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Monitoring report 2024

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National bowel cancer screening program monitoring report 2024

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Any enquiries about or comments on this publication should be directed to:
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Tel: (02) 6244 1000
Email: info@aihw.gov.au

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Summary

The National Bowel Cancer Screening Program (NBCSP) began in 2006. It aims to reduce the morbidity and mortality from bowel cancer by actively recruiting and screening the eligible target population, aged 50–74, for early detection or prevention of the disease. This monitoring report is the ninth to examine the NBCSP using the current key performance indicators.

It is estimated that in 2024 about 7,265 people aged 50–74 will be diagnosed with bowel cancer (around 47% of all bowel cancers diagnosed) and 1,793 people in this age group will die from the disease (around 34% of all bowel cancer deaths).

Participation

Of the 6.0 million people invited between January 2021 and December 2022, 40.0% participated in the program. The national participation rate was similar to the previous rolling 2-year period (2020–2021) of 40.9%. The re-participation rate for those who took part in their previous invitation round and received a subsequent screening invitation was 81.1%. For those who had ever previously participated, the re-participation rate was 72.4%.

Screening results

In 2022, 64,932 Australians returned a positive screening test, giving a 6% screening positivity rate. Of those who received a positive screening test, 86% reported a follow-up diagnostic assessment. The median time from positive screening test result to diagnostic assessment was 62 days.

Cancers and adenomas detected

As form return is not mandatory, diagnostic assessment data were not considered complete enough to allow formal performance indicator reporting. However, of the outcome data available for participants who had a diagnostic assessment in 2022, 1 in 25 were diagnosed with a confirmed or suspected cancer (84 and 497, respectively) and adenomas were diagnosed in a further 2,074 participants (1 in 7 participants assessed). Adenomas are benign growths with potential to become cancerous; their removal lowers the risk of future bowel cancers developing.

Population groups

Participants who identified as being of Aboriginal and/or Torres Strait Islander origin, those who lived in *Very remote* areas, and those who lived in low socioeconomic areas, all had higher rates of positive screens (warranting further assessment), but lower rates of follow-up diagnostic assessment, and a longer median time between a positive screen and assessment.

Since the NBCSP began

Since the program began in August 2006, about 11.4 million NBCSP screening tests have been completed, with about 4.8 million people participating at least once. Previous data linkage studies by the Australian Institute of Health and Welfare found that the NBCSP is contributing to reducing morbidity and mortality from bowel cancer in Australia (AIHW 2014a, 2018a, 2018b).

Data at a glance

Table 1: Summary of NBCSP performance indicators[a], Australia

Performance indicator (PI)[b]		Definition	Value	
			Previous period	Current period
PI 1	Participation rate	The percentage of people invited to screen through the NBCSP between **1 January 2021 and 31 December 2022** who returned a completed screening test within that period or by **30 June 2023**.	40.9%	40.0%
PI 2	Screening positivity rate	The percentage of people who returned a valid NBCSP screening test and received a positive screening result (warranting further assessment) between **1 January 2022 and 31 December 2022**.	6%	6%
PI 3	Diagnostic assessment rate	The percentage of people who returned a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022** and had follow-up diagnostic assessment within that period or by **31 December 2023**.	86%	86%
PI 4	Time between positive screen and diagnostic assessment	For those who received a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022**, the median time between the positive screen and a follow-up diagnostic assessment within that period or by **31 December 2023**.	58 days	62 days
PI 5a	Adenoma detection rate	The proportion of people who returned a valid NBCSP screening test between **1 January 2022 and 31 December 2022** who were diagnosed with an adenoma within that period or by **31 December 2023**.	n.a.	n.a.
PI 5b	Positive predictive value of diagnostic assessment for detecting adenoma	The percentage of people who returned a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022** that underwent a diagnostic assessment and were diagnosed with an adenoma by **31 December 2023**.	n.a.	n.a.
PI 6a	Colorectal cancer detection rate	The proportion of people who returned a valid NBCSP screening test between **1 January 2022 and 31 December 2022** and were diagnosed with a screen-detected colorectal cancer by **31 December 2023**.	n.a.	n.a.
PI 6b	Positive predictive value of diagnostic assessment for detecting colorectal cancer	The percentage of people who returned a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022** that underwent a diagnostic assessment and were diagnosed with cancer by **31 December 2023**.	n.a.	n.a.
PI 7	Interval cancer rate	The proportion of people who returned a NBCSP screening test between **1 January 2022 and 31 December 2022** who were diagnosed with colorectal cancer (not involving a positive NBCSP screen and positive assessment) in the following 24-month period, or before their next screen, whichever comes first.	n.a.	n.a.

(continued)

Table 1 (continued): Summary of NBCSP performance indicators[a], Australia

Performance indicator (PI)[b]		Definition	Value	
			Previous period	Current period
PI 8	Cancer clinico-pathological stage distribution	The percentage of people who had received a NBCSP invite and were later diagnosed with colorectal cancer between **1 January 2022 and 31 December 2022**, by clinico-pathological stage (either Stage I, Stage II, Stage III, Stage IV, Stage unknown or inadequately staged).	n.a.	n.a.
PI 9	Adverse events – hospital admission	The rate at which people who had a diagnostic assessment between **1 January 2022 and 31 December 2022** were admitted to hospital within 30 days of their assessment.	0.3 per 10,000 assessments	0.7 per 10,000 assessments
PI 10	Incidence of bowel cancer	The (estimated) age-standardised incidence rate of bowel cancer per 100,000 estimated resident population aged 50–74 in **2024**[c].	103 cases per 100,000 people	96 cases per 100,000 people
PI 11	Mortality from bowel cancer	The (estimated) age-standardised mortality rate of bowel cancer per 100,000 estimated resident population aged 50–74 in **2024**[c].	26 deaths per 100,000 people	23 deaths per 100,000 people

(a) NBCSP performance indicators presented here differ from the performance measures reported in monitoring reports before 2016. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

(b) PI – performance indicator. Hereafter in this report, the abbreviation is used when referring to a specific indicator (for example, PI 3 Diagnostic assessment rate); otherwise, the full expression is used.

(c) Age-standardised rates for 2024 are estimated based on 2010–2019 data for incidence and 2013–2022 data for mortality. See Appendix D for further details.

Notes

1. PIs 3–9 rely on information being reported to the National Cancer Screening Register (NCSR). As the return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
2. PI 5a (adenoma detection rate), PI 5b (positive predictive value, or PPV, of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate) and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability. See 'Current reporting limitations' on page 4 for more details.

Box 1: Data source transition

In November 2019, the NBCSP Register data were transitioned from the NBCSP Register, maintained by Services Australia (formerly the Department of Human Services), to the National Cancer Screening Register (NCSR), maintained by Telstra Health. This is the fourth NBCSP monitoring report to use data extracted from the NCSR. The NCSR is a live database which is updated over time and later reports using these data may have a greater level of completeness. This report uses NCSR data as at 31 December 2023 (NCSR raw data extract (RDE) as at 06 January 2024).

This report summarises trends from 2007 to 2022 in program participation rate (PI 1), diagnostic assessment rate (PI 3), and time between positive screen and diagnostic assessment (PI 4). Data for these trends use data collected for the NBCSP Register as well as data collected for the NCSR.

1 Introduction

1.1 Purpose of this report

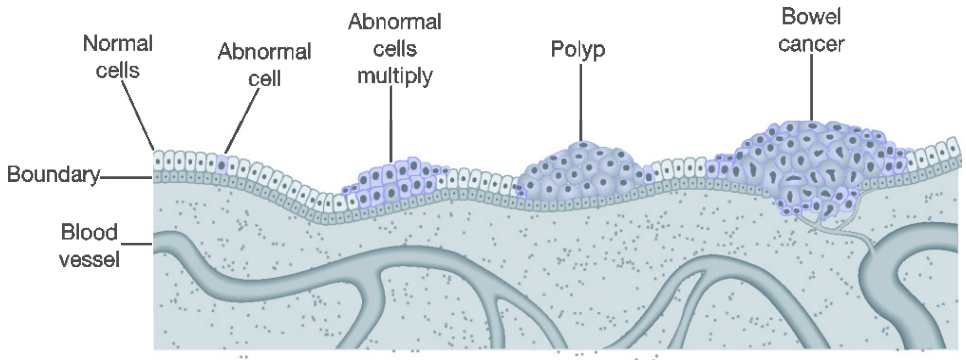
This report is the ninth to monitor data for the National Bowel Cancer Screening Program (NBCSP), based on the current NBCSP key performance indicators (AIHW 2014b). To ensure that the most recent data are used for each indicator, the time frame in which each is analysed can vary. However, where possible, analysis for indicators includes the period from 1 January 2022 to 31 December 2023.

1.2 Bowel cancer facts

Defining bowel cancer

Bowel cancer (or colorectal cancer) generally develops through a multistage process in which a series of cellular mutations occurs over time. Most bowel cancers start in the epithelial cells, which form part of the inner lining of the large bowel (intestinal mucosa layer). Early stages of these mutations result in benign polyps. However, a polyp may mutate further and become a benign adenoma and, ultimately, a malignant bowel cancer (Figure 1.1). Later stages of bowel cancer can spread to other sites in the body through the lymphatic or vascular system.

Figure 1.1: Beginnings of bowel cancer



Cancer stage

Bowel cancer stage describes the extent or spread of cancer in the body at diagnosis. Staging is usually based on the size of the tumour, whether lymph nodes contain cancer, and whether the cancer has spread from the original site to other parts of the body (Brierley et al. 2016). Cancer Australia, in consultation with state and territory cancer registries and the Australian Institute of Health and Welfare (AIHW), developed cancer staging rules for high-incidence cancers (including bowel cancer). These registry-defined cancer stages are closely related to the Tumour, Nodes and Metastasis (TNM) Classification of Malignant Tumours. Prognosis is often related to what stage of development the cancer has reached when first diagnosed, with smaller, less developed cancers having better prognoses than advanced cancers (Table 1.1).

Table 1.1: Registry-defined Australian stages of bowel cancer, 2011

Registry-defined Australian stage	Description	5-year relative survival estimates
I	Stage I – equivalent to TNM stage I: early stage Cancer has invaded several layers of the bowel, but has not spread outside the bowel wall	99%
II	Stage II – equivalent to TNM stage II: early stage Cancer has grown through the muscle layer of the bowel or rectum and invaded nearby tissues, but has not spread to the lymph nodes	89%
III	Stage III – equivalent to TNM stage III: locally advanced Cancer has spread to nearby lymph nodes, but not to other parts of the body	71%
IV	Stage IV – equivalent to TNM stage IV: metastatic The cancer has spread from where it started in the colon or rectum to other organs, often the liver and lungs, and/or non-regional lymph nodes	13%

Note: Descriptions and 5-year relative survival estimates were sourced from 2011 Australian stage data (AIHW 2019a).

Risk factors for bowel cancer

A risk factor is any factor associated with an increased likelihood of a person developing a health disorder or health condition. It is not known what causes bowel cancer; however, as at December 2016, several risk factors have been identified that may increase the chance of developing it – see Box 1.1 (AIHW 2021a; Bouvard et al. 2015; Dekker et al. 2019; IARC 2014; Song et al. 2015; WCRF and AICR 2007).

Box 1.1: Risk factors for bowel cancer

Behavioural and biomedical factors

Personal and lifestyle factors associated with an increased risk of bowel cancer include:

- overweight or obesity
- high blood plasma glucose
- physical inactivity
- high intake of red meat, processed meat, and sugar-sweetened beverages
- low intake of fibre-rich foods (such as wholegrains, vegetables, and fruits) and milk
- alcohol consumption
- tobacco smoking
- occupational hazards and exposures.

Family history and genetic susceptibility

Some genetic mutations increase the risk of bowel cancers, and these can also be passed from parent to child. Between 12% and 35% of bowel cancers can be attributed to a hereditary component (Dekker et al. 2019).

Ionising radiation

Ionising radiation from radiology (diagnostic X-rays), working in the nuclear industry, and natural sources can be a risk factor for bowel cancer.

Bowel cancer treatment

The aim of bowel cancer treatment is generally to remove the cancer and any cancer cells that may be left in the bowel or other parts of the body. However, treatment can vary based on individual factors, such as the type of cells involved, the size of the tumour, and the bowel cancer stage – some patients may receive palliative care. Treatment of bowel cancer commonly involves surgery to remove the cancer, with or without chemotherapy or radiation therapy.

Early diagnosis of bowel cancer can improve treatment outcomes and survival. Further, removal of polyps and adenomas (polypectomy) during a colonoscopy reduces the risk of their developing into bowel cancer. The excision of adenomatous polyps, together with regular surveillance, has been found to reduce bowel cancer incidence and mortality (Dekker et al. 2019).

1.3 Bowel cancer screening

Bowel cancer may be present for many years before a person shows symptoms, such as visible rectal bleeding, change in bowel habit, bowel obstruction, or anaemia. Often, symptoms such as these are not exhibited until the cancer has reached a relatively advanced stage. However, non-visible bleeding of the bowel may occur in the precancerous stages (Figure 1.1) for some time. The relatively slow development of bowel cancer means that precancerous polyps and adenomas, and early-stage cancers, can potentially be screened for and treated. This makes bowel cancer a valid candidate for population screening (Standing Committee on Screening 2018).

An immunochemical faecal occult blood test (iFOBT) is a common method of bowel cancer screening (Schreuders et al. 2015). An iFOBT is a non-invasive test that can detect microscopic amounts of blood in a sample from a bowel motion, which may indicate a bowel abnormality, such as an adenoma or cancer.

National Bowel Cancer Screening Program

In Australia, government-funded, population-based bowel cancer screening has been available through the NBCSP since 2006. The NBCSP is managed by the Department of Health and Aged Care and delivered through the National Cancer Screening Register (NCSR, November 2019 to present) with support from state and territory governments. The NBCSP aims to reduce the incidence of, and illness and mortality related to, bowel cancer in Australia through screening to detect cancers and pre-cancerous lesions in their early stages, when treatment will be most successful.

The *Clinical practice guidelines for the prevention, early detection and management of colorectal cancer* were endorsed by the National Health and Medical Research Council in 2017 (CCACCGWP 2017). The rollout of the recommended biennial iFOBT screening for all eligible Australians in the 50–74 target age group was completed in 2020. Eligible Australians are able to screen every 2 years using a free iFOBT screening kit.

The population screening chapter of the guidelines was revised in 2023 to recommend that biennial iFOBT screening for the asymptomatic Australian population be offered from age 45 and continue to age 74 (previously 50–74) (CCACCSWP 2023). From 1 July 2024, eligible people aged 45–49 will be able to request their first NBCSP kit from the program, or by talking to their doctor. This change in clinical guidance and subsequent flow on to the program did not apply to the time period in this report.

To participate in the NBCSP, invitees complete the screening test and post it to the NBCSP pathology laboratory for analysis. Results are sent to the participant, to the participant's nominated primary health-care practitioner (PHCP), and to the NCSR. Participants with a positive screening result, indicated by blood in the stool sample, are advised to consult their PHCP to discuss further diagnostic assessment – in most cases, a colonoscopy.

The AIHW conducted a study of people diagnosed with bowel cancer between 2006 and 2008. This study showed that NBCSP invitees (particularly those participating) who had been diagnosed with bowel cancer had a lower risk of dying from the disease and were more likely to have less advanced bowel cancers when diagnosed than non-invitees. These findings show that the NBCSP is contributing to reducing morbidity and mortality from bowel cancer in Australia (AIHW 2014a). More recent AIHW data linkage projects have further supported these findings (AIHW 2018a, 2018b).

For more information on the NBCSP, see Appendix C and http://www.health.gov.au/nbcsp.

Monitoring the NBCSP

NBCSP participant data come from a variety of sources along the screening pathway. Data are collected electronically, as well as from forms that participants, PHCPs, colonoscopists, pathologists, and other medical staff complete and return to the NCSR. However, as form return from health practitioners is not mandatory, these data may be incomplete.

This report is the ninth to present national data for the NBCSP, using the current key performance indicators (PIs) developed by the National Bowel Cancer Screening Program Report and Indicator Working Group (Table 1). These indicators were endorsed by the Standing Committee on Screening, the Community Care and Population Health Principal Committee, the National Health Information Standards and Statistics Committee, and the National Health Information and Performance Principal Committee. They are consistent with the 5 Australian Population Based Screening Framework steps: recruitment, screening, assessment, diagnosis, and outcomes (AIHW 2014b). See Appendix C for a summary of changes in monitoring the NBCSP that affect this report.

Current reporting limitations

Except for participation and iFOBT results, the completion and sending of other NBCSP forms or data by health practitioners is not mandatory and therefore data – and results – for PIs 3 to 9 are not complete. In this report, for the second time, colonoscopy form and MBS claim data have been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

Other limitations of NBCSP data include the lack of reliable population subgroup identification at the time of invitation. NBCSP participants can self-identify as being an Aboriginal and/or Torres Strait Islander person, having a disability, or speaking a language other than English at home by completing and returning the participant details form along with their iFOBT for analysis. The NCSR uses self-reporting from the participant details form and the Medicare Voluntary Indigenous Identifier, along with other sources such as the National Cervical Screening Program (for invitees who participate in cervical screening) to assign Indigenous status. These sources are still not currently sufficient to reliably identify membership of these subgroups for all invitees. Hence, it is not possible to accurately determine NBCSP participation rates for these subgroups due to the lack of denominators (invitations issued) for them. Ways to reduce these limitations are constantly being investigated; Chapter 5 in this report gives estimates of participation for these subgroups using proportions from the 2021 Census.

Seven performance indicators are aspirational, in that there is either a lack of national data or incomplete data. In this report, PI 5a (adenoma detection rate), PI 5b (positive predictive value, or PPV, of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), and PI 6b (PPV of diagnostic assessment for detecting colorectal cancer) are not formally reported due to incomplete data. These indicators require complete data return from histopathology. Additionally, PI 7 (interval cancer rate) and PI 8 (cancer clinico-pathological stage distribution) require linkage with complete national cancer incidence data, which is planned but not currently available. Lastly, PI 9 (adverse events – hospital admission) requires linkage with complete national hospital admissions data, which is not currently possible. However, the NCSR currently has (incomplete) information on adverse events, and this will be used until a more complete adverse event data source becomes available.

This is the fourth NBCSP monitoring report to use data extracted from the NCSR. The NCSR is a live database which is updated over time and later reports using data for the same time period may have a greater level of completeness.

Invitations to the target age group exclude those who do not have a valid mailing address in the NCSR. These individuals cannot be mailed, or may not receive, their NBCSP invitation until their Medicare address is updated. All users of Medicare are encouraged to update their address details when they move residence.

2 Picture of bowel cancer in Australia

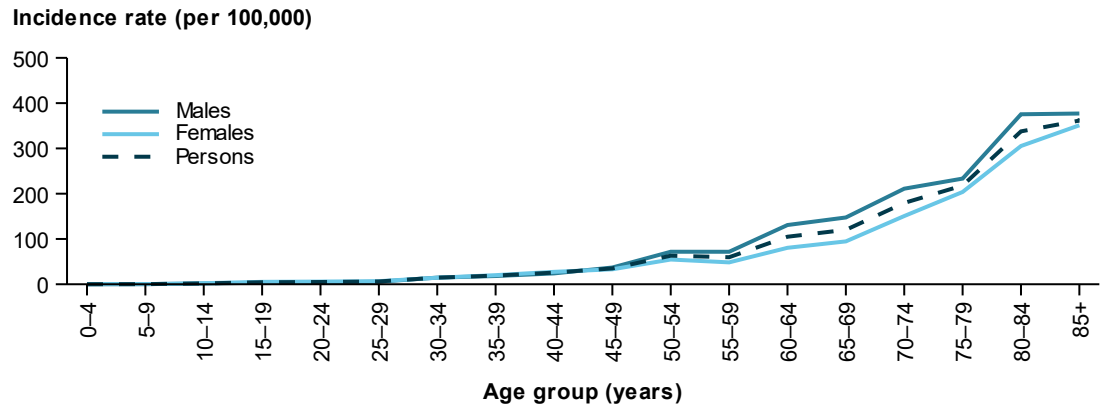
2.1 Number of new cases

In 2024, it is estimated that there will be 7,265 new cases of bowel cancer diagnosed in people aged 50–74 (around 47% of all bowel cancer diagnoses). Bowel cancer was the fourth most commonly diagnosed cancer in Australians of all ages (after prostate cancer, breast cancer, and melanoma of the skin) in 2023 (AIHW 2023b).

Target age group (50–74 years)	All ages
7,265 new cases estimated for 2024 96 new cases per 100,000 target-age people (ASR)	15,542 new cases estimated for 2024 47 new cases per 100,000 people (ASR)

Bowel cancer risk increases with age. In 2024, the incidence rate is expected to remain higher for people aged 45 and over than for younger people (Figure 2.1).

Figure 2.1: Age-specific incidence rates of bowel cancer, by sex, Australia, 2024



Notes

1. The 2024 estimates are based on 2010–2019 incidence data. See Appendix D for further information.
2. Age-specific rates are expressed per 100,000 people.

Source: Table A3.24.

It is estimated that a person's risk of being diagnosed with bowel cancer (unadjusted for competing mortality) is:

- 6 in 1,000 before age 50
- 26 in 1,000 (1 in 38) for those aged 50–74
- 45 in 1,000 for those aged 75 and over.

It is expected that, once biennial screening has been in place for several years, the risk of diagnosis (and death) for those in the target age group and older will be reduced, as those people will have been consistently invited to screen.

2.2 Number of deaths

Box 2.1: Changes to bowel cancer mortality coding

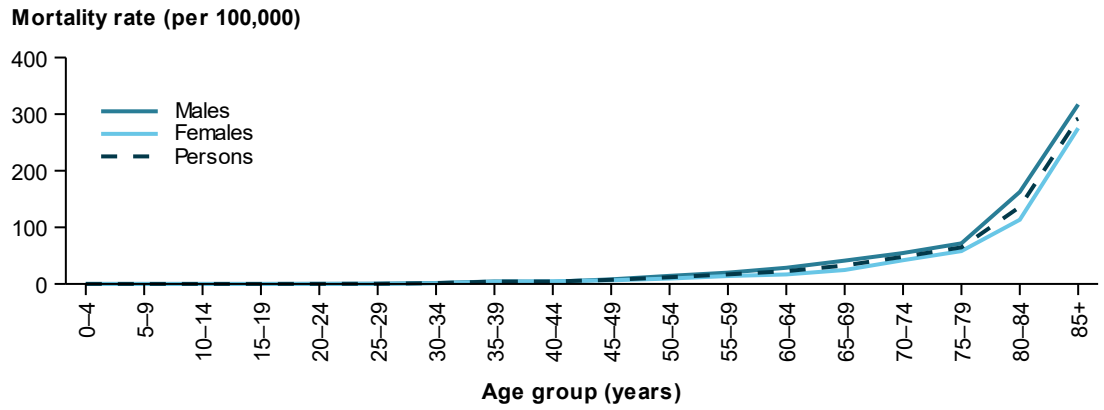
The AIHW uses the National Mortality Database (NMD) to report cancer mortality, a database coded and compiled by the Australian Bureau of Statistics (ABS). ABS advice notes that where the term 'bowel cancer' is recorded on the death certificate, internationally agreed rules state that the cancer should be coded to a less specific International Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) code (C26.0) as the specific site of the cancer is not known (ABS 2016). The ABS advises further that the code C26.0 should be included alongside deaths due to cancers of the colon and rectum (C18–C20) when assessing 'bowel cancer' deaths. For this reason, monitoring reports for the NBCSP from 2019 onwards use C18–C20, and also include C26.0 when reporting deaths from bowel cancer using the NMD. This approach differs from that used in previous versions of this report and will result in a greater number of deaths being attributed to bowel cancer. Hence, caution should be considered when comparing trends in bowel cancer mortality here with those in NBCSP monitoring reports published before 2019.

In 2024, it is estimated that there will be 1,793 bowel cancer deaths in people aged 50–74 (around 34% of all bowel cancer deaths). Bowel cancer was the second leading cause of cancer death in Australians of all ages (after lung cancer) in 2023 (AIHW 2023b).

Target age group (50–74 years)	All ages
1,793 deaths estimated in 2024 23 deaths per 100,000 target-age people (ASR)	5,239 deaths estimated in 2024 15 deaths per 100,000 people (ASR)

It is estimated that, in 2024, the mortality rate will be higher for people aged 50 and over than for younger people. The rate will increase with age for both men and women (Figure 2.2).

Figure 2.2: Age-specific mortality rates of bowel cancer, by sex, Australia, 2024



Notes

1. The 2024 estimates are based on 2013–2022 mortality data. See Appendix D for further information.
2. Age-specific rates are expressed per 100,000 people.

Source: Table A3.28.

The risk of dying from bowel cancer increases with increasing age. The risk (unadjusted for competing mortality) is estimated as being:

- 1 in 1,000 before age 50
- 7 in 1,000 for those aged 50–74
- 24 in 1,000 for those aged 75 and over.

As mentioned earlier, once biennial screening has been in place for a number of years, it is expected that the risk of diagnosis and death for those in, and above, the target age group will be reduced, as those people will have been consistently invited to screen for abnormalities.

2.3 Survival

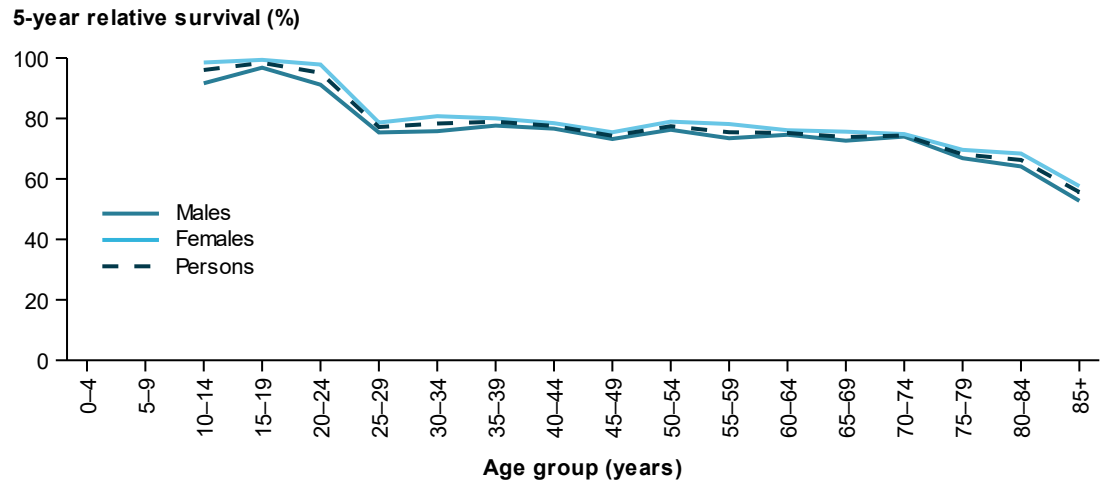
Information on survival indicates cancer prognosis and the effectiveness of treatment available. Survival in this report refers to 'relative survival' which is the probability of being alive for a given amount of time after diagnosis compared with the general population, and reflects the impact of a cancer diagnosis. Survival of less than 100% suggests that those with bowel cancer have a lower chance of surviving for at least 5 years after diagnosis than the general population.

In the period 2016–2020, Australians aged 50–74 who were diagnosed with bowel cancer had a 75% chance of surviving for 5 years compared with their counterparts in the general population.

Target age group (50–74 years)	All ages
75% 5-year relative survival (2016–2020)	71% 5-year relative survival (2016–2020)

In the period 2016–2020, 5-year relative survival was lower for people aged 70 and over than for younger people (Figure 2.3).

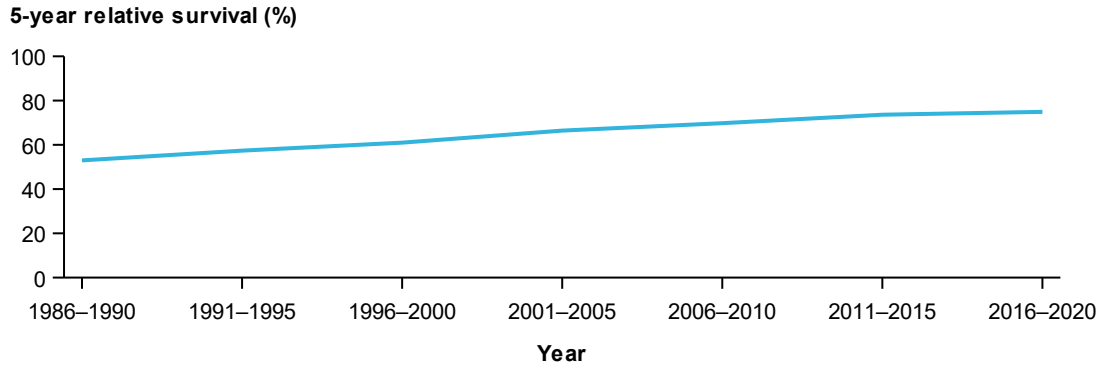
Figure 2.3: Five-year relative survival from bowel cancer, by age group and sex, Australia, 2016–2020



Source: Table A2.1.

