

Cancer Research in Australia

Evidence to inform strategic investment in cancer research



Cancer Research in Australia: an overview of funding initiatives to support cancer research capacity in Australia 2006 to 2011 is the first national report of its kind. It presents combined findings from Cancer Australia's National Audits of funding for cancer research.

Highlights

- ▶ **\$1.77 billion** was provided to cancer research in Australia between 2006 and 2011.
- ▶ The main funders of cancer research were the Australian Government, state and territory governments, Cancer Councils, cancer-specific research foundations and other not-for-profit and charitable funders.
- ▶ The Australian Government was the largest funder, providing more than **\$1 billion** (58%).
- ▶ Total identified funding for cancer research in Australia between 2006 and 2011 included:
 - **\$304 million** provided to 1,381 research career awards
 - **\$453 million** provided to 437 awards for initiatives which build cancer research capacity and infrastructure
 - **\$1.01 billion** provided to 3,106 cancer research projects and programs (identified and reported in *Cancer research in Australia: an overview of cancer research projects and research programs in Australia 2006 to 2011*.¹)

The National Audits

In 2014, Cancer Australia published a National Audit report *Cancer research in Australia: an overview of cancer research projects and research programs in Australia 2006 to 2011*.¹

The National Audit report *Cancer Research in Australia: an overview of funding initiatives to support cancer research capacity in Australia 2006 to 2011* presented here, brings together data from the Report on funding to cancer research projects and programs and provides additional information on the support provided to cancer research in Australia.²

This National Audit Report describes, for the first time, the breadth of cancer research funding in Australia, and can assist funders of research to make strategic funding decisions that deliver tangible health benefits to the Australian community.

This National Audit was made possible through the co-operation and provision of data by all major funders of cancer research in Australia. Findings from this National Audit provide Cancer Australia and other funders of cancer research with the evidence to inform research investment directions.

Types of cancer research funding not captured in the National Audits

The audits did not seek information on in-kind support to cancer research, funding for routine clinical care, support services, funding for staff costs to support data collection, ongoing monitoring of service delivery and outcomes, funding of integrating authorities, cancer registries, new buildings and laboratory fit-outs or small pieces of equipment (i.e. less than \$10,000).

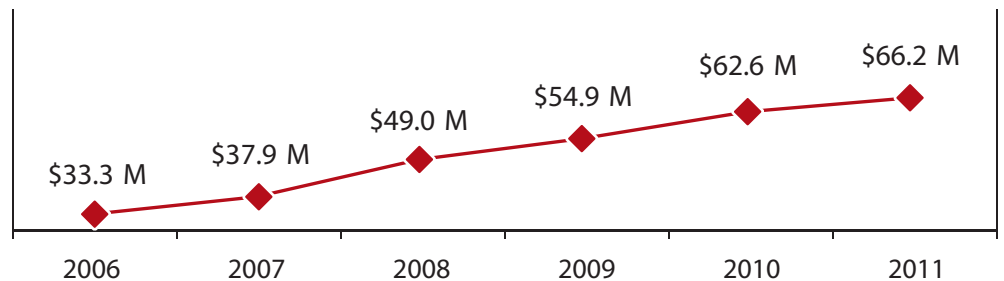
Funding for research careers

- ▶ \$304 million was provided between 2006 and 2011, with funding increasing year-on-year (Fig 1).
- ▶ The Australian Government was the largest funder of Scholarships (38%) and Fellowships (60%).
- ▶ Only 5% of research career awards were co-funded by two or more funders.
- ▶ 88% of both Scholarships and Fellowships were awarded to cancer researchers in the areas of Basic Science, and Clinical Medicine & Science (Fig 2).
- ▶ Mid-career Fellowships were the least commonly awarded type of Fellowship (Fig 3).
- ▶ Research career awards which focused on Prevention research received the lowest level of proportional funding (see Fig 5).

Annual funding

Total funding to Scholarships, Fellowships and Academic Cancer Research Chairs almost doubled from 2006 to 2011 (Fig 1).

