## **NHMRC:** IMPACT CASE STUDY

**AUG 2024** 





# Screening to prevent bowel cancer

Colorectal adenocarcinoma, also known as colorectal cancer (CRC) or bowel cancer, is the second most common cause of cancer-related death in Australia. With one of the highest rates of CRC in the world, Australia was also the first country in the world to implement and sustain a national population-based organised CRC screening program using faecal immunochemical tests. NHMRC-funded researchers made key contributions to the program's initial development and ongoing conduct.





The normal cells lining the colon or rectum may develop into a pre-malignant lesion often called a polyp.

In about 5% of cases the lesion can evolve into a cancer that, if left untreated, may spread throughout the body, leading to death.

To reduce CRC death rates it would be necessary to develop a population-level screening process to detect premalignant lesions before they progressed into early-stage cancers.



#### Investment

NHMRC identified the importance of cancer detection as early as 1936, but began ongoing funding for key CRC researchers commencing in the 1970s.

Many other organisations provided funding for research contributing to the development of a national bowel cancer screening program, including: Cancer Australia, State Cancer Councils, Australia Cancer Research Fund, SA Strategic Health Research Program, Flinders Foundation, Australian Gastrointestinal Trials Group and the Hospital Research Foundation.



#### Research

demonstrated that the standard testing technology (gFOBT) was unlikely to be acceptable to the public and had limited capacity to detect premalignant lesions o cancer. They recommended the use of an alternative: the faecal immunochemical test (FIT).

They also demonstrated that involvement from, and education for General Practitioners was important as was advanced notification before the screening test was provided. This strategy is now used both in Australian and around the world.



#### **Translation**

NHMRC-funded researchers helped to develop guidelines for the prevention, early detection and management of colorectal cancer. They advised the Australian Health Technology Advisory Committee and were members of the Bowel Cancer Screening Pilot Implementation Committee.

In 2005, the Committee reported that a National Bowel Cancer Screening Program (NBCSP) would be feasible, acceptable, and cost-effective in Australia. The NBSCP commenced in August 2006, based on FIT.



### Impact

Between the program's commencement and 2023, over 10 million screening tests had been completed with about 4.5 million people participating at least once. The program has been contributing to reducing morbidity and mortality from bowel cancer in Australia.

From 2020, the NBCSP offered screening every two years to people aged 50-74 with expansion from 1 July 2024 to include those aged 45-49 years given the increasing incidence of CRC in that age group.

#### 2020 screening every two years 2000 Project Grant Salkeld 2011 Project Grant, Since the program commenced, over 10 million included for 50-74 vo 2017 Project Grant Emory, **Development Grant Young** 1993 Project Grant Young 1999 Project Grant Fellowship Jenkins 2024 screening tests have been completed **2001 NBCSP** 2010 Project Grant Jenkins Young 2019 45-49 yo included pilot program 2016 Project Grant 1992 Project Grant Young 2008 Project Grant Project 2021 in NBCSP 1998 Project Grant commences Young Young 1981 Project Grant Young Grant 1991 Targeted Call for Research Young Salkeld Investigator 1971 aFOBT 2002 Project 2012 Centres of Symonds **Grant Jenkins** developed 1979 Postgraduate 1989 Project Grant Young 1996 Project Research Excellence **Grant Young** Scholarship Macrae 2005 Project Grants St John, Jenkins 1988 Project Grant Macrae 1977 Project Grant St John **Grants Young** 1981 Fellowship Macrae 2006 National Bowel Cancer Screen Program commences 1971 Project Grant St John 1980 2010 2020 2025 1970 1990 2000



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