

ANZCHOG

Australian and New Zealand
Children's Haematology/Oncology Group

**National Patient and Carer Advisory Group
Australian and New Zealand
Children's Haematology/ Oncology Group**

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Committee Secretary
Select Committee into Funding for Research into Cancers with Low Survival Rates
Department of the Senate
PO Box 6100
Canberra ACT 2600

Dear Sir/Madam

Re: Senate Inquiry into funding for research into cancers with low survival rates.

Thank you for the opportunity to make a submission to this Inquiry. We are members of the National Patient and Carer Advisory Group for the Australian and New Zealand Children's Haematology/Oncology Group (ANZCHOG). ANZCHOG is the peak professional body representing paediatric oncology and other healthcare professionals who care for children with cancer. We provide advice to ANZCHOG members from a patient and parent perspective, and are actively involved in the development of a range of research projects.

We feel that funding for research into childhood cancer – in particular clinical trials – desperately needs to be improved. Childhood cancer is a collection of rare and ultra-rare cancers and this creates unique challenges for funding essential clinical trial research. We welcome the opportunity to present our views in the attached submission.

Yours sincerely
Laurence Hibbert
Anne Kay
Alison Elgar
Maria Messina
Carolyn Blakemore

National Patient and Carer Advisory Group

The Australian and New Zealand Children's Haematology and Oncology Group (ANZCHOG) is the peak professional body representing paediatric oncologists and other healthcare professionals who care for children with cancer in Australia and New Zealand. In 2012, ANZCHOG created a subgroup, the National Patient and Carer Advisory Group (NPCAG). NPCAG was created to ensure childhood cancer clinical trials, research projects and grant applications incorporate a consumer perspective. This is recognised as best practice. Our membership consists of parents of children who have, and have not, survived a diagnosis of cancer.

Our submission concerns, amongst other things, the funding of paediatric participation in research into the treatment of childhood cancer, ie clinical trials. We strongly believe that such participation should be federally funded and supported regardless of whether the sponsors of such trials are based in Australia or overseas.

NPCAG passionately hopes that this Senate Committee will acknowledge that every Australian child with cancer, regardless of location, should have equal access to the best available cancer treatment including when that treatment is only available through a clinical trial.

"Curing childhood cancer is the equivalent of curing breast cancer in terms of productive life years saved".¹

A Parent's Story

Few parents ever have to consider organising the funeral of their young child. For parents of a child diagnosed with cancer, such considerations are thrust upon them. We emphasise to this enquiry that for us, as parents, the matters that are being considered by it are not about promoting Australian research capability or opportunities for Australian institutions to compete on the world stage, but about the survival of our children.

One of our members has had to face just this reality - arranging the funeral of her 11 year old daughter who died from a childhood cancer. For our other members, relapse is the most haunting of words and one which strikes the most fundamental of fears in our hearts - again having to face the possibility of losing our child before adulthood. Participation in childhood cancer clinical trials reduces the likelihood of relapse and treatment-associated toxicities, and enables the provision of access to

¹ Dr. Eugenie Kleinerman, The University of Texas MD Anderson Cancer Center, <http://curechildhoodcancer.ning.com/forum/topics/updated-lies-damned-lies-and> accessed 26/2/17

new agents that target the molecular and genetic aberrations driving each individual cancer.

Parents like us become very knowledgeable about childhood cancers and most would know of diagnoses with invariably tragic consequences. Maria and Tony were faced with this when in 2009, Emelia, aged 3, was diagnosed with cancer.

In those seconds, our life changed forever. The Oncologist said Emelia had cancer, something called Acute Promyelocytic Leukaemia (APML). APML is extremely rare in children and usually it's an adult's cancer. We were offered a place in the adult clinical trials organisation, the Australian Leukaemia and Lymphoma Group's (ALLG) clinical trial (APML4) that the Cancer Centre for Children in the Children's Hospital at Westmead had already signed up for. It involved As₂O₃ (arsenic trioxide).