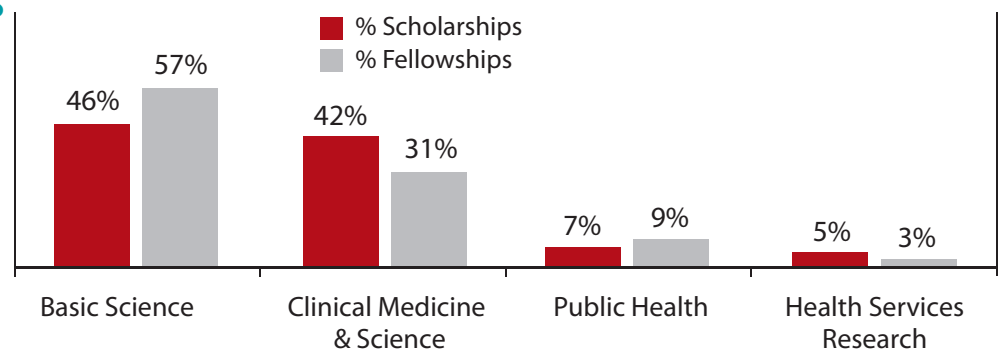
Figure 1. Annual funding for research career awards from 2006 to 2011



Broad Research Areas

Most Scholarships and Fellowships were awarded to researchers in the areas of Basic Science, and Clinical Medicine & Science (Fig 2).

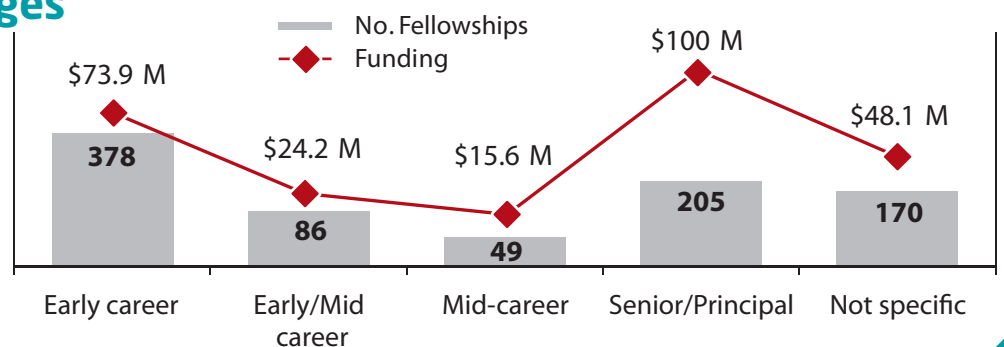
Figure 2. Broad Research Areas of Scholarships and Fellowships funded from 2006 to 2011



Fellowship career stages

From 2006 to 2011, Mid-career Fellowships were the least commonly awarded Fellowship type (Fig 3).

Figure 3. No. of Fellowships and level of funding for each career stage category



Funding for building cancer research capacity and infrastructure

- ▶ \$453 million was provided between 2006 and 2011.
- ▶ The Australian Government was the largest funder, providing 44% of funding.
- ▶ 75% of funding was provided by a single funding source.
- ▶ The majority of funding was provided to Centres of research and Strategic initiatives. Most funding awards were for Equipment, Capacity building initiatives and Clinical research networks (Fig 4).
- ▶ Building cancer research capacity initiatives and infrastructure which focused on research in Biology, and Treatment, received the most funding (Fig 5).

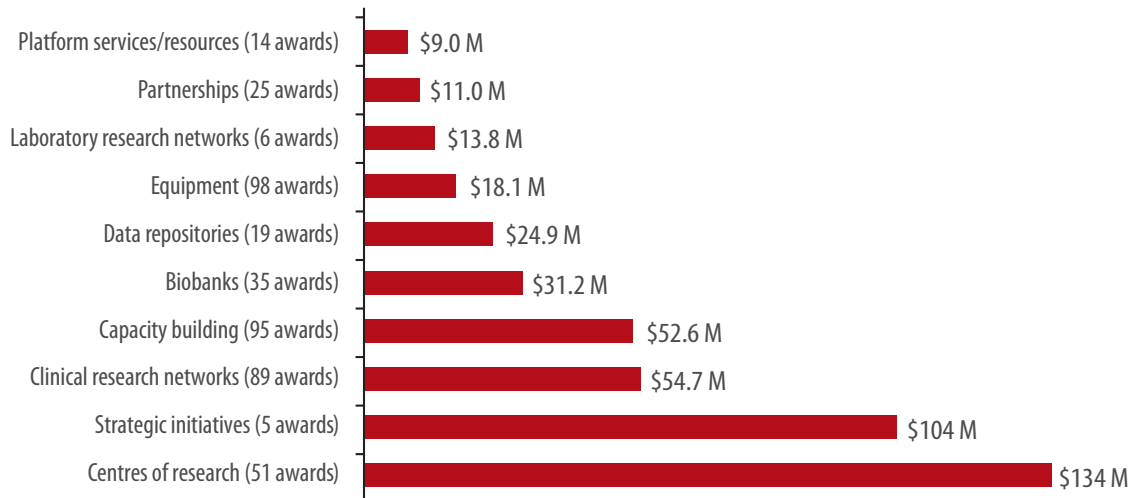


Figure 4. Funding and no. of awards for building cancer research capacity initiatives and infrastructure

Pattern of funding for research careers and building cancer research capacity and infrastructure

Pattern of research - Common Scientific Outline

The majority of funding for research careers, and building cancer research capacity and infrastructure, went to the CSO categories of Biology and Treatment (Fig 5).

