

Childhood cancer survivors at greater risk in middle age

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Scientists at the University of Birmingham have found that survivors of childhood cancers are four times more likely than the general population to develop a new cancer. The results are published online today in the *Journal of the American Medical Association*.

The researchers, funded by Cancer Research UK, followed the health of over 18,000 [childhood cancer](#) survivors for an average of 25 years. They found that in middle age, survivors were at greater risk of developing certain types of new cancers, particularly of the digestive or genitourinary systems, such as bowel and kidney cancers.

Among the survivors there were 837 new cancers, almost four times the 216 that would be expected in the same number of people in the general population.

They also found that five per cent of survivors had developed a new cancer by the age of 38, while in the general population it took until 54 years to reach this same figure.

Study author Dr Raoul Reulen, based in the School of Health and Population Sciences at the University, said: "We know that survivors of childhood cancer are at increased risk of developing new cancers, but we didn't know what the long term risks were as they reached [middle age](#). By knowing the cancers that survivors are most at risk of we can focus attempts to prevent or pick up cancers earlier hopefully helping them to be treated successfully."

Most of the increased risk of developing further cancers can be attributed to the treatments used for the original cancer. Cancer Research UK is already exploring ways to minimise these effects in its many research programmes. The researchers found that survivors treated with radiotherapy to the abdomen and pelvis 20 to 30 years ago were three times more likely to develop a new cancer of

the digestive system.

As the risk for developing bowel cancer among this group was similar to those who have a strong family history of the disease the researchers have questioned whether they should be offered colonoscopy screening to detect possible bowel cancers earlier.

Dr Reulen added: "The increased risk of developing new cancers in survivors is still relatively low overall, but we encourage survivors to take part in the existing screening programmes for bowel, cervical and breast cancer."

The study also showed a changing pattern in the cancers being seen among survivors as they got older. Digestive and genitourinary cancers are relatively rare among [survivors](#) younger than 20 years, but they become more common over time.

Overall, five-year survival rates for childhood cancer patients have made great improvements over the last 40 years and today almost 80 per cent survive. Due to this success there is now an urgent need to reduce the late side-effects of some of these treatments.

Dr Lesley Walker, director of cancer information at Cancer Research UK, said: "Treatments for childhood cancers have undergone major changes and are continually improving leading to the greatly improved survival rates we now see. This important work will help identify earlier those [childhood cancer survivors](#) who are at greater risk of developing new cancers.

"The current treatments used today, such as radiotherapy, have been refined to focus the on the tumour so are likely to result in fewer cancers in the surrounding areas. Cancer Research UK is continually looking at new treatments that will help more children survive cancer and reduce the long term effects that curative treatments can bring."

More information: Reulen, R.C. et al Long-term risks of subsequent primary neoplasms among survivors of childhood cancer, JAMA (2011)

Provided by University of Birmingham

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