Rates of skin cancer have increased dramatically over recent decades

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Professor Anjum Memon is Chair in Epidemiology and Public Health Medicine at BSMS. Credit: University of Sussex

Incidence rates of skin cancer (cutaneous malignant melanoma) have increased more than 550% in males and 250% in females since the early 1980s in England—according to a new study by Brighton and Sussex Medical School (BSMS).

Published in the new *Lancet* journal, *The Lancet Regional Health—Europe*, the study analyzed data on more than 265,000 individuals diagnosed with skin cancer in England over the 38-year period, 1981-2018.

Skin cancer is the fifth most common cancer in the UK, with about 16,200 new cases each year.

Excessive exposure to UV radiation from the sun (or sunlight) is the main environmental risk factor for developing skin cancer. It is estimated that about 86% of all skin cancers in the UK are attributable to excessive exposure to sunlight. Exposure to artificial sources of UV radiation from indoor tanning beds/lamps is the second most important cause of skin cancer.

Professor Anjum Memon, Chair in Epidemiology and Public Health Medicine at BSMS and lead author of the study, said: "Our study shows that overall there has been a steady and significant increase in rates of skin cancer during the last four decades, which was essentially due to the continually increasing rates in middle (age 35-64 years) and old (65+ years) ages.

"We observed that the steepest increase was in males (more than two-fold that of females) and at old ages. The steeper increase in males is consistent with their relatively greater sun exposure and poor sun-protective behavior."

Peter Bannister, medical student at BSMS and co-author of the study said: "The study also showed, for the first time, that the rates of skin cancer in young people (aged 0-34 years) in England have stabilized (or leveled off) during the last two decades. This finding suggests that public health campaigns targeted at children, adolescents and parents may be favorably influencing skin cancer incidence.

"The stabilization of incidence in young people is encouraging and emphasizes the importance of continued and sustained primary prevention measures to further improve sun-protective behaviors—such as avoidance of excessive exposure to sunlight and indoor tanning, appropriate clothing and application of sunscreens."

The site of skin cancer is most likely associated with the pattern of UV radiation exposure. Professor Memon said: "All the available evidence suggests that the enormous increase in the rates of skin cancer of the trunk (+817% in males, +613% in females) and arms (+750% in males, +518% in females) since the 1980s in England can be mostly attributable to an increasing trend in intermittent high intensity recreational UV radiation exposure due to lifestyle and societal changes."

"For example, (i) sunbathing, (ii) holidaying in a place with strong sunlight, (iii) proliferation of indoor tanning studios, budget holiday industry and airlines, (iv) increasing trend in travel to sunnier locations and (v) use of sunbeds."

Professor Malcolm Reed, Professor of Surgical Oncology and Dean of BSMS said: ""Considering that the large majority (86%) of skin cancers in the UK and other high-risk populations are preventable, this study has highlighted the potential benefits of effective primary and secondary prevention measures to substantially reduce the burden of the disease. This could have significant benefits for individuals, populations and health services, making skin cancer one of the most preventable forms of cancer on a global scale."

More information: Anjum Memon et al, Changing epidemiology and age-specific incidence of cutaneous malignant melanoma in England: An analysis of the national cancer registration data by age, gender and anatomical site, 1981-2018, *The Lancet Regional Health - Europe* (2021). DOI: 10.1016/j.lanepe.2021.100024

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