



Posterior Segment CAP Assessment Syllabus Form II, January 2023

SECTION 1: REFERENCE-BASED QUESTIONS (questions 1-14)

These questions are based on the references listed below, which emphasize new practice guidelines, landmark studies, and new information relevant to optometry within the area of Posterior Segment.

See page 2 for learning objectives for each topic area.

Topic: Posterior vitreous detachment (questions 1-5)

Seider M, Conell C, Melles R. Complications of Acute Posterior Vitreous Detachment. *Ophthalmology*. 2022; 129(1): 67-72. [https://www.aaojournal.org/article/S0161-6420\(21\)00552-2/fulltext#secsectitle0065](https://www.aaojournal.org/article/S0161-6420(21)00552-2/fulltext#secsectitle0065)

Topic: Obstructive sleep apnea and the retina (questions 6-10)

Nakayama LF, Tempaku PF, Bergamo VC, et al. Obstructive sleep apnea and the retina: a review. *J Clin Sleep Med*. 2021;17(9):1947–1952 <https://jcs.m.aasm.org/doi/10.5664/jcs.m.9312>

Topic: Hypertensive retinopathy and choroidopathy (questions 11-14)

Tsukikawa M, Stacey AW. A Review of Hypertensive Retinopathy and Chorioretinopathy. *Clinical Optometry*. 2020; 12: 67–73. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7211319/pdf/opto-12-67.pdf>

SECTION 2: FUNDAMENTAL KNOWLEDGE QUESTIONS (questions 15-25)

These questions are considered “fundamental knowledge” within the area of Posterior Segment. 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.

1. Diagnosis and treatment/management of common vitreous diseases and disorders
2. The following learning objectives are provided as a guide to aid in navigating through the references and preparing for the reference-based section of the assessment.
3. Diagnosis and treatment/management of common and most sight-threatening macular diseases and disorders
4. Diagnosis and treatment/management of common and most sight and/or life-threatening retinal vascular diseases
5. Treatment and management options for common non-vascular chorioretinal diseases
6. Treatment and management options for peripheral retinal diseases and disorders
7. Indications for and/or interpretation of posterior segment/retinal OCT and OCT-A

If you wish to review prior to answering these questions, we recommend the following references:

- Kaiser and Friedman, Mass Eye and Ear Illustrated Manual of Ophthalmology, 4th ed. (2014)
- The Wills Eye Manual, 7th ed. (2017)
- American Academy of Ophthalmology’s Summary Benchmarks for Retina Preferred Practice Patterns <https://www.aao.org/summary-benchmark-detail/retina-summary-benchmarks-2020>

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



Reference 1: Seider M, Conell C, Melles R. Complications of Acute Posterior Vitreous Detachment. *Ophthalmology*. 2022; 129(1): 67-72. [https://www.aaojournal.org/article/S0161-6420\(21\)00552-2/fulltext#secsectitle0065](https://www.aaojournal.org/article/S0161-6420(21)00552-2/fulltext#secsectitle0065)

Learning objectives

The learner will be able to:

1. List the risk factors for complicated PVD:
 - a. based on data available at triage
 - b. based on examination findings at time of initial presentation
 - c. as a late event (retinal tear or detachment within 1 year)
2. Describe the relationship between refractive error and:
 - a. age of presentation of PVD
 - b. risk of complicated PVD
3. Discuss the timing of late events and how that information informs recommended follow-up of acute PVD
4. Explain why the rate of complications in the KPNC study is lower than previously reported

Reference 2: Nakayama LF, Tempaku PF, Bergamo VC, et al. Obstructive sleep apnea and the retina: a review. *J Clin Sleep Med*. 2021;17(9):1947–1952 <https://jcsm.aasm.org/doi/10.5664/jcsm.9312>

The learner will be able to:

1. List non-retinal ocular findings associated with OSA
2. Identify retinal vascular changes associated with OSA and describe the proposed mechanism(s) for these changes: increased tortuosity, arteriolar changes, increased A/V ratio, decreased vessel density, retinal vein occlusion
3. Identify macular changes associated with OSA and describe the proposed mechanism(s) for these changes: CSC, macular edema, possible macular choroidal thickness
4. Discuss the relationship between OSA and diabetic retinopathy and the effects of CPAP treatment on DR and anti-VEGF therapy

Reference 3: Tsukikawa M, Stacey AW. A Review of Hypertensive Retinopathy and Chorioretinopathy. *Clinical Optometry*. 2020; 12: 67–73. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7211319/pdf/opto-12-67.pdf>

The learner will be able to:

1. Describe the different classification systems for grading hypertensive retinopathy
2. Discuss the differences between hypertensive retinopathy, choroidopathy and chorioretinopathy and identify the most common patient demographics for each
3. Define Elschnig spots and describe their clinical presentation with autofluorescence and fluorescein angiography
4. Discuss hypertensive retinopathy as a risk factor for cardiovascular mortality and how the risk changes based on severity of retinopathy
5. Articulate the referral recommendations for different grades of retinopathy and choroidopathy