Static vessel analysis

iMEDOS TECHNOLOGY FOR MICROVASCULAR HEALTH

Retinal vessels provide important information about the microcirculation. As a "mirror" of microvascular changes throughout the whole body, retinal vessel analysis provides information about the general microvascular health of patients and allows important conclusions to be drawn about systemic diseases and the development of end-organ damages.

Static vessel analysis is one method of retinal vessel analysis. Based on the measurement of vessel diameters, it examines the condition of retinal vessels. Critical vascular parameters (biomarkers) are then calculated from these vessel diameters. These valid biomarkers describe the individual cardiovascular risk of patients and are suitable in the context of cardiometabolic preventive medicine for:

- Cost-effective risk stratification and prediction as a component of early diagnosis and therapy control of cardiovascular diseases;
- The motivation of patients during therapeutic measures.

Static vessel analysis is a useful addition to standard cardiovascular diagnostics.

In ophthalmology, patients with blood flow-related retinal diseases could also benefit from the method of static vessel analysis.

High-performance Technology

As innovative combinations of fundus imaging systems and the excellent analysis software VesselMap aric from iMEDOS, the following complete systems offer high-quality solutions for the assessment of the vascular condition of the ocular fundus.

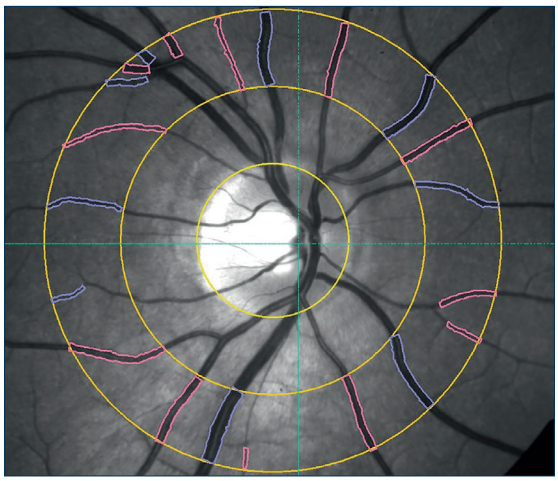
	BASIC	STANDARD	PREMIUM
CAMERA TYPE	DRS	IM-RC 3.1	TRC-NW8
NON-MYDRIATIC EXAMINATION	✓	x	✓
FULLY AUTOMATIC IMAGE CAPTURING	✓	AVAILABLE SOON!	Maximum flexibility: optional change between auto and manual function
PRICE RANGE	●	●●	●●●
PICTURES	High resolution images of the ocular fundus (colour)		High-resolution fundus imaging; various additional options, e.g. fluorescence angiography
SOFTWARE VesselMap aric (semi-automatic)	✓	✓	✓

Method

In order to determine the static vessel parameters, all major arterial and venous vessels are marked within a predefined ring zone on a standardised fundus image, following the protocol of the ARIC study*. The corresponding vessel diameters and static vessel parameters are then determined automatically.

* Hubbard et al. Methods for evaluation of retinal microvascular abnormalities associated with hypertension/sclerosis in the atherosclerosis risk in communities study. Ophthalmology 1999:106:2269-2280.

Regarding the research focus "Microvascular changes in vessels", static vessel analysis is a valuable tool – both in the field of translational and clinical research as well as in the field of drug research.



At a glance – the parameters of static vessel analysis

- Arteriovenous ratio (**AVR**): CRAE/CRVE ratio
- Central retinal artery equivalent (**CRAE**): arterial model vessel diameter
- Central retinal vein equivalent (**CRVE**): venous model vessel diameter

Customised solutions thanks to innovative plug-in feature

You are already working with a fundus camera from ZEISS, Topcon, Nidek, Canon or Kowa? Contact us! We will be more than happy to check your existing hardware for compatibility with our software and advise you on possible integration.

Please contact us for further information!

iMEDOS Health GmbH

Am Nasstal 4 • 07751 Jena • Germany
☎ +49 3641-63960
info@imedos.com • www.imedos.com

imedos