

3rd Illinois Eye Review 2010

Course Organizers

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Purpose of the activity:

The purpose of the Illinois Eye Review is concomitantly to: 1) provide participants with the fundamentals of ophthalmology research and practice; 2) provide intensive sessions that explicate cutting edge treatments and advances within the field; and 3) offer a variety of topical lectures by eminent ophthalmologists that will provide an opportunity for participants to apply what they have learnt to real-world clinical problems.

General Objectives

By the end of the course participants should be able to:

- List, define, identify, and evaluate the ophthalmological conditions and therapeutic interventions for various eye diseases.
- Demonstrate acquisition of facts and attainment of new knowledge about a variety of subspecialties and should be able to synthesize and apply the knowledge gained to improve clinical practice.

Specific objectives are listed on the website for the course: <http://www.illinoiseyereview.org>

Intended Audience

This course has been organized for ophthalmologists, residents, fellows, medical students, optometrists and basic scientists encompassing all levels of experience and knowledge.

CME Credit and Accreditation

The University of Illinois at Chicago (UIC) College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The University of Illinois at Chicago (UIC) College of Medicine designates this educational activity for a maximum of 79 AMA PRA Category 1 Credit(s)TM. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Faculty Disclosure

The University of Illinois, in an effort to comply with the Standards and Policies set forth by the Accreditation Council for Continuing Medical Education (ACCME) requires that all faculty members demonstrate balance, independence, objectivity, and scientific rigor in their presentations. All faculty members will disclose significant financial interests or relationships with organizations that provide products, services, or equipment being discussed during a presentation. Faculty members are also required to inform the audience of any presentation of a medical device, product, or pharmaceutical that has not been approved for such purpose by the FDA. Financial and "off-label" disclosure statements by the faculty will be made at the outset of each presentation so participants may form their own opinion about each presentation.

[Acknowledgment](#) - Pharmaceutical support will be acknowledged.

Learning Objectives

1. Describe the basic properties of light and light-tissue interactions.
2. Describe the optical models of the human eye.
3. Evaluate the utility of retinoscopy, manifest refraction cross cylinders and spectacle prescription.
4. Explain the optical principles underlying various modalities of refractive correction: spectacles, contact lenses, intraocular lenses, and refractive surgery.
5. Describe visual perception and function: visual acuity, color perception and contrast sensitivity.
6. To apply the basic optics principles to solving basic problems of physical optics relating to refraction and reflection of light.
7. To provide a rational approach of solving problems of physiological optics and reinforce the concepts learned in Optics.
8. Describe the anatomy of orbit, cranial nerve pathways and distribution of arterial and venous circulation of the orbit and optic nerve.
9. Delineate the events early embryogenesis pertinent to development of the eye and orbit.
10. Evaluate the stages in the development of the eye and correlate congenital ocular disorders with time of embryonic insult.
11. Describe the anatomy of the limbus, choroid, retina and vitreous.
12. Describe common ocular conditions.
13. Delineate how to correlate clinical and pathological findings.
14. Evaluate differential diagnostic techniques for ocular pathology.
15. Summarize the key histopathologic features of common ocular conditions utilizing clinical pathologic correlations as well as the " Grand Rounds CPC " format.
16. Describe the fundamentals of strabismus and amblyopia
17. Describe and assess strabismus as well as the ocular deviations.
18. Evaluate the procedures, guidelines, considerations, and the complications of strabismus surgery.
19. Describe ophthalmologic disorders most often found among children. Explain how to classify and manage these disorders.
20. Describe sensory and motor functions in strabismus.
21. Describe common ophthalmic genetic diseases, and the development of treatment approaches.
22. Describe the fundamentals of strabismus as well as the ocular deviations.
23. Identify when surgery is indicated.
24. Evaluate the procedures, guidelines, considerations, and the complications of strabismus surgery.
25. Describe ophthalmological disorders most often found among children. Explain how to classify and manage these disorders.
26. Identify the structure and function of the external eye and the cornea.
27. Describe the basic and clinical concepts of the cornea and infectious diseases.
28. Determine how to diagnose immune- mediated disorders.
29. Describe potential ocular surface disorders as well as infectious diseases.
30. Describe the effects of neoplastic and traumatic injuries.
31. Describe congenital anomalies, dystrophies and degenerations of the cornea.
32. Describe differential surgical options for the ocular surface.
33. Explain how to do an examination of the pupil, visual fields, color vision, contrast sensitivity, as well as how to do electrophysiologic testing and how to rule out maculopathy and retinal diseases.
34. Describe neuroimaging techniques and issues associated with transient vision loss.
35. Compare differential types of decreased vision, and explain how to differentially diagnose for those with both decreased vision and -ive RAPD and those with +ive RAPD.
36. Describe ocular movement and diplopia; describe eyelid and papillary abnormalities, as well as issues related to migraines and functional visual disorders.
37. To accurately differentiate anterior ischemic optic neuropathy from idiopathic demyelinating optic neuritis.
38. To appropriately manage optic neuropathies, ischemic, demyelinating, hereditary and related to elevated intracranial pressure.
39. To appropriately manage third cranial nerve palsies.
40. Describe the fundamentals of the anatomy and physiology of the retina and vitreous.
41. Explicate an approach to the diagnosis of congenital, stationary, and hereditary diseases primarily affecting the retina and vitreous.
42. Describe the basic physiology and clinical relevance of angiogenesis.
43. Classify diseases affecting the macula, retinal vascular diseases, choroidal diseases and inflammatory disorders.
44. Describe peripheral retinal abnormalities, RD, and vitreous diseases.
45. Analyze the pathological processes that affect the retina and the vitreous.
46. Evaluate the best diagnostic methods for vitreoretinal disorders.
47. Evaluate the best treatments, and surgical interventions in the treatment of vitreoretinal disorders.
48. Classify the different types of uveitis.
49. Describe and appraise clinical approaches to uveitis (including diagnosis), evaluation techniques, and medical and surgical management.
50. Differentially diagnose anterior, intermediate, and posterior uveitis, as well as pan-uveitis and endophthalmitis.
51. Delineate the complications of uveitis.
52. Describe the mechanisms and processes involved in uveitis and other ocular inflammatory disorders
53. Determine differential diagnosis and the decision-making processes in choosing examination methods, treatments, and surgical interventions.

