# People With HIV Have Good Lung Cancer Surgery Outcomes

HIV-positive people who underwent surgery to remove early lung cancer fared as well as HIV-negative people.

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People living with HIV had short-term outcomes following surgery for early-stage lung cancer that did not differ from those of their HIV-negative counterparts, according to a recent study.

The analysis, comparing HIV-positive and HIV-negative U.S. veterans, mostly with Stage I or II non-small-cell lung cancer, saw similar rates of postoperative complications and death.

“Concerns regarding short-term surgical complications should have limited influence on treatment decisions for people with HIV with lung cancer,” study authors Keith Sigel, MD, of the Icahn School of Medicine at Mount Sinai in New York City, and his colleagues wrote in the journal AIDS.

As people with HIV live longer thanks to effective antiretroviral treatment, a growing number are developing cancer and other age-associated non-AIDS conditions. Lung cancer is the leading cause of cancer death in HIV-positive and HIV-negative people alike. Several studies have shown that this cancer occurs at a higher rate among people living with HIV and that HIV-positive people are diagnosed at more advanced stages of disease, are less likely to receive treatment and have a higher risk of death.

In many cases, people with early lung cancer that has not spread beyond the lungs, a process known as metastasis, can be treated with resection surgery to remove the cancer, potentially resulting in a cure. But the safety of lung cancer surgery for HIV-positive people in the era of effective antiretroviral therapy has not been well studied.

Sigel’s team looked at disparities in who received lung cancer surgery and differences in the risk of lung cancer surgery complications and death according to HIV status.

The researchers first analyzed data from all 2,206 people diagnosed with Stage I to Stage III non-small-cell lung cancer in the Veterans Aging Cohort Study (VACS) between 2000 and 2016.

They found that 191 out of 415 (46%) people with HIV received lung surgery, compared with 329 out of 658 (50%) HIV-negative cohort members matched by sex, age and race/ethnicity. The

difference was not statistically significant, meaning it could have been attributable to chance.

The study authors next compared rates of 15 major short-term surgical complications among 137 HIV-positive VACS participants and 8,234 HIV-negative people with records in the Veterans Affairs Corporate Data Warehouse who underwent lung cancer surgery during the same time period.

Almost all participants in both groups were men. In the HIV-positive group, the mean age was 60, 47% were white and 43% were Black. In the HIV-negative group, the mean age was 66, 73% were white and 15% were Black. About 60% were current or former smokers. Most had early cancer: 63% with Stage I, 19% with Stage II and about 12% with Stage III. Among the HIV-positive participants, 71% had undetectable viral load (using a cutoff of 500 copies), 41% had a CD4 cell count in the 200 to 500 range and 34% had a count above 500.

There was no significant difference according to HIV status for any of the complications examined, the researchers reported. Major complications occurred in 17.5% of HIV-positive and 19.4% of HIV-negative patients. The most common complication in both groups was pneumonia, which did not differ between people with or without HIV (11.0% versus 9.4%).

Postoperative mortality within 30 days after surgery was low and did not differ between the two groups (2.2% versus 2.5%, respectively); 90-day mortality was also similar. The researchers found no significant predictors of postoperative complications among people with HIV, including viral load or CD4 count.

This study was not long enough to compare longer-term outcomes, such as tumor response rates or overall survival.

“In a national antiretroviral-era cohort of lung cancer patients undergoing surgical lung resection, short-term outcomes after surgery did not differ significantly by HIV status,” the authors concluded.

These findings point to the importance of lung screening to detect cancer early, when it is easier to treat. The National Lung Screening Trial, which enrolled more than 53,000 current and former smokers (excluding people with HIV) found that those who received annual low-dose computed tomography (CT) scans had a 20% lower risk of lung cancer death.

Current guidelines recommend annual CT screening for people ages 55 to 80 who have a cumulative smoking history of at least 30 pack-years—for example, smoking one pack of cigarettes a day for 30 years or two packs a day for 15 years—who either still smoke or have quit within the past 15 years.

Some research, however, suggests that people with HIV develop lung cancer at a younger age, on average, and may benefit from earlier screening. A recent mathematical modeling study found that the optimal criteria for HIV-positive men would be to start screening at age 43 with a smoking history of 19 or more pack-years and a quit time of 15 years. For HIV-positive women, the optimal criteria would be to start age 49 with a smoking history of more than 16 pack-years and a quit

time of 15 years.

Click here to read the study abstract.

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