Every aspect of Emelia's treatment and response was meticulously documented by the team at Westmead and reported back to ALLG. As₂O₃ was not available other than through this clinical trial and because of the success of this and other clinical trials is now recognised as the best treatment for this rare cancer.

Emelia hasn't escaped the side effects of the chemotherapy and we carefully monitor her health but she is a lively 11 year old who, like us, just loves life. If we hadn't had the opportunity to be on that clinical trial then, we firmly believe she would not be with us today.

Our children's lives depend upon access to clinical trials. Tony and I ask the Committee to support the NPCAG's recommendations.

Childhood cancer statistics in Australia

On average, about 710 children aged 0-14 years old were diagnosed with cancer each year in Australia between 2009 and 2013. Cancer's effects are devastating and, during that period, on average, cancer caused approximately 100 deaths per year in children under the age of 15. Tumours of the central nervous system (mainly brain tumours) account for the largest number of cancer deaths for children in Australia (40%), followed by leukaemia (23%) and neuroblastoma (12%). Almost half (48%) of all children diagnosed with cancer in Australia were aged 0-4 years old at diagnosis, with a median age of 5.² For each Australian child who dies due to cancer,

²Viertel Cancer Research Centre, Summary of Childhood Cancer Statistics in Australia 1983-2013
https://cancerqld.blob.core.windows.net/site/content/uploads/2016/11/160067_Summary-of-childhood-statistics_FA.pdf accessed 1/3/17

that death represents nearly 70 years of life lost from normal expectancy.³ This is a priceless loss to family and wider society.

Cancer in children and adolescents is rare and biologically very different from cancer in adults.⁴ As research uncovers the unique and myriad genetic variations of each childhood cancer, the rarity of childhood cancer may soon become universal. Despite the improvements in treatments, further improvement must entail new biology-driven approaches since optimisation of conventional treatments has in many cases reached its limits. In many instances, such approaches can only be achieved through international collaborative research since rare cancers are being subdivided into increasingly smaller subgroups on the basis of their molecular characteristics.⁵

In 2016, approximately 130,500 Australians were diagnosed with cancer.⁶ Less than 1000 of these diagnoses were in children. These childhood cancers are diverse in nature and those that occur most often in children are different from those seen in adults. The most common cancers of children are⁷:

Leukaemia	30%
Brain and spinal cord tumours	26%
Neuroblastoma	6%
Wilms tumours	5%
Lymphoma (including both Hodgkin and non-Hodgkin)	5%
Rhabdomyosarcoma	3%
Bone cancer including osteosarcoma and Ewing sarcoma	3%
Retinoblastoma	2%

Other types of cancers are rare in children but they do happen. In very rare cases, children may even develop cancers that are much more common in adults.

Cancer statistics in children are reported in an alternative format to that of adults. For example, we note that the Cancer Institute of NSW publishes statistics covering the annual diagnoses of some 28 adult cancers but only a single entry for 'childhood

³ http://www98.griffith.edu.au/dspace/bitstream/handle/10072/52076/85563_1.pdf accessed 26/2/17

