NICE National Institute for Health and Care Excellence

NICE guideline

Colorectal cancer prevention: colonoscopic surveillance in adults with ulcerative colitis, Crohn's disease or adenomas

Clinical guideline

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nice.org.uk/guidance/cg118

Your responsibility

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The application of the recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

Contents

Introduction

This clinical guideline incorporates the following NICE guidance:

- Computed tomographic colonography (virtual colonoscopy). NICE interventional procedure guidance 129 (2005).

This guidance has been incorporated into the colonoscopic surveillance NICE Pathway, along with other related guidance and products.

Adults with inflammatory bowel disease (IBD, which covers ulcerative colitis and Crohn's disease) or with adenomas have a higher risk of developing colorectal cancer than the general population. Colorectal cancer is the third most common cancer in the UK, with approximately 32,300 new cases diagnosed and 14,000 deaths in England and Wales each year. Around half of the people diagnosed with colorectal cancer survive for at least 5 years after diagnosis.

The prevalence of ulcerative colitis is approximately 100–200 per 100,000 and the annual incidence is 10–20 per 100,000. The risk of developing colorectal cancer for people with ulcerative colitis is estimated as 2% after 10 years, 8% after 20 years and 18% after 30 years of disease.

The prevalence of Crohn's disease is approximately 50–100 per 100,000 and the annual incidence is 5–10 per 100,000. The risk of developing colorectal cancer for people with Crohn's disease is considered to be similar to that for people with ulcerative colitis with the same extent of colonic involvement.

Colonoscopic surveillance in people with IBD or adenomas can detect any problems early and potentially prevent progression to colorectal cancer. For people who are not in these high-risk groups, the NHS Bowel Cancer Screening Programme offers screening using faecal occult blood testing every 2 years to all men and women aged 60–74 years. People undergoing colonoscopic surveillance are not generally offered screening as part of the Bowel Cancer Screening programme.

The British Society of Gastroenterology (BSG) issued guidelines for colonoscopic surveillance for people who have had adenomas removed and for people with IBD (Atkin and Saunders 2002; Eaden and Mayberry 2002; updated by Cairns et al. 2010). NICE has developed this short clinical guideline on the use of colonoscopic surveillance because of variations in clinical practice. Some members of the NICE Guideline Development Group (GDG) were also members of the group that developed the BSG guidelines. The evidence-based recommendations and algorithms developed in the NICE guideline are broadly consistent with those in the 2010 BSG guidelines. Both guidelines used a similar evidence base, with the exception of health economics evidence, which was not

considered for the BSG guidelines. However, there are some differences between the two guidelines because the processes and methods used to develop each guideline were different.

Throughout this guideline, the term 'adenomas' is used. However, other terms have been used in the clinical studies included in the evidence review, for example 'polyps' or 'adenomatous polyps'.

Patient-centred care

This guideline offers best practice advice on the use of colonoscopic surveillance in adults with inflammatory bowel disease (IBD, which covers ulcerative colitis and Crohn's disease) or adenomas.

Treatment and care should take into account patients' needs and preferences. People with IBD or adenomas should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals. If patients do not have the capacity to make decisions, healthcare professionals should follow the Department of Health's advice on consent and the code of practice that accompanies the Mental Capacity Act. In Wales, healthcare professionals should follow advice on consent from the Welsh Government.

Good communication between healthcare professionals and patients is essential. It should be supported by evidence-based written information tailored to the patient's needs. Treatment and care, and the information patients are given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English.

If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care.

Families and carers should also be given the information and support they need.

1 Guidance

The following guidance is based on the best available evidence. The full guideline gives details of the methods and the evidence used to develop the guidance.

1.1 List of all recommendations

People with inflammatory bowel disease

1.1.1 Offer colonoscopic surveillance to people with inflammatory bowel disease (IBD) whose symptoms started 10 years ago and who have:

- ulcerative colitis (but not proctitis alone) **or**
- Crohn's colitis involving more than one segment of colon.

1.1.2 Offer a baseline colonoscopy with chromoscopy and targeted biopsy of any abnormal areas to people with IBD who are being considered for colonoscopic surveillance to determine their risk of developing colorectal cancer (see table 1).

