People on HIV Meds Might Need Different Chemo Doses for Cancer

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A study in progress suggests that the dose of Sutent (sunitinib)—a chemotherapy—might need to be adjusted up or down depending on the antiretroviral (ARV) treatment a person is taking. The authors of the study, to be presented as a poster at the 2010 annual meeting of the American Society of Clinical Oncology (ASCO), suggest the same might be true of other similar chemotherapies with the potential to interact with HIV drugs.

The rates of a number of cancers—particularly those caused by viral infections such as the Epstein Barr virus (EBV), hepatitis C virus (HCV) or human papillomavirus (HPV)—appear to be on the rise in people with HIV. Unfortunately, the chemotherapy drugs that treat many of these cancers have not been well studied in people with HIV, in part because people with HIV are often excluded from clinical trials.

“A key challenge in treating these patients is that anti-HIV medicines are notorious for causing drug-drug interactions. Such interactions with anti-cancer chemotherapy drugs could lead to serious side effects and toxicities in patients,” said one of the principal authors of the study, John Deeken, MD, from Georgetown University’s Lombardi Comprehensive Cancer Center in Washington, DC.

To determine whether Sutent is safe in people with HIV and how it might interact with HIV drugs, Deeken and his colleagues from the AIDS Malignancy Consortium treated two groups of HIV-positive people with the chemotherapy. The AMC chose to study Sutent because it is approved to treat kidney cancer, which is occurring at a higher rate among people with HIV, and because the drug is being studied in other cancer types, such as lung and colorectal cancer. Deeken and his colleague gave Sutent along with an ARV regimen that included non-nucleoside reverse transcriptase inhibitors (NNRTIs) to one group, while a second group took Sutent along with a regimen including a protease inhibitor (PI).

Based on preliminary data in nine patients, the AMC found hints that the dose of Sutent might need to be increased in people taking an NNRTI regimen. Conversely, in people taking a PI-based regimen, the Sutent dose might need to be reduced significantly. This is because the human body breaks down many HIV drugs by a family of liver enzymes called CYP450, as is the case with Sutent.

Drugs broken down by this enzyme family often interact with each other, causing the blood levels of some drugs to skyrocket while others plummet. More will be learned as the study continues, and any emerging data could help guide clinicians in the appropriate dose of other chemotherapies in people taking ARV drugs.

“These are early days, but we hope the information we learn from this study will help these cancer patients get the therapy they want and need, as well as access to clinical trials of the newest agents,” Deeken said.
