

Prostate cancer vaccine trial begins at Oxford and Sheffield

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Oxford University scientists have started a clinical trial to test a new vaccine against prostate cancer and are looking for volunteers to take part. The first four participants have already received this experimental vaccine at the Churchill Hospital in Oxford, and the second trial site has just been opened at the Royal Hallamshire Hospital in Sheffield.

In an initial study led by Professor Freddie Hamdy in Oxford and Professor Jim Catto in Sheffield, the team will vaccinate 48 men with low or intermediate risk [prostate cancer](#) to document the safety of the new [vaccine](#) and measure how well the [immune system](#) responds to it. If successful, then future larger-scale studies will assess the effectiveness of the vaccine.

Prostate cancer is the most common cancer in men in the UK, affecting 1 in 8 men and causing more than 10,000 deaths each year.

Dr Irina Redchenko, a senior investigator on the trial from the Jenner Institute explained: 'Cancers can spread in the body is because the immune system does not recognise the [cancer cells](#) as foreign and so does not attack them. The right type of vaccine could help the body to attack and destroy the cancer cells.'

The vaccine technology being used is based on an immunisation approach developed at Oxford for preventive vaccination and found to be very effective for inducing strong cellular immunity to prevent diseases such as malaria, HIV and Ebola. In this trial it is being assessed

for the first time as a cancer vaccine therapy. The vaccines are designed to make the immune system recognise a protein found on the surface of cancer cells which is called 5T4. One of the vaccine components, based on the MVA vaccine vector has already been evaluated in over 500 cancer patients. The other vaccine is a new agent developed in Oxford, called ChAdOx1.5T4, which is being tested for the first time in people.

The two components of the vaccine are called 'viral vectors'. These vectors are weakened viruses already used safely for other vaccination trials; they cannot reproduce and cause illness. They are engineered to carry elements that specifically activate the immune system to recognize the cancer. ChAdOx1 is a safe inactivated form of a common cold virus, while the MVA has been used as a vaccine against smallpox. Once injected they prime the immune system to recognise and attack cancer cells that carry the 5T4 protein.

Men who were already scheduled for surgery to have their prostate removed will have the vaccinations before surgery, while those on 'active surveillance', where the prostate is reviewed regularly to ensure that the cancer is not progressing, will have an additional MRI scan to see if the vaccine has had a beneficial effect on their prostate. Both groups will also have follow-up blood tests.

Professor Adrian Hill, who heads the Jenner Institute, said: 'This trial will provide key information on the performance of this promising investigational prostate cancer vaccine which uses a very powerful technology to stimulate immunity. The vision is that we can develop an approach to treat this common [cancer](#) at a very early stage to prevent the disease progressing to a more serious form.'

Provided by University of Oxford

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