# Guardian of genome predicts treatment outcomes for childhood cancer

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Researchers have identified a new role for a cancer-prevention gene in the response to drug treatment for childhood cancer.

In humans, the p53 tumour suppressor gene, also known as the 'guardian of the genome', is known for its role in the prevention of cancer. Mutations in the gene are associated with a high incidence of cancer due to the uncontrolled division of cells which give rise to tumours.

In childhood cancers such as neuroblastoma, p53 mutations are rare at diagnosis, however they can emerge after chemotherapy.

A recent study published in the international journal *Cancer Research* this month by researchers from the Children's Cancer Institute Australia for Medical Research (CCIA), and collaborators in the USA, describes a new role for p53 in childhood cancer.

The group showed that by inactivating p53 in neuroblastoma cells, the most common childhood cancer, the cancer cells became resistant to a number of chemotherapy drugs.

"Our results provide definitive evidence of a role for p53 as a gene which dictates drug sensitivity in neuroblastoma," said Dr Xue of CCIA's Molecular Diagnostics Program.

Source: Research Australia