Table 1 Risk of developing colorectal cancer in people with IBD

Low risk:

- extensive but quiescent ulcerative colitis **or**
- extensive but quiescent Crohn's colitis **or**
- left-sided ulcerative colitis (but not proctitis alone) or Crohn's colitis of a similar extent.

Intermediate risk:

- extensive ulcerative or Crohn's colitis with mild active inflammation that has been confirmed endoscopically or histologically **or**
- post-inflammatory polyps **or**
- family history of colorectal cancer in a first-degree relative aged 50 years or over.

High risk:

- extensive ulcerative or Crohn's colitis with moderate or severe active inflammation that has been confirmed endoscopically or histologically **or**
- primary sclerosing cholangitis (including after liver transplant) **or**
- colonic stricture in the past 5 years **or**
- any grade of dysplasia in the past 5 years **or**
- family history of colorectal cancer in a first-degree relative aged under 50 years.

1.1.3 Offer colonoscopic surveillance to people with IBD as defined in 1.1.1 based on their risk of developing colorectal cancer (see table 1), determined at the last complete colonoscopy:

- Low risk: offer colonoscopy at 5 years.
- Intermediate risk: offer colonoscopy at 3 years.
- High risk: offer colonoscopy at 1 year.

1.1.4 For people with IBD who have been offered colonoscopic surveillance, continue to use colonoscopy with chromoscopy as the method of surveillance.

1.1.5 Offer a repeat colonoscopy with chromoscopy if any colonoscopy is incomplete. Consider whether a more experienced colonoscopist is needed.

People with adenomas

1.1.6 Consider colonoscopic surveillance for people who have had adenomas removed and are at low risk of developing colorectal cancer (see table 2).

1.1.7 Offer colonoscopic surveillance to people who have had adenomas removed and are at intermediate or high risk of developing colorectal cancer (see table 2).

1.1.8 Use the findings at adenoma removal to determine people's risk of developing colorectal cancer (see table 2).

Table 2 Risk of developing colorectal cancer in people with adenomas

Low risk: • one or two adenomas smaller than 10 mm. **Intermediate risk:** • three or four adenomas smaller than 10 mm **or** • one or two adenomas if one is 10 mm or larger. **High risk:** • five or more adenomas smaller than 10 mm **or** • three or more adenomas if one is 10 mm or larger.

1.1.9 Offer the appropriate colonoscopic surveillance strategy to people with adenomas based on their risk of developing colorectal cancer as determined at initial adenoma removal (see table 2).

- Low risk: consider colonoscopy at 5 years:
  - if the colonoscopy is negative (that is, no adenomas are found) stop surveillance
  - if low risk, consider the next colonoscopy at 5 years (with follow-up surveillance as for low risk)

  - if intermediate risk, offer the next colonoscopy at 3 years (with follow-up surveillance as for intermediate risk)
  - if high risk, offer the next colonoscopy at 1 year (with follow-up surveillance as for high risk).

- Intermediate risk: offer colonoscopy at 3 years:
  - if the colonoscopy is negative, offer the next colonoscopy at 3 years. Stop surveillance if there is a further negative result
  - if low or intermediate risk, offer the next colonoscopy at 3 years (with follow-up surveillance as for intermediate risk)
  - if high risk, offer the next colonoscopy at 1 year (with follow-up surveillance as for high risk).
- High risk: offer colonoscopy at 1 year.
  - if the colonoscopy is negative, or low or intermediate risk, offer the next colonoscopy at 3 years (with follow-up surveillance as for intermediate risk)
  - if high risk, offer the next colonoscopy at 1 year (with follow-up surveillance as for high risk).

1.1.10 Offer a repeat colonoscopy if any colonoscopy is incomplete. Consider whether a more experienced colonoscopist is needed.

1.1.11 Consider computed tomographic colonography[1] (CTC) as a single examination if colonoscopy is not clinically appropriate (for example, because of comorbidity or because colonoscopy cannot be tolerated).

1.1.12 Consider double contrast barium enema as a single examination if CTC is not available or not appropriate.

1.1.13 Consider CTC or double contrast barium enema for ongoing surveillance if colonoscopy remains clinically inappropriate, but discuss the risks and benefits with the person and their family or carers.

Providing information and support

1.1.14 Discuss the potential benefits, limitations and risks with people who are considering colonoscopic surveillance including:

- early detection and prevention of colorectal cancer **and**
- quality of life and psychological outcomes.

