

## New hope for better treatment for a rising cancer

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Poor diet, too much alcohol, smoking and increasing obesity could be leading to an epidemic of oesophageal and upper stomach cancer, according to a leading UK team of specialists at The University of Nottingham and Nottingham University Hospitals.

The Nottingham Gastro-Oesophageal <u>Cancer</u> Research Group has been carrying out intensive research over the past five years to try to improve the treatment of this cancer. A major part of the research is published today in the <u>British Journal of Cancer</u>. The work has been prompted by a large increase in the incidence of cancer of the oesophagus (gullet) and upper stomach over the past 40 years.

According to Cancer Research UK statistics, rates of oesophageal adenocarcinoma and gastro-oesophageal (GOJ) adenocarcinoma have been increasing in the UK. Since the 1970s the incidence of this cancer has increased by 50 per cent in men and 20 per cent in women. Indeed the reported rates for white men in the UK are now the highest in the world.

Doctors believe changes in diet and lifestyle are the key factors behind the rapid rise in the number of cases. This new research is aimed at providing a better treatment and prognosis for a cancer that is historically not survivable past five years from diagnosis. Current standard treatment for potentially operable cancer consists of a 12 week intensive course of powerful chemotherapy, followed by surgery if the tumour is operable, and then a second 12 week course of chemotherapy.



This prolonged, intense course of chemotherapy treatment is potentially toxic, impacts on quality of life and is likely to be beneficial only in those patients who respond to chemotherapy.

The Nottingham-based research using molecular cancer pathology and DNA protein expression techniques on tumour samples from around 250 patients after surgery has shown that only between 40 per cent and 50 per cent of these adenocarcinomas actually respond to the chemotherapy. The research has effectively tested a very promising monitoring test during treatment so that doctors can assess whether and how far the tumour is regressing during chemotherapy. In addition, the research has also identified a promising protein marker involved in DNA repair in cancer cells that predicts resistance to chemotherapy in tumours.

The new information could empower doctors to decide whether to recommend a second course of powerful chemotherapy after surgery. The research also paves the way for wider and more specialised clinical trials for this cancer which will monitor patients in real-time, rather than using past samples, and which could lead to new combinations of chemotherapy, including the new breast cancer drug, Herceptin, which has recently been proven to be effective in gastro-oesophageal cancers.

Dr Srinivasan Madhusudan, Clinical Associate Professor & Consultant in Medical Oncology at Nottingham University Hospitals and the University's School of Molecular Medical Sciences, said: "Recent scientific advances have given real hope for patients with gastro-oesophageal cancers. The Nottingham Upper Gastrointestinal Cancer Group is a multidisciplinary research team consisting of Oncologists, Surgeons, Pathologists and Radiologists. We aim to exploit the 'new science' for patient benefit. This study published online today in the *British Journal of Cancer* provides evidence that it may be possible to tailor gastro-oesophageal cancer treatments based on 'new' biology. We



are planning a larger prospective multicentre study to confirm these findings and we believe will have major clinical impact on how we treat these aggressive tumours in the future."

## Provided by University of Nottingham

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