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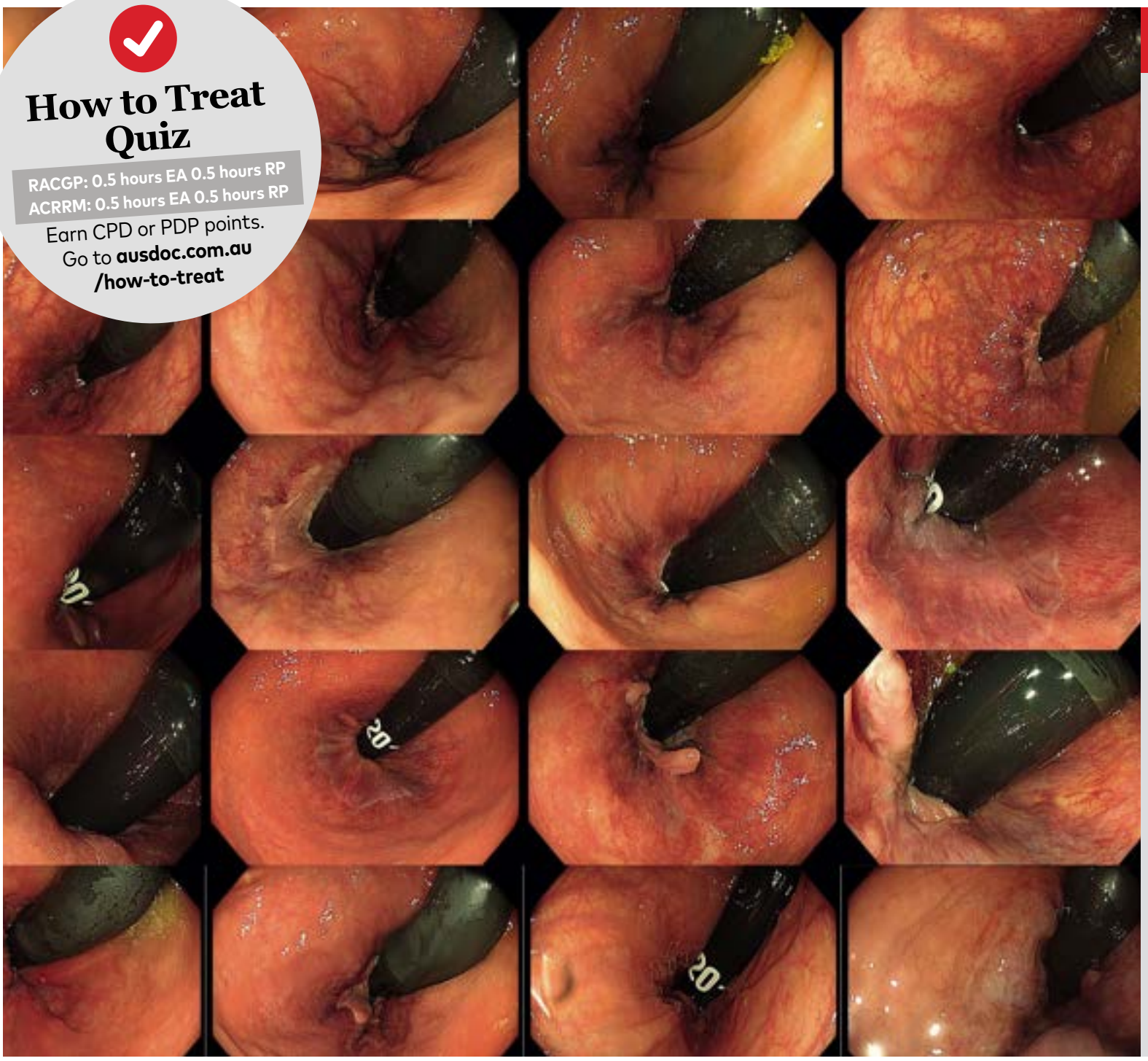

NEED TO KNOW

There were about 5276 deaths from colorectal cancer in Australia in 2022, second only to lung cancer with 9048.

The federally funded FOBT-based Australian National Bowel Cancer Screening Program is estimated to reduce colorectal cancer mortality by around 16%.

Screening colonoscopy reduces colorectal cancer mortality by 50% with colonoscopic polypectomies; GPs can now use the MBS Item 32228 funding pathway for screening colonoscopy for those at normal/low lifetime risk of colorectal cancer where there is clinical need for a once per patient lifetime colonoscopy.

MBS funds a colonoscopy every five years in patients with a moderate risk of colorectal cancer based on family history (one first-degree relative younger than 55 with bowel cancer; or two first-degree relatives of any age; or one first-degree relative and two second-degree relatives with a history of colorectal cancer).

MBS funds yearly screening colonoscopy in those at high risk of developing colorectal cancer.

Ways to increase screening colonoscopy include increased nurse colonoscopist training, federally funded colonoscopy clinics, and specific screening colonoscopy promotion.

Screening colonoscopy halves colorectal cancer mortality

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INTRODUCTION

LIKE many GP and non-GP specialist colleagues, when the primary author turned 50, he requested a screening colonoscopy (that turned out to include a polypectomy). Therefore, should we not as a medical profession follow the 'do unto others' rule and recommend screening colonoscopy to our patients? And if so, why?

To avoid (rightly) being called hypocrites for recommending one form of colorectal cancer screening to our patients (national FOBT screening), but adopting another form of colorectal cancer screening for ourselves (screening colonoscopy), we need to review the science, culture and logistics of colorectal cancer screening using colonoscopy as a primary modality, while still supporting the National Bowel Cancer (FOBT) Screening Program (see figure 1), and ask ourselves the important question: When is a screening colonoscopy indicated?

Asymptomatic patients developing colorectal cancer present a unique challenge in general practice, as their condition may not be detected until it has reached an advanced stage. In addition, routine screening for colorectal cancer is often not emphasised for asymptomatic individuals, leading to missed opportunities for early detection. Further, many Australians consider that because they don't have any symptoms, they are therefore healthy – adopting a mistaken 'She'll be right, mate' attitude.

Unfortunately, many people find the thought of colorectal cancer screening offensive, or worse, they simply prefer not to know. Thus, colorectal cancer is often diagnosed at an advanced stage because of its truly occult (hidden) nature, its lack of symptoms (and/or subtle symptoms) in the early stages, and the unwillingness of far too many Australians to undergo screening for the disease.

Compounding the issue of colorectal cancer screening is the concern in the medical community regarding both the increasing incidence of asymptomatic colorectal cancer and the growing incidence of colorectal cancer in patients younger than 45.[1] When it occurs in younger patients, it is often more aggressive and has a poorer prognosis.[2] The lack of wider community awareness about colorectal cancer occurring in younger individuals, and the misconception that the condition only affects older patients, also contributes to the delayed diagnosis and treatment in this population.

This How to Treat discusses screening colonoscopy. It aims to ensure GPs are up to date with the latest international research, as well as with the recommendations of leading Australian national stakeholders, funding and availability of screening colonoscopy.

COLORECTAL CANCER MORTALITY

IN 2021, colorectal cancer (see figure 2) was the second most common cause of cancer death in Australia (see figure 3). In 2021, there were 5350 deaths from colorectal cancer in Australia (2838 males and 2512 females). When 2023 figures are released, it is estimated there will be 5307 deaths (2810 males and 2497 females).[3] Around 80% of these patients have no family history of colorectal cancer.

The large Nordic-European Initiative on Colorectal Cancer trial (NordICC trial; see later) reported 10 years of follow-up in 2022. This important study found a 50% reduction in colorectal cancer mortality in the screening colonoscopy group at 10 years.[4,5]

The large UK Flexible Sigmoidoscopy Screening Trial (UKFSST; see later) reported 17 years of follow-up in 2017. This study revealed a 66% reduction in left-sided colorectal cancer mortality in the screening flexible sigmoidoscopy group.[6]

The authors argue that this Level 1A evidence should now be changing the advice we give patients on which primary colorectal cancer ▸

◂ screening modality they should consider using.

