Normal Life Expectancy With Maintenance of CD4s Above 500

March 2, 2010 By Tim Horn

Survival among HIV-positive men who keep their CD4 counts above 500 cells for at least three years is comparable with that of the general population, according to optimistic data from a large European cohort reported on Friday, February 19, at the 17th Conference on Retroviruses and Opportunistic Infections (CROI). More sobering findings were documented among HIV-positive women: mortality rates, even among those responding well to antiretroviral (ARV) therapy, were still lower compared with HIV-negative women.

Thought combination ARV therapy is lauded for its life-extending potential for people living with HIV, premature death rates—from any cause (all-cause mortality)—remain higher among HIV-positive people receiving treatment compared with those in the general population.

Both the mortality rate and the excess mortality risk to be lower in those with higher CD4 counts, explained Charlotte Lewden, MD, of the University of Bordeaux in Bordeaux, France and her colleagues explained. Lewden's group recalled a previous study finding that death rates among HIV-positive individuals were CD4 counts of 500 cells and higher after several years of ARV therapy were similar to those of the general population.

To confirm this suggestion, Lewden's group set out to evaluate data involving people living with HIV participating in one of 25 cohorts in 30 countries throughout Europe. The collected data, reflecting more than 80,000 individuals, were pooled in the continent-wide COHERE study. Participants were approximately 37 years old when they started ARV therapy for the first time, with an average CD4 count of 225 cells.

Mortality rates, calculated upon reviewing the 3,813 deaths reported over the 3.5-year follow-up period, were determined for patients with difference CD4 counts (below 200 cells, between 200 and 350 cells, between 351 and 500 cells and more than 500 cells). Standard mortality ratios (SMRs)—calculations that allow comparisons between HIV-positive people with different CD4 cell counts and HIV-negative individuals in the general population—were also conducted.

Overall, based on a review of patients' most recent CD4 cell counts—a single measurement only—the death rate among those living with HIV was 4.4 times higher compared with rates expected in the age-matched general population. Not surprisingly, the rate was highest among those with CD4s below 200 compared with those with CD4s above 500—13 times versus 1.5 times

more deaths, respectively.

Among men, there were four times as many deaths among those with CD4s below 200 versus 1.4 times more deaths among those with CD4s above 500. Among women, death rates were 7.8 times higher among those with CD4s below 200 compared with 2.2 times higher among those with CD4s above 500.

Rates improved when the researchers looked at the length of time HIV-positive individuals kept their CD4 counts above a specific threshold, taking into account measurements collected over time.

Among HIV-positive men who maintained CD4 counts above 500 cells for at least three years, death rates were virtually identical to those expected in the general population—an statistically insignificant 1.1-fold (10 percent) increase in the number of deaths.

Among the HIV-positive women, unfortunately, death rates failed to equalize, even after five years of CD4 counts maintained above 500 cells: a 2.4-fold increase in the number of deaths compared with those in the general population.

“Though our results”—notably the differences between men and women in the study—“might be partly explained by other differences between HIV-infected and uninfected populations, they point to the importance of maintaining high CD4 cell counts as well as long term treatment adherence,” Lewden’s group concluded.

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