RetinAVR™

The RetinAVR™ is a software program that automatically measures the retinal artery/vein diameter ratio.

RetinAVR™ takes a digital fundus image as its input and delivers the Artery to Vein Ratio. Unlike other programs that measure the AVR, the RetinAVR™ needs no operator intervention. Once the digital retinal image has been selected, the program will automatically calculate and display the ratio.

RetinAVR™ is a PC software, a variety of fundus images can be used to measure the AVR.


Why Artery/Vein Ratio?

The modern world suffers from myocardial infarction and cerebral stroke as leading causes of death and severe disability. Early detection and identification is the means to effectively lead subjects at risk to treatment that may alter the course of events.

Viewing the blood vessels can reveal various characteristic of the pathologic processes occurring in the body organs and may provide a view of a systemic condition. The eye is the only human organ where small vessels can be observed and assessed non-invasively.

Scientific Background

The Atherosclerosis Risk in Communities Study (ARIC), a multi site study, investigated the etiology and natural history of atherosclerosis, the etiology of clinical atherosclerotic diseases, and variation in cardiovascular risk factors, and formed the scientific background for using retinal vasculature for systemic risk assessment:

- The relative risk of stroke increases with decreasing AVR (Wong et al., Lancet 2001).
- Retinal vasculature can be used to assess the systemic risk for cardiovascular disease and to derive information on the systemic vascular status (Hubbard et al., Ophthalmology 1999).
- This method can be applied clinically to predict the risk of cerebral infarction (Wong et al., JAMA 2002).
- Small vessel disease may contribute to the risk of cardiovascular disease in older persons. (Wong et al., JAMA 2006).
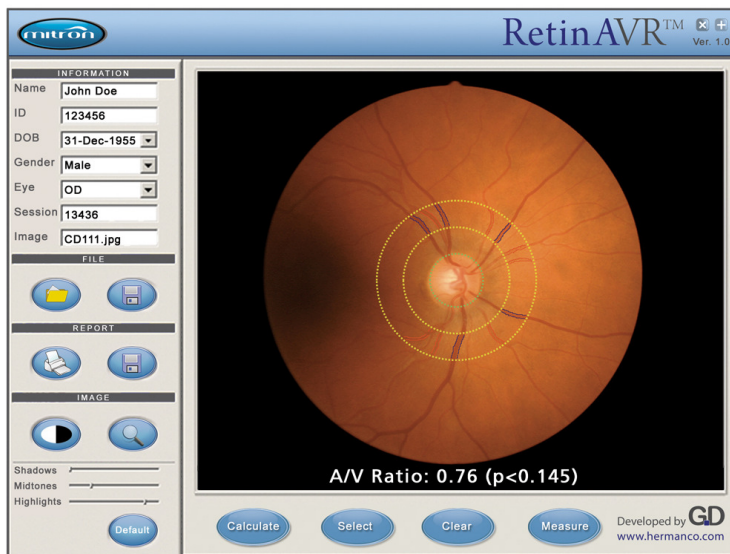
- ✓ Breakthrough in image recognition makes user interface simple and friendly.
- ✓ Automatic recognition of blood vessels.
- ✓ Various formats of input images in color or red free.
- ✓ Dedicated report with AVR value.
- ✓ Friendly PC interface