COLORECTAL CANCER SCREENING OPTIONS

THERE are several colorectal cancer screening choices that Australian GPs can recommend to their patients. In 2021, the United States Preventive Services Task Force (USPSTF), arguably the leading global scientific preventive health organisation, published its updated recommendations regarding six different and acceptable colorectal cancer screening pathways (see box 1).[7] The USPSTF currently regards all six options as equivalent and acceptable colorectal cancer screening pathways for appropriately aged and eligible people to consider.

The National Bowel Cancer Screening Program (NBCSP) rolled out by the Australian Government Department of Health and Aged Care is the current mainstay of colorectal cancer screening across Australia.[8] Eligible men and women aged 50-74 are sent a FOBT kit every two years after their 50th birthday, and Australians aged between 45 and 50 are now being encouraged to contact the NBCSP directly, as they are now eligible to commence FOBT screening from this younger age.

The NBCSP has been a tremendous advance in Australia, and this article in no way means to undermine the uptake or functioning of this important government-funded initiative. Further, the MBS clearly states in Technical Note 8.152 that "general practitioners are urged to recommend biennial FOBT screening to age-appropriate patients".[9] However, there is a current Australian participation rate of around 40%, such that Bowel Cancer Australia — a leading national Australian charity dedicated to prevention, early diagnosis, research, quality treatment and care in colorectal cancer — has recently published its concerns regarding the stagnating rate of colorectal cancer screening in Australia.[10,11] Therefore, one of the aims of this How To Treat article is to further encourage GPs to recommend to their patient populations that they partake in the NBCSP, as the authors agree with Bowel Cancer Australia that participation rates are stagnating.

SCREENING COLONOSCOPY FOR COLORECTAL CANCER

The Level 1A evidence

THERE are currently four large prospective randomised trials investigating the utility of screening colonoscopy in normal risk populations. These are the Nordic-European Initiative on Colorectal Cancer trial (NordICC trial), the CONFIRM, COLONPREV and SCREESCO colonoscopy screening trials. Of these, only NordICC has completed and published its 10-year findings.

The NordICC colonoscopy colorectal cancer screening study was a pragmatic, randomised trial involving men and women aged 55-64 drawn from population registries in Poland, Norway, Sweden and the Netherlands between 2009 and 2014. The participants were randomly assigned in a 1:2 ratio to either receive an invitation to undergo a single screening colonoscopy (the invited group) or to receive no invitation for screening (the usual-care group). The primary end points were the group risks of colorectal cancer and related death. In NordICC, 11,843 randomised patients underwent colonoscopy screening, with 15 participants having major bleeding after polyp removal, and with no perforations or screening-related deaths occurring within 30 days after colonoscopy.

During a median follow-up of 10 years, the adjusted analyses in NordICC showed that for the participants who were randomly assigned to and had undergone screening colonoscopy, their risk of colorectal cancer at 10 years decreased from 1.22% to 0.84%, and the risk of death from colorectal cancer was 0.15% in the invited group and 0.30% in the usual-care group. The estimated risk ratio was 0.50 (95% CI, 0.27 to 0.77). In other words, screening colonoscopy achieved a 50% reduction in colorectal cancer mortality in NordICC, in those who had a colonoscopy, as confirmed in a *New England Journal of Medicine* 2022 editorial.[5] Also of relevance is the UKFSST.[6] This trial published its 17-year follow-up of 40,621 randomised patients who received a screening flexible sigmoidoscopy. In per-protocol analyses, adjusted for non-compliance, colorectal cancer incidence and mortality were 35% (HR 0·65 [95% CI 0·59-0·71]) and 41% (0·59 [0·49-0·70]) lower in the screened group. In addition, distal colorectal cancer mortality was reduced by 66% (HR 0·34 [95% CI 0·26-0·46]).

Both the 66% left-sided colorectal mortality reduction seen at 17 years of follow-up in the UKFSST, and the 50% reduction in left- and right-sided colorectal cancer mortality seen at 10 years in the NordICC trial, are highly significant percentages. These colorectal cancer mortality reduction figures (66% and 50%) are in stark contrast to the 16% colorectal cancer mortality reduction reported in the 2007 Cochrane Review of colorectal cancer screening using faecal occult blood testing.[12]

There are currently in excess of 5000 Australians who succumb to colorectal cancer each year. If one then applies this prospective randomised international screening data to the Australian population, more than 2500 unnecessary colorectal cancer deaths each year could be prevented if a single colonoscopy was performed in every Australian between the ages of 55 and 64.

Figure 1. National Bowel Cancer Screening Program.

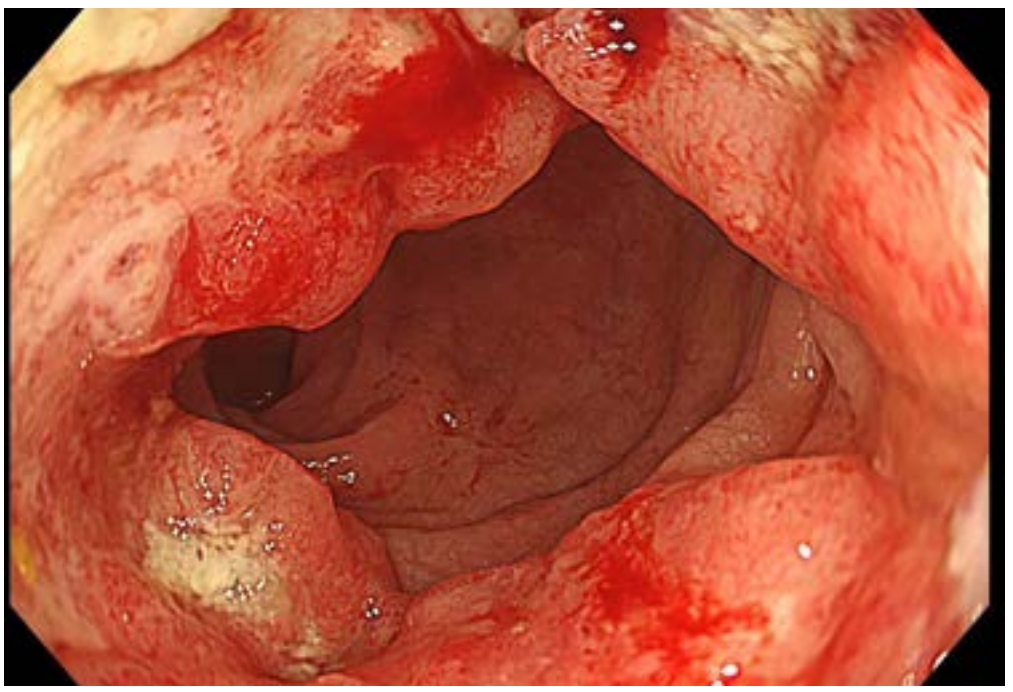


Figure 2. Colorectal cancer.

Box 1. USPSTF colorectal cancer screening options

1. High-sensitivity guaiac faecal occult blood test (HSgFOBT) or faecal immunochemical test (FIT) every year.
2. Stool DNA-FIT every 1-3 years.
3. Computed tomography colonography (see figure 4) every five years.
4. Flexible sigmoidoscopy every five years.
5. Flexible sigmoidoscopy every 10 years plus annual FIT.
6. Colonoscopy screening every 10 years.

Source: United States Preventive Services Task Force 2021[7]

How does screening colonoscopy result in a 50% reduction in colorectal cancer mortality?

