

Information about how the guideline was developed is on the [guideline's page](#) on the NICE website. This includes the evidence reviews, the scope, and details of the committee and any declarations of interest.

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1 Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about prescribing medicines (including off-label use), professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

2 **1.1 Prevention of colorectal cancer in people with Lynch** 3 **syndrome**

4 1.1.1 Consider daily aspirin¹, to be taken for more than 2 years, to prevent
5 colorectal cancer in people with Lynch syndrome.

To find out why the committee made the recommendation on prevention of colorectal cancer in people with Lynch syndrome and how it might affect practice, see [rationale and impact](#).

6

7 **1.2 Information for people with colorectal cancer**

8 1.2.1 Provide people with colorectal cancer information about their treatment
9 (both written and spoken) in a sensitive and timely manner throughout
10 their care, tailored to their needs and circumstances. Make sure the
11 information is relevant to them, based on the treatment they might have
12 and the possible side effects. Also see the NICE guidelines on [patient](#)
13 [experience in adult NHS services](#) and [decision-making and mental](#)
14 [capacity](#).

¹ At the time of consultation (August 2019), aspirin does not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information. A commonly used aspirin dose in current practice is either 150 mg or 300 mg.

- 1 1.2.2 Give people information on all treatment options for colorectal cancer
2 available to them, including:
- 3 • surgery, radiotherapy, systemic anti-cancer therapy or palliative care
 - 4 • the potential benefits, risks, side effects and implications of treatments,
5 for example, possible effects on bowel and sexual function (see also
6 [recommendation 1.6.2](#)), quality of life and independence.
- 7 1.2.3 Advise people with colorectal cancer of possible reasons why their
8 treatment plan might need to change during their care, including:
- 9 • changes from laparoscopic to open surgery or curative to non-curative
10 treatment, and why this change may be the most suitable option for
11 them
 - 12 • the likelihood of having a stoma, why it might be necessary and for how
13 long it might be needed.
- 14 1.2.4 If [recovery protocols \(such as 'enhanced recovery after surgery', ERAS\)](#)
15 are used, explain to people with colorectal cancer what these involve and
16 their value in improving their recovery after surgery.
- 17 1.2.5 Ensure that appropriate specialists discuss possible side effects with
18 people who have had surgery for colorectal cancer, including:
- 19 • altered bowel and sexual function
 - 20 • physical changes, including anal discharge or bleeding.
- 21 If relevant, have a trained stoma professional provide information on the
22 care and management of stomas and on learning to live with a stoma.
- 23 1.2.6 Emphasise to people the importance of monitoring and managing side
24 effects during non-surgical treatment to try to prevent permanent damage
25 (for example, monitoring prolonged sensory symptoms after platinum-
26 based chemotherapy treatment, which can be an indication to reduce
27 dosage to minimise future permanent peripheral neuropathy).

1 1.2.7 Give people who have had treatments for colorectal cancer information
2 about possible short-term, long-term, permanent and late side effects
3 which can affect quality of life, including:

- 4 • pain or sexual dysfunction caused by radiotherapy or surgery
- 5 • nerve damage and neuropathy caused by chemotherapy
- 6 • mental and emotional changes, including anxiety, depression,
7 chemotherapy-related cognitive impairment, and changes to self-
8 perception and [social identity](#).

9 1.2.8 Prepare people for discharge after treatment for colorectal cancer by
10 giving them advice on:

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

To find out why the committee made the recommendations on information for people with colorectal cancer and how they might affect practice, see [rationale and impact](#).

19 **1.3 Management of local disease**

20 **People with rectal cancer**

21 **Treatment for people with early rectal cancer ([T1-T2, N0, M0](#))**

22 1.3.1 Offer one of the treatments shown in table 1 to people with early rectal
23 cancer ([T1-T2, N0, M0](#)) after discussing the implications of each treatment
24 and reaching a shared decision with the person about the best option.

1 **Table 1 Implications of treatments for early rectal cancer (T1-T2, N0, M0) based**
 2 **on committee's expertise**

	Transanal excision (TAE), including transanal minimally invasive surgery (TAMIS) and transanal endoscopic microsurgery (TEMS)	Endoscopic submucosal dissection (ESD)	Total mesorectal excision (TME)
Type of procedure	Endoscopic/Surgery	Endoscopic	Surgery
Minimally invasive procedure	Yes	Yes	Possible
Resection of bowel (may have more impact on sexual and bowel function)	No	No	Yes
Stoma needed (a permanent or temporary opening in the abdomen for waste to pass through)	No	No	Possible
General anaesthetic needed (and the possibility of associated complications)	Yes	No, conscious sedation	Yes
Able to do a full thickness excision (better chance of removing cancerous cells and more accurate prediction of lymph node involvement)	Yes	No	Yes
Removal of lymph nodes (more accurate staging of the cancer so better chance of cure)	No	No	Yes
Conversion to more invasive surgery needed if complication	Possible	Possible	Possible
Further surgery needed depending on histology	Possible	Possible	Usually no
Usual hospital stay	1-2 days	1-2 days	5-7 days
External scarring	No	No	Yes
Possible complications include:	<ul style="list-style-type: none"> - Abdominal pain - Bleeding - Mild anal incontinence - Perirectal abscess/sepsis and stricture (narrowing) - Perforation 	<ul style="list-style-type: none"> - Abdominal pain - Bleeding - Bloating - Perforation 	<ul style="list-style-type: none"> - Adhesions - Anastomotic leak (leaking of bowel contents into the abdomen) - Anastomotic stricture (narrowing at internal operation site)

	<ul style="list-style-type: none"> – Suture line dehiscence (wound reopening) – Urinary retention 		<ul style="list-style-type: none"> – Bleeding – Incisional hernia (hernia where the surgical incision was made) – Injury to neighbouring structures – Pelvic abscess – Urinary retention
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1 Some of the potential complications shown in the table were identified from the evidence
2 review.

To find out why the committee made the recommendation on treatment for people with early rectal cancer and how it might affect practice, see [rationale and impact](#).

3 **Preoperative treatment for people with rectal cancer**

4 1.3.2 Do not offer preoperative radiotherapy to people with early rectal cancer
5 ([T1-T2 N0, M0](#)), unless as part of a clinical trial.

6 1.3.3 Offer preoperative radiotherapy or chemoradiotherapy to people with
7 rectal cancer that is [T1-T2, N1-N2, M0](#), or [T3-T4, any N, M0](#).

To find out why the committee made the recommendations on preoperative treatment for people with rectal cancer and how they might affect practice, see [rationale and impact](#).

8 **Surgery for people with rectal cancer**

9 1.3.4 Offer surgery to people with rectal cancer ([T1-T2, N1-N2, M0](#), or [T3-T4,](#)
10 [any N, M0](#)) who have a resectable tumour. For those who choose to
11 defer, this should be in the context of a clinical trial or a national registry.

12 1.3.5 Inform people with a complete clinical and radiological response to
13 neoadjuvant treatment who wish to defer surgery that there are no
14 prognostic factors to guide selection for deferral of surgery.

To find out why the committee made the recommendations on deferral of surgery for people with rectal cancer and how they might affect practice, see [rationale and impact](#).

1 ***Surgical technique for people with rectal cancer***

2 1.3.6 Offer laparoscopic surgery for rectal cancer, in line with the NICE
3 technology appraisal on [laparoscopic surgery for colorectal cancer](#).

4 1.3.7 Consider open surgery if clinically indicated, for example by locally
5 advanced tumours, multiple previous abdominal operations or previous
6 pelvic surgery.

