Clinical and molecular characterization of childhood cancer susceptibility syndromes

Published: 18-06-2007
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To identify novel childhood cancer-predisposing genes in children.

Ethical review	Approved WMO
Status	Pending
Health condition type	Miscellaneous and site unspecified neoplasms benign
Study type	Observational non invasive

Summary

ID

NL-OMON30743

Source
ToetsingOnline

Brief title
Genetics of childhood cancer

Condition

- Miscellaneous and site unspecified neoplasms benign

Synonym
childhood cancer, paediatric malignancies

Research involving
Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: ZONMW AGIKO subsidie

Intervention

Keyword: childhood cancer, hereditary, syndrome

Outcome measures

Primary outcome

Putative novel childhood malignancy predisposing genes.

Secondary outcome

Knowledge, experience and guidelines for the recognition and counseling of the

hereditary character of childhood malignancy.

Study description

Background summary

At present, the etiology of most childhood malignancies is unknown. Based on an overall increase in the Standard Incidence Ratio (SIR; 1.1-1.8) of first-degree relatives in the population of children with malignancies, a certain degree of genetic predisposition is anticipated.
Recently it was established that 8% of the children with a malignancy suffer from an additional congenital malformation syndrome. These percentages are significantly higher than the 1 % observed in the general population, and strongly underline the notion that constitutional anomalies may be associated with the occurrence of pediatric malignancies.

Study objective

To identify novel childhood cancer-predisposing genes in children.

Study design

Since patients with a malignancy and a congenital malformation syndrome are likely to exhibit genomic anomalies (microdeletions and/or duplications) that are within the limits of detection by microarray-based comparative genomic hybridization (arrayCGH) array, such patients are particularly well-suited for the discovery of novel cancer-predisposing genes. We will apply whole genome arrayCGH technology to the identification of novel candidate genes in children with a malignancy and one or more phenotypic abnormalities and/or a positive

family history for cancer.

Study burden and risks

The risks associated with participating in this study are minimal. The interview of patients/parents includes questions covering medical history and family history concerning malignancies; It poses no risk (physical or psychological) to the individual. Blood is drawn by a clinician. There is a minimal risk associated with venapuncture: slight pain and possible bruising, infection.
A firm genetic diagnosis will allow genetic counseling within families and may answer questions concerning the risk to develop malignancies in other children within such families.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adolescents (12-15 years)
Adolescents (16-17 years)

Adults (18-64 years)
Children (2-11 years)
Elderly (65 years and older)

Inclusion criteria

Patients with childhoodcancer and
- a congenital defect and/or
- developmental delay and/or
- dysmorphisms and/or
- a positive family history for cancer (sibs with childhood cancer or a parent with cancer at an age younger than 50 years)

Exclusion criteria

Cancer predisposition syndromes with a known molecular cause, for example Bechwith Wiedemann syndrome

Study design

Design

Study type: Observational non invasive

Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Basic science

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2007
Enrollment:	60
Type:	Anticipated

Ethics review

Approved WMO

Application type:	First submission
Review commission:	CMO regio Arnhem-Nijmegen (Nijmegen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL16027.091.07