

# LEA - Multicentric prospective cohort of children and adolescents malignant hemopathies

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## General

### Identification

Detailed name Multicentric prospective cohort of children and adolescents malignant hemopathies

Sign or acronym LEA

CNIL registration number, number and date of CPP agreement, AFSSAPS (French Health Products Safety Agency) authorisation CNIL n°05-1094, ANSM B120924-30, CPP 12.074 (n° ID-RCB 2012-A00984-39)

### General Aspects

Medical area Cancer research  
Hematology

Health determinants Iatrogenic

Keywords Malignant hemopathies, Leukemia, Lymphoma, Sequelae of leukemia or its treatment, long term adverse side effects, children, adolescents

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## Collaborations

## Funding

Funding status Mixed

Details PHRC, INCA, ARH, Conseil régional PACA, ANR  
Investissement d'avenir dans le cadre du projet  
HOPE-EPI

## Governance of the database

Sponsor(s) or organisation(s) responsible	Assistance Publique des Hopitaux de Marseille (APHM)
Organisation status	Public
<b>Additional contact</b>	
<b>Main features</b>	
<b>Type of database</b>	
Type of database	Study databases
Study databases (details)	Cohort study
Database recruitment is carried out by an intermediary	A selection of health institutions and services
Database recruitment is carried out as part of an interventional study	No
Additional information regarding sample selection.	<p>The study began in 2004 by an exhaustive recruitment of incident cases (diagnosed since 01/01/2006) and of prevalent cases (diagnosed between 01/01/1980 and 31/12/2005) in the Pediatric and pediatric hematology departments of the CHU of Marseille and Nice (PACA region), and the CHU of Nancy (Lorraine region). In a second time, the teams of Clermont-Ferrand (Auvergne) and Grenoble (Rhône-Alpes) joined the project respectively in 2008 and 2009. Then, teams of Lyon (Rhône-Alpes), Paris (Robert Debré, St. Louis et Trousseau) and St. Etienne began to include respectively in 2010 and 2011. Finally, teams of Montpellier, Rennes, Bordeaux and Strasbourg joined the LEA program in 2012. Malignant hemopathies are identified in pediatric and pediatric hematology departments. In all regions corresponding to the LEA study investigation centers, all children and adolescents malignant hemopathy cases are treated into one of the pediatric hematology departments participating to the LEA program, in the period following the diagnosis, in the perspective of medical care.</p>
<b>Database objective</b>	
Main objective	<p>General objective of the project :</p> <p>Describe the evolution at short and medium term of a cohort of patient treated for malignant hemopathy during their childhood, concerning:</p> <ul style="list-style-type: none"> <li>. quality of life in patient and its relatives</li> </ul>

- . socio-economic insertion
- . health condition
- . relation to the health care system

Study the determinants (medical, socio-economic, behavioral or environmental) of the evolution (health condition and quality of life) at medium and long term of a cohort of patients treated for malignant hemopathy during their childhood.

Study predictive factors of the occurrence of long term sequelae of height and weight growth, puberty, fertility, thyroid function, visual function, cardiac function, viral contamination, pulmonary function, bone metabolism, iron metabolism, metabolic syndrome, other sequelae.

Explore mortality/survival of the patients of this cohort after malignant hemopathy treatment in childhood.

Compare the quality of life in patients treated for malignant hemopathy to the one of subjects of same gender and age, control subjects in good health or suffering of chronic diseases.

Project perspectives:

Concerning literature, knowledge of the determinants of health condition and quality of life in patients after a malignant hemopathy treatment during childhood is today too fragmented to propose care strategies to improve the future of these children.

Taking into account the constitution limits of the Childhood Cancer Survivor Study, the cohort LEA showed its feasibility on the period 2004-2013.

Nevertheless, today it's necessary to enlarge the representative base of this cohort, joining to the project the large care centers for children malignant hemopathies in France, and creating a more multi-disciplinary research consortium (HOPE-EPI).

Funding requested in the context of ANR (Great loan) aim to carry on the work realized and to improve the program on the following main points: rise of the number of patients included, taking into account of largest panel of determinants, association with new clinical research teams.

A partnership with the national register of children malignant hemopathies (directed by J.Clavel) will be established, allowing to optimize completeness of the active thread. Moreover, actual large multi-central French protocols for children lymphoblastic and myeloblastic acute leukemia treatment (EORTC, FRALLE, ELAM) are represented in the project by the inclusion of new centers.

