

Clinical practice guidelines for the prevention, early detection and management of colorectal cancer

A guide for
general practitioners

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INTRODUCTION

This general practitioners' guide summarises the main evidence-based recommendations from the NHMRC approved *Clinical practice guidelines for the prevention, early detection and management of colorectal cancer* 2005. The guidelines were produced under the auspices of the Australian Cancer Network, by the combined efforts of all professional groups managing colorectal cancer in Australia, and recognise the pivotal role of the general practitioner in the management of patients with this disease.

The aim of this resource is to have well informed people being involved in their own cancer prevention and cancer management programs. It is further intended to assist general practitioners lead patients with colorectal cancer through the complex and evolving forms of investigation and treatment.

The clinical practice guidelines, which can be obtained from the Internet, (www.nhmrc.gov.au/publications/synopses/cp106syn.htm or www.cancer.org.au/clinical_guidelines) and the *Familial aspects of bowel cancer: A guide for health professionals* can be used as resources to provide more information for commonly asked questions on prevention, screening and family risk.

Colorectal cancer is the most commonly diagnosed, non-cutaneous cancer in Australia. In 2001 there were 12,844 cases of colorectal cancer (6,961 in men and 5,883 in women) and 4,754 deaths (2,601 in men and 2,153 in women). In Australia, the lifetime risk of developing colorectal cancer before the age of 75 years is approximately one in 17 for men and one in 26 for women.

Colorectal cancer is less common in people under the age of 50 years, with the median age at diagnosis being 70. As shown in the box below, risk increases with age.

Risk – related to age (for both sexes)		
Person's age	Risk in the next 5 years	next 10 years
30 years	1 in 7000	1 in 2000
40 years	1 in 1200	1 in 400
50 years	1 in 300	1 in 100
60 years	1 in 100	1 in 50
70 years	1 in 65	1 in 30
80 years	1 in 50	1 in 25

Risk is also greater for people with a family history of the disease. About two per cent of patients with colorectal cancer suffer from genetic syndromes associated with an exceptionally high risk of colorectal cancer and another 15 to 20 per cent have a family history of colorectal cancer without an identified genetic predisposition (see categories 1 to 3 below).

PREVENTION

Long-term adherence to healthy lifestyle and dietary recommendations may lower the risk of colorectal cancer at the population level, although the degree of risk reduction is yet to be quantified.

Healthy lifestyle

It is suggested that all people participate in moderate to vigorous physical activity for 30 to 60 minutes per day, maintain a healthy

body weight, avoid or limit alcohol consumption (no more than two standard drinks per day for men and no more than one standard drink per day for women) and do not smoke. Current smokers should quit smoking.

Diet

It is recommended that daily energy intake be restricted (<2,500 calories for men and <2,000 calories for women) and intake of dietary fat be reduced (<25 per cent of total energy). It is also advised that vegetables (5 or more serves), fruit (2 serves) and dietary calcium (1,000–1,200mg) be consumed each day. The consumption of poorly soluble cereal fibres (e.g. wheat bran) is encouraged.

Moderate intakes of lean red meat can be eaten as part of a mixed diet. Charring of red meat is best avoided and consumption of processed meats should be limited.

Chemoprevention

Folate, phytonutrients, antioxidant vitamins and selenium supplements are not currently recommended for the prevention of colorectal cancer.

Although HRT (hormone replacement therapy) may reduce risk for colorectal cancer in women, its use for that purpose is not recommended because of possible increased risks for breast cancer, stroke, and pulmonary embolism.

Due to uncertainties about dose and side effects, aspirin and non-steroidal anti-inflammatory drugs are also not recommended for prevention of colorectal cancer. However, in people who have had an adenoma removed, aspirin should be considered as prophylaxis against further adenoma development.

EARLY DETECTION

Colorectal cancer satisfies all nine of the WHO principles of screening. Randomised controlled trials (RCTs) have provided the highest level of evidence to show that population screening for bowel cancer using faecal occult blood testing (FOBT) is effective in reducing mortality from the disease. A number of case-control studies have indicated that screening with flexible sigmoidoscopy could also reduce mortality. However, definitive results from three RCTs currently in progress will not be available for several more years. There is no RCT evidence to support population screening based on colonoscopy.

Faecal occult blood testing

The FOBT-based RCTs used chemical (guaiac) tests. These are affected by diet and medication and require samples from three bowel actions. Laboratory-based immunochemical tests, specific for human haemoglobin, are now available. These tests have greater acceptability as they are not affected by diet or medication and most only require samples from two bowel actions.