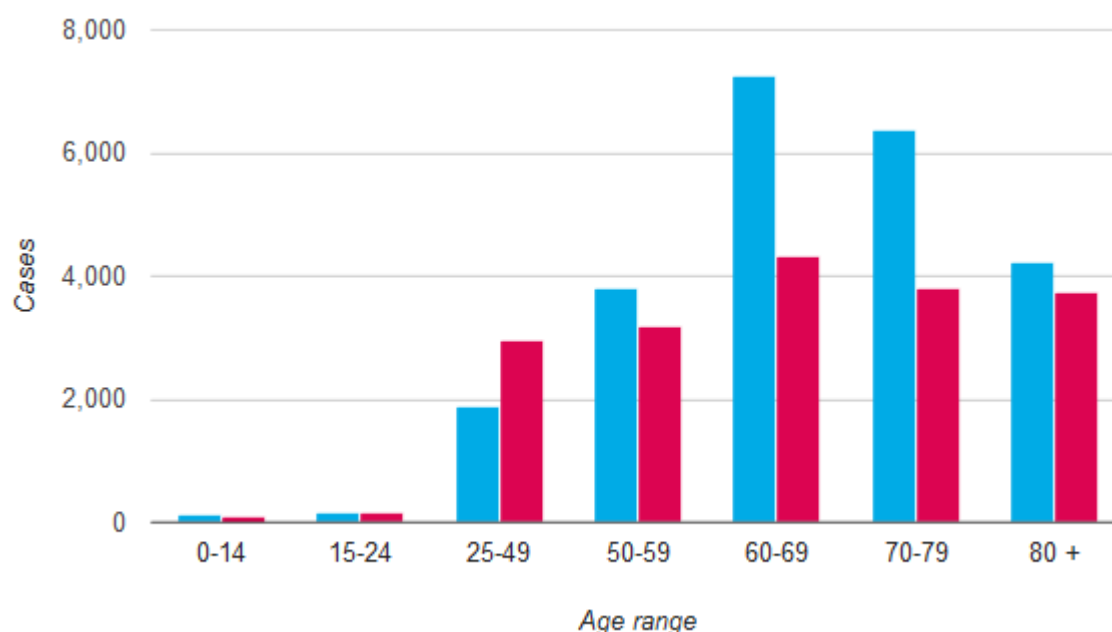
⁴ Pritchard-Jones K, Pieters R, Reaman GH et al. Sustaining innovation an improvement in the treatment of childhood cancers: lessons from high income countries. *Lancet Oncol* 2013;14: e95-103

⁵ Pritchard-Jones K, Pieters R, Reaman GH et al. Sustaining innovation an improvement in the treatment of childhood cancers: lessons from high income countries. *Lancet Oncol* 2013;14: e95-103

⁶ Australian Institute of Health and Welfare 2012. Cancer incidence projections: Australia, 2011 to 2020. Cancer Series no. 66. Cat. No. CAN 62. Canberra: AIHW sourced from <https://childrenscancer.canceraustralia.gov.au/about-childrens-cancer/statistics> accessed 24/2/17

⁷ <https://www.cancer.org/cancer/cancer-in-children/types-of-childhood-cancers.html> accessed 19/02/2017

cancers'. The rarity of cancer in children in NSW for 2012 is shown in this table of all cancer cases by age group:⁸



All childhood cancers, not just brain cancers, can therefore be considered 'cancers with relatively lower rates of incidence' and eligible to be considered by this enquiry.

The clinical treatment of childhood cancer in Australia⁹

Survival rates have increased from less than 30% in the 1960s to 80% in the 2000s for all childhood cancers combined.¹⁰ For Acute Lymphoblastic Leukaemia, the most common form of childhood cancer, the cure rate now approaches 90%. This success is primarily due to the extremely high participation rates of children in clinical trials. Despite this incredible improvement, childhood cancer remains the leading cause of non-accidental death in children in Australia and many subtypes of cancer, particularly brain cancer, continue to have a very poor prognosis.

The treatment of children with cancer is unique in the way that clinical research is seamlessly integrated with clinical care. Enrolment on a clinical trial whenever possible has become accepted as standard care and no other field has a higher degree of participation from patients in clinical research. In Australia, survival rates for children with cancer have been as good as anywhere in the world, in no small

⁸ <https://www.cancerinstitute.org.au/understanding-cancer/cancer-in-nsw/all-cancers-nsw-data> accessed 19/02/17

⁹ A summary of sections of the ANZCHOG submission to the Senate Inquiry into the availability of new, innovative and specialist cancer drugs in Australia, 26 February 2015

¹⁰ Pritchard-Jones K, Pieters R, Reaman GH et al. Sustaining innovation an improvement in the treatment of childhood cancers: lessons from high income countries. *Lancet Oncol* 2013;14: e95-103

part due to Australia's commitment to participating in international collaborative group clinical trials. The best way forward for children with cancer in Australia is continued participation in clinical trials of new agents as early as possible in their development.