1.1.15 Inform people who have been offered colonoscopy, CTC, or barium enema about the procedure, including:

- bowel preparation
- impact on everyday activities
- sedation
- potential discomfort
- risk of perforation and bleeding.

1.1.16 After receiving the results of each surveillance test, discuss the potential benefits, limitations and risks of ongoing surveillance. Base a decision to stop surveillance on potential benefits for the person, their preferences and any comorbidities. Make the decision jointly with the person, and if appropriate, their family or carers.

1.1.17 If there are any findings at surveillance that need treatment or referral, discuss the options with the person, and if appropriate, their family or carers.

1.1.18 Throughout the surveillance programme, give the person and their family or carers the opportunity to discuss any issues with a healthcare professional. Information should be provided in a variety of formats tailored to the person's needs and should include illustrations.

[1] Computed tomographic colonography (virtual colonoscopy). NICE interventional procedure guidance 129 (2005).

2 Notes on the scope of the guidance

NICE guidelines are developed in accordance with a scope that defines what the guideline will and will not cover. The scope of this guideline is available from our website – click on 'How this guidance was developed'.

3 Implementation

NICE has developed tools to help organisations implement this guidance.

4 Research recommendations

We have made the following recommendations for research, based on our review of the evidence, to improve NICE guidance and patient care in the future.

4.1 Surveillance programmes for people at increased risk of colorectal cancer

How effective are colonoscopic surveillance programmes in improving overall survival and cancer-related survival in people at increased risk of colorectal cancer?

Why this is important

There is no evidence from RCTs on the effectiveness of colonoscopic surveillance programmes in improving survival in people at increased risk of colorectal cancer. Although there is some observational evidence in people with IBD, there is no evidence in people after adenoma removal. RCTs should be undertaken to determine the comparative effect of different surveillance programmes on survival (preferably with a follow-up of 5 years and longer) and quality of life in people at increased risk of colorectal cancer because of IBD or adenomas. Such trials should also assess any differential effects associated with risk category (as defined in this guideline).

4.2 Natural history of progression to colorectal cancer in people at increased risk

What is the natural history of progression to colorectal cancer in people with IBD or adenomas?

Why this is important

There is very limited evidence on the natural history of progression to colorectal cancer, and how factors such as extent of disease, grade of dysplasia and adenoma-related factors affect progression. Long-term studies (ideally with a follow-up of 20 years or longer) should be conducted to determine the natural history of colorectal cancer in people with IBD or adenomas.

4.3 Effectiveness of biomarkers for determining level of risk of colorectal cancer

Which biomarkers, including epigenic and genetic markers, are predictors of colorectal cancer? How should these be used to improve risk stratification?

Why this is important

There is no high quality evidence on the predictive value of biomarkers, including epigenic and genetic markers, for colorectal cancer in people with IBD or adenomas. Research should be undertaken to identify the biomarkers that are predictive of colorectal cancer, if any can improve levels of early detection, and how they can be used to improve risk stratification.

4.4 Adenoma types and risk of colorectal cancer

Does the risk of colorectal cancer depend on the type of adenoma?

Why this is important

There is no high quality evidence on the association between risk of colorectal cancer and some adenoma types (sessile, hyperplastic non-adenomatous). Research should be undertaken to determine if the level of risk of colorectal cancer depends on the adenoma type.

5 Other versions of this guideline

5.1 Full guideline

The full guideline, Colonoscopic surveillance for prevention of colorectal cancer in people with ulcerative colitis, Crohn's disease or adenomas, contains details of the methods and evidence used to develop the guideline.

5.2 NICE Pathways

This guidance has been incorporated into the colonoscopic surveillance NICE Pathway, along with other related guidance and products.

5.3 Information for the public

NICE has produced information for the public explaining this guideline.

We encourage NHS and voluntary sector organisations to use text from this information in their own materials about colonoscopic surveillance in people with IBD and adenomas.

6 Related NICE guidance

Published

- Colorectal cancer: the diagnosis and management of colorectal cancer. NICE clinical guideline 131 (2011).
- Improving outcomes in colorectal cancer. NICE cancer service guidance (2004).
- Wireless capsule endoscopy for investigation of the small bowel. NICE interventional procedure guidance 101 (2004).