Between the periods 1986–1990 and 2016–2020, the 5-year relative survival rate from bowel cancer for people aged 50–74 at diagnosis rose from 53% to 75% (Figure 2.4).

Figure 2.4: Trend in 5-year relative survival from bowel cancer, people aged 50–74 at diagnosis, Australia, 1986–1990 to 2016–2020

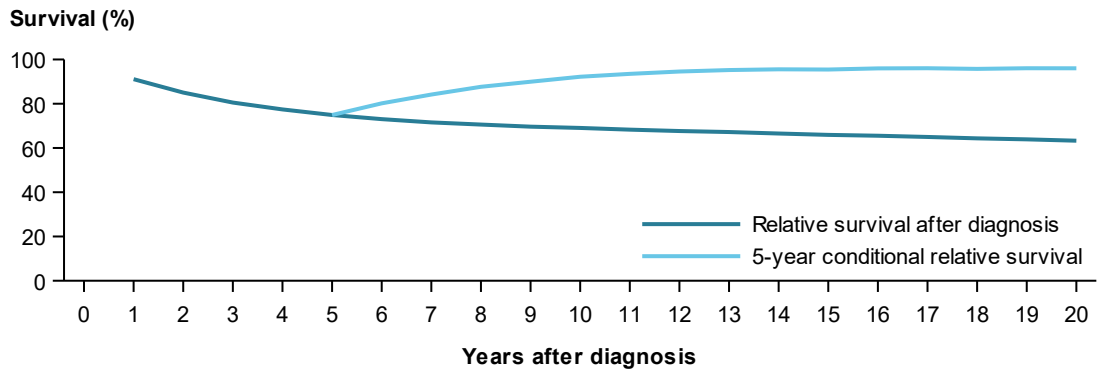


Source: Table A2.2.

Relative survival shows the probability of survival at diagnosis. Conditional relative survival estimates show the probability of surviving a given number of years, provided that an individual has already survived a specified amount of time after diagnosis.

While Australians aged 50–74 who were diagnosed with bowel cancer had a 75% chance of surviving for 5 years compared with their counterparts in the general population, among those who had already survived 5 years, the chance of surviving for at least another 5 years (5-year conditional relative survival) was 92% (Figure 2.5).

Figure 2.5: Relative survival at diagnosis and 5-year conditional relative survival from bowel cancer, people aged 50–74 at diagnosis, Australia, 2016–2020



Note: Conditional relative survival estimates show the probability of surviving bowel cancer for a given number of years provided an individual has already survived a specified amount of time after diagnosis.

Source: Table A2.3.

Prevalence of bowel cancer

Cancer survivorship focuses on the health and life of a person diagnosed with cancer after treatment until the end of life (NCI 2020). It is more than simply not dying from cancer; it

focuses on living with, and life after, a cancer diagnosis (Jackson et al. 2013). Survivorship covers the physical, psychosocial, and economic issues of cancer, including the later effects of treatment, secondary cancers, and quality of life (NCI 2020).

Prevalence is the number of people alive (surviving) after a diagnosis of cancer. At the end of 2020, there were 56,200 Australians alive who had been diagnosed with bowel cancer in the previous 5 years and 95,107 who had been diagnosed in the previous 10 years (Table 2.1). When limited to people aged 50–74 at the end of 2020, there were 29,116 alive after being diagnosed with bowel cancer in the previous 5 years and 47,565 after being diagnosed in the previous 10 years (Table 2.1).

Table 2.1: Prevalence of bowel cancer, by age group and sex, Australia, end of 2020

Age group (years)	Sex	5-year prevalence		10-year prevalence	
		Number	Rate per 100,000	Number	Rate per 100,000
50–74	Males	16,832	493.0	27,287	799.2
	Females	12,284	342.3	20,278	565.1
	Persons	**29,116**	**415.8**	**47,565**	**679.2**
All ages	Males	30,356	238.7	51,133	402.0
	Females	25,844	200.2	43,974	340.6
	Persons	**56,200**	**219.3**	**95,107**	**371.1**

Source: AIHW Australian Cancer Database (ACD) 2020.

2.4 Burden of bowel cancer

Burden of disease analysis is used to assess and compare the impact of different diseases and injuries on a population. It involves determining their impact in terms of the following:

(a) the number of years of healthy life lost through living with an illness or injury (the non-fatal burden, years lived with disability, or YLD)

(b) the number of years of life lost through dying prematurely from an illness or injury (the fatal burden, years of life lost, or YLL)

(c) the number of disability-adjusted life years (DALYs), which combines the non-fatal and fatal burden (or the combined impact of dying early and living with illness). One DALY is equivalent to one healthy year of life lost.

Burden of disease estimates capture both the quantity and quality of life, and reflect the magnitude, severity, and impact of disease and injury within a population. Burden of disease studies can also estimate the contribution of specific risk factors to disease burden (known as the attributable burden) (AIHW 2023a).

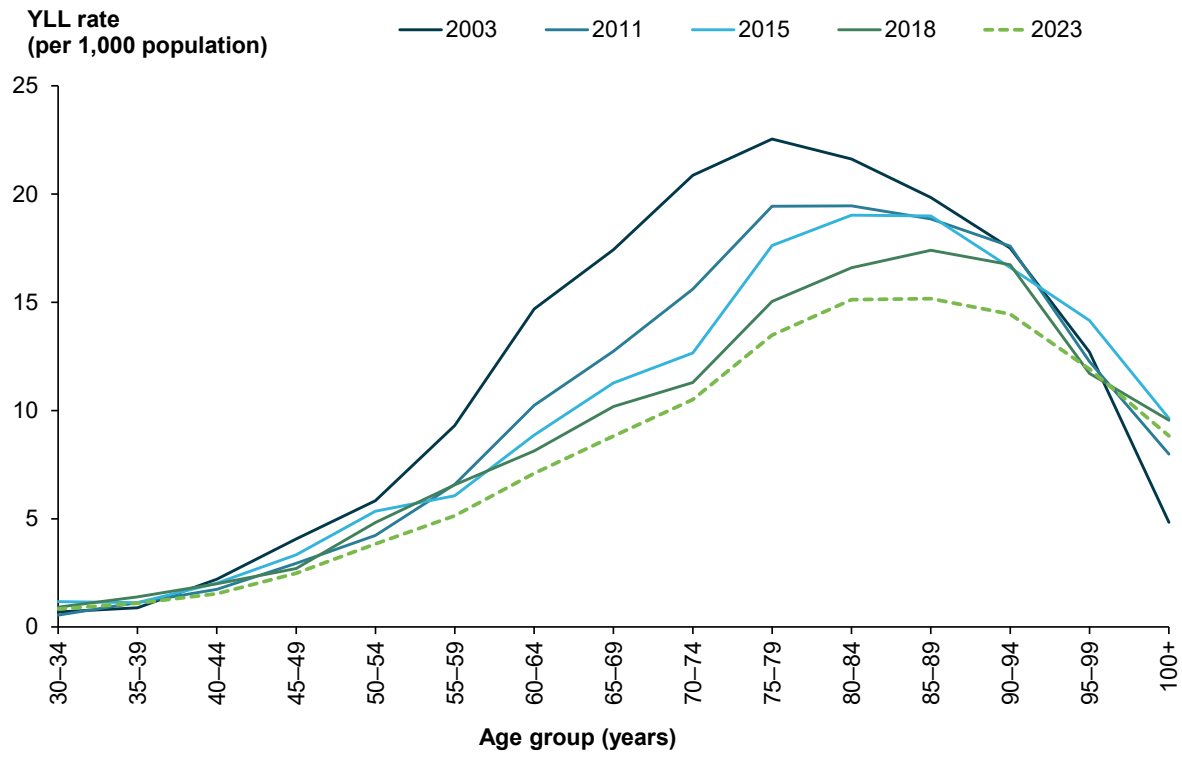
The AIHW report *Australian Burden of Disease Study 2023* (hereafter referred to as the ABDS 2023) found that 98,091 years of healthy life were lost (from fatal and non-fatal outcomes) due to bowel cancer in 2023 (AIHW 2023a). This meant bowel cancer accounted for 1.7% of the total disease burden in Australia, making it the 17th most burdensome disease overall (16th in males and 17th in females). Bowel cancer (98,091 DALYs) was the second most burdensome cancer in 2023 behind lung cancer (159,238 DALYs); Australians lost many more years of life due to dying from bowel cancer (92.8% of total bowel cancer burden) than healthy years lost from living with the impacts of the disease (7.2% of total bowel cancer burden) (AIHW 2023a).

Changes in burden since 2003

The NBCSP was introduced in 2006; hence, comparisons of the health burden before and after this date, as well as during the full program rollout, are of interest. The ABDS 2023 provides burden of disease estimates best matched to the Australian public health context for the Australian population for 2023. Due to improvements in data sources and methodological changes, published estimates from previous Australian studies are not directly comparable with those for the ABDS 2023. However, estimates for 2018, 2015, 2011, and 2003, revised using the same methods as for 2023, were calculated to enable direct comparisons over time (Figure 2.6).

Between 2003 and 2023, the age-standardised rate (ASR) of total burden from bowel cancer fell 24%, from 4.9 to 3.7 DALYs per 1,000 people. This reduction was primarily due to a drop in fatal burden from 4.7 to 3.4 YLL per 1,000 people (AIHW 2022b). The change in YLL ASRs was driven by a shift towards people dying from bowel cancer at older ages, a drop to 10.5 YLL per 1,000 people aged 70–74 in 2023 compared to 20.9 YLL per 1,000 people aged 70–74 in 2003, and a lower peak of 15.2 YLL per 1,000 people aged 85–89 in 2023 compared with the peak in 2003 of 22.5 YLL per 1,000 people aged 75–79.

Figure 2.6: Change in fatal burden – years of life lost (YLL) from bowel cancer, age-specific rate (per 1,000 people), Australia, 2003, 2011, 2015, 2018 and 2023



Sources: AIHW Australian Burden of Disease Database; Table A2.4.

Contribution of risk factors to bowel cancer burden

The ABDS 2018 calculated the proportion of the bowel cancer burden attributable to a number of behavioural, environmental, and metabolic risk factors. For the majority of this analysis, the risk factors were analysed independently, meaning that the estimates cannot be added together without further analysis to take into account that many risk factors are interrelated (AIHW 2021).

After analysis to adjust for interrelated risk factors, the study estimated that 54% of bowel cancer burden in 2018 was attributable to the combined impact of associated risk factors, referred to as the 'joint effect' (AIHW 2021a). All dietary risk factors combined were responsible for 26% of bowel cancer burden.

When looking at the individual contribution of each risk factor, a low consumption of wholegrains and high-fibre cereals and overweight and obesity contributed the most individually to bowel cancer burden in 2018 (16% and 14%, respectively). A greater proportion of bowel cancer burden in males was due to overweight and obesity than in females (19% compared with 7%) (Table 2.2). Physical inactivity was responsible for around 12% of bowel cancer burden in 2018.

See *Australian Burden of Disease Study: methods and supplementary material 2018* (AIHW 2021) for more information on the methods used to quantify the impact of specific risk factors.

Table 2.2: Bowel cancer burden attributed to selected risk factors (DALY and %), Australia, 2018

	Males		Females		Persons	
Risk factor	**Attributable DALY**	**Proportion of bowel cancer burden (%)**	**Attributable DALY**	**Proportion of bowel cancer burden (%)**	**Attributable DALY**	**Proportion of bowel cancer burden (%)**
Alcohol use	2,797	5.1	2,900	6.8	5,697	5.8
All dietary risks	14,468	26.3	11,167	26.2	25,635	26.3
• Diet high in processed meat	1,222	2.2	954	2.2	2,176	2.2
• Diet high in red meat	3,224	5.9	2,477	5.8	5,701	5.8
• Diet low in milk	2,607	4.7	2,010	4.7	4,618	4.7
• Diet low in whole grains and high-fibre cereals	8,777	16.0	6,774	15.9	15,551	15.9
High blood plasma glucose	3,872	7.0	2,127	5.0	5,999	6.1
Overweight and obesity	10,406	18.9	2,764	6.5	13,169	13.5
Physical inactivity	6,048	11.0	5,448	12.8	11,497	11.8
Tobacco use	2,878	5.2	3,741	8.8	6,619	6.8
Joint effect	**30,527**	**55.5**	**21,850**	**51.3**	**52,377**	**53.7**

Note: Attributable burden was analysed independently for each risk factor and only the 'joint effect' estimates take into account the complex pathways and interactions between risk factors. Therefore, attributable DALY and percentages for individual risk factors will not sum to the joint effect.

Source: AIHW Australian Burden of Disease Database.

3 Performance indicators

3.1 Summary

The Population Based Screening Framework (Standing Committee on Screening 2018) uses 5 incremental stages to describe a population screening pathway. The performance indicator data in this monitoring report have been applied to these stages and Figure 3.1 shows how the indicators relate to the framework. For further information on these indicator outcomes over the life of the NBCSP (2006 to 2023), see Appendix B.

Note that data for diagnostic assessments, adenomas and cancers detected, and hospital admissions (PIs 3–9) rely on information being reported back to the NCSR; this reporting is not mandatory and is known to be incomplete.

Recruitment

Of people invited in the 2-year period 2021–2022, 40.0% participated in the NBCSP (Table A3.2). This was similar to the 40.9% participation rate in the previous rolling 2-year period (2020–2021) (Table A3.5).

The participation rate was higher for people receiving their second, third, or later screening invitation (41.3%) than for those receiving their initial invitation to screen (30.9%) (Table A3.3).

For those who had participated in their previous invitation round, the re-participation rate was 81.1%. For those who had ever previously participated, the re-participation rate was 72.4% (Table A3.3).

Screening and assessment

In 2022, 64,932 participants returned a positive screening test, giving a 5.7% screening positivity rate (Table A3.6). People who receive a positive screening result are encouraged to visit their primary health-care practitioner (PHCP) for referral to diagnostic assessment.

Colonoscopy form data and MBS claims have been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test. Of the people who received a positive screening test, 85.9% had a diagnostic assessment recorded through one of these sources (Table A3.10). Of those who had a diagnostic assessment, the median time between a positive screening result and a diagnostic assessment was 62 days (Table A3.18).

Diagnosis

As return of the assessment form is not mandatory, diagnosis data were not considered to be complete enough to allow formal performance indicator reporting. However, using the available data for those assessed in 2022, 84 confirmed cancers, 497 suspected cancers, and 2,074 adenomas were reported (Table A4.1).

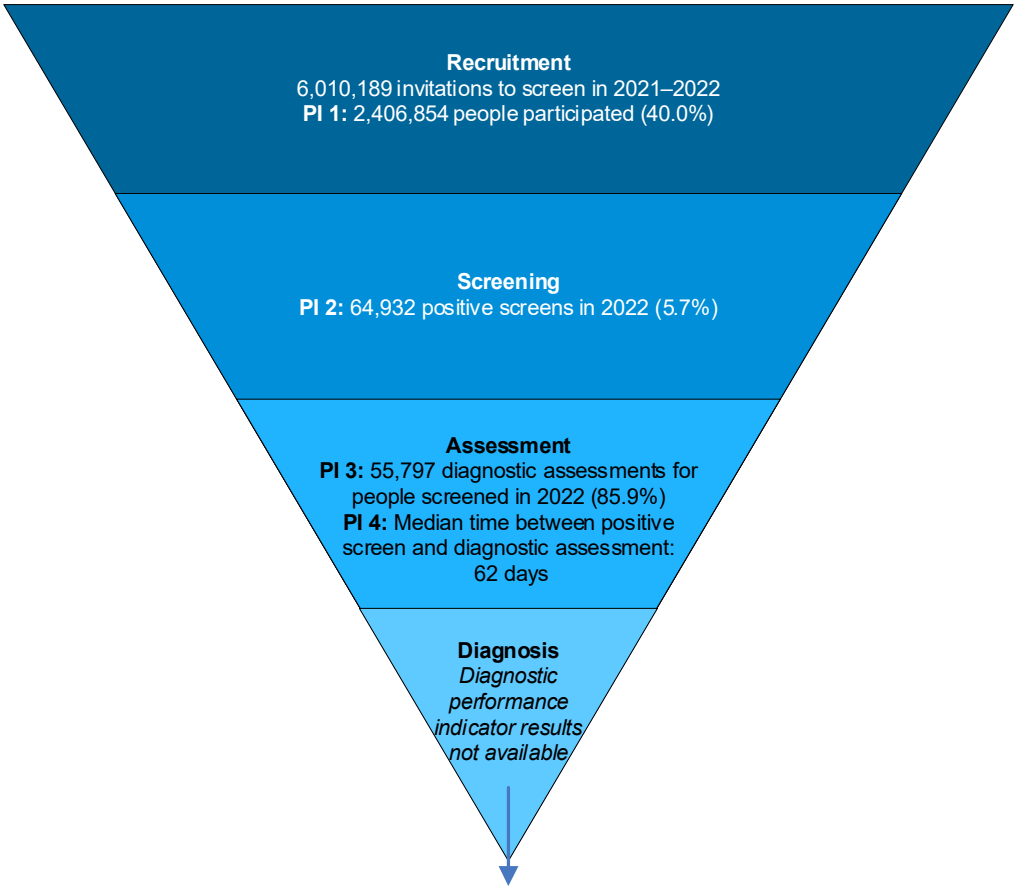
See Chapter 4 for a summary of bowel abnormality detection results, based on available assessment and diagnosis data. Also see *Analysis of bowel cancer outcomes for the National Bowel Cancer Screening Program 2018* (AIHW 2018a) for the most recent accurate PPV of diagnostic assessment for detecting bowel (colorectal) cancer.

Outcomes

In 2022, four people who underwent a diagnostic assessment were recorded as being admitted to hospital within 30 days of this procedure, giving a hospital admission rate after assessment of 0.7 per 10,000 assessments (Table A3.23).

In 2024, it is estimated that 7,265 people aged 50–74 will be diagnosed with bowel cancer (Table A3.24) and that 1,793 people aged 50–74 will die from the disease (Table A3.28).

Figure 3.1: Summary of NBCSP performance indicators for this report, Australia



Assessment details
Those assessed in 2022[(a)]

No issue or other diagnosis	6,039	(42.0%)
Biopsy awaiting histopathology	5,696	(39.6%)
Non-advanced adenomas	982	(6.8%)
Advanced adenomas	1,092	(7.6%)
Suspected cancer	497	(3.5%)
Confirmed cancer	84	(0.6%)

Outcomes
For morbidity and mortality

PI 9:	Adverse events	0.7 per 10,000	(2022)
PI 10:	Incidence	96 per 100,000	(2024)
PI 11:	Mortality	23 per 100,000	(2024)

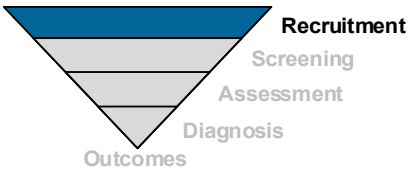
(a) Based on available outcome data. Percentages may not sum to 100% due to rounding. Excludes 40,591 assessments with no record of outcome.

Notes

1. The recruitment indicator PI 1 is reported against the 2-year calendar period 2021–2022, with follow-up to June 2023. The screening indicator PI 2 is reported against the year 2022. The assessment and adverse events indicators are reported against the year 2022, with follow-up to December 2023 for assessments and to June 2023 for adverse events. Incidence and mortality are estimated age-standardised rates for those aged 50–74 in 2024.
2. Assessment, diagnosis and outcomes (PIs 3–9) rely on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability. See 'Current reporting limitations' on page 4.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR raw data extract (RDE)) 06/01/2024).

3.2 Recruitment



PI 1 – Participation rate

Definition: The percentage of people invited to screen through the NBCSP between **1 January 2021 and 31 December 2022** who returned a completed screening test within that period or by **30 June 2023** (AIHW 2014b).

Rationale: Participation should be monitored to ensure acceptability, equity and uptake, with the aim that reductions in incidence, morbidity and mortality can be achieved. Without participation, the NBCSP cannot achieve earlier detection.

Data quality: All invitations issued and iFOBT kits returned are recorded in the NCSR.

Guide to interpretation: The number of individuals sent a screening invitation excludes those who deferred or opted out without completing their screening test, and those who skipped an invitation round due to a recent colonoscopy. Invitees without a valid mailing address in the NCSR are also necessarily excluded from invitation. A non-valid address may be a result of the NCSR not recognising a current postal address, or a return to sender flag currently recorded against the invitee and their given address. Appendix A (Table A3.1) contains details on the number of invitees in these categories.

Data on participation by Indigenous Australians, by preferred language spoken at home, and by disability status are not currently available due to the lack of complete denominators for these subgroups. See Chapter 5 for estimates of participation for these subgroups.

Participation is measured over 2 years to align with the 2-year recommended screening interval. A consequence of this is that there are 'rolling' participation rates, in which there is an overlap of one calendar year between any 2 consecutively reported participation rates.

National participation rate: 40%.

The following apply to the 6,010,189 eligible people invited from 1 January 2021 to 31 December 2022:

Australia-wide: A total of 2,406,854 people participated in the NBCSP, giving an overall Australia-wide participation rate of 40% (Table A3.2).

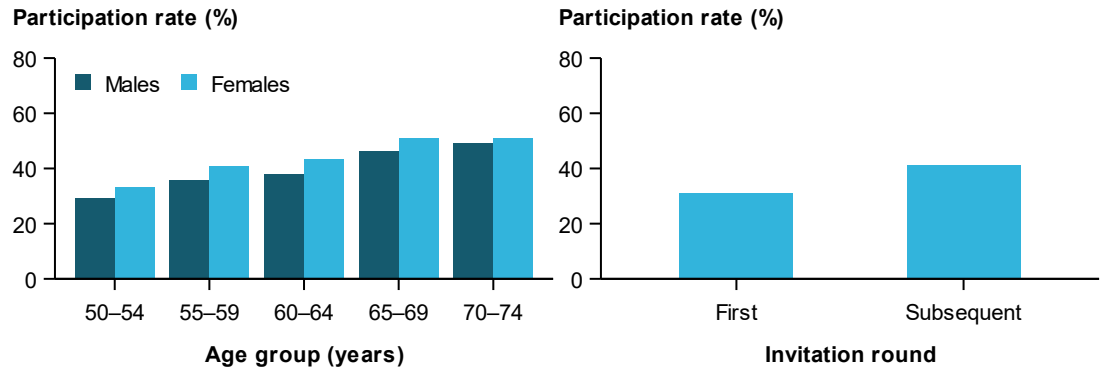
Sex: Female invitees had a higher participation rate (42%) than males (38%) (Table A3.2).

Age: The participation rate increased with each invitation age group, from 31% for people aged 50–54 to 50% for people aged 70–74 (Figure 3.2).

Invitation round: The participation rate was higher for people who had previously been invited to the program (receiving their second or later screening invitation, 41%) compared with people receiving their first invitation (31%) (Figure 3.2).

The re-participation rate was higher for those who had participated in their previous invitation round and were receiving a subsequent invitation (81%) compared with those who had ever previously participated (72%) (Table A3.3).

Figure 3.2: Participation of people aged 50–74, by sex and age and by invitation round, Australia, 2021–2022



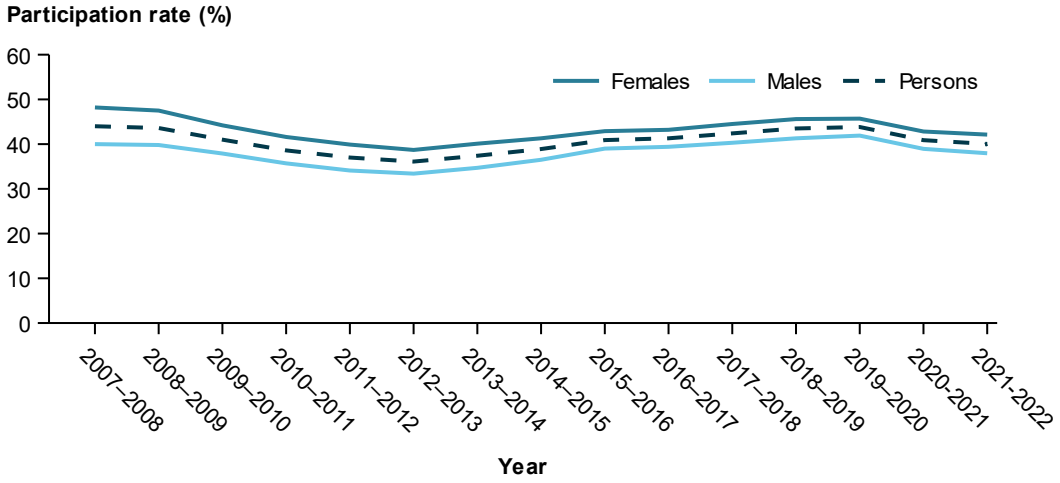
Note: Subsequent invitation round includes second, third and later invitation rounds.

Sources: Tables A3.2 and A3.3.

Trend: Monitoring reports before 2016 analysed participation differently from the indicator used in this report. This means that trend comparisons with rates published in those earlier reports cannot be made. To allow trends to be compared over time, the new participation indicator specifications have been applied retrospectively to earlier years of program data within this report (Figure 3.3).

Using this indicator across all program data to date, the participation rate fell from 44% in 2007–2008 to 36% in 2012–2013, then gradually rose to 44% in 2019–2020, before a drop to 40% in 2021–2022 (Figure 3.3).

Figure 3.3: Participation of people aged 50–74, by sex, Australia, 2007–2008 to 2021–2022



Notes

1. Data presented are for rolling 2-year participation periods.
2. Trend data used the performance indicator specifications retrospectively on previous years' data.

Source: Table A3.5.

State or territory: The participation rate was highest for people living in South Australia, the Australian Capital Territory and Tasmania (44% respectively) and lowest for people living in the Northern Territory (27%) (Figure 3.4).

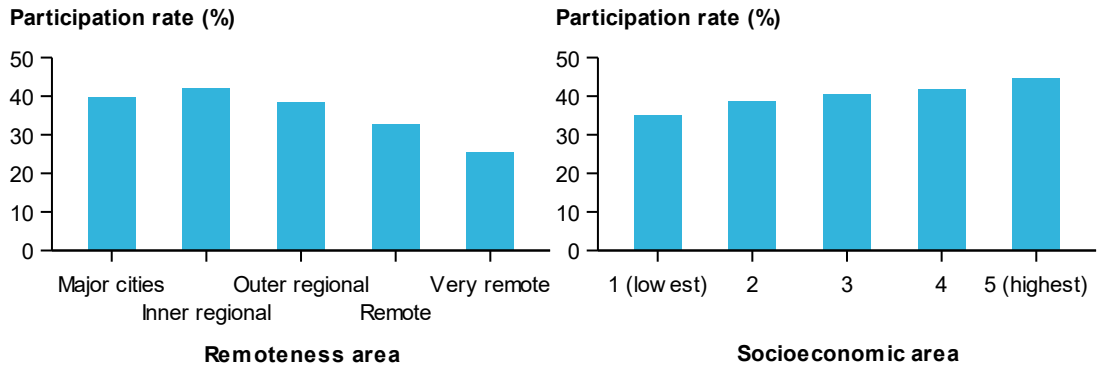
Figure 3.4: Participation of people aged 50–74, by state or territory, Australia, 2021–2022

Source: Table A3.4.

Remoteness area: The participation rate was highest for people living in *Inner regional* areas (42%) and lowest for people living in *Very remote* areas (26%) (Figure 3.5).

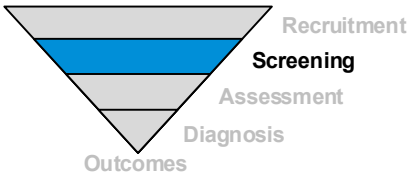
Socioeconomic area: The participation rate was highest for people living in the highest socioeconomic areas (45%) and lowest for those living in the lowest socioeconomic areas (35%) (Figure 3.5).

Figure 3.5: Participation of people aged 50–74, by remoteness area and socioeconomic area, Australia, 2021–2022



Source: Table A3.4.

3.3 Screening



PI 2 – Screening positivity rate

Definition: The percentage of people who returned a valid NBCSP screening test and received a positive screening result (warranting further assessment) between **1 January 2022 and 31 December 2022** (AIHW 2014b).

Rationale: The positive screening test rate determines the diagnostic assessment workload and lesion detection rate. It is important that the accepted positivity range is reviewed and revised (to improve lesion detection rates while limiting 'false' positive results) if necessary. Monitoring this is important for program planning and quality assurance. Further, monitoring the positivity rate by various stratifications may reveal emerging positive or negative trends that need to be investigated, and rectified.

Data quality: All valid iFOBT results are recorded in the NCSR.