Examining the colon with a colonoscope does not in itself reduce the risk of death from colorectal cancer. However, when asymptomatic precancerous adenomatous polyps (see figure 5) are seen and removed during a colonoscopy via a colonoscopic polypectomy, these polyps then cannot progress to form invasive colorectal cancer.

The adenoma to carcinoma sequence is well established and accepted as the principal cause in the development of colorectal cancer, although primary cancers can arise de novo in a small percentage of people.

The removal of benign polyps to prevent cancer from forming is not unique to the colorectum. For example, it is well accepted that if ductal carcinoma in situ (DCIS) in the breast is surgically removed, then there is a corresponding decline in subsequent invasive breast cancer. In addition, removal of Hutchinson melanotic freckles prevents the development of melanoma. However, unlike skin cancer precursors that are easily visible to the naked eye, the detection of precancerous colorectal polyps requires some form of imaging, visualisation or stool testing. This is the principal reason why screening colonoscopy is so successful at reducing the colorectal mortality rate — it both visualises and removes 'occult' premalignant lesions at the same time.

The occult nature of colorectal polyposis transitioning to colorectal cancer is hidden and is a major contributor to the lethal nature of the condition. This is why 'shining the light' during a colonoscopy to expose what is happening in the dark world of the colorectum is such a successful strategy in eliminating colorectal polyposis, thereby dramatically lessening the mortality rate from colorectal cancer.

To complement the removal of colorectal polyps, and to ensure that a high standard of colonoscopic polypectomy is achieved, all colonoscopists in Australia should now be audited on a three-yearly cycle. This is to ensure that they meet the required benchmarks for colonoscopic polypectomy. The current Gastroenterological Society of Australia (GESA) audit requirements, supported by the Royal Australasian College of Surgeons (RACS) and the Conjoint Committee of GESA and RACS, are that colonoscopists need to demonstrate a minimum 95% caecal intubation rate (the current national average is around 98%), a minimum 25% adenoma detection rate (the current national average is around 45%) and a minimum 4% sessile serrated lesion excision rate (the current national average is around 14%).[13]

Complications can occur during colonoscopy, such as post-polypectomy major bleeding and colonoscopic perforation (both should occur in less than 1:3000 colonoscopies). These complications are not currently nationally audited. However, GPs may be reassured that credentialled colonoscopy practitioners can safely achieve very high polypectomy rates. This is an important GESA standard to which almost all Australian colonoscopists adhere, and this is the international benchmark required for achieving the 50% reduction in colorectal cancer mortality that was shown in the NordICC trial.

THE MEDICAL BOARD OF AUSTRALIA

THE 2020 *Good Medical Practice: a Code of Conduct for Doctors in Australia* "describes what is expected of all doctors registered to practise medicine in Australia".[14] Section 3.2 of the code encourages us all to provide good patient care (see box 2).

Screening colonoscopy as a primary modality for colorectal cancer screening is now an internationally recognised screening technique that is used by many in Australia today. However, opinion varies between the various Australian stakeholders as to the role of colonoscopy as the primary modality in colorectal cancer screening.

As authors and practitioners, we consider that we need to follow good medical practice, which in essence means we believe our patients deserve to know the Level 1A evidence. In this instance, this means taking note of the growing Level 1A evidence that colonoscopic colorectal cancer screening has a significant benefit in terms of mortality reduction from colorectal cancer (that is, "a clinically recognised treatment").

Given the recent Level 1A scientific evidence quoted earlier from the NordICC and UKFSST studies,

PAGE 38 ▸

Box 2. The Medical Board of Australia 2020 *Good Medical Practice*

- 3.2.6 Providing treatment options based on the best available information.
- 3.2.7 Only recommending treatments when there is an identified therapeutic need and/or a clinically recognised treatment, and a reasonable expectation of clinical efficacy and benefit for the patient.

Source: The Medical Board of Australia 2020[14]

Box 3. Australian stakeholders involved in colonoscopic polypectomy

- Australian College of Rural and Remote Medicine (ACRRM-accredited colonoscopists).
- Australian College of Nurse Practitioners.
- Australian Commission on Safety and Quality in Health Care.
- Australian Federal Department of Health & Ageing.
- Bowel Cancer Australia.
- Cancer Council Australia — with endorsement from the National Health & Medical Research Council (NHMRC).
- Conjoint Committee of GESA and RACS.
- Gastroenterological Society of Australia (GESA).
- Medicare Benefits Schedule (MBS).
- National Health and Medical Research Council (NHMRC).
- RACGP (particularly the RACGP Red Book).
- Royal Australasian College of Surgeons (RACS).
- Safer Care Victoria (SCV).
- State government departments of health.

◂PAGE 36 we as a profession now have an ethical responsibility, per clause 3.2.6 of the code, to provide patients with the risks and benefits of various individual colorectal cancer screening programs. This should allow patients to decide whether or not they should proceed with screening colonoscopy.

It is important to note that a one-off colonoscopy with polypectomy for a person aged 50 could result in an addition of 20-40 years of life for that individual patient by preventing the development of colorectal cancer. Thus, the ethical "reasonable expectation of clinical efficacy and benefit for the patient" (clause 3.2.7 of the code) is another reason why GPs could consider recommending colorectal cancer screening with colonoscopy.

THE AUSTRALIAN STAKEHOLDERS

THERE are multiple Australian stakeholders involved, in some way or other, with providing colonoscopy and colonoscopic polypectomy. Together, these stakeholders all aim to provide, promote and enhance the quality and safety of colonoscopy across Australia (see box 3).

Most colonoscopies in Australia (see figure 6) are currently performed by general surgeons and gastroenterologists, but it is noted that nurse endoscopists represent the largest potential numerical growth entity in Australian colonoscopists over coming years.[15-17]

National Health and Medical Research Council and Cancer Council Australia

The *Clinical Practice Guidelines for Surveillance* (not screening) *Colonoscopy* recommendations were approved by the chief executive officer of the National Health and Medical Research Council (NHMRC) in October 2017.[18] Further, clinical practice guidelines for population screening of colorectal cancer were published by Cancer Council Australia in November 2023.[19] These updated guidelines provide the latest Australian Government-endorsed evidence-based advice on population screening and risk, and screening based on family history.

Appendix E of this November 2023 publication looks specifically at the various colorectal cancer screening tests and assesses their effectiveness in reducing colorectal cancer mortality rates, feasibility, acceptability and cost-effectiveness. They state that "The studies reviewed concluded no clear preference for a specific CRC screening test. However, there was evidence of a slight preference for colonoscopy because of the high accuracy and reliability, followed by iFOBT [immunochemical faecal occult blood test], because of the ease, convenience, and lower cost and lastly flexible sigmoidoscopy because of the accuracy."[19]

In March 2024, Cancer Council Australia published three colorectal cancer risk categories in its *Clinical Practice Guidelines for the Prevention, Early Detection and Management of Colorectal Cancer: Risk and Screening Based on Family History*.[19] These categories appear in box 4.

In the same document, Cancer Council Australia also made recommendations regarding colorectal cancer screening for these individuals (see box 5).[19]

Thus, Cancer Council Australia currently recommends that patients with Category 2 risk should be offered five-yearly screening colonoscopy starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative, or age 50 (whichever is earlier) up to age 74. And for patients with Category 3 risk, Cancer Council Australia again recommends five-yearly screening colonoscopy starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative, or age 40 (whichever is earlier) up to age 74. However, Cancer Council Australia stopped short of recommending screening colonoscopy as a primary modality in Category 1 patients.

