NICE National Institute for Health and Care Excellence

NICE Pathways

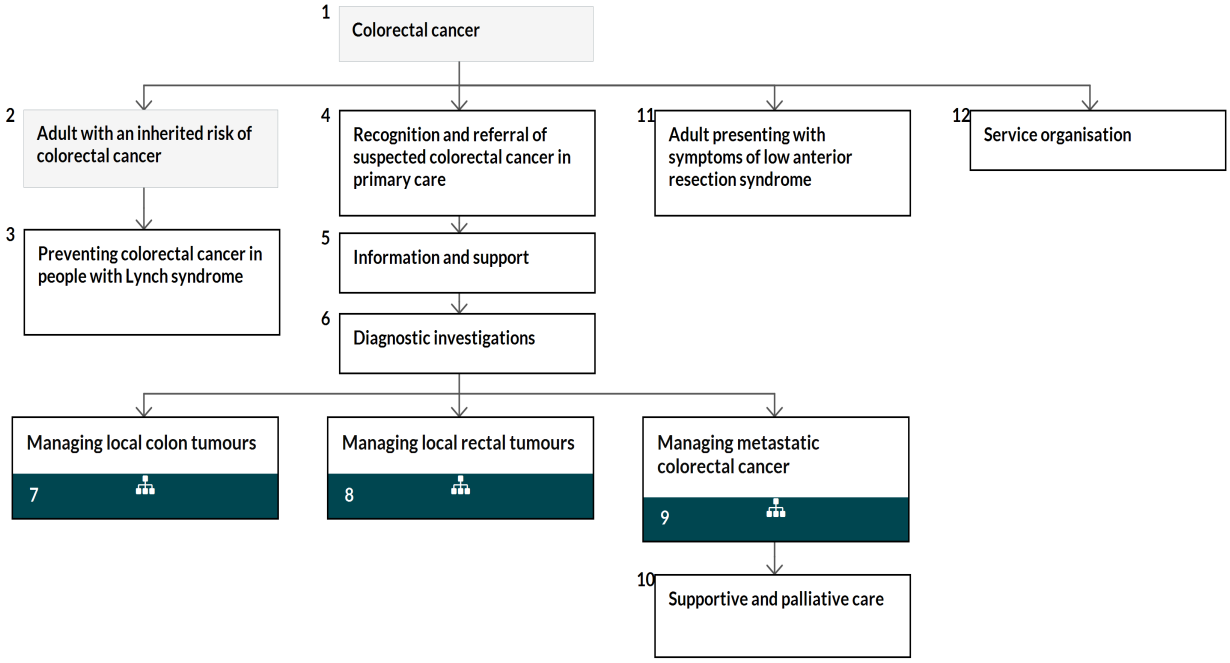
Colorectal cancer overview

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/colorectal-cancer
NICE Pathway last updated: 06 January 2021

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Colorectal cancer

No additional information

2 Adult with an inherited risk of colorectal cancer

No additional information

3 Preventing colorectal cancer in people with Lynch syndrome

Consider daily aspirin, to be taken for more than 2 years, to prevent colorectal cancer in people with Lynch syndrome. In January 2020 this was an off-label use of aspirin. See prescribing medicines at NICE website. Commonly used aspirin doses in current practice are 150 mg or 300 mg.

See the NICE guideline to find out why we made this recommendation and how it might affect practice.

4 Recognition and referral of suspected colorectal cancer in primary care

See gastrointestinal tract (lower) cancers in the NICE Pathway on suspected cancer recognition and referral for information on:

- when to suspect colorectal cancer in primary care
- referral for further investigation or assessment.

5 Information and support

Provide people with colorectal cancer information about their treatment (both written and spoken) in a sensitive and timely manner throughout their care, tailored to their needs and circumstances. Make sure the information is relevant to them, based on the treatment they might have and the possible side effects. Also see the NICE Pathways on patient experience in adult NHS services and decision-making and mental capacity.

Give people information on all treatment options for colorectal cancer available to them, including:

- surgery, radiotherapy, SACT or palliative care
- the potential benefits, risks, side effects and implications of treatments, for example, possible effects on bowel and sexual function (see also the information below on LARS), quality of life and independence.

Advise people with colorectal cancer of possible reasons why their treatment plan might need to change during their care, including:

- changes from laparoscopic to open surgery or curative to non-curative treatment, and why this change may be the most suitable option for them
- the likelihood of having a stoma, why it might be necessary and for how long it might be needed.

