

BRAIN – a study to find out why some patients with leukaemia have long-term problems with learning and memory



Project title: BRAIN Biomarkers to Reform Approaches to Therapy-Induced Neurotoxicity - An ALLTogether1 sub-study

Lead researcher: Professor Chris Halsey, University of Glasgow

Project Stage: Starting soon (January 2025)

Funded by: Funded by CCLG and CCLG Special Named Funds including The Riley Cameron Forget Me Not Fund, The Toti Worboys Fund, Fred Bennett's 'Don't Look Down' Fund, Arabella's Leukaemia (ALL) Research Fund

ABOUT THE PROJECT

To cure acute lymphoblastic leukaemia (ALL), doctors need to kill the leukaemia cells that hide in the fluid around the brain - the cerebrospinal fluid (CSF). This means 11-18 chemotherapy injections into the CSF via spinal tap under sedation or anaesthetic. This treatment can cause damage to the brain, leading to problems with learning, memory, and attention span. This affects around a third of patients and is sometimes known as 'chemo-brain'. Doctors do not know why some patients get chemo-brain and others don't.

In this project, Professor Chris Halsey hopes to learn more about the brain-related side effects of treatment in children and young people with ALL. Based at the University of Glasgow, she will be working with the ALLTogether1 clinical trial for children and young people with ALL.

Professor Halsey's team aims to find out which patients are at risk of chemo-brain and why. They will collect data about the side effects patients have during treatment, including questionnaires for patients and families about the impact, and test brain function during and after treatment. The researchers will compare the results according to patients' age, gender, leukaemia type, genetics and treatments.

The team will use this data to:

1. Identify children, teenagers, and young adults at risk of brain-related side effects.
2. Better understand what causes brain-related side effects.
3. Plan new trials to prevent or reduce these side effects.

The results will boost understanding of how to reduce the brain-related side effects of chemotherapy. Professor Halsey hopes that this will ultimately improve the quality of survival for patients with ALL.



Arabella's
Leukaemia (ALL) Research Fund



This project was funded by Special Named Funds at Children's Cancer and Leukaemia Group raising funds for research into leukaemia.



the EXPERTS
in CHILDHOOD
CANCER

© CCLG 2024

Children's Cancer and Leukaemia Group
Century House, 24 De Montfort Street, Leicester LE1 7GB
Registered charity in England and Wales (1182637)
and Scotland (SC049948).

0333 050 7654

info@cclg.org.uk

www.cclg.org.uk

ChildrensCLG

CCLG_UK

CCLG_UK