The authors disagree with this stance taken by Cancer Council Australia, as the international prospective Level 1A data discussed earlier now points to the 50-66% colorectal cancer mortality reduction in large randomised controlled populations versus only 16% colorectal cancer mortality reduction in FOBT.[4-6] Thus, the authors' view is that Category 1 patients should also be given the opportunity of undergoing a potentially PAGE 40 ▸

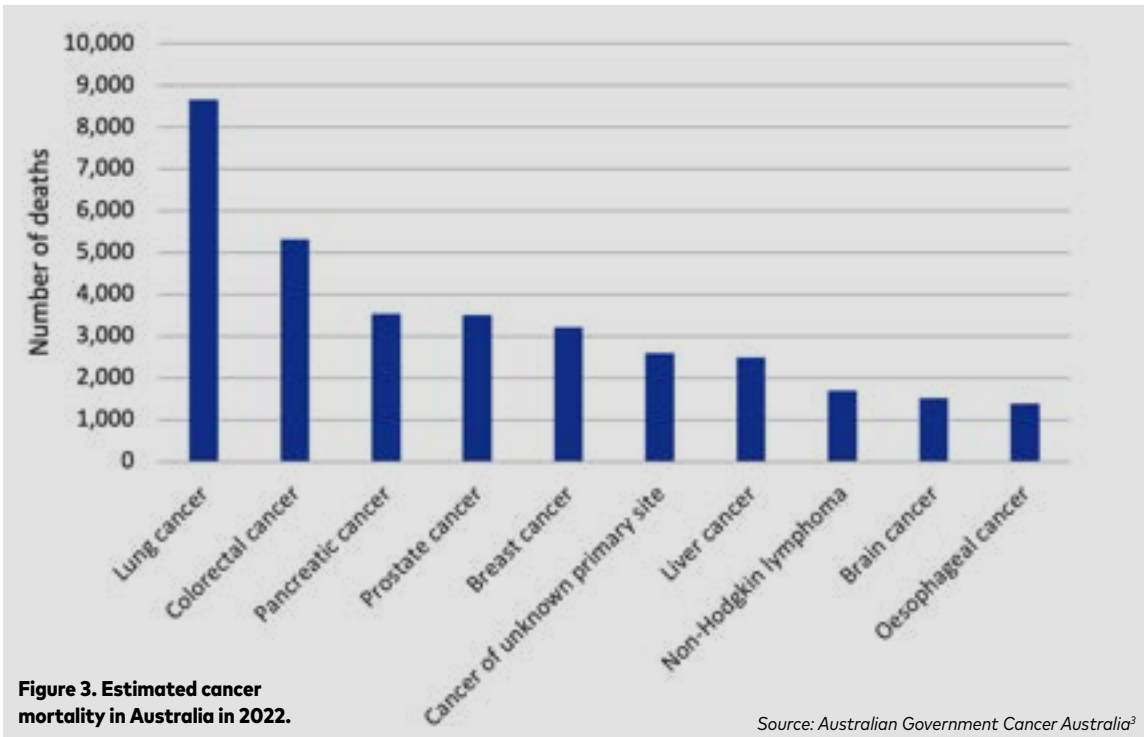


Figure 3. Estimated cancer mortality in Australia in 2022.

Source: Australian Government Cancer Australia[3]

Figure 4. CT colonography of a rectal mass to differentiate between stool and colonic neoplasia by dual-energy CT in an 88-year-old male.

A. Volume rendering.

B. Thin slice. It also shows the rectal tube used for insufflation of gas to distend the colon.

Dual-energy contrast-enhanced CT (axial plane) revealed no enhancement of mass, iodine value = –1.4 mg/mL (white arrow), suggesting no blood supply to the mass, which was validated as stool by colonography.

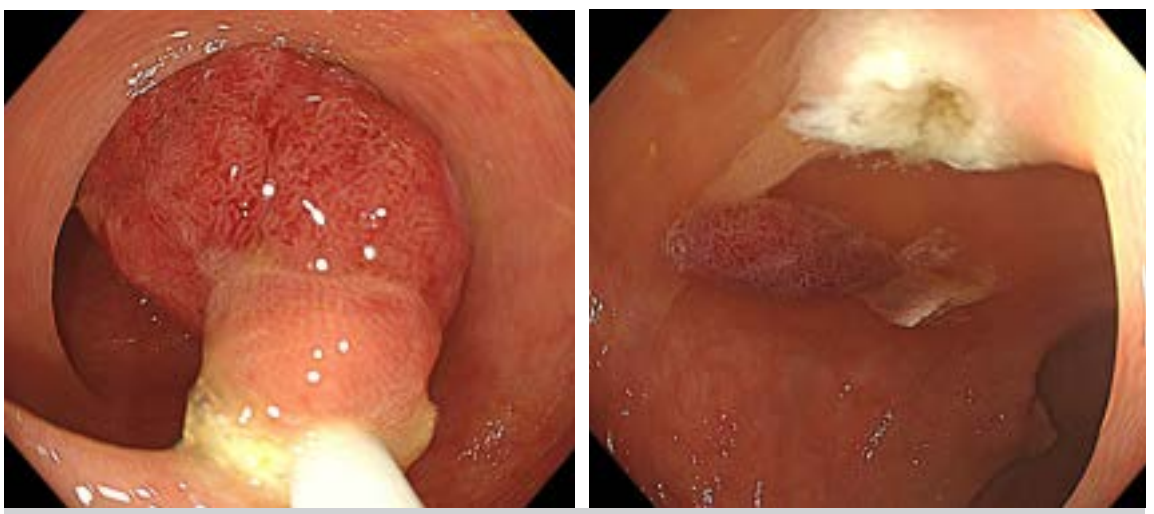


Figure 5. Polypectomy and scar.

Figure 6. Colonoscopy being performed.

◂PAGE 38 life-extending colonoscopy and polypectomy.

Federal Department of Health and Aged Care and the MBS

To facilitate the funding and provision of colonoscopy and colonoscopic polypectomy in Australia, the MBS lists various item numbers for therapeutic procedures.[20] These MBS item numbers (32222 to 32229) now provide the specific funding for patients, colonoscopists and their institutions across Australia to provide for screening colonoscopy (see figures 7-10).

However, and somewhat confusingly, it should be noted that the MBS item numbers 32224, 32225 and 32226 refer to moderate and high-risk patients, and that these moderate and high-risk definitions differ to the aforementioned Cancer Council Australia Category 2 and Category 3 definitions. Therefore, the authors recommend that GPs learn and adopt these four flowcharts in clinical practice, as these specific MBS item numbers determine the exact funding available and therefore in turn the exact management of these different groups of patients.

Australian Commission on Safety and Quality in Health Care and the Colonoscopy Clinical Care Standard

The Australian Commission on Safety and Quality in Health Care's *Colonoscopy Clinical Care Standard* encourages all facilities and clinicians delivering colonoscopy services to provide colonoscopy to an agreed high standard. This includes a timely copy of the colonoscopy report and histology result to the patient and their GP.[21]

