Course Goal:
The goal of this presentation is to provide a comprehensive review of posterior segment disease management.

Learning Objectives / Outcomes:
1. To be able to recognize, diagnose, and properly manage retinal complications of Hypertensive, Arterial, and Venous Diseases.
2. To discuss what we learned from clinical trials in retinal venous occlusions.
3. To be able to recognize, diagnose, and properly manage a myriad of edematous conditions such as Irvine-Gass syndrome (CME), Diabetic Macular Edema, and Central Serous Chorioretinopathy.
4. To be able to recognize, diagnose, and properly manage/co-manage retinal breaks/detachment.
5. To be able to recognize, diagnose, and properly manage/co-manage Choroidal Neovascular Membranes.
6. To become familiar with current and emerging treatments for CNMV, including Pharmacotherapy (corticosteroids and anti-VEGF drugs).

Abstract
This course presents several cases involving posterior segment disease. Clinical guidelines for diagnosis and management are reviewed, along with the results of recent clinical trials. Don’t miss this interactive, high-energy, posterior segment grand rounds case review.
Retina Grand Rounds-- Course Outline

Case Studies in Retinal Vascular Disease

A. Sickle cell disease/retinopathy
   1. Epidemiology/Etiology
   2. Subjective symptoms
   3. Objective signs
   4. Diagnostic work-up
   5. Assessment
   6. Management Plan

B. Venous disease
   1. Central and branch retinal vein occlusion
   2. Hemispheric retinal vein occlusion
   3. What we learned from clinical trials in retinal venous occlusions

B. Arterial disease
   1. Central and branch retinal artery occlusion
   2. Hypoperfusion Retinopathy/Ocular Ischemic Syndrome

Case Studies in Vitreo-retinal Disease

Irvine-Gass syndrome (CME)

1. Etiology
2. Subjective symptoms
3. Objective signs
4. Diagnostic work-up
5. Assessment
6. Management Plan
Central Serous Chorioretinopathy (CSC)

I. Introduction
Serous detachment of neurosensory retina in macular area
A. Blister-like shallow & round edges
B. Loss of FLR

II. Clinical picture
A. Acute presentation
B. Unilateral
C. Males
D. Young 20-50
E. Type A personality

III. Symptoms
A. Acute symptoms
B. Blurred vision
C. Relative scotoma or metamorphopsia
D. Color desaturation

IV. Pathophysiology
A. Leakage from choriocapillaries through the RPE
B. Role of fluorescein angiography
   Classic: “Ink blot” or “smoke stack”
   Common: hyperfluorescence at level of RPE. This increases in intensity and size in the later stages
C. Role of indocyanine green angiography: implicates the choroidal circulation in the pathogenesis

V. Associated factors
A. Steroid use
B. H. Pylori
C. Adrenergics

VI. Natural history
A. Spontaneous resolution in most cases (~3-6 months)
B. Less than 50% are recurrent

VII. Management
A. Role of OCT
B. Most cases are managed carefully with routine observation
C. If treatment is necessary photocoagulation or photodynamic therapy is a viable option

Neoplastic Disease
Choroidal Nevus

- Symptoms: Most are asymptomatic
- Typically flat or mildly elevated
- Secondary drusen common and reactivity of the RPE
- Predictive Factors for Growth:
  1. tumor thickness
  2. tumor site
  3. flashes/floaters/blurred vision
  4. Orange pigment
  5. CNVM
  6. SRF (can also occur with nevi)

Melanoma

- May be external or intraocular
- Intraocular: Most common primary intraocular tumor in adults
- External: Most lethal primary skin tumor—but rare on eyelids
- Highly malignant and metastatic.
- Metastasis is most commonly to the liver. Also to lung, brain, skin and GI tract.
- Almost always unilateral
- More common in light skinned patients

Intraocular:

- Elevated, round mass in the choroid but protruding under or through
- the sensory retina.
- Usually darkly pigmented, but may be amelanotic.

Primary Uveal Tumors

- Unilateral & solitary
- Pigmented but may be amelanotic
- Relatively elevated
- Can break through Bruch’s membrane…"Collar Button”
- Rare in non-Caucasians (C 19 X AA; H 5x AA)

Symptoms:

- Most asymptomatic
- Blurred vision
- Scotoma or loss of visual field
- Photopsia

Treatment of Choroidal Melanoma

- Observation indicated in elderly/infirm, lots of mets and very poor prognosis
- Enucleate, exenterate: huge melanomas with secondary complications.
- Radiotherapy improves survival alone: plaque or external beam
- Transcleral Resection
- Multiple Treatment Modalities
- Local resection + Plaque Rx + Photocoagulation
- Refer for retinal evaluation/ocular oncology
- Small tumors (<10 mm diameter and <3 mm height) may be monitored carefully
- Medium tumors (10-16 mm diameter and 3-10 mm height) may treat with laser photocoagulation, external beam or episcleral plaque irradiation
- Large tumors (>16 mm diameter and >10 mm height) enucleation possible
- Evaluate for metastasis

Primary Uveal tumors
- Can metastasize, but rarely have by the time they are detected in the eye
- Systemic work-up a must, but not common to find metastases at time of diagnosis
- Most frequent site........75%.........is the liver
- 2X risk of colon cancer compared to general population

COMS and other studies
- Five year survival rates for.........
- Primary choroidal melanoma
- Treatment side effects
- Main side effect of focal ocular treatment is...........Radiation retinopathy