Guide to interpretation: This indicator counts all tests analysed in the defined period, not tests analysed from those invited in the defined period; therefore, the cohort monitored is different from the cohort monitored in the participation indicator.

National screening positivity rate: 5.7%.

The following apply to the 1,129,914 invitees who had a screening test analysed in 2022:

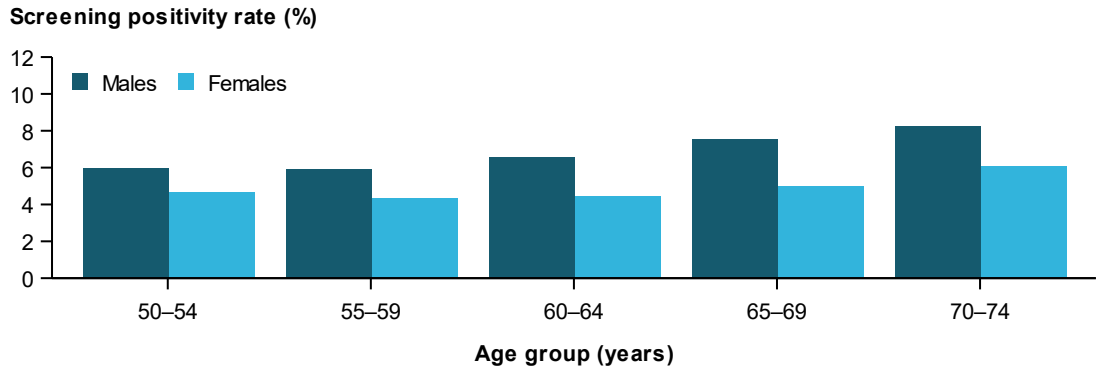
Australia-wide: A total of 64,932 people received a positive screening test result, giving an overall Australia-wide screening positivity rate of 5.7% (Table A3.6).

Sex: Male participants had a higher screening positivity rate than females (7% compared with 5%, respectively), across all age groups (Figure 3.6).

Age: The screening positivity rate increased with each age group, from 5% for people aged 50–64 to 7% for those aged 70–74 (Figure 3.6).

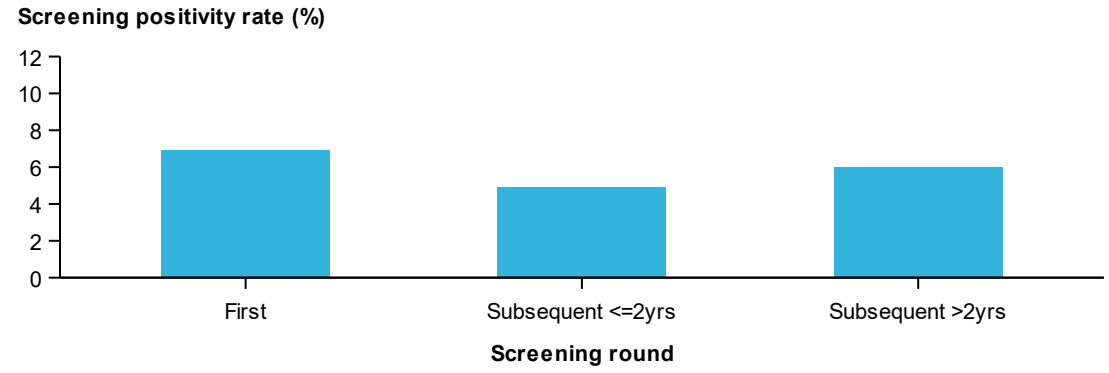
Screening round: The screening positivity rate was highest for people during their first round of screening (7% compared with 6% for those whose subsequent screen was more than 2 years after their first screen) (Figure 3.7).

Figure 3.6: Screening positivity rate of people aged 50–74, by sex and age, Australia, 2022



Source: Table A3.6.

Figure 3.7: Screening positivity rate of people aged 50–74, by screening round, Australia, 2022



Source: Table A3.7.

State or territory: The screening positivity rate was consistently between 5% and 6% across jurisdictions (Figure 3.8).

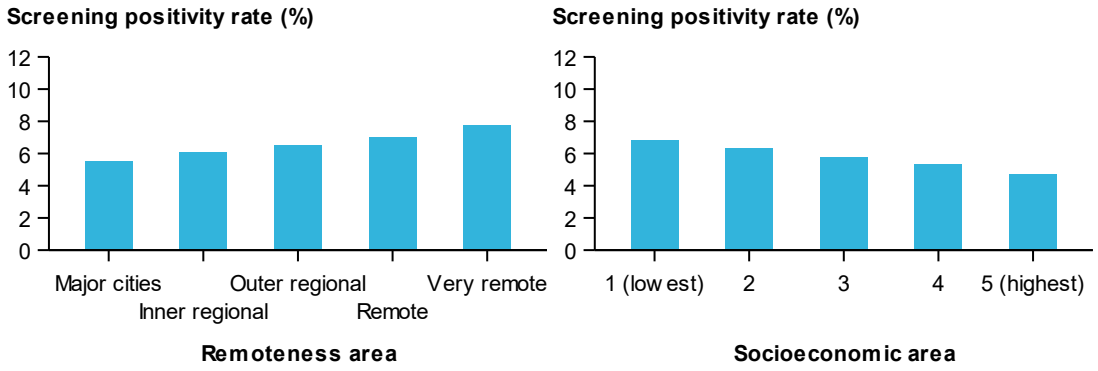
Figure 3.8: Screening positivity rate of people aged 50–74, by state or territory, Australia, 2022

Source: Table A3.8.

Remoteness area: The screening positivity rate was highest for people living in *Very remote* areas (8%) and lowest for those living in *Major cities* (6%) (Figure 3.9).

Socioeconomic area: The screening positivity rate was highest for people living in the lowest socioeconomic areas (7%) and lowest for those living in the highest socioeconomic areas (5%) (Figure 3.9).

Figure 3.9: Screening positivity rate of people aged 50–74, by remoteness area and socioeconomic area, Australia, 2022



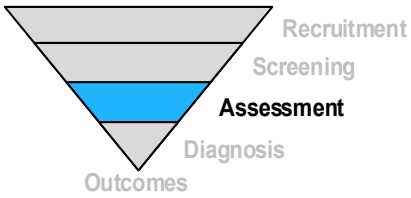
Source: Table A3.8.

Indigenous status: Indigenous Australians had a higher screening positivity rate than non-Indigenous Australians (8% compared with 6%, respectively) (Table A3.9).

Preferred language spoken at home: Those who preferred to speak a language other than English at home had the same screening positivity rate as those who spoke English at home (6% for both) (Table A3.9).

Disability status: Those reporting severe or profound activity limitation had a higher screening positivity rate than those not reporting such limitation (10% compared with 6%, respectively) (Table A3.9). Reasons for this difference are not well understood but may include a lower level of physical activity (Wolin et al. 2011) or comorbidities and medications that increase the likelihood of a positive iFOBT screening result in people with severe or profound activity limitation.

3.4 Assessment



PI 3 – Diagnostic assessment rate

Definition: The percentage of people who returned a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022** and had follow-up diagnostic assessment within that period or by **31 December 2023** (AIHW 2014b).

Rationale: The appropriate movement of people from participation to diagnostic assessment is a key indicator of the efficiency of the program and its impact in reducing morbidity and mortality from bowel cancer. While not all participants with a positive screen will necessarily have an assessment, according to the Population Based Screening Framework (Standing Committee on Screening 2018), systems should be in place to ensure timely follow-up to diagnostic assessment for individuals with a positive screening test.

Data quality: This indicator relies on information being returned to the NCSR; however, this reporting is not mandatory, and is known to be incomplete. Therefore, there is an unknown level of under-reporting for this indicator, and levels of under-reporting may differ across groups (for example, across jurisdictions, and across remoteness and socioeconomic areas). Participants with only an MBS claim for colonoscopy services are included (and assumed to have been performed in a private health-care setting), though outcomes from this colonoscopy source are not known. In this report, for the second time, colonoscopy data have also been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

Guide to interpretation: This indicator includes all people with a positive screen in the defined period, not all those invited in the defined period.

National diagnostic assessment rate: 86%.

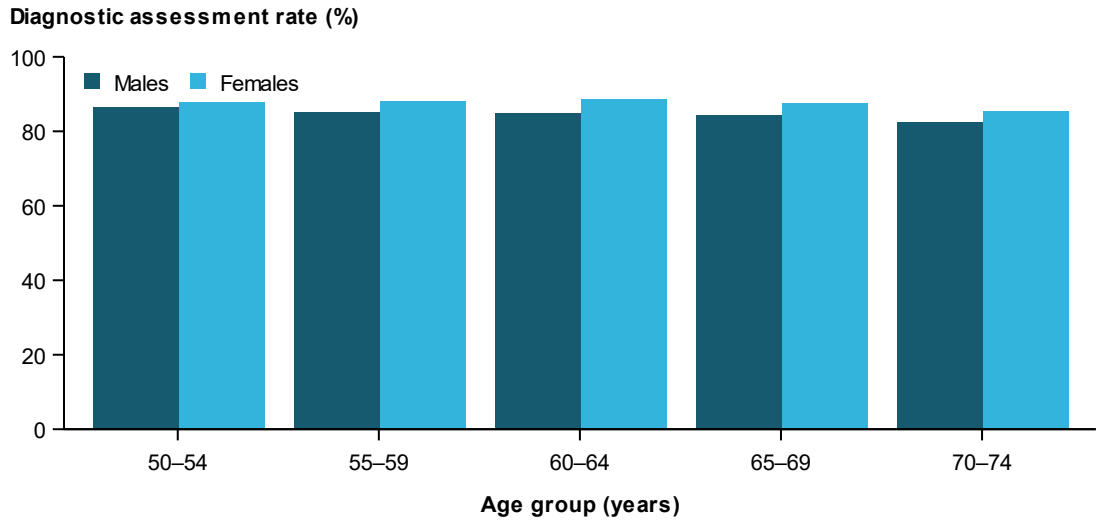
The following apply to the 64,932 participants with a positive screening test in 2022:

Australia-wide: A total of 55,797 people had a follow-up diagnostic assessment (colonoscopy) recorded – an overall Australia-wide diagnostic assessment rate of 86% (Table A3.10).

Sex and age: Diagnostic assessment rates were higher for females (88%) than males (85%) and were slightly lower for people aged 70–74 (84%) than for younger target age groups (87%–86% for age groups 50–64 to 65–69) (Figure 3.10).

Health-care provider: Most diagnostic assessments (58%; 32,442) recorded were performed through the private health-care system, with an additional 27% (15,068 assessments) recorded through the public health-care system (Table A3.11). The remaining 15% (8,287 diagnostic assessments) did not state through which system (public or private) the follow-up assessment was performed. As this indicator relies on information being reported back to the NCSR, and because reporting is not mandatory, differences in the performance of diagnostic assessments by public and private providers should be considered with caution.

Figure 3.10: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by sex and age group, Australia, 2022



Notes

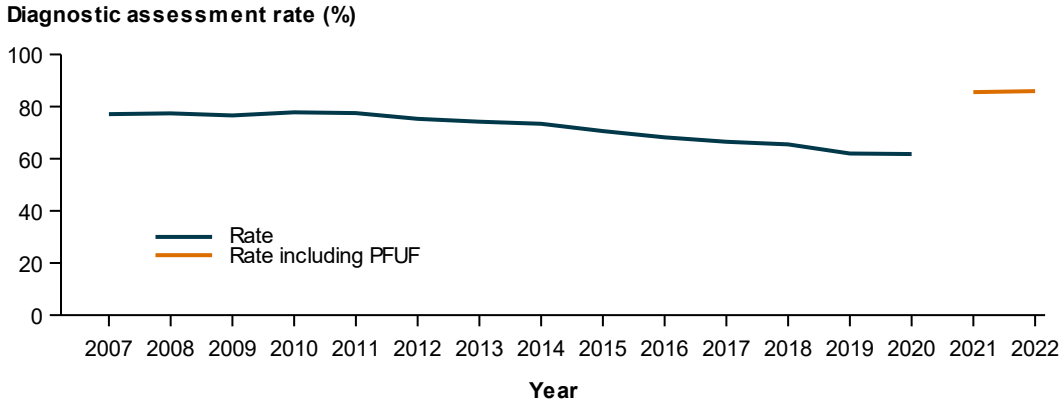
1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of hospital admission rate (PI 9) is based on the diagnostic assessment date.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.

Source: Table A3.10.

Trend: Monitoring reports before 2016 used a different methodology to analyse the diagnostic assessment rate. This means that trend comparisons with rates published in those earlier reports cannot be made. To allow trends to be compared over time, the new indicator specifications have been applied retrospectively to earlier years of program data within this report (Figure 3.11). However, note that from 2021 colonoscopy form data and MBS claims have been supplemented with Participant follow-up function (PFUF) data, so direct comparisons between 2021 and earlier time periods should not be made.

State or territory: The follow-up diagnostic assessment rate was highest for people living in the Australian Capital Territory (90%) and lowest for those living in the New South Wales (83%) (Figure 3.12). Note that differences in form return and varying pathway practices for diagnostic assessment may affect the results across jurisdictions.

Figure 3.11: Diagnostic assessment rate (colonoscopy) of people aged 50–74, Australia, 2007–2022

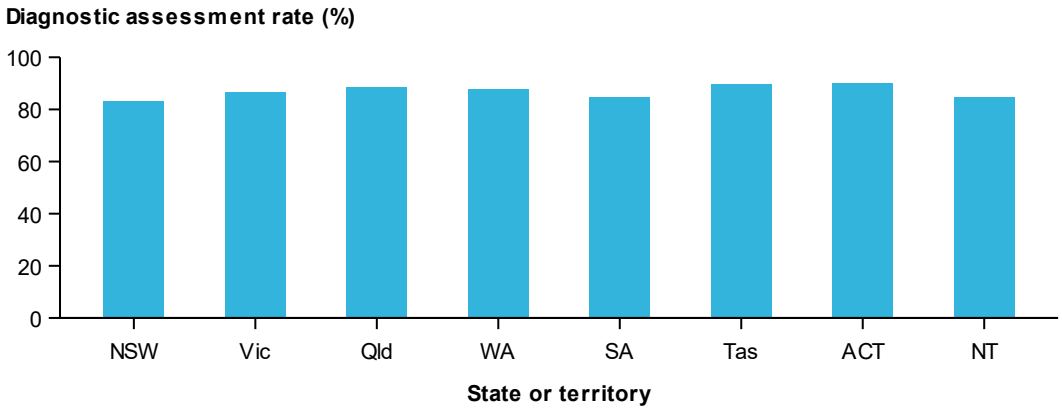


Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of hospital admission rate (PI 9) is based on the diagnostic assessment date.
2. This indicator relies on information being reported to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, from 2021 Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
3. Trend data used the performance indicator specifications retrospectively on previous years' data.
4. As PFUF data are used from 2021 onwards to supplement missing colonoscopy form data, trend data prior to 2021 cannot be compared with newer time periods.

Source: Table A3.14.

Figure 3.12: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by state and territory, Australia, 2022



Notes

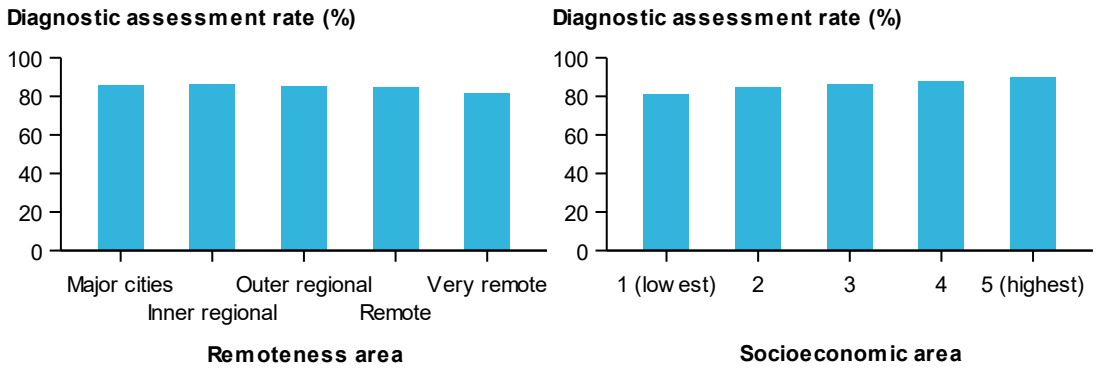
1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of hospital admission rate (PI 9) is based on the diagnostic assessment date.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
3. Differences across jurisdictions may involve differences in form return and varying pathway practices for diagnostic assessment.

Source: Table A3.12.

Remoteness area: The follow-up diagnostic assessment rate was highest for people living in *Inner regional areas* (86%) and lowest for people living in *Very remote* areas (82%) (Figure 3.13).

Socioeconomic area: The follow-up diagnostic assessment rate was highest for people living in the highest socioeconomic areas (90%) and lowest for those living in the lowest socioeconomic areas (81%) (Figure 3.13).

Figure 3.13: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by remoteness area and socioeconomic area, Australia, 2022



Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of hospital admission rate (PI 9) is based on the diagnostic assessment date.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.

Source: Table A3.12.

Indigenous status: Indigenous Australians had a lower follow-up diagnostic assessment rate than non-Indigenous Australians (80% compared with 86%, respectively) (Table A3.13).

Preferred language spoken at home: People who preferred to speak a language other than English at home had a lower follow-up diagnostic assessment rate than those who spoke English at home (82% compared with 87%, respectively) (Table A3.13).

Disability status: People reporting severe or profound activity limitation had a lower follow-up diagnostic assessment rate than those not reporting such limitation (71% compared with 88%, respectively) (Table A3.13).

PI 4 – Time between positive screen and diagnostic assessment

Definition: For those who received a positive NBCSP screening test (warranting further assessment) between **1 January 2022 and 31 December 2022**, the median time between the positive screen and a follow-up diagnostic assessment within that period or by **31 December 2023** (AIHW 2014b).

Rationale: Waiting for a definitive diagnosis after a positive screen can create anxiety. There are various steps, participant decisions, and waiting times that occur along the pathway between a positive screen and a diagnostic assessment. Therefore, this indicator should not be considered a hospital wait time indicator. However, after a positive screen, further diagnostic assessment should occur in a timely fashion as there is a defined risk of bowel cancer in those with a positive screening test – and any harms (such as anxiety) from a positive screen should be minimised.

Data quality: This indicator relies on information being reported to the NCSR; however, this reporting is not mandatory, and is known to be incomplete. Therefore, there is an unknown level of under-reporting for this indicator, and levels of under-reporting may differ across groups (for example, across jurisdictions and across remoteness and socioeconomic areas). Participants with only an MBS claim for colonoscopy services are included (and assumed to have been performed in a private health-care setting), though outcomes from this colonoscopy source are not known. In this report, for the second time, colonoscopy data have been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

Guide to interpretation: This indicator includes all people with a positive screen in the defined period, not all those invited in the defined period.

Details of the number and proportion of participants for whom time between positive screen and diagnostic assessment was less than or equal to 30, 60, 120, 180, or 360 days, or greater, are included in tables A3.15–A3.17 (Appendix A), together with median time and 90th percentile information in tables A3.18–A3.22.

National median time between positive screen and diagnostic assessment: 62 days.

The following apply for the 64,932 participants who had a positive screening test in 2022 with a diagnostic assessment recorded:

Australia-wide: The median time between positive screen and assessment was 62 days (Table A3.18).

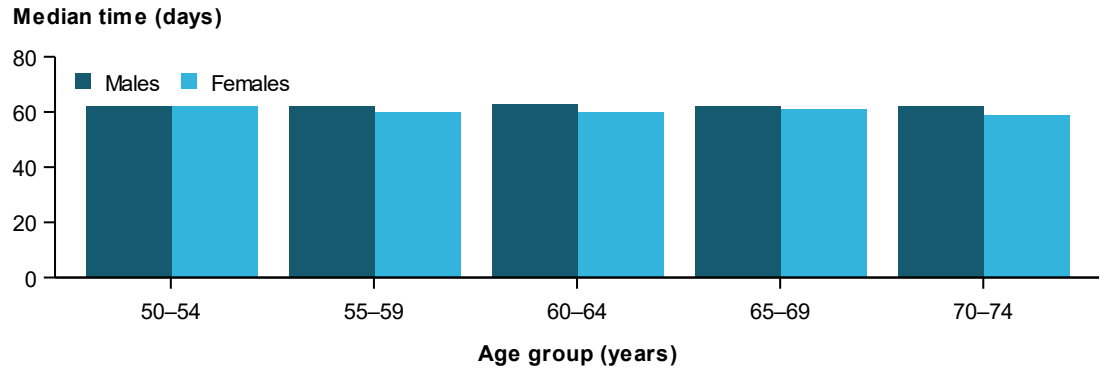
Sex: Males had longer median time between a positive screen and assessment than females (62 days and 60 days, respectively) (Figure 3.14).

Age: The median time between a positive screen and diagnostic assessment was from 61 to 62 days across age groups (Figure 3.14).

Health-care provider: The median time between a positive screen and diagnostic assessment for people who went through the private or public health-care systems was 51 and 87 days, respectively (Table A3.19).

Around 15% of diagnostic assessments did not state through which system (public or private) the follow-up assessment was performed. As this indicator relies on information being reported back to the NCSR, and since reporting is not mandatory, differences in wait times by public and private providers should be considered with caution.

Figure 3.14: Median time (in days) between positive screen and diagnostic assessment of people aged 50–74, by sex and age, Australia, 2022

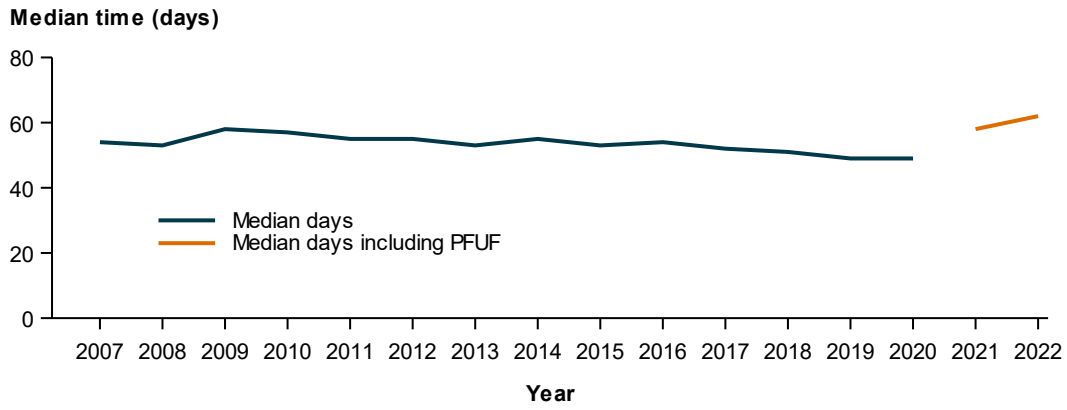


Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.

Source: Table A3.18.

Trend: Monitoring reports before 2016 did not include this analysis, so trend comparisons with data from these earlier reports cannot be made. To allow trends to be compared over time, the new indicator specifications have been applied retrospectively to earlier years of program data within this report (Figure 3.15). However, note that from 2021 colonoscopy form data and MBS claims have been supplemented with Participant follow-up function (PFUF) data, so direct comparisons between 2021 and earlier time periods should not be made.

Figure 3.15: Median time (in days) between positive screen and diagnostic assessment of people aged 50–74, Australia, 2007–2022



Notes

1. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
2. Trend data used the performance indicator specifications retrospectively on previous years' data.
3. As PFUF data are used from 2021 onwards to supplement missing colonoscopy form data, trend data prior to 2021 cannot be compared with newer time periods.

Source: Table A3.22.

State or territory: The median time between a positive screen and diagnostic assessment was highest for people living in the Northern Territory (78 days) and lowest for those living in Victoria and Western Australia (55 days) (Figure 3.16). Note that differences in form return and varied pathway practices for diagnostic assessment may affect the results across jurisdictions.

Figure 3.16: Median time (in days) between positive screen and diagnostic assessment of people aged 50–74, by state or territory, Australia, 2022

Notes

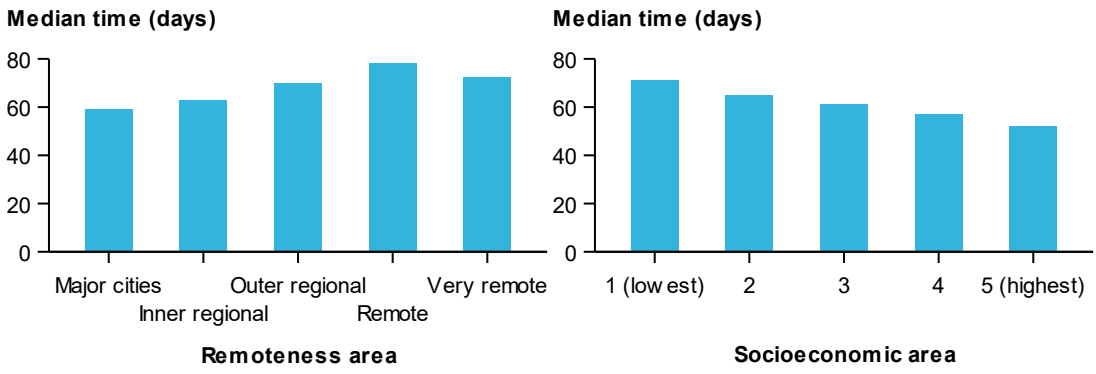
1. Differences across jurisdictions may involve differences in form return and varying pathway practices for diagnostic assessment.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.

Source: Table A3.20.

Remoteness area: The median time between a positive screen and diagnostic assessment was highest for people living in *Remote* areas (78 days) and lowest for those in *Major cities* (59 days) (Figure 3.17).

Socioeconomic area: The median time between a positive screen and diagnostic assessment was highest for people living in the lowest socioeconomic areas (71 days) and lowest for those in the highest socioeconomic areas (52 days) (Figure 3.17).

Figure 3.17: Median time (in days) between positive screen and diagnostic assessment of people aged 50–74, by remoteness area and socioeconomic area, Australia, 2022



Notes

1. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
2. A participant's location may be divided across multiple remoteness areas proportionally. For PI 4, participants were assigned to their largest proportion remoteness area. See Appendix E for more information.

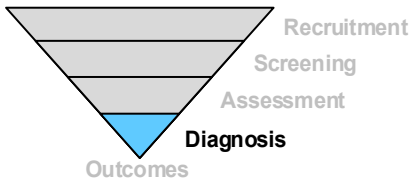
Source: Table A3.20.

Indigenous status: There was a longer median time between a positive screen and diagnostic assessment for Indigenous Australians (72 days) than for non-Indigenous Australians (61 days) (Table A3.21).

Preferred language spoken at home: Those who preferred to speak a language other than English at home had a longer median time between a positive screen and diagnostic assessment compared with those who spoke English at home (66 and 61 days, respectively) (Table A3.21).

Disability status: Participants reporting severe or profound activity limitation had a longer median time between a positive screen and diagnostic assessment (80 days) than those not reporting such limitation (60 days) (Table A3.21).

3.5 Diagnosis

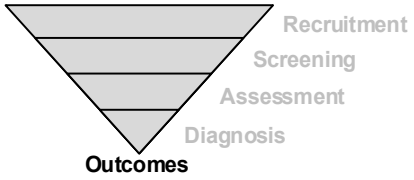


The diagnosis data available were not considered complete enough to allow formal reporting for the following performance indicators:

- PI 5a – Adenoma detection rate
- PI 5b – Positive predictive value of diagnostic assessment for detecting adenoma
- PI 6a – Colorectal cancer detection rate
- PI 6b – Positive predictive value of diagnostic assessment for detecting colorectal cancer. See *Analysis of bowel cancer outcomes for the National Bowel Cancer Screening Program 2018* (AIHW 2018b) for the most recent PPV of diagnostic assessment for detecting colorectal cancer.

See Chapter 4 for a summary of bowel abnormality detection results using available assessment and diagnosis data.

3.6 Outcomes



PI 9 – Adverse events – hospital admission

Definition: The rate at which people who had a diagnostic assessment between **1 January 2022 and 31 December 2022** were admitted to hospital within 30 days of their assessment (AIHW 2014b).

Rationale: As with any invasive procedure, there is the risk of an adverse event occurring with a colonoscopy. 'Maximising benefit and minimising harm' is an important tenet of population screening. Accordingly, it is important to report known harms from screening when monitoring the program's performance.

Data quality: Complete data for this indicator requires linkage with hospital data, which is not currently performed. However, the NCSR does have non-mandatory information on adverse events for participants who had an assessment which will be used until a more complete data source becomes available. Therefore, there is currently an unknown level of under-reporting for this indicator.