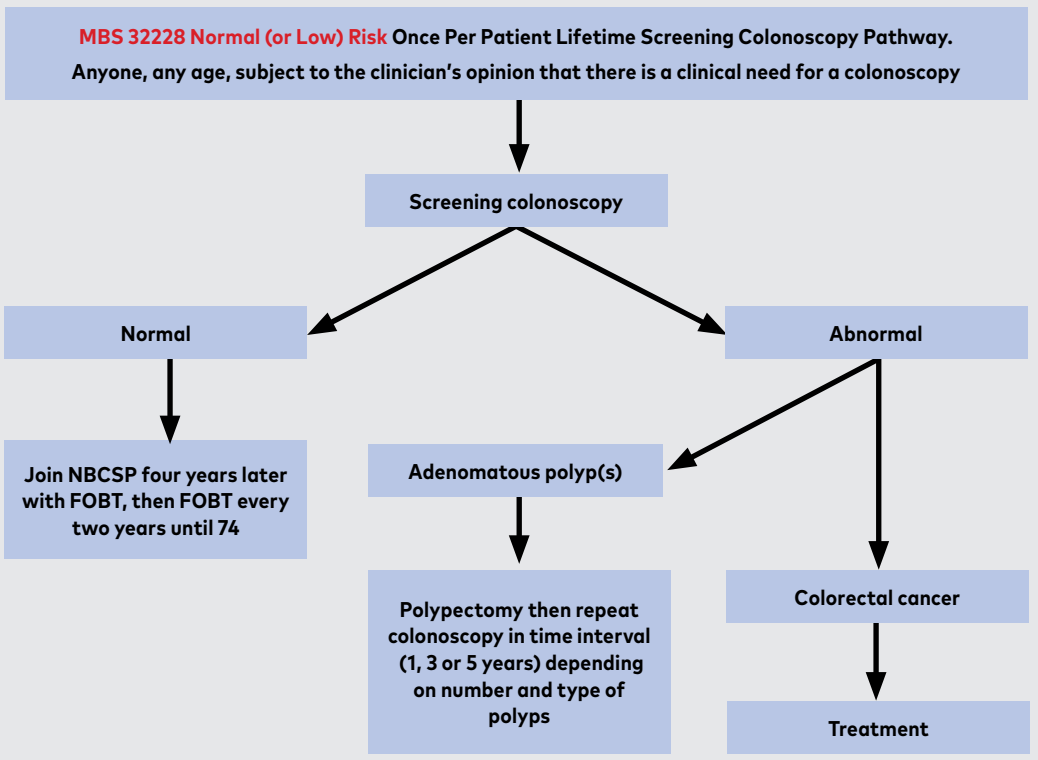
Many colonoscopists are now taking advantage of the recent improvements in software and practice management software (for example, Medical-Objects) that now facilitate immediate forwarding of colonoscopy reports (including colour photography) through to the referring GP. Compliance with the *Colonoscopy Clinical Care Standard* is mandatory under the Australian Health Service Safety and Quality Accreditation Scheme (MBS TN.8.152).[9]

Royal Australian College of General Practitioners' Red Book

MBS Online states: "When colonoscopy is considered clinically appropriate, general practitioners should ensure colonoscopy referral practices align with applicable national guidelines, including the Royal Australian *College of General Practitioners' Guidelines for Preventive Activities in General Practice* (the Red Book)".[9]

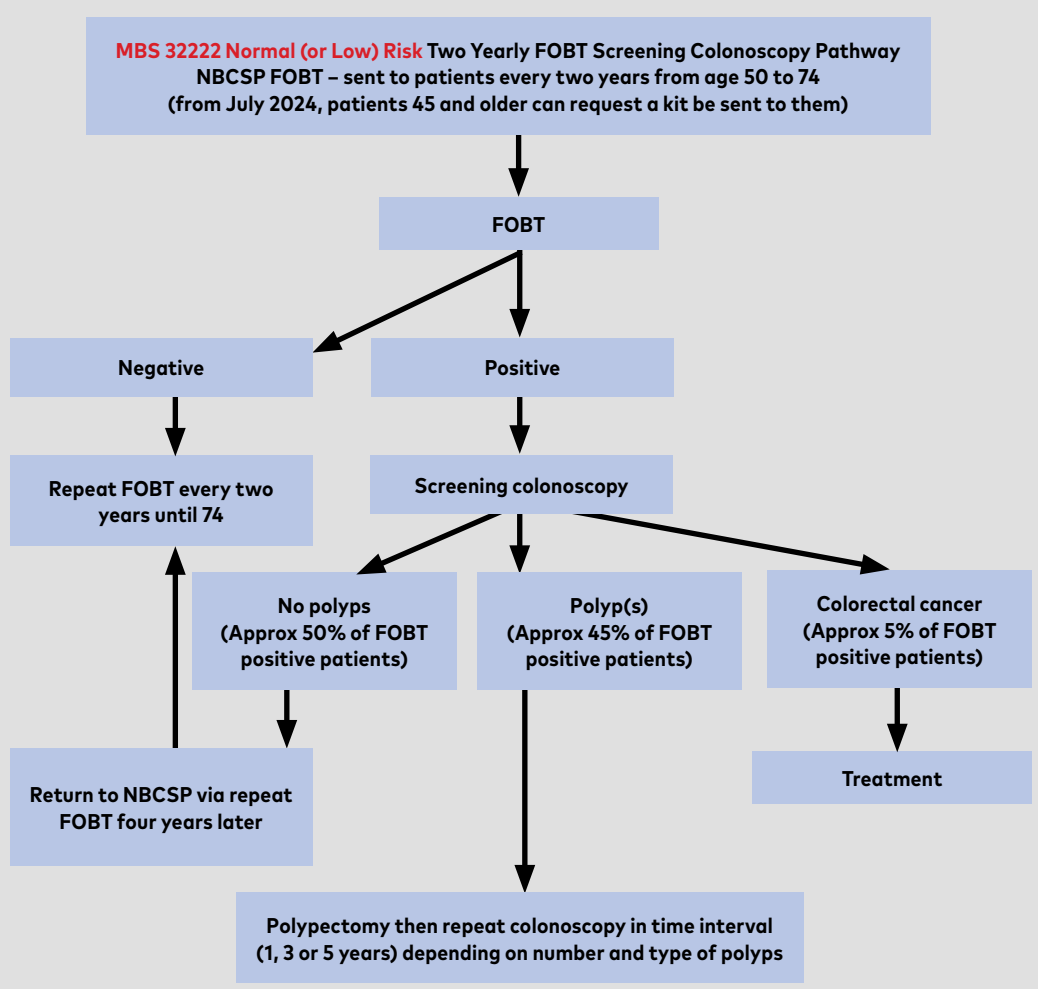
The recently published 10th edition of the Red Book states that "due to the potential harms of colonoscopy and additional costs to the health system of this procedure, colonoscopy is only recommended as a screening test for people who are at least at moderate risk of colorectal cancer".[22]

Again, the authors argue that the aforementioned NordICC and UKFSST Level 1A evidence should now be guiding the advice we give patients on the colorectal cancer screening modalities available to them, thus empowering patients to make their own informed decisions about the potential benefits and harms of colonoscopy and in turn make an informed choice about their own access to screening colonoscopy.



- This MBS category can be used for family history normal (or low) risk patients (based on NordICC and UKFSST Level 1A evidence).
- This can be used for anyone who could benefit from a once per patient lifetime screening colonoscopy who is ineligible for a screening colonoscopy under MBS items 32222 to 32226.
- Suggest age range of 45-74.

Figure 7. MBS 32228 Normal (or Low) Risk Once Per Patient Lifetime Screening Colonoscopy Pathway.



- Screening colonoscopy should be offered to family history normal (or low) risk patients returning a positive FOBT (either through GP referral or via the NBCSP), using MBS item number 32222.

Figure 8. MBS 32222 Normal (or Low) Risk Two Yearly FOBT Screening Colonoscopy Pathway.

Victorian Government Department of Health

The Victorian Government Department of Health has recently developed a program to train nurses to become nurse endoscopists. A nurse endoscopist is an advanced practice specialised nurse trained under the direct supervision of gastroenterologists and colorectal surgeons to perform endoscopic examinations. Nurses are currently required to complete five years of clinical experience as a registered nurse, three years of nursing experience within the gastroenterology specialty, including two years (concurrent) experience in endoscopy, as well as a relevant postgraduate qualification. The Australian College of Nurse Practitioners currently provides ongoing support for the fledgling numbers of Australian nurse colonoscopists.

A formalised training program was recently provided by the State Endoscopy Training Centre (SETC), through Austin Health in partnership with the Victorian Department of Health.[23]

The authors' view is that the largest reduction in colorectal cancer mortality will only occur across Australia when there are sufficient numbers of both nurses and doctors performing screening colonoscopy and polypectomy to remove the large volume of precancerous colorectal polyps that is required to bring down the current colorectal cancer mortality rate.

