ISRCTN15740250 https://doi.org/10.1186/ISRCTN15740250

Examining the efficacy of faecal immunochemical testing (FIT) in patients with Lynch Syndrome

Submission date 09/07/2021	**Recruitment status** No longer recruiting	[X] Prospectively registered [X] Protocol [_] Statistical analysis plan [X] Results [_] Individual participant data
Registration date 13/07/2021	**Overall study status** Ongoing	
Last Edited 26/02/2026	**Condition category** Cancer	

Plain English summary of protocol

Background and study aims
Lynch Syndrome (LS) is an inherited disorder that results in an increased lifetime risk of several cancers, including colorectal cancer (CRC). It is estimated that nearly 175,000 people in the U.K. have Lynch Syndrome, though fewer than 5% (~8,750) are known.
Given the increased risk of CRC for individuals with LS, colonoscopy (a test to check inside the bowels) is recommended every two years for patients with LS within England, which may begin between the ages of 25 – 35 and last until 75 years of age. Though colonoscopy is presently considered the gold standard for the detection of colonic lesions, the requirement of having up to 25 colonoscopies throughout a LS patient's lifetime is invasive and resource intensive.
For this research study, we are proposing the use of a non-invasive, self-sampling diagnostic device known as the faecal immunochemical testing (FIT) kit for patients with LS. FIT is a CLIA-waived diagnostic device designed to detect trace amounts of faecal haemoglobin (f-Hb) and used to guide clinical referral for lower gastrointestinal investigation, often to colonoscopy. Despite the routine use of FIT in population-based CRC screening programmes within the U.K. and abroad, the role of FIT for patients with LS is unknown.

Who can participate?
Individuals (men and women) aged 25–75 years who have a diagnosis of Lynch Syndrome.

What does the study involve?
In this study, we will offer eligible LS patients an OC-Sensor™ FIT kit via mail at baseline, and annually for 3 years thereafter. Patients will also receive additional study materials at baseline, as well as a pre-notification letter just prior to baseline. After the trial has ended, we will continue to passively observe a subset of trial participants (those with preceding negative FIT results), for the observation of interval CRC's. The mechanism for collecting long-term follow up data at 3 years is dependent on future funding, however, and will therefore be decided at a later date.

What are the possible benefits and risks of participating?
By participating in this study there is a chance that your FIT results may provide your clinician

with additional information which may assist them with your clinical care. You will also be contributing to research that will help improve surveillance for people with Lynch Syndrome in the future. There are no immediate risks in taking part in this research study, and it is unlikely that you will come to any harm while collecting a stool sample as part of the FIT kit sampling. FIT testing is used routinely as part of the National Bowel Cancer Screening Programme and has been deemed safe and effective in this setting. You may, however, be referred for an additional colonoscopy(s). Although this procedure is not considered as part of this research study, there are some risks associated with colonoscopies. Please enquire about any of these risks directly with your consultant.

Where is the study run from?
King's College London (UK)

When is the study starting and how long is it expected to run for?
March 2021 to December 2026

Who is funding the study?
1. MAST Group Ltd (UK)
2. 40TUDE Curing Colon Cancer (UK)

Who is the main contact?
Dr Nick Dai
Dr Kevin Monahan
Prof. Peter Sasieni
FITforLynchStudy@kcl.ac.uk

Contact information

Type(s)
Scientific

Contact name
Dr Nick Dai

Contact details
St Mark’s Academic Institute
London North West University Healthcare NHS Trust
Northwick Park
Watford Road
Harrow
United Kingdom
HA1 3UJ
-
nick.dai@nhs.net

Type(s)
Scientific

Contact name
Dr Kevin Monahan

Contact details
Family Cancer Clinic & Wolfson Unit for Endoscopy
London North West University Healthcare NHS Trust
St Mark's Hospital
Northwick Park
Watford Road
Harrow
United Kingdom
HA1 3UJ
+44 (0)20 8235 4270
k.monahan@nhs.net

Type(s)
Scientific

Contact name
Prof Peter Sasieni

Contact details
QMUL
Cancer Research UK Cancer Prevention Trials Unit
1st Floor Empire House, Queen Mary University of London, Whitechapel, 67-75 New Road
London
United Kingdom
E1 1HH
+44 (0)20 7188 4484
p.sasieni@qmul.ac.uk

Additional identifiers

Integrated Research Application System (IRAS)
280583

Central Portfolio Management System (CPMS)
48716

Study information

Scientific Title
Exploring the utility and acceptability of Faecal Immunochemical Testing (FIT) as a novel intervention for the improvement of Colorectal Cancer (CRC) surveillance in individuals with Lynch Syndrome

Acronym
FIT for Lynch Syndrome

Study objectives
Based upon preliminary data which came from a preceding emergency clinical service evaluation examining the utility of FIT in patients with Lynch Syndrome throughout the COVID-19 pandemic, we believe that a structured programme and longitudinal research with annual FIT

alongside biannual colonoscopy in this patient cohort will enable a robust dataset to examine the efficacy of FIT as an additive, non-invasive diagnostic modality for the purposes of surveillance in patients with Lynch Syndrome.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 25/03/2021, Yorkshire & The Humber – Bradford Leeds Research Ethics Committee (NHSBT Newcastle Blood Donor Centre, Holland Drive, Newcastle upon Tyne, NE2 4NQ, UK; +44 (0)2071048083; bradfordleeds.rec@hra.nhs.uk), ref: 21/YH/0066

Primary study design
Observational

Study design
Observational cohort study

Study type(s)
Screening

Health condition(s) or problem(s) studied
Lynch Syndrome (hereditary non-polyposis colorectal cancer)

