Course Description

This course will highlight the interesting ways OCT can improve diagnosis and management of patients with retinal disease. Case presentations will highlight the utility of OCT in a VA setting.

Objectives:

1. Understand how to use OCT to diagnose macular disease
2. Learn how OCT helps with management of patients on plaquenil
3. Discuss differences and subtleties of diagnosing epiretinal membrane, vitreomacular traction, lamellar macular hole, and full thickness macula hole
4. Differentiate who is a candidate for Anti-VEGF therapy based on OCT characteristics

Adult Vitelliform

I. Patient presentation
II. View of fundusopic observation
III. Key characteristics found on OCT
IV. Discuss prognosis
V. Management

AMD

I. Important observations
   a. Find CNVM
   b. When to treat
      i. Any serous fluid or heme
      ii. Likely not with Ped
   c. Case examples

Central Serous

I. Patient demographics
   a. Age, stress
II. Fundus, FA, OCT appearance

Diabetic Macular Edema

I. Review importance of fundus observation
II. Review ETDRS criteria and their continued relevance
III. Discuss treatment modalities
IV. OCT – Anti-VEGF treatment criteria

Juvenile Retinoschisis

I. Age/Gender
II. Prognosis
III. OCT observations
IV. Treatment
   a. Mostly monitor
   b. Consider CAI
V. Can this masquerade as amblyopia?

ERM/VMT/Lamellar Macular Hole/Macular Hole

I. Case reports
II. OCT/Photos
III. Differential diagnoses often involve the same thing. OCT can help differentiate
   a. So can VA, fundus appearance
IV. ERM treatment
   a. Peel and vitrectomy
   b. Expected acuity?
   c. Side effects
V. VMT treatment
   a. Vitrectomy
   b. Jetrea
   c. Leave alone
   d. Expected outcomes
   e. Side effects
VI. Lamellar macular hole
   a. Vitrectomy, peel, repair
   b. Who is a good candidate
   c. Expected outcomes
   d. Side effects
VII. Macular hole
   a. Traditional macular hole repair
   b. New macular hole repair involving broad ILM peel, ERM peel if present
      i. Less face down time?
   c. Expected outcomes
   d. Future?
e. Side effects

**Plaquenil Maculopathy**

I. SD-OCT – Look for Flying Saucer sign
   a. Pros
      i. Available
      ii. Objective
      iii. Interpretation easy
      iv. Good Specificity
   b. Cons
      i. Early detection may be difficult
      ii. Poor sensitivity
      iii. Cost

II. American Academy of Ophthalmology 2002 recommendations
   a. Patient is high risk if > 6.5 mg/kg/day
   b. Color vision
   c. 10-2 or Amsler Grid

III. American Academy of Ophthalmology 2011/2016 recommendations
   a. High risk if 1000g cumulative dose
   b. Consider actual weight
   c. No color vision or Amsler Grid testing
   d. Should do 10-2 combined with
   e. SD-OCT, FAF, mfERG
      i. Most people do not have FAF or ERG

IV. Recommend baseline exam
   a. If high risk, test yearly
   b. If low risk, test again after 5 years

V. May consider altering dose if patient does not meet ideal body (height/weight) for given dosage
   a. For example, if patient is less than 180 lbs, they cannot safely take 400 mg/day.
      Consider dosing 13 tablets per week instead of 14.
   b. Would need consultation with Rheumatology/Primary Care

**Solar maculopathy**

VI. Patient presents with no complaints
VII. Normal anterior segment
VIII. Atypical macula noticed on fundus exam
IX. Show photos/OCT
X. Differential
   a. Solar
b. Macular Hole  
c. ERM  
d. VMT  

XI. Diagnosis: Solar Maculopathy  
XII. Patient has history of mental illness  
XIII. Show another example of patient with h/o staring at eclipse  
XIV. Solar maculopathy is a result of a thermal burn  
XV. Often have mental illness diagnosis  

Vein Occlusions  
I. Discuss fundus observations  
II. Discuss OCT findings (may be cystic)  
III. Case presentations