Herpes virus used to treat cancer

By Emma Wilkinson Health reporter, BBC News

The herpes virus causes cold sores
Doctors say they have used a genetically engineered herpes virus to treat successfully patients with head and neck cancer.

A London hospital trial of 17 patients found that use of the virus alongside chemotherapy and radiotherapy helped kill the tumours in most patients.

It works by getting into cancer cells, killing them from the inside, and also boosting the patient's immune system.

Further trials are planned for later in the year.

Head and neck cancer, which includes cancer of the mouth, tongue and throat, affects up to 8,000 people every year in the UK.

Study leader Dr Kevin Harrington, who is based at the Institute of Cancer Research in London, said current treatments were effective if the cancer was picked up early but that many patients were not diagnosed until it was more advanced.

The herpes virus, which is also being tested in patients with skin cancer, is genetically manipulated so that it grows inside tumour cells but cannot infect normal healthy cells.

Once there it has a triple effect - it multiplies, killing tumour cells as it does so, it is engineered to produce a human protein that activates the immune system and it also makes a viral protein that acts as a red flag to immune cells.

'Potential weapon'
In the 17 patients injected with the virus, in addition to their standard treatment, at the Royal Marsden Hospital, 93% showed no trace of cancer after their tumour had been surgically removed.

More than two years later, 82% of patients had not succumbed to the disease.

Only two of 13 patients given the virus treatment at a high dose relapsed, the journal Clinical Cancer Research reported.

There were no safety concerns with use of the virus, the researchers said, and it is hoped the
virus could one day be used to fight other types of cancer.

"Around 35 to 55% of patients given the standard chemotherapy and radiotherapy treatment typically relapse within two years, so these results compare very favourably," said Dr Harrington.

He is now planning a trial comparing the viral treatment with the standard treatment in people newly diagnosed with head and neck cancer.

Dr Alison Ross, senior science information officer at Cancer Research UK, said it would be some time before the treatment could be used in patients as it still needed to be tested directly against standard treatment.

But she added: "This small study highlights the potential of using genetically modified viruses as a weapon to fight cancer."