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 people support and building research capacity and infrastructure award was classified to the CSO category that best reflected the primary focus of the research being supported.

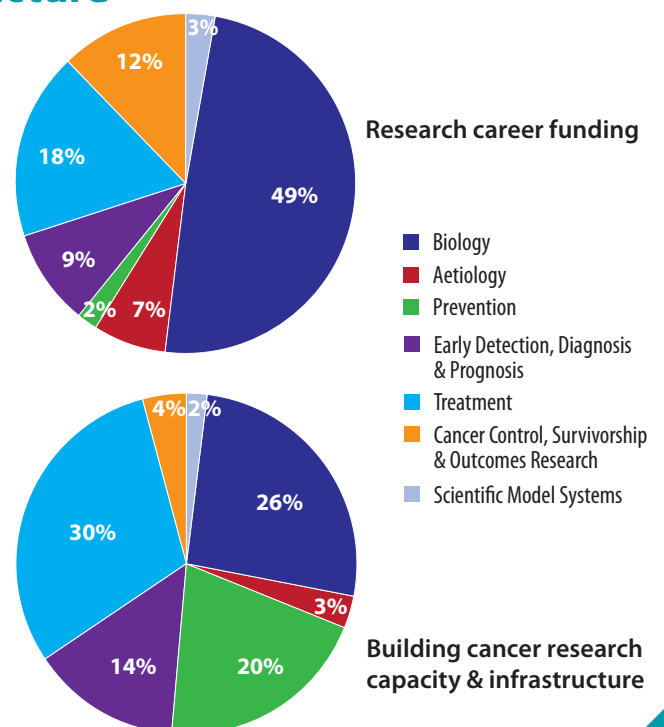


Figure 5. Percentage of funding to CSO categories for research careers, and building research capacity and infrastructure

National Audits 2006-2011

Combined, \$1.77 billion was provided to cancer research projects and programs, research careers, capacity building and infrastructure in Australia between 2006 and 2011.

- ▶ The Australian Government was the largest funder and provided more than \$1 billion (58%).
- ▶ Of the 4,924 grants and awards identified for cancer research, 91% were funded by a single funding source.
- ▶ Combined research funding to many cancers was low compared with their burden of disease on the Australian population (Fig 6).

Cancer research funding in Australia compared to burden of disease

Cancer Australia's two National Audits identified funding of \$1.77 billion to research, careers and infrastructure in the period 2006 to 2011. Research funding to specific tumour types did not always correlate well with the burden of disease (DALYs, Fig 6).

Burden of disease and DALYs

Burden of disease (measured as Disability Adjusted Life Years or DALYs) refer to the years of healthy life lost in Australia through premature death or disability, and most of the total cancer burden is due to premature death.³

