

# Sosioekonomisten tekijöiden vaikutus lasten syöpäkuolleisuuteen Suomessa

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Lääketieteen etiikan päivän seminaari

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ORIGINAL ARTICLE

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## Impact of parental socioeconomic factors on childhood cancer mortality: a population-based registry study

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### ABSTRACT

**Introduction:** Parental socioeconomic status has been proposed to have an influence on childhood cancer mortality even in high-income countries. Our study investigated the influence of parental socioeconomic factors on childhood cancer mortality.

**Material and methods:** We identified 4437 patients diagnosed with cancer under the age of 20 from 1990 to 2009 and their parents from the Finnish cancer and central population registers. Information on death from primary cancer during five-year follow-up and parental socioeconomic factors was obtained from Statistics Finland. Poisson regression modeling was used to estimate hazard ratios (HRs) for factors related to cause-specific mortality and recursive tree based survival analysis to identify important risk factors and interactions.

**Results:** Mortality was lower in the highest quartile of combined parental disposable income (HR 0.68, CI 95% 0.52–0.89) compared to the lowest quartile. In the most recent diagnostic period from 2000 to 2009, highest attained education of either parent being post-secondary predicted lower mortality (HR 0.73, CI 95% 0.60–0.88) compared to parents who had attained primary or lower education.

**Conclusion:** Despite high quality public health care and comprehensive social security, both high parental income and education were associated with lower mortality after childhood cancer. Lower health literacy and financial pressures limiting treatment adherence may explain higher mortality in children with less educated parents and parents with lower income. Motivation and support during treatment and follow-up period is needed concerning the families of these patients.

### ARTICLE HISTORY

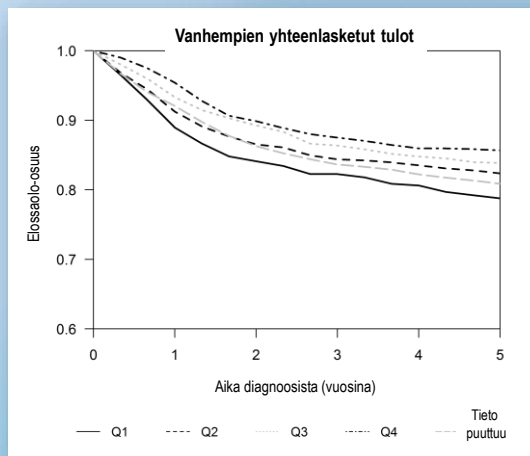
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## Vanhempien tulot

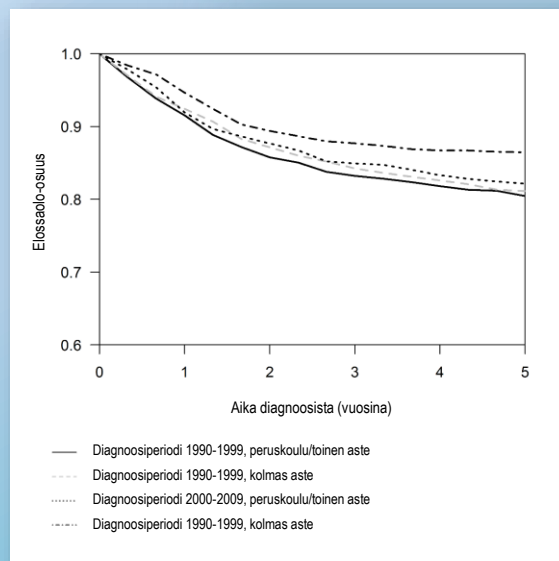
### Vanhempien yhteenlasketut tulot

	5-vuotis- elossaololuku
Q1	79% (75-82%)
Q2	82% (79-85%)
Q3	84% (81-86%)
Q4	86% (83-88%)
Tieto puuttuu	81% (79-83%)



## Vanhempien koulutus

	5-vuotis- elossaololuku
Diagnoosiperiodi 1990-1999, peruskoulu /toinen aste	80% (78-83%)
Diagnoosiperiodi 1990-1999, kolmas aste	81% (79-83%)
Diagnoosiperiodi 2000-2009, peruskoulu /toinen aste	82% (80-84%)
Diagnoosiperiodi 2000-2009, kolmas aste	86% (84-88%)





IJC

International Journal of Cancer

## Childhood cancer mortality and survival in immigrants: A population-based registry study in Finland

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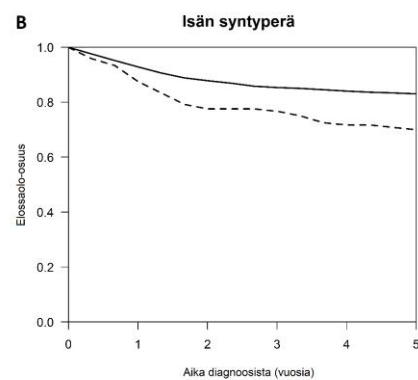
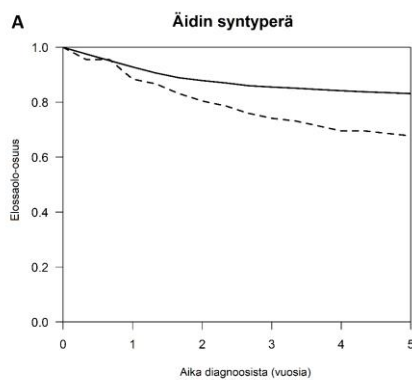
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Immigration in Europe has increased considerably over the past decades with the immigrant population similarly expanding in Finland. Our aim was to study childhood cancer mortality and survival in immigrants. In all, 4,437 patients diagnosed with cancer under the age of 20 years between 1990 and 2009 were identified from the Finnish Cancer Registry and their parents from the Population Register Center. Information on demographic factors was obtained from Statistics Finland. Poisson regression modeling was used to estimate hazard ratios (HRs) for cancer deaths. The life table method and the log rank test were used in survival analysis. Patients or parents of foreign background and born abroad had higher 5-year mortality (patient HR 2.03, 95% CI 1.18–3.49; maternal HR 2.11, 95% CI 1.46–3.04; paternal HR 1.85, 95% CI 1.29–2.66) compared to those of Finnish background and born in Finland. Childhood cancer survival in 5-year follow-up was higher if the mother (83% vs. 68%) or the father (83% vs. 70%) were of Finnish background and born in Finland. Despite equal access to public health care, we observed significant differences in childhood cancer mortality and survival by background. Cultural differences, linguistic obstacles and difficulties in navigating the health care system may contribute, along with genetic and biologic factors. Offering tailored information and taking cultural and linguistic aspects into account is necessary when diagnosing and treating patients from different ethnic backgrounds who have not yet integrated into the local culture and health care system.

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## Syntyperä

	5-vuotis- elossaololuku
<b>Äidin syntyperä</b>	
Suomalaistaustainen, syntynyt Suomessa	83% (82-84%)
Ulkomaalaistaustainen, syntynyt ulkomailla	68% (58-76%)
<b>Isän syntyperä</b>	
Suomalaistaustainen, syntynyt Suomessa	83% (82-84%)
Ulkomaalaistaustainen, syntynyt ulkomailla	70% (61-77%)



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