Inclusion criteria

Patients with lymphoma, acute lymphoblastic and myeloblastic leukemia, aged less than 18 at the moment of the diagnosis, and diagnosed after January 1980.

Patients are in a condition of hematological remission, and the treatment of the acute leukemia has begun in one of the investigation centers.

Other criteria: resident in France, agree to participate, or parents agree for their minor children participation.

## Population type

Age

Newborns (birth to 28 days)  
Infant (28 days to 2 years)  
Early childhood (2 to 5 years)  
Childhood (6 to 13 years)  
Adolescence (13 to 18 years)  
Adulthood (19 to 24 years)  
Adulthood (25 to 44 years)

Population covered

Sick population

Gender

Male  
Woman

Geography area

National

Detail of the geography area

At the beginning, the project implied pediatric and pediatric hematology departments of the CHU Marseille (PACA-West and Corse) and CHU Nancy (Lorraine). As a second step, the teams of CHU Nice (PACA-East), Clermont Ferrand (Auvergne) and Grenoble (Rhône-Alpes) joined the project, and have been included respectively in 2007, 2008, and 2009. In 2010, the Lyon Institute of Hematology and Pediatric Oncology joined the project, followed in 2011 by 3 Parisian centers (St. Louis, Robert Debré, Trousseau) and St. Etienne (Rhône-Alpes). Finally, the CHU of Rennes (Bretagne) and Montpellier (Languedoc-Roussillon) began to include in 2012. Half -2012, the CHU of Bordeaux and Strasbourg committed to the preparatory phase for inclusion.

## Data collection

### Dates

Date of first collection (YYYY or MM/YYYY)

04/2004

### Size of the database

Size of the database (number of individuals)	[1000-10 000[ individuals
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Details of the number of individuals	2385 patients (2003+2007+2008+2009+2010+2011+2012+2013)
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## Data

Database activity	Current data collection
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Type of data collected	Clinical data Declarative data Paraclinical data Biological data
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Clinical data (detail)	Direct physical measures
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Declarative data (detail)	Paper self-questionnaire
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Paraclinical data (detail)	Concerning transplanted patients follow-up, a thyroid echography is realized, as well as Pulmonary Function Test. All patients get a cardiac echography ; patients over 10 years old receive a Bone Mineral Density test too.
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Biological data (detail)	Concerning medical follow-up of patients, blood samples are taken and data concerning biological usual parameters are collected.
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Presence of a biobank	No
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Health parameters studied	Health event/morbidity Quality of life/health perception
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## Procedures

Data collection method	For the incident cases, data collection is organized in a prospective way at fixed term from the initial date of the diagnosis. For the prevalent cases, data collected are similar to the ones collected for the incident cases. The only difference is the collection method, which is retrospective for events concerning the period before the centers participation to LEA program (information concerning diagnosis, treatments set up, health occurrence including death, relapses, organic sequelae of treatments), while it's in a perspective way for incident cases. Data collected concern explanatory variables characterizing patients' health condition and quality of life, and on the other hand variables describing factors considered as
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potentials determinants. Between these potential determinants, will be considered factors defined at the individual level (clinic, demographic?) but also population factors (environment?). Data collected:- socio-demographic and socio-economic concerning the patient and its family;- clinical and therapeutic data concerning the disease (LA): nature, age at diagnosis, severity, treatments, recovery distance? );- concerning clinical examination and eventual organic sequelae: height and weight growth puberty, fertility, thyroid function, visual function, cardiac function, viral contamination, pulmonary function, bone metabolism, iron metabolism, metabolic syndrome, other sequelae (diabetes, osteonecrosis, chronic renal insufficiency, alopecia, central nervous system?);- psychological, behavioral and cognitive; - concerning quality of life in patients and their relatives;- concerning patient relation with health care system (care access and satisfaction);

Participant monitoring

Yes

Details on monitoring of participants

Follow-up duration undefined

Links to administrative sources

Yes

Linked administrative sources (detail)

Hospital diagnosis-related group database (PMSI), to check the exhaustiveness of population included in the study.

## Promotion and access

### Promotion

Link to the document

<http://tinyurl.com/Publi-HAL-LEA>

Description

List of publications in HAL

Link to the document

<http://tinyurl.com/Pubmed-LEA>

Description

List of publications in Pubmed

### Access

Terms of data access (charter for data provision, format of data, availability delay)

Oral communications concerning the study are regularly presented during annual cohort days (gathering all the investigation centers), during ? cancéropole? days, during workshops at SFCE.

Access to aggregated data

Access on specific project only

Access to individual data

Access on specific project only