



# Health-related quality of life in young survivors of childhood cancer

A report from the Swiss Childhood Cancer Survivor Study

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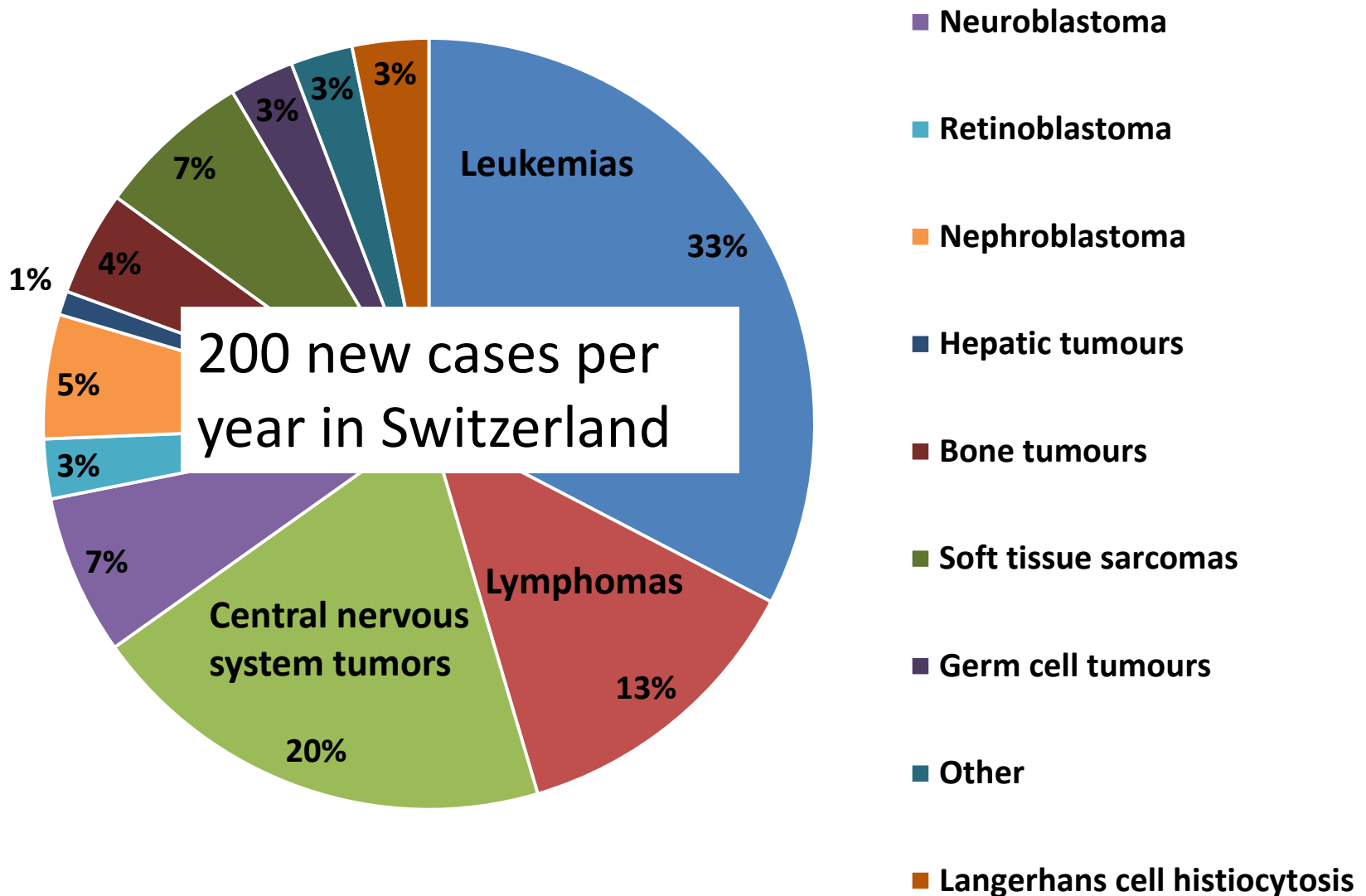
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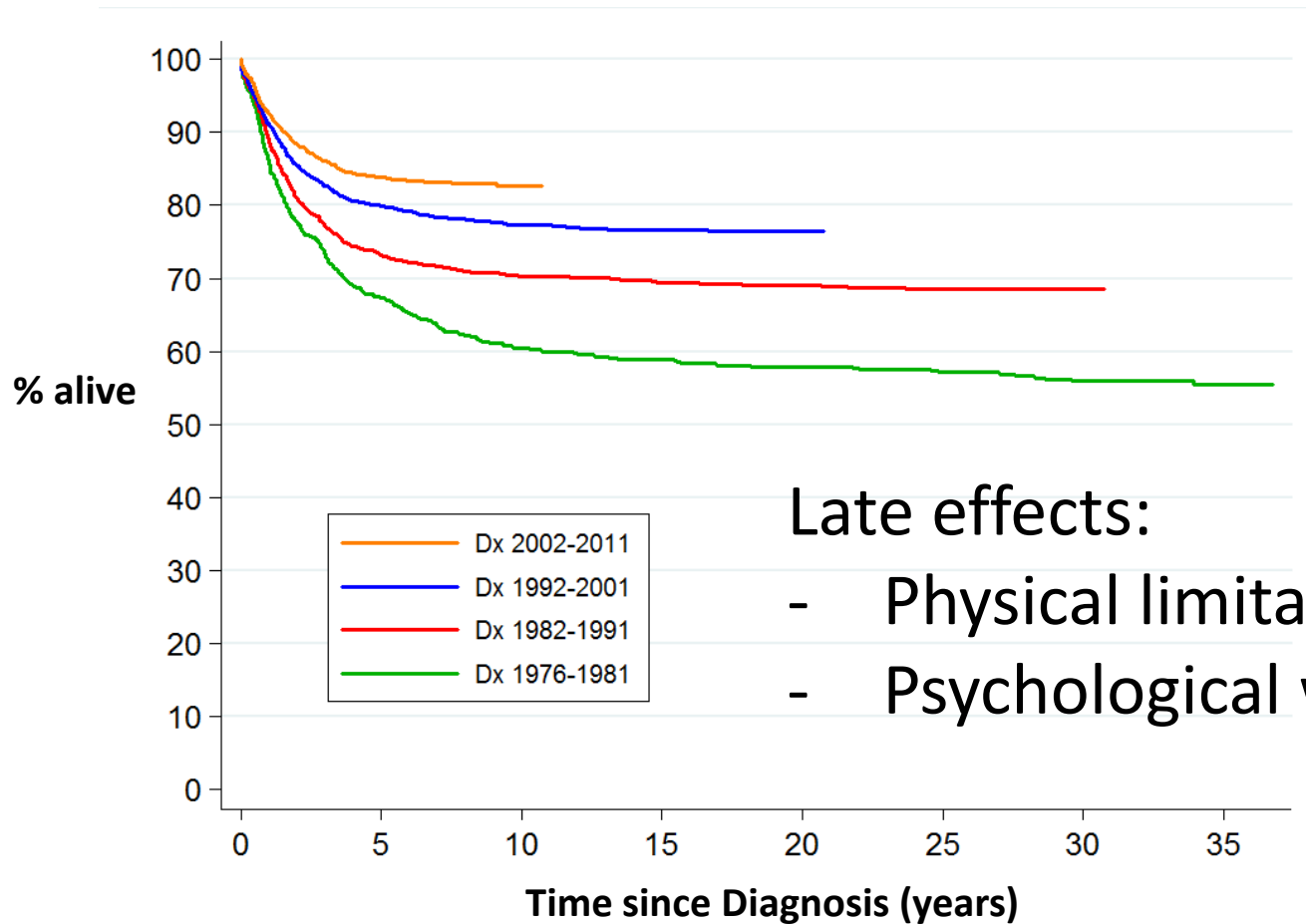
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# Childhood Cancer