7 1.3.8 Only consider robotic surgery within established programmes that have
8 appropriate audited outcomes.

9 1.3.9 Only consider transanal TME surgery within structured and supervised
10 programmes, and with the outcomes entered into the appropriate national
11 transanal TME registry.

To find out why the committee made the recommendations on surgical technique for people with rectal cancer and how they might affect practice, see [rationale and impact](#).

12 ***People with locally advanced or recurrent rectal cancer***

13 1.3.10 Consider referring people with locally advanced primary or recurrent rectal
14 cancer that might potentially need multi-visceral or [beyond-TME surgery](#)
15 to a specialist centre to discuss exenterative surgery.

To find out why the committee made the recommendation on locally advanced or recurrent rectal cancer and how it might affect practice, see [rationale and impact](#).

16 ***Surgical volumes for rectal cancer surgeries***

17 1.3.11 Hospitals performing [major resection for rectal cancer](#) should operate on
18 at least 10 patients per year.

19 1.3.12 Individual surgeons performing [major resection for rectal cancer](#) should
20 operate on at least 5 patients per year.

To find out why the committee made the recommendation on surgical volumes for rectal cancer surgeries and how it might affect services, see [rationale and impact](#).

1 **People with colon cancer**

2 ***Preoperative treatment for people with colon cancer***

3 1.3.13 Consider preoperative systemic anti-cancer therapy for people with [T4](#)
4 colon cancer.

To find out why the committee made the recommendation on preoperative treatment for people with colon cancer and how it might affect practice, see [rationale and impact](#).

5 **People with either colon or rectal cancer**

6 Also see the NICE technology appraisal on [laparoscopic surgery for colorectal](#)
7 [cancer](#).

8 ***Duration of adjuvant chemotherapy for people with colorectal cancer***

9 Patients with rectal cancer treated with long-course chemoradiotherapy are not
10 covered by this recommendation.

11 1.3.14 For people with stage III colon cancer² ([T1-4, N1-2, M0](#)), or stage III rectal
12 cancer³ ([T1-4, N1-2, M0](#)) treated with short-course radiotherapy or no
13 preoperative treatment, offer:

- 14 • capecitabine in combination with oxaliplatin (CAPOX) for 3 months, or if
15 this is not suitable

² Although use of capecitabine with oxaliplatin chemotherapy (CAPOX) is common in UK clinical practice, at the time of consultation (August 2019), oxaliplatin did not have UK marketing authorisation for use in combination with capecitabine and capecitabine did not have UK marketing authorisation for 3 months duration of adjuvant treatment in people with colon cancer. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

³ At the time of consultation (August 2019), capecitabine with oxaliplatin (CAPOX) and oxaliplatin with 5-fluorouracil and folinic acid (FOLFOX) did not have a UK marketing authorisations for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

- 1 • oxaliplatin in combination with 5-fluorouracil and folinic acid (FOLFOX)
2 for 3 to 6 months, or
3 • single-agent fluoropyrimidine (for example, capecitabine) for 6 months,
4 in line with NICE technology appraisal on [capecitabine and oxaliplatin](#)
5 [in the adjuvant treatment of stage III \(Dukes' C\) colon cancer](#).
6 Base the choice on the person's histopathology (for example [T1-T3 and](#)
7 [N1](#), and [T4 and/or N2](#)), performance status, any comorbidities, age and
8 personal preferences.

To find out why the committee made the recommendation on duration of adjuvant chemotherapy for people with colorectal cancer and how it might affect practice, see [rationale and impact](#).

9 ***Colonic stents in acute large bowel obstruction***

- 10 1.3.15 Consider stenting for people presenting with acute left-sided large bowel
11 obstruction who are to be treated with palliative intent.
12 1.3.16 Offer either stenting or emergency surgery for people presenting with
13 acute left-sided large bowel obstruction if potentially curative treatment is
14 suitable for them.

To find out why the committee made the recommendations on colonic stents in acute large bowel obstruction and how they might affect practice, see [rationale and impact](#).

15 **1.4 Molecular biomarkers to guide systemic anti-cancer** 16 **therapy**

17 Also see the NICE diagnostics guidance on [molecular testing strategies for Lynch](#)
18 [syndrome in people with colorectal cancer](#).

- 19 1.4.1 Test all people with metastatic colorectal cancer suitable for systemic anti-
20 cancer treatment for *RAS* and *BRAF* V600E mutations.

To find out why the committee made the recommendation on molecular biomarkers to guide systemic anti-cancer therapy and how it might affect practice, see [rationale and impact](#).

1 **1.5 Management of metastatic disease**

2 **People with asymptomatic primary tumour**

3 1.5.1 Consider surgical resection of the primary tumour for people with
4 incurable metastatic colorectal cancer who are receiving systemic anti-
5 cancer therapy and have an asymptomatic primary tumour. Discuss the
6 implications of the treatment options with the person before making a
7 shared decision. See table 2.

8 **Table 2 Factors to take into account when considering resection of the**
9 **asymptomatic primary tumour**

	Advantages	Disadvantages
Resection of the asymptomatic primary tumour	<ul style="list-style-type: none"> – Possible improvement in overall survival rate (based on low quality evidence from research) – Avoidance of primary tumour-related symptoms such as obstruction, perforation, bleeding and pain 	<ul style="list-style-type: none"> – Around 5 in 100 people will have severe postoperative complications (based on moderate quality evidence from research) – Systemic therapy still needed, and may be delayed if surgical complications occur
No resection (systemic anti-cancer therapy only)	<ul style="list-style-type: none"> – Avoids surgery and the potential for postoperative complications 	<ul style="list-style-type: none"> – Around 20 in 100 people will develop primary tumour-related symptoms such as obstruction, perforation, bleeding and pain that need surgery (based on low quality evidence from research)

10 Advantages and disadvantages in table 2 are based on committee expertise unless
11 otherwise indicated. Quality of evidence based on GRADE:
12 Moderate: True effect is probably close to the estimated effect.
13 Low: True effect might be markedly different from the estimated effect.

To find out why the committee made the recommendation on asymptomatic primary tumour and how it might affect practice, see [rationale and impact](#).

1 **Systemic anti-cancer therapy for people with metastatic colorectal cancer**

2 1.5.2 For advice on systemic anti-cancer therapy for people with metastatic
3 cancer, see the following NICE technology appraisals:

- 4 • [Aflibercept in combination with irinotecan and fluorouracil-based](#)
5 [therapy for treating metastatic colorectal cancer that has progressed](#)
6 [following prior oxaliplatin-based chemotherapy](#)
- 7 • [Bevacizumab and cetuximab for the treatment of metastatic colorectal](#)
8 [cancer](#)
- 9 • [Bevacizumab in combination with oxaliplatin and either fluorouracil plus](#)
10 [folinic acid or capecitabine for the treatment of metastatic colorectal](#)
11 [cancer](#)
- 12 • [Cetuximab and panitumumab for previously untreated metastatic](#)
13 [colorectal cancer](#)
- 14 • [Cetuximab, bevacizumab and panitumumab for the treatment of](#)
15 [metastatic colorectal cancer after first-line chemotherapy: Cetuximab](#)
16 [\(monotherapy or combination chemotherapy\), bevacizumab \(in](#)
17 [combination with non-oxaliplatin chemotherapy\) and panitumumab](#)
18 [\(monotherapy\) for the treatment of metastatic colorectal cancer after](#)
19 [first-line chemotherapy](#)
- 20 • [Guidance on the use of capecitabine and tegafur with uracil for](#)
21 [metastatic colorectal cancer](#)
- 22 • [Trifluridine–tipiracil for previously treated metastatic colorectal cancer](#)

To find out why the committee made the recommendation on systemic anti-cancer therapy for people with metastatic cancer and how it might affect practice, see [rationale and impact](#).

23 **People with metastatic colorectal cancer in the liver**

24 1.5.3 Consider resection, either simultaneous or sequential, by a
25 multidisciplinary team (MDT) with expertise in resection of disease in all
26 sites.

27 1.5.4 Consider perioperative systemic anti-cancer therapy if liver resection is a
28 suitable treatment.

- 1 1.5.5 Consider chemotherapy with local ablative techniques for people with
2 colorectal liver metastases that are unsuitable for liver resection after
3 discussion in a specialist MDT.
- 4 1.5.6 Do not offer selective internal radiation therapy (SIRT) as first-line
5 treatment for people with colorectal liver metastases that are unsuitable
6 for local treatment.

To find out why the committee made the recommendations on metastatic colorectal cancer in the liver and how they might affect practice, see [rationale and impact](#).

7 **People with metastatic colorectal cancer in the lung**

- 8 1.5.7 Consider metastasectomy, ablation or stereotactic body radiation therapy
9 for people with lung metastases that are suitable for local treatment, after
10 discussion in a MDT that includes a thoracic surgeon and a specialist in
11 non-surgical ablation.
- 12 1.5.8 Consider biopsy for people with a single lung lesion to exclude primary
13 lung cancer.

To find out why the committee made the recommendations on metastatic colorectal cancer in the lung and how they might affect practice, see [rationale and impact](#).

14 **People with metastatic colorectal cancer in the peritoneum**

- 15 1.5.9 For people with colorectal cancer metastases limited to the peritoneum:
- 16 • offer systemic anti-cancer therapy, **and**
- 17 • refer to a recognised specialist centre to consider cytoreductive surgery
- 18 and hyperthermic intraperitoneal chemotherapy (HIPEC).

To find out why the committee made the recommendation on metastatic colorectal cancer in the peritoneum and how it might affect practice, see [rationale and impact](#).

1 **1.6 Ongoing care and support**

2 **Follow-up for detection of local recurrence and distant metastases**

- 3 1.6.1 For people who have had potentially curative surgical treatment for non-
4 metastatic colorectal cancer, offer follow-up for detection of local
5 recurrence and distant metastases for the first 3 years that includes
6 carcinoembryonic antigen (CEA) and CT.

To find out why the committee made the recommendation on follow-up for detection of local recurrence and distant metastases and how it might affect practice, see [rationale and impact](#).

7 **Management of low anterior resection syndrome**

- 8 1.6.2 Give information on low anterior resection syndrome (LARS) to people
9 who will potentially have sphincter-preserving surgery. Advise them to
10 seek help from primary care if they think they have symptoms of LARS,
11 such as:

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

- 17 1.6.3 Assess people who present to primary care with symptoms of LARS using
18 a validated patient-administered questionnaire (for example, the LARS
19 score).

- 20 1.6.4 Offer people with bowel dysfunction treatment for associated symptoms in
21 primary care (such as dietary management, laxatives, anti-bulking agents,

1 anti-diarrhoeal agents, or anti-spasmodic agents). Seek advice from
2 secondary care if the treatment is not successful.

To find out why the committee made the recommendations on management of low anterior resection syndrome and how they might affect practice, see [rationale and impact](#).

3 ***Terms used in this guideline***

4 **Beyond-TME surgery**

5 Beyond-TME surgery is when tumour extends beyond what is achievable to resect
6 by TME and requires more extensive surgery to achieve clear margins.

7 **Major resection for rectal cancer**

8 Major resection for rectal cancer means surgeries where part or whole of the rectum
9 are removed, including anterior resection and abdominoperineal resection.

10 **Recovery protocols**

11 Recovery protocols, such as 'enhanced recovery after surgery' or ERAS, are
12 perioperative care pathways designed to promote early recovery for patients
13 undergoing major surgery by optimising the person's health before surgery and
14 maintaining health and functioning after surgery.

15 **Social identity**

16 Social identity is about changes to people's concept of themselves as a result of
17 either their cancer, or the long-term side effects from treatment. For example, it could
18 cover changes from being a previously fit person to someone who has physical or
19 mental problems, from being someone with the expectation of years to live to
20 someone with a limited life expectancy, or the change from being a carer to
21 becoming cared for.

22 **TNM classification**

23 This guideline uses the tumour, node, metastasis (TNM) classification developed by
24 the Union for International Cancer Control (UICC) to describe the stage of the

1 cancer. Please refer to The TNM Classification of Malignant Tumours 8th Edition⁴
2 for further information. In this guideline early rectal cancer is defined as T1-2, N0,
3 M0.

4 **Recommendations for research**

5 The guideline committee has made the following recommendations for research.

6 **Key recommendations for research**

7 **1 Treatment for metastatic colorectal cancer in the lung**

8 What is the cost effectiveness and safety of non-surgical ablation and stereotactic
9 body radiotherapy compared to resection for people with metastatic colorectal
10 cancer in the lung amenable to local treatment?

11 To find out why the committee made the research recommendation on treatment for
12 metastatic colorectal cancer in the lung see [rationale and impact](#).

13 **2 Management of lower anterior resection syndrome**

14 What is the effectiveness and safety of sacral nerve stimulation and transanal
15 irrigation compared to symptomatic treatment for people with major low anterior
16 resection syndrome?

17 To find out why the committee made the research recommendation on management
18 of lower anterior resection syndrome see [rationale and impact](#).

19 **Rationale and impact**

20 These sections briefly explain why the committee made the recommendations and
21 how they might affect practice. They link to details of the evidence and a full
22 description of the committee's discussion.

23 ***Prevention of colorectal cancer in people with Lynch syndrome***

24 Recommendation [1.1.1](#)

⁴ Brierley JD, Gospodarowicz MK, Wittekind C, eds. International Union Against Cancer (UICC). TNM Classification of Malignant Tumours, 8th edn. Oxford: Wiley Blackwell, 2017

1 **Why the committee made the recommendations**

2 There was evidence from a multi-country randomised controlled trial that taking daily
3 aspirin for more than 2 years reduces the risk of colorectal cancer in people with
4 Lynch syndrome, although this was only evident when restricting the analysis to
5 those who actually took aspirin as planned increasing the uncertainty around the
6 evidence. An observational study among people with Lynch syndrome also showed
7 a reduced risk of colorectal cancer in people who had taken aspirin in the long-term
8 compared to those who had not.

9 Potential harm of long-term aspirin use could be an increased bleeding risk but no
10 evidence was identified which compared adverse events, such as peptic ulcer,
11 gastrointestinal bleeding or cerebral haemorrhage, in people with Lynch syndrome
12 who took aspirin on a long-term basis (compared to not taking aspirin at all), but the
13 committee agreed that the benefits are likely to outweigh any potential harms. The
14 committee recommended that the potential harms and benefits of long-term aspirin
15 use should be discussed so that people are able to make an informed decision.

16 The optimal dose of aspirin that balances the benefits of aspirin as prevention of
17 colorectal cancer and the potential increased bleeding risk especially with higher
18 doses remains unclear and the committee was not able to recommend a dose,
19 though an ongoing trial is currently studying this. A commonly used dose in current
20 practice is either 150 mg or 300 mg.

21 **How the recommendations might affect practice**

22 Aspirin is already widely used for this indication and so the recommendation is not
23 expected to have a significant impact on practice.

24 Full details of the evidence and the committee's discussion are in [evidence review](#)
25 [A1: Effectiveness of aspirin in the prevention of colorectal cancer in people with](#)
26 [Lynch syndrome.](#)

27 [Return to recommendations](#)

28 **Information needs**

29 Recommendations [1.2.1 to 1.2.8](#)

1 **Why the committee made the recommendations**

2 There was evidence that people having treatment for colorectal cancer need different
3 information at different stages of their care, and this was supported by the
4 committee's own clinical experience as well as NICE's guideline on patient
5 experience in adult NHS services.

6 The committee based their recommendations on qualitative evidence and their
7 clinical experience, which enabled the committee to identify areas where people
8 lacked understanding and issues that people would value information on. This
9 included explaining colorectal cancer and its treatments in depth, including non-
10 surgical treatment options and palliative care, as well as explaining how people can
11 alter their diet to reduce bowel problems and manage their weight.

12 The committee also agreed it was important to prepare people for the fact that
13 changes to the agreed plan are sometimes needed during treatment, and to explain
14 what these could be so that people feel ready for this possibility.

15 **How the recommendations might affect practice**

16 Current practice varies between hospitals, so these recommendations aim to reduce
17 variation and encourage best practice. There may be a cost to providing training to
18 professionals but this is expected to be small and potentially recouped through
19 patients being better prepared for treatment and post-treatment.

20 Full details of the evidence and the committee's discussion are in [evidence review](#)
21 [E3: Information needs of people prior, during and after treatment for colorectal](#)
22 [cancer.](#)

23 [Return to recommendations](#)

24 ***Treatment for people with early rectal cancer***

25 Recommendation [1.3.1](#)

26 **Why the committee made the recommendations**

27 The committee agreed that it was not possible to recommend one treatment over
28 another because of the low quality of the evidence and the limited amount of
29 evidence available. The available evidence showed no clinically important

1 differences between treatments and, in addition, for many of the outcomes specified
2 in the protocol and a number of the comparisons, no evidence was identified at all.
3 However, based on their knowledge and experience, the committee noted that there
4 are risks and benefits associated with each treatment option. They highlighted that
5 while total mesorectal excision is a radical intervention and has more risks than the
6 others, it is the only way to accurately stage lymph nodes and, by doing so, allow
7 better treatment planning. Therefore, the committee recommended discussing the
8 implications of each intervention with the person before making a choice.

9 **How the recommendations might affect practice**

10 Currently, endoscopic submucosal dissection (ESD) is not widely available in the
11 UK. In centres where ESD is not already available, resources and time would be
12 needed to provide this service, including purchasing equipment and training staff
13 although this would be a short-term cost. After this initial investment there will be
14 minimal cost difference between ESD and alternatives. TAE (including TAMIS and
15 TEMS) and TME are current practice in the UK, so the recommendations will have a
16 minimal effect for these interventions. However, the recommendations will allow for
17 an informed discussion with patients so they are fully aware of the risks and benefits
18 of each procedure.

19 Full details of the evidence and the committee's discussion are in [evidence review](#)
20 [C1: Treatment for early rectal cancer](#).

21 [Return to recommendations](#)

22 ***Preoperative treatment for people with rectal cancer***

23 Recommendations [1.3.2 to 1.3.3](#)

24 **Why the committee made the recommendations**

25 There was no evidence for the effectiveness of preoperative radiotherapy for people
26 with early rectal cancer, and based on their experience the committee would not
27 recommend preoperative radiotherapy. However, the ongoing STAR-TREC trial,
28 which is a multicentre randomised controlled trial, compares radiotherapy to total
29 mesorectal excision for early rectal cancer. Because of this, the committee

1 recommended that preoperative radiotherapy for early rectal cancer could be
2 offered, but only in the context of a clinical trial.

3 For rectal cancer T1-T2, N1-N2, M0, or T3-T4, any N, M0, the evidence from several
4 RCTs shows that people who have preoperative radiotherapy or chemoradiotherapy
5 have less local recurrence and have better overall and disease-free survival
6 compared to people who did not have preoperative therapy. Although preoperative
7 therapy can potentially have adverse effects, from the evidence the committee did
8 not find a difference in quality of life or treatment-related mortality between those
9 who did or did not receive preoperative therapy.

10 The committee was not able to make a recommendation on the duration and type of
11 radiotherapy or chemoradiotherapy because the available evidence did not show a
12 difference between short-course and long-course radiotherapy, chemoradiotherapy
13 with or without induction chemotherapy, or internal radiotherapy with or without
14 external radiotherapy and external radiotherapy alone.

15 **How the recommendations might affect practice**

16 There is some variation in current practice among different multidisciplinary teams as
17 to who is offered preoperative therapy. The aim of the recommendation is to
18 standardise treatment across the country, so this might have a resource impact in
19 areas where preoperative therapy is not currently offered and where more clinical
20 oncologists and radiotherapy equipment will be needed. There may be savings
21 downstream through reduced recurrence and increased disease-free survival
22 avoiding or delaying expensive further treatment.

23 The recommendation might increase the number of people offered preoperative
24 radiotherapy or chemoradiotherapy for lower-risk tumours (mainly cancers in the
25 upper and mid rectum). In current practice, people with cancer in the upper and mid
26 rectum might not have preoperative therapy because there is a lower risk of
27 recurrence in cancers in these locations compared to cancer in the low rectum.

28 Full details of the evidence and the committee's discussion are in [evidence review](#)
29 [C1: Treatment for early rectal cancer](#) and [evidence review C2: Preoperative](#)
30 [radiotherapy and chemoradiotherapy for rectal cancer](#).

1 [Return to recommendations](#)

2 ***Surgery for people with rectal cancer***

3 Recommendations [1.3.4 to 1.3.5](#)

4 **Why the committee made the recommendations**

5 Surgery is the preferred treatment for people with rectal cancer (T1-T2, N1-N2, M0,
6 or T3-T4, any N, M0) if the tumour is resectable. The committee acknowledged that
7 some people whose rectal cancer shows a complete clinical response to
8 neoadjuvant therapy choose to defer surgery and opt for an organ preserving ‘watch-
9 and-wait’ strategy instead. The committee agreed that those who choose to defer
10 surgery should be entered into a clinical trial or national registry because there was
11 no evidence about factors that predict the risk of recurrence. Clinical trials and
12 national registries could generate evidence to help a person decide whether to defer
13 surgery. Around one third of these people will experience local regrowth of their
14 tumour and need salvage surgery.

15 The committee were uncertain about how different definitions of complete clinical
16 response and different watch-and-wait surveillance protocols would impact risk of
17 recurrence. Because of the lack of evidence they recommended that people
18 considering deferral of surgery after a complete clinical and radiological response to
19 neoadjuvant treatment should be aware of the uncertainty about their outcome.

20 **How the recommendations might affect practice**

21 Deferral of surgery in people whose rectal cancer shows a complete clinical
22 response to neoadjuvant therapy is not standard practice in all centres. The watch-
23 and-wait approach requires repeated surveillance examinations and endoscopies to
24 monitor for tumour regrowth. In some cases, people choosing to defer surgery will
25 need to be referred to another centre that can provide the necessary watch-and-wait
26 surveillance programme. The recommendations are not expected to have a
27 significant impact on practice.

28 Full details of the evidence and the committee’s discussion are in [evidence review](#)
29 [C4: Deferral of surgery in people having neoadjuvant therapy for rectal cancer for](#)
30 [rectal cancer.](#)

1 [Return to recommendations](#)

2 ***Surgical technique for people with rectal cancer***

3 Recommendations [1.3.6 to 1.3.9](#)

4 **Why the committee made the recommendations**

5 The NICE technology appraisal on [laparoscopic surgery for colorectal cancer](#)
6 published in 2006 covers colorectal cancer in general, with evidence largely based
7 on mixed (colon and rectal cancer) populations or colon cancer populations. Over
8 time, the clinical community has started to treat surgery for colon and rectal cancer
9 as separate entities with rectal cancer surgery being considered more challenging. In
10 addition, robotic technique and transanal TME have been used in rectal cancer
11 surgery. Therefore, it was considered important that new evidence on different
12 surgical techniques for rectal cancer specifically be reviewed.

13 The clinical evidence on the different surgical techniques for rectal cancer showed
14 that the short- and long-term outcomes of laparoscopic technique were similar or
15 better than of the open technique and that there seemed to be no difference in
16 effectiveness between laparoscopic and robotic techniques. The committee agreed
17 that in addition to the clinical effectiveness it was important to consider the costs of
18 these difference techniques in order to assess which technique is the most cost
19 effective approach in rectal cancer surgery, therefore, a health economic analysis
20 was done.

21 The evidence showed that laparoscopic surgery is cost effective compared to open
22 surgery or robotic surgery. However, in some cases open surgery might be clinically
23 more appropriate and laparoscopic surgery might be less feasible, for example
24 because of scarring from previous surgeries or technically demanding resection of
25 adjacent organs or structures in locally advanced tumours.

26 Robotic surgery was not found to be cost effective; however, this technique could be
27 considered in centres that have already invested in a robot and have an established
28 programme. These programmes should collect outcome data in order to benchmark
29 the effectiveness and safety of this technique in clinical practice against other

1 centres and techniques. The techniques and equipment of robotic surgery develop
2 rapidly and more evidence on its cost effectiveness will be available in the future.

3 There is not enough clinical evidence on transanal TME to draw conclusions about
4 its safety and effectiveness. However, transanal TME could be considered in centres
5 that already have a structured and supervised programme. Outcome data should be
6 submitted to a national registry in order to assess the safety and effectiveness of this
7 technique in clinical practice. This is in line with NICE interventional procedures
8 guidance on [transanal total mesorectal excision of the rectum](#).

9 **How the recommendations might affect practice**

10 There will be more laparoscopic surgery, while recognising that there is a role for
11 open surgery in appropriately selected cases. Current robotic techniques were found
12 not to be cost effective, so there may be less investment in robotic techniques for
13 this indication. However, the recommendation will not affect the use of robotic
14 surgery within established programmes. The recommendations are not expected to
15 have an impact on the use of transanal TME as these are largely performed within
16 structured and supervised programmes in current practice.

17 Full details of the evidence and the committee's discussion are in [evidence review](#)
18 [C3: Optimal surgical technique for rectal cancer](#).

19 [Return to recommendations](#)

20 ***People with locally advanced or recurrent rectal cancer***

21 Recommendation [1.3.10](#)

22 **Why the committee made the recommendations**

23 Based on their clinical experience, the committee acknowledged that many patients
24 are not currently referred to specialist centres and are only offered palliative care
25 instead of potentially curative surgery. The committee also noted that pelvic
26 exenteration is a complex and invasive procedure.

27 However, there was some very low quality evidence that showed people who had
28 pelvic exenteration had similar quality of life scores to those who did not, and that the
29 procedure improved survival over 12 months. The committee agreed that evidence

1 from long-term follow-up of quality of life would help to inform the recommendation,
2 but there was no quality of life data available beyond 12 months of follow-up.
3 Therefore, the committee could not recommend referring everyone with locally
4 advanced or recurrent rectal cancer to have pelvic exenteration, but agreed that
5 people should have the opportunity to discuss pelvic exenteration as an option in a
6 specialist centre.

7 **How the recommendations might affect practice**

8 The recommendation could increase the number of referrals to specialist centres in
9 hospitals where this is not current practice. This would, in turn, increase demand for
10 specialist time and mean that more people may go on to have surgery. However, this
11 may improve quality of life and survival.

12 Full details of the evidence and the committee's discussion are in [evidence review](#)
13 [C5: Effectiveness of exenterative surgery for locally advanced or recurrent rectal](#)
14 [cancer.](#)

15 [Return to recommendations](#)

16 ***Surgical volumes for rectal cancer surgeries***

17 Recommendations [1.3.11 to 1.3.12](#)

18 **Why the committee made the recommendations**

19 Currently, there is uncertainty in the clinical community about optimal hospital and
20 surgeon volumes for rectal cancer outcomes, with some clinicians advocating for the
21 centralisation of services. There was evidence that when the threshold is set
22 between 10 and 20 rectal cancer surgery patients per year, higher volume hospitals
23 have better outcomes than lower volume hospitals in terms of overall survival, local
24 recurrence, permanent stoma rates and perioperative mortality. Similarly, there was
25 evidence of benefit with a surgeon case volume threshold of between 5 and 10
26 cases per year in terms of resection margins, local recurrence and permanent stoma
27 rates.

28 The committee were cautious in their interpretation of the evidence: individual
29 studies had used different case volume thresholds and had not treated case volume

1 as a continuous outcome, and there were additional complexities with surgeon-level
2 data (that is, consultants may do more complex surgeries, but fewer of them, and a
3 consultant might be involved with other surgeries but not be the named surgeon) as
4 well as with hospital-level data (that is, some studies were old and from outside the
5 UK, with inconsistent staging across studies).

6 Given the uncertainties in the data, the committee agreed that the evidence was not
7 strong enough to recommend a minimum cut-off of 20 cases and instead decided to
8 recommend a more conservative cut-off of 10 cases a year.

9 **How the recommendations might affect services**

10 An audit of rectal cancer surgeries in the UK has indicated that most hospitals in the
11 UK perform at least 20 cases of rectal cancer surgery per year. Therefore, the
12 recommendation for a minimum threshold of 10 cases per year at hospital level will
13 not have a large impact on current practice. Based on their clinical knowledge, the
14 committee were aware that some surgeons in the UK currently perform fewer than 5
15 operations per year, so the recommendation could have an impact on these
16 surgeons. The centralisation of surgeons with fewer surgeons performing more
17 cases could have an impact on staffing, although as the overall number of surgeries
18 will be the same the overall cost impact should be neutral. There may be an increase
19 in the distance patients need to travel for surgery and this will have a cost impact on
20 the NHS where this is reimbursed. This cost will be offset by better surgical
21 outcomes reducing care-related costs later on and increasing quality of life.

22 Full details of the evidence and the committee's discussion are in [evidence review](#)
23 [F1: Surgical volumes and outcomes for rectal cancer.](#)

24 [Return to recommendations](#)

25 ***Preoperative treatment for people with colon cancer***

26 Recommendation [1.3.13](#)

27 **Why the committee made the recommendations**

28 The committee made the recommendation to consider chemotherapy preoperatively
29 for people with T4 colonic cancer based on evidence that it improved survival and

1 rates of clear resection margins in these patients. The committee was only able to
2 recommend preoperative chemotherapy as an option to consider because the
3 evidence was of low quality, despite the large sample size. There was no evidence
4 on the effectiveness of preoperative chemotherapy for people with colonic cancers at
5 other stages.