In this report, for the second time, colonoscopy form and MBS claim data have been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test, increasing the number of known colonoscopies. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

Guide to interpretation: This indicator includes all people who underwent a diagnostic assessment in the defined period, not all those invited in the defined period. Therefore, assessment counts here may differ to other indicators. As per the adverse event form, unplanned hospital admissions after a colonoscopy are recorded only if they occurred within 30 days of the procedure.

National hospital admission rate: 0.7 per 10,000 assessments.

The following apply to the 54,981 people who had a diagnostic assessment in 2022:

Australia-wide: Four people were admitted to hospital within 30 days of assessment, giving an overall Australia-wide hospital admission rate after assessment of 0.7 per 10,000 assessments (Table A3.23). Reporting of adverse events after a NBCSP colonoscopy is not mandatory so this rate may be underestimated.

Due to concerns about the level of data completeness, no other disaggregations are presented for this indicator.

PI 10 – Incidence of bowel cancer

Definition: The (estimated) incidence rate for bowel cancer per 100,000 estimated resident population aged 50–74 between **1 January 2024 and 31 December 2024** (AIHW 2014b).

Rationale: Incidence data provide contextual information about the number of new cases of bowel cancer in the population, which can inform NBCSP planning.

Data quality: Each Australian state and territory has legislation requiring mandatory reporting of cancer (excluding basal cell and squamous cell carcinomas of the skin). The 2020 Australian Cancer Database (ACD) used in this report contains data on cancers diagnosed up to and including the year 2020.

Guide to interpretation: The latest estimated incidence results (for 2024) are given where possible. However, estimated 2024 incidence numbers are not available for analysis by state or territory, by remoteness and socioeconomic areas, or by Indigenous status. Hence, for these stratifications, the latest actual data to 2020 (the latest year of complete data for all states and territories) are used.

National bowel cancer incidence rate: 96 new cases per 100,000 people aged 50–74.

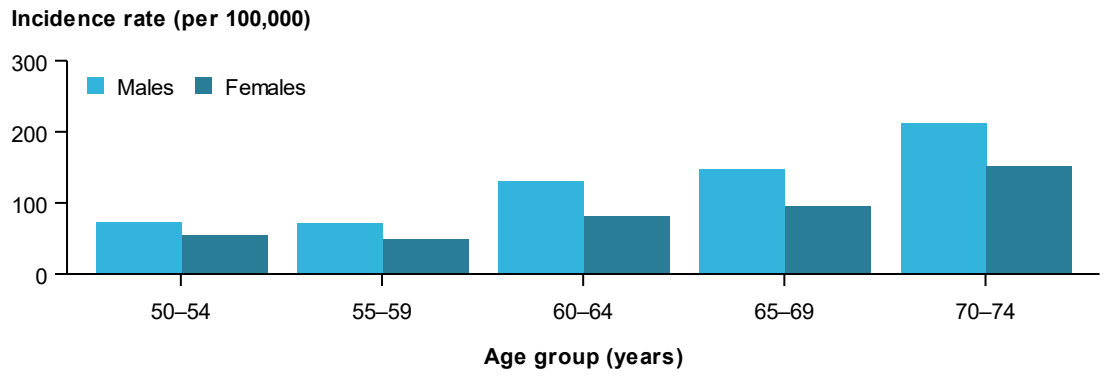
The following estimates were calculated for 2024:

Australia-wide: A total of 7,265 people aged 50–74 will be diagnosed with bowel cancer, giving an age-standardised rate of 96 new cases per 100,000 people (Table A3.24).

Sex: Of people aged 50–74, men will be more likely to be diagnosed with bowel cancer than women (120 new cases per 100,000 males compared with 82 new cases per 100,000 females). When age standardised, rates for males and females will be 114 and 78 new cases, respectively, per 100,000 (Table A3.24).

Age: Bowel cancer incidence rates will be higher for older age groups. For people in the target age group, the estimated bowel cancer incidence rate will increase with increasing age, from 63 new cases per 100,000 people aged 50–54 to 180 new cases per 100,000 people aged 70–74 (Figure 3.18).

Figure 3.18: Incidence rate of bowel cancer for people aged 50–74, by sex and age group, Australia, 2024

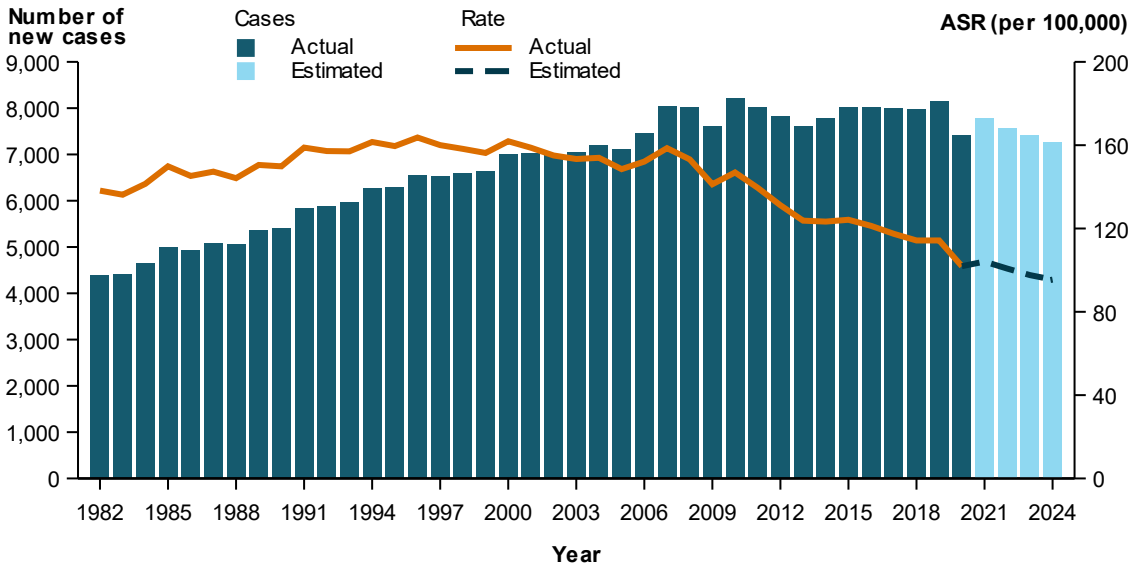


Notes
1. The 2024 estimates are based on 2010–2019 incidence data.
2. Age-specific rates are expressed per 100,000 people.
3. Bowel cancer includes ICD-10 codes C18–C20.

Source: Table A3.24.

Trend: Among people aged 50–74, the number of new bowel cancer cases per year rose from 4,384 in 1982 to a peak of 8,217 in 2010. The number of new cases per year has declined since then to an estimated 7,265 in 2024. The age-standardised rate for new cases (per 100,000 people aged 50–74) rose from 138 in 1982 to a peak of 164 in 1996 (Figure 3.19). Since then, the rate has fallen and is expected to reach an ASR of 96 new cases per 100,000 in 2024. While the Australian population has increased and aged over time, the number of new bowel cancer cases and ASR of new cases are expected to continue to decline.

Figure 3.19: Trend in new cases of bowel cancer, people aged 50–74, Australia, 1982–2024



Notes

1. Estimated incidence data for 2021–2024 are based on 2010–2019 incidence data and may differ to actual incidence data due to current and ongoing program or practice changes, or COVID-19 pandemic effects.
2. The ACD currently contains data on all cases of cancer diagnosed from 1982 to 2020 for all states and territories.
3. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
4. Bowel cancer includes ICD-10 codes C18–C20.

Source: Table A3.27.

State or territory: In the period 2016–2020, the rate of new cases of bowel cancer per 100,000 people aged 50–74 was highest in Queensland (124 new cases of bowel cancer per 100,000 people) and lowest in Western Australia (101 new cases per 100,000 people) (Table A3.25). The age-standardised rates by state or territory followed a similar pattern to the crude rates (Figure 3.20).

Figure 3.20: Incidence rate of bowel cancer for people aged 50–74, by state or territory, Australia, 2016–2020

Notes

1. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. 'State or territory' refers to the state or territory of usual residence.
3. Bowel cancer includes ICD-10 codes C18–C20.

Source: Table A3.25.

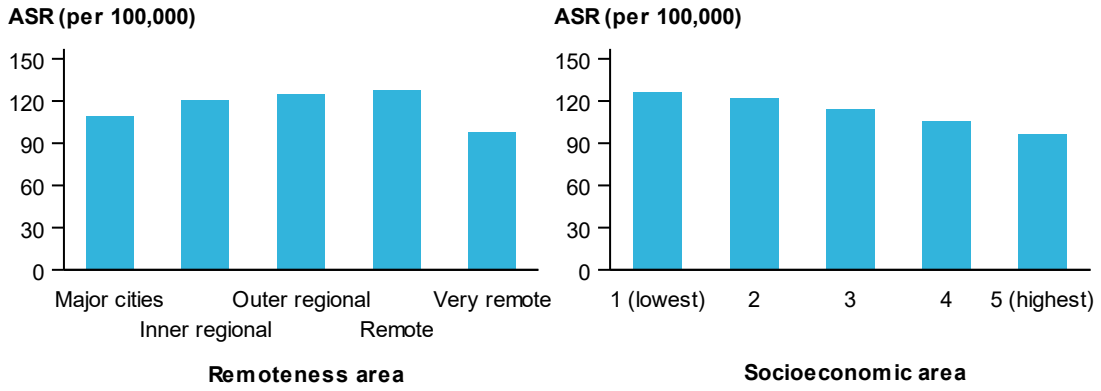
Remoteness area: In the period 2016–2020, incidence of bowel cancer per 100,000 people aged 50–74 differed by remoteness area. Age-standardised rates (ASR) are shown in Figure 3.21 and below.

The ASR for new cases of bowel cancer per 100,000 people aged 50–74 was highest for those living in *Remote* areas (128 new cases of bowel cancer per 100,000 people) and lowest for people living in *Very remote* areas (98 new cases per 100,000 people) (Figure 3.21).

Socioeconomic area: In the period 2016–2020, incidence of bowel cancer per 100,000 people aged 50–74 differed by socioeconomic area. Age-standardised rates are shown in Figure 3.21 and below.

The ASR for new cases of bowel cancer per 100,000 people aged 50–74 was highest for those living in the lowest socioeconomic areas (126 new cases of bowel cancer per 100,000 people) and lowest for people living in the highest socioeconomic areas (96 new cases per 100,000 people) (Figure 3.21).

Figure 3.21: Incidence rate of bowel cancer for people aged 50–74, by remoteness area and socioeconomic area, Australia, 2016–2020



Notes

1. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Remoteness was classified according to the Australian Statistical Geography Standard (ASGS) Remoteness Areas (see Appendix E).
3. Socioeconomic areas were classified using the ABS Index of Relative Socio-economic Disadvantage (IRSD) (see Appendix E).
4. The number of people in different remoteness or socioeconomic areas may not sum to the total due to rounding.
5. Bowel cancer includes ICD-10 codes C18–C20.

Source: Table A3.25.

Aboriginal and/or Torres Strait Islander people

Reliable national data on the diagnosis of cancer for Indigenous Australians are not available. All state and territory cancer registries collect information on Indigenous status; however, in some jurisdictions, the quality of the data is insufficient for analysis. Information in the ACD on Indigenous status is considered to be of sufficient completeness for reporting for New South Wales, Victoria, Queensland, Western Australia, the Australian Capital Territory, and the Northern Territory.

While the majority (91%) of Indigenous Australians live in these 6 jurisdictions, the degree to which data for these jurisdictions are representative of data for all Indigenous Australians is unknown (ABS 2017). For the 6 jurisdictions analysed, 3% (1,214 records) of the relevant ACD records had unknown Indigenous status for bowel cancer diagnoses for people aged 50–74 in 2016–2020 (Table A3.26).

The incidence counts and rates for Indigenous and non-Indigenous Australians presented are under-estimated due to the relatively large proportion of people whose Indigenous status is not stated, or not available. Also, it is likely that some Indigenous Australians are misclassified as non-Indigenous Australians. Therefore, the estimates presented in this report should be interpreted with caution. In addition, age-standardised incidence rates should be used to compare the incidence of bowel cancer for Indigenous and non-Indigenous Australians to account for the different age structures of Indigenous and non-Indigenous populations. See Box 3.1 for information on Indigenous rates calculated using Indigenous population estimates from the 2016 Census.

Box 3.1: Indigenous Australians – incidence and mortality: populations and rates

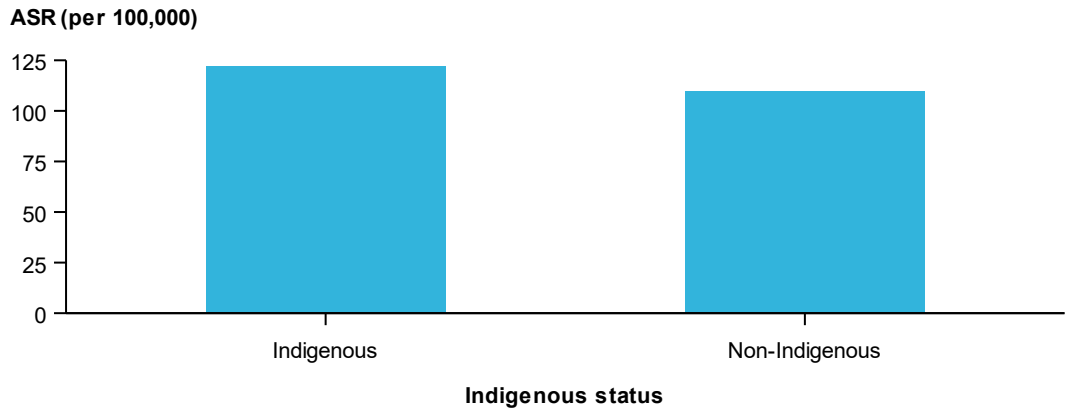
To derive bowel cancer incidence and mortality rates for Indigenous Australians, this report used Indigenous population estimates and projections based on the 2016 Census, due to those from the 2021 Census not being available at the time of this report.

The final estimated resident Aboriginal and Torres Strait Islander population as at 30 June 2016 was 19% larger than the estimated population as at 30 June 2011 (ABS 2018). The ABS notes that the population increase is greater than demographic factors alone can explain. As well, the 2016 estimated population was 7% larger than the 2016 projected population based on the 2011 Census.

The extent of the increase in the Indigenous population estimates between 2011 and 2016 means that any rates calculated with Indigenous population estimates based on the 2016 Census will be lower than those based on the 2011 Census and should not be compared with rates calculated using populations based on previous Censuses.

In the 6 jurisdictions analysed, Indigenous Australians aged 50–74 had a crude rate of incidence of bowel cancer of 112 per 100,000. Following adjustment for differences in the age structure between the two population groups, Indigenous Australians had a higher incidence rate than non-Indigenous Australians in 2016–2020 (122 and 110 cases, respectively, per 100,000 people) (Figure 3.22).

Figure 3.22: Incidence rate of bowel cancer, by Indigenous status, 50–74 years, NSW, Vic, Qld, WA, ACT, and NT, 2016–2020



Notes

1. The rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Bowel cancer includes ICD-10 codes C18–C20.
3. See Box 3.1 for information on rates calculated using the 2016 Census.

Source: Table A3.26.

PI 11 – Mortality from bowel cancer

Definition: The (estimated) mortality rate for bowel cancer per 100,000 estimated resident population aged 50–74 between **1 January 2024 and 31 December 2024** (AIHW 2014b).

Rationale: Mortality data provide contextual information about trends in the level of bowel cancer mortality in the population, which can inform NBCSP planning.

Data quality: Cause of Death Unit Record File data are provided to the AIHW by the jurisdictional registrars of Births, Deaths and Marriages and the National Coronial Information System (managed by the Victorian Department of Justice) and include causes of death coded by the ABS. It is suspected that bowel cancer deaths are under-reported due to issues with death certificate coding (see Appendix D).

Monitoring reports for the NBCSP from 2019 onwards use ICD-10 codes C18–C20, and C26.0 when reporting deaths from bowel cancer using the NMD. This differs from the approach used for versions of the report before 2019 and will result in a greater number of deaths being attributed to bowel cancer (see Box 2.1).

Guide to interpretation: The latest estimated mortality results (for 2024) are given where possible. However, analysis by state or territory, by remoteness and socioeconomic areas, and Indigenous status use the latest actual mortality data (which were to 2022 at the time this report was prepared).

National bowel cancer mortality rate: 23 deaths per 100,000 people aged 50–74.

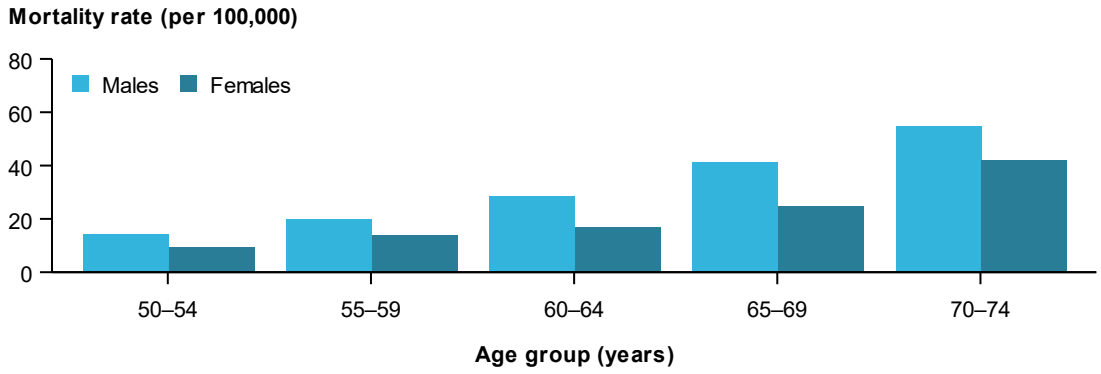
The following estimates were calculated for 2024:

Australia-wide: A total of 1,793 people aged 50–74 will die from bowel cancer, giving an age-standardised rate of 23 deaths per 100,000 people (Table A3.28).

Sex: Males aged 50–74 will be more likely to die from bowel cancer than females (30 deaths per 100,000 males compared with 20 deaths per 100,000 females) (Figure 3.23). When age standardised, rates for males and females will be 28 and 19 deaths, respectively, per 100,000 (Table A3.28).

Age: The bowel cancer mortality rate will continue to be higher for older age groups (Table A3.28). For people in the target age range, the estimated bowel cancer mortality rate per 100,000 people will rise from 12 deaths for those aged 50–54 to 48 deaths for those aged 70–74 (Figure 3.23).

Figure 3.23: Mortality rate from bowel cancer for people aged 50–74, by sex and age, Australia, 2024



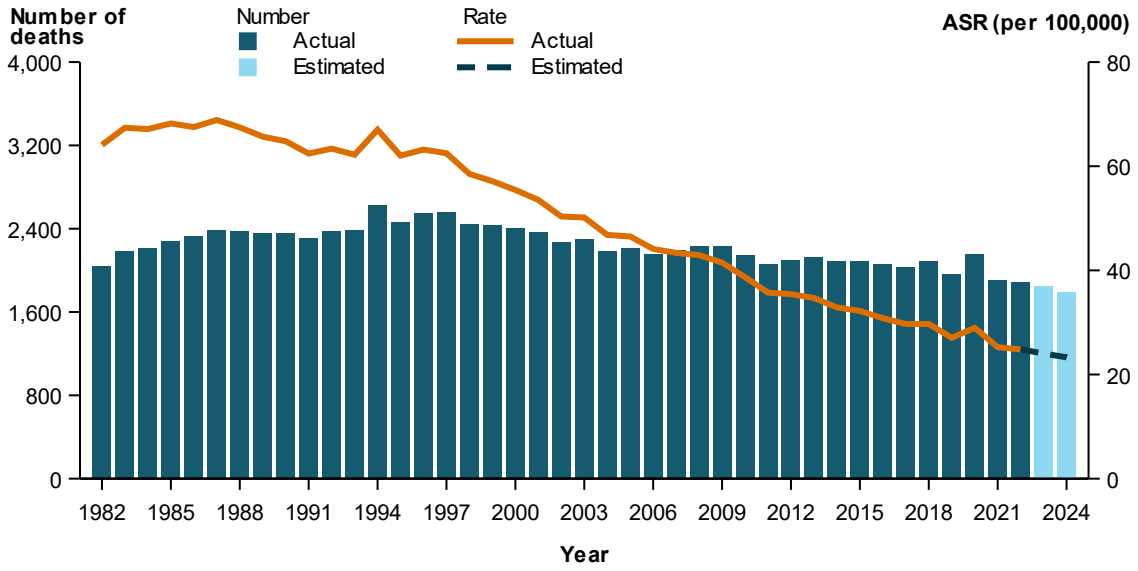
Notes

1. The 2024 estimates are based on 2013–2022 mortality data. See Appendix D for further information.
2. Age-specific rates are expressed per 100,000 people.

Source: Table A3.28.

Trend: Since 1987, the age-standardised mortality rate from bowel cancer per 100,000 people aged 50–74 has fallen from 69 to an estimated 23 deaths per 100,000 in 2024 (Figure 3.24). The number of deaths from bowel cancer peaked at 2,623 cases in 1994 and decreased to an estimated 1,793 in 2024. The overall effect of the increasing and ageing Australian population is that, while the age-standardised mortality rate has steadily fallen over time, the actual number of deaths has remained stable or slowly declined.

Figure 3.24: Trend in deaths from bowel cancer, people aged 50–74, Australia, 1982–2024



Notes

1. Estimated mortality data for 2023–2024 are based on 2013–2022 mortality data and may differ to actual mortality data due to current and ongoing program or practice changes, or COVID-19 pandemic effects. See Appendix D for further information.
2. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.
3. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.

Source: Table A3.31.

The NBCSP started in 2006 and, from 2020, rollout of biennial screening for all eligible Australians in the current target age group (50–74) was in effect. Once biennial invitations have been in place for a number of years, and actual mortality data are available for 2022 onwards, it will be easier to quantify the program's impact on bowel cancer mortality. However, studies conducted by the AIHW of people diagnosed with bowel cancer in 2006–2008 showed that NBCSP invitees (particularly those who participated) diagnosed with bowel cancer had less risk of dying from the disease and were more likely to have less advanced cancers when diagnosed than non-invitees. These findings provide evidence that the NBCSP is contributing to reducing morbidity and mortality from bowel cancer in Australia (AIHW 2014a, 2018a, 2018b).

State or territory: In 2018–2022, the mortality rate per 100,000 people aged 50–74 was highest in Tasmania (33 deaths from bowel cancer) and lowest in the Australian Capital Territory (23 deaths) (Table A3.29). The age-standardised rates by state or territory followed a generally similar pattern to the crude rates (Figure 3.25).

Figure 3.25: Mortality rate from bowel cancer for people aged 50–74, by state or territory, Australia, 2018–2022

Notes

1. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.

Source: Table A3.29.

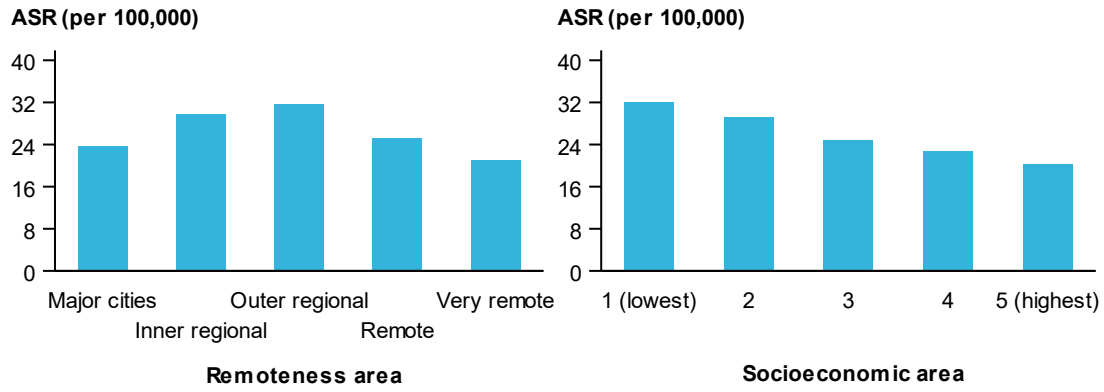
Remoteness area: In the period 2018–2022, mortality from bowel cancer per 100,000 people aged 50–74 differed by remoteness area. Age-standardised rates are shown in Figure 3.26 and below.

The ASR per 100,000 people aged 50–74 was highest for those living in *Outer regional* areas (32 deaths from bowel cancer) and lowest for those living in *Very remote* areas (21 deaths) (Figure 3.26).

Socioeconomic area: In the period 2018–2022, mortality from bowel cancer per 100,000 people aged 50–74 differed by socioeconomic area. Age-standardised rates are shown in Figure 3.26 and below.

The ASR per 100,000 people aged 50–74 was highest for those living in the lowest socioeconomic areas (32 deaths from bowel cancer) and lowest for those living in the highest socioeconomic areas (20 deaths) (Figure 3.26).

Figure 3.26: Mortality rate from bowel cancer for people aged 50–74, by remoteness area and socioeconomic area, Australia, 2018–2022



Notes

1. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.
3. Remoteness was classified according to the ASGS Remoteness Areas (see Appendix E).
4. Socioeconomic areas were classified using the ABS IRSD (see Appendix E).

Source: Table A3.29.

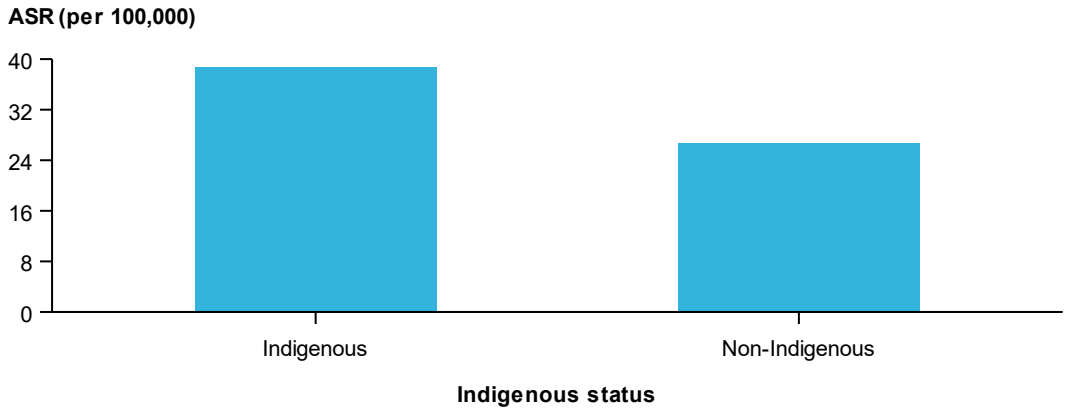
Aboriginal and/or Torres Strait Islander people

Age-standardised mortality rates should be used to compare the mortality rate from bowel cancer between Indigenous and non-Indigenous Australians to account for the different age structures between the 2 populations. Only mortality data from New South Wales, Queensland, Western Australia, South Australia, and the Northern Territory are considered adequate for reporting by Indigenous status. Other jurisdictions have a small number of Indigenous deaths, and identification of these in their death registration systems is relatively poor, making the data less reliable. Note that these jurisdictions differ from those used to calculate incidence for Indigenous and non-Indigenous Australians (see Box 3.1).

For the period 2018–2022, 234 Indigenous Australians aged 50–74 died from bowel cancer in Australia, with 210 of these deaths registered in New South Wales, Queensland, Western Australia, South Australia, and the Northern Territory.

In these jurisdictions for the period 2018–2022, Indigenous Australians aged 50–74 had a crude mortality rate of 36 deaths per 100,000. Following adjustment for differences in age structure between the two population groups, mortality from bowel cancer was higher for Indigenous Australians compared with non-Indigenous Australians (ASRs per 100,000 people of 39 and 27 deaths, respectively, from bowel cancer) (Figure 3.27).

Figure 3.27: Mortality rate from bowel cancer, 50–74 years, by Indigenous status, NSW, Qld, WA, SA, and NT, 2018–2022



Notes

1. Rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.
3. See Box 3.1 for information on rates calculated using the 2016 Census.

Source: Table A3.30.

4 Bowel abnormality detection results

Diagnosis data were not considered complete enough to allow for formal performance indicator reporting of NBCSP diagnostic outcomes in Chapter 3. Instead, a summary of bowel abnormality detection results for those assessed in 2022 are presented here for information, using the available outcome data. In this report, for the second time, colonoscopy form data and MBS claims have been supplemented with Participant follow-up function (PFUF) data for those who had a positive screening test, increasing the number of known colonoscopies. However, colonoscopies sourced from PFUF reports or MBS claims have no accompanying outcome data so are excluded here. See 'Changes in monitoring the NBCSP' in Appendix C for further details.

