

Skin cells 'fight child cancer'

Genetically modified skin cells could be used to fight a cancer which strikes the very young, a UK study suggests.

Scientists at UCL said they were able to stimulate the immune system of mice by injecting the animals' skin cells into a neuroblastoma tumour.

This type of tumour accounts for 15% of childhood cancer deaths. It is most frequently found in the under-fives.

But the authors, writing in the *British Journal of Cancer*, said clinical trials in humans were at least five years off.

Nerve cells

Once the skin cells were genetically modified they became "little factories" producing a sort of protein which helped the immune system, said lead researcher Dr Stephen Hart.

When they were injected into the tumour site, these cells apparently helped the mouse fight the cancer - with a treated mouse living 90 days or more longer than an untreated mouse.

Research in the past has show that genetically modified tumour cells can be turned against the tumour they came from, "but use of the patient's own skin cells would be much easier", Dr Hart wrote.

"These cells can be taken by a routine skin punch biopsy, grown in the lab then genetically modified before injecting into the tumour site."

Neuroblastoma is a cancer of specialised nerve cells, called neural crest cells. These cells are involved in the development of the nervous system and other tissues.

Prognosis for children diagnosed in the first 12-18 months of life is good, but if it comes back in older children it can be very hard to cure.

Fewer than 100 new cases are diagnosed each year, according to Cancerbackup.

Dr Bruce Morland, head of the Children's Cancer and Leukaemia Group, said: "we are delighted that scientists are finding out how to harness the potential of immunotherapy for this childhood cancer.

"This study in mice adds to the growing body of evidence that kick-starting the immune system can work successfully against neuroblastoma.

"However, we need to learn much more about this approach before we can be sure that it is a safe and effective treatment for children."

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