

Cancer Research in Australia

Evidence to inform research investment

Highlights

Funding to cancer research projects and programs

- ▶ More than \$1 billion was provided between 2006 and 2011, combining to a total of \$1.3 billion from 2003 to 2011.
- ▶ Total funding more than doubled and the number of research projects progressively increased from 2003 to 2011 (see Figure 1).
 - ▶ The Australian Government provided 66% of total funding (\$856 million).
- ▶ Between 2006 and 2011, 90% of research projects were supported by a single funding source.

Tumour-specific research

- ▶ Funding to tumour-specific research increased more than 3-fold from 2003 to 2011 (see Figure 2).
 - ▶ Total funding and the number of research projects increased for all tumour types, with the notable exception of cancer of unknown primary.
- ▶ Research funding to many cancers was low compared with their burden on the Australian population (see Figure 3).

Research categories

- ▶ Total funding and the number of research projects increased from 2003 to 2011 in all cancer research categories, except for Prevention.
 - ▶ In proportional terms, funding decreased to the research category of Biology and increased to Early Detection, Diagnosis and Prognosis, and Treatment (see Figure 4).

Research collaborations

- ▶ The percentage of research projects from 2003 to 2011 which involved collaborators increased from 58% to 65% (see Figure 5).
- ▶ Between 2006 and 2011, 75% of research projects had collaborators in the same institution.

International comparisons

- ▶ The national pattern of funding to cancer research categories in Australia was broadly similar to Canada and the UK (see Figure 6).

Cancer Australia

Cancer Australia was established by the Australian Government in 2006 to provide national leadership in cancer control to improve outcomes for Australians affected by cancer, their families and carers.

Cancer Australia's functions, specified in The Cancer Australia Act, include overseeing a dedicated budget for research into cancer and guiding scientific improvements in cancer prevention, treatment and care.

Cancer Research in Australia: an overview of funding to cancer research projects and research programs in Australia 2006 to 2011 builds upon Cancer Australia's previous audit of 2003 to 2005, and provides a comparison of direct funding to cancer research projects and programs nationally, and with international surveys of cancer research.

The National Audit

This National Audit was made possible by co-operation and provision of data by all major funders of cancer research in Australia. The Audit contains data from 134 individual funders of cancer research projects and research programs.

Findings from the National Audit provide Cancer Australia with an opportunity to analyse our national research efforts and the evidence to inform future cancer research investment and focus.

Funding to cancer research

Total funding to cancer research projects and programs more than doubled, and the number of projects and programs increased steadily over three time periods (Figure 1).

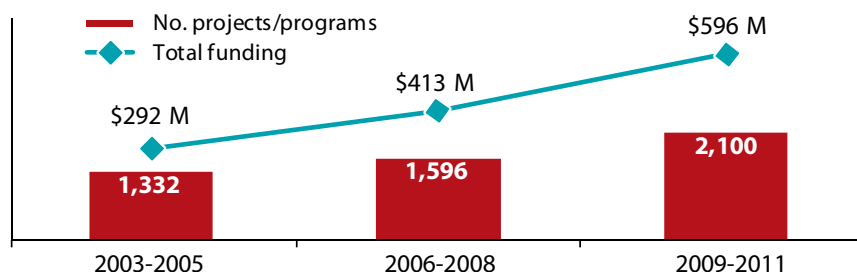


Figure 1. Total funding and number of cancer research projects and programs

Tumour-specific research

Total funding to tumour-specific research projects and programs more than tripled, and the number of projects and programs increased steadily over three time periods (Figure 2).

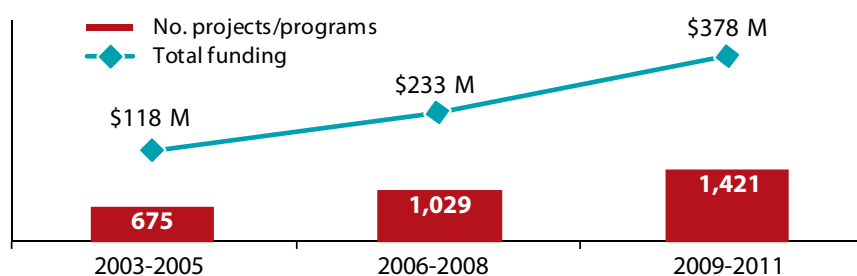


Figure 2. Total funding and number of tumour-specific research projects and programs

Research funding compared to burden of disease

The funding to research projects and programs investigating specific tumour types did not always correlate well with the burden of disease (DALYs, Figure 3).