4.1 Bowel abnormality detection using available assessment and histopathology data

Of the 54,981 participants who had a diagnostic assessment in 2022, 14,390 had outcome data. Of these:

- 84 (0.6%) had a bowel cancer detected and confirmed by histopathology
- 497 (3.5%) had a suspected bowel cancer at assessment that was still awaiting histopathological diagnosis
- 2,074 (14.4%) had an adenoma diagnosed by histopathology
- 6,039 (41.9%) had no adenoma or cancer recorded (includes those with no issue noted, or other diagnoses)
- 5,696 (39.6%) were still awaiting histopathology outcomes for a polyp biopsy sample (not suspected of being bowel cancer) (Table A4.1).

Rates of bowel cancer and adenoma detection differed by state or territory (Table A4.2). Differences across states and territories may be affected by differences in return rates of histopathology forms and should be interpreted with caution.

5 Spotlight on population groups

The NBCSP is monitored in relation to equity of access to relevant services for different population groups, including by geographical location, socioeconomic area, Indigenous status, preferred language spoken at home, and disability status. Routine monitoring of rates by various stratifications may reveal emerging trends for further investigation. This chapter provides a summary of performance indicators for 5 population subgroups. Note that there is large overlap of the Indigenous population with 2 of the other population subgroups presented here, due to higher proportions of Indigenous Australian participants living in the lowest socioeconomic areas and in *Very remote* areas.

5.1 Low socioeconomic areas

This section compares performance indicator results between the highest and lowest socioeconomic areas only. However, as noted in Chapter 3, across all performance indicators, there is a general gradient of increasingly poorer outcomes across the 5 socioeconomic groupings as socioeconomic disadvantage increases.

Australians living in the lowest socioeconomic areas had a lower participation rate than those living in the highest socioeconomic areas. Further, those that screened in the lowest socioeconomic areas experienced a higher screening positivity rate than those living in the highest socioeconomic areas, yet had a lower follow-up diagnostic assessment rate and a longer median time between a positive screen and an assessment.

Australians living in the lowest socioeconomic areas had higher age-standardised bowel cancer incidence and mortality rates than those living in the highest socioeconomic areas (Table 5.1).

Table 5.1: Summary of performance indicators for lowest and highest socioeconomic areas

Indicator		Summary of performance indicators for the lowest socioeconomic areas compared with the highest	Lowest socioeconomic areas	Highest socioeconomic areas
PI 1	Participation rate	Lower participation rate	35.0%	44.6%
PI 2	Screening positivity rate	Higher screening positivity rate	7%	5%
PI 3	Diagnostic assessment rate	Lower diagnostic assessment follow-up rate	81%	90%
PI 4	Time between positive screen and diagnostic assessment	Longer median time	71 days	52 days
PI 9	Adverse events – hospital admission	Comparison not published	n.p.	n.p.
PI 10	Incidence of bowel cancer	Higher age-standardised incidence rate	126 per 100,000	96 per 100,000
PI 11	Mortality from bowel cancer	Higher age-standardised mortality rate	32 per 100,000	20 per 100,000

Notes

1. The participation indicator PI 1 is reported against the period 2021–2022 with follow-up to June 2023. The screening indicator PI 2 is reported against the period 2022. The assessment indicators PIs 3 and 4 are reported against the period 2022 with follow-up to 31 December 2023. Incidence (PI 10) is reported for 2016–2020. Mortality (PI 11) is reported for 2018–2022.
2. Indicators PI 3–9 rely on information being reported back to the NCSR. As NBCSP forms are not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability.

Sources: AIHW ACD 2020; AIHW NMD; AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

5.2 Very remote areas

This section compares performance indicator results between *Major cities* and *Very remote* areas only. However, as noted in Chapter 3, both *Remote* and *Very remote* areas had poorer participation and higher positivity rates than all other areas.

Australians living in *Very remote* areas had a lower participation rate than those living in *Major cities*. They also experienced a higher screening positivity rate than Australians living in *Major cities* yet had a lower follow-up diagnostic assessment rate and a longer median time between a positive screen and an assessment.

Australians living in *Very remote* areas had a lower age-standardised bowel cancer incidence rate and a lower age-standardised mortality rate compared with those living in *Major cities* (Table 5.2).

Table 5.2: Summary of performance indicators for *Very remote* and *Major cities* areas

Indicator		Summary of performance indicators for *Very remote* areas compared with *Major cities*	*Very remote*	*Major cities*
PI 1	Participation rate	Lower participation rate	25.5%	39.8%
PI 2	Screening positivity rate	Higher screening positivity rate	8%	6%
PI 3	Diagnostic assessment rate	Lower diagnostic assessment follow-up rate	82%	86%
PI 4	Time between positive screen and diagnostic assessment	Longer median time	73 days	59 days
PI 9	Adverse events – hospital admission	Comparison not published	n.p.	n.p.
PI 10	Incidence of bowel cancer	Lower age-standardised incidence rate	98 per 100,000	109 per 100,000
PI 11	Mortality from bowel cancer	Lower age-standardised mortality rate	21 per 100,000	24 per 100,000

Notes

1. The participation indicator PI 1 is reported against the period 2021–2022 with follow-up to June 2023. The screening indicator PI 2 is reported against the period 2022. The assessment indicators PIs 3 and 4 are reported against the period 2021 with follow-up to 31 December 2023. Incidence (PI 10) is reported for 2016–2020. Mortality (PI 11) is reported for 2018–2022.
2. Indicators 3–9 rely on information being reported back to the NCSR. As NBCSP forms are not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability.

Sources: AIHW ACD 2020; AIHW NMD; AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

5.3 Aboriginal and/or Torres Strait Islander people

Indigenous Australians had a lower estimated participation rate than non-Indigenous Australians. They also experienced a higher screening positivity rate but have a lower follow-up diagnostic assessment rate and a longer median time between a positive screen and an assessment. Indigenous Australians had higher age-standardised bowel cancer incidence rates and higher mortality rates compared with non-Indigenous Australians (Table 5.3).

Reasons for differences in screening outcomes between Indigenous and non-Indigenous Australians are not known; however, the fact that higher proportions of Indigenous Australians live in *Remote* and *Very remote* locations and in lower socioeconomic areas, where access to relevant services can be an issue, may be contributing factors.

Table 5.3: Summary of performance indicators for Indigenous and non-Indigenous Australians

Indicator		Summary of performance indicators for Indigenous Australians compared with non-Indigenous Australians	Indigenous	Non-Indigenous
PI 1	Participation rate[(a)]	Lower participation rate	34.2%	40.5%
PI 2	Screening positivity rate	Higher screening positivity rate	8%	6%
PI 3	Diagnostic assessment rate	Lower diagnostic assessment follow-up rate	80%	86%
PI 4	Time between positive screen and diagnostic assessment	Longer median time	72 days	61 days
PI 9	Adverse events – hospital admission	Comparison not published	n.p.	n.p.
PI 10	Incidence of bowel cancer[(b)(c)]	Higher age-standardised incidence rate	122 per 100,000	110 per 100,000
PI 11	Mortality from bowel cancer[(c)(d)]	Higher age-standardised mortality rate	39 per 100,000	27 per 100,000

(a) Participation rates by Indigenous status were estimated using 2021 Census proportions (see Appendix F for more information).

(b) Includes only New South Wales, Victoria, Queensland, Western Australia, the Australian Capital Territory, and the Northern Territory.

(c) These rates were calculated using Indigenous populations based on the 2016 Census and should not be compared with rates calculated using populations based on previous Censuses. See Box 3.1 for more information.

(d) Includes only New South Wales, Queensland, Western Australia, South Australia and the Northern Territory.

Notes

1. The participation indicator PI 1 is reported against the period 2021–2022 with follow-up to June 2023. The screening indicator PI 2 is reported against the period 2022. The assessment indicators PIs 3 and 4 are reported against the period 2022 with follow-up to 31 December 2023. Incidence is reported for 2016–2020. Mortality is reported for 2018–2022.
2. Indicators 3–9 rely on information being reported back to the NCSR. As NBCSP forms are not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability.
4. The incidence counts and rates for Indigenous and non-Indigenous Australians presented are underestimates due to the relatively large proportion of people whose Indigenous status is not stated. Also, it is likely that some Indigenous Australians are misclassified as non-Indigenous Australians. Therefore, the estimates presented should be interpreted with caution.
5. Bowel cancer incidence and mortality rates for Indigenous and non-Indigenous Australians are compared using age-standardised rates to account for the different age structures of these populations.

Sources: Census data; AIHW ACD 2020; AIHW NMD; AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

5.4 Preferred language spoken at home

Australians who preferred to speak a language other than English at home had a lower participation rate than those who preferred to speak English. They experienced the same screening positivity rate; however, those with a positive screening result had a lower follow-up diagnostic assessment rate and longer median time between a positive screen and an assessment (Table 5.4).

Table 5.4: Summary of performance indicators for English speakers and those who preferred to speak a language other than English (LOTE) at home

Indicator		Summary of performance indicators for those who preferred language other than English at home compared with English speakers	LOTE	English
PI 1	Participation rate[(a)]	Lower participation rate	24.4–31.2%	42.0–44.7%
PI 2	Screening positivity rate	Same screening positivity rate	6%	6%
PI 3	Diagnostic assessment rate	Lower diagnostic assessment follow-up rate	82%	87%
PI 4	Time between positive screen and diagnostic assessment	Longer median time	66 days	61 days
PI 9	Adverse events – hospital admission	Comparison not published	n.p.	n.p.
PI 10	Incidence of bowel cancer[(b)]	Comparison not available	n.a.	n.a.
PI 11	Mortality from bowel cancer[(b)]	Comparison not available	n.a.	n.a.

(a) Participation rates by preferred language spoken at home were estimated using 2021 Census proportions (see Table A5.1 and Appendix F for more information).

(b) Data for this indicator are not available.

Notes

1. The participation indicator PI 1 is reported against the period 2021–2022 with follow-up to June 2023. The screening indicator PI 2 is reported against the period 2022. The assessment indicators PIs 3 and 4 are reported against the period 2022 with follow-up to 31 December 2023. Incidence and mortality data are not currently available for reporting by preferred language spoken at home.
2. Indicators 3–9 rely on information being reported back to the NCSR. As NBCSP forms are not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability.

Sources: Census data; AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

5.5 Disability status

Australians with severe or profound disability experienced a higher screening positivity rate, yet had a lower follow-up diagnostic assessment rate, and a longer median time between a positive screen and an assessment than those not reporting such limitation (Table 5.5).

Table 5.5: Summary of performance indicators for those with severe or profound activity limitation and those without severe or profound activity limitation

Indicator		Summary of performance indicators for those with severe or profound disability compared with those without severe or profound disability	Severe or profound activity limitation reported	No severe or profound activity limitation reported
PI 1	Participation rate[(a)]	Comparison not published	n.p.	n.p.
PI 2	Screening positivity rate	Higher screening positivity rate	10%	6%
PI 3	Diagnostic assessment rate	Lower diagnostic assessment follow-up rate	71%	88%
PI 4	Time between positive screen and diagnostic assessment	Longer median time	80 days	60 days
PI 9	Adverse events – hospital admission	Comparison not published	n.p.	n.p.
PI 10	Incidence of bowel cancer[(b)]	Comparison not available	n.a.	n.a.
PI 11	Mortality from bowel cancer[(b)]	Comparison not available	n.a.	n.a.

(a) Estimates of participation rates by disability status could not be reported in the current report due to changes in completeness of disability status information in the NCSR (see Appendix C and Appendix F for more information).

(b) Data for this indicator are not available.

Notes

1. The participation indicator PI 1 is reported against the period 2021–2022 with follow-up to June 2023. The screening indicator PI 2 is reported against the period 2022. The assessment indicators PIs 3 and 4 are reported against the period 2021 with follow-up to 31 December 2023. Incidence and mortality data are not currently available for reporting by disability status.
2. Indicators 3–9 rely on information being reported back to the NCSR. As NBCSP forms are not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability.

Sources: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Appendix A: Data tables

Additional tables for Chapter 2

Table A2.1: Five-year relative survival from bowel cancer, by age group and sex, Australia, 2016–2020

	Males	Females	Persons
Age group (years)	**5-year relative survival (%)**	**5-year relative survival (%)**	**5-year relative survival (%)**
0–4	n.p.	n.p.	n.p.
5–9	n.p.	n.p.	n.p.
10–14	91.6	98.5	96.0
15–19	96.8	99.4	98.4
20–24	91.2	97.8	95.1
25–29	75.4	78.6	77.2
30–34	75.8	80.8	78.3
35–39	77.6	80.0	78.9
40–44	76.6	78.4	77.5
45–49	73.2	75.4	74.3
50–54	76.3	78.9	77.4
55–59	73.4	78.2	75.4
60–64	74.6	76.1	75.2
65–69	72.6	75.6	73.9
70–74	74.0	74.8	74.4
75–79	66.9	69.6	68.1
80–84	64.1	68.4	66.3
85+	52.7	57.6	55.6
50–74	*73.9*	*76.3*	*74.9*
All ages	**70.4**	**72.3**	**71.3**

Source: Australian Institute of Health and Welfare (AIHW) Australian Cancer Database (ACD) 2020

Table A2.2: Trend in 5-year relative survival from bowel cancer, people aged 50–74 at diagnosis, Australia, 1986–1990 to 2016–2020

Year	5-year relative survival (%)
1986–1990	53.0
1991–1995	57.4
1996–2000	61.0
2001–2005	66.4
2006–2010	69.8
2011–2015	73.6
2016–2020	74.9

Source: AIHW ACD 2020.

Table A2.3: Relative survival at diagnosis and 5-year conditional relative survival from bowel cancer, people aged 50–74 at diagnosis, Australia, 2016–2020

	Relative survival	Conditional survival	
Years after diagnosis	Relative survival (%)	Years already survived	5-year conditional relative survival (%)
1	91.1	. .	. .
2	85.0	. .	. .
3	80.5	. .	. .
4	77.4	. .	. .
5	74.9	0	74.9
6	73.0	1	80.2
7	71.6	2	84.1
8	70.6	3	87.7
9	69.6	4	89.9
10	69.1	5	92.2
11	68.3	6	93.5
12	67.7	7	94.6
13	67.2	8	95.2
14	66.5	9	95.6
15	65.9	10	95.5
16	65.5	11	96.0
17	65.0	12	96.0
18	64.3	13	95.7
19	63.9	14	96.0
20	63.3	15	96.0

Source: AIHW ACD 2020.

Table A2.4: Change in fatal burden – years of life lost (YLL) from bowel cancer, age-specific rate (per 1,000 people), Australia, 2003, 2011, 2015, 2018, and 2023

Age group (years)	Year				
	2003	2011	2015	2018	2023
30–34	0.7	0.6	1.2	0.9	0.8
35–39	0.9	1.1	1.1	1.4	1.1
40–44	2.2	1.7	2.0	2.0	1.5
45–49	4.1	2.9	3.3	2.7	2.5
50–54	5.8	4.2	5.3	4.8	3.8
55–59	9.3	6.6	6.1	6.6	5.1
60–64	14.7	10.2	8.9	8.1	7.1
65–69	17.4	12.7	11.3	10.2	8.8
70–74	20.9	15.6	12.7	11.3	10.5
75–79	22.5	19.4	17.6	15.0	13.5
80–84	21.6	19.5	19.0	16.6	15.1
85–89	19.8	18.9	19.0	17.4	15.2
90–94	17.5	17.6	16.6	16.7	14.5
95–99	12.7	12.3	14.2	11.7	11.9
100+	4.8	8.0	9.6	9.6	8.8

Source: AIHW Australian Burden of Disease Database.

Additional tables for Chapter 3

Recruitment

Table A3.1: Screening invitations including opt-out, deferred and skip-round status of people aged 50–74, by sex and age group, Australia, 2021–2022

Sex	Age (years)	Invitations issued to eligible population[a] (N)	Persons deferred[b] (N)	Persons opted out [c] (N)	Persons skipped a round[d] (N)	Persons deferred, skipped, and opted out (N)	Persons deferred, skipped, and opted out (%)	Invitations (minus opted out and deferred) (N)
Males	50–54	899,842	924	1,106	34,131	36,161	4.0	863,681
	55–59	599,837	748	666	38,742	40,156	6.7	559,681
	60–64	762,426	1,242	1,167	55,278	57,687	7.6	704,739
	65–69	435,115	1,124	1,030	40,202	42,356	9.7	392,759
	70–74	542,636	1,307	2,031	60,275	63,613	11.7	479,023
	50–74	*3,239,856*	*5,345*	*6,000*	*228,628*	*239,973*	*7.4*	*2,999,883*
Females	50–54	914,870	1,424	1,419	47,549	50,392	5.5	864,478
	55–59	603,520	999	884	51,039	52,922	8.8	550,598
	60–64	774,877	1,753	1,422	68,476	71,651	9.2	703,226
	65–69	450,682	1,468	1,110	48,261	50,839	11.3	399,843
	70–74	564,915	1,740	2,415	68,599	72,754	12.9	492,161
	50–74	*3,308,864*	*7,384*	*7,250*	*283,924*	*298,558*	*9.0*	*3,010,306*
Persons	50–54	1,814,712	2,348	2,525	81,680	86,553	4.8	1,728,159
	55–59	1,203,357	1,747	1,550	89,781	93,078	7.7	1,110,279
	60–64	1,537,303	2,995	2,589	123,754	129,338	8.4	1,407,965
	65–69	885,797	2,592	2,140	88,463	93,195	10.5	792,602
	70–74	1,107,551	3,047	4,446	128,874	136,367	12.3	971,184
	50–74	**6,548,720**	**12,729**	**13,250**	**512,552**	**538,531**	**8.2**	**6,010,189**

(a) Invitations issued excludes 177,173 people that did not have a valid mailing address in the NCSR.

(b) Invitees from the eligible population who would like to participate in the National Bowel Cancer Screening Program (NBCSP) but have advised they are unable to do so at this time. These invitees will be contacted once the nominated deferral period has elapsed.

(c) Invitees from the eligible population who have advised that they do not wish to participate in the NBCSP, now or in the future. Invitees who opt out will not be contacted again. Invitees may elect to opt back in at a later date.

(d) Invitees from the eligible population who have had a recent colonoscopy (in the last 2 years) are notified that they will skip a round of the NBCSP rather than being sent an immunochemical faecal occult blood test (iFOBT) screening invitation (from November 2019).

Source: AIHW analysis of the National Cancer Screening Register (NCSR) as at 31 December 2023 (NCSR raw data extract [RDE] 06/01/2024).

Table A3.2: Participation of people aged 50–74, by sex and age, Australia, 2021–2022

Sex	Age (years)	Returned completed screening test (N)	Invitations (minus opted out, skipped, and deferred) (N)	Participation (%)
Males	50–54	252,773	863,681	29.3
	55–59	200,383	559,681	35.8
	60–64	267,994	704,739	38.0
	65–69	181,615	392,759	46.2
	70–74	235,916	479,023	49.2
	50–74	*1,138,681*	*2,999,883*	*38.0*
Females	50–54	285,819	864,478	33.1
	55–59	224,295	550,598	40.7
	60–64	303,652	703,226	43.2
	65–69	203,223	399,843	50.8
	70–74	251,184	492,161	51.0
	50–74	*1,268,173*	*3,010,306*	*42.1*
Persons	50–54	538,592	1,728,159	31.2
	55–59	424,678	1,110,279	38.2
	60–64	571,646	1,407,965	40.6
	65–69	384,838	792,602	48.6
	70–74	487,100	971,184	50.2
	50–74	**2,406,854**	**6,010,189**	**40.0**

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.3: Participation of people aged 50–74, by invitation round, previous participation and age group, Australia, 2021–2022

Invitation round	Age (years)	Returned completed screening test (N)	Invitations (minus opted out, skipped, and deferred) (N)	Participation (%)
People who participated for the first time				
First invitation	50–54	218,142	711,451	30.7
	55–59	2,323	6,783	34.2
	60–64	2,779	6,681	41.6
	65–69	1,712	3,971	43.1
	70–74	1,681	3,741	44.9
	50–74	*226,637*	*732,627*	*30.9*
Subsequent invitation	50–54	90,123	687,627	13.1
	55–59	69,238	595,151	11.6
	60–64	72,844	700,791	10.4
	65–69	36,139	323,761	11.2
	70–74	43,134	388,797	11.1
	50–74	*311,478*	*2,696,127*	*11.6*
People who have previously participated				
People who have previously participated in any invitation round				
Subsequent invitation	50–54	230,327	329,081	70.0
	55–59	353,117	508,345	69.5
	60–64	496,023	700,493	70.8
	65–69	346,987	464,870	74.6
	70–74	442,285	578,646	76.4
	50–74	*1,868,739*	*2,581,435*	*72.4*
People who participated in their previous invitation round				
Subsequent invitation	50–54	212,163	290,211	73.1
	55–59	288,889	370,646	77.9
	60–64	400,291	487,333	82.1
	65–69	281,979	330,974	85.2
	70–74	371,128	436,652	85.0
	50–74	*1,554,450*	*1,915,816*	*81.1*

(continued)

Table A3.3 (continued): Participation of people aged 50–74, by invitation round, previous participation and age group, Australia, 2021–2022

Invitation round	Age (years)	Returned completed screening test (N)	Invitations (minus opted out, skipped, and deferred) (N)	Participation (%)
Total				
First invitation	50–54	218,142	711,451	30.7
	55–59	2,323	6,783	34.2
	60–64	2,779	6,681	41.6
	65–69	1,712	3,971	43.1
	70–74	1,681	3,741	44.9
	50–74	*226,637*	*732,627*	*30.9*
Subsequent invitation	50–54	320,450	1,016,708	31.5
	55–59	422,355	1,103,496	38.3
	60–64	568,867	1,401,284	40.6
	65–69	383,126	788,631	48.6
	70–74	485,419	967,443	50.2
	50–74	*2,180,217*	*5,277,562*	*41.3*
All	50–54	538,592	1,728,159	31.2
	55–59	424,678	1,110,279	38.2
	60–64	571,646	1,407,965	40.6
	65–69	384,838	792,602	48.6
	70–74	487,100	971,184	50.2
	50–74	**2,406,854**	**6,010,189**	**40.0**

Notes

1. Subsequent invitation round includes second, third, and subsequent invitation rounds.
2. Previous invitation round is the round immediately before the current invitation (usually 2 years prior).

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.4: Participation of people aged 50–74, by state or territory, remoteness area, and socioeconomic area, Australia, 2021–2022

Area		Returned completed screening test (N)	Invitations (minus opted out and deferred) (N)	Participation rate (%)
State or territory	NSW	754,376	1,949,770	38.7
	Vic	644,999	1,512,910	42.6
	Qld	441,932	1,198,824	36.9
	WA	255,678	631,233	40.5
	SA	195,583	443,106	44.1
	Tas	63,192	144,399	43.8
	ACT	41,185	93,720	43.9
	NT	9,909	36,227	27.4
Remoteness area[(a)]	Major cities	1,657,131	4,160,963	39.8
	Inner regional	514,779	1,219,028	42.2
	Outer regional	203,000	527,550	38.5
	Remote	20,350	61,856	32.9
	Very remote	6,983	27,413	25.5
	Unknown	4,611	13,379	34.5
Socioeconomic area[(a)]	1 (lowest)	437,250	1,249,433	35.0
	2	477,146	1,230,452	38.8
	3	482,109	1,189,707	40.5
	4	472,138	1,129,621	41.8
	5 (highest)	532,460	1,194,137	44.6
	Unknown	5,751	16,839	34.2
Total		**2,406,854**	**6,010,189**	**40.0**

(a) Total may not equal the sum of individual remoteness or socioeconomic areas due to rounding.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.5: Participation rate (%) of people aged 50–74, by sex and age, Australia, 2009–2010 to 2021–2022

Sex	Age group (years)	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022
Males	50–54	32.2	29.9	28.0	26.9	26.5	26.4	26.2	28.0	29.8	31.4	31.8	29.9	29.3
	55–59	36.8	34.4	32.3	32.6	33.9	34.1	33.0	33.1	34.8	36.1	36.5	34.0	35.8
	60–64	. .	. .	. .	. .	40.6	40.2	40.1	40.6	41.0	42.0	44.3	40.4	38.0
	65–69	49.4	47.0	45.5	43.5	41.7	41.1	42.0	45.5	47.6	48.7	51.9	48.2	46.2
	70–74	. .	. .	. .	. .	. .	51.8	51.8	51.8	52.2	53.0	55.8	51.5	49.2
	50–74	*37.9*	*35.7*	*34.1*	*33.4*	*34.7*	*36.5*	*39.0*	*39.4*	*40.3*	*41.3*	*41.9*	*38.9*	*38.0*
Females	50–54	37.4	34.7	32.6	31.2	30.8	30.7	30.0	31.7	34.0	35.5	35.4	33.3	33.1
	55–59	44.7	41.9	39.4	38.9	39.7	39.5	38.0	37.8	39.9	41.2	41.1	38.8	40.7
	60–64	. .	. .	. .	. .	47.2	46.2	45.2	45.6	46.5	47.3	49.1	45.5	43.2
	65–69	55.4	52.9	51.4	49.2	46.8	45.8	46.4	49.3	51.6	53.0	55.9	52.5	50.8
	70–74	. .	. .	. .	. .	. .	53.1	53.2	53.4	54.1	55.0	57.0	52.8	51.0
	50–74	*44.2*	*41.6*	*39.9*	*38.7*	*40.1*	*41.3*	*42.9*	*43.2*	*44.5*	*45.6*	*45.7*	*42.8*	*42.1*
Persons	50–54	34.8	32.3	30.3	29.0	28.6	28.5	28.1	29.8	31.9	33.5	33.6	31.6	31.2
	55–59	40.7	38.1	35.8	35.8	36.8	36.8	35.5	35.5	37.3	38.7	38.9	36.4	38.2
	60–64	. .	. .	. .	. .	43.9	43.2	42.7	43.1	43.8	44.7	46.7	43.0	40.6
	65–69	52.3	49.9	48.4	46.3	44.2	43.5	44.2	47.4	49.6	50.9	53.9	50.3	48.6
	70–74	. .	. .	. .	. .	. .	52.5	52.5	52.6	53.1	54.0	56.4	52.2	50.2
	50–74	**41.0**	**38.6**	**37.0**	**36.1**	**37.4**	**38.9**	**40.9**	**41.3**	**42.4**	**43.5**	**43.8**	**40.9**	**40.0**

Notes

1. Data presented are for rolling 2-year participation periods.
2. Values prior to 2009 are presented in the online appendix tables, available on the AIHW website.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Screening

Table A3.6: iFOBT positivity rate of people aged 50–74, by sex and age, Australia, 2022

Sex	Age at screen (years)	Positive result (N)	Valid screening test (N)	Screening positivity (%)
Males	50–54	7,094	119,322	5.9
	55–59	6,320	107,023	5.9
	60–64	7,902	120,083	6.6
	65–69	6,112	80,897	7.6
	70–74	8,499	102,994	8.3
	50–74	*35,927*	*530,319*	*6.8*
Females	50–54	6,821	146,974	4.6
	55–59	5,169	119,971	4.3
	60–64	6,021	135,421	4.4
	65–69	4,484	90,035	5.0
	70–74	6,510	107,194	6.1
	50–74	*29,005*	*599,595*	*4.8*
Persons	50–54	13,915	266,296	5.2
	55–59	11,489	226,994	5.1
	60–64	13,923	255,504	5.4
	65–69	10,596	170,932	6.2
	70–74	15,009	210,188	7.1
	50–74	**64,932**	**1,129,914**	**5.7**

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.7: iFOBT positivity rate of people aged 50–74, by screening round, Australia, 2022

Screen round	Positive result (N)	Valid screening test (N)	Screening positivity (%)
First	18,900	274,000	6.9
Subsequent (≤2 years)	23,446	477,579	4.9
Subsequent (>2 years)	22,586	378,335	6.0
All rounds	**64,932**	**1,129,914**	**5.7**

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.8: iFOBT positivity rate of people aged 50–74, by state or territory, remoteness area, and socioeconomic area, Australia, 2022

Area		Positive result (N)	Valid screening test (N)	Screening positivity (%)
State or territory	NSW	20,599	358,864	5.7
	Vic	17,204	301,863	5.7
	Qld	11,944	206,206	5.8
	WA	6,658	116,406	5.7
	SA	5,437	92,925	5.9
	Tas	1,776	30,316	5.9
	ACT	1,083	19,648	5.5
	NT	231	3,686	6.3
Remoteness area[(a)]	Major cities	43,558	787,385	5.5
	Inner regional	14,509	238,463	6.1
	Outer regional	5,881	89,972	6.5
	Remote	596	8,513	7.0
	Very remote	209	2,702	7.7
	Unknown	178	2,879	6.2
Socioeconomic area[(a)]	1 (lowest)	13,751	201,280	6.8
	2	13,919	219,509	6.3
	3	13,085	226,541	5.8
	4	11,984	224,287	5.3
	5 (highest)	11,984	254,857	4.7
	Unknown	209	3,440	6.1
Total		**64,932**	**1,129,914**	**5.7**

(a) Total may not equal the sum of individual remoteness or socioeconomic areas due to rounding.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.9: iFOBT positivity rate of people aged 50–74, by Indigenous status, preferred language spoken at home, and disability status, Australia, 2022

Population group		Positive result (N)	Valid screening test (N)	Screening positivity (%)
Indigenous status	Indigenous	1,350	17,544	7.7
	Non-Indigenous	59,706	1,064,617	5.6
	Not stated	3,876	47,753	8.1
Preferred language spoken at home	Language other than English	8,678	155,089	5.6
	English	56,254	974,825	5.8
Disability status	Severe or profound activity limitation	3,435	33,402	10.3
	No severe or profound activity limitation reported	57,190	1,038,483	5.5
	Not stated[(a)]	4,307	58,029	7.4
Total		**64,932**	**1,129,914**	**5.7**

(a) Includes participants who did not report their disability status, or whose disability status is unknown.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Assessment

Table A3.10: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by sex and age, Australia, 2022

Sex	Age at first positive screen (years)	Assessments (N)	Positive iFOBT result (N)	Diagnostic assessment rate (%)
Males	50–54	6,136	7,094	86.5
	55–59	5,391	6,320	85.3
	60–64	6,716	7,902	85.0
	65–69	5,173	6,112	84.6
	70–74	7,016	8,499	82.6
	50–74	*30,432*	*35,927*	*84.7*
Females	50–54	5,991	6,821	87.8
	55–59	4,556	5,169	88.1
	60–64	5,335	6,021	88.6
	65–69	3,929	4,484	87.6
	70–74	5,554	6,510	85.3
	50–74	*25,365*	*29,005*	*87.5*
Persons	50–54	12,127	13,915	87.2
	55–59	9,947	11,489	86.6
	60–64	12,051	13,923	86.6
	65–69	9,102	10,596	85.9
	70–74	12,570	15,009	83.7
	50–74	**55,797**	**64,932**	**85.9**

Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of the PPVs and detection rates for both adenoma and carcinoma, and the hospital admission rate, is based on the diagnostic assessment date. Therefore, the number of assessment counts may differ across indicators.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.11: Diagnostic assessments (colonoscopy) performed for people aged 50–74, by health-care provider, Australia, 2022

Health-care provider	Assessments (N)	Proportion of assessments (%)
Public	15,068	27.0
Private	32,442	58.1
Not stated	1,622	2.9
PFUF not stated	6,665	11.9
Total	**55,797**	**100.0**

Notes

1. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.
2. ‘PFUF not stated’ records are those known to have occurred from PFUF data only, but did not indicate a health-care provider type.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.12: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by state or territory, remoteness area, and socioeconomic area, Australia, 2022

Area		Assessments (N)	Positive iFOBT result (N)	Diagnostic assessment rate (%)
State or territory	NSW	17,087	20,599	83.0
	Vic	14,921	17,204	86.7
	Qld	10,597	11,944	88.7
	WA	5,829	6,658	87.5
	SA	4,599	5,437	84.6
	Tas	1,594	1,776	89.8
	ACT	975	1,083	90.0
	NT	195	231	84.4
Remoteness area[(a)]	Major cities	37,394	43,558	85.8
	Inner regional	12,541	14,509	86.4
	Outer regional	5,038	5,881	85.7
	Remote	506	596	84.9
	Very remote	171	209	81.6
	Unknown	148	178	83.1
Socioeconomic area[(a)]	1 (lowest)	11,197	13,751	81.4
	2	11,814	13,919	84.9
	3	11,290	13,085	86.3
	4	10,541	11,984	88.0
	5 (highest)	10,780	11,984	90.0
	Unknown	175	209	83.7
Total		**55,797**	**64,932**	**85.9**

(a) Total may not equal the sum of individual remoteness or socioeconomic areas due to rounding.

Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of the positive predictive values (PPVs) and detection rates for both adenoma and carcinoma, and the hospital admission rate, is based on the diagnostic assessment date. Therefore, the number of assessment counts may differ across indicators.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations' on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.13: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by Indigenous status, preferred language spoken at home, and disability status, Australia, 2022

Population group		Assessments (N)	Positive iFOBT result (N)	Diagnostic assessment rate (%)
Indigenous status	Indigenous	1,082	1,350	80.1
	Non-Indigenous	51,562	59,706	86.4
	Not stated	3,153	3,876	81.3
Preferred language spoken at home	Language other than English	7,072	8,678	81.5
	English	48,725	56,254	86.6
Disability status	Severe or profound activity limitation	2,437	3,435	70.9
	No severe or profound activity limitation reported	50,240	57,190	87.8
	Not stated[(a)]	3,120	4,307	72.4
Total		**55,797**	**64,932**	**85.9**

(a) Includes participants who did not report their disability status, or whose disability status is unknown.

Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of the PPVs and detection rates for both adenoma and carcinoma, and the hospital admission rate, is based on the diagnostic assessment date. Therefore, the number of assessment counts may differ across indicators.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.14: Diagnostic assessment rate (colonoscopy) of people aged 50–74, by sex and age, Australia, 2009–2022[(a)]

Sex	Age at first positive screen (years)	Diagnostic assessment rate (%)													
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Males	50–54	76.4	76.8	74.7	74.2	71.8	73.4	71.4	69.2	67.7	66.8	58.0	56.1	85.7	86.5
	55–59	75.4	77.4	77.1	74.2	74.0	71.8	71.0	69.0	65.6	66.8	57.8	55.2	84.3	85.3
	60–64	. .	. .	. .	. .	74.5	72.8	70.5	68.8	66.4	65.6	58.1	56.0	84.4	85.0
	65–69	77.0	77.8	78.3	75.0	74.4	73.7	70.2	68.2	65.5	64.7	59.0	56.2	84.9	84.6
	70–74	. .	. .	. .	. .	. .	. .	68.4	65.5	64.9	63.8	56.5	56.0	82.4	82.6
	50–74	*76.3*	*77.4*	*76.9*	*74.6*	*73.7*	*73.0*	*70.0*	*67.4*	*65.8*	*65.1*	*57.8*	*55.9*	*84.2*	*84.7*
Females	50–54	76.2	78.4	77.9	75.5	74.2	73.6	73.6	69.5	69.1	67.8	67.8	70.9	88.1	87.8
	55–59	79.8	77.6	77.5	75.8	74.9	73.1	72.6	70.7	69.2	68.6	68.3	70.6	88.6	88.1
	60–64	. .	. .	. .	. .	75.9	74.1	72.8	70.3	67.4	65.8	68.9	69.6	88.1	88.6
	65–69	75.2	78.6	78.8	76.4	74.6	74.6	71.5	69.8	67.0	66.0	67.8	68.6	87.3	87.6
	70–74	. .	. .	. .	. .	. .	. .	68.7	67.1	65.7	64.4	64.4	66.2	85.3	85.3
	50–74	*76.9*	*78.2*	*78.1*	*76.0*	*74.7*	*73.9*	*71.4*	*69.0*	*67.3*	*66.0*	*67.3*	*69.0*	*87.3*	*87.5*
Persons	50–54	76.3	77.6	76.3	74.8	73.1	73.5	72.5	69.4	68.4	67.3	62.5	63.1	86.7	87.2
	55–59	77.6	77.5	77.3	75.0	74.5	72.5	71.8	69.9	67.3	67.6	62.5	62.2	86.2	86.6
	60–64	. .	. .	. .	. .	75.2	73.4	71.6	69.5	66.9	65.7	62.9	62.1	86.0	86.6
	65–69	76.2	78.2	78.5	75.7	74.5	74.1	70.8	69.0	66.2	65.2	62.8	61.7	86.0	85.9
	70–74	. .	. .	. .	. .	. .	. .	68.5	66.2	65.3	64.0	59.9	60.4	83.7	83.7
	50–74	**76.6**	**77.8**	**77.5**	**75.3**	**74.2**	**73.4**	**70.6**	**68.2**	**66.5**	**65.5**	**62.0**	**61.8**	**85.5**	**85.9**

(a) Participation follow-up function (PFUF) data are used from 2021 onwards to supplement missing colonoscopy form data and MBS claims. Trend data prior to 2021 should not be compared with newer time periods

Notes

1. Calculation of the diagnostic assessment rate is based on the screening test date. In contrast, calculation of the PPVs and detection rates for both adenoma and carcinoma, and the hospital admission rate, is based on the diagnostic assessment date. Therefore, the number of assessment counts may differ across indicators.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, PFUF data are now used to supplement missing colonoscopy form data. See ‘Current reporting limitations’ on page 4 for more details.
3. Values prior to 2009 are presented in the online appendix tables, available on the AIHW website.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.15: Time between positive screen and diagnostic assessment of people aged 50–74, by sex and age, Australia, 2022

Sex	Age group (years)	No diagnostic assessment		≤30 days		≤60 days		≤120 days		≤180 days		≤360 days		>360 days		All
		N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Males	50–54	958	13.5	934	13.2	2,999	42.3	4,992	70.4	5,667	79.9	6,090	85.8	46	0.6	7,094
	55–59	929	14.7	784	12.4	2,597	41.1	4,439	70.2	5,041	79.8	5,365	84.9	26	0.4	6,320
	60–64	1,186	15.0	998	12.6	3,200	40.5	5,526	69.9	6,263	79.3	6,685	84.6	31	0.4	7,902
	65–69	939	15.4	797	13.0	2,488	40.7	4,268	69.8	4,832	79.1	5,144	84.2	29	0.5	6,112
	70–74	1,483	17.4	1,020	12.0	3,373	39.7	5,835	68.7	6,578	77.4	6,989	82.2	27	0.3	8,499
	50–74	*5,495*	*15.3*	*4,533*	*12.6*	*14,657*	*40.8*	*25,060*	*69.8*	*28,381*	*79.0*	*30,273*	*84.3*	*159*	*0.4*	*35,927*
Females	50–54	830	12.2	1,020	15.0	2,933	43.0	4,869	71.4	5,529	81.1	5,944	87.1	47	0.7	6,821
	55–59	613	11.9	763	14.8	2,302	44.5	3,814	73.8	4,279	82.8	4,529	87.6	27	0.5	5,169
	60–64	686	11.4	866	14.4	2,703	44.9	4,434	73.6	4,983	82.8	5,295	87.9	40	0.7	6,021
	65–69	555	12.4	677	15.1	1,958	43.7	3,282	73.2	3,674	81.9	3,902	87.0	27	0.6	4,484
	70–74	956	14.7	891	13.7	2,836	43.6	4,666	71.7	5,207	80.0	5,520	84.8	34	0.5	6,510
	50–74	*3,640*	*12.5*	*4,217*	*14.5*	*12,732*	*43.9*	*21,065*	*72.6*	*23,672*	*81.6*	*25,190*	*86.8*	*175*	*0.6*	*29,005*
Persons	50–54	1,788	12.8	1,954	14.0	5,932	42.6	9,861	70.9	11,196	80.5	12,034	86.5	93	0.7	13,915
	55–59	1,542	13.4	1,547	13.5	4,899	42.6	8,253	71.8	9,320	81.1	9,894	86.1	53	0.5	11,489
	60–64	1,872	13.4	1,864	13.4	5,903	42.4	9,960	71.5	11,246	80.8	11,980	86.0	71	0.5	13,923
	65–69	1,494	14.1	1,474	13.9	4,446	42.0	7,550	71.3	8,506	80.3	9,046	85.4	56	0.5	10,596
	70–74	2,439	16.3	1,911	12.7	6,209	41.4	10,501	70.0	11,785	78.5	12,509	83.3	61	0.4	15,009
	50–74	**9,135**	**14.1**	**8,750**	**13.5**	**27,389**	**42.2**	**46,125**	**71.0**	**52,053**	**80.2**	**55,463**	**85.4**	**334**	**0.5**	**64,932**

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.16: Time between positive screen and diagnostic assessment of people aged 50–74, by state or territory, remoteness area, and socioeconomic area, Australia, 2022

		No diagnostic assessment		≤30 days		≤60 days		≤120 days		≤180 days		≤360 days		>360 days		All
Area		**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**
State or territory	NSW	3,512	17.0	2,311	11.2	7,712	37.4	13,864	67.3	15,920	77.3	16,974	82.4	113	0.5	20,599
	Vic	2,283	13.3	3,125	18.2	8,263	48.0	12,540	72.9	13,961	81.1	14,858	86.4	63	0.4	17,204
	Qld	1,347	11.3	1,538	12.9	5,244	43.9	8,825	73.9	9,882	82.7	10,530	88.2	67	0.6	11,944
	WA	829	12.5	950	14.3	3,275	49.2	5,085	76.4	5,534	83.1	5,795	87.0	34	0.5	6,658
	SA	838	15.4	564	10.4	1,868	34.4	3,643	67.0	4,277	78.7	4,562	83.9	37	0.7	5,437
	Tas	182	10.2	158	8.9	602	33.9	1,212	68.2	1,393	78.4	1,582	89.1	12	0.7	1,776
	ACT	108	10.0	80	7.4	355	32.8	810	74.8	908	83.8	969	89.5	6	0.6	1,083
	NT	36	15.6	24	10.4	70	30.3	146	63.2	178	77.1	193	83.5	2	0.9	231
Remoteness area[(a)]	Major cities	6,181	14.1	6,634	15.2	19,207	43.9	31,099	71.1	35,017	80.1	37,302	85.3	244	0.6	43,727
	Inner regional	1,988	13.6	1,595	10.9	5,944	40.7	10,575	72.3	11,850	81.1	12,567	86.0	65	0.4	14,620
	Outer regional	814	14.3	465	8.2	1,982	34.9	3,887	68.4	4,508	79.3	4,846	85.3	22	0.4	5,682
	Remote	85	16.0	34	6.4	147	27.6	334	62.8	410	77.1	445	83.6	2	0.4	532
	Very remote	37	19.2	11	5.7	56	29.0	122	63.2	142	73.6	156	80.8	—	—	193
	Unknown	30	16.9	11	6.2	53	29.8	108	60.7	126	70.8	147	82.6	1	0.6	178
Socioeconomic area	1 (lowest)	2,554	18.6	1,204	8.8	4,482	32.6	8,627	62.7	10,143	73.8	11,129	80.9	68	0.5	13,751
	2	2,105	15.1	1,528	11.0	5,369	38.6	9,621	69.1	11,033	79.3	11,735	84.3	79	0.6	13,919
	3	1,795	13.7	1,678	12.8	5,551	42.4	9,365	71.6	10,560	80.7	11,214	85.7	76	0.6	13,085
	4	1,443	12.0	1,895	15.8	5,617	46.9	9,042	75.5	9,985	83.3	10,494	87.6	47	0.4	11,984
	5 (highest)	1,204	10.0	2,431	20.3	6,304	52.6	9,338	77.9	10,181	85.0	10,717	89.4	63	0.5	11,984
	Unknown	34	16.3	14	6.7	66	31.6	132	63.2	151	72.2	174	83.3	1	0.5	209
Total		**9,135**	**14.1**	**8,750**	**13.5**	**27,389**	**42.2**	**46,125**	**71.0**	**52,053**	**80.2**	**55,463**	**85.4**	**334**	**0.5**	**64,932**

(a) A participant's location may be divided across multiple remoteness areas proportionally. For PI 4, participants were assigned to their largest proportion remoteness area. See Appendix E for more information.

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See 'Current reporting limitations' on page 4.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.17: Time between positive screen and diagnostic assessment of people aged 50–74, by Indigenous status, preferred language spoken at home, and disability status, Australia, 2022

	No diagnostic assessment		≤30 days		≤60 days		≤120 days		≤180 days		≤360 days		>360 days		All
Population group	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**
Indigenous status															
Indigenous	268	19.9	112	8.3	418	31.0	811	60.1	978	72.4	1,073	79.5	9	0.7	1,350
Non-Indigenous	8,144	13.6	8,168	13.7	25,559	42.8	42,825	71.7	48,206	80.7	51,268	85.9	294	0.5	59,706
Not stated	723	18.7	470	12.1	1,412	36.4	2,489	64.2	2,869	74.0	3,122	80.5	31	0.8	3,876
Preferred language spoken at home															
Language other than English	1,606	18.5	1,042	12.0	3,190	36.8	5,542	63.9	6,472	74.6	7,030	81.0	42	0.5	8,678
English	7,529	13.4	7,708	13.7	24,199	43.0	40,583	72.1	45,581	81.0	48,433	86.1	292	0.5	56,254
Disability status															
Severe or profound activity limitation	998	29.1	213	6.2	840	24.5	1,745	50.8	2,168	63.1	2,419	70.4	18	0.5	3,435
No severe or profound activity limitation reported	6,950	12.2	8,154	14.3	25,272	44.2	42,055	73.5	47,121	82.4	49,959	87.4	281	0.5	57,190
Not stated[(a)]	1,187	27.6	383	8.9	1,277	29.6	2,325	54.0	2,764	64.2	3,085	71.6	35	0.8	4,307
Total	**9,135**	**14.1**	**8,750**	**13.5**	**27,389**	**42.2**	**46,125**	**71.0**	**52,053**	**80.2**	**55,463**	**85.4**	**334**	**0.5**	**64,932**

(a) Includes participants who did not report their disability status, or whose disability status is unknown.

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.18: Time between positive screen and diagnostic assessment of people aged 50–74, median and 90th percentile value (in days), by sex and age, Australia, 2022

Sex	Age at first positive screen (years)	Median	90th percentile
Males	50–54	62	159
	55–59	62	154
	60–64	63	154
	65–69	63	154
	70–74	62	152
	50–74	*62*	*154*
Females	50–54	62	164
	55–59	60	151
	60–64	60	155
	65–69	61	152
	70–74	59	149
	50–74	*60*	*155*
Persons	50–54	62	162
	55–59	61	154
	60–64	62	155
	65–69	62	153
	70–74	61	150
	50–74	**62**	**155**

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See 'Current reporting limitations' on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.19: Time between positive screen and diagnostic assessment of people aged 50–74, median and 90th percentile value (in days), by health-care provider, Australia, 2022

Health-care provider	Median	90th percentile
Public	87	188
Private	51	129
Not stated	61	155
PFUF not stated	64	142
Total	**62**	**155**

Notes

1. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See 'Current reporting limitations' on page 4 for more details.
2. 'PFUF not stated' records are those known to have occurred from PFUF data only, but did not indicate a health-care provider type.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.20: Time between positive screen and diagnostic assessment of people aged 50–74, median and 90th percentile value (in days), by state or territory, remoteness area, and socioeconomic area, Australia, 2022

Area		Median	90th percentile
State or territory	NSW	65	160
	Vic	55	150
	Qld	61	153
	WA	55	133
	SA	71	160
	Tas	73	197
	ACT	72	159
	NT	78	175
Remoteness area[(a)]	Major cities	59	154
	Inner regional	63	152
	Outer regional	70	160
	Remote	78	163
	Very remote	73	167
	Unknown	76	195
Socioeconomic area	1 (lowest)	71	177
	2	65	156
	3	61	153
	4	57	140
	5 (highest)	52	138
	Unknown	72	194
Total		**62**	**155**

(a) A participant's location may be divided across multiple remoteness areas proportionally. For PI 4, participants were assigned to their largest proportion remoteness area. See Appendix E for more information.

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See 'Current reporting limitations' on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.21: Time between positive screen and diagnostic assessment of people aged 50–74, median and 90th percentile value (in days), by Indigenous status, preferred language spoken at home, and disability status, Australia, 2022

Population group		Median	90th percentile
Indigenous status	Indigenous	72	178
	Non-Indigenous	61	153
	Not stated	66	174
Preferred language spoken at home	Language other than English	66	171
	English	61	152
Disability status	Severe or profound activity limitation	80	187
	No severe or profound activity limitation reported	60	150
	Not stated[(a)]	72	191
Total		**62**	**155**

(a) Includes participants who did not report their disability status, or whose disability status is unknown.

Note: This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data and MBS claims. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.22: Time between positive screen and diagnostic assessment of people aged 50–74, median (in days), by sex and age, Australia, 2009–2022[(a)]

Sex	Age at first positive screen (years)	Median days													
		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Males	50–54	63	62	58	58	59	60	57	55	55	53	50	49	59	62
	55–59	58	60	57	57	56	56	56	57	55	54	49	48	59	62
	60–64	. .	. .	. .	. .	58	56	55	56	53	52	49	49	59	63
	65–69	59	56	55	52	51	55	53	55	53	51	49	49	59	63
	70–74	. .	. .	. .	. .	. .	. .	54	53	53	51	48	50	58	62
	50–74	*60*	*58*	*56*	*55*	*55*	*56*	*55*	*55*	*53*	*52*	*49*	*49*	*59*	*62*
Females	50–54	60	60	59	56	55	55	55	55	51	52	50	49	58	62
	55–59	57	56	54	54	54	56	53	52	53	49	51	49	57	60
	60–64	. .	. .	. .	. .	57	52	52	53	51	50	50	50	57	60
	65–69	54	54	51	52	48	52	51	53	50	49	49	50	57	61
	70–74	. .	. .	. .	. .	. .	. .	51	53	51	50	50	50	57	59
	50–74	*56*	*57*	*54*	*54*	*52*	*53*	*52*	*53*	*51*	*50*	*50*	*49*	*57*	*60*
Persons	50–54	61	61	58	57	57	56	56	55	53	52	50	49	58	62
	55–59	57	58	56	56	55	56	55	55	54	53	50	48	58	61
	60–64	. .	. .	. .	. .	58	54	53	55	52	51	50	49	58	62
	65–69	56	55	53	52	50	54	53	54	51	50	49	49	58	62
	70–74	. .	. .	. .	. .	. .	. .	53	53	52	50	49	50	58	61
	50–74	**58**	**57**	**55**	**55**	**53**	**55**	**53**	**54**	**52**	**51**	**49**	**49**	**58**	**62**

(a) Participant follow-up function (PFUF) data are used from 2021 onwards to supplement missing colonoscopy form data and MBS claims. Trend data prior to 2021 should not be compared with newer time periods.

Notes

1. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, PFUF data are now used to supplement missing colonoscopy form data. See 'Current reporting limitations' on page 4 for more details.
2. Values prior to 2009 are presented in the online appendix tables, available on the AIHW website.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Diagnosis

Diagnosis data were not considered complete enough to allow formal performance indicator reporting of NBCSP diagnostic outcomes. Therefore, data for the diagnostic performance indicators are not available.

See Chapter 4 for a summary of bowel abnormality detection results, using available assessment and diagnosis data.

Outcomes

Table A3.23: Hospital admissions within 30 days of assessment of people aged 50–74, by sex and age, Australia, 2022

Sex	Age group at assessment (years)	Hospital admissions (N)	Assessments (N)	Hospital admission rate (per 10,000 assessments)
Males	50–54	—	6,038	—
	55–59	—	5,209	—
	60–64	1	6,824	n.p.
	65–69	—	5,245	—
	70–74	2	6,696	n.p.
	50–74	*3*	*30,012*	*n.p.*
Females	50–54	—	5,874	—
	55–59	1	4,431	n.p.
	60–64	—	5,382	—
	65–69	—	4,032	—
	70–74	—	5,250	—
	50–74	*1*	*24,969*	*n.p.*
Persons	50–54	—	11,912	—
	55–59	1	9,640	n.p.
	60–64	1	12,206	n.p.
	65–69	—	9,277	—
	70–74	2	11,946	n.p.
	50–74	**4**	**54,981**	**0.7**

Notes

1. The hospital admission rate is calculated based on the diagnostic assessment date. This is the same as the PPV rate for adenoma and the PPV rate for carcinoma. This differs from the diagnostic assessment rate, which is calculated based on the screening test date. Therefore, assessment counts may differ across indicators.
2. This indicator relies on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. However, Participant follow-up function (PFUF) data are now used to supplement missing colonoscopy form data. See ‘Current reporting limitations’ on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A3.24: Incidence of bowel cancer, by sex and age group, Australia, 2024

	Males		Females		Persons	
Age group (years)	New cases	Rate	New cases	Rate	New cases	Rate
0–4	—	—	1	n.p.	1	n.p.
5–9	2	n.p.	2	n.p.	4	n.p.
10–14	13	1.5	19	2.3	32	1.9
15–19	30	3.5	43	5.3	73	4.4
20–24	37	4.0	52	5.9	89	4.9
25–29	57	5.5	68	6.8	125	6.1
30–34	151	14.6	150	14.4	301	14.5
35–39	178	18.1	203	20.1	381	19.1
40–44	218	23.9	254	27.4	472	25.7
45–49	297	37.0	270	33.0	567	35.0
50–54	589	71.8	467	54.6	1,056	63.0
55–59	529	71.7	377	48.3	906	59.7
60–64	967	130.8	629	80.5	1,596	104.9
65–69	960	147.5	662	94.6	1,622	120.1
70–74	1,175	211.0	910	150.6	2,085	179.6
75–79	1,074	233.3	1,015	203.8	2,089	218.0
80–84	1,060	375.4	1,007	305.3	2,067	337.6
85+	868	377.1	1,208	351.1	2,076	361.5
Ages 50–74 crude rate	*4,220*	*120.4*	*3,045*	*81.8*	*7,265*	*100.5*
Ages 50–74 ASR	*4,220*	*114.2*	*3,045*	*77.8*	*7,265*	*95.5*
All ages crude rate	**8,205**	**60.1**	**7,337**	**52.8**	**15,542**	**56.4**
All ages ASR	**8,205**	**51.9**	**7,337**	**41.8**	**15,542**	**46.6**

Notes

1. The 2024 estimates are based on 2010–2019 incidence data. See Appendix D for further information.
2. Age-specific rates are expressed per 100,000 people. The age-standardised rates (ASRs) for ages 50–74 and all ages were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
3. The number of people in each age group may not sum to total due to rounding.

Source: AIHW ACD 2020.

Table A3.25: Incidence of bowel cancer, by state or territory, remoteness area, and socioeconomic area, people aged 50–74, Australia, 2016–2020

Area		New cases	ASR	Crude rate
State or territory	NSW	12,967	115.4	121.7
	Vic	9,888	114.4	119.2
	Qld	8,375	118.5	124.1
	WA	3,463	97.6	100.7
	SA	3,024	110.9	118.2
	Tas	1,038	112.6	121.9
	ACT	518	101.6	104.0
	NT	309	121.3	115.5
Remoteness area	Major cities	25,115	109.0	112.7
	Inner regional	9,229	120.4	130.5
	Outer regional	4,400	124.6	132.5
	Remote	557	127.7	129.8
	Very remote	201	97.6	91.8
	Unknown	90	. .	. .
Socioeconomic area	1 (lowest)	8,901	126.2	135.2
	2	8,975	121.8	130.0
	3	8,140	114.4	119.9
	4	6,966	105.4	108.2
	5 (highest)	6,504	96.2	98.7
	Unknown	106	. .	. .
Total		**39,592**	**113.4**	**118.8**

Notes

1. ‘State or territory’ refers to the state or territory of usual residence.
2. Remoteness was classified according to the Australian Statistical Geography Standard (ASGS) Remoteness Areas (see Appendix E).
3. Socioeconomic areas were classified using the Australian Bureau of Statistics (ABS) Index of Relative Socio-economic Disadvantage (IRSD) (see Appendix E).
4. ASRs are standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
5. The number of people in different remoteness or socioeconomic areas may not sum to total due to rounding.

Source: AIHW ACD 2020.

Table A3.26: Incidence of bowel cancer, by Indigenous status, NSW, Vic, Qld, WA, ACT and NT, people aged 50–74, 2016–2020

Indigenous status	New cases	ASR	Crude rate
Indigenous	631	122.0	111.7
Non-Indigenous	33,675	109.7	114.9
Not stated	1,214	. .	. .
Total	**35,520**	**113.7**	**118.8**

Note: The rates were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.

Source: AIHW ACD 2020.