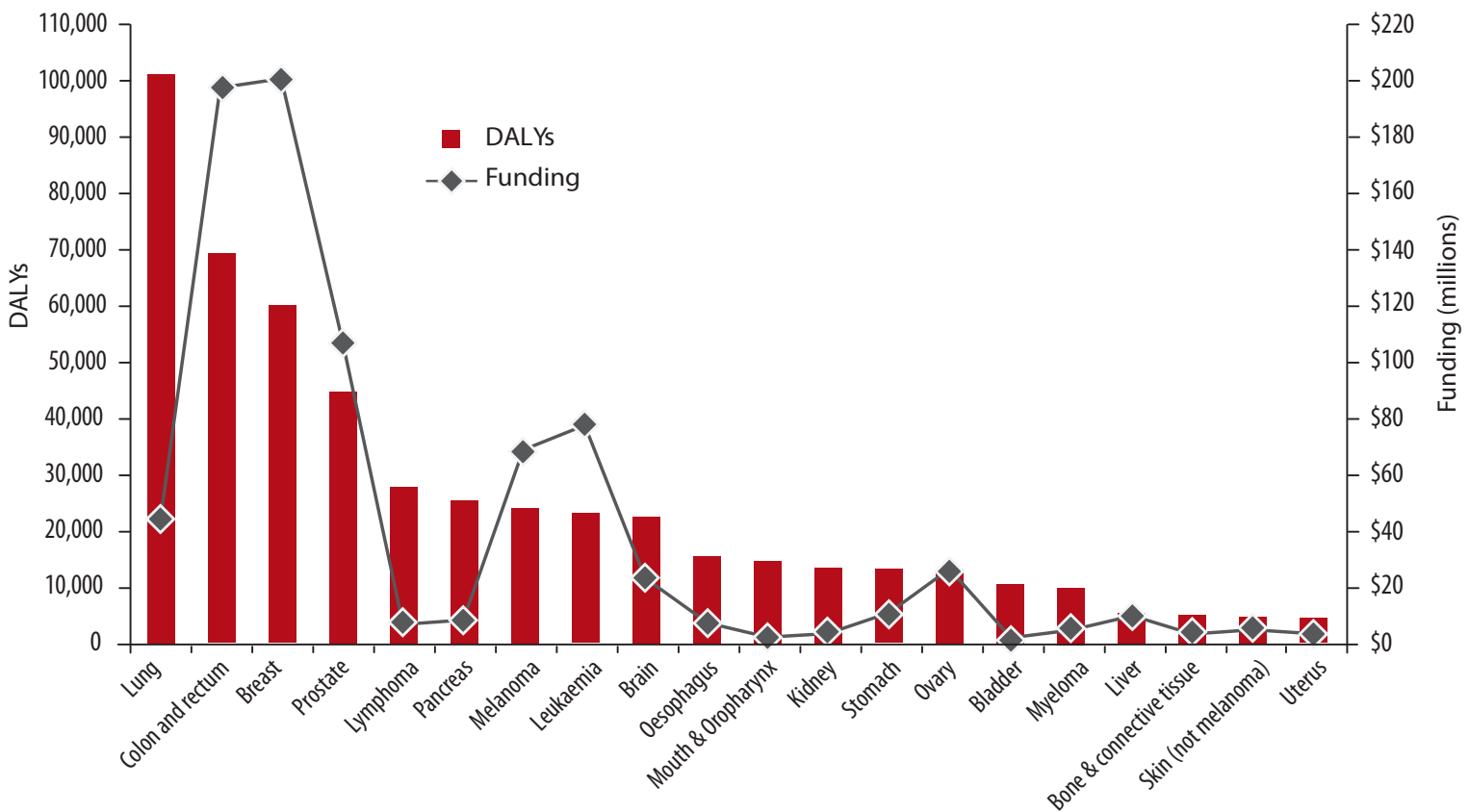


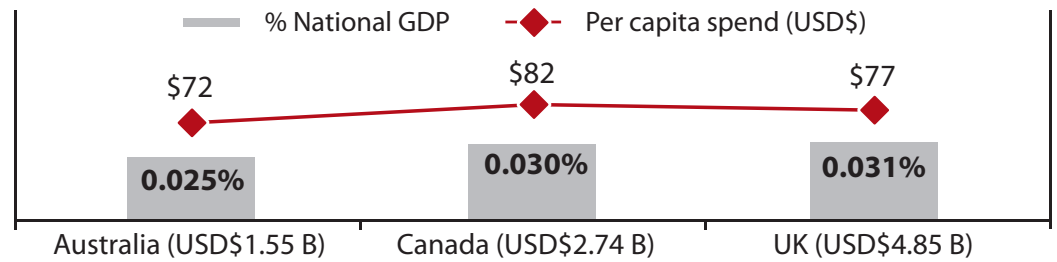
Figure 6. Funding to specific tumour types (2006-2011) vs burden of disease (DALYs; AIHW, 2012)

International comparisons

- ▶ Funding to cancer research per capita, and as a percentage of GDP, was similar in Australia, Canada and the UK (Fig 7).
- ▶ The national pattern of funding to cancer research categories in Australia was broadly similar to Canada and the UK (Fig 8).

As a proportion of national gross domestic product (GDP), and per person (per capita), funding to cancer research in Australia (\$1.77 billion; USD\$1.55 billion) was similar to Canada and the UK (Fig 7).

