

International Childhood Cancer Cohort Consortium

I4C

Welcome to the second newsletter from the I4C International Data Coordinating Centre (IDCC). This newsletter provides I4C members and stakeholders with an update on progress and latest news

Data Pooling Reaches New Heights

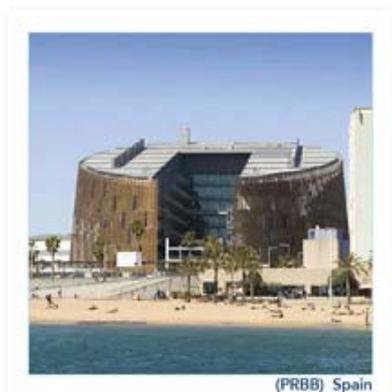
Since the first newsletter in December 2010, The IDCC has received data on an additional 150,408 live births from two I4C cohorts to add to the existing pool of data.

This brings the current total to 175,077 live births available for pooling, as we head towards the proposed goal of 1,000,000 mothers and babies. I4C cohort data received at the IDCC in live births:

- Avon Longitudinal Study of Parents and Children (ALSPAC): 14,062
- Collaborative Perinatal Project (CPP): 58,000
- Jerusalem Perinatal Study (JPS): 92,408
- Tasmanian Infant Health Survey (TIHS): 10,628

A pooled data set of common variables is being developed for the four cohorts.

Fourth International Childhood Cancer Cohort Consortium I4C workshop

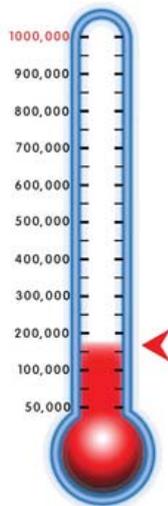


The next I4C workshop is fast approaching, with the fourth workshop taking place on September 19-20, 2011 at the Parc de Recerca Biomèdica de Barcelona (PRBB) Dr. Aiguader 88, E-08003, Barcelona, Spain.

The workshop will follow the annual conference of the International Society for Environmental Epidemiology, also in Barcelona.

Topics for discussion at the 2011 workshop are:

- Harmonization of data from cohorts;
- Updates from the Epigenetics working group and Environmental working groups on birth weight and



Update on the I4C Birth Weight Working Group (BWWG)

The BWWG is being led by Ora Paltiel from the Jerusalem Perinatal Study (Israel) in collaboration with Manolis Kogevinas from the Centre for Research in Environmental Epidemiology (CREAL, Spain) and Terry Dwyer from the Murdoch Childrens Research Institute (MCRI, Australia).

Purpose

The aim is to investigate the association between childhood cancer, and in particular leukemia, with specific attention to determinants of BW such as maternal obesity, weight gain in pregnancy, pregnancy complications, foetal growth and gestational age using prospectively collected pooled data.

Maternal BMI is one determinant of BW. Thus, the ongoing obesity epidemic raises the possibility of an association between maternal BMI or excess weight gain during pregnancy and foetal macrosomia and its subsequent effect on childhood cancer incidence. This issue has not been previously investigated. The temporal and geographical diversity of cohorts participating in the I4C will allow the analysis of secular trends in the BW- cancer association as well as geographic/ethnic variations in this relation.

Progress

This proposal was recently approved by the Steering Committee. Initially, this work will involve data that is currently available on 175,000 mothers and babies with data from other cohorts as it is received. Preliminary results are expected by late 2012-early 2013.

Questions

If you have any questions or are interested in discussing this proposal please contact Ora Paltiel from the Jerusalem Perinatal Study on ora@vms.huji.ac.il

Update on the I4C Parental Pesticide Exposure and Childhood Cancers Working Group (PWG)

The PWG is being led by Joachim Schüz (IARC, Lyon)

Purpose

The causes of childhood cancers are to a large extent unknown, and very few modifiable risk factors have been identified. However, in the last decade many case-control studies have reported associations between pesticide use and increased risk of childhood cancer; but these findings remain controversial. The major reason for this is that although case-control studies do with some consistency show moderate risk increases, especially for leukaemia, cohort studies show weaker associations. The I4C offers a unique opportunity to analyse more detailed exposure data collected in a very large dataset and in a prospective setting.