However, there is a lack of sustainable funding for Australian centres treating children with cancer to conduct this vital clinical research despite clear evidence that it results in improved survival.

The role of Clinical Trials in Childhood Cancer treatment

As previously stated, a significant contributing factor to the high cure rate of childhood cancer is the seamless integration of clinical trials into clinical care. Most of the gains in childhood cancer survival have occurred as a direct result of improvements in treatment that have proven to be effective by international collaborative clinical trials.¹¹

Since childhood cancers have very low rates of incidence and some occur extremely rarely, hospitals cannot accurately predict their rate of occurrence but still have to plan for such events. For the rarest cancers, in order to have the option of access to the latest treatments, hospitals have to open clinical trial protocols prior to a patient presenting. That process is expensive and contributes to the high cost of running clinical trials for childhood cancer.

The small numbers of cases of childhood cancer in Australia means that international collaboration is essential for our patients to participate in clinical trials. In both the US and Europe, there is a numerically far larger pool of patients which enables the creation of clinical trials to continuously improve existing treatments and investigate novel ones. Unlike the adult cancer world, the majority of clinical trials are not initiated by pharmaceutical companies but by cooperative groups such as the US based Children's Oncology Group and European based Consortium for Innovative Therapies for Children with Cancer. These groups work to continuously improve the rate of survival and the quality of survivorship for children with cancer. Both groups are majority funded by US and European governments. The importance of the opportunity for Australian children to participate in these internationally run clinical trials cannot be overstated. It is their route to a chance of survival.

The high overall survival rate using current treatment regimens presents challenges for future trial design i.e. to secure further incremental increases in survival or to show survival equivalence from targeted agents that might have reduced side-effects. Small subgroups of children with cancers defined by molecular signatures

¹¹ Viertel Cancer Research Centre, Summary of Childhood Cancer Statistics in Australia 1983-2013 https://cancerqld.blob.core.windows.net/site/content/uploads/2016/11/160067_Summary-of-childhood-statistics_FA.pdf accessed 1/3/17

mean that international recruitment (such as Australian children) into these European and US created clinical trials is essential to do trials in a reasonable timeframe.¹² Thus, Australian participation in many cases is welcomed given the ability of Australian clinicians and hospitals to meet the strict participation requirements of a clinical trial.

However, enrolling in, and compliance with, these international trials is both time consuming and extremely expensive for oncology units. Such costs are not met by the normal oncology unit operating budget of the public hospital in which it operates. Hence oncology units are often largely dependent upon philanthropic and charitable donations to meet these costs and thus unable to open all trials that they would like to.

If there is only limited funding available then Australian children are denied the opportunity to participate in potentially life saving clinical trials.

The vast majority of cancer clinical trials for adults are funded through industry or competitive research grants. The funding for paediatric cancer trials is very different.

- Childhood cancers are made up of rare and ultra-rare diseases. There is little economic incentive for pharmaceutical companies to fund paediatric cancer trials.
- The low incidence of any given type of childhood cancer impacts on the competitiveness of grant applications. It is very hard to compete with the impact of many of the common adult cancers. In addition, the lengthy recruitment time required to achieve sufficient numbers is usually longer than the funding period of most research schemes.
- As outlined above, participating in trials developed by international trial groups is more likely to achieve recruitment numbers in reasonable timeframes. However funding these trials is difficult – the trial is usually developed by international investigators, thus not eligible for many Australian competitive funding schemes. In addition, the complex bureaucratic and regulatory barriers means that Australian sites are not always invited to participate.