Interventions
A baseline mailing will be sent to eligible participants within 30 days of their next standard of care colonoscopy to include the following study materials and items:
1. A study invitation letter
2. A FIT kit (OC-Sensor brand) enclosed within a biospecimen sample bag
3. Consent form
4. FIT instruction sheet (to have pictorial and written instructions for collection)
5. A baseline questionnaire
6. A patient information sheet
7. Return envelope w/ prepaid postage

Eligible patients may read about the study in greater detail within the study invitation letter and the patient information leaflet. Interested patients will then be asked to provide a small faecal sample within the provided FIT kit and per the enclosed FIT instruction sheet. Additionally, they will be asked to complete the consent form and baseline questionnaire (which will assess attitudes of acceptability and preferences for this novel intervention, as well as current medications), all of which will be returned to the NHS Bowel Cancer Screening Programme Southern Hub (referred to as the "Southern Hub" herein), in Guildford, Surrey via the provided return envelope with prepaid postage.

FIT (self-sampling) kits will be posted to enrolled patients annually for 3 years after baseline (Years 1-3) and will include the FIT kit for sample collection, the FIT instruction sheet, a post-baseline letter, and a return envelope with prepaid postage for return to the Southern Hub.

At intervening years between patient's routine (biennial) colonoscopy (years 1 & 3), FIT will be used to inform colonoscopy triage for patients whose result exceeds an upper threshold of 6 micrograms of haemoglobin per gram of faeces. For patients whose FIT result exceeds the pre-

defined upper threshold at those intervening years (whom we expect to be a small minority), results will be disclosed via their physician (Co-I) and they will be advised to proceed with a colonoscopy which shall be triaged via the two-week wait (2WW) pathway.

A subset of FIT-negative patients will be passively followed-up 3 years after the trial ends for the observation of interval CRC's.

To address the primary aim of the study, we will compare results from FIT and the respective pathology and/or histology reports from endoscopy following each colonoscopy from baseline through the subsequent 3 years (4 years total).

Intervention Type
Other

Primary outcome(s)
Confirmation of no visible CRC at time of colonoscopy and subsequent negative pathology report for patients who had preceding negative FIT results. The absence of colorectal cancer is measured by colonoscopy for participants with preceding negative FIT results (<6 micrograms of haemoglobin / g of faeces) at Baseline and Year 2

Key secondary outcome(s)
1. The overall acceptability of this novel intervention (FIT) by this patient population (Lynch Syndrome) will be measured through the use of a participant questionnaire which will be distributed at baseline
2. Confirmation of colorectal neoplasia (CN) at time of colonoscopy, and subsequent confirmation via pathology report for patients who had preceding positive FIT results over the 3-year interventional follow-up period
3. Gut microbiota measured using 16S next-generation sequencing on residual DNA from archived FIT samples at a single time point
4. Colorectal cancer (CRC) diagnoses from patient records in a subset of patients who had negative FIT results at Baseline and Years 1-3 to record for potential interval cancers through Baseline, Years 1-3, and passive follow-up years 4-6
5. Advanced colorectal neoplasia (ACN) at time of colonoscopy, and subsequent confirmation of malignancy on pathology report using patient records over the 5 year follow up period

Completion date
31/12/2026

Eligibility

Key inclusion criteria
1. Individuals (men and women) who have a diagnosis of Lynch Syndrome (as defined by a confirmed mutation in any of the mismatch repair genes (MLH1, MSH2, MSH6, PMS2 or EPCAM),
2. Between the age of 25 - 75 years
3. Have a scheduled standard of care (SOC) routine colonoscopy appointment within the 12 months at start of study recruitment

Participant type(s)
Patient

Healthy volunteers allowed

No

Age group
Mixed

Lower age limit
25 Years

Upper age limit
75 Years

Sex
All

Total final enrolment
421

Key exclusion criteria
1. Individuals who have not had genetic testing and therefore are not known to have Lynch Syndrome
2. Individuals who have previously undergone a subtotal or total colectomy
3. Individuals unable to provide informed consent

Date of first enrolment
06/09/2021

Date of final enrolment
31/12/2023

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
St Mark's Hospital
Watford Road
Harrow
England
HA1 3UJ

Study participating centre
Guy's Hospital
Guy's & St Thomas' NHS Foundation Trust
Great Maze Pond

London
England
SE1 9RT

Study participating centre
Newcastle Hospital
Newcastle Upon Tyne Hospital Trust
High Heaton
Newcastle
England
NE7 7DN

Study participating centre
St George’s Hospital
Blackshaw Road
London
England
SW17 0QT

Study participating centre
The Royal Marsden Hospital
Fulham Road
Chelsea
London
England
SW3 6JJ

Study participating centre
Central Manchester University Hospitals NHS Foundation Trust
Cobbett House
Oxford Road
Manchester
England
M13 9WL

Study participating centre
Birmingham Women's and Children's NHS Foundation Trust
Steelhouse Lane
Birmingham
England
B4 6NH

Study participating centre
John Radcliffe Hopsital
Headley Way
Oxford
England
OX3 9DU

Sponsor information

Organisation
London North West Healthcare NHS Trust

ROR
https://ror.org/04cntmc13

Funder(s)

Funder type
Industry

Funder Name
MAST GROUP LIMITED

Funder Name
40TUDE CURING COLON CANCER

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated and/or analysed during the current study during this study will be included in the subsequent results publication.

IPD sharing plan summary
Published as a supplement to the results publication

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?

Results article	05/09/2023	06/09/2023	Yes	No
Protocol article	07/11/2022	08/11/2022	Yes	No
HRA research summary		28/06/2023	No	No