



**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, 7<sup>th</sup> 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