

4. The method of claim 3 further comprising linking said at least one image of the retina, captured after delivery of said localized laser beam to said spots on the retina, to said annotated image of the retina.

5. The method of claim 1 further comprising correlating said stored images with said captured real-time images by matching landmarks present in said stored images and said real time images.

6. The method according to claim 1, further comprising determining the position of each said spot of the plurality.

7. The method according to claim 6, further comprising determining the size of each spot of the plurality.

8. The method according to claim 1, further comprising determining the size of each spot of the plurality.

9. The method according to claim 1, further comprising determining the position and size of each said spot of the plurality by scanning said retina.

10. The method according to claim 1, further comprising introducing indicator dye to said retina.

11. The method according to claim 10, further comprising determining the position of each said spot of the plurality by scanning said retina for an indicator dye introduced to said retina.

12. The method according to claim 11, further comprising determining the size of each spot of the plurality by scanning said retina for an indicator dye introduced to said retina.

13. The method according to claim 12, further comprising introducing a photosensitizing dye to said retina.

14. The method according to claim 13, further comprising delivering a localized laser beam to at least one of said plurality of spots on said retina containing said photosensitizing dye to promote the release of charged molecules to reduce blood flow in abnormal vascular beds.

15. The method according to claim 10, further comprising determining the size of each spot of the plurality by scanning said retina for an indicator dye introduced to said retina.

16. The method according to claim 1, further comprising determining the position and size of each said spot of the plurality by automatically scanning said retina of an indicator dye introduced to said retina.

17. A device including:

a retinal imager for capturing:

a diagnostic image of a retina having at least one lesion, said lesion including a plurality of spots to be treated, a real-time image of said retina using at least one of eye tracking and image stabilization, and

at least one updated real-time image of said retina using at least one of said eye tracking and said image stabilization;

a user interface for receiving information, said information including at least one of:

a duration of treatment for each of said spots,

an intensity of treatment for each of said spots, and a wavelength of treatment for each of said spots;

a processor for creating:

a composite image by linking said diagnostic image to said real-time image, and

an annotated image by modifying said composite image based on said updated real-time image; and

a laser for delivering a localized laser beam to each of said spots according to said information, said composite image, and said annotated image.

18. The device according to claim 17, wherein said information includes at least one of a position and a size of each of said spots.

19. The device according to claim 17, further comprising an indicator dye locator for determining at least one of a position and a size of each of said spots.

20. A system for the precise delivery of laser energy to a retina comprising:

a computer processor;

a retinal imager with eye tracking coupled to said computer processor;

a user interface, said user interface coupled to said retinal imager and said computer processor;

a laser coupled to said user interface through said processor;

wherein said retinal imager captures at least one diagnostic image, and at least one real time image of said retina;

said computer processor receives said plurality of images, saves said images, correlates said images, and creates at least one annotated image identifying the location and size of at least one spot on the retina to receive laser treatment;

said computer processor displaying said annotated image and receiving instructions for delivery of laser energy to said retina from said user interface;

said laser coupled to said user interface delivering laser energy specified by said processor to a particular location on the retina.

21. The system of claim 20 wherein said retinal imager further comprises imaging stabilization.

22. The system of claim 21 wherein said processor is programmed to perform image stabilization.

23. The system of claim 21 wherein said laser imager is a scanning laser ophthalmoscope.

24. The system of claim 20 wherein said laser is coupled to said user interface through said processor delivers laser energy to a location on the retina specified by the computer processor.

25. The system of claim 24 wherein said laser is coupled to said user interface through said processor and is positioned to deliver laser energy to a location on the retina containing a photosensitizing dye.