Vaccine hope for skin cancer sufferers

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Nottingham scientists have been given the green light to test a vaccine which they hope could reverse, and even cure malignant melanoma, the most deadly type of skin cancer.

Scancell Holdings plc, led by Professor Lindy Durrant of the University's Division of Clinical Oncology within the School of Molecular Medical Sciences, believes the new vaccine, which targets tumour cells without damaging healthy tissue, could be successful in treating patients with malignant melanoma.

Incidences of malignant melanoma have more than quadrupled over the past 30 years and in the last 25 years rates of malignant melanoma have risen faster than for any other cancer. It is now the most common cancer in younger adults aged 15 to 34, which may be linked to risky associated behaviour such as exposure to the sun on foreign beach holidays and the use of tanning booths. Every year, most of the 2,000 skin cancer deaths result from malignant melanoma.

Professor Durrant said: "Up until now, early diagnosis has been a crucial factor in the successful treatment of this disease. In the early stages it can be cured by completely removing the skin melanoma by surgery. However, in cases where it has not been picked up until further down the line, we have found that chemotherapy and radiotherapy simply do not work, although new compounds are being tested.

"It is still at a very early stage and impossible to predict the outcome of the clinical trial but if our results from the lab are replicated in patients I

think we have a good chance of dramatically improving the chances of successful treatment — we are hoping that the vaccine will cure between 10 and 20 per cent of patients with malignant melanoma."

Testing for the new SCIB1 vaccine has been given approval by the Gene Therapy Advisory Committee and the Medicines and Healthcare products Regulatory Agency and clinical trials are due to start shortly at Nottingham City Hospital and centres in Manchester and Newcastle.

It will initially be given to patients who are suffering from advanced malignant melanoma which has spread to other parts of the body.

The new vaccine works by activating the body's own natural defence systems — it contains DNA and genetic material from tumours meaning it 'switches' on the specific immune cells that target melanoma. This means that it targets only the cancer and not the surrounding healthy tissue.

The team of scientists believe that, in principle, new vaccines based upon the same principle could also be used to target other types of cancer tumours, such as breast and prostate.

Provided by University of Nottingham