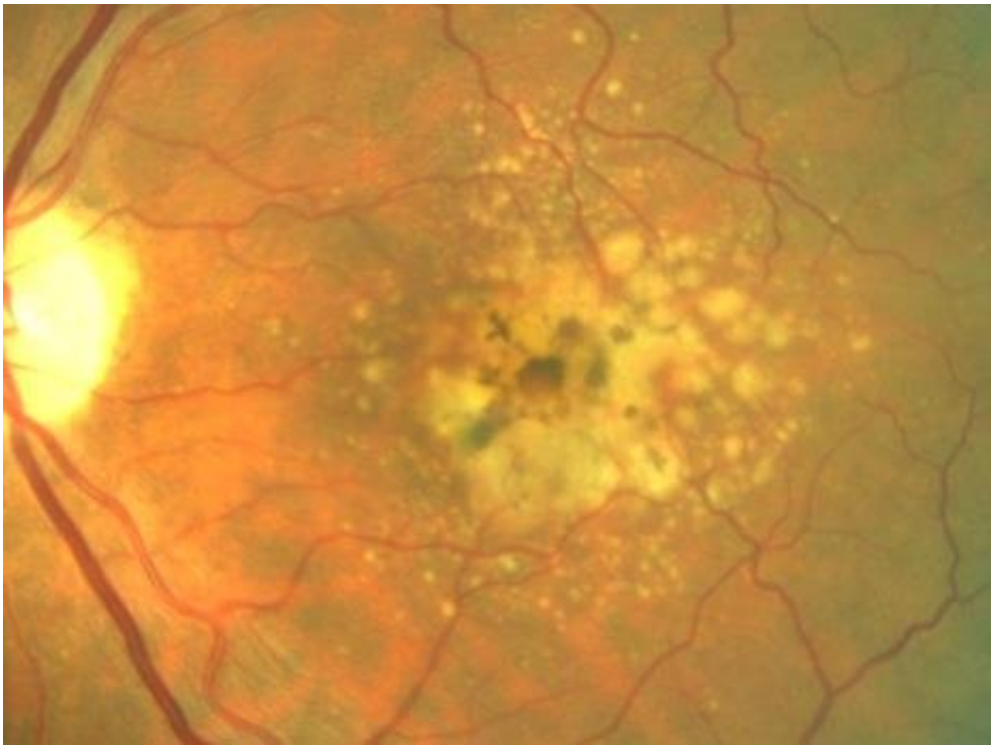
Better assessments for early age-related macular degeneration

August 30 2018



Eye fundus with intermediate AMD. Credit: Universitäts-Augenklinik Bonn

The European MACUSTAR consortium is conducting a multi-country clinical study on age-related macular degeneration (AMD) coordinated by the University of Bonn. The clinical study focuses on the intermediate stage of the disease, in which a person's vision under low-light and low-contrast conditions is impaired. Throughout Europe, a total of 20 study centers will recruit and follow-up with 750 patients. The study rationale

and protocol has recently been published in the journal *Ophthalmologica*.

Age-related macular degeneration (AMD) is associated with a progressive loss of photoreceptor cells at the point of sharpest vision. People older than 60 years are most affected, corresponding to around 2.5 million people in the European Union. The number of persons affected by AMD is expected to rise due to increasing life expectancy. Disease progress from an early stage to an intermediate stage is typically associated with low-light and low-contrast vision problems. Late stage AMD usually leads to irreversible central vision loss.

Currently, clinical tests available are good at diagnosing the loss of vision in late stage AMD. However, they are not sensitive to changes in vision in earlier stages of the disease, thus, hampering the testing of treatment methods to prevent or delay progression of early AMD stages. Therefore, MACUSTAR is developing novel tests to assess earlier stages of AMD.

The core of the MACUSTAR project is a three-year observational study of 750 patients who have intermediate and other stages of AMD. They will be recruited by 20 participating clinical trial centers in seven European countries. Aim of the investigation is to find variables that provide reliable information on disease progression or stability, which could then be further developed into clinical tests.

The article published in the peer-reviewed journal Ophthalmologica summarizes the methods used to assess AMD and its impact on function and quality of life. For example, high-resolution imaging techniques will provide information on anatomical changes in the retina. Besides conventional visual function tests, vision under low-light conditions and contrast vision will be determined. Researchers will also capture the light sensitivity of the macula, the duration of dark adaptation, and reading speed and visual path navigation under low-light conditions. In addition,

questionnaires will provide information on how visual impairment is perceived by the study participants. The MACUSTAR consortium aims to identify the best method or combination of methods that indicate if a novel therapeutic approach can stop AMD progression in the future.

More information: Robert P. Finger et al. MACUSTAR: Development and Clinical Validation of Functional, Structural, and Patient-Reported Endpoints in Intermediate Age-Related Macular Degeneration, *Ophthalmologica* (2018). DOI: 10.1159/000491402

Provided by University of Bonn