National bowel cancer screening program

The Australian Government has provided \$43.4 million over three years to phase in a National Bowel Cancer Screening Program. Further information about the National Bowel Cancer Screening Program may be obtained by visiting the website www.cancerscreening.gov.au.



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General enquiries about screening

If you have an enquiry about screening from an asymptomatic patient who is concerned about prevention, their level of risk, or the possible presence of colorectal cancer, the following process is recommended:

- Take a thorough history focusing on risk factors, namely:
 - Age;
 - Symptoms (see *symptoms of colorectal cancer* below);
 - Family medical history (age of onset, number of affected family members, and which side of the family);
 - Individual history of colorectal adenomas, colorectal cancer, inflammatory bowel disease;
 - Diet and lifestyle.
- Perform a physical examination (including abdominal and a digital rectal examination).

Once it is clear that there are no relevant risk factors apart from age, and that the person is otherwise healthy:

- Explain information regarding risk, diet and healthy lifestyle (including cigarette smoking);
- Explain the nature, value, risks, and costs of screening and all screening tools available, and indicate that it is reasonable to choose FOBT-based screening (providing testing is of high quality).

Symptomatic individuals require diagnostic investigations.

In asymptomatic individuals a management decision can then be made based upon the following information.

Quantifying risk based on family history

Individuals can be placed in one of three categories of relative risk, based on their family history.

Category 1 – those at or slightly above average risk

This covers about 98 per cent of the population.

Asymptomatic people fit into this category if there is:

- No personal history of colorectal cancer, colorectal adenomas or chronic inflammatory bowel disease and no confirmed close family history of colorectal cancer; or
- One first-degree (parent, sibling, child) or second-degree (aunt, uncle, niece, nephew, grandparent, grandchild) relative with colorectal cancer diagnosed at age 55 or older; or
- Two relatives diagnosed with colorectal cancer at age 55 or older but on different sides of the family.

Screening guidelines:

- FOBT is recommended at least every two years for all people over the age of 50. If eligible, participation in the National Bowel Cancer Screening Program should be recommended. For those not eligible for the national program, advice on access to FOBT is available from The Cancer Council Helpline (Phone 13 11 20).
- Consider sigmoidoscopy (preferably flexible) every five years from the age of 50.
- It is important that GPs advise individuals to re-present if they develop symptoms of colorectal cancer. In symptomatic patients, particularly those aged over 40 years or those with a personal history of colorectal adenomas, referral to a specialist should be considered. Full examination of the large bowel with colonoscopy is recommended.

Category 2 – those at moderately increased risk

This covers one to two per cent of the population.

Asymptomatic people fit into this category if there is:

- One first-degree relative with colorectal cancer diagnosed before the age of 55 (without potentially high risk features as in category 3); or
- Two first or one first and one second-degree relative/s on the same side of the family with colorectal cancer diagnosed at any age (without potentially high risk features as in category 3).

Screening guidelines:

- Offer colonoscopy every five years starting at 50, or at an age 10 years younger than the age of first diagnosis of colorectal cancer in the family, whichever comes first.
- Flexible sigmoidoscopy plus double-contrast barium enema or CT colonography may be offered if colonoscopy is contraindicated for some reason.
- Consider offering FOBT in the intervening years. Patients should be informed that a positive test will require further investigation.

Category 3 – those at potentially high risk

This covers less than one per cent of the population.

Asymptomatic people fit into this category if there are:

- Three or more first-degree relatives or a combination of first and second-degree relatives on the same side of the family diagnosed with colorectal cancer; or
- Two or more first or second-degree relatives on the same side of the family diagnosed with colorectal cancer plus any of the following high-risk features:
 - Multiple colorectal cancers in a family member;
 - Colorectal cancer before the age of 50 years;
 - An hereditary non-polyposis colorectal cancer (HNPCC)-related cancer (endometrial, ovarian, stomach, small bowel, renal pelvis or ureter, biliary tract, brain cancer); or
- At least one first-degree or second-degree relative with a large number of adenomas throughout the large bowel [suspected familial adenomatous polyposis (FAP)]; or
- Member of a family in which a gene mutation that confers a high risk of colorectal cancer has been identified.

