CD4s, Viral Load Not Enough to Predict Survival During HIV Treatment

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As AIDS-related illnesses decline and non-AIDS complications become increasingly more common in the modern antiretroviral (ARV) therapy era, looking at six blood markers—not just CD4 cell counts and viral load—will be necessary to make accurate survival predictions. This is the conclusion of a study conducted by researchers at Yale and Harvard universities and reported on Monday, February 28, at the 18th Conference on Retroviruses and Opportunistic Infections (CROI) in Boston.

As people living with HIV continue to respond favorably to ARV treatment, explained researcher Amy Justice, MD, PhD, of Yale and the Veterans Administration (VA) Connecticut Healthcare System, there is increased interest in factors associated with aging, beyond standard CD4 count and viral load measurements, that may influence survival rates.

The Veterans Aging Cohort Study (VACS) Index, composed of routine lab measurements of organ system injury, has been shown to predict death from any cause more accurately than an index restricted to CD4s and viral load. Studies thus far testing the VACS Index, however, have been limited to veterans. What has not yet been tested is whether the VACS Index is applicable to the average population: non-veterans receiving ARV treatment.

In addition to viral load, CD4 cell counts and age, the VACS Index includes markers for anemia (hemoglobin measurements), kidney injury (estimated glomerular filtration rate, or eGFR), liver injury (blood labs indicative of liver fibrosis, or FIB-4) and hepatitis C infection status.

To conduct its analysis, Justice's group turned to data involving 5,980 people living with HIV participating in either the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD) or the Canadian Cohort Collaboration (CANOC). To establish a baseline, the researchers randomly selected a CD4 count for each patient—at least a year after they'd been on ARV treatment—along with other VACS Index blood tests conducted around the same time as the CD4 cell measurement. They then looked at the deaths, from any causes, among the nearly 6,000 patients during the next five years.

According to Justice's report, the VACS Index predicted five-year mortality—from any cause—substantially better than an index restricted to CD4 cell count, viral load and age in the two cohorts, which she said represented North Americans on ARV therapy with varying periods of HIV treatment experience.

"The variables included in the VACS Index are recommended for routine monitoring by current

guidelines," Justice and her colleagues concluded. "Because the VACS Index both accurately predicts mortality and indicates specific organ systems at risk, it may be a useful tool with which to monitor treatment response and assess prognosis among those on [ARV therapy]."

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http://beta.docker.poz.com/article/hiv-vacs-survival-20023-3355