

Fewer Asians, Blacks, Hispanics eligible for drugs that may delay Alzheimer's progression

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The development of anti-amyloid monoclonal antibodies that may slow the progression of Alzheimer's disease by breaking down amyloid plaques, a hallmark of the disease, has brought fresh hope to aging populations and the doctors who treat them. But a new study, led by UC San Francisco, Vanderbilt University Medical Center and the Alzheimer's Association, shows that fewer Black, Hispanic and Asian patients would qualify for these treatments, since cognitive impairment in these groups is more likely to be caused by other forms of dementia that may be unrelated to amyloid plaques.

The study, which publishes in *JAMA Neurology* on Oct. 3, 2022, is believed to be the largest multi-site study to date examining differences in amyloid deposition among more than 17,000 Asian, Black, Hispanic and white participants with [dementia](#) or [mild cognitive impairment](#) (MCI), a frequent precursor to dementia. The participants were Medicare beneficiaries enrolled in the Imaging Dementia—Evidence for Amyloid Scanning (IDEAS) study, launched to assess the value of PET scans in diagnosing and treating dementia and MCI.

It follows previous work by other researchers showing that Black and Hispanic populations in the United States are between one-and-a-half and two times more likely than whites to be diagnosed with dementia. In contrast, Asian Americans may have the lowest incidence of dementia.

Overall, 61% of the participants in the current study had MCI, characterized as having cognitive issues but being able to live independently, and 31% had dementia, in which impairment had progressed to the point where assistance was required for day-to-day functions.

Of the participants, whose average age was 75, the researchers matched 313 whites with 313 Asians, who had MCI or dementia. Matches were made according to age, sex, education, living arrangement, level of impairment, history of diabetes and hypertension, as well as family history of dementia.

They found that 45% of the Asian participants tested positive for [amyloid plaques](#), versus 58% of white participants. When they matched 615 Blacks with 615 whites, the proportions were 54% versus 58%, respectively. And for 780 Hispanics matched with 780 whites, they were 55% versus 62%, respectively.

When the researchers looked specifically at patients with MCI in these

matched groups, percentages of PET positivity declined to 36% for Asians versus 53% for whites; 42% for Blacks versus 49% for whites; and 46% for Hispanics versus 53% for whites.

New Treatments More Effective at Earliest Disease Stage

"A higher proportion of Black and Hispanic patients presented to specialists at the dementia stage, rather than at the MCI stage, but the benefit of these new therapies is expected to be greater in earlier stages of the disease," said senior author, Gil D. Rabinovici, MD, of the UCSF Memory and Aging Center and of the Department of Neurology.

"Lack of access to diagnosis and care at an early stage of disease could further exacerbate disparities in dementia care and outcome," he added.

Anti-amyloid monoclonal antibodies are the first class of drugs designed to address the underlying biology of Alzheimer's disease, rather than its symptoms. The premier drug, Aduhelm (aducanumab), was approved by the Food and Drug Administration (FDA) in 2021 for patients with MCI or dementia due to Alzheimer's disease and covered by the Centers for Medicare and Medicaid Services in the context of clinical trials. A second drug, lecanemab, was reported on Sept. 27 to slow the rate of cognitive decline in a phase 3 trial, the final phase before the FDA weighs approval. Two other therapies are expected to follow within the next several months.

The higher rates of dementia and lower rates of amyloid positivity among Black and Hispanic people may reflect differences in the cause of [cognitive impairment](#), said first author Consuelo H. Wilkins, MD, MSCI, of the Division of Geriatric Medicine at Vanderbilt University Medical Center. "These populations have higher rates of hypertension

and diabetes, which are associated with vascular diseases of the brain."

Lower Dementia Rates, PET Positivity in Asians, 'Difficult to Interpret'

However, lower rates of dementia and amyloid positivity among Asians may be "difficult to interpret due to different social factors and co-existing [health conditions](#) among Asian subgroups," she said, noting that hypertension rates are generally lower among Asians, but not among Vietnamese and Koreans.

Second author, Charles C. Windon, MD, of the UCSF Memory and Aging Center and of the Department of Neurology, said it is important to recognize that there are "numerous structural and systemic factors that influence the development of non-amyloid pathologies." These may include economic and social policies that affect neighborhood conditions, housing, education access and health care access. "Exposure to these factors may have differed between racial and ethnic groups in the study," he stated.

"Public health efforts to better diagnose and treat non-amyloid variants of dementia will be critical if we are to reduce disparities in dementia care," said Rabinovici, who is also affiliated with the UCSF Department of Radiology and Biomedical Imaging, and the Weill Institute for Neurosciences.

In addressing inequities in accessibility to clinical trials, Rabinovici said he would favor regulatory requirements to ensure participants are racially and ethnically representative of patients with the disease. "We can draw inspiration from COVID-19 vaccine trials that demonstrated this can be done when utilizing state-of-the-art inclusive research practices and allocating adequate resources."

Other factors that were identified as increasing the odds of amyloid positivity were older age, female sex and higher education, according to the researchers. Living alone and a history of diabetes decreased the odds of amyloid PET positivity.

Provided by University of California, San Francisco

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