If recovery protocols (such as ERAS) are used, explain to people with colorectal cancer what these involve and their value in improving their recovery after surgery.

Ensure that appropriate specialists discuss possible side effects with people who have had surgery for colorectal cancer, including:

- altered bowel, urinary and sexual function
- physical changes, including anal discharge or bleeding.

If relevant, have a trained stoma professional provide information on the care and management of stomas and on learning to live with a stoma.

Emphasise to people the importance of monitoring and managing side effects during non-surgical treatment to try to prevent permanent damage (for example, monitoring prolonged sensory symptoms after platinum-based chemotherapy treatment, which can be a sign that the dose needs to be reduced to minimise future permanent peripheral neuropathy).

Give people who have had treatments for colorectal cancer information about possible short-term, long-term, permanent and late side effects which can affect quality of life, including:

- pain
- altered bowel, urinary or sexual function
- nerve damage and neuropathy
- mental and emotional changes, including anxiety, depression, chemotherapy-related cognitive impairment, and changes to self-perception and social identity.

Prepare people for discharge after treatment for colorectal cancer by giving them advice on:

- adapting physical activity to maintain their quality of life
- diet, including advice on foods that can cause or contribute to bowel problems such as diarrhoea, flatulence, incontinence and difficulty in emptying the bowels
- weight management, physical activity and healthy lifestyle choices (for example stopping smoking and reducing alcohol use)
- how long their recovery might take
- how, when and where to seek help if side effects become problematic.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

NICE has written information for the public on colorectal cancer.

Low anterior resection syndrome

Give information on LARS to people who will potentially have sphincter-preserving surgery. Advise them to seek help from primary care if they think they have symptoms of LARS, such as:

- increased frequency of stool
- urgency with or without incontinence of stool
- feeling of incomplete emptying
- fragmentation of stool (passing small amounts little and often)
- difficulty in differentiating between gas and stool.

See the NICE guideline to find out why we made this recommendation and how it might affect practice.

6 Diagnostic investigations

NICE has published a clinical knowledge summary on bowel screening. This practical resource is for primary care professionals (it is not formal NICE guidance).

Colonoscopy

Endocuff Vision

The following recommendations are from NICE medical technologies guidance on Endocuff

Vision for assisting visualisation during colonoscopy.

Evidence supports the case for adopting Endocuff Vision in the NHS because it improves the adenoma detection rate during colonoscopy, particularly for people having a colonoscopy as part of bowel cancer screening.

Endocuff Vision should be considered as an option for people having a colonoscopy as part of bowel cancer screening following a positive stool test. There is limited evidence for the benefits of Endocuff Vision in a non-screening population.

Cost modelling shows that for people having a colonoscopy as part of bowel cancer screening, using Endocuff Vision is cost saving. Savings are related to the adenoma detection rate; for a colonoscopist with a baseline adenoma detection rate of 51%, using Endocuff Vision saves £53 per patient over 10 years compared with standard colonoscopy.

Virtual chromoendoscopy to assess colorectal polyps

The following recommendation is from NICE diagnostics guidance on virtual chromoendoscopy to assess colorectal polyps during colonoscopy.

Virtual chromoendoscopy using NBI, FICE or i-scan is recommended to assess polyps of 5 mm or less during colonoscopy, instead of histopathology, to determine whether they are adenomatous or hyperplastic, only if:

- high-definition enabled virtual chromoendoscopy equipment is used
- the endoscopist has been trained to use virtual chromoendoscopy, and accredited to use the technique under a national accreditation scheme
- the endoscopy service includes systems to audit endoscopists and provide ongoing feedback on their performance (see section 6.1 of NICE diagnostics guidance 28 and
- the assessment is made with high confidence.

Computed tomographic colonography (virtual colonoscopy)

NICE has published interventional procedures guidance on computed tomographic colonography (virtual colonoscopy) with **normal arrangements** for clinical governance, consent and audit.

Molecular testing strategies for Lynch syndrome

The following recommendations are from NICE diagnostics guidance on molecular testing

strategies for Lynch syndrome in people with colorectal cancer.

