People Who Use Statins May Lower Their Cancer Risk

Statin users were less likely to develop several types of cancer in a large study.

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People who use statins to manage their cardiovascular risk also have a lower risk of cancer, according to research presented at the 25th Conference on Retroviruses and Opportunistic Infections (CROI 2018) this week in Boston.

Statin users were nearly 40 percent less likely to develop cancer overall, with an even larger risk reduction seen for some cancers caused by viruses. The benefit appeared larger for people with HIV, but HIV-negative people lowered their risk too.

Statins are commonly used to lower blood lipid levels and reduce the risk of cardiovascular disease. But in addition to inhibiting cholesterol synthesis, these medications have other effects that include reducing inflammation and influencing T-cell activity in a way that may enhance immune response against tumors.

Some previous research has shown that statin use is associated with reduced risk of cancer in the general population, but study results have been inconsistent. Beneficial effects might be greater for people with HIV, hepatitis C or other long-term infections that cause chronic immune activation and inflammation.

Roger Bedimo, MD, of the Veterans Affairs North Texas Health Care Center in Dallas and colleagues analyzed the association between statin use and cancer risk in the Veterans Aging Cohort Study (VACS), a large observational study that includes all HIV positive veterans receiving care through the VA system, matched two to one with HIV negative people with similar characteristics.

The researchers identified statin users in the cohort between 2000 and 2012. They adjusted for confounding factors including age, smoking history, chronic conditions such as diabetes, hypertension, hepatitis C and heavy alcohol use, and lab values such as cholesterol levels and liver fibrosis biomarkers.

After this propensity score matching, the analysis included 12,014 statin users and 12,041 non-users. In both groups combined, 5,105 participants were HIV-positive and 19,067 were

HIV negative. Most were men, as expected for a veterans' cohort.

The study looked at the risk of all cancers, several specific cancer types, AIDS-related cancers (Kaposi sarcoma non-Hodgkin lymphoma) and non-AIDS cancers. The researchers also distinguished between non-virus-related and virus-related cancers, the latter of which include anal and oral cancer (caused by human papillomavirus, or HPV), liver cancer (caused by hepatitis B or C) and Hodgkin and non-Hodgkin lymphoma (associated with Epstein-Barr virus).

In total, 449 people living with HIV (9.0 percent) and 1,350 HIV negative people (7.1 percent) were newly diagnosed with cancer during a follow-up period of four to five years. Only 64 of these cases were AIDS-defining cancers.

Overall, statin use was associated with a 39 percent decline in the risk of all cancers combined. This was a significance decrease, meaning it was probably not attributable to chance.

In general, the protective effect of statins was stronger for HIV-positive people compared with those who were HIV negative people (49 percent versus 35 percent overall risk reduction, respectively). However, the interaction between statin use and HIV status did not reach statistical significance for specific cancer types or categories.

This risk of non-AIDS cancers fell by 37 percent, similar to the overall risk reduction. AIDS-defining cancers were 69 percent less likely among statin users, and HIV-negative people as well as HIV-positive people saw a decline in AIDS-related cancers.

Non-virus-related cancers and virus-related cancers fell to a similar extent—by 37 percent and 36 percent, respectively—when they were considered as categories. But changes in specific cancer types varied considerably when they were considered separately.

The risk of anal cancer and liver cancer both decreased by 38 percent overall, with a much larger drop seen among HIV-positive people. Hodgkin lymphoma fell by 57 percent, oral cancer fell by 65 percent and non-Hodgkin lymphoma declined by 71 percent. Lung cancer—which is generally considered non-virus-related, although some research has linked it to HPV—fell by 51 percent, while prostate cancer fell by just 17 percent among people taking statins.

Looking at all-cause mortality, Bedimo reported that the risk of death was 45 percent lower among statin users compared with nonusers.

It is important to note that seemingly large changes in relative or comparative risk can mask small absolute numbers of cases—particularly for less common cancers—which limits confidence in the results. But the fact that the risk of all cancer types consistently declined among statin users, with no increases seen for any type, suggest that this is a real effect that warrants further study.

Click here to read the CROI study abstract.

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