



What we know

Head and neck cancers take many forms, and can occur in the mouth, throat, salivary glands, nose and the middle ear.

In most types of cancer, metastasis (cancer that spreads to a different part of the body from where it started - the primary site) is the most frequent cause of death. Head and neck cancers, however, work differently. In these cases, the disease and death are largely the result of one of two factors: a spread of the cancerous cells, or a recurrence of the disease after treatment. As a result, treatments such as chemotherapy or radiotherapy often don't work.

Our study involves using immunotherapy which boosts and helps the body's own natural defences to fight cancer. Immunotherapy is a rapidly growing form of cancer treatments and we hope to use it to offer new treatment for those with head and neck cancers.



the increase in cases of head and neck cancer in the UK since the early 1990s.



The number of new cases of head and neck cancer in 2014.



Between 19% and 59%

the percentage of patients with a form of head and neck cancer that survive their disease for ten years or more.

What we are doing

We will take a blood sample from our patients and then treat the white blood cells with a harmless virus to create two new genes. The first stimulates growth of white blood cells, and the second helps these cells to recognise and attack the cancerous growth (tumour). After two weeks, a CAR-T cell is created, which supports the body's own immune system to target head and neck cancers. The CAR-T cell is then injected directly into the patient to fight the disease.

CAR-T Cell Therapy has been used to successfully treat some forms of leukaemia, but more research is needed for treatment of "solid cancers"

The aim of this study is to determine:

- How well the treatment works
- The best and safest dosage
- How the body responds to it.

What we hope to find

"If this trial is successful, it could have significant implications for other solid cancers, especially those that spread within a natural space in the body, such as ovarian cancer." Dr John Maher, Principal Investigator at the NIHR Biomedical Research Centre at Guy's and St Thomas' NHS Foundation Trust and King's College London.



About the Study

The study was supported by the NIHR Biomedical Research Centre at Guy's and St Thomas' and King's College London



This research snapshot has been put together in collaboration with our Public and Patient Involvement (PPI) Advisory Group.

Further Information

Find out more

www.cancerresearchuk.org/about-cancer/head-neck-cancer

www.nhs.uk/conditions/cancer-of-the-head-and-neck/Pages/Definition.aspx

<https://kclpure.kcl.ac.uk/portal/john.maher.html>

To find out more about how you can work with us to improve healthcare through research contact brcppi@gstt.nhs.uk

About Us

Our NIHR Biomedical Research Centre is a partnership between Guy's and St Thomas' NHS Foundation Trust and King's College London.

We develop and deliver new medicines and diagnostics to patients, drive research and innovation into the NHS, and provide national systems leadership for maximum impact to our patients.

www.guysandstthomasbrc.nihr.ac.uk