Table A3.27: Incidence of bowel cancer, by sex, people aged 50–74, Australia, 1985–2024

	Males		Females		Persons	
Year	New cases	ASR	New cases	ASR	New cases	ASR
1985	2,807	176.1	2,192	126.6	4,999	149.8
1986	2,773	169.9	2,172	123.3	4,945	145.2
1987	2,870	173.7	2,219	123.6	5,089	147.3
1988	2,916	173.0	2,156	117.7	5,072	144.2
1989	3,110	181.4	2,255	122.6	5,365	150.5
1990	3,101	178.1	2,304	123.7	5,405	149.8
1991	3,427	193.0	2,420	127.0	5,847	158.8
1992	3,342	184.2	2,536	132.1	5,878	157.2
1993	3,477	188.2	2,502	128.2	5,979	157.0
1994	3,643	192.4	2,639	132.7	6,282	161.5
1995	3,723	193.7	2,580	127.4	6,303	159.6
1996	3,922	201.4	2,627	128.2	6,549	163.7
1997	3,937	197.2	2,603	124.7	6,540	160.0
1998	3,886	190.4	2,708	127.7	6,594	158.2
1999	3,923	188.1	2,720	125.8	6,643	156.3
2000	4,213	197.8	2,799	127.4	7,012	161.9
2001	4,174	191.7	2,848	127.0	7,022	158.8
2002	4,205	188.9	2,793	122.2	6,998	155.1
2003	4,184	184.5	2,866	123.2	7,050	153.4
2004	4,333	187.2	2,880	121.5	7,213	153.9
2005	4,284	180.8	2,843	117.1	7,127	148.5
2006	4,426	183.1	3,040	122.1	7,467	152.1
2007	4,756	189.6	3,299	128.4	8,055	158.6
2008	4,792	185.1	3,232	122.1	8,024	153.2
2009	4,539	170.0	3,084	113.2	7,623	141.3
2010	4,925	177.7	3,292	116.8	8,217	146.9
2011	4,715	165.5	3,299	114.1	8,014	139.5
2012	4,611	156.4	3,210	106.5	7,821	131.2
2013	4,457	146.4	3,147	101.7	7,604	123.8
2014	4,621	147.9	3,173	99.4	7,794	123.3
2015	4,720	148.1	3,307	101.1	8,027	124.2
2016	4,716	144.6	3,318	98.7	8,034	121.3
2017	4,652	139.0	3,347	96.7	7,999	117.4
2018	4,719	137.7	3,262	91.8	7,981	114.3
2019	4,799	137.3	3,355	92.3	8,154	114.3
2020	4,352	122.7	3,072	82.2	7,424	101.9
2021	4,529	124.4	3,248	85.0	7,777	104.1
2022	4,413	120.5	3,166	82.1	7,579	100.8
2023	4,306	116.7	3,104	79.7	7,410	97.6
2024	4,220	114.2	3,045	77.8	7,265	95.5

Notes

1. The 2021–2024 estimates are based on 2010–2019 incidence data. See Appendix D for further information.
2. ASRs are standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
3. Values prior to 1985 are presented in the online appendix tables, available on the AIHW website.

Source: AIHW ACD 2020.

Table A3.28: Mortality from bowel cancer, by sex and age, Australia, 2024

	Males		Females		Persons	
Age group (years)	**Deaths**	**Rate**	**Deaths**	**Rate**	**Deaths**	**Rate**
0–4	—	—	—	—	—	—
5–9	—	—	—	—	—	—
10–14	—	—	—	—	—	—
15–19	—	—	—	—	—	—
20–24	1	n.p.	1	n.p.	2	n.p.
25–29	3	n.p.	3	n.p.	6	0.3
30–34	17	1.6	13	1.2	30	1.4
35–39	43	4.4	40	4.0	83	4.2
40–44	35	3.8	44	4.7	79	4.3
45–49	65	8.1	52	6.4	117	7.2
50–54	117	14.3	81	9.5	198	11.8
55–59	147	19.9	109	14.0	256	16.9
60–64	211	28.5	131	16.8	342	22.5
65–69	268	41.2	172	24.6	440	32.6
70–74	304	54.6	253	41.9	557	48.0
75–79	330	71.7	289	58.0	619	64.6
80–84	459	162.5	374	113.4	833	136.1
85+	730	317.1	947	275.2	1,677	292.0
Ages 50–74 crude rate	*1,047*	*29.9*	*746*	*20.0*	*1,793*	*24.8*
Ages 50–74 ASR	*1,047*	*28.1*	*746*	*18.8*	*1,793*	*23.3*
All ages crude rate	**2,730**	**20.0**	**2,509**	**18.0**	**5,239**	**19.0**
All ages ASR	**2,730**	**16.8**	**2,509**	**12.8**	**5,239**	**14.7**

Notes

1. The 2024 estimates are based on 2013–2022 mortality data. See Appendix D for further information.
2. Age-specific rates are expressed per 100,000 people. The ASRs for ages 50–74 and all ages were age standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
3. The number of people in each age group may not sum to total due to rounding.

Source: AIHW National Mortality Database (NMD).

Table A3.29: Mortality from bowel cancer, by state or territory, remoteness area, and socioeconomic group, people aged 50–74, Australia, 2018–2022

Area		Deaths	ASR	Crude rate
State or territory	NSW	3,254	27.7	29.7
	Vic	2,505	27.4	29.2
	Qld	2,101	27.9	29.7
	WA	880	23.0	24.3
	SA	785	27.5	29.7
	Tas	290	30.8	33.0
	ACT	121	22.5	23.4
	NT	76	28.8	27.6
Remoteness area	Major cities	5,791	23.7	24.9
	Inner regional	2,430	29.7	33.2
	Outer regional	1,156	31.7	34.6
	Remote	112	25.2	26.6
	Very remote	46	21.0	19.4
	Unknown	479	. .	. .
Socioeconomic group	1 (lowest)	2,416	32.0	34.7
	2	2,293	29.1	31.8
	3	1,827	24.7	26.4
	4	1,549	22.6	23.5
	5 (highest)	1,447	20.1	21.0
	Unknown	481	. .	. .
Total		**10,013**	**27.1**	**29.0**

Notes

1. ‘State or territory’ refers to the state or territory of usual residence.
2. Remoteness was classified according to the ASGS Remoteness Areas (see Appendix E).
3. Socioeconomic areas were classified using the ABS IRSD (see Appendix E).
4. ASRs are standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
5. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.
6. The number of people in different remoteness or socioeconomic areas may not sum to total due to rounding.

Source: AIHW NMD.

Table A3.30: Mortality from bowel cancer, by Indigenous status, NSW, Qld, WA, SA, and NT, people aged 50–74, 2018–2022

	Australia	NSW, Qld, WA, SA, and NT		
Indigenous status	**Deaths**	**Deaths**	**ASR**	**Crude rate**
Indigenous	234	210	38.6	35.5
Non-Indigenous	9,721	6,853	26.6	28.6
Not stated[(a)]	58	33	. .	. .
Total	**10,013**	**7,096**	**27.0**	**28.9**

(a) Deaths where Indigenous status was not stated were included in the total count and ASR calculation.

Notes

1. ASRs are standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
2. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.

Source: AIHW NMD.

Table A3.31: Mortality from bowel cancer for people aged 50–74, by sex, Australia, 1987–2024

	Males		Females		Persons	
Year	Deaths	ASR	Deaths	ASR	Deaths	ASR
1987	1,361	82.0	1,028	57.1	2,389	68.9
1988	1,380	81.8	995	54.4	2,375	67.5
1989	1,370	79.7	985	53.0	2,355	65.7
1990	1,353	77.1	1,008	53.8	2,361	64.8
1991	1,369	77.1	944	48.9	2,313	62.4
1992	1,415	78.2	960	49.5	2,375	63.4
1993	1,390	74.8	996	50.4	2,386	62.2
1994	1,569	82.8	1,054	52.2	2,623	67.0
1995	1,475	76.6	992	48.6	2,467	62.0
1996	1,570	80.1	979	47.5	2,549	63.2
1997	1,534	76.8	1,029	49.1	2,563	62.5
1998	1,454	71.3	992	46.4	2,446	58.5
1999	1,528	73.4	904	41.7	2,432	57.1
2000	1,483	69.7	921	41.8	2,404	55.4
2001	1,447	66.6	920	41.0	2,367	53.5
2002	1,348	60.7	921	40.3	2,269	50.3
2003	1,418	62.7	883	38.0	2,301	50.2
2004	1,327	57.7	859	36.3	2,186	46.8
2005	1,394	59.4	822	34.1	2,216	46.5
2006	1,350	55.9	805	32.7	2,155	44.1
2007	1,345	54.0	846	33.0	2,191	43.4
2008	1,329	51.8	904	34.3	2,233	42.9
2009	1,362	51.0	871	32.2	2,233	41.5
2010	1,328	48.4	816	29.2	2,144	38.7
2011	1,288	45.1	772	26.6	2,060	35.7
2012	1,289	43.9	813	27.2	2,102	35.4
2013	1,323	43.8	804	25.8	2,127	34.7
2014	1,282	41.0	803	25.0	2,085	32.9
2015	1,267	39.6	822	25.1	2,089	32.2
2016	1,234	37.6	821	24.3	2,055	30.8
2017	1,231	36.5	809	23.3	2,040	29.8
2018	1,278	36.8	824	23.2	2,102	29.8
2019	1,204	34.0	756	20.4	1,960	27.1
2020	1,260	34.9	896	23.4	2,156	29.0
2021	1,160	31.6	748	19.2	1,908	25.2
2022	1,106	29.9	781	20.1	1,887	24.8
2023	1,083	29.1	761	19.3	1,844	24.0
2024	1,047	28.1	746	18.8	1,793	23.3

Notes

1. The 2023–2024 estimates are based on 2013–2022 mortality data. See Appendix D for further information.
2. ASRs are standardised to the Australian population as at 30 June 2001 and expressed per 100,000 people.
3. Deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.
4. Values prior to 1987 are presented in our online data table, available on the AIHW website.

Source: AIHW NMD.

Additional tables for Chapter 4

Table A4.1: Available diagnostic assessment outcomes of people aged 50–74, by age group and sex, Australia, assessed in 2022

Sex	Age group at assessment (years)		Assessments with outcome data[a]	Available assessment results						
				No issue noted[a]	Biopsy awaiting histopathology[b]	Other histopathology diagnosis[c]	Confirmed non-advanced adenoma[d]	Confirmed advanced adenoma[d]	Suspected cancer[e]	Confirmed cancer[f]
Males	50–54	N	1,605	624	618	47	115	141	51	9
		%		38.9	38.5	2.9	7.2	8.8	3.2	0.6
	55–59	N	1,486	534	658	31	86	133	38	6
		%		35.9	44.3	2.1	5.8	9.0	2.6	0.4
	60–64	N	1,798	614	760	37	139	170	67	11
		%		34.1	42.3	2.1	7.7	9.5	3.7	0.6
	65–69	N	1,422	500	581	24	124	116	66	11
		%		35.2	40.9	1.7	8.7	8.2	4.6	0.8
	70–74	N	1,678	564	740	28	126	127	80	13
		%		33.6	44.1	1.7	7.5	7.6	4.8	0.8
	50–74	N	*7,989*	*2,836*	*3,357*	*167*	*590*	*687*	*302*	*50*
		%		*35.5*	*42.0*	*2.1*	*7.4*	*8.6*	*3.8*	*0.6*
Females	50–54	N	1,520	724	535	39	77	99	40	6
		%		47.6	35.2	2.6	5.1	6.5	2.6	0.4
	55–59	N	1,164	551	418	27	79	62	24	3
		%		47.3	35.9	2.3	6.8	5.3	2.1	0.3
	60–64	N	1,396	630	502	28	96	92	37	11
		%		45.1	36.0	2.0	6.9	6.6	2.7	0.8
	65–69	N	1,027	446	389	26	56	62	41	7
		%		43.4	37.9	2.5	5.5	6.0	4.0	0.7
	70–74	N	1,294	545	495	20	84	90	53	7
		%		42.1	38.3	1.5	6.5	7.0	4.1	0.5
	50–74	N	*6,401*	*2,896*	*2,339*	*140*	*392*	*405*	*195*	*34*
		%		*45.2*	*36.5*	*2.2*	*6.1*	*6.3*	*3.0*	*0.5*

(continued)

Table A4.1 (continued): Available diagnostic assessment outcomes of people aged 50–74, by age group and sex, Australia, assessed in 2022

Sex	Age group at assessment (years)		Assessments with outcome data[a]	Available assessment results						
				No issue noted[a]	Biopsy awaiting histopathology[b]	Other histopathology diagnosis[c]	Confirmed non-advanced adenoma[d]	Confirmed advanced adenoma[d]	Suspected cancer[e]	Confirmed cancer[f]
Persons	50–54	N	3,125	1,348	1,153	86	192	240	91	15
		%		43.1	36.9	2.8	6.1	7.7	2.9	0.5
	55–59	N	2,650	1,085	1,076	58	165	195	62	9
		%		40.9	40.6	2.2	6.2	7.4	2.3	0.3
	60–64	N	3,194	1,244	1,262	65	235	262	104	22
		%		38.9	39.5	2.0	7.4	8.2	3.3	0.7
	65–69	N	2,449	946	970	50	180	178	107	18
		%		38.6	39.6	2.0	7.3	7.3	4.4	0.7
	70–74	N	2,972	1,109	1,235	48	210	217	133	20
		%		37.3	41.6	1.6	7.1	7.3	4.5	0.7
	50–74	**N**	**14,390**	**5,732**	**5,696**	**307**	**982**	**1,092**	**497**	**84**
		%		**39.8**	**39.6**	**2.1**	**6.8**	**7.6**	**3.5**	**0.6**

(a) Excludes 40,591 colonoscopies with no record of outcome, such as those reported by Medicare claim (23,929), or by PFUF only (16,662). 'No issue noted' recorded when no cancers, adenomas, polyps or other diagnoses were noted at colonoscopy and/or histopathology.

(b) Polyps detected at assessment and sent to histopathology for analysis. No histopathology report form received by Register.

(c) A non-cancer, non-adenoma diagnosis was recorded at colonoscopy, for example, hyperplastic polyps.

(d) Confirmed adenoma figures are based on a combination of the assessment and histopathology report forms for a person received by the NCSR.

(e) Cancer suspected at assessment but not yet confirmed by histopathology.

(f) Cancer confirmed by histopathology.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Table A4.2: Available diagnostic assessment outcomes of people aged 50–74, by state or territory, Australia, assessed in 2022

State or territory		Assessments with outcome data[a]	Available assessment results						
			No issue noted[a]	Biopsy awaiting histopathology[b]	Other histopathology diagnosis[c]	Confirmed non-advanced adenoma[d]	Confirmed advanced adenoma[d]	Suspected cancer[e]	Confirmed cancer[f]
NSW	N	2,965	1,371	1,012	73	172	209	105	23
	%		46.2	34.1	2.5	5.8	7.0	3.5	0.8
Vic	N	3,155	1,387	1,265	51	170	157	113	12
	%		44.0	40.1	1.6	5.4	5.0	3.6	0.4
Qld	N	4,821	1,691	1,984	103	412	446	160	25
	%		35.1	41.2	2.1	8.5	9.3	3.3	0.5
WA	N	1,240	414	699	8	30	32	52	5
	%		33.4	56.4	0.6	2.4	2.6	4.2	0.4
SA	N	1,071	405	476	24	28	93	40	5
	%		37.8	44.4	2.2	2.6	8.7	3.7	0.5
Tas	N	626	285	144	27	69	72	23	6
	%		45.5	23.0	4.3	11.0	11.5	3.7	1.0
ACT	N	483	172	97	21	101	82	2	8
	%		35.6	20.1	4.3	20.9	17.0	0.4	1.7
NT	N	29	7	19	—	—	1	2	—
	%		24.1	65.5	—	—	3.4	6.9	—
Australia	**N**	**14,390**	**5,732**	**5,696**	**307**	**982**	**1,092**	**497**	**84**
	%		**39.8**	**39.6**	**2.1**	**6.8**	**7.6**	**3.5**	**0.6**

(a) Excludes 40,591 colonoscopies with no record of outcome, such as those reported by Medicare claim (23,929), or by PFUF only (16,662). 'No issue noted' recorded when no cancers, adenomas, polyps or other diagnoses were noted at colonoscopy and/or histopathology.

(b) Polyps detected at assessment and sent to histopathology for analysis. No histopathology report form received by Register.

(c) A non-cancer, non-adenoma diagnosis was recorded at colonoscopy, for example, hyperplastic polyps.

(d) Confirmed adenoma figures are based on a combination of the assessment and histopathology report forms for a person received by the NCSR.

(e) Cancer suspected at assessment but not yet confirmed by histopathology.

(f) Cancer confirmed by histopathology.

Note: Differences in form return and varying pathway practices for diagnostic assessment may affect results across jurisdictions.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Additional tables for Chapter 5

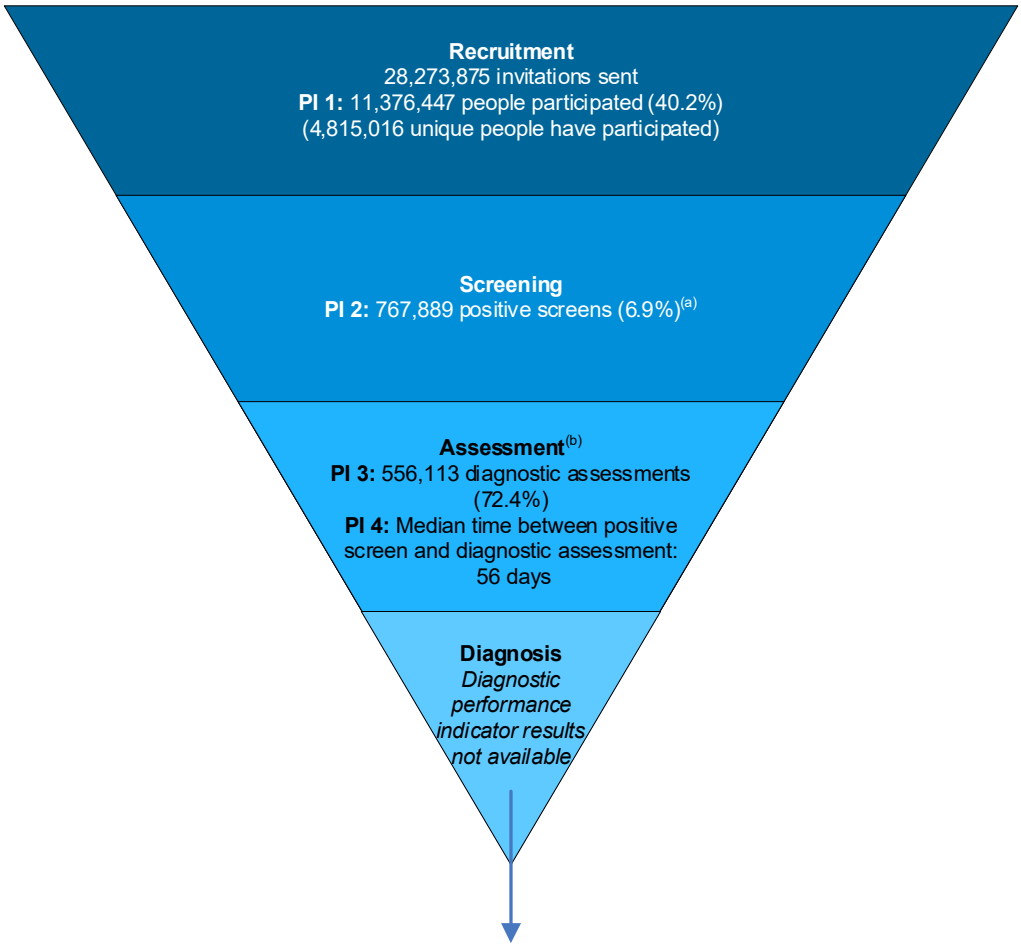
Table A5.1: Estimated participation rate for people aged 50–74, by preferred language spoken at home, sex and age group, Australia, 2021–2022

Sex	Age group (years)	Estimated participation rate range (%)		Total participation rate (%)
		Language other than English	English	
Males	50–54	13.5–17.7	32.0–34.6	29.3
	55–59	21.8–28.7	37.4–40.2	35.8
	60–64	25.4–33.7	38.9–41.5	38.0
	65–69	32.4–43.0	46.8–49.9	46.2
	70–74	32.3–43.7	50.2–53.5	49.2
	50–74	*22.9–30.3*	*39.5–42.4*	*38.0*
Females	50–54	14.1–17.1	37.3–39.5	33.1
	55–59	26.2–32.1	42.9–45.4	40.7
	60–64	30.4–37.5	44.5–47.0	43.2
	65–69	35.9–44.9	52.1–55.1	50.8
	70–74	33.3–43.3	52.5–55.8	51.0
	50–74	*25.8–32.0*	*44.5–47.1*	*42.1*
Persons	50–54	13.8–17.4	34.6–37.0	31.2
	55–59	24.0–30.4	40.1–42.8	38.2
	60–64	27.9–35.6	41.7–44.2	40.6
	65–69	34.2–43.9	49.5–52.6	48.6
	70–74	32.8–43.5	51.4–54.6	50.2
	50–74	**24.4–31.2**	**42.0–44.7**	**40.0**

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024) using 2021 Census data (see Appendix F for more information).

Appendix B: Overall NBCSP outcomes

Figure B1: Summary of NBCSP performance indicators, Australia, August 2006 to June 2023



Assessment details[(c)]

No issue, or other diagnosis	147,833	(44.2%)
Polyp awaiting histopathology	110,576	(33.1%)
Non-advanced adenomas	30,489	(9.1%)
Advanced adenomas	31,521	(9.4%)
Suspected cancer	10,711	(3.3%)
Confirmed cancer	2,846	(0.9%)

(a) Based on the 11,189,377 participants who returned a valid iFOBT.

(b) Information on colonoscopies known through MBS claim only prior to 2018 is not included; PI 3 and PI 4 may be under-reported. Count also includes colonoscopies from 2021 onwards that were notified through PFUF data.

(c) Based on available outcome data. Excludes 222,137 assessments with no record of outcome.

Notes

1. PI 1: 'people participated' counts the people who participated over the time the NBCSP has been operating. It is not a unique count of people, and people who participated multiple times over several years were counted more than once. 'Unique people participated' counts each unique person who has participated in the program at least once.
2. Assessment and diagnosis (PIs 3–9) rely on information being reported back to the NCSR. As return of NBCSP forms is not mandatory, there may be incomplete form return and incomplete data. See 'Current reporting limitations' on page 4 for more details.
3. PI 5a (adenoma detection rate), PI 5b (PPV of diagnostic assessment for detecting adenoma), PI 6a (colorectal cancer detection rate), PI 6b (PPV of diagnostic assessment for detecting colorectal cancer), PI 7 (interval cancer rate), and PI 8 (cancer clinico-pathological stage distribution) are not reported due to data incompleteness or unavailability. See 'Current reporting limitations' on page 4 for more details.

Source: AIHW analysis of NCSR as at 31 December 2023 (NCSR RDE 06/01/2024).

Appendix C: National Bowel Cancer Screening Program information

Target population

The target population list is compiled from those registered as an Australian citizen or permanent migrant in the Medicare enrolment file or registered with a Department of Veterans' Affairs gold card.

From 2020, roll-out of biennial screening for all eligible Australians in the target age group (50–74) was completed; eligible Australians will be sent an iFOBT screening kit and invited to screen at the time of their 50th birthday, then every 2 years after they have completed their last test, until the age of 74. Table C1 outlines the starting dates of each phase and the target age groups.

Table C1: NBCSP phases and target populations

Phase	Start date	End date	Target ages (years)
1	7 August 2006	30 June 2008	55 and 65
2	1 July 2008	30 June 2011[(a)]	50, 55 and 65
2[(b)]	1 July 2011	30 June 2013	50, 55 and 65
3	1 July 2013	31 December 2014	50, 55, 60 and 65
4	1 January 2015	31 December 2015	50, 55, 60, 65, 70 and 74
4	1 January 2016	31 December 2016	50, 55, 60, 64, 65, 70, 72 and 74
4	1 January 2017	31 December 2017	50, 54, 55, 58, 60, 64, 68, 70, 72 and 74
4	1 January 2018	31 December 2018	50, 54, 58, 60, 62, 64, 66, 68, 70, 72 and 74
4	1 January 2019	30 June 2024	50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72 and 74
5	1 July 2024	ongoing	People aged 50–74 continue to receive a NBCSP kit every 2 years. People aged 45–49 can request their first NBCSP kit

(a) Eligible birth dates, and thus invitations, ended on 31 December 2010.

(b) Ongoing NBCSP funding commenced.

Note: The eligible population for all Phase 2 and 3 start dates incorporated all those turning the target ages from 1 January of that year onwards.

Changes in monitoring the NBCSP

Regular users of annual NBCSP monitoring reports will notice that, from the *National Bowel Cancer Screening Program: monitoring report 2016* (AIHW 2016) onwards, monitoring reports differ from those released earlier. For a full summary of changes to the performance indicators, reporting period, and structure of the report since 2016, please see *National Bowel Cancer Screening Program: monitoring report 2019* (AIHW 2019b). This section includes only the major changes since the 2019 monitoring report.

Changes to the data custodian

In November 2019, the NBCSP Register data were transitioned from the NBCSP Register, maintained by Services Australia (formerly the Department of Human Services), to the National Cancer Screening Register (NCSR), maintained by Telstra Health. This is the fourth

NBCSP monitoring report to use data extracted from the NCSR. The NCSR is a live database which is updated over time and later reports using these data may have a greater level of completeness.

The performance indicators in this report use data collected for the NCSR (January 2021 to December 2023). However, this report also summarises trends from 2007–2008 to 2021–2022 in program participation rate (PI 1), diagnostic assessment rate (PI 3), and time between positive screen and diagnostic assessment (PI 4). These trends use data collected for the NBCSP Register as well as data collected for the NCSR.

Changes to determining Indigenous status from the NCSR

This report uses both the Person and PersonHistory table in the NCSR to determine a person's self-identified Indigenous status. Firstly, the most recently reported Indigenous status from Person is used. For those where this value is not stated, any historical Indigenous status values available in the PersonHistory table are used, with a preference to Indigenous over non-Indigenous Australians status if multiple values have been selected in the past.

Changes to the cohort monitored

Each indicator uses the latest available data rather than presenting results for the same invitation cohort across all indicators. This means that some indicators report results for different time periods than others and therefore for different cohorts. Where possible, indicator reporting periods in this report include the time frame 1 January 2022 to 31 December 2022.

Changes to reporting of estimated participation by disability status

Due to changes in data completeness by self-reported disability status in NBCSP records prior to migration to the NCSR (in November 2019), estimated participation by disability status cannot be reported in this report. See Appendix F for further information.

Estimated incidence and mortality numbers

This report includes 2024 estimates for bowel cancer incidence and mortality rather than actual numbers, which are not yet available for 2024. Estimates are based on 2010–2019 data for incidence, and 2013–2022 data for mortality, and provide relevant data closest to the timing of this report. The latest actual (non-estimated) incidence and mortality data are used to produce statistics by state or territory, remoteness and socioeconomic areas, and by Indigenous status, as 2024 estimates for these disaggregations are not available.

Changes to incidence and mortality populations and rates for Indigenous Australians

To derive bowel cancer incidence and mortality rates for Indigenous Australians, this report used Indigenous population estimates and projections based on the 2016 Census (the most recent estimates available when this report was prepared).

The final estimated resident Aboriginal and Torres Strait Islander population as at 30 June 2016 was 19% larger than the estimated population as at 30 June 2011 (ABS 2018). The ABS notes that the population increase is greater than demographic factors alone

can explain. As well, the 2016 estimated population was 7% larger than the 2016 projected population based on the 2011 Census.

The extent of the increase in the Indigenous Australian population estimates between 2011 and 2016 means that any rates calculated with Indigenous population estimates based on the 2016 Census will be lower than those based on the 2011 Census. These rates should not be compared with rates calculated using populations based on previous Censuses.

Changes to coding bowel cancer mortality

The Australian Institute of Health and Welfare (AIHW) uses the National Mortality Database (NMD) for reporting cancer mortality. The NMD is coded and compiled by the Australian Bureau of Statistics (ABS), and ABS advice notes that where 'bowel cancer' is recorded on the death certificate, internationally agreed rules state that the cancer should be coded to a less specific code (C26.0) as the specific site of the cancer is not known (ABS 2016). The ABS advises that the use of code C26.0 for 'bowel cancer' deaths leads to undercounting due to cancers of the colon and rectum (C18–C20). For this reason, monitoring reports from 2019 onwards use C18–C20, and include C26.0 when reporting deaths from bowel cancer using the NMD. This differs from versions of this report prior to 2019 (which did not include C26.0) and will result in a greater number of deaths being attributed to bowel cancer.

Improvements to the valid invitations count

For data from 2020 onwards, improvements have been made to exclude a number of incorrectly recorded invitations within the NCSR. This includes identifying and excluding prospective invitees without a valid mailing address. A non-valid address may be a result of the NCSR not recognising a current postal address, or a return to sender flag has previously been recorded against the invitee and their given address.

Improvements to the known colonoscopy count

Due to incomplete colonoscopy form return for those having a follow-up diagnostic assessment after a positive screen, this report now supplements colonoscopy form data and MBS claims with Participant follow-up function (PFUF) data. This means data for PIs 3,4, and 9 from 2021 onwards cannot be compared with previous years.

The PFUF is a system whereby participants who have had a positive screen are contacted by program officers in their jurisdiction if a follow-up diagnostic assessment has not been recorded in the NCSR within a certain period. Any PFUF confirmation of a colonoscopy having occurred is then used in this report to supplement colonoscopy form data and MBS claims. While this can be used to improve the *number* of colonoscopies known to have taken place for program participants, it does not improve colonoscopy *outcome* data (that is, the diagnostic findings from these additional colonoscopies are not known).