54. Describe the basics of the orbit, and infectious and inflammatory disorders including anatomy, evaluation, and imaging techniques.
55. Identify orbital neoplasms and describe the range of orbital traumas and appropriate surgical techniques.
56. Explain the anatomy of the lacrimal system.
57. Evaluate different diagnostic approaches to disorders and traumas.
58. Describe potential surgical interventions for orbit disorders.
59. Identify pathophysiological processes that may affect the structure and function of the orbital and periocular tissues.
60. Differentiate when to use specific examination.
61. Distinguish how to best diagnose disorders of the orbit, eyelids, and lacrimal system.
62. Evaluate surgical interventions.
63. Evaluation and surgical considerations of cosmetic eyelid/facial conditions.
64. Describe the diagnosis and detection of melanocytic and angiomatous tumors.
65. Describe retinoblastoma and lymphomatous tumors as well as secondary tumors of the eye.
66. Delineate the differential treatment and intervention options and appraise their differential utility and indications.
67. Describe the basic concepts of glaucoma such as classification and heredity factors.
68. Describe intraocular pressure and aqueous humor dynamics.
69. Illustrate the clinical evaluation of glaucoma.
70. Diagnose childhood glaucoma's including primary congenital or infantile glaucoma's, as well as developmental glaucoma's and related anomalies and syndromes.
71. Identify the different types of open-angle glaucoma's.
72. Identify the different types of angle-closure glaucoma's.
73. Appraise the medical and surgical approaches to the treatment of glaucoma.
74. Describe the different contact lenses, FDA classification, their anatomy and fitting.
75. Describe the basic concepts regarding the lens.
76. Explain the process of cataract surgery.
77. Describe potential complications of cataract surgery.
78. Explain the basic concepts of refractive surgery.
79. Describe refractive surgery procedures.
80. Explain considerations after refractive surgery.
81. Review common internal medicine illnesses and any associated ophthalmic manifestations.
82. Review new and current antiviral, antifungal and antibacterial agents.
83. Review current concepts of malignancies and screening of same in adults.
84. Describe the basic concepts of glaucoma such as classification and heredity factors.
85. Describe intraocular pressure and aqueous humor dynamics.
86. Illustrate the clinical evaluation of glaucoma.
87. Describe potential surgical interventions for corneal and anterior segment diseases.
88. Describe congenital anomalies, dystrophies and common diseases of the cornea.
89. Assess the indications and techniques of surgical procedures for managing corneal disease, trauma, and refractive error.
90. Identify the retinal physiology responsible for normal and abnormal night vision.
91. Describe proper techniques for dark adaptation testing.
92. Recognize the results of dark adaptation testing in various retinal diseases.
93. Discuss the principles and physiology behind color vision testing.
94. Explain the physiological principles involved with electroretinography (ERG) and electro-oculography (EOG) measurements.
95. Appraise the clinical applications or ERG and EOG testing.
96. Describe the histological features of ophthalmic conditions of particular interest to the audience
97. Apply the participant's knowledge of the pathology of these conditions to the diagnosis and treatment of these disorders.
98. Delineate a symptom-focused approach to diagnosis, and how to use that same approach to determine the best testing and imaging techniques.
99. Describe eye movement disorders and ocular motor pathology.
100. Identify how systemic disorders might deleteriously affect the visual and ocular motor systems.
101. Describe the pathogenesis of common disorders affecting the eyelid margin, conjunctiva, cornea and sclera.
102. Explicate the steps in an ocular examination for corneal or external eye disease and evaluate the appropriate laboratory and other diagnostic tests.
103. Describe the developmental and metabolic alterations that lead to structural changes of the cornea.
104. Review common internal medicine illnesses and any associated ophthalmic manifestations.
105. Review new and current antiviral, antifungal and antibacterial agents.
106. Review current concepts of malignancies and screening of same in adults.
107. Appraise the issues in the treatment of childhood strabismus.
108. Describe the normal visual development including binocular vision.
109. Analyze how to formulate the best treatment plans for childhood and adult strabismus.
110. Differentiate the classification, diagnosis, and current treatment options for amblyopia, and strabismus.
111. Describe the treatment options for children with cataracts.