

Experts predict melanoma death rates will fall by 2050

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By 2050 the death rates from malignant melanoma will have decreased from their current levels but the numbers of people dying from the disease will have increased due to the aging of populations.

However, if new treatments for the deadly skin cancer prove to be effective, the numbers of deaths could fall too, according to research presented at the European Cancer Congress 2017 today (Sunday).

Ms Alice Koechlin, from the International Prevention Research Institute in Lyon, France, told the meeting that people who were at highest risk of dying from [melanoma](#) were those born between 1900 and 1960 when not only were the dangerous effects of exposure to ultraviolet (UV) radiation from sunlight largely unknown, but also health professionals believed that sunshine was positively beneficial.

"These beliefs were boosted by observations that exposure to ultraviolet light and sunshine could heal some skin infections and rickets, and by the discovery of vitamin D," she said. "It was common for babies and school children to be treated with commercial UV radiation-emitting devices and exposed, unclothed, to the midday sun. This fashion faded in the 1960s as effective treatments, such as vaccines and antibiotics, became available and people became aware that [sun exposure](#) and sunburn during childhood were strong risk factors for developing skin cancer in later life."

Ms Koechlin, Professor Philippe Autier and colleagues used statistical

models to work out whether current cancer [death rates](#) were due more to the effects of age, the year of birth (which takes into account exposure to cancer-causing agents such as sunshine during early life), or to the recent introduction of new medical technologies or treatments. They used the models to estimate the numbers of deaths from melanoma for the period 2014-2050 in Australia, the USA and Sweden. They produced two estimates: one based on the assumption that there was no available effective treatment for melanoma, and the second on the assumption that there was a treatment available that resulted in a 25% reduction in melanoma deaths from 2015 onwards, assuming that all patients had access to these treatments.

They found that death rates from melanoma peaked around 2015 for Australian men and 1990 for Australian women, around 2005 and 1995 for US men and women respectively, and around 2010 in both Swedish men and women.

The researchers predicted that in 2050 death rates in Australia would be two-fold lower than in the peak years, falling back to rates seen in 1970 for men and before 1960 for women. For men the death rate adjusted according to the ages of populations (age standardised rate) was nine deaths per 100,000 of the population in 2010; in 2050 this is predicted to fall to four per 100,000. For women, the rates fall from 3.5 to 1.7 per 100,000.

In the USA, rates would be two and a half to three times lower than in the peak years, falling to rates that prevailed before 1960. The age standardised death rate would fall from four to 1.6 per 100,000 men and from 1.7 to less than one per 100,000 women.

In Sweden, the 2050 rates would be one and a half times lower than in peak years, falling to rates seen around 1985. The age standardised death rate would fall from five to three per 100,000 men in 2050, and from 2.7

to 2.1 per 100,000 women in 2050.

However, because of the aging of populations the actual numbers of deaths from melanoma would continue to increase until 2030-2035. For instance, in Australia the numbers of men dying from the disease would increase from 1007 in 2010 to 1354 in 2030, falling back to 1124 in 2050. In women they would increase from 410 in 2010 to 570 in 2030, falling back to 544 in 2050.

The researchers predicted these numbers based on the assumption that no effective therapy exists for melanoma. "With an effective therapy, we would expect to see decreases in the number of melanoma deaths from 2030," said Ms Koechlin. "In 2050, the numbers of melanoma deaths in Australia would be equal to those of around 2005: 846 men and 408 women. In the USA they would be equal to those of around 1990 for men with 3646 deaths, and to 1980 for women with 1876 deaths. In Sweden they would be equal to those of around 2000: 231 men and [174 women](#).

"As time passes, melanoma deaths will become steadily rarer in people younger than 50 years, and after 2050, practically all melanoma deaths will occur in people over the age of 70."

She concluded: "Our findings clearly show that most of the death toll due to melanoma has been caused by medically-backed exposures to highly carcinogenic UV radiation between 1900 and 1960. They also show that UV-protection of children pays off because rates of melanoma death keep going down from around 1960 to the current day as the UV protection of children based on clothing, shading and avoidance of excessive sun exposure has spread in most light-skinned populations, starting in Australia.

"Skin screening, based on the opportunistic early detection of skin

cancers, does not affect melanoma mortality and our analyses confirm this evidence. So, generations that have been over-exposed to high UV doses keep the high probability of developing a deadly melanoma at some stage in their lives. The good news is that the risk declines rapidly as skin protection increases, and that effective treatments are starting to be available. But we still have a long way to go before we will have affordable therapies able to prolong survival from advanced melanoma by several years with a decent quality of life."

Chair of the Congress and President of ECCO, Professor Peter Naredi, from the Sahlgrenska Academy, University of Gothenburg, Sweden, who was not involved with the research, commented: "This study by Autier and colleagues is very interesting. Malignant melanoma is one of our most common cancers and we have tried different ways to increase awareness about protection and early diagnosis. If the predictions are right, protection from sun exposure is one of the best examples of primary prevention and this study proves all efforts to protect a population from unhealthy amounts of sun exposure are worthwhile."

Provided by ECCO-the European CanCer Organisation

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