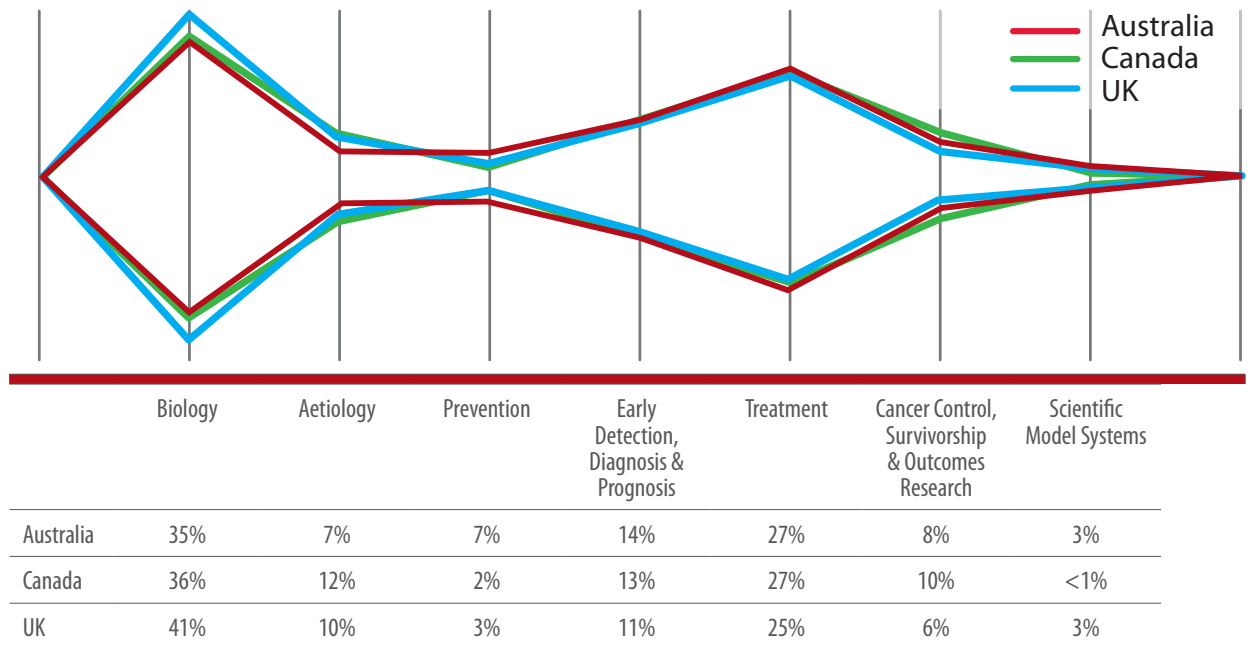
Figure 7. International comparisons of cancer research funding (2006-2011)



Proportional funding to CSO categories

Figure 8 depicts and lists the proportional funding provided to each of the CSO cancer research categories in Australia, Canada and the UK. The patterns of funding were similar for each country.

Figure 8. International comparisons of funding to CSO cancer research categories (2006-2011)



Optimising investment in cancer research

Considerations for the future

Collaboration

- ▶ A national approach which brings together funders to co-ordinate their career funding, could provide a sustainable model to support Fellowships across the career spectrum.
- ▶ Collaborative funding across sectors to support researchers working in Public Health, and Health Services Research, would build workforce capacity in these fields and deliver improved cancer outcomes and cost-effective cancer care.

Co-funding

- ▶ Initiatives which build cancer research capacity often require larger amounts of funding. Co-funding opportunities may allow funders to collectively support funding such grants and increase funding to large-scale initiatives.

Targeted research investment

- ▶ The provision of targeted funding in the areas of Cancer Control, Survivorship and Outcomes Research would expedite research in these fields improving care, quality of life, and outcomes.
- ▶ Many preventable risk factors for cancer are common to other chronic diseases such as cardiovascular disease and diabetes. Funding strategies to accelerate the conduct of Prevention research, could improve outcomes and reduce the burden of disease across a range of chronic disease areas including cancer.

National and international funding

- ▶ The similar level of cancer research funding, and the pattern across the CSO continuum in Australia, Canada and the United Kingdom identifies areas for potential international collaboration in the funding of cancer research.
- ▶ The lower proportional funding identified in common areas provides the opportunity for national funders to direct, cooperate and co-fund collaborative international research endeavours.

References

1. Cancer Australia 2014. Cancer Research in Australia: an overview of funding to cancer research projects and research programs in Australia 2006 to 2011. Surry Hills: Cancer Australia.
2. Cancer Australia 2015. Cancer Research in Australia: an overview of funding initiatives to support cancer research capacity in Australia 2006 to 2011, Surry Hills: Cancer Australia.
3. Australian Institute of Health and Welfare 2012. Cancer in Australia: an overview 2012. Cancer series No 74. Cat. no. CAN70. Canberra: AIHW.

To view the full report *Cancer Research in Australia: an overview of funding initiatives to support cancer research capacity in Australia 2006 to 2011* visit canceraustralia.gov.au

Cancer Australia

Cancer Australia was established by the Australian Government in 2006 to benefit all Australians who are diagnosed with cancer, their families and carers.

The Cancer Australia Act 2006 specifies a number of roles for Cancer Australia, including guiding scientific improvements to cancer prevention, treatment and care, and overseeing a dedicated budget for research into cancer.