HIV Infection Decreases Survival in Women With Invasive Cervical Cancer

By Dave Levitan

HIV infection significantly decreases survival among women with invasive cervical cancer, according to a study conducted in Botswana. This was the case even though most women with HIV received antiretroviral therapy.

“Cervical cancer is the most common cause of cancer death among African women, and the HIV epidemic intensifies this burden,” wrote study authors led by Scott Dryden-Peterson, MD, of Brigham and Women’s Hospital in Boston. The use of antiretroviral therapy for HIV can reduce the frequency and duration of the HPV strains that can cause cervical cancer, but incidence of the malignancy has not decreased since HIV treatment expanded. The impact of HIV on survival from cervical cancer has not been well studied before.

In this study, researchers enrolled 348 women with cervical cancer; of those, 231 women (66.4%) had HIV and 96 women (27.6%) did not. Most of the HIV-positive women (81.8%) had received antiretroviral therapy before their cancer diagnosis. The results of the analysis were published online ahead of print in the Journal of Clinical Oncology.

Over a median follow-up period of 19.7 months, 157 women died; this included 117 HIV-positive women (50.7%) and 40 without HIV (41.7%). Most of the deaths were attributed to cancer, and only one definitively attributed to the HIV infection, though 12 women with HIV and 1 without HIV had an unknown cause of death.

On an adjusted analysis, HIV infection almost doubled the risk of death, with a hazard ratio of 1.95 (95% CI, 1.20–3.17; \( P = .007 \)). When the analysis was restricted only to women who received therapy with curative intent, the result was similar. HIV’s effect varied based on cancer stage, with a greater adverse effect on women with more localized disease (\( P = .035 \) for interaction). Increasing CD4 cell count attenuated the impact of HIV on survival, though there was an adverse effect even in women with near-normal CD4 counts.

In an accompanying editorial, Linda R. Mileshkin, MD, and Alison E. Freimund, both of the Peter MacCallum Cancer Centre in Melbourne, Australia, noted several methodological limitations to the study. These included a lack of data on tumor volume or nodal status, as well as a relatively short follow-up period. “Despite methodological concerns and the absence of detailed data about certain aspects, this study describes the importance of further research and investment into improving the outcomes of women with both HIV and cervical cancer,” they wrote.

They also noted another important finding from the study that is more related to difficulties in treating complex diseases in developing countries than with HIV’s influence on outcome: a significant portion of patients received radiation doses deemed “inadequate” by the study authors. The number of such patients did not differ significantly based on HIV status.

“If we are to reduce the number of deaths from cervical cancer in women with and without HIV, it is paramount that access to screening, vaccination, and treatment facilities in those areas of the world with the greatest burden of disease is addressed,” they wrote.

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