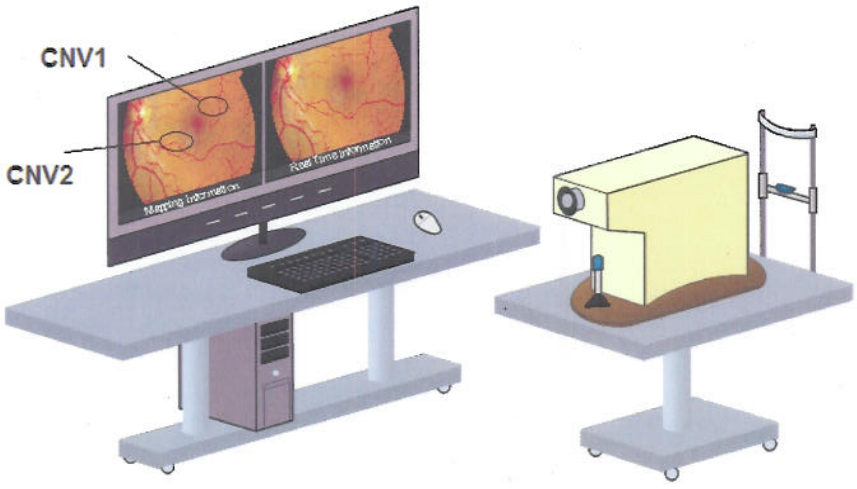
Procedure for use of combination OCT/PDT laser therapy instrument:

1) Diagnostic images are captured utilizing conventional fluorescein and indocyanine green; these dyes may be administered simultaneously to reduce image capture time and avoid an additional needle stick for the patient.
2) Image capture is performed by the scanning SLO with excitiation and detection wavelengths appropriate for these dyes.
3) The captured images are stored on computer for real-time review by the treating physician.
4) Treatment images are encircled on the computer viewing screen and digitally registered to the exact lesion on the stored image. If multiple treatment areas are required, each location is programmed for a specific energy level and exposure time, and treatment wavelength (in the case of a tunable treatment laser delivery system).*

   A concept drawing of a treatment image and accompanying treatment plan are shown below:



LESION ID	Spot size	Treatment duration	energy	wavelength
CNV 1	500 micron	80 sec	300 mJ	680 nM
CNV 2	2500 micron	92 sec	400 mJ	540 nM

5) With the patient positioned at the diagnostic and therapeutic SLO, registration of the live (real-time) retinal image is obtained with the stored image data using image tracking and stabilization.
6) Once lock-on is achieved the physician may initiate treatment by activation of a footpedal or joystick. Each lesion will be treated accrding to the preprogrammed sequence as shown in step 4. Treatment may proceed smoothly from lesion to lesion as long as the footpedal is depressed.

Alternatively, treatment may be activated with audio prompting from the computer in stepwise fashion. The physician may interrupt or resume treatment at any time during therapeutic laser application. In addition, the joystick or footpedal may be programmed to permit shifting treatment to the next or prior lesion in the programmed sequence.

7) At the conclusion of the treatment session, another series of retinal images may be captured as necessary with or without dye enhancement.

Flow chart of system operation: