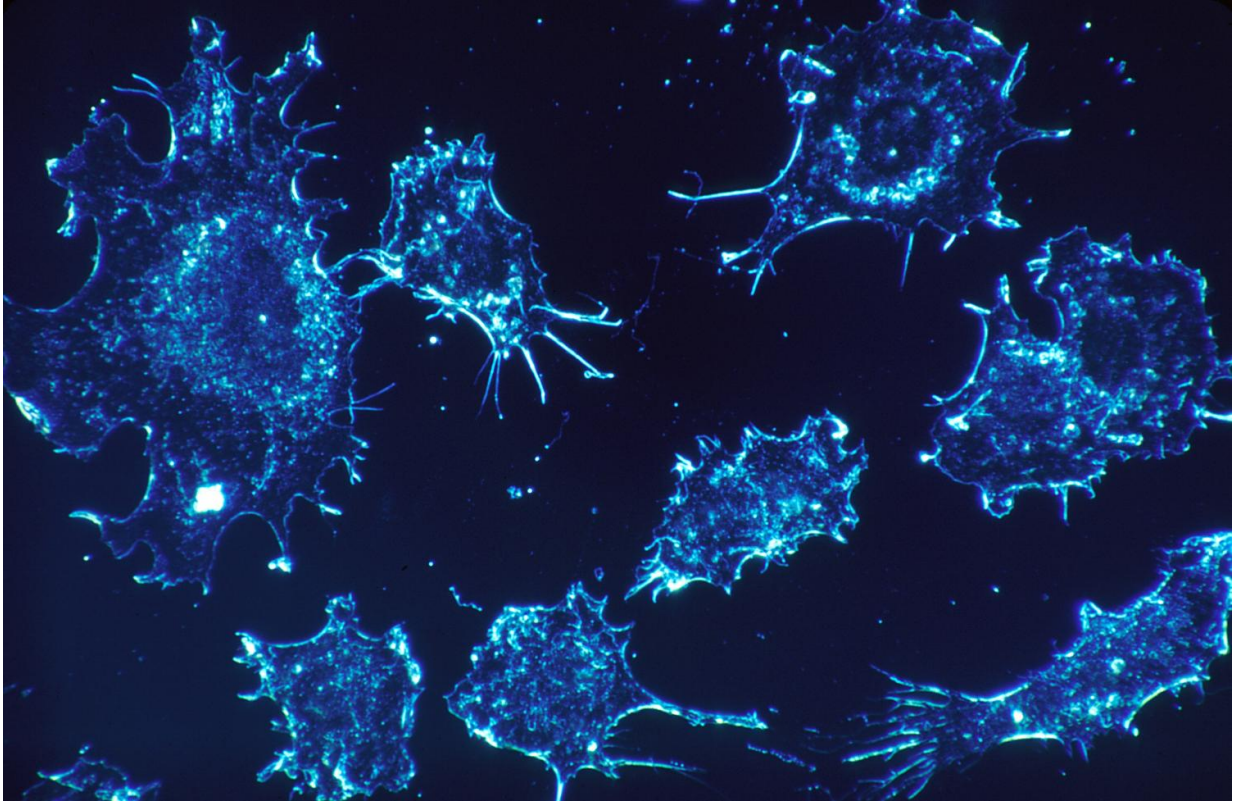


Skin cancer on the rise

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New diagnoses for two types of skin cancer increased in recent years, according to a Mayo Clinic-led team of researchers.

Their paper, published today in *Mayo Clinic Proceedings*, uses medical records from the Rochester Epidemiology Project to compare diagnoses

of basal cell [carcinoma](#) and [squamous cell carcinoma](#)—both nonmelanoma [skin](#) cancers—between 2000 and 2010 to diagnoses in prior years. The Rochester Epidemiology project is a medical records linkage system and research collaborative in Minnesota and Wisconsin.

Age, sex lead to different diagnoses

The researchers report that, between 2000 and 2010, squamous cell carcinoma (also called cutaneous squamous cell carcinoma) diagnoses increased 263 percent, and basal cell carcinomas increased 145 percent. They compared the 2000-2010 period to two other segments of time: 1976-1984 and 1985-1992.

Women 30-49 experienced the greatest increase in [basal cell carcinoma](#) diagnoses; whereas, women 40-59 and 70-79 experienced the greatest increase in squamous cell carcinomas.

Men had an increase in squamous cell carcinomas between the first and second time period studied (1976-1984 and 1985-1992), but experienced a slight decline in the 2000-2010 period. However, for basal cell carcinomas, men over 29 showed similar increases in diagnoses in the 2000-2010 period then the two earlier periods.

Tanning: Beautifying or death-defying?

"We know that the sun and some artificial sunlight sources give off skin-damaging ultraviolet, or UV, rays," says Christian Baum, M.D., a Mayo Clinic dermatologist and the study's senior author. "This skin damage accumulates over time and can often lead to skin [cancer](#)."

"Despite the fact that sunscreens and cautionary information have been widely available for more than 50 years, we saw the emergence of tanning beds in the 1980s, and tanning - indoors or out - was a common

activity for many years."

Although Dr. Baum notes that tanning has slowed, tanning beds still exist, and beaches will never be empty. But what people should remember is that the damage accumulates, he says, and "eventually those blistering sunburns of your youth and hot, reddened skin, and peeling shoulders of your adulthood can add up to one or more skin cancers."

The authors also reported that shifts in exposure to UV light may be the reason for a location shift in where the cancer tumors are found. In the earlier time periods, both basal cell and squamous cell carcinomas were diagnosed more often on the head and neck. But, in the most recent time period, the records showed that basal cell tumors on the torso increased, as did squamous cell carcinomas on the arms and legs.

Dr. Baum says that the risk of cancer should provide the ultimate argument for using sunscreen - every day, year-round on all exposed skin.

"Use sunscreen," says Dr. Baum. "This includes on your left arm for those who do a lot of driving. UV rays can penetrate car windows and exposed skin—even when the sun isn't shining. UV rays bounce around under the clouds, off the snow, buildings, and more, causing damage—even on gray days.

More on the data

Using the Rochester Epidemiology Project medical records linkage system, the research team was able to identify nearly all of the Olmsted County, Minnesota, adult residents who received an initial diagnosis of the most common nonmelanoma skin cancers—basal or squamous cell carcinoma (or both), during the 2000-2010 period and the comparison years.

"There is no tumor registry for these types of cancer," says Dr. Baum, "So it is difficult to have accurate estimates of the national or worldwide impact of these cancers. However, because the Rochester Epidemiology Project contains health care information for virtually all residents of Olmsted County since 1966, it provides a good proxy for information on many global population health concerns."

More information: John G. Muzic et al. Incidence and Trends of Basal Cell Carcinoma and Cutaneous Squamous Cell Carcinoma, *Mayo Clinic Proceedings* (2017). [DOI: 10.1016/j.mayocp.2017.02.015](https://doi.org/10.1016/j.mayocp.2017.02.015)

Provided by Mayo Clinic

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