



BRAIN CANCER

Australian Brain Cancer Mission

On 29 October 2017, the Minister for Health and Minister for Sport, the Hon Greg Hunt, announced a \$100 million Australian Brain Cancer Mission, which aims to double survival rates of people living with brain cancer and improve the quality of life for patients with brain cancer over the next 10 years, with the longer term aim of defeating brain cancer. It is a partnership between the Australian Government, philanthropists, researchers and clinicians, patients and their families. The Government is dollar matching every donation up to \$50 million to support the Mission through the Medical Research Future Fund (MRFF). Initial partners include the Minderoo Foundation's Eliminate Cancer Initiative and the Cure Brain Cancer Foundation.

Cancer is a disease of the cells, which are the body's basic building blocks. Brain cancer occurs when abnormal cells in the brain grow in an uncontrolled way. These abnormal cells can damage or invade the surrounding tissues, or spread to other parts of the body, causing further damage.

In 2014, 1,710 new cases of brain cancer were diagnosed in Australia.¹ In 2017, it is estimated that there will be 1,956 new cases of brain cancer.²

When compared to all other cancers in Australia, brain cancer is rare, equating to 1.4% of all cancers estimated to be diagnosed in 2017.³

The five-year relative survival rate for brain cancer is low, at around 22%. This rate has not improved for the past 30 years.

There are no known prevention measures for brain cancer and for some types of brain cancer, no effective treatments. It is widely recognised that the key to improvements in this area is investment in research.

The Government is committed to improving outcomes for people with brain cancer through ongoing investment in cancer control.

This investment includes funding for cancer research, and providing Australians with access to medical treatments through the Medicare Benefits Schedule and medicines through the Pharmaceutical Benefits Scheme (PBS).

From 2013 to 2016, about 2.5% of Government cancer research funding has been allocated for brain cancer research.

On 18 October 2017, the Australian Institute of Health and Welfare (AIHW) released a report that presents national data and statistics on brain and other central nervous system cancers in Australia. This report is available on the [AIHW website](#).

¹ Australian Institute of Health and Welfare (AIHW) 2017. Australian Cancer Incidence and Mortality (ACIM) books: Brain cancer. Canberra.

² AIHW 2017. Brain and other central nervous system cancers. Cat. no. CAN 106. Canberra.

³ AIHW 2017. Cancer in Australia 2017. Cancer series no.101.Cat. no. CAN 100. Canberra.

Australian Government investment in brain cancer research

The Government is the biggest single investor in cancer research in Australia. The majority of the Government's targeted research funding for cancer is provided through the National Health and Medical Research Council (NHMRC) and Cancer Australia. Significant new funding has been delivered in the 2017-18 Budget to help the fight against brain cancer. The Medical Research Future Fund (MRFF) also provides new opportunities for further work to address survival and quality of life for those with brain cancer.

NHMRC

From 2013 to 2016, the Government has provided over \$17 million in funding through the NHMRC to support brain cancer research.

Cancer Australia

From 2013-14 to 2016-17, \$2.8 million has been provided through the Priority-driven Collaborative Cancer Research Scheme (PdCCRS) for brain cancer research. Of this funding, \$1.8 million has been provided by the Government through Cancer Australia.

Medical Research Future Fund

In 2014, the Government announced the establishment of the \$20 billion MRFF to provide a sustainable source of funding for vital medical research over the medium to longer term.

Through the MRFF, the Government is delivering a major additional injection of funds into the health and medical research sector, including targeted cancer initiatives.

Research is ongoing to find new ways to diagnose and treat different types of brain cancer.

2017-18 Budget Measures

The Government has continued to build on its commitment to cancer control as demonstrated by first disbursements from the

MRFF and other investments announced in the 2017-18 Budget.

These investments include measures that may improve outcomes for brain cancer, including:

- \$68 million to support the establishment of a state of the art Proton Beam Therapy facility which can treat brain cancer. The facility, located in South Australia, will offer an alternative to conventional radiotherapy for certain types of cancer and provide a useful research tool for Australian scientists.
- \$5.8 million for several initiatives aimed at improving outcomes for children with cancer, through increasing Australia's research capacity to advance diagnosis, treatment, management, analysis, and improve data and awareness of childhood cancer, and fast tracking international research collaborations of paediatric brain cancer in Australia.
- \$13 million under the MRFF *Lifting Clinical Trials and Registry Capacity* to stimulate trial activity to improve patient outcomes, health system efficiency and drive innovation with a focus on rare cancers and rare diseases.
- \$5 million under the MRFF for clinical trial activity for adolescents and young adults with cancer.