The International Agency for Research on Cancer (IARC), the

- parental occupational exposure;
- Reports from new cohorts and progress from foundation cohorts;
- Biospecimens - what has been collected and what is available;
- Use of blood spots in research.

You should have received a save the date. If you haven't please contact Gabriella Tikellis (gabriella.tikellis@mcri.edu.au). A website with further information and registration options is currently being developed.

French Institute for Medical and Health Research (INSERM), the Murdoch Childrens Research Institute (MCRI) in Australia, the National Cancer Institute (NCI) in the US, and the Center for Research in Environmental Epidemiology (CREAL) in Spain are working together to conduct a study under the I4C umbrella to investigate if parental occupations relating to different types of farming and parental use of pesticides are associated with an increased risk of childhood cancer in their offspring. This will involve the development of an automatic conversion table from national classification systems for job classifications to one international classification (ISCO-68, ISIC-rev2).



Update on the I4C Genetics/Epigenetics Working Group (G/EWG)

The G/EWG is being led by Zdenko Herceg (IARC, Lyon) and Hector Hernandez (IARC, Lyon).

Purpose

The G/EWG has been created to design a consensus strategy to investigate mechanisms of cancer within the I4C cohorts. The product of this collaboration is a document with a specific study proposal. This proposal explores the hypothesis that epigenetic deregulation in response to environmental cues during intrauterine life primes a subpopulation of cells for the development of childhood cancer, and this is reflected in epigenetic differences that can be detectable in offspring at birth.

The proposal has four main goals:

- To optimize the methodologies for epigenomic screening in samples obtained at birth.
- To understand the potential impact of environmental exposure during pregnancy on the epigenome.
- To correlate the presence of a known factor linked to childhood cancer (i.e. high birth weight) with epigenomic profiling at birth.
- To define an epigenetic signature able to indicate both, exposure to carcinogenic cues during early life, and future risk of cancer development.

This proposal represents a proof-of-principle study to detect the epigenetic changes induced by a risk factor during pregnancy and its link to cancer development. In the first instance, the risk factor in question will be birth weight, which will be examined through the use of both blood spots and cord blood samples obtained from a number of I4C cohorts.

Progress

This proposal has been approved by the I4C Steering Committee. I4C cohorts will be invited to take part in the study by providing linked cancer data and biological samples. Preliminary results based on this proposal are expected by 2012-13.

Questions

If you have any questions or are interested in discussing this project please contact Zdenko Herceg (herceg@iarc.fr) or Hector Hernandez (vargash@iarc.fr)

The proposal aims to pool prospectively collected data from a number of I4C cohorts with detailed parental occupation and pesticide data.



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Progress

The project was presented to and approved by the I4C Steering Committee at the June 6, 2011 meeting. The study group has subsequently defined the environmental data required, and is preparing to issue invitations to potentially eligible cohorts. The proposal has been submitted to the French ANSES for funding and has been successful in the first stage of the process.

Questions

If you have any questions or are interested in discussing this project, please contact Joachim Schüz (schuzj@iarc.fr)

New Research Initiatives

Do you have a research question that you would like to pursue through the I4C? Why not join a genetic or environmental working group at the workshop in September 2011?

Approval for new research questions is provided by the I4C Steering Committee which includes representatives of the participating cohorts. Submissions can be made by complete the Concept Proposal Form form located in the appendix on page 18 of the [I4C Policy and Procedures Manual](#) and email it to a Steering Committee member.

If you wish to have preliminary discussions about a new initiative please contact Terry Dwyer Chair of the Steering Committee on terry.dwyer@mcri.edu.au.

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