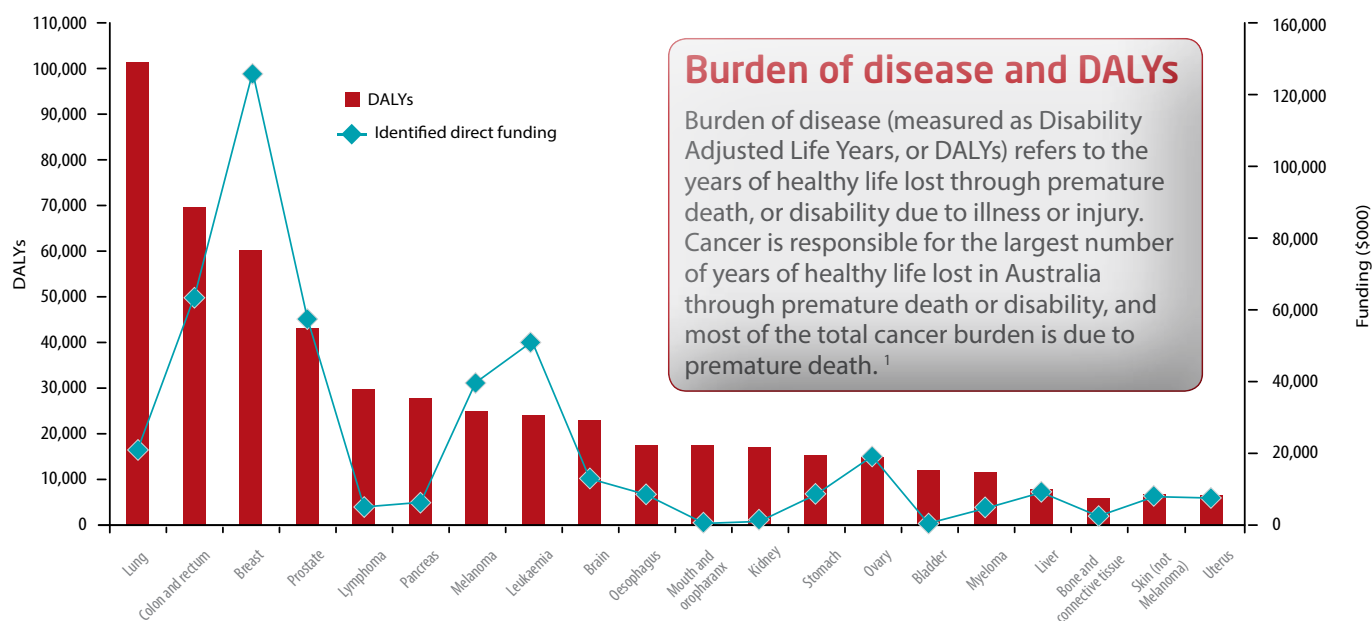


Figure 3. Funding to specific tumour types (2006-2011) vs burden of disease (DALYs; AIHW, 2012)

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Funding to cancer research categories - Common Scientific Outline

In *proportional* terms, funding to the CSO category of Biology decreased and funding to the CSO categories of Early Detection, Diagnosis and Prognosis, and Treatment, increased (Figure 4).

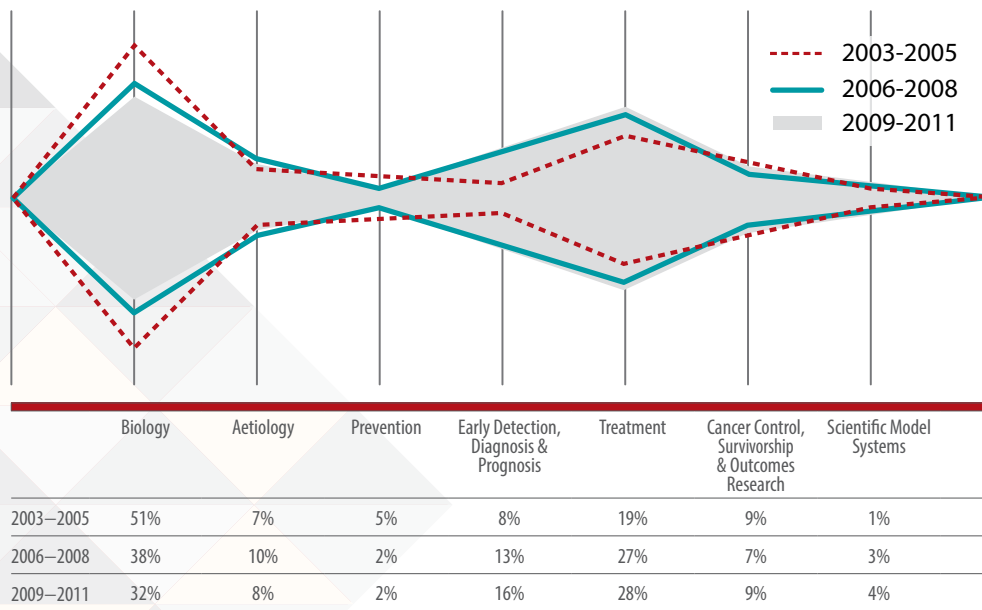


Figure 4. The national pattern of funding to CSO cancer research categories across three trienniums

The Common Scientific Outline (CSO)

The CSO is an international classification system specific to cancer research. The CSO uses easily applied terminology to describe and classify research by where it fits into the cancer research continuum. Each cancer research project and program in the National Audit was classified to the CSO category that best reflected the primary focus of the research being undertaken.

Research collaborations

Collaborations build research capacity and critical mass, bring together the best minds to expedite research and accelerate the achievement of improved cancer outcomes, and can limit potential duplication of research effort. For the National Audit, funders provided details of collaborators for each cancer research project and program.