# Diagnosis in children aged 0-14 years



# Survival increased drastically



Late effects:

- Physical limitations
- Psychological well-being

# Health-related quality of life

- Few studies on young survivors, specific diagnostic groups only<sup>1-3</sup>
- KIDSCREEN instrument suitable to measure HRQoL in healthy and sick children<sup>4,5</sup>
- Normative data is available retrieved from 1'701 children in Switzerland<sup>6</sup>

<sup>1</sup>Bhat, 2005, J Clin Oncol; <sup>2</sup>Laffond, 2012, Brain In; <sup>3</sup>van Dijk, 2007, Health Qual Life; <sup>4</sup>Mohler-Kuo, 2012, Qual Life Res; <sup>5</sup>Everts, 2008, Child Neuropsychol <sup>6</sup>Michel, 2009, Qual Life Res

# Study Aims

1. Describe HRQoL in a representative sample of survivors in Switzerland, compared to healthy peers.
2. Determine predictors for HRQoL in survivors

# Study population N=403

- ✓ Registered in the Swiss Childhood Cancer Registry
  - ✓ Aged <16 years at diagnosis
  - ✓ Living in Switzerland at diagnosis
  - ✓ Alive,  $\geq 5$  years past diagnosis
- ✓ *For this study:* Aged 8-16 years at survey

# Methods: HRQoL measurement

- **KIDSCREEN-27**<sup>1</sup> (5 dimensions of self-reported HRQoL):
  - physical well-being
  - psychological well-being
  - autonomy and parents
  - peers and social support
  - school environment
- Compared to Swiss norms<sup>2</sup>: T-standardized range: 0-100, mean: 50, SD=10
- Higher scores → better HRQoL

<sup>1</sup>Ravens-Sieberer, 2007, Qual Life Res; <sup>2</sup>Michel, 2009, Qual Life Res

