

Researchers Describe Cancer Trends in People Under 50

A nationwide analysis found a higher incidence of 14 types of cancer compared to rates in 2010 among people under 50 years old.

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The overall rate of new cancers in the U.S. has been stable in recent years. And age-adjusted death rates have, on average, been falling. But some recent studies have spotted a troubling trend that points to increased cancer diagnoses among younger people.

Analyses have found an uptick in early-onset cancers—that is, cancers that occur before age 50—in the U.S. and other countries. The underlying factors that might lead to this rise in early cancer have been unclear. Proposed causes have included increased rates of obesity and better detection through higher rates of cancer screening.

To better understand these apparent changes in cancer rates among different age groups, a research team led by Dr. Meredith Shiels of NIH's National Cancer Institute examined two large nationwide datasets. These included mortality data from national death certificate information and cancer registry data representing the entire U.S. population. Most previous studies of early-onset cancers looked only at subsets of data from U.S. states and did not include comparison data from older age groups.

Shiels and colleagues analyzed incidence and mortality trends for 33 types of cancer over about a 10-year period, from 2010 to 2019. Data were divided into six age groups. Three groups were considered early-onset: ages 15-29 years, 20-39 years, and 40-49 years. Three other groups were considered older-onset: ages 50-59 years, 60-69 years, and 70-79 years. Study results appeared on May 8, 2025, in the journal [Cancer Discovery](#).

The researchers found that the incidence of 14 of the 33 cancer types climbed in at least one of the younger age groups. Nine of these cancer types also increased in at least one of the older age groups. These included breast cancer in females and colorectal, kidney, testicular, uterine, pancreatic, and three types of blood cancer (lymphomas). Cancer types whose incidence increased only in younger age groups were melanoma, cervical cancer, stomach cancer, cancer of bones and joints, and plasma cell neoplasms.

The analysis also identified a concerning increase in deaths from colorectal, uterine, and testicular

cancers among younger age groups. However, death rates among these early-onset groups did not rise for most other types of cancer.

The incidence of 19 other types of cancer—including lung and prostate cancer—declined among the early-onset groups. As a result, the total rate of all cancers diagnosed in both younger and older adults did not rise overall. Likewise, the overall cancer death rate did not increase in either the younger or older age groups.

The researchers hope that these data will lead to new insights into the factors that affect early cancer rates.

“This study provides a starting point for understanding which cancers are increasing among individuals under age 50,” Shiels says. “The causes of these increases are likely to be cancer specific, including cancer risk factors becoming more common at younger ages, changes in cancer screening or detection, and updates to clinical diagnosis or coding of cancers.”

This [research summary](#) was published by the National Institutes of Health on May 20, 2025.