Box 4. Cancer Council Australia risk guidelines for colorectal cancer screening

- **Category 1**
  - An individual should be advised that their risk of developing colorectal cancer is:
    - Near average risk if they have no family history of colorectal cancer (no first-degree or second-degree relatives).
    - Above average but less than twice the average risk if they have only one first-degree relative with colorectal cancer diagnosed at age 60 or older.
- **Category 2**
  - An individual should be advised that their risk of developing colorectal cancer is at least two times higher than average, but could be up to four times higher than average, if they have any of the following:
    - Only one first-degree relative with colorectal cancer diagnosed before age 60
    - One first-degree relative AND one or more second-degree relatives with colorectal cancer diagnosed at any age.
    - Two first-degree relatives
- **Category 3**
  - An individual should be advised that their risk of developing colorectal cancer is at least four times higher than average, but could be up to 20 times higher than average, if they have any of the following:
    - Two first-degree relatives AND one second-degree relative with colorectal cancer, with at least one diagnosed before age 50.
    - Two first-degree relatives AND two or more second-degree relatives with colorectal cancer diagnosed at any age.
    - Three or more first-degree relatives with colorectal cancer diagnosed at any age.

Source: Cancer Council Australia 2023[19]

Australian open access colonoscopy clinics

Open access (also called rapid access, or direct access) colonoscopy clinics are being rolled out across metropolitan and regional Australia. These dedicated clinics focus on the provision of high volume and high quality colonoscopic services for their local communities. They have many advantages for both GPs and patients, as these clinics can reduce wait times for a

public outpatient consultation, allowing direct booking to colonoscopy. This frees up clinic time for patients with more complex issues, allowing minimal delays for those requiring a screening colonoscopy. Open access colonoscopy clinics also provide a team of focused, dedicated individuals tasked to provide efficient and effective colonoscopy services. For example, patients can undergo a more thorough informed consent process as they interact with the administration, pre-op nursing and colonoscopists each step of the way.

The authors reasonably consider that many more of these clinics should be set up, and that these should be directly federally funded, using BreastScreen infrastructure and clinics as a model, using appropriately trained and audited nurse and doctor colonoscopists. These envisaged federal screening colonoscopy clinics should be rolled out across Australia using doctor and nurse colonoscopists to provide the required level of service.

As stated above, the Level 1A evidence (which confirms a greater than 50% colorectal cancer mortality reduction) now dictates that we head towards an extended delivery of screening colonoscopy far more widely across our Australian population. Hence, the GP has a key role in educating patients so that, in turn, the required political willpower will follow with further funding in this important preventive health area of colorectal cancer prevention.

SUMMARY

THE list of those now eligible for MBS-funded screening colonoscopy appears in box 6.

CASE STUDIES

Case study one

GRACE, aged 50 and asymptomatic, seeks her GP's advice on preventive health screening. She has never had a colonoscopy before, but because of the GP's experience of seeing several asymptomatic patients present with bowel cancer, and together with the GP's new knowledge regarding the international studies showing a 50% reduction in colorectal cancer mortality with screening colonoscopy, her GP refers Grace for a screening colonoscopy, hoping that the colonoscopist will use the 32228 item number, as in the GP's opinion there is a clinical need for a colonoscopy.

A significant tubular adenoma with low grade dysplasia is subsequently found and removed from Grace's caecum, and she is placed on a five-year recall for a repeat colonoscopy.

Case study two

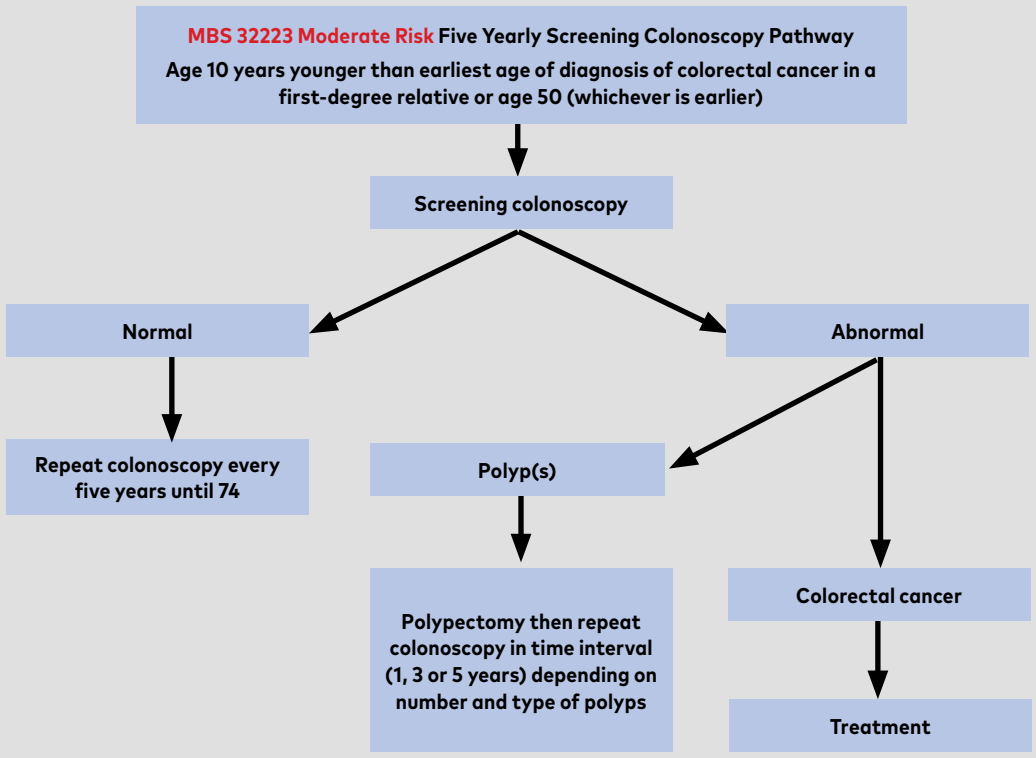
Greg, aged 40, presents to his GP requesting a screening colonoscopy. His grandfather was diagnosed with colorectal cancer in his 60s and Greg is concerned that he might develop bowel cancer one day. Greg is only eligible for a colonoscopy under MBS item number 32228, but his GP reasonably considers that there is a clinical need for colonoscopy and so makes the referral.

On colonoscopy, several premalignant polyps are found (four sessile serrated lesions and one tubular adenoma), and all are completely removed (see figure 11).