Offer testing to all people with colorectal cancer, when first diagnosed, using immunohistochemistry for mismatch repair proteins or microsatellite instability testing to identify tumours with deficient DNA mismatch repair, and to guide further sequential testing for Lynch syndrome (see recommendations below). Do not wait for the results before starting treatment.

If using immunohistochemistry, follow the steps below.

Steps in the immunohistochemistry testing strategy

<table>
<tr><td>Step 1</td><td colspan="2">Do an immunohistochemistry 4-panel test for MLH1, MSH2, MSH6 and PMS2.</td></tr>
<tr><td>Step 2</td><td>If the MLH1 immunohistochemistry result is abnormal, use sequential BRAF V600E and MLH1 promoter hypermethylation testing to differentiate sporadic and Lynch syndrome-associated colorectal cancers. First do a BRAF V600E test.</td><td rowspan="3">If the MSH2, MSH6 or PMS2 immunohistochemistry results are abnormal, confirm Lynch syndrome by genetic testing of germline DNA.</td></tr>
<tr><td>Step 3</td><td>If the BRAF V600E test is negative, do an MLH1 promoter hypermethylation test.</td></tr>
<tr><td>Step 4</td><td>If the MLH1 promoter hypermethylation test is negative, confirm Lynch syndrome by genetic testing of germline DNA.</td></tr>
</table>

If using microsatellite instability testing, follow the steps below.

Steps in the microsatellite instability testing strategy

Step 1	Do a microsatellite instability test.

Step 2	If the microsatellite instability test result is positive, use sequential *BRAF* V600E and *MLH1* promoter hypermethylation testing to differentiate sporadic and Lynch syndrome-associated colorectal cancers. First do a *BRAF* V600E test.
Step 3	If the *BRAF* V600E test is negative, do an *MLH1* promoter hypermethylation test.
Step 4	If the *MLH1* promoter hypermethylation test is negative, confirm Lynch syndrome by genetic testing of germline DNA.

Healthcare professionals should ensure that people are informed of the possible implications of test results for both themselves and their relatives, and ensure that relevant support and information is available. Discussion of genetic testing should be done by a healthcare professional with appropriate training.

Laboratories doing microsatellite instability testing or immunohistochemistry for mismatch repair proteins should take part in a recognised external quality assurance programme.

7 Managing local colon tumours

See Colorectal cancer / Managing local colon tumours

8 Managing local rectal tumours

See Colorectal cancer / Managing local rectal tumours

9 Managing metastatic colorectal cancer

See Colorectal cancer / Managing metastatic colorectal cancer

10 Supportive and palliative care

NICE has published cancer service guidance on improving supportive and palliative care for adults with cancer.

See the NICE Pathways on metastatic spinal cord compression and opioids for pain relief in palliative care, and NICE's recommendations on end of life care for people with life-limiting conditions.

11 Adult presenting with symptoms of low anterior resection syndrome

Assess people with symptoms of LARS using a validated patient-administered questionnaire (for example, the Low Anterior Resection Syndrome score (LARS score), at the European Society of Coloproctology).

Offer people with bowel dysfunction treatment for associated symptoms in primary care (such as dietary management, laxatives, anti-bulking agents, anti-diarrhoeal agents, or anti-spasmodic agents). Seek advice from secondary care if the treatment is not successful.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

12 Service organisation

NICE has published cancer service guidance on improving supportive and palliative care for adults with cancer.

Glossary

ERAS

enhanced recovery after surgery

LARS

low anterior resection syndrome

Recovery protocols

(perioperative care pathways designed to promote early recovery for patients undergoing major surgery by optimising the person's health before surgery and maintaining health and functioning after surgery)

SACT

systemic anti-cancer therapy

social identity

(this is about changes to people's concept of themselves as a result of either their cancer, or the long-term side effects from treatment, for example, it could cover changes from being a previously fit person to someone who has physical or mental health problems, from being someone with the expectation of years to live to someone with a limited life expectancy, or the change from being a carer to becoming cared for)

Sources

Colorectal cancer (2020) NICE guideline NG151

Endocuff Vision for assisting visualisation during colonoscopy (2019) NICE medical technologies guidance 45

Virtual chromoendoscopy to assess colorectal polyps during colonoscopy (2017) NICE diagnostics guidance 28

Molecular testing strategies for Lynch syndrome in people with colorectal cancer (2017) NICE

diagnostics guidance 27

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services 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 complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do 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.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so 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.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart 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.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.