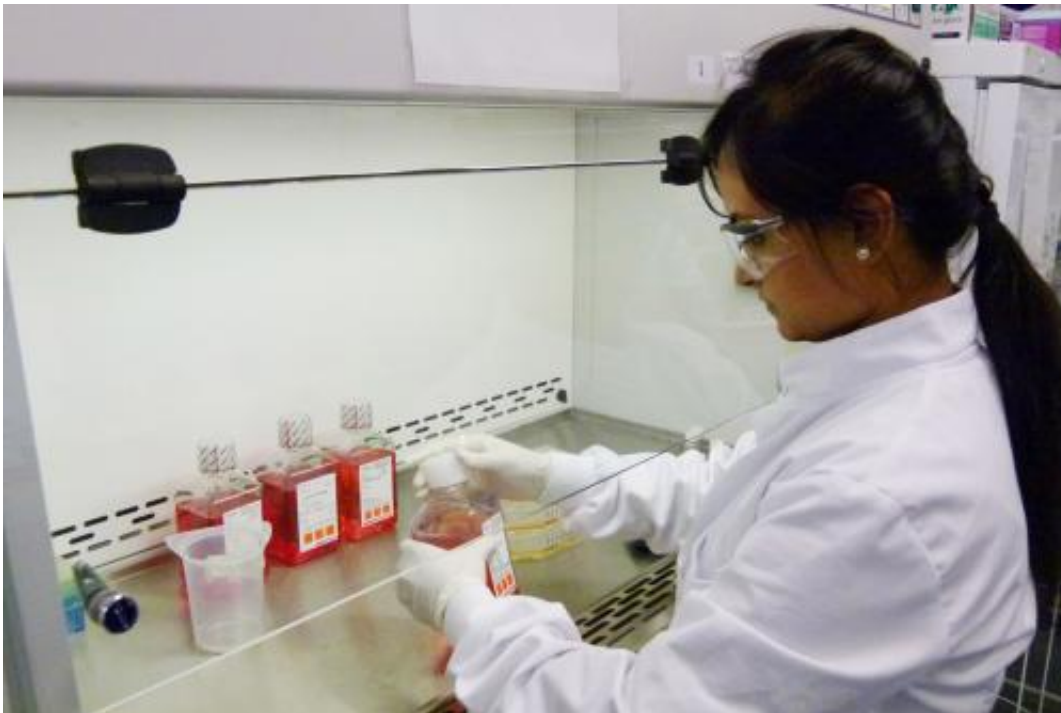


# Scientists put bowel cancer under the microscope

May 24 2013

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Researcher Soozana Puvanenthira in the laboratories at London's Kingston University.

Researchers from London's Kingston University have begun a two-year study which could help prolong the lives of people with colorectal tumours.

Patients with [bowel cancer](#) – the third most commonly diagnosed form

in the United Kingdom – could enjoy increased [survival rates](#) as a result of a new study led by an expert from London's Kingston University. Professor Helmut Modjtahedi is heading an investigation examining why some tumours are hard to treat and how they can be targeted with the most effective therapies.

During the study, specimens from patients with tumours of the colon or [rectum](#), known as colorectal or bowel [cancer](#), will be examined for biomarkers – proteins on the surface of cells. This would help pinpoint which individuals were most likely to benefit from specific therapies, particularly two new antibody-based drugs, Professor Modjtahedi said. Since the drugs cost tens of thousands of pounds a year, targeting their use would help [health authorities](#) reduce costs, while patients who would not benefit from them could be spared the trauma of unnecessary treatment and offered an alternative instead.

The researchers are aiming to develop a [diagnostic test](#) to demonstrate which patients would respond to specific treatments by the end of the study. "This is something that will have a huge impact, not just for colorectal cancer sufferers, but also for people with other forms such as lung, breast, head or [neck cancer](#)," Professor Modjtahedi said. "This is because these patients may also be treated with [antibodies](#) or small [molecule inhibitors](#) targeted at the [antigens](#) under investigation. We hope our far-reaching work will improve patients' lives as well as helping health authorities direct their resources where they are most needed. We anticipate it will play a significant role in the response, survival and cure rates for patients."

The two-year study, due to conclude in April 2015, has attracted £107,000 in funding from cancer charity BRIGHT (Better Research into Gastrointestinal Cancer Health and Treatment), based at St Luke's Cancer Centre at the Royal Surrey County Hospital in Guildford.

Colorectal cancer is hard to treat in the majority of cases. People diagnosed at an early stage have a good survival rate – 90 per cent after five years – but this figure drops to 68 per cent for those detected at an advanced stage and just 10 per cent when it has spread to other parts of the body. In the United Kingdom it is the second most commonly diagnosed cancer in women and the third in men – responsible for around 19,000 deaths a year.

Professor Modjtahedi has been a specialist in cancer biology at Kingston University since 2007 and has amassed more than 20 years' experience researching in the field. His most recently-completed study in the laboratories at Kingston University, also funded by BRIGHT, found that some colorectal cancers had more than one marker and therefore needed more than one drug or combination of drugs to treat them. That three-year probe also looked at the reasons patients sometimes responded to treatment in the early stages only to suffer setbacks when the drugs subsequently stopped working.

The current study will explore in more detail why some patients' cancers develop a resistance to treatment and how this can be overcome using different combinations of drugs. It will also aim to identify some of the biomarkers that will allow doctors to select which drugs will benefit which patients.

The biomarkers Professor Modjtahedi and his team are focusing their attention on come from a family known as epidermal growth factor receptors (EGFR). In patients with a high level of EGFR, cancer cells can divide more rapidly – escalating the disease and making it harder to treat. The team has already developed antibodies capable of blocking the actions of EGFR and detecting such proteins in [tumour](#) specimens from patients.

The preliminary findings of Professor Modjtahedi's research have been

published in the *British Journal of Cancer*.

Provided by Kingston University, London

Citation: Scientists put bowel cancer under the microscope (2013, May 24) retrieved 4 June 2024 from <https://medicalxpress.com/news/2013-05-scientists-bowel-cancer-microscope.html>

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