Currently paediatric centres rely heavily on philanthropy, charities and individual hospital budgets to fund most cancer clinical trials.

¹² Pritchard-Jones K, Dixon-Woods M et al, Improving recruitment to clinical trials for cancer in childhood; Lancet Oncol 2008:volume 9; No 4; p392-399

The recommendations of ANZCHOG's Parent Advisory Group

Recommendation 1: A federal government commitment to centrally fund the infrastructure required to undertake paediatric cancer clinical trials, domestic or international, to increase access and availability of clinical trials to Australian children with cancer.

In December 1990, Australia ratified the UN Convention on the Rights of the Child (CRC). Amongst other important articles in the Convention, NPCAG emphasises the following articles¹³:

Article 6

1. States Parties recognize that every child has the inherent right to life.
2. States Parties shall ensure to the maximum extent possible the survival and development of the child.

Article 24

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
 - (a) To diminish infant and child mortality;
 - (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;.....and
4. States Parties undertake to promote and encourage international co-operation with a view to achieving progressively the full realization of the right recognized in the present article. In this regard, particular account shall be taken of the needs of developing countries.

There is precedent in Australia for amending legislation to meet its obligations under the CRC. In June 2012, substantial amendments to Part VII of the *Family Law Act 1975* came into effect including s60B:

¹³ <https://www.humanrights.gov.au/convention-rights-child> accessed 21/02/2017

(4) An additional object of this Part is to give effect to the Convention on the Rights of the Child done at New York on 20 November 1989.

NPCAG believes that the federal government has an obligation to commit funding to support the participation of children with cancer in an appropriate clinical trial whether it be international or domestic.

Recommendation 2: Strengthen the capacity of ANZCHOG

We believe an effective way for the Federal Government to achieve Recommendation 1 is to provide additional funding to ANZCHOG, through a on-going funding commitment, dedicated to off-set the expenses relating to the participation in domestic and international trials.

ANZCHOG is the body representing all healthcare professionals working with children with cancer in Australia and New Zealand. Children with cancer in Australia are treated in one of eight paediatric oncology centres. ANZCHOG is funded by federal government (through Cancer Australia) to develop new clinical trial protocols and has established strong research networks domestically and with international trial consortia. While the strict funding guidelines do not allow ANZCHOG to utilise the Cancer Australia funding to support the actual conduct of trials, ANZCHOG has a small amount of discretionary funding and has successfully sponsored and managed a number of national and domestic clinical trials. However this is not sustainable, and the majority of the costs relating to running trials continue to fall back on each individual oncology unit.

We recommend that the federal government provide ANZCHOG with dedicated funds to support the infrastructure to enhance access to paediatric cancer clinical trials in Australia. This funding would enable ANZCHOG to provide centralised, national oversight and directly assist with the costs of conducting trials at each centre.

Recommendation 3: Travel and Accommodation Funding for Clinical Trial Participation

Where a trial is only available interstate, participation requires funding for interstate travel and accommodation. This is a huge financial burden for interstate patients. Currently, no such funding exists.

Conclusion

In 1966, Martin Luther King said:

*“Of all the forms of inequality, injustice in healthcare is the most shocking and inhumane”.*¹⁴

NPCAG recognises the importance of Australian based research in oncology treatment. As parents of children who have had cancer, we strongly support all research in this field. We strongly urge you to consider the importance of participating in both domestic and international trials and the barriers that hinder our involvement in these trials. Participation in these clinical trials means that Australian children will have the earliest possible opportunity to receive state-of-art treatment for their cancer. We believe it is their right to participate in these clinical trials.

We passionately hope that this Senate Committee will acknowledge that all Australian children with cancer deserve to have access to the best available cancer treatment, which is frequently through a clinical trial. Such access should not be prevented solely because of a lack of funding by the relevant state or national authority.

¹⁴ Martin Luther King, Jr. – Second National Convention of the Medical Committee for Human Rights – Chicago, March 25, 1966