Case study three

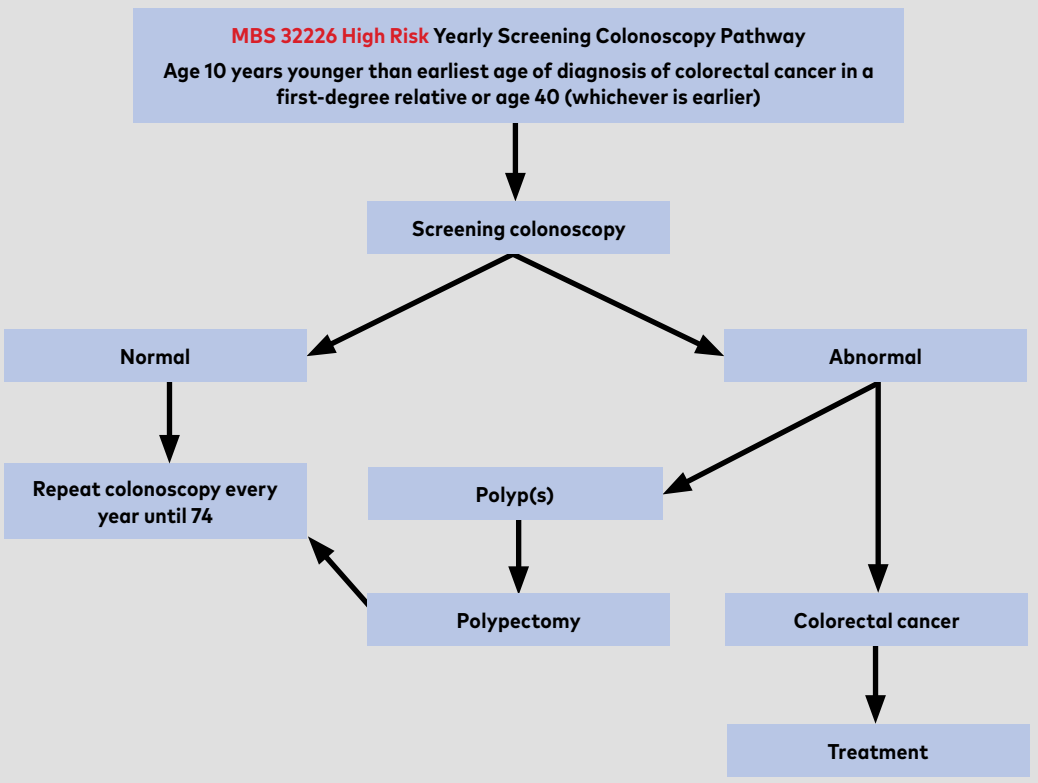
Gretel, aged 60, presents to her GP requesting a repeat screening colonoscopy after a normal colonoscopy five years earlier. Her father had developed colorectal cancer at age 60. Gretel is currently completely asymptomatic and has no other indications for colonoscopy that fit any of the MBS item number criteria.

However, the MBS no longer has an item number for this indication (as the sole first-degree relative has to be 55 or younger). Gretel is thus required to either cover the entire cost without any Medicare or private health fund contribution, or not have a colonoscopy. Gretel elects to proceed with colonoscopy, and four precancerous polyps are found. These are removed, thus significantly ▸



- Screening colonoscopy should be offered to family history moderate-risk patients every five years starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative or age 50, whichever is earlier, to age 74, using MBS item number 32223:
  - A patient with one first-degree relative diagnosed with colorectal cancer younger than 55.
  - Two first-degree relatives of any age diagnosed with colorectal cancer.
  - One first-degree relative and two second-degree relatives of any age diagnosed with colorectal cancer.

Figure 9. MBS 32223 Moderate Risk Five Yearly Screening Colonoscopy Pathway.



- Screening colonoscopy should be offered to family history high-risk patients every year starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative or age 40, whichever is earlier, to age 74, using MBS item number 32226:
  - Anyone with a high risk because of their family history (MBS 32226), who has a known or suspected familial condition, such as familial adenomatous polyposis, Lynch syndrome or serrated polyposis syndrome; or a genetic mutation associated with hereditary colorectal cancer.

Figure 10. MBS 32226 High Risk Yearly Screening Colonoscopy Pathway.

Box 5. Cancer Council Australia colorectal cancer screening recommendations based on individual risk category

- **For people assessed as having category 1 risk of colorectal cancer [Practice Point 15]:**
  - iFOBT screening should be performed in line with population screening every two years from age 45 to age 74.
  - Low-dose (100mg) aspirin daily should be considered from age 45 to 70 in consultation with a healthcare professional.
- **For people assessed as having category 2 risk of colorectal cancer [Practice Point 16]:**
  - Colonoscopy should be offered every five years starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative or age 50, whichever is earlier, to age 74.
  - CT colonography may be offered if clinically indicated.
  - Low-dose (100mg) aspirin daily should be considered from age 45 to 70 in consultation with a healthcare professional.
- **For people assessed as having category 3 risk of colorectal cancer [Practice Point 17]:**
  - Colonoscopy should be offered every five years starting at 10 years younger than the earliest age of diagnosis of colorectal cancer in a first-degree relative or age 40, whichever is earlier, to age 74.
  - CT colonography may be offered if clinically indicated.
  - Low-dose (100mg) aspirin daily should be considered from age 45 to 70 in consultation with a healthcare professional.
  - Referral to a culturally safe family cancer clinic should be considered. Those carrying their family-specific mutation or having uncertain genetic status require careful cancer screening.

Source: Cancer Council Australia 2023[19]

DIAGNOSTIC SUMMARY:

1. HEPATIC FLEXURE POLYP - SESSILE SERRATED LESION.
2. DISTAL TRANSVERSE POLYP - FEATURES SUGGEST SESSILE SERRATED LESION WITH DYSPLASIA (SEE REPORT).
3. SPLENIC FLEXURE POLYP - SESSILE SERRATED LESION.
4. DISTAL DESCENDING COLON POLYP - SESSILE SERRATED LESION.
5. SIGMOID COLON POLYPS - TUBULAR ADENOMA. HYPERPLASTIC POLYP.

Figure 11. Greg's pathology summary.

◂ reducing her risk of dying from colorectal cancer.

Case study four

Gavin, 35, presents to the GP complaining of left upper quadrant pain. He has had a few similar episodes earlier in the year. He is a married man, with twins, and his wife is expecting their third baby.

On examination, he is tender in the left upper quadrant and he looks a little pale. Blood tests show a mild elevation of his inflammatory markers and negative *Helicobacter pylori* serology. Abdominal ultrasound does not demonstrate any pathology, but there appears to be some free fluid in the left iliac fossa. Gavin's discomfort does not settle, so a CT is ordered. This shows enlargement of the abdominal lymph nodes but no other evidence of pathology. The GP refers Gavin for specialist investigation, and a colonoscopy reveals the presence of a transverse colon colorectal cancer primary (see figure 12).

Box 6. Those eligible for MBS-funded screening colonoscopy

1. Anyone at any age where the doctor considers there is a clinical need for a colonoscopy (MBS 32228) and this is not provided for via MBS item numbers 32222 to 32226. This once per patient lifetime funded procedure is ideal for normal (or low) risk populations.
2. Anyone with a positive FOBT (MBS 32222), again in normal (or low) risk populations.
3. Anyone with a moderate risk due to their family history (MBS 32223) defined as:
   a. One first-degree relative younger than 55 at diagnosis; OR
   b. Two first-degree relatives with a history of colorectal cancer; OR
   c. One first-degree relative and two second-degree relatives with a history of colorectal cancer.
4. Anyone with a high risk because of their family history (MBS 32226), who has a known or suspected familial condition, such as familial adenomatous polyposis, Lynch syndrome or serrated polyposis syndrome; or a genetic mutation associated with hereditary colorectal cancer.

Australians who do not fulfill the above four criteria can still request referral for a screening colonoscopy, but their screening colonoscopy will currently have to be self-funded outside of the MBS.

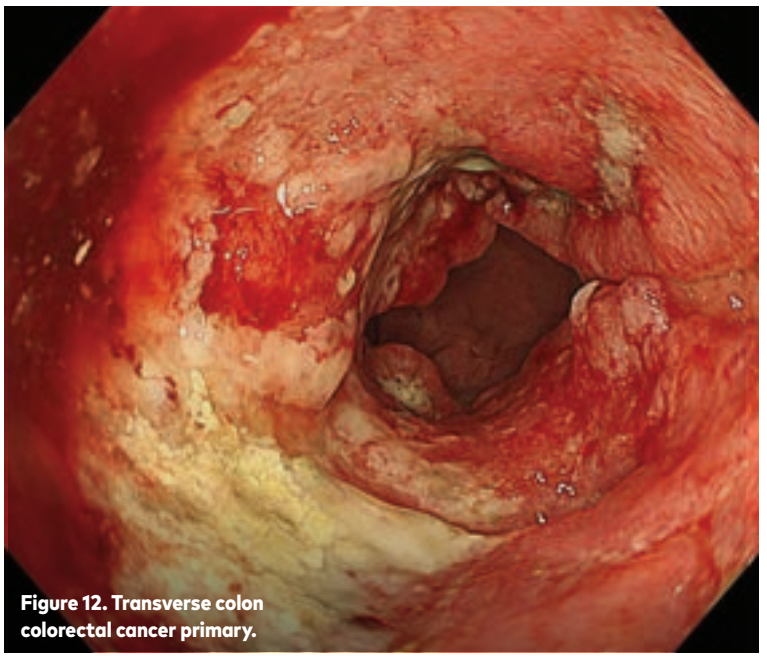


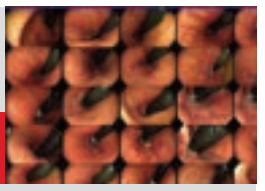
Figure 12. Transverse colon colorectal cancer primary.

