

# Cancer incidence and mortality in young people decreases with increasing deprivation

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Results of research into the associations between cancer and socio-economic deprivation and affluence have shown that, in contrast to cancers in older people, the numbers of new cases and deaths from the disease in teenagers and young adults (TYAs) decrease with increasing deprivation.

Professor Jillian Birch told Teenage Cancer Trust's Fifth International Conference on Teenage and Young Adult Cancer Medicine today (Monday) that research by her group also showed increases in the incidence of a number of cancers, including two potentially preventable cancers among younger people: cervical cancer and melanoma.

Prof Birch, Director of the Cancer Research UK Paediatric and Familial Cancer Research group, University of Manchester (UK), explained: "Strong associations with socio-economic deprivation and affluence are seen for many diseases. Overall cancer incidence and mortality increase with increasing deprivation. However, different cancers and age groups show different patterns. Geographical variations in incidence, trends over time, and associations with deprivation and affluence can point to lifestyle or other environmental factors as possible causes. Until recently, very little was known about the detailed patterns of cancer in TYAs, but my group has carried out a series of studies to rectify this. The most recent studies have looked at geographical variations, time trends and associations with deprivation.

"Results show that in contrast to cancers in older people, in TYAs

incidence and mortality decreases with increasing deprivation. This is because the more common types of cancers that occur in young people are associated with affluence, including lymphomas, brain tumours, germ cell tumours and melanoma. These cancers also show significant regional variations in incidence and are increasing over time. However, carcinoma of the cervix, which is one of the more common cancers seen in young women, shows increasing rates with increasing deprivation and an upward trend in incidence over time."

Prof Birch's team showed that the incidence of cervical cancer in TYAs had increased by 1.6% per year during 1979-2003. "However, national data show that across all ages, incidence is falling. We therefore analysed trends in 15-39 year olds to look at the changing pattern with age. We found that in 15-19 year olds, rates were increasing by 6.8% per year and by 1.4% per year in 20-24 year olds, but rates were decreasing among those aged 25 and over," she said.

"Similar analyses for melanoma showed increasing rates at all ages but a greater rate of increase in 20-29 year olds than at older ages. In 20-24 year olds the annual percentage change was 4.1 and 4.0 in 25-29 year olds, but declined to 3.3 in 30-34 year olds and 2.5 in 35-39 year olds."

Overall, the research showed that cancer incidence rates between 1979-2001, varied from 173 per million person years (per mpyr) in the North East to 208 per mpyr in the South East and South West [1]. National rates have increased during this time period by 1.5% per year. For the whole period, melanoma incidence varied from 12 per mpyr in the East Midlands and London, to 20 per mpyr in the South West. Incidence of melanoma increased nationally by 3.8% per year but the trend was strikingly different in different regions. During 1979-1983 highest rates of around 15 per mpyr were seen in the South and West of England but the rates increased over time more rapidly in the North, so that during 1999-2003 highest rates of between 22 and 32 per mpyr were

seen in Northern regions.

Prof Birch said: "It is important that public health messages about these two mainly preventable cancers are targeted appropriately. For other TYA cancers, the results of our analyses provide a basis for designing studies to look at possible causes."

Simon Davies, CEO at Teenage Cancer Trust said: "It is worrying that cervical cancer and melanoma, two preventable cancers, are increasing in teenagers faster than in other groups. More education is desperately needed so young people can change their behaviour before it's too late. This is why Teenage Cancer Trust funds an education programme for teenagers and young adults throughout schools and colleges in the UK. We are targeting hundreds of thousands of teenagers this summer in our sun safety campaign, fronted by Leona Lewis."

Source: Teenage Cancer Trust

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