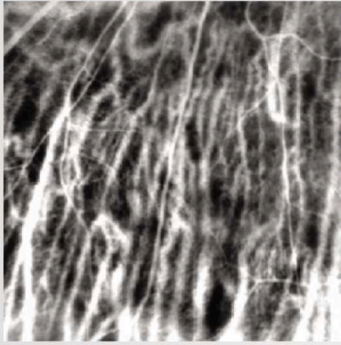


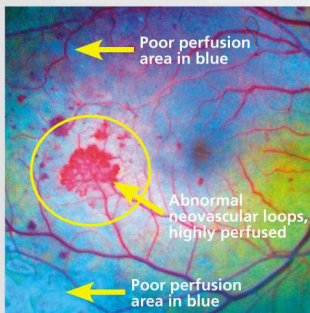
## Multi-spectral Imaging for Multiple Applications



Noninvasive Visualization of Choroidal Vessels

To provide insight into oxygen utilization and other retinal functions, a special RFI module allows multi-spectral imaging and analysis. The module, based on a fast-switching filter wheel, overcomes issues such as poor signal-to-noise ratio that have hampered such analysis until now. Using multi-spectral mode, we perform spectroscopic decomposition to assess the oximetric state of the retina. This measurement is completely non-invasive. In addition the filter wheel allows choroidal vessels visualization using near infra red light and pigments density maps.

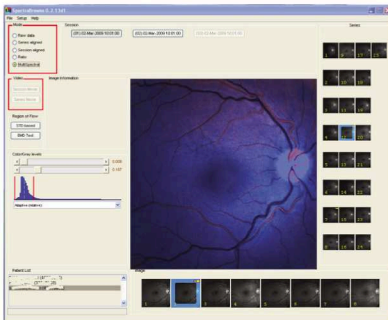
## Sickle Cell Retinopathy Patient



A case of sickle cell retinopathy with sea-fan vascular loops. Areas of poor perfusion are detected using qualitative oximetry with the RFI. Perfusion deficits and abnormalities appear as regions of color distinct from their surroundings. (Image courtesy of Richard Rosen, MD and Teerapat Jittpoonkuson, MD at New York Eye and Ear Infirmary).

### Benefits of using the multi-spectral imaging module:

- Rapid multi-spectral imaging of the retina
- Indicative of oximetric state of the retina
- Indicative of ischemic regions without using a contrast agent
- Direct, non-invasive enhanced visualization of choroidal vessels
- Indication of oximetric changes occurring after several types of challenges to the retina



### Powerful software tool for multi-spectral imaging

The SpectraBrowse software operates on multi-spectral image series. The software supports image registration, image decomposition and differential image analysis.