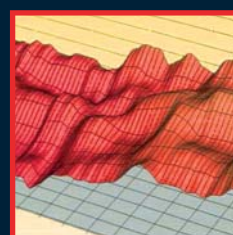


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Retinal Vessel Analyzer/RVA*Research*
Vessel Analysis in Research Environment



RVAResearch - Vessel Analysis in Research Environment

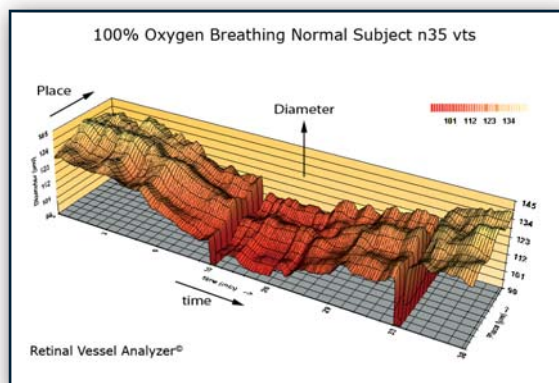
- Vasoactive therapeutic effect, therapy monitoring and individual therapy optimization
- Examination of microvascular risk factors and indicators for cardio- and cerebrovascular diseases and disorders of microcirculation of the retina and other organs
- Clinical studies of systemic and retinal vascular diseases
- Examination of regulation mechanisms of vasomotion and local vascular changes
- Endothelial research
- Drug research

Dynamic vessel analysis is a key technology for early detection of functional changes of vessels and autoregulation mechanisms and was developed in collaboration with several universities. It is the perfect basis on which to study different systemic changes in retinal microcirculation. The Retinal Vessel Analyzer (RVAResearch) has specifically been designed for use in research.

Dynamic Vessel Analysis

Examinations of the functional ability of vessels at a high level of precision can be made with the **Retinal Vessel Analyzer (RVAResearch)**. A mydriatic fundus camera records a video sequence of the retina. The vessel diameter of the selected vascular section is determined automatically.

The retina is stimulated during the examination to cause vessel response (dilatation and constriction). Stimulation can be provided by flicker light, isometric stress, different respiratory gases (O₂ breathing) or by changes of the intraocular pressure. The changes of the vessel diameter are recorded by the RVA software. The results can be displayed in different graphic formats.



RVA software

The RVAResearch comes with specific software packages for optimal use of the system in research. The software also supports simple link-up with other data sources and data can be exported in the formats required.

Software functions

- Online determination of vessel diameters at two different locations (e.g. artery and vein)
- Different graphic display formats (3D, time, locus)
- Numerous evaluation tools
- Flicker light stimulation with evaluation tool
- Recording and archiving of the video sequences for later offline analysis
- Documentation of the location of analysis
- Database for patient-based analytical data
- Networking capability
- Simple data transfer by different import and export formats
- Interfaces with ECG, blood pressure monitoring and others (optional)
- Heart rate analysis and synchronization

Components

- Fundus camera (mydriatic)
- CCD video camera
- Digital video recorder
- PC, printer
- Software: RVA
- Workstation