In Vivo Assessment of Retinal Remodeling in Age-related Macular Degeneration by a Novel Technology

DESCRIPTION:

Imaging assessment of retinal remodeling in age-related macular degeneration. Optical coherence tomography automated quantification to estimate the natural history of retinal involvement in long-term follow-up.

ABSTRACT:

The area in which this project has been designed is the early age related macular degeneration (AMD), a major cause of vision loss in the elderly. Morphologic methods allows in vivo monitoring of tiny details of retinal structure. Corresponding changes of retinal function can be assessed by visual acuity and focal-electroretinogram (f-ERG).

Automated segmentation of high-resolution spectral domain-optical coherence tomography (SD-OCT), performed according to an original technique, will be employed to visualize and quantify in vivo retinal layers of AMD patients to investigate disease progression.

The examinations will be performed every six months in a cohort of 100 early AMD patinets and 10 age matched controls over a total follow-up period of two years.

The objective investigation of the layers involved at different stage diseases, could be strategic in the therapy choice and become an outcome variable, potentially targeting the market of innovating diagnostic technologies.