Faecal immunochemical tests to triage patients with lower abdominal symptoms for suspected colorectal cancer referrals in primary care: a systematic review and cost-effectiveness analysis

Marie Westwood,[1]* Isaac Corro Ramos,[2] Shona Lang,[1] Marianne Luyendijk,[3] Remziye Zaim,[3] Lisa Stirk,[1] Maiwenn Al,[3] Nigel Armstrong[1] and Jos Kleijnen[4]

[1]Kleijnen Systematic Reviews Ltd, York, UK
[2]Institute for Medical Technology Assessment, Erasmus University Rotterdam, Rotterdam, the Netherlands
[3]Institute of Health Policy and Management, Erasmus University Rotterdam, Rotterdam, the Netherlands
[4]School for Public Health and Primary Care (Care and Public Health Research Institute), Maastricht University, Maastricht, the Netherlands

*Corresponding author marie@systematic-reviews.com

Declared competing interests of authors: none

Published May 2017
DOI: 10.3310/hta21330

Plain English summary

Faecal immunochemical tests for suspected colorectal cancer
Health Technology Assessment 2017; Vol. 21: No. 33
DOI: 10.3310/hta21330

NIHR Journals Library www.journalslibrary.nihr.ac.uk

Plain English summary

Bowel (colorectal) cancer is the third most common cancer in the UK. Symptoms, such as anaemia, abdominal pain and altered bowel habit, can be early warnings of bowel cancer, but these symptoms usually have another explanation. In order to be sure whether or not someone has bowel cancer, hospital tests, such as colonoscopy, are needed. Because colonoscopy can be unpleasant and carries a small risk of heavy bleeding or tearing of the bowel, it is important to find tests that can help to select people who really need to have colonoscopy, that is, those who are more likely to have bowel cancer and other serious lower gastrointestinal disease, including inflammatory bowel disease.

The faecal immunochemical test (FIT) for haemoglobin detects blood in the faeces that is not visible to the naked eye.

This report looks at whether or not faecal immunochemical testing should be offered to people reporting bowel symptoms to their doctor who are considered to be at low risk of having bowel cancer.

We included 10 studies that looked at how well the results of faecal immunochemical testing can predict whether or not bowel cancer is found when a person has a colonoscopy examination. Research indicates that a negative FIT result could be used to reliably determine that a person does not have bowel cancer in around three-quarters of people with low-risk bowel symptoms. Using faecal immunochemical testing could therefore reduce the number of people who do not have bowel cancer undergoing 'unnecessary' colonoscopy. Although most people who have a positive FIT result and low-risk bowel symptoms do not have bowel cancer, other bowel diseases are often found when these people are sent for colonoscopy examination.

Because there has been no research comparing different brands of FITs, we cannot know whether or not any one test is better than another.

Health Technology Assessment

NICE TAR and DAR

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 4.058

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the ISI Science Citation Index.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

Editorial contact: journals.library@nihr.ac.uk

The full HTA archive is freely available to view online at www.journalslibrary.nihr.ac.uk/hta. Print-on-demand copies can be purchased from the report pages of the NIHR Journals Library website: www.journalslibrary.nihr.ac.uk

Criteria for inclusion in the *Health Technology Assessment* journal

Reports are published in *Health Technology Assessment* (HTA) if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the reviewers and editors.

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: http://www.nets.nihr.ac.uk/programmes/hta

This report

The research reported in this issue of the journal was funded by the HTA programme as project number 15/17/06. The contractual start date was in February 2016. The draft report began editorial review in October 2016 and was accepted for publication in December 2016. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

Published by the NIHR Journals Library (www.journalslibrary.nihr.ac.uk), produced by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk).