Colorectal cancer

Clinical case scenarios for secondary care – mixed chemotherapy options

February 2012

NICE clinical guideline 131
These clinical case scenarios accompany the clinical guideline: ‘Colorectal cancer: the diagnosis and management of colorectal cancer’ (available at www.nice.org.uk/guidance/CG131).

Issue date: February 2012

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Introduction

Colorectal cancer is the third most common cancer in the UK after breast and lung cancer, with approximately 40,000 new cases registered each year. Occurrence of colorectal cancer is strongly related to age, with almost three-quarters of cases occurring in people aged 65 or over. Colorectal cancer is the second most common cause of cancer death in the UK. Around half of people diagnosed with colorectal cancer survive for at least 5 years after diagnosis.

Clinical case scenarios are an educational resource that can be used in individual or group learning situations. Each question should be considered by the individual or group before referring to the answers.

These six clinical case scenarios have been compiled to improve users’ knowledge on mixed chemotherapy options for colorectal cancer and their application in practice. They illustrate how the recommendations below from ‘Colorectal cancer: the diagnosis and management of colorectal cancer’ (NICE clinical guideline 131) can be applied to the care of patients in secondary care.

### Chemotherapy for advanced and metastatic colorectal cancer

When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first-line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment (1.3.4.1)

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.
Chemotherapy for advanced and metastatic colorectal cancer

Decide which combination and sequence of chemotherapy to use after full discussion of the side effects and the patient's preferences (1.3.4.2)

This tool is available in two formats: This PDF version, which can be used for individual learning, and a slide set that can be used for groups. Slides from the clinical case scenario slide set can be added to the standard NICE ‘awareness raising’ slide set produced for this guideline.

You will need to refer to the NICE clinical guideline to help you decide what steps you would need to follow to diagnose and manage each case, so make sure that users have access to a copy (either online at www.nice.org.uk/guidance/CG131 or as a printout). You may also want to refer to the colorectal cancer NICE pathway, the quality standard (in development) and the specialist library page on NHS Evidence.

Each case scenario includes details of the person’s initial presentation, their past medical history and their clinician’s summary of the situation after examination. The clinical decisions surrounding diagnosis and management are then examined through a question and answer approach.
**Staging of colorectal cancer**

Below is a summary of the fifth edition of the TNM staging system for colorectal cancer and comparison with Dukes' stage.

<table>
<thead>
<tr>
<th>Tumour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>the tumour is confined to the submucosa</td>
</tr>
<tr>
<td>T2</td>
<td>the tumour has grown into (but not through) the muscularis propria</td>
</tr>
<tr>
<td>T3</td>
<td>the tumour has grown into (but not through) the serosa</td>
</tr>
<tr>
<td>T4</td>
<td>the tumour has penetrated through the serosa and the peritoneal surface. If extending directly into other nearby structures (such as other parts of the bowel or other organs/body structures) it is classified as T4a. If there is perforation of the bowel, it is classified as T4b.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nodes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N0¹</td>
<td>no lymph nodes contain tumour cells</td>
</tr>
<tr>
<td>N1²</td>
<td>there are tumour cells in up to 3 regional lymph nodes</td>
</tr>
<tr>
<td>N2²</td>
<td>there are tumour cells in 4 or more regional lymph nodes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metastases</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M0</td>
<td>no metastasis to distant organs</td>
</tr>
<tr>
<td>M1</td>
<td>metastasis to distant organs</td>
</tr>
</tbody>
</table>

¹A tumour nodule in the pericolic or perirectal adipose tissue without evidence of residual lymph node is regarded as a lymph node metastasis if it is more than 3 mm in diameter. If it is less than 3 mm in diameter, it is regarded as discontinuous tumour extension.

²If there are tumour cells in non-regional lymph nodes (that is, in a region of the bowel with a different pattern of lymphatic drainage to that of the tumour), that is regarded as distant metastasis (pM1).

<table>
<thead>
<tr>
<th>Dukes’ stage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dukes' stage A = T1N0M0</td>
<td>or T2N0M0</td>
</tr>
<tr>
<td>Dukes' stage B = T3N0M0</td>
<td>or T4N0M0</td>
</tr>
<tr>
<td>Dukes' stage C = any T, N1, M0</td>
<td>or any T, N2, M0</td>
</tr>
<tr>
<td>Dukes' stage D = any T , any N, M1</td>
<td></td>
</tr>
</tbody>
</table>
**Performance status**

This scale is used by doctors and researchers to assess how a patient's disease is progressing, how the disease affects the daily living abilities of the patient, and to determine appropriate treatment and prognosis. It is included here for health care professionals to use.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Fully active, able to carry on all pre-disease performance without restriction</td>
</tr>
<tr>
<td>1</td>
<td>Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, for example, light house work, office work</td>
</tr>
<tr>
<td>2</td>
<td>Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours</td>
</tr>
<tr>
<td>3</td>
<td>Capable of only limited self-care, confined to bed or chair more than 50% of waking hours</td>
</tr>
<tr>
<td>4</td>
<td>Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair</td>
</tr>
<tr>
<td>5</td>
<td>Dead</td>
</tr>
</tbody>
</table>

**Patient experience: chemotherapy for advanced colorectal or metastatic cancer**

Patients should be offered a full discussion with the clinicians responsible for their treatment. Topics should include:

- the patient’s performance status
- possible side effects
- the patient’s preferences.

The patient should be given written information and be able to have a face-to-face discussion (with a friend, carer or family member present, if requested by the patient).

Patients in these situations are likely to be deeply anxious and to feel under pressure not only from their own perspective and that of those closest to them but also from clinicians who are likely to want to start treatment as soon as possible. As far as possible, in line with responsible case management, patients should be given time and opportunity to arrive at a reasoned decision that meets their needs, and they should have the clinical support they need to help them do this.
**Learning objectives**

By the end of these scenarios, you should:

- be aware of the different chemotherapy treatment options recommended for advanced and metastatic colorectal cancer

- understand the rationale behind the choice of treatment options identified in each scenario

- tailor their choices to the needs and preferences of the patient

- consider the information and support that may be needed by each patient, e.g. side effects, treatment regime
Clinical case scenarios for secondary care

Case scenario 1: Peter

Presentation
A 58-year-old man with liver and lung metastases from colorectal cancer.

Medical history
None

On examination
Well: performance status 0, no evidence of bowel obstruction.

Next steps for management

1.1 Question
What should his initial treatment be?
1.1 Answer
There is no evidence of obstruction, therefore Peter could receive palliative chemotherapy.

Next steps for management

1.2 Question
Which chemotherapy regimen is most appropriate for Peter?
### 1.2 Answer

**FOLFOX**

**Related recommendations**

When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- **FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment** or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.
**Supporting information**

Peter should receive combination chemotherapy. This should consist of a fluoropyrimidine (either capecitabine or fluorouracil) in combination with either oxaliplatin or irinotecan. Trials have shown that the order that active chemotherapy regimens are given in colorectal cancer does not have a big impact on overall survival (see Tournigand et al., Journal of Clinical Oncology 2004; Seymour et al., Journal of Clinical Oncology 2005). So the choice of first-line treatment depends on convenience and likely side effects. XELOX is given every 3 weeks and is administered as a tablet, so is less intrusive in terms of hospital visits. There is a higher risk of grade 3 and grade 4 diarrhoea and hand-foot syndrome, but a lower risk of febrile neutropenia. Careful consideration should be given to bowel function and general fitness before treatment starts. Infusional fluorouracil chemotherapy may be easier for some patients, for example those with memory problems or who have difficulty taking tablets. But it must be administered through a central line, which remains in place for the duration of treatment.

FOLFIRI has similar response rates in the first-line metastatic setting, but can cause more mucositis, fatigue and hair loss.

Although not recommended by NICE, bevacizumab may be considered by some clinicians as first-line chemotherapy in metastatic colorectal cancer. This would be subject to application to the Cancer Drugs Fund. (see page 30 for more information on bevacizumab)

After discussion, Peter chose to have a peripherally inserted central catheter line inserted and have FOLFOX.

**Next steps for management**

**1.3 Question**

Peter initially responded to treatment and stopped after 6 months. His disease progressed 3 months after stopping chemotherapy and he remains performance status 0. What treatment should he now receive?
1.3 Answer

Peter should receive single agent Irinotecan

**Relevant recommendations**

When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

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**Supporting information**

As Peter has a good performance status, he should be considered for second-line treatment, which should either be FOLFIRI or single agent irinotecan. His disease progressed within 3 months of stopping fluorouracil, and therefore single agent irinotecan is a reasonable choice. This has the advantage that it is every 3 weeks rather than every 2 weeks, and does not need a central catheter line but some studies suggest that alopecia and diarrhoea are slightly more frequent than with combination treatment.
Case scenario 2: Juliet

Presentation
A 65-year-old woman with metastatic colorectal cancer (lymph node and lung metastases).

Medical history
Diagnosed with stage II colorectal cancer 2 years earlier, treated surgically and did not receive adjuvant chemotherapy.

On examination
Performance status 1

Next steps for management

2.1 Question
What should Juliet’s initial treatment be?
2.1 Answer

Palliative XELOX chemotherapy

Related recommendations
When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment. [1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

Supporting information
Juliet should receive combination chemotherapy. This should consist of a fluoropyrimidine (either capecitabine or fluorouracil) plus either oxaliplatin or irinotecan. After discussing the options, Juliet said she did not want to lose her hair. She has a 1-hour journey to get to the hospital and is the main carer for her husband, who has dementia. She therefore chose to have XELOX because this was as effective as FOLFOX but Juliet would need to visit the hospital less often.
Next steps for management

2.2 Question

After responding to XELOX Juliet stopped treatment after 6 months. Her disease progressed 6 months after stopping the treatment. She remains performance status 1. What treatment should Juliet receive now?
2.2 Answer

FOLFIRI

Related recommendations
When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment. [1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

Supporting information
Because Juliet has a good performance status she should be considered for second-line treatment. Ideally this should be FOLFIRI because it is 6 months since she received fluorouracil-based treatment. However, if the extra trips to hospital are an issue, then single agent irinotecan can also be discussed.

After discussion, Juliet chose to have FOLFIRI.
Case scenario 3: Edward

Presentation
A 70-year-old man who was found to have metastatic colorectal cancer (lymph node disease) on his computed tomography (CT) scan.

Medical history
Underwent a right hemicolectomy 14 months before and received 6 months of adjuvant XELOX chemotherapy, which he completed 6 months ago.

On examination
Well: performance status 1

Next steps for diagnosis

3.1 Question
What should his initial treatment be?
3.1 Answer
Palliative chemotherapy with FOLFIRI

Related recommendations
When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment. [1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

Supporting information
Because Edward received adjuvant oxaliplatin he cannot receive further oxaliplatin because of the cumulative risk of peripheral neuropathy. Because it has been 6 months from stopping his adjuvant chemotherapy and he has a good performance status he should receive FOLFIRI chemotherapy.

Next steps for management

3.2 Question
His disease progresses after 3 months of treatment and at this stage he is performance status 2. What treatment should Edward receive now?
3.2 Answer

Edward should receive the best supportive care.

**Supporting information**

Edward has received fluorouracil, oxaliplatin and irinotecan. It is unlikely that he would benefit from further chemotherapy. Because he is performance status 2 it is unlikely that he would be suitable for a clinical trial.

Edward should be considered for best supportive care with appropriate palliative care input.

For patients with good performance status (0 or 1), cetuximab treatment can be considered. Patients with tumours that are wild-type for the KRAS gene may benefit from cetuximab in the third-line setting. This treatment would have to be funded by application to the Cancer Drugs Fund.
Case scenario 4: Ahmed

Presentation
A 72-year-old man who is shown to have metastatic colorectal cancer (liver and lymph node metastases) on his CT scan.

Medical history
A year ago Ahmed was diagnosed with stage II colorectal cancer and underwent an anterior resection. Adjuvant capecitabine was recommended as treatment but he developed angina on his first cycle (on day 5) so the adjuvant treatment was stopped.

On examination
Well: performance status 1, normal renal function

Next steps for management

4.1 Question
What should his initial treatment be?
4.1 Answer

The initial treatment should be raltitrexed and oxaliplatin

Related recommendations

Consider raltitrexed only for patients with advanced colorectal cancer who are intolerant to 5-fluorouracil and folinic acid, or for whom these drugs are not suitable (for example, patients who develop cardiotoxicity). Fully discuss the risks and benefits of raltitrexed with the patient. [1.3.4.3]

Prospectively collect data on quality of life, toxicity, response rate, progression-free survival, and overall survival for all patients taking raltitrexed. [1.3.4.4]

Supporting information

Because Ahmed is well and has a good performance status he should be considered for palliative combination chemotherapy. While irinotecan can be given as a single agent, oxaliplatin does not have significant activity unless given in combination. Fluoropyrimidines are contra-indicated because Ahmed had coronary artery spasm causing angina with capecitabine. He has normal renal function so he should be considered for treatment with raltitrexed and oxaliplatin. Raltitrexed can cause severe diarrhoea, skin rashes, and abnormal liver function tests.

Next steps for management

Ahmed’s CT scan at 3 months shows a response so he receives a further 3 months of treatment. At this point his CT scan shows disease progression with liver and nodal disease and additional peritoneal disease. However Ahmed remains performance status 1.

4.2 Question

What treatment should Ahmed receive now?
4.2 Answer

Ahmed should receive irinotecan (single agent irinotecan as second-line treatment).

**Related recommendations**

When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- **FOLFOX** (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

**Supporting information**

Because Ahmed is well and has a good performance status he should be considered for single agent irinotecan. But his peritoneal disease should be monitored closely because it causes an increased risk of developing bowel obstruction and bowel obstruction is a contra-indication to irinotecan.
Case scenario 5: Rosie

Presentation
A 65-year-old woman who works as a piano teacher with metastatic disease in the liver, which the hepatobiliary multidisciplinary team have decided is inoperable.

Past medical history
Thirty months ago Rosie was diagnosed with stage III rectal cancer. She had a resection followed by treatment for 6 months with adjuvant capecitabine chemotherapy. She has diabetes, which is treated with insulin.

On examination
Well: performance status 1

Next steps for diagnosis

5.1 Question
What should Rosie’s initial treatment be?
5.1 Answer

FOLFIRI

Related recommendations

When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

Decide which combination and sequence of chemotherapy to use after full discussion of the side effects and the patient’s preferences. [1.3.4.2]
**Supporting information**

Because Rosie has a good performance status she should be considered for combination chemotherapy. Because she has diabetes she is at greater risk of developing peripheral neuropathy with oxaliplatin. This would affect her ability to continue working as a piano teacher so it would be reasonable to start with FOLFIRI.

**Next steps for management**

**5.2 Question**

Rosie responds to FOLFIRI and stops after 6 months of treatment. Six months later her disease progresses, but she remains performance status 1. What treatment should Rosie receive now?
5.2 Answer

FOLFOX

Related recommendations
When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

Supporting information
As Rosie still has a good performance status she should receive second line treatment. The risk of neuropathy should be discussed, but she should be offered oxaliplatin combined with either fluorouracil or capecitabine. Alternatively, as it has been 6 months since her last chemotherapy, treatment with FOLFIRI could be considered again.
Case scenario 6: James

Presentation
A 78-year-old man presenting with liver and lung metastases.

Medical history
He had a left hemicolectomy for stage II colorectal cancer 3 years ago.

On examination
Well: performance status 1

Next steps for diagnosis

6.1 Question
What should James's initial treatment be?
6.1 Answer
Combination chemotherapy

**Related recommendations**
When offering multiple chemotherapy drugs to patients with advanced and metastatic colorectal cancer, consider one of the following sequences of chemotherapy unless they are contraindicated:

- FOLFOX (folinic acid plus fluorouracil plus oxaliplatin) as first line treatment then single agent irinotecan as second-line treatment or
- FOLFOX as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment or
- XELOX (capecitabine plus oxaliplatin) as first-line treatment then FOLFIRI (folinic acid plus fluorouracil plus irinotecan) as second-line treatment.

[1.3.4.1]

At the time of publication (November 2011), irinotecan did not have UK marketing authorisation for second-line combination therapy. Informed consent should be obtained and documented.

**Supporting information**
James has a good performance status so he should be considered for combination chemotherapy treatment. In the first-line metastatic setting this should usually be oxaliplatin in combination with fluorouracil or capecitabine.

**Next steps for management**

6.2 Question
James received 12 weeks of treatment with FOLFOX. At this point his CT scan shows disease progression. He is also jaundiced but has no dilated ducts. He has a performance status of 2. What treatment should he receive next?
6.2 Answer

No further treatment because irinotecan is contra-indicated in a jaundiced patient. James should be given the best supportive care.

Supporting information

Recommendation 1.3.4.1 recommends mixed treatment chemotherapy options unless they are contraindicated, for example, in jaundice patients. In this instance other treatment options may be more suitable.

Cetuximab should not be considered because James’s performance status is 2. It would only be appropriate if he had a performance status of 0–1.

For more information on biological agents in metastatic colorectal cancer see:

Other implementation tools

NICE has developed tools to help organisations implement the clinical guideline on colorectal cancer (listed below). These are available on the NICE website (www.nice.org.uk/guidance/CG131).

- **Standard slide set** – to support awareness raising activities
- **Costing report** – gives the background to the national savings and costs associated with implementation.
- **Costing template** - can be used by health communities to assess the local impact of implementing the recommendations, based on the local population. The national assumptions used in the template can be altered to reflect local circumstances.
- **Audit support** – for monitoring local practice, in particular:
  - **Audit tool** – chemotherapy for advanced and metastatic colorectal cancer
- **Baseline assessment** – to help you identify which areas of practice may need more support, decide on clinical audit topics and prioritise implementation activities.
- **An example case study** based on the Merseyside and Cheshire Cancer Network model to support implementation of the recommendation on the establishment of early rectal multidisciplinary teams. Although cited in the ‘Improving outcomes in colorectal cancer’ (NICE cancer service guidance; available from http://guidance.nice.org.uk/CSGCC) very few early rectal multidisciplinary teams have been established.

A practical guide to implementation, ‘How to put NICE guidance into practice: a guide to implementation for organisations’, is also available (www.nice.org.uk/usingguidance/implementationtools).

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