Very Early HIV Treatment Benefits

A new analysis of the global START trial found that health outcomes were better for those starting treatment within six months.

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People who start antiretroviral (ARV) treatment for HIV within six months of contracting the virus reap greater improvements in immune health over the subsequent three years compared with those who start with a similarly healthy CD4 count yet later in the course of their infection.

Researchers analyzed data from the global START study, which enrolled 4,684 people with HIV who had a CD4 count greater than 500. They were randomized to start ARVs immediately or when their CD4s declined to 350 or below. In 2015, the study famously proved that compared with delaying treatment, earlier therapy was associated with a 72% lower risk of serious AIDS-defining health events and a 39% reduction in serious non–AIDS-related events.

The new analysis divided the participants into three groups: those who enrolled in START when they'd been living with HIV for less than six months (Group 1; 373 people), between six and 24 months (Group 2; 2,634 people) and more than 24 months (Group 3; 1,605 people).

During an average of three years of follow-up, the average CD4 count rise in Groups 1, 2 and 3 was a respective 231, 202 and 171 cells. The members of Group 1 also saw a larger increase in their CD4-to-CD8 ratio, suggesting they experienced a greater normalization of their immune function.

Among the participants in the deferred-treatment arm of the study, those in Group 1 were 52% more likely to see their CD4s fall below 350 or to receive an AIDS diagnosis compared with those in Group 3. For each 100 cumulative years of study follow-up, those in Groups 1, 2 and 3 experienced a respective median of 16, 13 and 11 cases of HIV disease progression.

"START is continuing follow-up through 2021," notes the new analysis's lead author, Shweta Sharma, MS, of the division of biostatistics at the School of Public Health at the University of Minnesota. "At that time, we hope to have data to determine if the difference in CD4 cell count between the immediate and deferred groups among recently infected individuals results in a lower risk of AIDS or serious non-AIDS outcomes."

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