Study makes case for wider gene testing in bowel cancer

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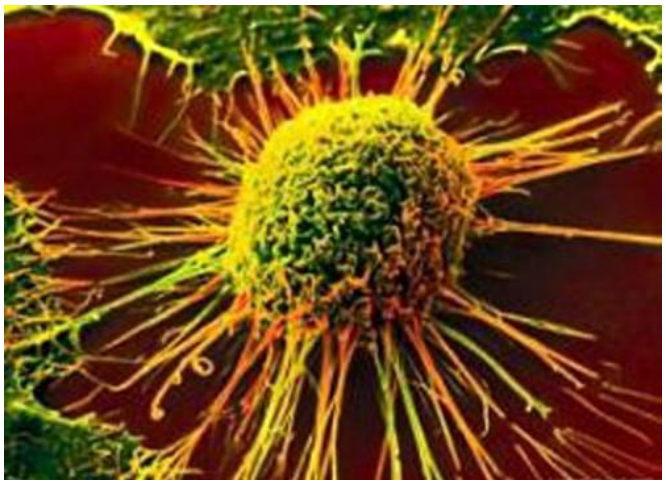

Up to a quarter of patients with bowel cancer who have a family history of the disease could have the causes of their cancer identified through gene testing, a new study reports.

Wider testing for known cancer genes in patients with bowel cancer could help in their diagnosis and treatment, and in the early detection or prevention of cancers in their relatives, the researchers said.

Scientists at The Institute of Cancer Research, London, sequenced genes in more than 600 patients with a family history of bowel cancer - and found known mutations could be identified in 'a high proportion'.

The researchers, who received funding from Cancer Research UK and the European Union, said their findings suggested patients with bowel cancer and a family history should routinely be tested for a range of known cancer genes.

But they stressed there was also a need for further research to identify new cancer genes that could be involved in the three quarters of cases where no mutations in known cancer genes could be detected.

Scientists at The Institute of Cancer Research (ICR) sequenced the DNA of 626 patients with bowel cancer and a family history of early-onset disease from 140 clinical centres across the UK.

Their study, published in the *Journal of Clinical Oncology* today (Monday), found that inherited susceptibility to bowel cancer was common among patients with a family history of the disease.

Inherited mutations in a well-known group of genes called the mismatch repair genes alone accounted for 11% of familial bowel cancers. Genetic screening to detect defects in these genes has previously been shown to reduce bowel cancer death rates.

Professor Richard Houlston, Professor of Molecular and Population Genetics at The Institute of Cancer Research, London, said:

"Knowing which cancer gene has caused bowel cancer isn't just important for researchers - it's crucial for the treatment, counselling and surveillance of patients and their relatives.

"Our study has found that using just existing tests for known cancer genes, we could identify the genetic causes of familial bowel cancer in perhaps as many as a quarter of cases. It's vital that we improve access to genetic testing for cancer patients and their relatives so as many as possible can have a genetic diagnosis.

"Of course, we are still left with three-quarters of patients where no genetic cause could be identified, and that underlines the need for further research to identify new cancer genes."

Dr Áine McCarthy, Cancer Research UK's science information officer, said:

"So far, there are 10 gene faults that we know are linked to inherited bowel cancer. People with these gene faults have a much higher risk of developing the disease and so are screened from a younger age. But this research shows that around three-quarters of people with a family history of bowel cancer do not have these known gene faults.

"By testing a much larger portion of their DNA we may be able to discover other mistakes in different genes that can also cause bowel cancer. This could potentially help doctors decide how best to monitor people for early signs of bowel cancer and guide their treatment."

Provided by Institute of Cancer Research