The percentage of research projects and programs with collaborators increased from 58% to 65% over three time periods (Figure 5).

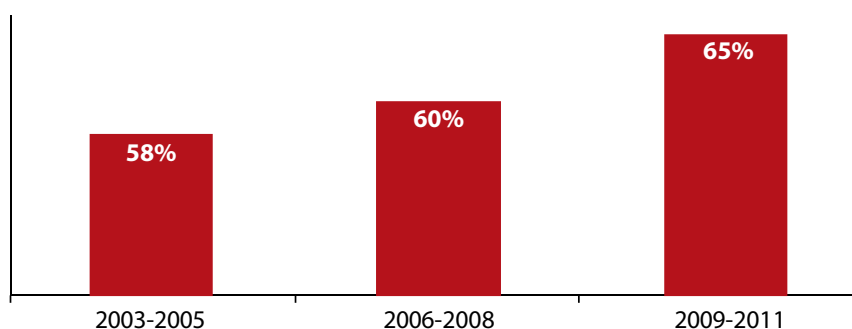


Figure 5. Percentage of cancer research projects and programs involving one or more collaborators

International comparisons

In the period 2006 to 2011, the pattern of funding to CSO cancer research categories in Australia was broadly similar to Canada and the UK (Figure 6).

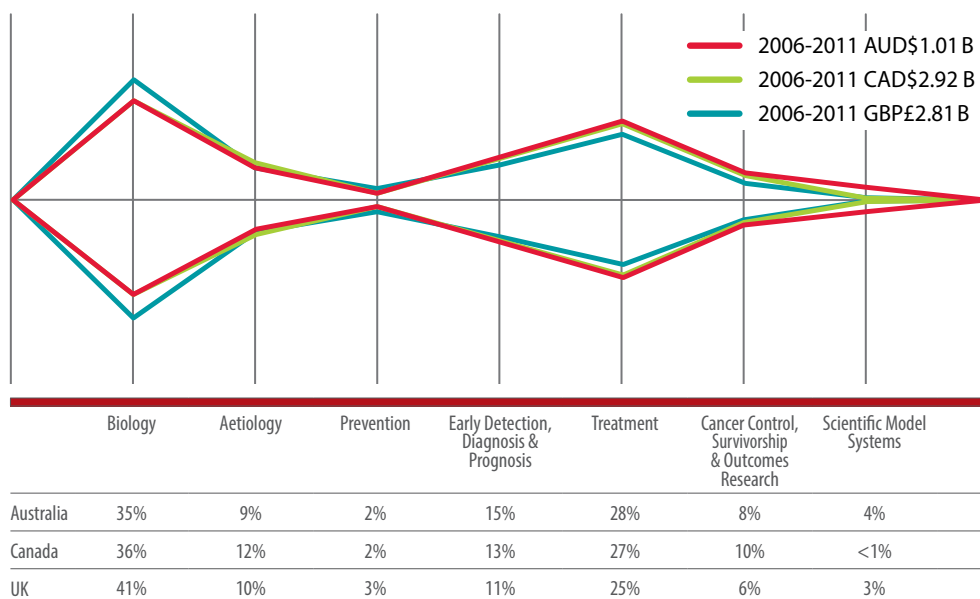


Figure 6. International comparisons of funding to CSO cancer research categories (2006-2011)

Optimising investment in cancer research - considerations for the future

Co-funding

Opportunities and funding models exist to co-fund research. A co-funding model could increase the impact and delivery timelines of a range of cancer research. Co-funding could also increase investment in areas such as prevention research.

Many preventable risk factors for cancer are common to other chronic diseases such as cardiovascular disease and diabetes. Development of joint prevention or health services research funding initiatives by funders of different chronic diseases would build the evidence base to support strategies towards reduced risk of cancer and other chronic diseases, and provide more cost-effective models of care.

Targeted research investment

Research funding investment could be prioritised for cancers which have a high impact and burden of disease.

Given the increasing research focus on genetic and epigenetic factors which are common across tumour types, this also presents an opportunity to foster funding which supports research activity across tumour streams.

Research collaborations

Funders of cancer research could foster research collaboration by developing and implementing funding models which value and reward national and international collaborations.

International funding

The similar cancer research funding pattern across different countries identifies areas of common research endeavour and need. This provides opportunities to collaborate, direct and co-fund future research funding investments, and establish an international collaborative which funds priority research across different countries.

Types of cancer research funding not captured in the National Audit

The National Audit did not capture funding to clinical trials-based research that did not receive specific grant funding, nor does it capture cancer clinical trials funded by industry. This audit does not describe funding intended for infrastructure, equipment, fellowships or scholarships awarded to individuals, or in-kind support provided by staff in cancer research, or routine clinical care, support services, data collection and ongoing monitoring of service delivery and outcomes.

Reference

1. Australian Institute of Health and Welfare & Australasian Association of Cancer Registries. 2012. *Cancer in Australia: an overview*, 2012. Cancer Series no. 74. Cat. no. CAN 70. Canberra: AIHW.

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Australian Government
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