OCT Interpretation

- Optical Coherence Tomography
  - Spectral Domain-OCT
  - Interpretation
  - Case series
Interpretation Approach

- General image characteristics
  - Quality
  - Artifacts
  - Segmentation errors
- OCT analysis
  - Scrutinize OCT layer by layer
- Location of abnormalities narrows Dx
  - Vitreo-retinal interface disease
  - Inner retinal disease
  - Outer retinal disease
  - Subretinal disease
  - Diffuse retinal disease
Errors: Motion Artifact

- Raster pattern of data acquisition
- Vertical scans are reconstructions
Errors: Segmentation

- ILM and RPE automatically identified
  - Serve as limits for macular thickness and volume measurements
- Automated segmentation error prone
- SD-OCT less prone than TD-OCT
Correlation with Histology
Vitreo-retinal interface disease

- Disease of cortical vitreous
  - Anterior-Posterior contraction
    - VMT
  - Centrifugal contraction
    - Macular Hole
    - Pseudohole
  - Centripetal contraction
    - ERM
Vitreomacular Traction
Vitreomacular Traction
Macular Hole
Chronic Macular Hole
Epiretinal Membrane
Disorders of Inner Retina
Preretinal Hemorrhage
Foveal Hypoplasia
Artery Occlusion
Disorders of Outer Retina
Commotio Retinae

R

L

Stargardt's disease
Retinitis Pigmentosa
Subretinal disease
Rhegmatogenous RD
CSR
Drusen
Choroidal Neovascular Membrane
Diffuse Retinal Disease
Macroaneurysm
Cystoid Macular Edema
Conclusions

● OCT Analysis: Approach
  ● Scrutinize OCT layer by layer

● Narrow the diagnosis
  – Categorizing disease by location of abnormality
Challenging Cases
RPE rip
Outer Retinal Tubulation
Nematode
Subretinal Hemorrhage