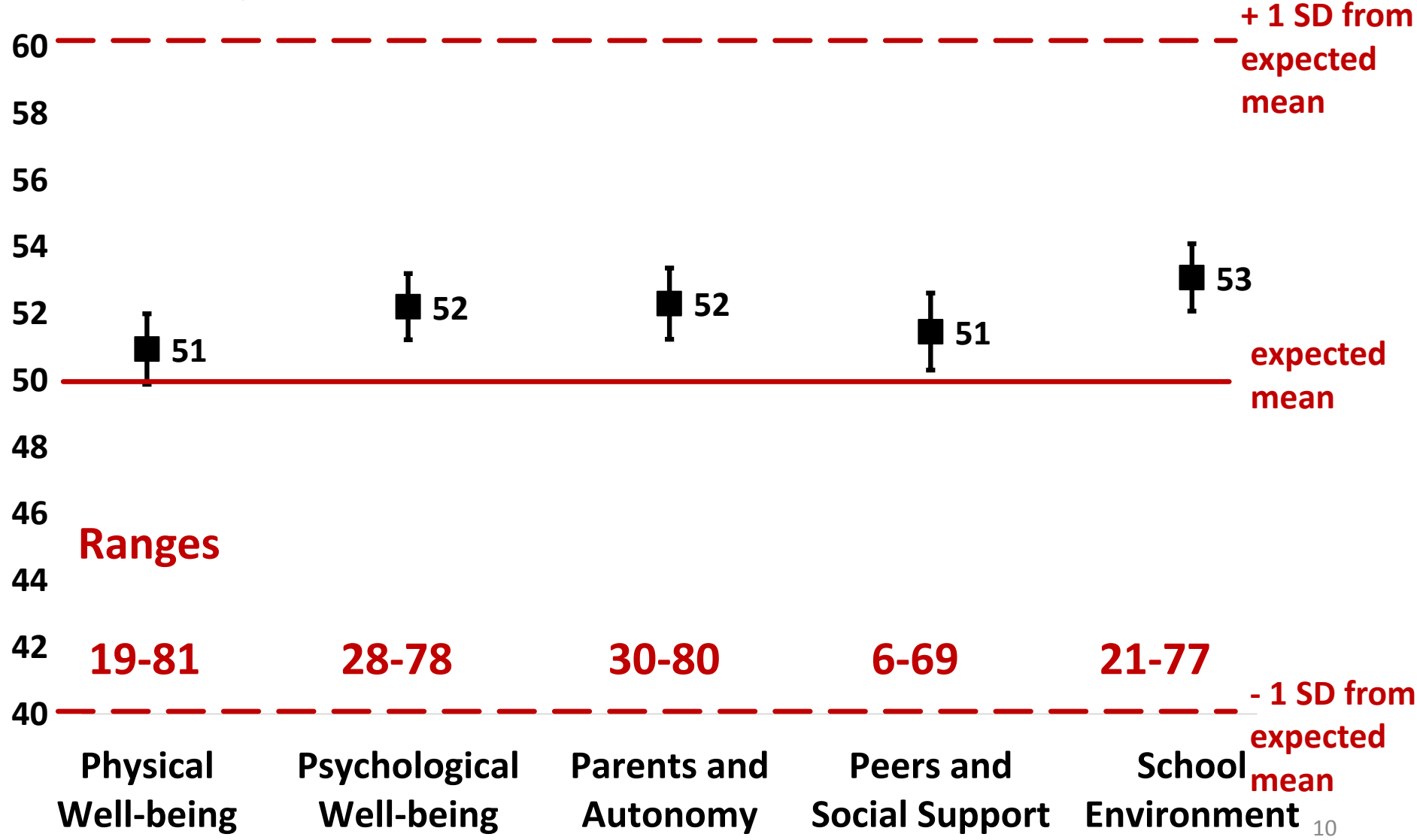


# Procedures

- **Questionnaire** sent to all eligible survivors, resulting in 403 completed questionnaires (response 67%)
- We used **multivariable linear regressions** to analyze the association of **socio-demographic** and **cancer-related factors** with each HRQoL dimension.

# Results 1: Survivors' HRQoL similar to norm

Mean HRQoL with 95% confidence intervals



# Results 2: Socio-demographic factors associated with HRQoL

## Mean differences in HRQoL between compared groups

	<u>Physical well-being</u>	<u>Psychological well-being</u>	<u>Autonomy and Parents</u>	<u>Peers and Social Support</u>	<u>School Environment</u>
<b>Girls</b>	+0.7	-0.1	+2.2	+2.1	<b>+2.6 *</b>
<b>Adolescents (age 13-16)</b>	-1.1	+1.3	<b>+3.0 *</b>	+0.3	-1.3
<b>Ita./French Language region</b>	-0.6	+2.0	-1.0	-1.9	+0.1
<b>Migration background</b>	+1.1	+1.8	+3.7	+2.7	+3.3

\*\*\* p<0.001 \*\* p<0.01 \* p<0.05

# Results 2: Clinical factors associated with HRQoL

## Mean differences in HRQoL between compared groups

	<u>Physical</u> well-being	<u>Psychological</u> well-being	<u>Autonomy</u> and Parents	<u>Peers and</u> Social Support	<u>School</u> Environment
Lymphoma	-2.0	+0.6	+2.3	+0.9	+1.0
CNS tumor	<b>-5.9 *</b>	-3.5	-1.0	-3.0	-1.6
Neuroblastoma	-2.0	-1.0	+0.5	+0.9	+0.7
Retinoblastoma	+0.6	-1.9	+1.0	-2.9	+3.3
Nephroblastoma	<b>-6.1 *</b>	-2.1	+0.1	-1.1	+0.1
Soft tissue sarcoma	-4.9	-1.4	+2.5	-0.6	-1.7
Other tumors	-4.7	-1.8	-2.1	-3.0	-0.5
Surgery	+2.5	+1.6	+0.3	+2.0	+0.3
Radiotherapy	+0.5	-0.3	<b>-3.5 *</b>	-0.8	-0.2
BMT	+1.9	+0.8	+1.2	+2.8	-4.7
Relapse	<b>-4.1 *</b>	-1.1	+2.2	-3.0	+0.5
Late effects	<b>-5.7 ***</b>	<b>-4.0 **</b>	<b>-4.0 **</b>	<b>-3.9 **</b>	-1.4

# Discussion

- **First study on HRQoL in children who survived childhood cancer in Switzerland**
  - Overall HRQoL in survivors comparable to healthy peers!
  - But some survivors reported decreased HRQoL (physical dimension, CNS tumors, nephroblastoma, radiotherapy, relapse, late effects)
- **Focus to reduce adverse late effects from cancer treatments**

# Aknowlegements

## Survivors and their Families

### Sponsors

**SPOG**

**Krebsliga Schweiz**

**Krebsliga Aargau**

**Bernische Krebsliga**

**Krebsliga Zürich**

**Krebsforschung Schweiz**

**Swiss National Science Foundation**

**Graduate schools: SSPH+, GCB Bern**

**Herzlichen dank!**

# Questions?



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