6 The committee also considered results from FOxTROT: a large international trial
7 comparing preoperative plus postoperative chemotherapy (with or without
8 panitumab) to standard postoperative chemotherapy in people with T3 or T4a
9 resectable tumours. The results showed that complete clinical response and tumour
10 downstaging are more likely in those who receive preoperative chemotherapy,
11 although follow-up is not yet long enough to show a difference in survival.

12 **How the recommendations might affect practice**

13 The current standard of care is surgical resection with postoperative chemotherapy,
14 dependent on the organs or structures involved and the degree of involvement. The
15 committee was aware that some centres already give preoperative chemotherapy,
16 but noted that this recommendation will affect practice and have a resource impact in
17 hospitals where this is not standard practice.

18 Full details of the evidence and the committee's discussion are in [evidence review](#)
19 [C7: Preoperative chemotherapy for non-metastatic colon cancer](#).

20 [Return to recommendations](#)

21 ***Duration of adjuvant chemotherapy for people with colorectal*** 22 ***cancer***

23 Recommendations [1.3.14](#)

24 **Why the committee made the recommendations**

25 The benefits and risks of adjuvant chemotherapy can depend on several factors,
26 including the stage and characteristics of the cancer, and the person's performance
27 status, comorbidities and age.

28 Peripheral neuropathy is recognised as a major long-term side effect of oxaliplatin
29 chemotherapy and the risk of developing persistent neuropathy increases by

1 cumulative dose of treatment. The standard duration of chemotherapy has been 6
2 months, but a shorter 3-month course has been investigated.

3 There was good evidence that showed 3 months of CAPOX chemotherapy was at
4 least as beneficial for people with colon cancer as a 6-month course but caused
5 considerably less severe neuropathy and was cost saving. However, with FOLFOX
6 chemotherapy, disease-free survival was worse after a 3-month course compared
7 with the standard 6-month course, although the rate of severe neuropathy was again
8 considerably lower in the 3-month group.

9 A recent high quality health economic study found a 3-month course of FOLFOX to
10 be cost effective compared to a 6-month course, despite lower disease-free survival,
11 as a result of a decrease in costs. Although this economic evidence was directly
12 applicable to the clinical question, and the study was included in the consideration of
13 the clinical evidence, the committee was concerned that basing recommendations
14 solely in line with the economic evaluation (that is, CAPOX for 3 months or FOLFOX
15 for 3 months) might lead to people who would otherwise have received 6-month
16 FOLFOX to opt for 3-month CAPOX instead.

17 In the SCOT trial CAPOX was associated with a higher rate of severe diarrhoea than
18 FOLFOX. This was not looked at by the economic evaluation and the 'switching'
19 group would likely to be at higher risk of toxicity-related complications with worse
20 outcomes, increased treatment-related mortality and increased costs from the
21 treatment of severe adverse events than the trial population for 3-month CAPOX.
22 This would decrease the certainty of the conclusions of the economic evaluation.

23 Based on the balance of benefits and lower risk of long-term adverse effects, the
24 committee agreed CAPOX for 3 months should be the first choice of adjuvant
25 treatment. If CAPOX is not suitable, for example because of the person's higher risk
26 of and lower tolerance for severe diarrhoea, FOLFOX should be offered. Having
27 considered the economic evaluation given the clinical concerns, it was decided that
28 there should be an individualised consideration for the duration of FOLFOX for those
29 who are not suitable for 3-month CAPOX chemotherapy, taking into account the
30 benefits and short- and long-term harms of both options, the person's comorbidities,
31 performance status and preference.

1 Single-agent capecitabine chemotherapy is also an effective adjuvant treatment and
2 can be more suitable for people who are older (for example over 70 years) or less fit,
3 as it is associated with fewer side effects than chemotherapy treatments that contain
4 oxaliplatin.

5 The available evidence is mainly for people with colon cancer. However, people with
6 rectal cancer who had received either short-course preoperative radiotherapy or no
7 preoperative therapy were also included in a large randomised trial and their
8 outcomes were similar to people with colon cancer, and therefore the committee
9 agreed the recommendation could also apply to this population.

10 No recommendations were made for people with rectal cancer who have been
11 treated with long-course chemotherapy or chemoradiotherapy because no evidence
12 was identified in the available trials.

13 **How the recommendations might affect practice**

14 Halving the standard care from 6 months to 3 months (for people who can have
15 CAPOX) will reduce treatment time and costs, will mean people have chemotherapy
16 side effects for a shorter time, and will lower the incidence of long-term toxicity
17 (neuropathy) and its consequences.

18 Full details of the evidence and the committee's discussion are in [evidence review](#)
19 [C8: Optimal duration of adjuvant chemotherapy for colorectal cancer.](#)

20 [Return to recommendations](#)

21 ***Colonic stents in acute large bowel obstruction***

22 Recommendations [1.3.15 to 1.3.16](#)

23 **Why the committee made the recommendations**

24 In patients presenting with acute left-sided large bowel obstruction, evidence showed
25 that stoma rates were reduced in the stenting group compared to the emergency
26 surgery group. There was no evidence of a difference in overall or disease-free
27 survival. Stenting also allows time to fully assess the patient and stabilise any
28 comorbidities before proceeding with potentially curative surgery. The committee

1 considered the yet to published results of the CREST trial shared with the committee
2 in confidence which were consistent with the published evidence.

3 The committee noted the evidence that stenting sometimes causes perforation and
4 is not always technically successful and so may not be appropriate in all cases for
5 the curative intent treatment group. For this reason they also recommended
6 emergency surgery as an option.

7 **How the recommendations might affect practice**

8 Stenting is established practice for patients presenting with acute left-sided large
9 bowel obstruction who are to be treated with palliative intent. Stenting is not
10 established practice in those to be treated with curative intent. Therefore, the
11 recommendation could lead to an increase in the provision of stenting and
12 associated costs. However, stenting allows patients to be assessed and become
13 stable before surgery, in turn reducing operative morbidity, the need for stoma and
14 preventing expensive surgery in those people when it would not be appropriate, thus
15 reducing downstream costs. Some patients might need to be transferred to another
16 unit in order to receive a stent.

17 Full details of the evidence and the committee's discussion are in [evidence review](#)
18 [C9: Effectiveness of stenting for acute large bowel obstruction.](#)

19 [Return to recommendations](#)

20 ***Molecular biomarkers to guideline systemic anti-cancer therapy***

21 Recommendation [1.4.1](#)

22 **Why the committee made the recommendations**

23 The evidence showed that *RAS* and *BRAF* V600E mutations were predictive of
24 response to anti-EGFR targeted therapy in people with metastatic colorectal cancer.
25 People with *RAS* or *BRAF* V600E mutant metastatic colorectal cancer also had
26 poorer progression-free and overall survival than those without such mutations.
27 While *RAS* testing is already used to select those people with metastatic colorectal
28 cancer most likely to benefit from anti-EGFR targeted therapy, *BRAF* V600E testing
29 has the potential to further refine this group.

1 The committee noted evidence that testing for deficient DNA mismatch repair may
2 inform systemic therapy choices for those with non-metastatic colorectal cancer, but
3 NICE diagnostics guidance on [molecular testing strategies for Lynch syndrome in](#)
4 [people with colorectal cancer](#) already recommends such testing for all people with
5 colorectal cancer when first diagnosed. For this reason no further recommendations
6 were made about testing for deficient DNA mismatch repair.

7 **How the recommendations might affect practice**

8 *RAS* testing is current practice. *BRAF* V600E testing is not done routinely in current
9 practice. *BRAF* V600E test can be done from the extended colorectal cancer
10 molecular test panel which is part of the recommendations in NICE diagnostics
11 guidance on [molecular testing strategies for Lynch syndrome in people with](#)
12 [colorectal cancer](#), so the recommendation should not have a large impact on
13 practice or costs.

