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NHS University Hospitals Bristol and Weston NHS Foundation Trust

headandneck 5000

Salivary proteomic biomarkers for head & neck cancer: a case-control study

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Summary:

Early diagnosis of cancer is a priority for the NHS, with a target of 75% of new cancers diagnosed at an early stage by 2028. Diagnosing cancer early is key to allow a wider range of treatment options which increase the chances of survival. Cancer affecting the mouth, throat, neck and the gut have some of the lowest levels of early diagnosis amongst all cancer types in the UK. These cancers very often have vague symptoms and are common amongst people with lifestyle habits such as smoking tobacco and drinking too much alcohol, making them very difficult to find early.

Certain markers in the body (molecules that indicate disease) are linked to cancers - this project aims to find a new way to assist the early diagnosis of cancer in primary care and identify people with a high risk of cancer who might need an urgent referral from their GP for more tests. We will do this by finding the most accurate markers that are linked to cancer from other studies already done in this field and developing special sensors that can fit on a toothbrush and find changes in these markers during teeth brushing. We hope these new sensors can detect these markers related to cancers in the throat, upper airways and gut quickly, easily and cheaply.

Keywords

Head & neck cancer, proteomics, saliva, early-stage diagnosis