Australian Government
Australian Institute of Health and Welfare

Leading cause of premature mortality in Australia fact sheet:
Colorectal cancer

Colorectal cancer

What is colorectal cancer?

Colorectal cancer (commonly referred to as bowel cancer) is cancer of the large intestine—specifically, abnormal cells growing and multiplying out of control in the colon or rectum. Colorectal cancer can arise from polyps (small benign growths) in the wall of the colon, but their removal can stop this progression (Chabner 2001). Polyps are relatively common in older age.

Because mutations can occur relatively slowly, early detection and removal of polyps or small cancers can be reasonably effective in preventing ill health or death from colorectal cancer (AIHW 2015a).

Premature mortality refers to deaths that occur at a younger age than a selected cut-off. For this analysis, deaths among people under the age of 75 are considered premature.

Who dies prematurely from colorectal cancer?

In 2012, there were 1,952 premature deaths due to colorectal cancer. Three out of 5 premature deaths due to colorectal cancer were among males (60%; or 1,167 deaths compared with 785 deaths for females). The higher mortality rate among males was consistent across almost all age groups (Figure 1).

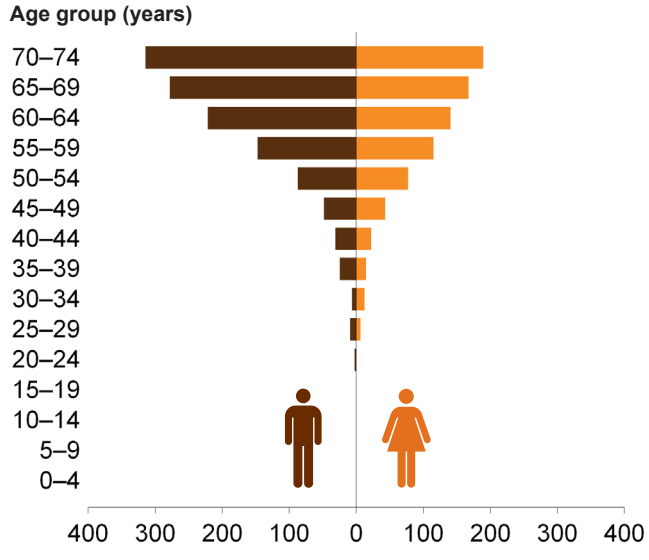

Figure 1: Premature deaths due to colorectal cancer, by sex and age group, 2012

Quick facts

Colorectal cancer was the **4th** leading cause of premature death in Australia in 2012.

3 in 5 premature deaths due to colorectal cancer in 2012 were among males (60%).

The premature death rate due to colorectal cancer decreased by **54%** over the 3 decades from 1982 and 2012.

The risk of bowel cancer increases sharply from the age of 50 (Bowel Cancer Australia 2014). In 2012, colorectal cancer was responsible for 215 deaths among 25–49 year olds and 1,735 deaths among 50–74 year olds.

What population-level approaches target premature deaths due to colorectal cancer?

Although about 20% of colorectal cancers can be attributed to a hereditary component (Weitz et al. 2005), a larger proportion are caused by known (for example, physical inactivity, alcohol consumption and diet) and unknown environmental and lifestyle factors (WCRF & AICR 2011). Incidence is also known to increase with age (AIHW 2015c).

Often symptoms of colorectal cancer are not exhibited until it has reached a relatively advanced stage (AIHW 2015c). The somewhat slow development of most colorectal cancers and the availability of a suitable screening test mean population screening to identify risk markers for pre-disease abnormalities or early disease is appropriate (APHDPCSS 2008).

The National Bowel Cancer Screening Program is managed by the Department of Health, in partnership with state and territory governments. The screening test is called a faecal occult blood test (FOBT) which collects samples of bowel motions which are then analysed to detect tiny traces of blood which are not visible to the naked eye. The screening test cannot diagnose colorectal cancer, but rather indicates whether further testing is required (Department of Health 2014).

Targeted invitations to screen (for example, for specific age groups) began in 2006, and once fully implemented by 2020, all Australians aged between 50 and 74 will be offered bowel screening every two years. For more details on implementation of the screening program, see AIHW 2015c. Participants with a positive result are referred to their GP for further diagnostic testing. In addition to the program, screening tests can be obtained through pharmacists and also purchased online.

Early detection of colorectal cancer through screening can result in less aggressive treatment (AIHW 2015a). Treatment for colorectal cancer is generally based on a combination of techniques, including surgery, chemotherapy and radiotherapy, depending on how early the cancer is detected and where the cancer is—as treatment will vary depending on whether the cancer is in the rectum or the colon.

Premature deaths due to colorectal cancer are classified as 'potentially avoidable in the context of the present health system' according to nationally agreed definitions (AIHW 2015b). The definition includes deaths from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care.

How have premature death rates due to colorectal cancer changed over time?

The age-standardised premature death rate due to colorectal cancer fluctuated between 1921 and 2012, including a general increase in the early-1970s for males but a decrease at around the same time for females. From the late 1980s there was a general decrease in the premature death rate for both sexes.

The age-standardised premature death rate due to colorectal cancer more than halved (54%) between 1982 and 2012—from 18 per 100,000 population to 8.2 per 100,000 (Figure 2). Females experienced a slightly greater decrease in premature deaths over this time (57% compared with 53% for males).

In the 5 years between 2008 and 2012, the age-standardised premature death rate due to colorectal cancer decreased by 16%, from 9.8 deaths per 100,000 population to 8.2 deaths per 100,000.

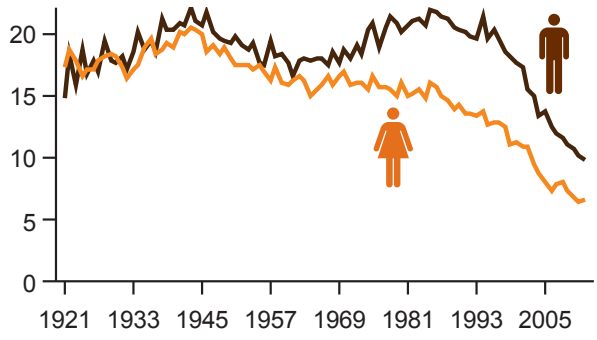

Figure 2: Age-standardised rate of premature deaths due to colorectal cancer, by sex, 1921–2012

What has influenced trends in premature deaths due to colorectal cancer?

Risk-factor modification, screening and medical and surgical advancements in the treatment of colorectal cancer have contributed to the decrease in premature deaths from this disease in the United States (Vogelaar et al. 2006).

In Australia, early detection of colorectal cancer through population screening programs—specifically, FOBT screening—has been found to reduce mortality from colorectal cancer (AIHW 2014; Ananda et al. 2009).

Medical advancements in the treatment of colorectal cancer including radiotherapy (as shown, for example, in Sermeus et al. 2014), chemotherapy (for example, in André et al. 2004), and combinations of both therapies, are also likely to have led to improvements in survival and mortality trends.

Where can I find out more?

Premature mortality in Australia (including references):
<http://www.aihw.gov.au/deaths/premature-mortality/>.

AIHW GRIM books:
<http://www.aihw.gov.au/deaths/grim-books/>.

AIHW web pages and publications:
<http://www.aihw.gov.au/cancer/bowel/>.

Suggested citation

Australian Institute of Health and Welfare 2015. Leading cause of premature mortality in Australia fact sheet: colorectal cancer. Cat. no. PHE 194. Canberra: AIHW.

ISBN 978-1-74249-794-5 (PDF)