Screening guidelines:

- Consider referral to a familial cancer service for further risk assessment and possible genetic testing.
- Refer to a bowel cancer specialist to plan appropriate surveillance and management. This may include:
 - FAP:** Flexible sigmoidoscopy yearly or second-yearly, starting from age 12–15 years until polyposis develops, then prophylactic surgery. If family genetic testing is inconclusive and no polyposis develops, sigmoidoscopy reduced to every 3 years after the age of 35, then change to population screening if examinations normal to age 55. Prophylactic surgery, e.g. restorative proctocolectomy, is appropriate for those with proven FAP.
 - HNPCC:** Colonoscopy every one to two years from age 25, or five years earlier than the youngest diagnosis in the family (whichever comes first). FOBT may be offered in alternate years or to subjects unwilling to accept colonoscopy. There are options for surveillance at other sites, usually starting from age 25–35. Prophylactic surgery may be appropriate for some.

Symptoms of colorectal cancer

The most common presenting symptoms of colorectal cancer are:

- Bleeding from the rectum, mixed with or separate from the faeces;
- A change in bowel habit, especially a recent one;
- Symptoms of anaemia;
- Abdominal pain, especially if of recent onset;
- Weight loss.

These symptoms are not always clear-cut and can have a variety of other causes, including more common conditions such as haemorrhoids.

Investigation of symptoms

Investigation must be tailored to the circumstances.

- The recent onset of symptoms in a patient over 40 years of age raises the index of suspicion for colorectal cancer, and investigation is important in this situation. Referral to a specialist should be considered.
- Persons under 40 years of age should be investigated if there is a positive family history, if there is not an identified cause of symptoms, or if symptoms are persistent.

When a decision is made to investigate, it is appropriate to perform a thorough examination of the anus, rectum and colon by one or more of the following in order to make a definitive diagnosis:

- Digital rectal examination and sigmoidoscopy; and
- Colonoscopy; or
- Air contrast barium enema and sigmoidoscopy; or
- CT colonography.

The accuracy and safety of these investigations depends upon quality issues. Only colonoscopists who are appropriately credentialed should be consulted. If investigations are incomplete, an alternative investigation is necessary.

Adenomatous polyps

If any polyps are seen at colonoscopy they should be removed.

- For patients with adenomatous polyps:
 - Repeat colonoscopy is warranted if there is uncertainty about completeness of removal of an adenoma. The colonoscopist should be able to clear the large bowel of polyps.
 - Surveillance colonoscopy should be performed at three years for a large adenoma (more than 1 cm in diameter), adenomas with high-grade dysplasia or villous change, multiple (3 or more) adenomas, or those aged 60 or more with a first-degree relative with colorectal neoplasia.
- Surveillance colonoscopy may be delayed to four to six years for single tubular adenomas less than 1 cm in diameter.

COLORECTAL CANCER MANAGEMENT

Clinical trials

Doctors should encourage patients with colorectal cancer to consider participating in appropriate clinical trials for which they are eligible.

Preoperative assessment

Routine preoperative assessment includes a full medical history and physical examination, with particular interest in cardiorespiratory assessment.

- All patients who have a reasonable chance of a post-operative stoma should be prepared for this possibility. The patient should be seen by an experienced stomal therapist before surgery.

Preparation for surgery

- Many patients having surgical resection of the colon still have bowel preparation, although there is no evidence that this reduces infection rates or morbidity following surgery. Therefore, mechanical bowel preparation is not routinely indicated unless where there are anticipated problems with faecal loading that might create technical difficulties with the procedure.
- Patients undergoing surgery should receive prophylaxis for thromboembolic disease.
- Prophylactic antibiotics are required in colorectal surgery. A single preoperative dose of intravenous cephalosporin and metronidazole or gentamicin and metronidazole is an effective regimen.

Elective surgery for colon cancer

An *en bloc* resection of the primary colonic cancer together with the appropriate lymph nodes is undertaken.

In experienced hands, laparoscopic surgery has an equivalent short-term outcome to conventional surgery.

Rectal cancer

In general, sphincter saving operations are preferred to abdominoperineal resection. With the use of modern instruments and surgical specialisation, most rectal tumours can be removed with preservation of the sphincters to avoid the implications of a permanent colostomy.

Local excision of small rectal tumours can be effective in selected cases.

Emergency surgery

A large proportion of patients (about 20 per cent) with colorectal cancer will present as an emergency.

This may be because of obstruction, perforation or significant bleeding. Patients should be urgently sent to an appropriate hospital and usually require surgery with resection of the cancer and management of any complications.

