

7. Adv Exp Med Biol. 2021;1256:1-31. doi: 10.1007/978-3-030-66014-7\_1.

Age-Related Macular Degeneration: Epidemiology and Clinical Aspects.

Keenan TDL(1), Cukras CA(2), Chew EY(2).

Author information: (1)Division of Epidemiology and Clinical Applications, National Eye Institute, National Institutes of Health, Bethesda, MD, USA. tiaran.keenan@nih.gov. (2)Division of Epidemiology and Clinical Applications, National Eye Institute, National Institutes of Health, Bethesda, MD, USA.

Age-related macular degeneration (AMD) is a degenerative disease of the human retina affecting individuals over the age of 55 years. This heterogeneous condition arises from a complex interplay between age, genetics, and environmental factors including smoking and diet. It is the leading cause of blindness in industrialized countries. Worldwide, the number of people with AMD is predicted to increase from 196 million in 2020 to 288 million by 2040. By this time, Asia is predicted to have the largest number of people with the disease. Distinct patterns of AMD prevalence and phenotype are seen between geographical areas that are not explained fully by disparities in population structures. AMD is classified into early, intermediate, and late stages. The early and intermediate stages, when visual symptoms are typically absent or mild, are characterized by macular deposits (drusen) and pigmentary abnormalities. Through risk prediction calculators, grading these features helps predict the risk of progression to late AMD. Late AMD is divided into neovascular and atrophic forms, though these can coexist. The defining lesions are macular neovascularization and geographic atrophy, respectively. At this stage, visual symptoms are often severe and irreversible, and can comprise profoundly decreased central vision in both eyes. For these reasons, the condition has major implications for individuals and society, as affected individuals may experience substantially decreased quality of life and independence. Recent advances in retinal imaging have led to the recognition of an expanded set of AMD phenotypes, including reticular pseudodrusen, nonexudative macular neovascularization, and subtypes of atrophy. These developments may lead to refinements in current classification systems.

DOI: 10.1007/978-3-030-66014-7\_1 PMID: 33847996