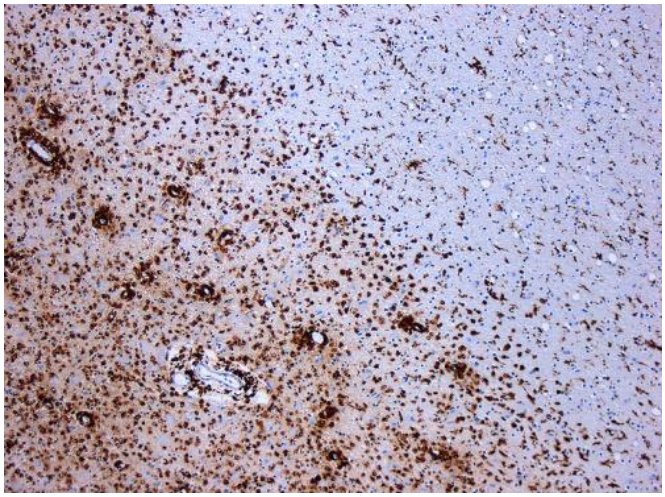
Study: Black people may respond differently to common multiple sclerosis therapy than white people

14 April 2021



Demyelination by MS. The CD68 colored tissue shows several macrophages in the area of the lesion. Original scale 1:100. Credit: Marvin 101/Wikipedia

A preliminary study suggests that Black people who have autoimmune neurologic diseases, multiple sclerosis (MS) and neuromyelitis optica spectrum disorder (NMOSD), may respond differently than white people to a common therapy meant to modulate the immune system. The research, released today, April 14, 2021, will be presented at the American Academy of Neurology's 73rd Annual Meeting being held virtually April 17 to 22, 2021.

The people in this study were given anti-CD20 infusion therapies, which are often used to treat autoimmune diseases such as MS and neuromyelitis optica spectrum disorder, which is a relapsing inflammatory disorder of the optic nerve, spinal cord and brain. The goal of this treatment, called B-cell depletion therapy, is to destroy B-cells in blood circulation. B-cells are partly responsible for the abnormal autoimmune responses in people with MS and NMOSD.

"While previous research has shown that this type of infusion therapy is effective for people with those diseases, we also know that Black people tend to have more severe courses of MS," said study author Ilya Kister, M.D., of NYU Grossman School of Medicine in New York and a Fellow of the American Academy of Neurology. "We wanted to compare how quickly the B-cells came back in Black people and white people after treatment."

The study involved 168 people, 134 with MS and 32 with neuromyelitis optica spectrum disorder. The group included 61 who identified as Black and 60 who identified as white. The people received infusions of the drugs rituximab or ocrelizumab.

Between four and six months after their infusions, Black and white people showed no difference in the levels of B-cells that could be measured in their blood samples.

However, when researchers looked at B-cell levels between six and 12 months after people received their blood infusions, there was a difference. Sixteen out of 21, or 76%, of the Black people had detectable levels of B-cells, compared to four out of 12 white people, or 33.3%.

"Our findings raise the question of whether the same therapy dose may be equally effective for all people, and that could have implications for the way Black people with autoimmune diseases like MS and neuromyelitis optica spectrum disorder are treated in the future," Kister said.

A limitation of the study is that researchers analyzed the available results at different times after infusion, rather than making measurements at

the same specified times in all patients. More research is needed to determine whether faster return of B-cells in Black people means that they are more likely to have more disease activity.

Provided by American Academy of Neurology