Staging systems and prognosis after surgery

Staging of colorectal cancer is complex because of the multiplicity of staging systems. The ACPS (Australian Clinico-Pathological Staging System) is recommended as a method of staging and is very helpful in clinical management but pTNM (pathological staging of tumour, node and metastasis) should also be reported to allow for international comparisons.

Prognosis depends upon the degree to which the cancer has spread and is described in stages.

Stage	Definition	Five year Survival figures
ACPS	pTNM	
A	I	Localised within the bowel 88%
B	II	Penetrates the bowel wall 70%
C	III	Regional nodal involvement 43%
D	IV	Distant metastases 7%

The overall five-year survival for colorectal cancer is just over 50 per cent. There is an upward trend in these survival figures.

Chemotherapy and radiotherapy combined with surgery have been shown to improve survival in selected groups with colorectal cancer.

Adjuvant therapies

Colon cancer

Those with resected node-positive colon cancer [Stage C (III)], unless having significant co-morbidity, should be routinely offered adjuvant chemotherapy.

For those with Stage B (II) colon cancer, a decision regarding adjuvant treatment should be made following a discussion of the merits and side effects of chemotherapy. High-risk sub-groups may benefit more from adjuvant chemotherapy.

Rectal cancer

Adjuvant chemotherapy and radiotherapy should be offered to patients if they have non-metastatic, low to mid-rectal cancer that has either penetrated the rectal wall and/or involved local lymph nodes, because it significantly improves survival and local tumour control.

- Preoperative therapy is preferred to postoperative therapy as it may lower the incidence of morbidity and is associated with a lower rate of local recurrence.
- Postoperative chemotherapy and radiotherapy is recommended for patients with high-risk rectal cancer who did not receive preoperative therapy, because it improves survival and local tumour control.

Follow-up after curative resection

Intensive follow-up for colorectal cancer should be performed for patients who have had potentially curable disease.

Advanced disease

Local management

- Surgery, radiation therapy or chemotherapy may be offered to patients with locally advanced or recurrent disease.
- Systemic chemotherapy significantly prolongs life when compared to best supportive care in patients with metastatic colorectal cancer.

The cure of liver and/or lung metastases is possible, providing all disease can be resected. This approach is supported by meta-analyses with long-term follow-up.

Palliative care

Palliative care management should be offered to all patients who experience intractable symptoms associated with advanced cancer. Valuable assistance can be obtained from consultation with palliative care specialists. This management may involve a wide range of therapies.

Psychosocial care

Psychosocial care is important. Psychosocial interventions should be a component of care as they can improve the quality of life for patients with cancer. The National Breast Cancer Centre's *Clinical practice guidelines for the psychosocial care of adults with cancer – A summary guide for health professionals* (www.nbcc.org.au/bestpractice/resources/PCAS188_clinicalpracticeguid.pdf) has been developed to assist health professionals in providing evidence-based psychosocial care for adults with cancer and their families. The summary guide outlines key emotional issues to consider when treating patients with cancer and includes practical recommendations to promote adjustments and detect and treat emotional issues.

COMMUNICATION WITH THE PATIENT

Information should be provided to patients in a form and manner that helps patients understand the problem and treatment options available, and which is appropriate to the patient's circumstances, personality, expectations, fears, beliefs, values and cultural background.

Patient information

Where possible, the following information should be provided in collaboration with the GP, surgeon and stomal therapy nurse to a patient with colorectal cancer:

- The causes of colorectal cancer and the extent of the disease;
- Proposed approach to investigation and treatment, including information on expected benefits, the process involved, common side effects, whether the intervention is standard or experimental, who will undertake the intervention, and the likely consequence of choosing a particular treatment or no treatment;
- The time and costs involved;
- Emotional reactions, appearance after surgery, and the effect of cancer and its therapy on interpersonal and sexual relationships;
- Genetic implications for close relatives;
- Access to special items (stomal devices) and entitlements to benefits and services (travel subsidies and prostheses);
- Access to cancer information services.

Quality of life

Doctors involved in the management of patients with colorectal cancer should be aware of the potential impact of treatment on quality of life and should include this in decision making.

Patients should be informed of the likely impact of treatment alternatives on their quality of life.

Support

Support needs for patients with colorectal cancer and their families may include:

- Psychosocial support and counselling, including sexuality and fertility;
- Access to a cancer support service and/or an ostomy support group;
- Education and assistance with stomal therapy;
- Assistance with care of children or other family members;
- Assistance with transport, travel and accommodation;
- Dietary advice.

For more information contact
The Cancer Council Helpline
on 13 11 20