14 Full details of the evidence and the committee's discussion are in [evidence review](#)
15 [B1: Use of molecular biomarkers to guide systemic therapy](#).

16 [Return to recommendations](#)

17 ***People with asymptomatic primary tumour***

18 Recommendation [1.5.1](#)

19 **Why the committee made the recommendations**

20 For people with incurable metastatic colorectal cancer whose primary tumour is
21 asymptomatic, there was some low quality evidence of better overall survival in
22 those who had resection of their primary tumour and chemotherapy compared with
23 chemotherapy alone.

24 Around a quarter of this group had postoperative complications and a small
25 proportion (around 5%) had severe postoperative complications which needed
26 intervention or were life-threatening. However, resecting the tumour at this stage can
27 prevent symptoms from developing later: almost a fifth of people who did not have
28 the asymptomatic primary tumour resected went on to develop primary tumour-
29 related symptoms that needed surgical treatment which could often mean an

1 emergency operation that can have higher risks of complications and stoma.
2 Because of this, the committee agreed the implications should be discussed with the
3 person so they can make an informed decision.

4 **How the recommendations might affect practice**

5 There could be an increase in resections of asymptomatic primary tumours,
6 however, the population with metastatic colorectal cancer and asymptomatic primary
7 tumour is small so no major cost impact is expected.

8 Full details of the evidence and the committee's discussion are in [evidence review](#)
9 [D1: Surgery for asymptomatic primary tumour](#).

10 [Return to recommendations](#)

11 ***Systemic anti-cancer therapy for people with metastatic colorectal*** 12 ***cancer***

13 Recommendation [1.5.2](#)

14 **Why the committee made the recommendations**

15 Guidance on systemic anti-cancer therapy for people with metastatic colorectal
16 cancer are covered by NICE technology appraisals and were not updated by this
17 guideline. The committee did not review the technology appraisals and merely refers
18 to them without a suggestion of an order or hierarchy of treatment. The technology
19 appraisals should be used when appropriate to guide the choice of systemic anti-
20 cancer therapy.

21 **How the recommendations might affect practice**

22 The recommendation reflects current practice and no change in practice is expected.

23 [Return to recommendations](#)

24 ***People with metastatic colorectal cancer in the liver***

25 Recommendations [1.5.3 to 1.5.6](#)

1 **Why the committee made the recommendations**

2 There was not enough evidence to show if simultaneous or sequential resection is
3 better. There was some poor quality evidence from retrospective cohort studies
4 showing that people who underwent sequential resection had better liver
5 progression-free survival. However, these results might be influenced by baseline
6 differences between the groups, and there was no difference in recurrence in other
7 parts of the body or in overall survival in several studies. There was no difference in
8 short-term adverse events and no evidence on quality of life was available. Based on
9 these findings and their experience, the committee agreed that a multidisciplinary
10 team with expertise in both colorectal and liver disease should consider if a
11 simultaneous or a sequential resection is appropriate, taking into account the
12 person's preference.

13 Evidence from randomised trials suggested that chemotherapy in addition to liver
14 resection improves disease-free survival and may improve overall survival. The
15 potential benefit on survival should be balanced with a higher rate of treatment-
16 related adverse events because of added chemotherapy. No quality of life evidence
17 was available.

18 The evidence on chemotherapy combined with radiofrequency ablation showed
19 better overall survival and progression-free survival compared to chemotherapy
20 alone. No difference was observed in treatment-related mortality and morbidity. The
21 evidence on quality of life was too limited for the committee to draw any conclusions.
22 The evidence on survival came from a single small study and the committee had
23 doubts about its relevance to current practice. Because of the uncertainties in the
24 evidence, the committee recommended considering chemotherapy with local
25 ablative techniques as an option for people whose liver metastases are determined
26 by the MDT to be unresectable but potentially curable. The evidence was on
27 radiofrequency ablation which is still used but in many centres has been largely
28 replaced by newer local ablative techniques, such as microwave ablation (see the
29 NICE interventional procedures guidance on [microwave ablation for treating liver](#)
30 [metastases](#)). Therefore, the committee agreed that it is more appropriate that local
31 ablative techniques, not only radiofrequency ablation, are considered.

1 Evidence from several randomised controlled trials did not show any benefit on
2 overall survival from SIRT as a first-line treatment for people with colorectal liver
3 metastases. Limited evidence was available on the effectiveness of SIRT for people
4 refractory or intolerant to standard chemotherapy and the committee was not able to
5 make a recommendation.

6 **How the recommendations might affect practice**

7 The recommendations largely reflect current practice and no substantial change in
8 practice is expected.

9 Full details of the evidence and the committee's discussion are in [evidence review](#)
10 [D2a: Treatment for metastatic colorectal cancer in the liver amenable to treatment](#)
11 [with curative intent](#) and [evidence review D2b: Treatment for metastatic colorectal](#)
12 [cancer in the liver not amenable to treatment with curative intent](#).

13 [Return to recommendations](#)

14 ***People with metastatic colorectal cancer in the lung***

15 Recommendations [1.5.7 to 1.5.8](#)

16 **Why the committee made the recommendations**

17 As there was limited evidence, the committee made recommendations based on
18 their clinical knowledge. There was not enough evidence to recommend one
19 treatment over another even though the current first choice is to perform surgery
20 over stereotactic body radiation therapy or ablation. Referring people to
21 multidisciplinary teams that specialise in primary lung disease may not be
22 appropriate as they do not specialise in the management of lung metastases from
23 colorectal cancer. Therefore, the committee agreed that the multidisciplinary team
24 should include a thoracic surgeon and a specialist in non-surgical ablation to ensure
25 that the appropriate specialist knowledge is available.

26 Based on their clinical knowledge, the committee recommended that biopsies should
27 be considered for patients with a single lung lesion to rule out primary lung cancer
28 and guide treatment options even if surgical excision is not planned.

1 Because of the lack of clinical evidence, a randomised trial comparing surgical to
2 non-surgical treatment is needed to provide more high quality, comparative data, so
3 the committee made a research recommendation on this topic.

4 **How the recommendations might affect practice**

5 The recommendations are expected to increase the involvement of thoracic
6 surgeons in the management of metastatic colorectal cancer, however this additional
7 expertise would result in expensive treatments being more appropriately targeted.
8 While assessing fitness for surgery is common practice, the advice to also discuss
9 factors including disease-free interval, CEA level, number, size and site of
10 metastases and other sites of disease should improve best practice across the NHS.

11 Full details of the evidence, the committee's discussion and the recommended
12 approach to research are in [evidence review D3: Treatment for metastatic colorectal
13 cancer in the lung amenable to local treatment.](#)

14 [Return to recommendations](#)

15 ***People with metastatic colorectal cancer in the peritoneum***

16 Recommendation [1.5.9](#)

17 **Why the committee made the recommendations**

18 The committee made the recommendations based on both the evidence and their
19 clinical knowledge. The advice to offer chemotherapy and refer to a specialist
20 cytoreductive surgery centre is in the same recommendation because these
21 interventions should happen at the same time. That is, making a referral should not
22 wait until chemotherapy has been given, and chemotherapy could be started before
23 the person is reviewed in the specialist centre.

24 It is standard practice to start all patients on a course of systemic anti-cancer therapy
25 and the evidence supported this, showing greater overall survival compared to
26 supportive care. The evidence on the effectiveness of cytoreductive surgery and
27 HIPEC was mixed but, based on their clinical knowledge, the committee decided
28 they should be considered.