Under development

NICE is developing the following guidance:

- The management of Crohn's disease. NICE clinical guideline. Publication expected December 2012.

7 Updating the guideline

NICE clinical guidelines are updated so that recommendations take into account important new information. New evidence is checked 3 years after publication, and healthcare professionals and patients are asked for their views; we use this information to decide whether all or part of a guideline needs updating. If important new evidence is published at other times, we may decide to do a more rapid update of some recommendations. Please see our website for information about updating the guideline.

Appendix A: The Guideline Development Group and the Short Clinical Guidelines Technical Team

Guideline Development Group

Peter Howdle
Emeritus Professor and Chair of the Guideline Development Group

Wendy Atkin
Professor of Epidemiology, Imperial College London, (GDG member February–July 2010)

Matthew Rutter
Consultant Gastroenterologist, University Hospital of North Tees

Janusz Jankowski
Professor of Gastroenterology, University Hospitals of Leicester NHS Trust

Bruce Fox
Consultant Gastrointestinal Radiologist, Derriford Hospital, Devon

Carol Makin
Consultant General and Colorectal Surgeon, Wirral University Teaching Hospital

Julie D'Silva
Consultant Endoscopist, Clinical Lead for Quality Assurance, Endoscopy Services, Rotherham General Hospital NHS Trust

Marco Novelli
Professor of Histopathology, University College Hospital NHS Foundation Trust London

Tracey Cole
Patient member

Elaine Trump
Patient member

Short clinical guidelines technical team

A short clinical guidelines technical team was responsible for this guideline throughout its development. It prepared information for the Guideline Development Group, drafted the guideline and responded to consultation comments. The following NICE employees made up the technical team for this guideline.

Beth Shaw
Technical Adviser

Prashanth Kandaswamy
Technical Adviser (Health Economics)

Tarang Sharma
Technical Analyst (September 2009–July 2010)

Jonathan Nyong
Assistant Technical Analyst (October 2009–September 2010)

Kim Jeong
Technical Analyst (Health Economics)

Yaminah Rajput
Assistant Technical Analyst (Health Economics) (November 2009–November 2010)

Victoria Kelly
Project Manager

Michael Heath
Programme Manager

Louise Foster
Information Specialist

Appendix B: The Guideline Review Panel

The Guideline Review Panel is an independent panel that oversees the development of the guideline and takes responsibility for monitoring adherence to NICE guideline development processes. In particular, the panel ensures that stakeholder comments have been adequately considered and responded to. The panel includes members from the following perspectives: primary care, secondary care, lay, public health and industry.

Professor Mike Drummond - Chair
Director, Centre for Health Economics, University of York

Dr Graham Archard
General Practitioner, Dorset

Ms Catherine Arkley
Lay member

Dr David Gillen
Medical Director, Wyeth Pharmaceutical

Dr Ruth Stephenson
Consultant in Anaesthetics Clinical Ethics Lead, NHS Grampian

About this guideline

NICE clinical guidelines are recommendations about the treatment and care of people with specific diseases and conditions in the NHS in England and Wales.

The guideline was developed by the Short Clinical Guidelines Technical Team. The team worked with a group of healthcare professionals (including consultants, GPs and nurses), patients and carers, and technical staff, who reviewed the evidence and drafted the recommendations. The recommendations were finalised after public consultation.

The methods and processes for developing NICE clinical guidelines are described in The guidelines manual. This guideline was developed using the short clinical guideline process.

This clinical guideline incorporates 'Computed tomographic colonography (virtual colonoscopy)' (NICE interventional procedure guidance 129; 2005).

The recommendations from this guideline have been incorporated into a NICE Pathway. We have produced information for the public explaining this guideline. Tools to help you put the guideline into practice and information about the evidence it is based on are also available.

Changes after publication

December 2011: minor maintenance

February 2013: minor maintenance

March 2013: minor maintenance

Your responsibility

This guidance represents the view of NICE, which was arrived at after careful consideration of the evidence available. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. However, the guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer, and informed by the summary of product characteristics of any drugs they are considering.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

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Contact NICE

National Institute for Health and Clinical Excellence
Level 1A, City Tower, Piccadilly Plaza, Manchester M1 4BT

www.nice.org.uk
nice@nice.org.uk
0845 033 7780

Accreditation