

# Researchers publish largest Chinese American eye study

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The University of Southern California (USC) Roski Eye Institute researchers and clinicians published the results of the National Eye Institute-funded "Chinese American Eye Study (CHES)," the largest ophthalmology study among those with Chinese ancestry living in the U.S. The findings, published in *JAMA Ophthalmology*, point to critical interventions in the prevention and treatment of blinding eye diseases, such as age-related macular degeneration and diabetic retinopathy (DR), among Chinese Americans.

Key findings of the CHES study point to a higher percentage (85 percent) of neovascular or "wet" AMD than geographic atrophy or "dry" AMD (15 percent). This is almost the opposite of what has been found in whites or other ethnic groups who typically have the same percentage of AMD types or higher prevalence of dry AMD. The study also found the prevalence of AMD is higher among Chinese Americans as compared to the Chinese population living in urban/rural China, suggesting the influence of environmental or behavioral factors should be considered. According to the National Eye Institute, part of the National Institutes of Health, AMD is the leading cause of vision loss affecting more than 2 million Americans. Primarily affecting central vision, the two types of AMD refers most often to those who receive a diagnosis after age 60.

The other substantial finding in the study is the participants with diabetes (17.4 percent) were three times more likely than those without the disease to have significant visual impairment. This increase was found in

the Chinese American study participants with Type II diabetes who had cataracts or macular edema resulting in visual impairments. While 41 percent of these Chinese American study participants had DR, this is a lower percentage than has been reported among Chinese people living in rural China (46 percent) and Latinos living in Los Angeles (48 percent). As well, Chinese Americans were found to have a lower reported rate of DR than Chinese residing in rural Northern China, likely a result of their better access to diabetes screening and treatment.

Asian Americans are the fastest growing racial group in the U.S. and Chinese Americans are the largest segment of this population, according to the latest U.S. Census. Rohit Varma, MD, MPH, interim dean of the Keck School of Medicine of USC and director of the USC Roski Eye Institute, was the study's principal investigator and one of the world's leading experts in population based eye disease.

"This study sounds a clarion call for all eye care providers to be aware of the prevalence of wet AMD in those of Chinese ancestry and to provide the available treatments such as injections and laser therapies," said Dr. Varma. "And while not as prevalent as we see in the Latino community, we also need to be aware of addressing those Chinese Americans with diabetes to prevent DR and the onset of significant visual impairment."

Dr. Varma added that the treatments for wet AMD are aimed at blocking the growth of new abnormal blood vessels in the eye and are widely available as opposed to the lack of therapy options for dry AMD, a diagnosis that is typically treated through health lifestyle changes.

"The study gives us unprecedented insights into the burden of eye disorders among this fast growing racial group in the U.S. The findings will help inform preventive screening strategies and guide health care resource planning," said Maryann Redford, D.D.S., M.P.H., a program director for Collaborative Clinical Research at NIH's National Eye

Institute (NEI).

The CHES study involved more than 4,500 Chinese Americans age 50 or older living in Monterey Park, Calif. Almost all (98 percent) of the study participants were first-generation immigrants. The participants underwent comprehensive eye exams and interviews to assess risk factors for AMD and DR, including lifestyle factors such as smoking and daily diet. Photographs of the inside of the eyes were taken to also detect signs of these [eye](#) diseases.

**More information:** *JAMA Ophthalmology*,  
[dx.doi.org/10.1001/jamaophthalmol.2016.0445](https://doi.org/10.1001/jamaophthalmol.2016.0445)

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