



Anterior Segment I
May 15 – August 31, 2022

This assessment covers topics related to conjunctiva and cornea (excluding dry eye).

SECTION 1: REFERENCE-BASED QUESTIONS (Questions 1-13)

See pages 2-4 for learning objectives and a detailed outline of each topic area.

Topic: Conjunctivitis (questions 1-5)

AAO Preferred Practice Patterns - Conjunctivitis 2018

<https://www.aao.org/preferred-practice-pattern/conjunctivitis-ppp-2018>

NOTE: This link opens a summary page. You MUST click on “PDF Version” to access the complete document.

Topic: HSV Keratitis (questions 6-10)

ML White, J Chodosh. Herpes Simplex Virus Keratitis: A Treatment Guideline 2014. Am Academy of Ophthalmology Clinical Statement, June 2014.

<https://www.aao.org/clinical-statement/herpes-simplex-virus-keratitis-treatment-guideline#COUNSELING/REFERRAL>

Topic: Corneal Cross-Linking (questions 11-13)

Mohammadpour M, et al. Updates on corneal collagen cross-linking: Indications, techniques and clinical outcomes. Journal of Current Ophthalmology, 2017; 29(4), pages 235-247.

<https://www.sciencedirect.com/science/article/pii/S2452232516302256>

SECTION 2: FUNDAMENTAL KNOWLEDGE QUESTIONS (Questions 14-25)

These questions are considered “fundamental knowledge” within the areas of conjunctiva and cornea. This is information that has not changed substantially in the past 5-10 years, and with which all optometrists should be familiar or be able to access quickly. The following outline is provided as a guide for this section.

- I. Diagnosis and treatment/management of disorders of cornea
- II. Diagnosis and treatment/management of disorders of conjunctiva
- III. Use of topical medications (prescription and OTC) to treat diseases of the cornea and conjunctiva
- IV. Interpretation and use of corneal topography
- V. Interpretation and use of pachymetry
- VI. Interpretation and use of anterior segment photography
- VII. Interpretation and use of corneal and anterior segment imaging
- VIII. Use of bandage contact lenses
- IX. Removal of ocular foreign bodies

If you wish to review for the fundamental knowledge questions, we recommend the following references:

- The Wills Eye Manual, 7th ed. (2017)
- Kaiser and Friedman, Mass Eye and Ear Illustrated Manual of Ophthalmology, 4th ed. (2014)



The following learning objectives and outlines are provided as a guide to aid in navigating through the references and preparing for the reference-based section of the assessment.

CONJUNCTIVITIS

The learner will be able to:

- Identify the different types of conjunctivitis
- Articulate the diagnostic criteria (history and examination findings) for each type of conjunctivitis
- Discuss the appropriate management for each type of conjunctivitis
- Determine when diagnostic tests, such as cultures or biopsies, are needed
- Articulate the appropriate preventive measures for preventing the spread of conjunctivitis
- Describe the CDC recommendation for disinfection of tonometry tips
- Discuss the CDC's recommendations for use of the HZV vaccine

CONJUNCTIVITIS Outline

- I. Types of conjunctivitis
 - a. Allergic
 - b. Mechanical/irritative/toxic
 - c. Immune-mediated
 - d. Neoplastic
 - e. Viral
 - f. Bacterial
- II. Diagnosis
 - a. History
 - b. Physical examination
 - i. External
 - ii. Slit lamp examination
 - iii. Anterior chamber
 - iv. Dye staining pattern
 - c. Diagnostic tests
 - i. Cultures
 - ii. Viral diagnostic tests
 - iii. Chlamydial diagnostic tests
 - iv. Biopsy
 - v. Tear immunoglobulin E
 - vi. Blood tests
- III. Management
 - a. Prevention
 - i. Reducing exposure
 - ii. HZV vaccine
 - iii. Tonometer disinfection



- b. Treatment
 - i. Seasonal allergic conjunctivitis
 - ii. Vernal/atopic conjunctivitis
 - iii. SLK
 - iv. CL-related keratoconjunctivitis
 - v. GPC
 - vi. Floppy eyelid syndrome
 - vii. Medication/preservative-induced keratoconjunctivitis
 - viii. OMMP
 - ix. Steven-Johnson Syndrome
 - x. Adenovirus
 - xi. HSV/HZV
 - xii. Molluscum contagiosum
 - xiii. Bacterial conjunctivitis
 - xiv. Chlamydial conjunctivitis

HSV KERATITIS

The learner will be able to:

- Discuss the epidemiology of HSV keratitis
- Identify the clinical manifestations of initial and recurrent infection
- List the classifications of HSV keratitis and explain how the clinical manifestation differs
- Discuss the findings from the HEDS studies on prophylactic use of oral anti-viral agents
- Outline the appropriate treatment of HSV keratitis based on the patient's presentation and history
- Discuss the appropriate use of topical corticosteroids in the treatment of HSV keratitis

HSV KERATITIS Outline

- I. Epidemiology
- II. Natural history
 - a. Initial infection
 - b. Viral reactivation and shedding
- III. Clinical manifestation and classification
- IV. Prevention/early detection
 - a. HEDS studies of prophylaxis
 - b. Acyclovir versus valacyclovir
 - c. Acyclovir resistance
- V. Diagnosis
 - a. History
 - b. Physical examination
 - c. Diagnostic tests
- VI. Treatment



- a. HSV epithelial keratitis
- b. HSV stromal keratitis
- c. HSV endothelial keratitis

CORNEAL CROSS-LINKING

The learner will be able to:

- Identify when CXL is indicated
- Discuss the expected outcomes of CXL in patients with keratoconus, including limitations of the procedure
- Compare and contrast transepithelial versus epi-off CXL
- List the possible complications of CXL, how they might be avoided and how to manage when they occur

CORNEAL CROSS-LINKING Outline

- I. Basic principles of CXL
- II. Indications for CXL
- III. Efficacy and outcomes of CXL
- IV. Accelerated versus conventional CXL in keratoconus
- V. Transepithelial versus epithelium-off CXL
- VI. Complications of CXL
 - a. Corneal haziness
 - b. Endothelial damage/corneal edema
 - c. Post-operative infection
 - d. HSV keratitis
 - e. Corneal melting
 - f. Excessive corneal flattening