These measures build on the Government's 2016 commitment of \$20 million for the ground breaking Zero Childhood Cancer Initiative.

Clinical trials

Clinical trials are research investigations that evaluate whether a medical strategy, treatment, drug or device is safe and effective for humans.

Clinical trials provide the evidence to inform best practice while providing participants with legitimate alternative therapy options and the opportunity to benefit from the latest medical research.

Current treatments

Cancer is not one disease; rather it is many diseases.

Treatment and care of people with cancer is usually provided by a team of health professionals – called a multidisciplinary team. The treatment depends on the stage of the disease, the severity of symptoms and the person's general health. Treatment may involve surgery to remove the affected area of the brain, and may also include radiotherapy and/or chemotherapy to destroy cancer cells.

Quite often, a cancer drug is initially approved for use in a limited range of cancers only. Subsequent research and clinical trials may result in the drug being used in other ways. Given the innovative, intensive research that leads to improved survival and outcomes, cancer medicines are among the most expensive medicines available.

There are currently two drugs on the PBS specifically listed for the treatment of glioblastoma multiforme (a malignant tumour affecting the brain) - Carmustine (Gliadel®) and Temozolomide (numerous brands including Astromide®, Temodal® and APO-Temozolomide®). Over the 2016-17 financial year, the Australian Government provided patients with more than \$4.2 million in PBS subsidies to enable affordable access to these drugs.

A number of other PBS listed chemotherapy drugs, including carboplatin, cisplatin and vincristine are also used in the treatment of brain cancer.

AIM BRAIN – a new clinical trial for children with brain cancer

The *Access to Innovative Molecular profiling for BRAIN cancers* (AIM BRAIN) trial will deliver technology to benefit children with brain cancer in Australia and could transform paediatric brain cancer outcomes.

In August 2017, the Minister for Health, the Hon Greg Hunt, announced the AIM BRAIN trial.

Establishing AIM BRAIN in Australia will build expertise and establish technology in Australia to enable diagnostic molecular profiling of children with brain cancer.

Molecular profiling provides a more sophisticated and accurate understanding of cancer including the characteristics of brain cancer subtypes, mechanisms which may drive tumour growth and reasons for variations in drug responsiveness.

This clinical trial will refine the diagnosis of the tumour and ensure treatment is tailored for the best possible outcome for each child's brain cancer.

The international collaborative trial, which is co-funded by the Federal Government (through Cancer Australia) and the Robert Connor Dawes Foundation has been fast-tracked to commence recruitment of eligible children in Australia. Recruitment is now open in Victoria and will be rolled out nationally in early 2018.

Mechanisms to fund research in low incidence and low survival diseases such as brain cancer.

NHMRC

NHMRC will accept grant applications in any research discipline and applicants are provided with an opportunity within their application to explain how their research will lead to improved outcomes in health. Further information on the grant schemes is available on the [NHMRC website](#).

NHMRC's range of funding schemes offers flexibility and responsiveness for targeting research and capacity building in key areas of need in the health system.

For example, NHMRC partners with philanthropists, governments, and non-government organisations to fund research in targeted areas.

NHMRC also sets aside funding each year to address identified priorities, such as through its Targeted Calls for Research (TCR) funding program, which invites grant applications to address a specific health issue.

NHMRC has created an online pathway for community and professional groups to propose ideas for health research topics, which NHMRC may develop into a TCR. The TCR portal can be accessed through the [NHMRC website](#).

Cancer Australia

Cancer Australia's PdCCRS draws on non government sector research funding to boost investment in priority areas, and is a successful model of how priorities and gaps in cancer research can be identified and collaboratively funded using a merit-based and competitive selection process. More information about the PdCCRS can be accessed through the [Cancer Australia website](#).

Medical Research Future Fund

The Government's MRFF has begun expanding the pool of research funds available into the future.

- MRFF investments will be strategic and priority-driven consistent with the advice provided by the Australian Medical Research and Innovation Strategy 2016-2021 and related Priorities 2016-2018 established by the Australian Medical Research Advisory Board.
- First disbursements from the MRFF were announced in the 2017-18 Budget totalling \$65.9 million.

More information about the MRFF can be accessed through the [Department of Health website](#).

For more information and support:

NHMRC:

w: www.nhmrc.gov.au

p: 1800 500 983

e: help@nhmrc.gov.au

Cancer Australia:

w: www.canceraustralia.gov.au

p: 1800 624 973

Department of Health (MRFF)

w: www.health.gov.au/mrff

p: 1800 020 103