

Assessing the additional benefit of an innovative imaging system for colonoscopy

Submission date 17/09/2015	Recruitment status No longer recruiting	☐ Prospectively registered ☐ Protocol
Registration date 18/09/2015	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 04/02/2019	Condition category Cancer	☐ Individual participant data

Plain English summary of protocol

Background and study aims

A colonoscopy is an important procedure in which a narrow, flexible, telescopic camera is inserted into the back passage to look at the lining of the large bowel. Although it can be an uncomfortable procedure, it is the most effective way to diagnose colorectal cancer (bowel cancer). Although colonoscopies are very effective at finding tumours (neoplasms), it is reported that they do not always spot polyps. A polyp is a very small growth on the inner lining of the colon or rectum. Although most colorectal polyps do not become cancerous, almost all cases of colorectal cancer begin as polyps. It is therefore very important to detect polyps, as their presence increases the risk of colorectal cancer. A possible reason that polyps are sometimes missed in colonoscopies may be because of inadequate equipment. A full spectrum endoscope (FUSE) is a device that has been developed to help lower the miss rate of polyps in routine colonoscopies. The device uses three cameras to give a panoramic view of the colon, allowing for a more complete picture of the colon. The aim of this study is to find out how well this new technology performs in comparison to the standard device used.

Who can participate?

Adults between 50 and 69 years of age, having their first colonoscopy after testing positively for blood in their stool in a mass screening programme.

What does the study involve?

Participants are randomly allocated in one of two groups. For participants in the first group, the colonoscopy procedure is completed using a standard forward-viewing colonoscopy. For participants in the second group, the procedure is completed using full spectrum endoscopy (FUSE). After the procedures, the accuracy of the two devices is compared. Participants also are asked to complete a questionnaire after the procedure about their experiences.

What are the possible benefits and risks of participating?

A potential benefit for participants in the FUSE group is that the procedure may reveal polyps that otherwise might have been missed. There are no risks of participating other than the standard risks involved with having a colonoscopy. Additionally, some additional polyps

detected with the new instrument might not be clinically significant.

Where is the study run from?

Seven hospitals in Italy.

When is the study starting and how long is it expected to run for?

September 2014 to October 2015

Who is funding the study?

Regional Health Authority, Piedmont Region (Italy)

Who is the main contact?

Dr Carlo Senore

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Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

Protocol serial number

351

Study information

Scientific Title

Assessing the additional neoplasia yield of FULL Spectrum Endoscopy in a CRC screening setting

Acronym

FUSE

Study objectives

The use of an instrument ensuring a wider view of the colonic mucosa would result in a higher rate of detection of significant colonic lesions as compared to standard instruments.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Comitato etico interaziendale AOU Città della Salute e della Scienza, 26/05/2014, ref: N 531

Primary study design

Interventional

Study design

Multi-centre stratified randomised parallel trial

Study type(s)

Screening

Health condition(s) or problem(s) studied

1. Colorectal cancer
2. Colorectal adenomas

Interventions

Patients are randomly allocated into two groups, who will each undergo a colonoscopy. For patients in the first group, a standard white light HD endoscope (Standard Forward View) is used, and for patients in the second group, Full Spectrum Endoscopy (FUSE) technology is used. The two instruments are similar, the only difference being related to the characteristics and number of the lenses. The only difference for the patients might be related to the slightly longer duration of the exam with FUSE technology as it may be more likely to find one or more polyps. IN general a colonoscopy is expected to last about 30 minutes. No study related follow-up after the completion of the colonoscopic assessment is planned within this study

Intervention Type

Device

Primary outcome(s)

1. Additional yield of advanced adenomas in patients when using Fuse as compared to SFV
2. Proportion of patients detected with 3 or more adenomas when using Fuse as compared to SFV

Key secondary outcome(s)

1. Overall adenoma and polyp detection rate, flat adenoma and serrated polyps/adenomas detection rate of the two techniques, determined from the information recorded in endoscopist and pathology reports
2. Comparison of the size of multiple lesions detected by the two methods, determined from the information recorded in endoscopist and pathology reports
3. Comparison of the detection rate of neoplasia by colonic site: distal (rectum, sigmoid and descending colon) and proximal (proximal to the descending colon), determined from the information recorded in endoscopist and pathology reports
4. Differences in the surveillance guidelines post-colonoscopy when comparing the two arms, determined from the information recorded in endoscopist and pathology reports
5. Comparison of the time required to reach the cecum, determined from the information recorded in endoscopist and pathology reports
6. Comparison of the withdrawal and total procedure time, determined from the information recorded in endoscopist and pathology reports
7. Assessing the learning curve of participating endoscopists, determined from the information recorded in endoscopist and pathology reports

8. Assessing patient's experience, measured using a questionnaire administered at the end of the examination
9. Assessing the specific contribution of the additional view estimating the proportion of polyps detected using the additional views only, determined from the information recorded in endoscopist and pathology reports

Completion date

31/12/2015

Eligibility

Key inclusion criteria

Consecutive patients aged 50 to 69 years undergoing their first colonoscopy examination in the participating centers following a positive fecal immunochemical test (FIT) performed in the context of a regional mass-screening program.

Participant type(s)

Other

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

1. Personal history of colorectal cancer or advanced adenoma
2. More than one first degree relative with colorectal cancer
3. Inflammatory bowel disease (IBD)
4. Endoscopy within past 5 years

Date of first enrolment

01/09/2014

Date of final enrolment

15/10/2015

Locations

Countries of recruitment

Italy

Study participating centre

CPO Piemonte and Gastroenterology Unit 2 - AOU Città della Salute e della Scienza
Via S Francesco da Paola 31

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Study participating centre
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Study participating centre
Istituto Clinico Humanitas
Rozzano (Milano)
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20089

Study participating centre
Ospedale di Circolo
Rho (Milano)
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20017

Study participating centre
Ospedale S Chiara
Trento
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IRCCS Ospedale S. Maria Nuova
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Study participating centre
Osepdale Nuovo Regina Margherita
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Sponsor information

Organisation

CPO Piemonte

ROR

<https://ror.org/05v0e5774>

Funder(s)

Funder type

Government

Funder Name

Regional Health Authority, Piedmont Region (Italy)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Stored in repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/11/2017		Yes	No