

# Facts about DIPG

## CHILDHOOD BRAIN CANCER

Brain and spinal cord tumours are the second most frequently diagnosed cancers in children. Although not as common as leukaemias, brain cancers are responsible for more deaths in children than any other disease. Remarkably, only three treatment options are currently available for high-grade gliomas, which are devastating brain cancers responsible for more than 50% of all childhood brain cancer deaths<sup>1</sup>.



## WHAT IS DIPG?

DIPG, or diffuse intrinsic pontine glioma, is a type of high-grade glioma diagnosed in the brainstem of children, adolescence and young adults. The brainstem is critical for controlling life sustaining actions such as breathing, heartrate, seeing, hearing, movement, speaking and swallowing. Hence, high-grade gliomas diagnosed in the brainstem have rapidly fatal consequences.

- › **Diffuse** – means that the tumour is not well-contained and it grows out into other tissue so that cancer cells mix with healthy cells.
- › **Intrinsic** – means “in”, referring to the point or origin.
- › **Pontine** – indicates that the tumour is found in a part of the brainstem called the pons, which is the area responsible for a number of important bodily functions, like breathing, sleeping, bladder control, and balance.
- › **Glioma** – is a general term for tumours originating from glial cells, which are found throughout the brain. They make up the white matter of the brain that surrounds and supports the neurons.



**BRAIN CANCER KILLS  
MORE AUSTRALIAN  
KIDS THAN ANY OTHER  
DISEASE**

**1/5**

**of these deaths  
are due to DIPG**

## HOW COMMON IS DIPG?

Around 10% to 15% of all childhood brain tumours are DIPG or brainstem gliomas. They are most common in children between the ages of 6 and 7 years, but can occur at any age in childhood. Tragically, fewer than 10% of children survive two years from diagnosis.

## CAUSES

It is unknown what causes DIPG – there are no known associations of DIPG with any environmental or infectious agents. Most researchers who study DIPG believe these brain tumours, similar to other tumours affecting children, arise when something goes wrong with the process of cell reproduction.

1. References: Findlay 2022, *Oncogene*; Duchatel 2019, *Proteomics*.

## COMMON SYMPTOMS

Due to the fast growth of these tumours, symptoms usually develop rapidly in the majority of patients. The most common symptoms include:

- › Problems with balance and walking
- › Problems with the eyes (including double vision, drooping eyelids, uncontrolled eye movements, blurred vision)
- › Slurred speech
- › Difficulty chewing and swallowing
- › Nausea and vomiting
- › Morning headache or headache that gets better after the child vomits
- › Facial weakness or drooping/palsy of a child's face

## CURRENT TREATMENT OPTIONS

Radiation therapy is the standard treatment for children with DIPG. However, radiation only provides a temporary benefit in most patients.

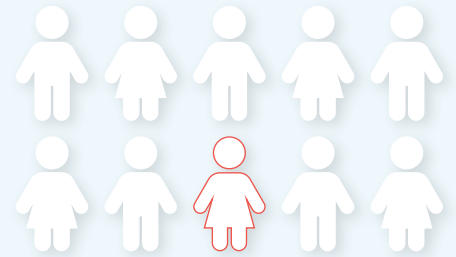
No chemotherapy drugs to date are known to have an impact on survival, and surgery is rarely used because of the risks involved in surgery in this area of the brain.

## MORE INFORMATION

For further information about DIPG, please visit <https://dipg.org>

MEDIAN SURVIVAL  
FOR KIDS WITH  
DIPG IS JUST

**9-12**  
months



FEWER THAN

**10%**

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ASSOCIATIONS OF DIPG  
WITH ANY ENVIRONMENTAL  
OR INFECTIOUS AGENTS**



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