From 2021 onwards, Chapter 4 outcome data only includes colonoscopies known from colonoscopy or histopathology forms, as only colonoscopies from these sources record outcomes. Therefore, these outcome data cannot be compared with previous years.

Appendix D: Data sources

To provide a comprehensive picture of national cancer statistics in this report, a range of data sources were used, including AIHW and external data sources. These data sources are described in this appendix.

Australian Burden of Disease Study

The Australian Burden of Disease Study (ABDS) 2023 used burden of disease analysis to measure the impact of 219 diseases and injuries on the health of the Australian population. The study provides a detailed picture of the burden of disease in the population in 2003, 2011, 2015, 2018, and 2023 (with 2023 being projected estimates). It includes estimates of total, fatal, and non-fatal burden for the total Australian population.

The ABDS 2018 includes the latest subnational burden of disease estimates, (by state or territory, remoteness area and socioeconomic area). It also includes estimates of the contribution made by selected risk factors on the disease burden in Australia, and by socioeconomic areas for some risk factors.

The ABDS uses and adapts the methods of global studies to produce estimates that are more relevant to the Australian health policy context.

Results from the study provide an important resource for health policy formulation, health service planning, and population health monitoring. The results provide a foundation for further assessments; for example, in relation to health interventions that aim to prevent or treat diabetes and its complications, and disease expenditure.

Full details on the various methods, data sources, and standard inputs used in the ABDS are available in *Australian Burden of Disease Study 2018: methods and supplementary material* (AIHW 2021).

Australian Cancer Database

All forms of cancer, except basal and squamous cell carcinomas of the skin, are notifiable diseases in each Australian state and territory. Legislation in each jurisdiction requires hospitals, pathology laboratories, and various other institutions to report all cases of cancer to their central cancer registry. An agreed subset of the data collected by these registries is supplied annually to the AIHW, where it is compiled into the Australian Cancer Database (ACD). The ACD used in this report currently contains data on all cases of cancer diagnosed from 1982 to 2020 for all states and territories.

Cancer reporting and registration is a dynamic process, and records in the state and territory cancer registries may be modified if new information is received. As a result, the number of cancer cases reported by the AIHW for any particular year may change slightly over time and may not always align with state and territory reporting for that same year.

The 2021–2024 estimated cancer cases for incidence were derived using a combination of ABS estimated resident populations and Centre for Population projections, as described in the technical notes of *Cancer data in Australia* (AIHW 2023b).

The latest Data Quality Statement for the ACD can be found on the AIHW website at https://meteor.aihw.gov.au/content/index.phtml/itemId/793071.

National Bowel Cancer Screening Program

This report uses National Cancer Screening Register (NCSR) data (raw data extract as at 06 January 2024) to present statistics on the progression of eligible participants along the screening pathway for those invited into the National Bowel Cancer Screening Program (NBCSP). It covers measures of participation, iFOBT results, and follow-up investigations and outcomes. However, data for follow-up investigations rely on non-mandatory form return from clinicians and are incomplete. Analyses are presented by age, sex, state or territory, remoteness and socioeconomic areas, Indigenous status, preferred language spoken at home, and disability status.

From mid-November 2019, the NBCSP Register data were transitioned from the Department of Health Services to the NCSR. Following the transition, the NCSR is now the sole source of NBCSP data in Australia.

The Data Quality Statement for the NBCSP can be found on the AIHW website at http://meteor.aihw.gov.au/content/index.phtml/itemId/791990.

National Death Index

The National Death Index is a database, housed at the AIHW, which contains records of all deaths occurring in Australia since 1980. The data are obtained from the registrars of Births, Deaths and Marriages in each state and territory. The National Death Index is designed to facilitate the conduct of epidemiological studies and its use is strictly confined to medical research.

Cancer incidence records from the ACD were linked to the National Death Index and used to calculate the survival and prevalence data presented in this report.

The Data Quality Statement for the National Death Index can be found at http://meteor.aihw.gov.au/content/index.phtml/itemId/480010.

National Mortality Database

The AIHW National Mortality Database (NMD) contains information supplied by the registrars of Births, Deaths and Marriages and the National Coronial Information System – and coded by the ABS – for deaths from 1964 to 2022. Registration of deaths is the responsibility of the Registry of Births, Deaths and Marriages in each state and territory. These data are then collated and coded by the ABS and maintained at the AIHW in the NMD.

In the NMD, both the year in which the death occurred and the year in which it was registered are provided. For the purposes of this report, actual mortality data are shown based on the year the death occurred, except for the most recent year (2022), where the number of people whose death was registered is used. Previous investigation has shown that the year of death and its registration coincide for the most part. However, in some instances, deaths at the end of each calendar year may not be registered until the following year. Thus, year of death information for the latest available year is generally an underestimate of the actual number of deaths that occurred in that year.

In this report, deaths registered in 2019 and earlier are based on the final version of cause of death data; deaths registered in 2020 are based on the revised version; and deaths registered in 2021–2022 are based on preliminary versions. Revised and preliminary versions are subject to further revision by the ABS.

The 2023–2024 estimates for mortality were based on deaths from the 2013–2022 NMD and were derived using a combination of ABS estimated resident populations and Centre for Population projections, as described in the technical notes of *Cancer data in Australia* (AIHW 2023b).

The data quality statements underpinning the AIHW NMD can be found on the following ABS internet pages:

- ABS quality declaration summary for Deaths, Australia https://www.abs.gov.au/methodologies/deaths-australia-methodology/2020
- ABS quality declaration summary for Causes of death, Australia https://www.abs.gov.au/methodologies/causes-death-australia-methodology/2020

For more information on the AIHW NMD, see: https://www.aihw.gov.au/about-our-data/our-data-collections/national-mortality-database/.

Lastly, the ABS has noted that there is a high likelihood that many deaths coded to ICD-10 code 'C26.0 Malignant neoplasms of the intestinal tract, unspecified' are deaths from colon, sigmoid, rectum, and anus cancers (ABS 2016). Therefore, deaths coded as C26.0 have been included in bowel cancer deaths throughout this report (and in monitoring reports from 2019 onwards).

Population data

Throughout this report, population data were used to derive bowel cancer incidence and mortality rates. The population data were sourced from the ABS using the most up-to-date estimates available at the time of analysis.

To derive its estimates of the resident populations, the ABS uses the 5-yearly Australian Census of Population and Housing data and adjusts them as follows:

- all respondents in the Census are placed in their state or territory, statistical area, and postcode of usual residence; overseas visitors are excluded
- an adjustment is made for people missed in the Census
- Australians temporarily overseas on Census night are added to the usual residence Census count.

Estimated resident populations are then updated each year from the Australian Census data, using indicators of population change, such as births, deaths, and net migration. More information is available from the ABS website at http://www.abs.gov.au.

The projected incidence and mortality rates cited for 2024 in this report will sometimes differ from the rates that would occur if the Centre for Population data were used to calculate rates.

For the Indigenous Australian incidence and mortality comparisons in this report, the most recently released ABS Indigenous estimated resident populations (based on the 2016 Census of Population and Housing (ABS 2018)) were used for 2016. While ABS Indigenous projections (also based on the 2016 Census) were used for 2017–2022.

Appendix E: Classifications

International Classification of Diseases for Oncology

Cancers were originally classified solely under the International Classification of Diseases and Related Health Problems (ICD) classification system, based on topographic site and behaviour. However, during the creation of the 9th Revision of the ICD in the late 1960s, working parties suggested creating a separate classification for cancers that included improved morphological information. The first edition of the International Classification of Diseases for Oncology (ICD-O) was subsequently released in 1976 and, in this classification, cancers were coded by both morphology (histology type and behaviour) and topography (site).

Since that first edition of the ICD-O, a number of revisions have been made, mainly in the area of lymphomas and leukaemias. The current edition, the 3rd Edition (ICD-O-3), was released in 2000 and is used by most state and territory cancer registries in Australia, as well as by the AIHW in regard to the ACD.

Index of Relative Socio-economic Disadvantage

The Index of Relative Socio-economic Disadvantage (IRSD) is one of 4 Socio-Economic Indexes for Areas developed by the ABS. This index is based on factors such as average household income, education levels, and unemployment rates. It is not a person-based measure, but an area-based measure of socioeconomic disadvantage in which small areas of Australia are classified on a continuum from disadvantaged to affluent. This information is used as a proxy for the socioeconomic disadvantage of people living in those areas and may not be correct for each person in that area.

In this report, the first socioeconomic area corresponds to geographical areas containing the 20% of the population with the greatest socioeconomic disadvantage according to the IRSD, and the fifth area corresponds to the 20% of the population with the least socioeconomic disadvantage. Caution should always be used when analysing the results of data that have been converted using correspondences, with the potential limitations of the data considered.

Socioeconomic areas for screening data

Participants' areas of residence were assigned to socioeconomic areas using the Statistical Area Level 2 of the participant's residential address according to the IRSD for 2016. Socioeconomic groupings (based on IRSD rankings) were calculated with a Statistical Area Level 2 correspondence, using a population-based method at the Australia-wide level. Participants whose Statistical Area Level 2 was not available in the socioeconomic correspondence were included in an 'Unknown' column in the relevant tables.

Socioeconomic areas for incidence and mortality

Socioeconomic disadvantage areas were assigned to cancer cases according to the IRSD for 2011 of the Statistical Area Level 2 of residence at the time of diagnosis, and to deaths according to the 2016 Statistical Area Level 2 of residence at the time of death. The 2011 IRSD classifications were used for cancer cases as data were more complete using the 2011 Statistical Area Level 2 than the 2016 Statistical Area Level 2 within the 2020 ACD.

International Statistical Classification of Diseases and Related Health Problems

The ICD is used to classify diseases and other health problems (including symptoms and injuries) in clinical and administrative records. The use of a standard classification system enables the storage and retrieval of diagnostic information for clinical and epidemiological purposes that is comparable between different service providers, across countries and over time.

In 1903, Australia adopted the ICD to classify causes of death and it was fully phased in by 1906. Since 1906, the ICD has been revised 9 times in recognition of new diseases (for example, acquired immunodeficiency syndrome, or AIDS), increased knowledge of diseases, and changing terminology in describing diseases. The version currently in use, the ICD-10 (WHO 1992), was endorsed by the 43rd World Health Assembly in May 1990 and officially came into use in World Health Organization member states from 1994.

International Statistical Classification of Diseases and Related Health Problems, Australian Modification

The Australian modification of the ICD-10, referred to as the ICD-10-AM (NCCH 2010), is based on the ICD-10. The ICD-10 was modified for the Australian setting by the National Centre for Classification in Health, with assistance from clinicians and clinical coders. Despite the modifications, compatibility with the ICD-10 at the higher levels of the classification (that is, up to 4-character codes) has been maintained. The ICD-10-AM has been used to classify diagnoses in hospital records in all states and territories since 1999–2000 (AIHW 2000).

Remoteness Areas

The Remoteness Areas divide Australia for statistical purposes into broad geographical regions that share common characteristics of remoteness. The Remoteness Structure divides each state and territory into several regions on the basis of their relative access to services. There are 6 classes of Remoteness Area in the Remoteness Structure: *Major cities*, *Inner regional*, *Outer regional*, *Remote*, *Very remote,* and *Migratory*. The category *Major cities* includes Australia's capital cities, except for Hobart and Darwin, which are classified as *Inner regional*. Remoteness Areas are based on the Accessibility and Remoteness Index of Australia, produced by the Australian Population and Migration Research Centre at the University of Adelaide.

Remoteness Area for screening data

Participants' residential address Statistical Area Level 2 data were mapped to 2021 Australian Statistical Geography As some Statistical Area Level 2 areas can span different Remoteness Areas, a weighting for each Remoteness Area was attributed to the Statistical Area Level 2 in such cases. This can result in non-integer counts for remoteness classifications.

Remoteness Area for incidence and mortality

Each unit record in the ACD contains 2011 Statistical Area Level 2 and 2016 Statistical Area Level 2, but not the Remoteness Area. To calculate cancer incidence by Remoteness Area, a correspondence was used to map the 2011 Statistical Area Level 2 to the 2011 Remoteness Area. The 2011 Statistical Area Level 2 classification was used for cancer cases as data were more complete using that than the 2016 Statistical Area Level 2 classification within the 2020 ACD. Cancer mortality rates by Remoteness Area were based on 2016 Remoteness Area classifications.

Tables in this report based on geographical location were rounded to integer values. Where figures were rounded, discrepancies may occur between totals and sums of the component items. Participants whose postcode was not available in the remoteness correspondence were included in an ‘Unknown’ column in the relevant tables.

Appendix F: Methodology for calculating participation for population subgroups

Determining participation rates by Indigenous status, preferred language spoken at home, and disability status requires the number of screening invitations sent out to members of each of these population groups (the denominator) as well as the number of people in each group who returned a completed screening kit (the numerator).

Unfortunately, at present, information on these groups is known only for participants who choose to identify when they return a completed details form along with their iFOBT for analysis (the numerator). That is, identification of these population groups is known only for the 40% of people who participated, not for all invitees. As a result, it is not possible to accurately determine participation rates for these population groups.

An alternative method to estimate the number of invitations sent out to people in these population groups involves using the percentages of those aged 50–74 who reported as such in the 2021 Census.

To do so, percentages based on Census counts (tables F1–F3) have been applied to the number of overall invitations (by age group and sex) to estimate invitation volumes by population groups. These estimated denominator data can then be used with the known population group numerator data gained from the returned participant details forms of those who participated.

Estimated participation by Indigenous status

There are limitations in the data available to estimate Indigenous Australians' participation in the NBCSP, due to differences in the 'not stated' proportions between the 2021–2022 NBCSP participation data and the 2021 Census data (3.6% and 4.5% 'not stated', respectively). An overall participation rate for invitees who self-identified as Indigenous has been estimated (see Chapter 5), but these limitations should be considered when interpreting these data.

Opportunities to improve the accuracy of calculating Indigenous Australian participation rates will continue to be explored. New information may become available that enables improved estimates to be produced for future reports.

Table F1: Percentage of the population by Indigenous status as identified in the 2021 Census, by sex and age

		%		
Sex	**Age group (years)**	**Indigenous**	**Non-Indigenous**	**Not stated**
Males	50–54	2.40	92.36	5.24
	55–59	2.10	92.73	5.17
	60–64	1.87	93.28	4.85
	65–69	1.53	93.79	4.68
	70–74	1.14	94.27	4.59
	50–74	*1.86*	*93.20*	*4.94*
Females	50–54	2.59	93.35	4.06
	55–59	2.27	93.60	4.12
	60–64	1.94	94.12	3.94
	65–69	1.59	94.38	4.03
	70–74	1.19	94.62	4.19
	50–74	*1.97*	*93.96*	*4.06*
Persons	50–54	2.50	92.87	4.64
	55–59	2.19	93.18	4.63
	60–64	1.91	93.71	4.38
	65–69	1.56	94.10	4.34
	70–74	1.17	94.45	4.38
	50–74	**1.92**	**93.59**	**4.49**

Source: 2021 Census.

Estimated participation by language spoken at home

Census data for population subgroups broken down by the language they spoke at home include a ‘not stated’ percentage for those who did not respond to this question (Table F2). This is equal to the ‘not stated’ option for those who participate and choose not to provide population group information.

For preferred language spoken at home, the NCSR assumes all who do not self-identify a language speak English. As a result, there is no ‘not stated’ language spoken at home data for participants (numerator) to match the ‘not stated’ percentage data from the Census (used for the denominator).

To resolve this issue, a participation range method was used for language spoken at home. The rate is provided as a range that covers what the percentage would be if the entire ‘not stated’ percentage was added to the ‘English’ column, and what it would be if the entire ‘not stated’ percentage was added to the ‘Language other than English’ column (Table 5.4).

Table F2: Percentage of the population by language spoken at home as self-identified in the 2021 Census, by sex and age

		%		
Sex	**Age group (years)**	**English**	**Language other than English**	**Not stated**
Males	50–54	74.89	19.14	5.98
	55–59	76.08	18.17	5.75
	60–64	78.15	16.50	5.35
	65–69	78.95	15.83	5.22
	70–74	80.07	14.70	5.23
	50–74	*77.41*	*17.05*	*5.54*
Females	50–54	74.72	20.85	4.43
	55–59	75.83	19.72	4.44
	60–64	77.19	18.50	4.31
	65–69	77.57	17.95	4.48
	70–74	78.96	16.19	4.85
	50–74	*76.70*	*18.82*	*4.49*
Persons	50–54	74.80	20.01	5.19
	55–59	75.96	18.96	5.08
	60–64	77.66	17.53	4.81
	65–69	78.24	16.93	4.84
	70–74	79.50	15.47	5.03
	50–74	**77.04**	**17.96**	**5.00**

Source: 2021 Census.

Estimated participation by disability status

Census data for population subgroups broken down by disability status include a ‘not stated’ percentage for those who did not respond to this question (Table F3). This should equate to the ‘not stated’ option for those who participate and choose not to provide population group information.

Using the Census data to estimate denominators, estimated participation rates by disability status were able to be calculated (Table 5.5).

Table F3: Percentage of the population by disability status as self-identified in the 2021 Census, by sex and age

		%		
Sex	**Age group (years)**	**Has need for assistance with core activities**	**Does not have need for assistance with core activities**	**Not stated**
Males	50–54	3.60	90.15	6.26
	55–59	4.64	89.33	6.03
	60–64	6.15	88.23	5.62
	65–69	7.94	86.67	5.39
	70–74	10.95	83.72	5.33
	50–74	*6.34*	*87.89*	*5.77*
Females	50–54	4.12	91.18	4.70
	55–59	5.20	90.08	4.72
	60–64	6.62	88.86	4.52
	65–69	8.26	87.12	4.62
	70–74	11.45	83.73	4.82
	50–74	*6.84*	*88.48*	*4.67*
Persons	50–54	3.86	90.67	5.46
	55–59	4.93	89.72	5.36
	60–64	6.39	88.56	5.05
	65–69	8.10	86.90	4.99
	70–74	11.21	83.72	5.07
	50–74	**6.60**	**88.20**	**5.20**

Source: 2021 Census.

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Abbreviations

ABDS	Australian Burden of Disease Study
ABS	Australian Bureau of Statistics
ACD	Australian Cancer Database
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ASGS	Australian Statistical Geography Standard
ASR	age-standardised rate
DALY	disability-adjusted life year
ICD	International Classification of Diseases and Related Health Problems
ICD-O	International Classification of Diseases for Oncology
iFOBT	immunochemical faecal occult blood test
IRSD	Index of Relative Socio-economic Disadvantage
LOTE	language other than English
MBS	Medicare benefits schedule
NBCSP	National Bowel Cancer Screening Program
NCSR	National Cancer Screening Register
NMD	National Mortality Database
NSW	New South Wales
NT	Northern Territory
PFUF	Participant follow-up function
PHCP	primary health-care practitioner (general practitioner or other primary health-care provider)
PI	performance indicator
PPV	positive predictive value
Qld	Queensland
RDE	raw data extract
SA	South Australia
Tas	Tasmania
TNM	Tumour, Nodes and Metastasis
Vic	Victoria
WA	Western Australia
YLD	years lived with disability
YLL	years of life lost

Symbols

—	nil or rounded to zero
. .	not applicable
>	greater than
≤	less than or equal to
n.a.	not available
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data
N	number

Glossary

Note: Terms in bold within definitions are defined elsewhere in the glossary.

Aboriginal and/or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Indigenous**.

adenocarcinoma: A **cancer** that began in a glandular epithelial cell (see **epithelium**).

adenoma (adenomatous polyp): A **benign** tumour that arises from epithelial cells (see **epithelium**). All adenomas have **malignant** potential. Adenomas in the rectum or colon have a higher chance of developing into **cancer** (see **adenocarcinoma**) than adenomas in most other organs. An adenoma can be classified from highest risk (advanced) to lowest risk (diminutive).

age-specific rate: The number of cases occurring in each specified age group by the corresponding population in the same age group, expressed as 'per 100,000 people'.

age-standardised rate (ASR): A rate derived by removing the influence of age when comparing populations with different age structures. This is usually necessary as the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, which allows disease rates to be compared.

asymptomatic: Describes being without **symptoms**.

benign: Describes non-cancerous tumours that may grow larger but do not spread to other parts of the body. Not **malignant**.

bowel (colorectal) cancer: A cancer definition that comprises both **cancer** of the colon and cancer of the rectum.

cancer death: A death where the underlying cause of death is indicated as **cancer**. People with cancer who die of other causes are not counted in the mortality statistics in this publication.

cancer (malignant neoplasm): A large range of diseases whose common feature is that some of the body's cells become defective and begin to multiply out of control. These cells can invade and damage the area around them and can also spread to other parts of the body through the circulatory and lymphatic systems to cause further damage.

colonoscopy: A diagnostic assessment procedure to examine the bowel using a special scope (colonoscope), usually carried out in a hospital or day clinic.

conditional relative survival: The probability of surviving a given number of years, provided that an individual has already survived a specified amount of time after diagnosis (usually 5 or 10 years). Compare with **relative survival**.

crude rate: The number of events over a specified period (for example, a year) divided by the total population. The crude rate (for participation, attendance and follow-up) is the proportion of people who have proceeded to a key point on the screening pathway (at the date of the data extraction) out of those eligible to proceed to that point.

The crude proportions will generally underestimate the true proportions of the population that participated in the National Bowel Cancer Screening Program. This is because, at any point in time, there are members of the population who are eligible to proceed to the next point on the screening pathway but who have not yet had time to do so. Similarly, there is a time lag

between when a person with a positive **iFOBT result** is referred for a **colonoscopy** and when they can have the procedure.

defer: Describes the action of an invitee who would like to participate in the National Bowel Cancer Screening Program but is unable to do so at this time. Such invitees will be contacted once the nominated deferral period has elapsed. Compare with **opt out**.

disability-adjusted life year (DALY): A year of healthy life lost, either through premature death or equivalently through living with disability due to illness or injury. It is the basic unit used in burden of disease and injury estimates.

epithelium: The tissue lining the outer layer of the body, the digestive tract and other hollow organs and structures.

false negative: A screening test result that incorrectly indicates a person does not have a marker for the condition being tested when they do have the condition. Not all screening tests are completely accurate, so false negative results cannot be discounted. Further, with an **iFOBT**, if a **polyp**, **adenoma**, or **cancer** is not bleeding at the time of the test, it may be missed by the screening test.

false positive: A screening test result that incorrectly indicates that a person has the marker being tested when they do not have the condition. As **iFOBTs** detect blood in stool (which may be caused by a number of conditions), a false positive finding for bowel cancer may still detect other non-bowel cancer conditions, or precancerous **polyps** or **adenomas**.

histopathology: The microscopic study of the structure and composition of tissues and associated disease.

immunochemical faecal occult blood test (iFOBT): immunochemical faecal occult blood test—a self-administered test to detect blood in bowel motions, but not bowel cancer itself. The iFOBT is analysed by a pathology laboratory, and results forwarded to the participant and primary health care practitioner (if nominated). The 2-sample screening kits can have an overall adequacy rating of:

- Expired: the kit was returned after the expiry date of the sample tubes
- Unsatisfactory: the kit was received greater than 28 days from the first sample date
- Not received: the kit was returned without the sample tubes
- Spoiled / Damaged: both sample tubes in the returned kit were spoiled or damaged

These first 4 adequacy ratings are given an overall result of *No result*. The final potential adequacy rating is:

- Correctly completed: the sample tubes were not judged in the above categories overall.

  Overall results of the correctly completed kits are then categorised into:

  - *Positive*: at least one sample was positive (≥ 20 µg Haemoglobin per gram faeces) for occult blood, regardless of the other sample
  - *Negative*: both samples were negative for occult blood
  - *Inconclusive*:
    - one sample was negative, and the other sample was Spoiled/Damaged or Not received, or
    - both samples were negative but the kit was received at the lab greater than 14 days since the first sample was taken.

Positive and negative overall results are used in positivity calculations. No result and Inconclusive results are resent a replacement kit by the pathology laboratory.

incidence: The number of new cases (of an illness or event, and so on) occurring during a given period, usually 1 year. Compare with **prevalence**.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as Aboriginal and/or Torres Strait Islander. See also **Aboriginal and/or Torres Strait Islander**.

interval cancer: A bowel cancer that is diagnosed after completion of a negative screening episode and before the next screening examination or within 24 months of a negative screening episode, whichever comes first.

invitee: A person invited to participate in the National Bowel Cancer Screening Program.

lymph node: A mass of lymphatic tissue, often bean-shaped, that produces adaptive immune system cells and through which lymphatic fluid filters. These nodes are located throughout the body.

malignant: Describes tumours with the capacity to spread to surrounding tissue or to other sites in the body.

metastasis: The process by which cancerous cells are transferred (or spread) from one part of the body to another; for example, via the lymphatic system or the bloodstream.

morbidity: Ill health in an individual, or the level of ill health in a population or group.

mortality: The number of deaths occurring during a given period.

new cancer case: A person who has a new cancer diagnosed for the first time. One person may have more than one cancer and therefore may be counted more than once in incidence statistics if it is decided that the additional cancers are not of the same origin. This decision is based on a series of principles, set out in more detail in a publication by Jensen at al. (1991).

non-valid address: A non-valid address may be a result of the NCSR not recognising a current postal address, or a return to sender flag is currently recorded against the invitee and their given address.

opt out: Describes what invitees do who advise that they do not wish to participate in the National Bowel Cancer Screening Program, now or in the future. Invitees who opt out will not be contacted again. Invitees may elect to opt back in at a later date.

participant: A person who has agreed to participate in the National Bowel Cancer Screening Program by returning a completed **iFOBT** kit and participant details form.

polyp: A small growth of colon tissue that protrudes into the colonic or rectal lumen. Polyps are usually asymptomatic, but sometimes cause visible rectal bleeding and, rarely, other symptoms. Most polyps are **benign**. **Adenomatous polyps** are more likely to become **malignant** than other types of polyps.

polypectomy: The removal of a **polyp** or **adenoma**.

positive predictive value: Proportion of people with a positive **iFOBT** screen who have **adenomas** or **cancer** detected at **colonoscopy** and confirmed by **histopathology**.

prevalence: The total number of people alive at a specific date who have been diagnosed with a particular disease (such as cancer) within a defined period.

primary health-care practitioner (PHCP): A general practitioner or other primary health-care provider. This may include remote health clinics or specialists providing general practitioner services.

prognosis: The likely outcome of an illness.

radiation therapy: The treatment of disease with any type of radiation, most commonly with ionising radiation, such as X-rays, beta rays and gamma rays.

relative survival: A measure of the average survival experience of a population of people diagnosed with cancer, relative to the 'average' Australian of the same sex and age, at a specified interval after diagnosis (usually 5 or 10 years). A 5-year relative survival figure of 100% means that the cancer has no impact on the person's chance of still being alive 5 years after diagnosis, whereas a figure of 50% means that the cancer has halved that chance.

screening: Repeated testing, at regular intervals, of **asymptomatic** people to detect a medical condition at an earlier stage than would otherwise be the case. Screening tests are not diagnostic (for example, see **false positive**, **false negative**, and **positive predictive value**); therefore, people who receive a positive screening result require further assessment and diagnosis to determine whether they have the disease or risk marker being screened for.

Skipping a round: As of November 2019, people who are potentially eligible for the National Bowel Cancer Screening Program but who have had a recent colonoscopy (within the last 2 years) are notified that they will skip a round of the **immunochemical faecal occult blood test (iFOBT)**, rather than being invited to participate.

stage: The extent of a **cancer** in the body. Staging is usually based on the size of the **tumour**, whether **lymph nodes** contain cancer, and whether the cancer has spread from the original site to other parts of the body (undergone **metastasis)**.

symptom: Any evidence of disease apparent to the patient. For the purposes of this report, symptoms can include visible rectal bleeding, change in bowel habit, bowel obstruction or anaemia.

target population: People who are actively targeted by the National Bowel Cancer Screening Program. This includes people aged 50–74 who were registered as Australian citizens or permanent migrants in the Medicare enrolment file, or are registered with a Department of Veterans' Affairs gold card.

tumour: An abnormal growth of tissue. Can be **benign** (not a **cancer**) or **malignant** (cancer).

underlying cause of death: The disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence that produced the fatal injury.

valid results: iFOBT results that are classified as either positive or negative. Inconclusive results are excluded.

Years lived with disability (YLD): A measure of the years of what could have been a healthy life but were instead spent in states of less than full health. YLD represent non-fatal burden.

Years of life lost (YLL): Years of life lost due to premature death, defined as dying before the global ideal life span at the age of death. YLL represent fatal burden.

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This report presents statistics on the National Bowel Cancer Screening Program (NBCSP) using key performance indicators. Of those who were invited to participate in the NBCSP between 1 January 2021 and 31 December 2022, 40% undertook screening. Among those who screened in 2022, 6% had a positive result warranting further assessment. Of the participants who underwent a follow-up diagnostic assessment, 1 in 25 was diagnosed with a confirmed or suspected cancer.

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