Biology and Diagnostic Approaches to Ocular Surface Neoplasia
11. Clinical Approach to Neoplastic Disorders of the Conjunctiva and Cornea

PART VI. Congenital Anomalies of the Cornea and Sclera

12. Basic Concepts of Congenital Anomalies of the Cornea and Sclera
13. Clinical Aspects of Congenital Anomalies of the Cornea and Sclera

PART VII. Corneal Dystrophies and Metabolic Disorders Involving the Conjunctiva, Cornea, and Sclera

14. Molecular Genetics of Corneal Dystrophies and Metabolic Disorders
15. Clinical Approach to Corneal Dystrophies and Metabolic Disorders

PART VIII. Degenerative Disorders of the Conjunctiva, Cornea, and Sclera

16. Degenerative and Aging Processes of the Conjunctiva, Cornea, and Sclera
17. Clinical Approach to Depositions and Degenerations of the Conjunctiva, Cornea, and Sclera

PART IX. Toxic and Traumatic Injuries of the Anterior Segment

18. Healing of Conjunctiva, Cornea, and Sclera
19. Clinical Aspects of Toxic and Traumatic Injuries of the Anterior Segment
20. Introduction to Surgery of the Ocular Surface
Corneal and Conjunctival Epithelial Healing
21. Surgical Procedures of the Ocular Surface

PART X.

22. Corneal Transplantation Basic Concepts of Corneal Transplantation
23. Approach to Corneal Transplantation

Intraocular Inflammation and Uveitis

PART I.

1. Basic Concepts in Immunology
2. Immunization and Adaptive Immunity: The Immune Response Arc
3. Ocular Immune Responses
4. Mechanisms of Immune Effector Reactivity 5. Special Topics in Ocular Immunology

PART II.

6. Intraocular Inflammation and Uveitis Clinical Approach to Uveitis
7. Noninfectious (Autoimmune) Uveitis. 8. Infectious Uveitis
9. Endophthalmitis
10. Masquerade Syndromes
11. Complications of Uveitis
12. Ocular Involvement in AIDS