Case study five

Genevieve, 43, presents to the GP complaining of intermittent abdominal bloating for a few years. The GP refers her for a gastroscopy and colonoscopy, which reveals the presence of a 16mm splenic flexure colonic polyp. Excision of this polyp reveals that "Sections show a pedunculated tubulovillous adenoma exhibiting low grade (moderate) epithelial dysplasia and focal high grade dysplasia. There is no evidence of malignancy". This unexpected polypectomy is performed and effectively stops this polyp turning cancerous over the coming months.

How to Treat Quiz.

SCREENING COLONOSCOPY HALVES COLORECTAL CANCER MORTALITY



GO ONLINE TO COMPLETE THE QUIZ **ausdoc.com.au/how-to-treat**

1. **Which THREE statements regarding colorectal cancer are correct?**
   - **a** It may be asymptomatic in the early stages.
   - **b** The incidence is rising in younger people.
   - **c** It is usually diagnosed in the early stages.
   - **d** Routine screening is not typically recommended for the asymptomatic and/or those younger than 45.

2. **Which TWO statements are correct?**
   - **a** Fewer than 2000 Australians die each year from colorectal cancer.
   - **b** Colorectal cancer was the second most common cause of cancer death in Australia in 2022.
   - **c** Slightly more men than women died from colorectal cancer in Australia in 2022.
   - **d** Around 80% of patients with colorectal cancer have a family history of colorectal cancer.

3. **Which THREE statements regarding the National Bowel Cancer Screening Program are correct?**
   - **a** The program recommends screening start at a younger age in Indigenous Australians.
   - **b** This is the current mainstay of colorectal cancer screening across Australia.
   - **c** Those aged 45-74 are eligible.
   - **d** Screening involves a FOBT every two years after the patient's 45th birthday.

4. **Which TWO statements regarding current GP referrals of patients are correct?**
   - **a** A patient who previously had a normal colonoscopy and has one first-degree relative with a diagnosis of colorectal cancer at age 56 is eligible for a Medicare-funded colonoscopy.
   - **b** A patient who has not had a colonoscopy and has one first-degree relative with a diagnosis of colorectal cancer at age 56 is eligible for a Medicare-funded colonoscopy.
   - **c** A patient who had a normal colonoscopy five years earlier and has two first-degree relatives with a diagnosis of colorectal cancer at any age is eligible for a Medicare-funded colonoscopy.
   - **d** A 60-year-old asymptomatic patient with no family history of colorectal cancer who had a normal colonoscopy five years earlier is eligible for a Medicare-funded colonoscopy.

5. **Which THREE statements regarding the major colonoscopy colorectal cancer screening trials are correct?**
   - **a** The NordICC trial reported that screening colonoscopy achieved a 50% reduction in colorectal cancer mortality.
   - **b** Colorectal cancer screening using FOBT reduces colorectal cancer by 10%.
   - **c** After 17 years of follow up, the UKFSST reported that screening flexible sigmoidoscopy reduced left-sided colorectal cancer mortality by 66%.
   - **d** A single colonoscopy performed in every Australian aged 55-64 would likely halve the death rate from colorectal cancer.

6. **Which THREE statements regarding colonoscopy and polypectomy are correct?**
   - **a** Removal of precancerous adenomatous polyps during a colonoscopy can prevent their change to invasive colorectal cancer.
   - **b** Colonoscopic polypectomies do not reduce the risk of succumbing to colorectal cancer.
   - **c** The occult nature of the development of bowel cancer is a major contributor to the lethal nature of the condition
   - **d** Colonoscopists in Australia should all now be audited on a three-yearly cycle.

7. **Which THREE are MBS funding criteria for five-yearly colonoscopy defining moderate risk of colorectal cancer from family history (MBS number 32223)?**
   - **a** A patient with one first-degree relative less than 55 years of age at diagnosis.
   - **b** A patient with two first-degree relatives with a history of colorectal cancer.
   - **c** A patient with one first-degree relative older than 55 years of age at diagnosis.
   - **d** A patient with one first-degree relative and two second-degree relatives with a history of colorectal cancer.

8. **Which THREE are current Cancer Council Australia recommendations regarding screening?**
   - **a** Offer colorectal cancer screening colonoscopy in category 1 patients.
   - **b** Offer patients with category 2 (moderate) and category 3 (high) risk five-yearly colonoscopy.
   - **c** People with category 1 (low) risk should undergo iFOBT screening in line with population screening every two years from age 45 to 74.
   - **d** Refer those in category 3 (high) to a culturally safe family cancer clinic.

9. **Which THREE statements accurately indicate how Australia could move forward with colonoscopy colorectal cancer screening?**
   - **a** By increasing the number of nurse practitioner colonoscopists.
   - **b** By decreasing the enrolment in FOBT screening.
   - **c** By providing federally funded colonoscopy cancer screening clinics like BreastScreen.
   - **d** By providing an MBS criterion specifically for a screening colonoscopy once between 45 and 65.

10. **Which THREE statements regarding the ethical dilemmas associated with colonoscopy colorectal cancer screening are correct?**
    - **a** We do not need to inform patients regarding the very low risks of colonic perforation and bleeding following colonoscopy because of the very strong benefit of the 50% reduction in colorectal cancer-specific mortality.
    - **b** All Australians should have the same screening options made available to them, irrespective of social class or geographical location.
    - **c** All colonoscopists should be enrolled in a rotating three-yearly quality assurance audit program to measure adenoma detection rates and colonoscopy completion rates.
    - **d** Current colonoscopists have an ethical obligation to train the next generation of doctors and nurses to safely perform colonoscopy.

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CONCLUSION

SO, is it time for GPs to recommend screening colonoscopy as a primary modality for colorectal cancer in patients considered low risk by their family history?

The authors consider that the answer to this question is yes, and that it is now time for GPs to advise patients that screening colonoscopy is a legitimate option for them to consider. The Level 1A evidence is strong and robust, and the ethical obligation on referring practitioners to follow this scientific evidence is equally compelling. GPs thinking about referring their patients for screening colonoscopy should consider the important new information confirming the 50-66% colorectal mortality reduction as shown in the NordICC and UKFSST trials.

It is accepted that there are still major national colonoscopy logistics, equity issues, training, funding and other problems yet to be worked through. However, the authors argue that the process of colorectal cancer screening should start with the GP making Level 1A evidence-based medicine recommendations to their patients. Patients can then make an independent decision based on their own perceived benefits, risks and costs. The public and private health marketplace will then have to work through the logistics and solutions required to meet this increased need. The authors suggest that significant grassroots uptake as a result of GPs increasing referrals for screening colonoscopy (on both Level 1A evidence-based scientific and ethical grounds) is an important step to take before further national progress can be made to reduce the high rate of colorectal cancer mortality.

RESOURCES

- **The Australian Commission on Safety and Quality in Health Care's Colonoscopy Clinical Care Standard**
  bit.ly/3VJi0Sa
- **Royal Australian College of General Practitioners' *Guidelines for Preventive Activities in General Practice* (the Red Book)**
  bit.ly/4iERKIE

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