

# Less intensive chemo avoids irreversible side effects in children's cancer

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Children with a rare type of cancer called Wilms' tumour who are at low risk of relapsing can now be given less intensive treatment, avoiding a type of chemotherapy that can cause irreversible heart problems in later life.

The move follows the results of a Cancer Research UK trial, published in the Lancet today (Thursday), showing that the drug doxorubicin can be safely omitted from treatment without affecting patients' chances of survival.

Wilms' [tumour](#) is a type of kidney [cancer](#) that affects around 80 [children](#) a year in the UK, most under the age of seven. Until now, about one half of these patients would have received doxorubicin as part of their treatment, which carries a small but significant risk of [heart problems](#) in later life. Now only about one quarter of children - those at the greatest risk of relapse - need the drug.

Doxorubicin is helpful in treating many types of cancer. But with around nine in 10 children with Wilms tumour now cured, doctors wanted to find out whether it could be safely left out from the treatment of those who had a low chance of relapse, without affecting survival chances.

583 children with stage II or stage III Wilms' tumour, who were at intermediate risk of relapsing, took part in the 10 year trial from 2001-2011 across 26 European countries.

The results showed that 96.5 per cent of children whose treatment included doxorubicin survived for five years or more, compared with 95.8 per cent of children who didn't receive the drug. Although there were slightly more relapses among the children who avoided doxorubicin, they could all be successfully re-treated, meaning there was no impact on the overall risk of death.

The researchers are now carrying out further work, funded by Cancer Research UK, to pinpoint genetic changes in tumour samples from these patients that could be used to better predict the chance of relapse, so treatment can be tailored accordingly.

Lead author Professor Kathy Pritchard-Jones, a Cancer Research UK-funded researcher at the Institute of Child Health, University College London and consultant oncologist at Great Ormond Street Hospital in London, said: "Thanks to the results of this trial fewer children with this disease will have to have treatment that could cause them lifelong side effects without much benefit. It's taken researchers in 26 countries nearly 10 years to gather the data to support this theory, and none of this would have been possible without the 583 children who took part in the trial and the families that supported them."

Professor Pam Kearns, professor of paediatric oncology at the University of Birmingham and Cancer Research UK's senior clinical advisor, said: "This is a very important trial that has changed clinical practice for this type of Wilms' tumour. Around nine in 10 children with the disease survive with current treatments, so it is difficult to consider reducing treatment, but minimising the side effects that occur later in life is crucial. Thanks to trials like this we're learning how we can both improve treatments for children's cancers alongside reducing the damaging side effects.

"Whilst [treatment](#) for Wilms' tumour is very successful, overall cancer

remains the biggest killer of children in the UK so our work is still far from done. Our new campaign – Cancer Research UK Kids & Teens – will help us fund more research to find cures and kinder treatments to beat child

**More information:** "Doxorubicin omission from the treatment of stage II-III, intermediate-risk histology Wilms' tumour: results of the SIOP WT 2001 randomised trial," *Lancet* (2015), [DOI: 10.1016/S0140-6736](https://doi.org/10.1016/S0140-6736)

Provided by Cancer Research UK

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