

New trial to fight cancer caused by asbestos

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Patients with a hard-to-treat type of cancer are being given new hope in a ground-breaking clinical trial.

Researchers at the University of Southampton and the University of Leicester are trialling a drug that could boost the body's immune system to fight off mesothelioma, which can be caused by asbestos.

The trial will be one of many to be conducted at the University of Southampton's Centre for Cancer Immunology, which will be the UK's first and only centre dedicated to [cancer immunology](#) research.

Mesothelioma rates are rising. Since the late 1970s, mesothelioma incidence rates have increased almost six-fold (497 per cent increase) in Great Britain. There were around 2,700 new cases of mesothelioma in the UK in 2013 – more than seven cases diagnosed every day.

Current treatment methods include chemotherapy, radiotherapy or surgery and are mainly aimed at keeping the [cancer](#) under control.

The phase III randomised controlled trial, which is funded by Cancer Research UK and supported by Bristol Myers Squibb, will test whether nivolumab, a drug already used to successfully treat advanced melanoma and advanced kidney cancer, can be used to target mesothelioma.

It works by finding and blocking a protein called PD-1 on the surface of certain immune cells called T-cells. Blocking PD-1 activates the T-cells to find and kill cancer cells.

The trial has been launched ahead of International Clinical Trials Day, which is marked on 20 May each year, but this year has events taking place today (Friday, 19 May).

Professor Gareth Griffiths, the study's co-Chief Investigator from the Southampton Clinical Trials Unit at the University of Southampton, said: "The UK has one of the world's highest incidences of mesothelioma and currently there aren't many ways to treat it. Boosting the immune system by releasing killer T-cells that have previously been blocked could offer us a new way to treat more patients with this devastating disease."

The trial, which is being run in collaboration with the clinical lead Professor Dean Fennell at the University of Leicester, plans to recruit 304 patients, who have relapsed mesothelioma, across 20 UK-wide sites including Southampton and Leicester.

Professor Fennell said: "Preliminary studies targeting PD-1 in mesothelioma have shown promising activity. CONFIRM aims to definitively assess the true benefit of nivolumab for patients with relapsed mesothelioma in a setting where there is an unmet need. Critically, we aim to understand why patients respond (or not) to this drug, and identify biomarkers to ensure that we can personalise therapy to maximize the benefit for patients."

One person who has already benefited from using the immune system to fight mesothelioma is Mavis Nye, who was diagnosed with the disease in 2009. After various courses of treatments which failed, she joined a phase 1 immunotherapy trial to test the drug (Keytruda) on how well it blocked the PD-1 protein and enabled the body to fight off a number of cancers, including mesothelioma. After the first two years, scans revealed the tumours had decreased by 81 per cent, with three disappearing completely. Mavis is now cancer-free and spends her time raising awareness about the importance of [clinical trials](#).

She said: "I was just an ordinary woman whose husband worked at the dockyards in Chatham. We didn't know what the effects of the asbestos on his clothes might be. Cancer is a terrible and devastating disease that turns everything on its head. I am so thankful that the trial I took part in worked. But it didn't work for every participant. We need more [trials](#) to help improve treatments and survival rates for cancer, and this new trial is a big step in the right direction."

Dr Catherine Pickworth, Cancer Research UK's science information officer, said: "Immunotherapy treatments work by turning the power of our immune system against cancer. They are already being used routinely to treat advanced skin and kidney cancers, and are showing promise for other types of cancer too. This clinical trial will find out whether an immunotherapy drug could benefit people with [mesothelioma](#), which is hard for doctors to treat successfully. We urgently need trials like this to help improve survival for patients with this aggressive type of cancer."

The construction of the Centre for Cancer Immunology is expected to be completed by September and aims to be in full operation in summer 2018. It will bring world-leading cancer scientists together under one roof and enable interdisciplinary teams to expand clinical trials and develop lifesaving drugs.

The Centre, which is based at Southampton General Hospital site, is being funded by a £25 million fundraising campaign by the University of Southampton.

Professor Tim Elliott, Director of the Centre for Cancer Immunology, said: "The University has made major advances in tumour immunology and immunotherapy over the past 40 years and we enjoy a strong reputation for our 'bench to bedside' approach. The new Centre will go a long way in helping many more people with cancer become free of the

disease, and we hope this new trial to fight a particularly sinister type of cancer will be the first of many successful trials."

Provided by University of Southampton

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