1 The committee agreed it was important to recommend referral to a specialist centre
2 so that more patients can have potentially curative treatment. However, they were
3 concerned that this might lead to more centres offering the service without having
4 the necessary training and resources, so referral to recognised specialist centres
5 was recommended instead. This recommendation is in line with the NICE
6 interventional procedure guidance on [cytoreductive surgery followed by HIPEC for](#)
7 [peritoneal carcinomatosis](#).

8 **How the recommendations might affect practice**

9 It is standard practice for clinicians to initially offer chemotherapy to patients who are
10 fit, and if their cancer responds to systemic chemotherapy (that is, the person has
11 limited disease that has been stable over a period of time) cytoreductive surgery and
12 HIPEC might be suitable. Currently there are only 3 funded centres in England that
13 provide cytoreductive surgery and HIPEC. The recommendation could lead to an
14 increase in workload in these specialist centres as more patients would be referred
15 to the currently funded centres and a proportion of those will be suitable for
16 cytoreductive surgery with HIPEC, although this would be offset by reductions at
17 other centres.

18 Full details of the evidence and the committee's discussion are in [evidence review](#)
19 [D4: Local and systemic treatments for metastatic colorectal cancer isolated in the](#)
20 [peritoneum](#).

21 [Return to recommendations](#)

22 ***Follow-up for detection of local recurrence and distant metastases***

23 Recommendation [1.6.1](#)

24 **Why the committee made the recommendations**

25 Evidence showed that recurrent disease was more likely to be resectable when
26 patients received regular follow-up tests than with minimal or no follow-up. Evidence
27 also showed recurrent disease was more likely to be resectable when follow-up tests
28 included CEA and liver imaging. The 2011 NICE guideline on colorectal cancer
29 (updated and replaced by this guideline) recommended CEA and CT testing in the
30 first 3 years after treatment with curative intent, and the committee did not find

1 evidence to change this. Colonoscopic surveillance to detect metachronous
2 colorectal neoplasia was outside the scope of this guideline. The British Society of
3 Gastroenterology (BSG) and the Association of Coloproctology for Great Britain and
4 Ireland (ACPGBI) are currently updating guidance on this topic.

5 **How the recommendations might affect practice**

6 The recommendation reflects current practice so the committee agreed there should
7 be no change in practice.

8 Full details of the evidence and the committee's discussion are in [evidence review](#)
9 [E1: Follow-up to detect recurrence after treatment for non-metastatic colorectal](#)
10 [cancer.](#)

11 [Return to recommendations](#)

12 ***Management of low anterior resection syndrome***

13 Recommendations [1.6.2 to 1.6.4](#)

14 **Why the committee made the recommendations**

15 Based on their experience, the committee agreed LARS can have a significant
16 impact on a person's quality of life and daily functioning, so it is important to identify
17 and treat it quickly. Because LARS may only become apparent after discharge from
18 hospital, it is important that LARS is identified in primary care and people who have
19 had sphincter-preserving surgery are aware of its symptoms.

20 LARS should be assessed using a validated tool, for example the LARS score, which
21 is a validated patient-administered questionnaire.

22 No comparative evidence on different treatments for LARS was available, so the
23 committee agreed based on their experience that people with LARS should be
24 offered symptomatic treatment in primary care. The committee also agreed that if
25 treatments offered in primary care have not helped within 6 months, advice should
26 be sought from secondary care to discuss further options and consider specialist
27 input.

1 Because of the lack of evidence on the effectiveness of treatments for LARS, a
2 research recommendation was made to compare sacral nerve stimulation and
3 transanal irrigation in people with LARS for whom conservative treatments have not
4 worked.

5 **How the recommendations might affect practice**

6 Primary care clinicians are not necessarily aware of LARS or how to assess it, and
7 administering the questionnaire might need extra work and time. However, it is
8 patient-administered and easy to score and no training should be needed. Bowel
9 dysfunction treatment for associated symptoms are commonly delivered in primary
10 care, therefore, the recommendation is not expected to have a large impact on
11 current practice except raising awareness of LARS.

12 Full details of the evidence, the committee's discussion and the recommended
13 approach to research are in [evidence review E2: Optimal management of low](#)
14 [anterior resection syndrome.](#)

15 [Return to recommendations](#)

16 **Context**

17 Colorectal cancer (cancer of the colon or rectum, or bowel cancer) is the fourth most
18 common cancer in the UK, with over 41,000 new cases diagnosed each year
19 according to [Cancer Research UK](#). Risk factors include increasing age, genetics and
20 family history (particularly syndromes such as familial adenomatous polyposis and
21 Lynch syndrome), inflammatory bowel disease and other dietary and lifestyle factors.
22 Survival rates have improved over the years, with almost 60% of the people
23 diagnosed with colorectal cancer surviving for at least 5 years. Survival is linked to
24 disease stage at presentation, with better survival the earlier the disease is detected
25 and treated.

26 People with Lynch syndrome have an increased risk of colorectal cancer, with
27 lifetime risk estimated to be between around 50 to 80%⁵. The main strategy to

⁵ Kohlmann W, Gruber SB. Lynch Syndrome. 2004 (updated 2018). In: Adam MP, Ardinger HH, Pagon RA, et al., (eds). GeneReviews. University of Washington, Seattle, WA; 1993–2019. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK1211/>

1 prevent colorectal cancer in people with Lynch syndrome has been regular screening
2 with colonoscopy and polypectomy. Aspirin has been suggested as another potential
3 prevention strategy for colorectal cancer.

4 Diagnosis and staging of colorectal cancer are well established with histology and
5 appropriate imaging, and are not covered by this guideline.

6 Management of colorectal cancer has advanced over time with new treatment
7 methods and strategies being trialled and used. Management of local disease differs
8 depending on the site of the cancer. The standard practice for colon cancer is to
9 offer surgery for those who are fit for it. Recent trials have studied the effectiveness
10 of preoperative systemic anti-cancer therapy for colon cancer to improve survival.
11 Treatment for rectal cancer is more complex. There is variation in current practice in
12 the treatment for early rectal cancer, use of preoperative (chemo)radiotherapy,
13 surgical technique for rectal cancer surgery, and treatment for locally advanced or
14 recurrent rectal cancer. This guideline addresses all these issues. Until now, the
15 standard duration of adjuvant systemic therapy for colorectal cancer has been 6
16 months, which has been recently challenged by suggestion of a shorter duration in
17 order to lower toxicity caused by the treatment.

18 Metastatic colorectal cancer commonly affects the liver, lungs or peritoneum.
19 Treatment for metastatic colorectal cancer depends on, for example, the site and
20 number of the metastases and if the metastases are amenable to local treatment. In
21 addition, the role of molecular biomarkers in predicting effectiveness of systemic
22 anti-cancer therapy has been discussed more and more in recent years.

23 People who have been treated for colorectal cancer may have long-term side effects
24 of their treatments. For example, low anterior resection syndrome can have major
25 impact on quality of life and daily living and it affects around 40% of those who have
26 undergone sphincter-preserving surgery for rectal cancer. It is important that the
27 treatment options, their implications and potential consequences are discussed with
28 together with the person with colorectal cancer in order to enable shared decision
29 making.

1 **Finding more information and resources**

2 To find out what NICE has said on topics related to this guideline, see our web page
3 on [colorectal cancer](#).

4 **Update information**

5 This guideline is an update of NICE guideline CG131 (published November 2011)
6 and NICE guideline CSG5 (published June 2004) and will replace them.

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